



Date: Oct 6, 2022

The MH Companies
4815 List Drive
Colorado Springs CO 80919
Phone: (719) 266-0050
Fax: (719) 266-0049

Job Name
Southeast Water Conservancy - Remodel
MHCS22-227151
Colorado Springs CO

Bid Date
Oct 4, 2022

Submittal Date
Oct 4, 2022

Architect:
No Architect

Controls:
Unregistered Controls



Transmittal

The MH Companies
 4815 List Drive
 Colorado Springs CO 80919
 Phone: (719) 266-0050
From: Brianna Deets

Project Southeast Water Conservancy - Remodel
Quote# MHCS22-227151
Location Colorado Springs CO
 Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input checked="" type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
LIGHTING PROPOSAL		
A-MW	Columbia	LCAT24-35MWG-EDU-C588
A-LW	Columbia	LCAT24-35LWG-EDU-C588
A-ML	Columbia	LCAT24-35MLG-EDU-C588
B-ML	Columbia	LCAT22-35MLG-EDU-C588
B-HL	Columbia	LCAT22-35HLG-EDU-C588
C	Columbia	MPS4-35ML-CW-EDU
D-10L	Prescolite	LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H
D-20L	Prescolite	LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS
E-10L	Prescolite	LFR-4RW-M-10L35K8-LWW-DM1 LFR-4RW-T-LWW-SS
G-ML	Columbia	RLW4-35ML-FAW-EDU
G-VL	Columbia	RLW4-35VL-FAW-EDU
VAN	Columbia	CWM4-35MLSM-FRWA-EDU
WW	ARON Lighting, LLC	QUADT1-FSQ-AWW2*-W35K8-1000-BWW2*-W35K8-1000-CX-DX-UNV-DM-W
WW1	ARON Lighting, LLC	QUADT1-FSQ-AX-BWW2*-35K8-CX-DX-UNV-DM-W
WW2	ARON Lighting, LLC	QUADT1-FSQ-ARB2-W35-1000-BWW2*-W35K8-1000-CX-DX-UNV-DM-W
AA	Compass Life Safety	CUSO4DB-H-ND
116/117	Watt Stopper	LMRC-111
	Watt Stopper	LMDC-100
	Watt Stopper	LMDM-101-*
	Watt Stopper	LMRJ-P25
TOOL	Watt Stopper	LMCT-100-2
		DIGITAL WIRELESS CONFIGURATION TOOL WITH USB



Transmittal

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Phone: (719) 266-0050
From: Brianna Deets

Type	MFG	Part
W.OCC	Watt Stopper	DW-311-*
	0-10V Dual Tech. Wall Switch Occ. Sensor, 120/277V	

Notes:

** Please Download Submittal, be advised the Link for this Submittal will Expire in 30 days.



Date: Oct 6, 2022

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LIGHTING PROPOSAL

Bid Date: Oct 4, 2022

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**Job Name:**Southeast Water Conservancy - Remodel
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Controls: Unregistered Controls**Catalog Number:**

LCAT24-35MWG-EDU-C588

Type:**A-MW**

Notes:

MHCS22-227151

Columbia
LIGHTING**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters

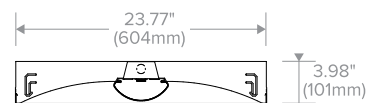
DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____



See Certification Specifications

RELATED PRODUCTSØ [LCAT12](#)Ø [LCAT14](#)Ø [LCAT22](#)**CONTROLS TECHNOLOGY**

Grid, recessed section

SPECIFICATIONS**CONSTRUCTION**

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2350-8367
Wattage Range	18-63
Efficacy Range (LPW)	119-146
Reported Life (Hours)	L80/60,000



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 LCAT24-35MWG-EDU-C588

Type:
A-MW

Notes:

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT24-35MLG-ESDU

CATALOG # _____

LCAT24	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver	
LCAT24 2' x 4' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	XW 2350-2560	G Grid Lay-in ²	Blank	Static	E Fixed Output
	9	>90	35 3500K	VW 2953-3339	SM Surface Mount ^{2,11}	Curve	A Air Return Side Slots	ED 0-10V Dimming ⁶
			40 4000K	MW 3205-3626	CM Cable Suspended Mount ^{2,4}	Rectangular		ED1 0-10V 1% Dimming
			50 5000K	LW 4041-4617				EDD 0-10V Dim-to-Dark
			2750T 2700K-5000K SpectraSync™ Tunable White ¹	ML 4448-5026				ESD Step Dimming ^{6,7,13}
			2765T 2700K-6500K SpectraSync™ Tunable White ¹	HL 5065-5786				LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6,7,13}
				VL 6542-7440				DALIP DALI Power Bus ^{7,13,16}
				XL 7517-8367				

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	<p>ELL14 Emergency Battery Pack (Installed, 1400 Lumens)^{7,8}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{7,8}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{7,8,9}</p> <p>DTS Dimming Bypass Module^{7,10}</p> <p>C388 3-wire Flex¹⁵</p> <p>C488 4-wire Flex¹⁵</p> <p>C588 5-wire Flex¹⁵</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only). Provides end wiring access for continuous row mounting.³</p> <p>INT Intermediate (SM and CM only). Provides ends with wiring access for continuous row mounting.³</p> <p>CP Chicago Plenum</p> <p>SAF SpectraSAFE™ Integrated Surveillance Lighting System¹¹</p>	<p>NX Standalone</p> <p>NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount^{12,14}</p> <p>NX Networked - Wired</p> <p>NXE NX, Dual SmartPORTs^{14,15}</p> <p>NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs^{12,14}</p> <p>NX Networked - Wireless</p> <p>NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor^{12,13,14}</p> <p>NXWE NX Wireless Enabled^{12,13,14}</p> <p>NX Networked - Wired/Wireless Hybrid</p> <p>NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs^{12,14}</p> <p>NXWD NX Wireless, Dual SmartPORTs^{12,14}</p> <p>Third-Party Control Options</p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{7,16,18}</p> <p>LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only)^{7,16,17,18}</p> <p>LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{7,16,17,18}</p>

Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL or XL lumen outputs.
- 2 For drywall, order G with Flange Kit Accessory.
- 3 Not available with Air Return (A) air function.
- 4 Order hanger accessories separately.
- 5 1V minimum low-end trim recommended when paired with a 0-10V dimmer.
- 6 Limitations apply based on lumen packages (see Product Specifications & Downloads).
- 7 Not available in 347V.
- 8 For compatibility with Dual-Life LifeGear® inverters, contact Hubbell Lighting Representative.
- 9 Not available for use in Canada.
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram.

- 11 SpectraSync+NX+SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V.

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions.
- 13 NX is not available with ESD, LUTH, or DALIP driver options.
- 14 NX combined with SpectraSync is not available in 347V.
- 15 For NX control and Flex Wire together, consult factory.

Third-Party Control Options:

- 16 LVS, LVR and ODPG only available with DALIP driver option.
- 17 VIVE is a trademark of Lutron Electronics Co., Inc.
- 18 Not available with SpectraSync (2750T or 2765T).

For questions about configuration options, contact Hubbell Representative.



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LCAT24-35MWG-EDU-C588

Type:**A-MW**

Notes:

MHCS22-227151

**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE								
	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
EDD		X	X	X	X	X		
ESD				X	X	X	X	X
LUTH	X	X	X	X	X	X		
DALIP		X	X	X	X	X	X	X
347	X	X	X	X	X	X		X

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense

2 [See link to Philips commissioning](#)3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)**Wireless Switch Accessories¹**

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white





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A-MW

Notes:

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LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
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CONTROLS (CONTINUED)

SpectraSAFE™ Integrated Surveillance Lighting System

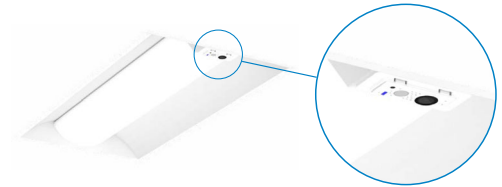
Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

Software & Support

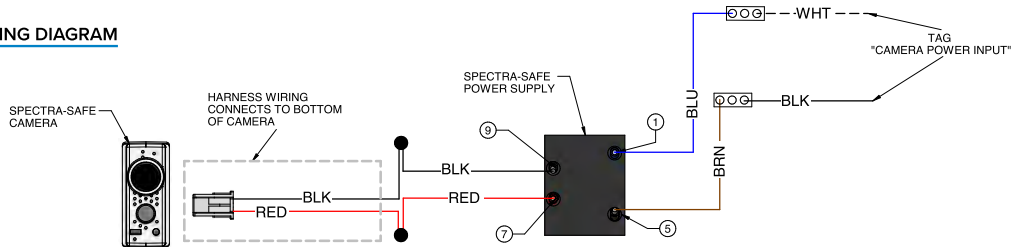
- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

SPECTRASAFE



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (N)
5	VAC in (L)
7	+Vout
9	-Vout



SpectraSync™ Color Tuning Technology:

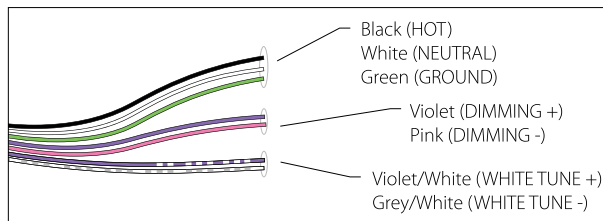
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

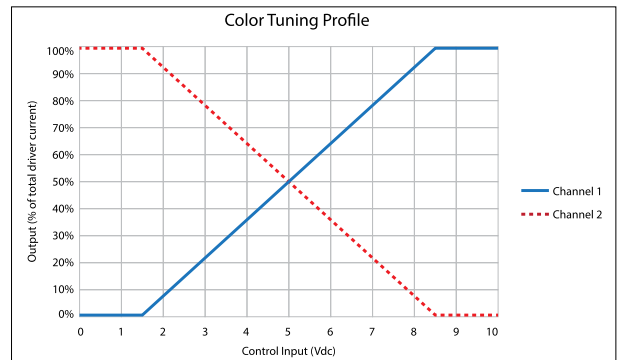


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





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LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASYN[™]



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2240	117	2341	123	2383	125	2414	126	2493	131	2456	129
	VW	28	2990	108	3124	113	3180	115	3221	117	3327	121	3277	119
	MW	30	3218	107	3363	111	3424	113	3467	115	3582	119	3528	117
	LW	36	4084	113	4268	118	4345	120	4400	122	4545	126	4477	124
	ML	39	4566	118	4771	123	4857	125	4919	127	5081	131	5005	129
Rectangle	HL	44	5209	118	5443	124	5541	126	5612	128	5797	132	5710	130
	XW	20	2489	123	2601	128	2648	130	2682	132	2770	136	2728	134
	VW	28	3085	109	3224	114	3282	116	3324	118	3434	122	3382	120
	MW	30	3323	110	3472	115	3534	117	3580	119	3698	122	3642	121
	LW	36	4230	117	4420	122	4500	125	4557	126	4707	130	4637	128
	ML	39	4711	121	4923	127	5012	129	5076	131	5243	135	5164	133
	HL	43	5295	123	5533	128	5633	131	5705	132	5893	137	5804	135

DELIVERED LUMENS [View 90 CRI data on supplemental document](#)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
XW		3000K	2448	18.7	131
		3500K	2532	18.7	135
		4000K	2560	18.7	137
	R	5000K	2560	18.7	137
		3000K	2350	18.6	126
		3500K	2532	18.7	135
VW		4000K	2560	18.7	137
		5000K	2560	18.7	137
		3000K	3112	24.3	128
	R	3500K	3303	24.3	136
		4000K	3339	24.3	138
		5000K	3339	24.3	138
MW		3000K	2953	24.3	122
		3500K	3135	24.3	129
		4000K	3169	24.3	130
	R	5000K	3169	24.3	130
		3000K	3379	26.4	128
		3500K	3587	26.4	136
LW		4000K	3626	26.4	137
		5000K	3626	26.4	137
		3000K	3205	26.5	121
	R	3500K	3402	26.5	128
		4000K	3439	26.5	130
		5000K	3439	26.5	130
XL		3000K	4302	32.1	134
		3500K	4567	32.1	142
		4000K	4617	32.1	144
	R	5000K	4617	32.1	144
		3000K	4041	32.2	125
		3500K	4290	32.2	133
	4000K	4337	32.2	135	
	5000K	4337	32.2	135	

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
ML		3000K	4683	36.0	130
		3500K	4971	36.0	138
		4000K	5026	36.0	140
	R	5000K	5026	36.0	140
		3000K	4448	36.1	123
		3500K	4722	36.1	131
HL		4000K	4774	36.1	132
		5000K	4774	36.1	132
		3000K	5391	39.7	136
	R	3500K	5723	39.7	144
		4000K	5786	39.7	146
		5000K	5786	39.7	146
VL		3000K	5065	39.8	127
		3500K	5377	39.8	135
		4000K	5436	39.8	137
	R	5000K	5436	39.8	137
		3000K	6933	52.9	131
		3500K	7358	52.9	139
XL		4000K	7440	52.9	141
		5000K	7440	52.9	141
		3000K	6542	53.1	123
	R	3500K	6942	53.1	131
		4000K	7019	53.1	132
		5000K	7019	53.1	132
XL		3000K	7798	63.0	124
		3500K	8273	63.0	131
		4000K	8367	63.0	133
	R	5000K	8367	63.0	133
		3000K	7517	62.9	119
		3500K	7894	62.9	126
	4000K	7894	62.9	126	
	5000K	7517	62.9	120	





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A-MW

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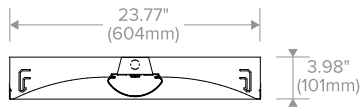
LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

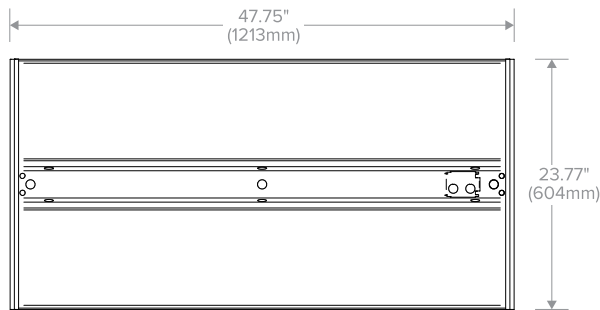
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 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

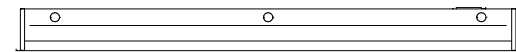
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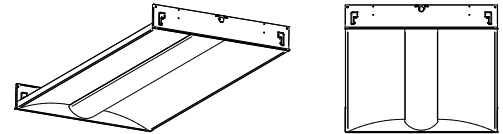
Grid, recessed section



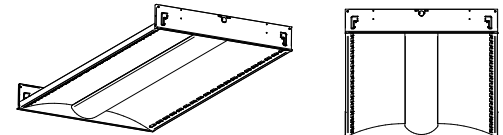
Grid, back of housing



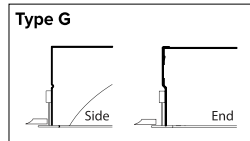
GRID, STATIC



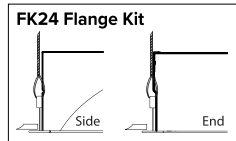
GRID, AIR RETURN



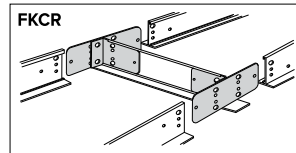
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

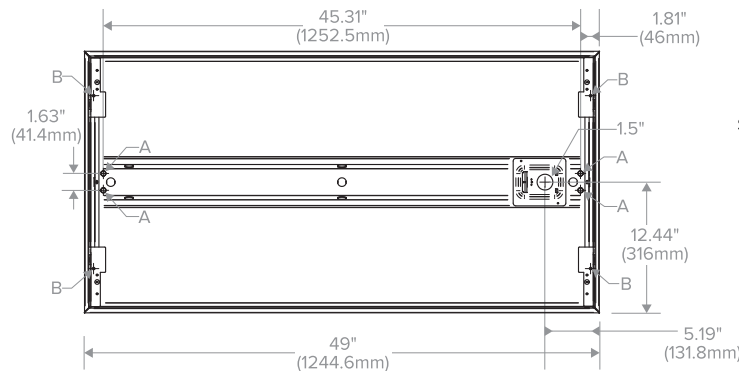


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24s & FKCR adapters: Width 24³/₈", Length [48" x (# in row)] + ³/₈". Example: (48" x 2) + ³/₈" = 96³/₈"

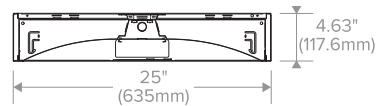
Flange kit cut out dimension for single unit only: 24³/₈" x 48³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount (SM) and Cable Mount (CM), back of housing

* For Cable Mount a 2" x 3" access plate with (4) ⁷/₈" KOs provided in place of Mounting Collar shown.



Surface section (SM)

Surface Mount:
 Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:
 Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35MWG-EDU-C588

Notes:

Type:
A-MW

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

PHOTOMETRY

LCAT24-35LWG-EU

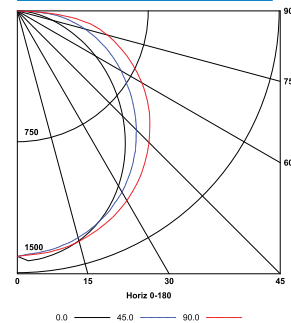
LUMINAIRE DATA

Test No.	16519
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4396
Watts	36.10
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.32

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1098	25
0-40	1804	41
0-60	3240	73.7
0-90	4396	100
0-180	4396	100

POLAR GRAPH



LCAT24-35MLG-EU

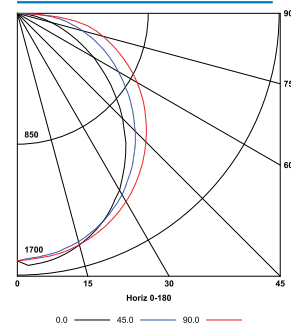
LUMINAIRE DATA

Test No.	16522
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4914
Watts	38.80
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1250	25.4
0-40	2049	41.7
0-60	3648	74.2
0-90	4914	100
0-180	4914	100

POLAR GRAPH



LCAT24-35HLG-EU

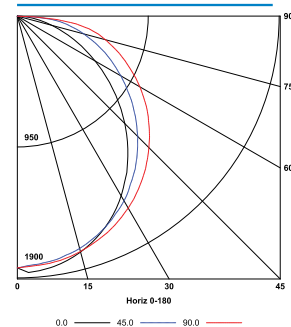
LUMINAIRE DATA

Test No.	16525
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5607
Watts	44.00
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.31

ZONAL LUMEN SUMMARY

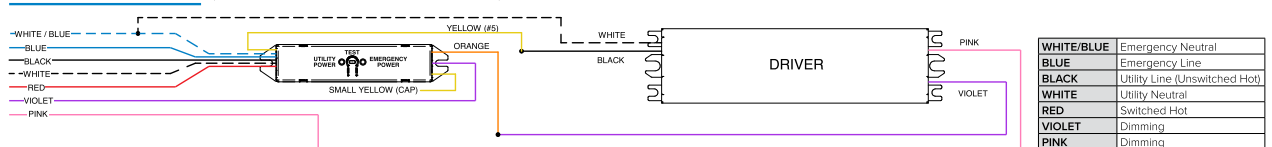
Zone	Lumens	% Luminaire
0-30	1422	25.4
0-40	2333	41.6
0-60	4161	74.2
0-90	5607	100
0-180	5607	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



All product and company names, logos and product identifiers are trademarks or registered trademarks of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LCAT24-35LWG-EDU-C588

Type:**A-LW**

Notes:

MHCS22-227151

Columbia
LIGHTING**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters



See Certification Specifications

CONTROLS TECHNOLOGY**SPECIFICATIONS****CONSTRUCTION**

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

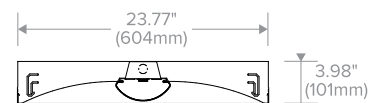
- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

RELATED PRODUCTSØ [LCAT12](#)Ø [LCAT14](#)Ø [LCAT22](#)

Grid, recessed section

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2350-8367
Wattage Range	18-63
Efficacy Range (LPW)	119-146
Reported Life (Hours)	L80/60,000



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35LWG-EDU-C588

Type:
A-LW

Notes:

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT24-35MLG-ESDU

CATALOG # _____

LCAT24	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver
LCAT24 2' x 4' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	XW 2350-2560	G Grid Lay-in ²	Blank	E Fixed Output
	9	>90	35 3500K	VW 2953-3339	SM Surface Mount ^{2,11}	Blank	ED 0-10V Dimming ⁶
			40 4000K	MW 3205-3626	CM Cable Suspended Mount ^{2,4}	Curve	ED1 0-10V 1% Dimming
			50 5000K	LW 4041-4617		Rectangular	EDD 0-10V Dim-to-Dark
			2750T 2700K-5000K SpectraSync™ Tunable White ¹	ML 4448-5026		A	ESD Step Dimming ^{6,7,13}
			2765T 2700K-6500K SpectraSync™ Tunable White ¹	HL 5065-5786			LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6,7,13}
				VL 6542-7440			DALIP DALI Power Bus ^{7,13,16}
				XL 7517-8367			

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	<p>ELL14 Emergency Battery Pack (installed, 1400 Lumens)^{7,8}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{7,8}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{7,8,9}</p> <p>DTS Dimming Bypass Module^{7,10}</p> <p>C388 3-wire Flex¹⁵</p> <p>C488 4-wire Flex¹⁵</p> <p>C588 5-wire Flex¹⁵</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only). Provides end wiring access for continuous row mounting.³</p> <p>INT Intermediate (SM and CM only). Provides ends with wiring access for continuous row mounting.³</p> <p>CP Chicago Plenum</p> <p>SAF SpectraSAFE™ Integrated Surveillance Lighting System¹¹</p>	<p>NX Standalone</p> <p>NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount^{12,14}</p> <p>NX Networked - Wired</p> <p>NXE NX, Dual SmartPORTs^{14,15}</p> <p>NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs^{12,14}</p> <p>NX Networked - Wireless</p> <p>NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor^{12,13,14}</p> <p>NXWE NX Wireless Enabled^{12,13,14}</p> <p>NX Networked - Wired/Wireless Hybrid</p> <p>NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs^{12,14}</p> <p>NXWD NX Wireless, Dual SmartPORTs^{12,14}</p> <p>Third-Party Control Options</p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{7,16,18}</p> <p>LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only)^{7,16,17,18}</p> <p>LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{7,16,17,18}</p>

Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL or XL lumen outputs.
- 2 For drywall, order G with Flange Kit Accessory.
- 3 Not available with Air Return (A) air function.
- 4 Order hanger accessories separately.
- 5 1V minimum low-end trim recommended when paired with a 0-10V dimmer.
- 6 Limitations apply based on lumen packages (see Product Specifications & Details).
- 7 Not available in 347V.
- 8 For compatibility with Dual-Life LifeGear® inverters, contact Hubbell Lighting Representative.
- 9 Not available for use in Canada.
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram.

- 11 SpectraSync+NX+SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V.

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions.
- 13 NX is not available with ESD, LUTH, or DALIP driver options.
- 14 NX combined with SpectraSync is not available in 347V.
- 15 For NX control and Flex Wire together, consult factory.

Third-Party Control Options:

- 16 LVS, LVR and ODPG only available with DALIP driver option.
- 17 VIVE is a trademark of Lutron Electronics Co., Inc.
- 18 Not available with SpectraSync (2750T or 2765T).

For questions about configuration options, contact Hubbell Representative.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LCAT24-35LWG-EDU-C588

Type:**A-LW**

Notes:

MHCS22-227151

**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE								
	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
EDD		X	X	X	X	X		
ESD				X	X	X	X	X
LUTH	X	X	X	X	X	X		
DALIP		X	X	X	X	X	X	X
347	X	X	X	X	X	X		X

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense

2 [See link to Philips commissioning](#)3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)**Wireless Switch Accessories¹**

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35LWG-EDU-C588

Type:
A-LW

Notes:

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS (CONTINUED)

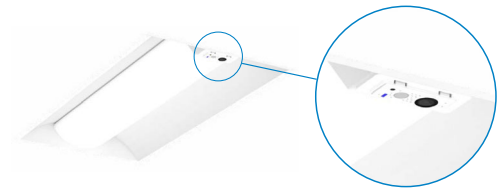
SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

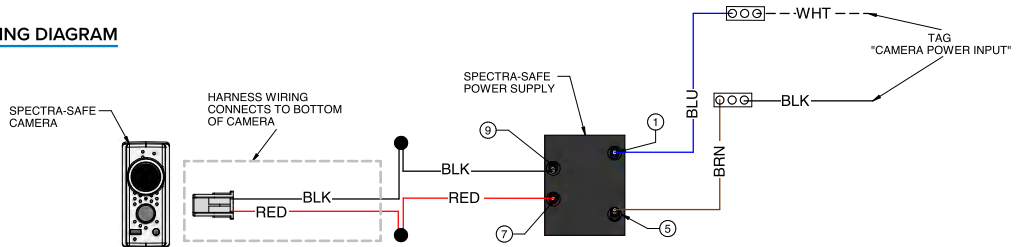
Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (NI)
5	VAC in (L)
7	+Vout
9	-Vout



SpectraSync™ Color Tuning Technology:

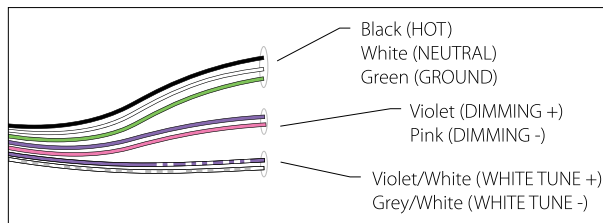
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

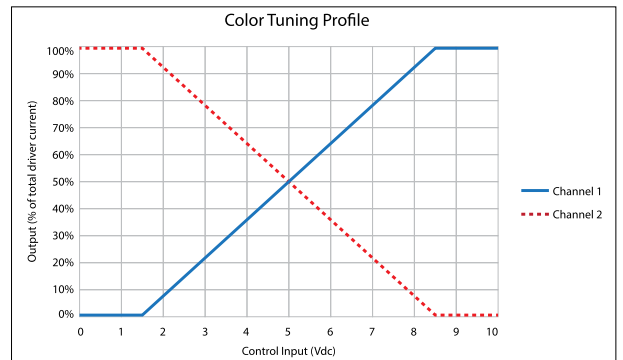


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





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Notes:

Type:

A-LW

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASYN[™]



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2240	117	2341	123	2383	125	2414	126	2493	131	2456	129
	VW	28	2990	108	3124	113	3180	115	3221	117	3327	121	3277	119
	MW	30	3218	107	3363	111	3424	113	3467	115	3582	119	3528	117
	LW	36	4084	113	4268	118	4345	120	4400	122	4545	126	4477	124
	ML	39	4566	118	4771	123	4857	125	4919	127	5081	131	5005	129
Rectangle	HL	44	5209	118	5443	124	5541	126	5612	128	5797	132	5710	130
	XW	20	2489	123	2601	128	2648	130	2682	132	2770	136	2728	134
	VW	28	3085	109	3224	114	3282	116	3324	118	3434	122	3382	120
	MW	30	3323	110	3472	115	3534	117	3580	119	3698	122	3642	121
	LW	36	4230	117	4420	122	4500	125	4557	126	4707	130	4637	128
	ML	39	4711	121	4923	127	5012	129	5076	131	5243	135	5164	133
	HL	43	5295	123	5533	128	5633	131	5705	132	5893	137	5804	135

DELIVERED LUMENS [View 90 CRI data on supplemental document](#)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
XW		3000K	2448	18.7	131
		3500K	2532	18.7	135
		4000K	2560	18.7	137
	R	5000K	2560	18.7	137
		3000K	2350	18.6	126
		3500K	2532	18.7	135
VW		4000K	2560	18.7	137
		5000K	2560	18.7	137
		3000K	3112	24.3	128
	R	3500K	3303	24.3	136
		4000K	3339	24.3	138
		5000K	3339	24.3	138
MW		3000K	2953	24.3	122
		3500K	3135	24.3	129
		4000K	3169	24.3	130
	R	5000K	3169	24.3	130
		3000K	3379	26.4	128
		3500K	3587	26.4	136
LW		4000K	3626	26.4	137
		5000K	3626	26.4	137
		3000K	3205	26.5	121
	R	3500K	3402	26.5	128
		4000K	3439	26.5	130
		5000K	3439	26.5	130
XW		3000K	4302	32.1	134
		3500K	4567	32.1	142
		4000K	4617	32.1	144
	R	5000K	4617	32.1	144
		3000K	4041	32.2	125
		3500K	4290	32.2	133
VW		4000K	4337	32.2	135
		5000K	4337	32.2	135
		3000K	4302	32.1	134
	R	3500K	4567	32.1	142
		4000K	4617	32.1	144
		5000K	4617	32.1	144

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
ML		3000K	4683	36.0	130
		3500K	4971	36.0	138
		4000K	5026	36.0	140
	R	5000K	5026	36.0	140
		3000K	4448	36.1	123
		3500K	4722	36.1	131
HL		4000K	4774	36.1	132
		5000K	4774	36.1	132
		3000K	5391	39.7	136
	R	3500K	5723	39.7	144
		4000K	5786	39.7	146
		5000K	5786	39.7	146
VL		3000K	5065	39.8	127
		3500K	5377	39.8	135
		4000K	5436	39.8	137
	R	5000K	5436	39.8	137
		3000K	6933	52.9	131
		3500K	7358	52.9	139
XL		4000K	7440	52.9	141
		5000K	7440	52.9	141
		3000K	6542	53.1	123
	R	3500K	6942	53.1	131
		4000K	7019	53.1	132
		5000K	7019	53.1	132
XW		3000K	7798	63.0	124
		3500K	8273	63.0	131
		4000K	8367	63.0	133
	R	5000K	8367	63.0	133
		3000K	7517	62.9	119
		3500K	7894	62.9	126
VW		4000K	7894	62.9	126
		5000K	7517	62.9	120
		3000K	4302	32.1	134
	R	3500K	4567	32.1	142
		4000K	4617	32.1	144
		5000K	4617	32.1	144





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35LWG-EDU-C588

Type:
A-LW

Notes:

MHCS22-227151



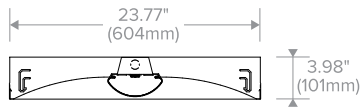
LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

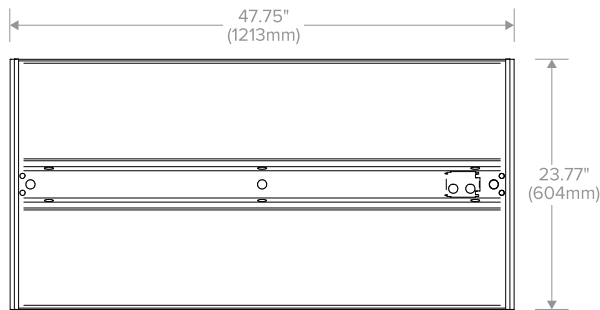
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

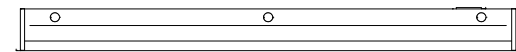
GRID



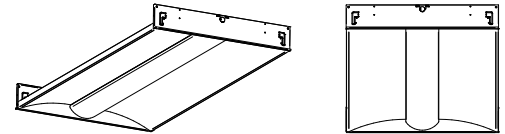
Grid, recessed section



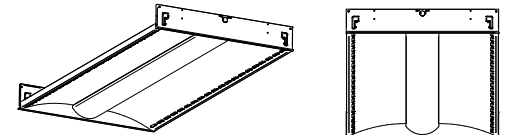
Grid, back of housing



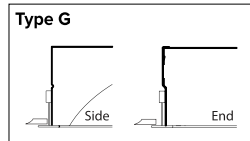
GRID, STATIC



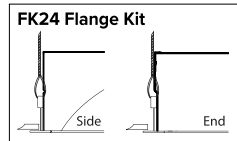
GRID, AIR RETURN



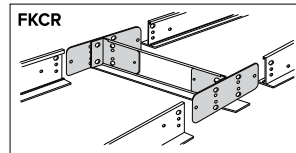
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

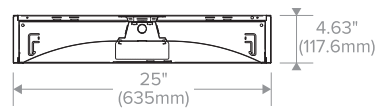
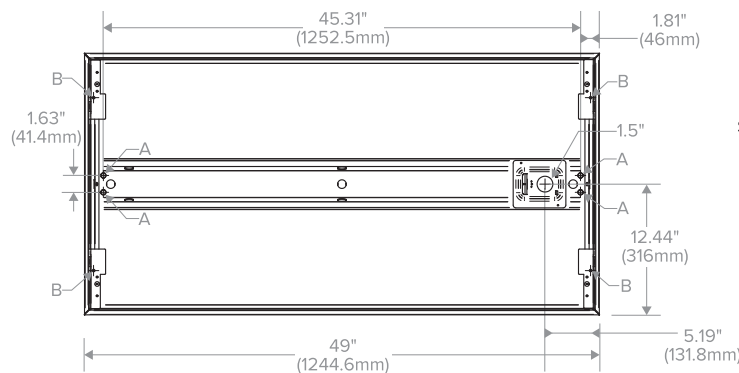


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24s & FKCR adapters:
 Width 24³/₈", Length [48" x (# in row)] + ³/₈".
 Example: (48" x 2) + ³/₈" = 96³/₈"

Flange kit cut out dimension for single unit only: 24³/₈" x 48³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface section (SM)

Surface Mount:
 Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:
 Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

Surface Mount (SM) and Cable Mount (CM), back of housing

* For Cable Mount a 2" x 3" access plate with (4) 3/8" KOs provided in place of Mounting Collar shown.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35LWG-EDU-C588

Notes:

Type:
A-LW

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

PHOTOMETRY

LCAT24-35LWG-EU

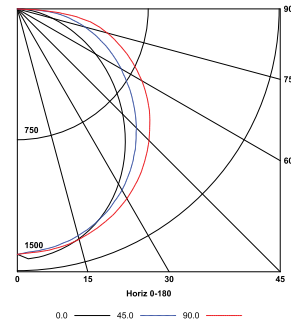
LUMINAIRE DATA

Test No.	16519
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4396
Watts	36.10
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.32

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1098	25
0-40	1804	41
0-60	3240	73.7
0-90	4396	100
0-180	4396	100

POLAR GRAPH



LCAT24-35MLG-EU

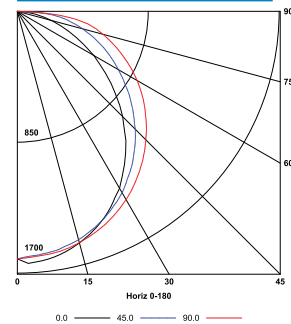
LUMINAIRE DATA

Test No.	16522
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4914
Watts	38.80
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1250	25.4
0-40	2049	41.7
0-60	3648	74.2
0-90	4914	100
0-180	4914	100

POLAR GRAPH



LCAT24-35HLG-EU

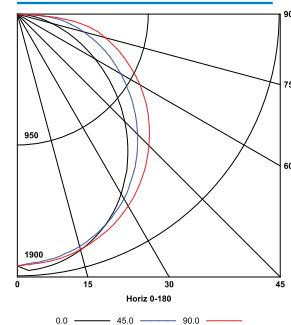
LUMINAIRE DATA

Test No.	16525
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5607
Watts	44.00
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.31

ZONAL LUMEN SUMMARY

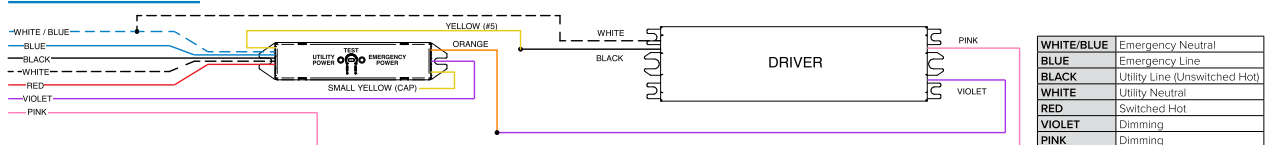
Zone	Lumens	% Luminaire
0-30	1422	25.4
0-40	2333	41.6
0-60	4161	74.2
0-90	5607	100
0-180	5607	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



All product and company names, logos and product identifiers are trademarks or registered trademarks of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**
LCAT24-35MLG-EDU-C588**Type:****A-ML**

Notes:

MHCS22-227151

Columbia
LIGHTING**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

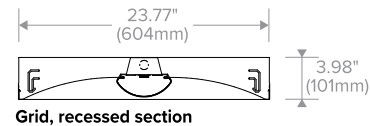
FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

**RELATED PRODUCTS**

Ø [LCAT12](#) Ø [LCAT14](#) Ø [LCAT22](#)

**CONTROLS TECHNOLOGY****SPECIFICATIONS****CONSTRUCTION**

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2350-8367
Wattage Range	18-63
Efficacy Range (LPW)	119-146
Reported Life (Hours)	L80/60,000



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35MLG-EDU-C588

Type:
A-ML

Notes:

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT24-35MLG-ESDU

CATALOG # _____

LCAT24	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver
LCAT24 2' x 4' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	XW 2350-2560	G Grid Lay-in ²	Blank Static	E Fixed Output
	9	>90	35 3500K	VW 2953-3339	SM Surface Mount ^{2,11}	A Air Return Side Slots	ED 0-10V Dimming ⁶
			40 4000K	MW 3205-3626	CM Cable Suspended Mount ^{2,4}	R Rectangular	ED1 0-10V 1% Dimming
			50 5000K	LW 4041-4617			EDD 0-10V Dim-to-Dark
			2750T 2700K-5000K SpectraSync™ Tunable White ¹	ML 4448-5026			ESD Step Dimming ^{6,7,13}
			HL 5065-5786	VL 6542-7440			LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6,7,13}
			2765T 2700K-6500K SpectraSync™ Tunable White ¹	XL 7517-8367			DALIP DALI Power Bus ^{7,13,16}

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{7,8} ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test ^{7,8} ELL14H2 Emergency Battery Pack, 2-Hour Run Time ^{7,8,9} DTS Dimming Bypass Module ^{7,10} C388 3-wire Flex ¹⁵ C488 4-wire Flex ¹⁵ C588 5-wire Flex ¹⁵ GLR Fast Blow Fuse EOR End of Row (SM and CM only). Provides end wiring access for continuous row mounting. ³ INT Intermediate (SM and CM only). Provides ends with wiring access for continuous row mounting. ³ CP Chicago Plenum SAF SpectraSAFE™ Integrated Surveillance Lighting System ¹¹	NX Standalone NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount ^{12,14} NX Networked - Wired NXE NX, Dual SmartPORTs ^{14,15} NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs ^{12,14} NX Networked - Wireless NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor ^{12,13,14} NXWE NX Wireless Enabled ^{12,13,14} NX Networked - Wired/Wireless Hybrid NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs ^{12,14} NXWD NX Wireless, Dual SmartPORTs ^{12,14} Third-Party Control Options ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{7,16,18} LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{7,16,17,18} LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) ^{7,16,17,18}

Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-Wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL or XL lumen outputs.
- 2 For drywall, order G with Flange Kit Accessory.
- 3 Not available with Air Return (A) air function.
- 4 Order hanger accessories separately.
- 5 1V minimum low-end trim recommended when paired with a 0-10V dimmer.
- 6 Limitations apply based on lumen packages (see Product Specifications & Details).
- 7 Not available in 347V.
- 8 For compatibility with Dual-Life LifeGear® inverters, contact Hubbell Lighting Representative.
- 9 Not available for use in Canada.
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram.

- 11 SpectraSync+NX+SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V.

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions.
- 13 NX is not available with ESD, LUTH, or DALIP driver options.
- 14 NX combined with SpectraSync is not available in 347V.
- 15 For NX control and Flex Wire together, consult factory.

Third-Party Control Options:

- 16 LVS, LVR and ODPG only available with DALIP driver option.
- 17 VIVE is a trademark of Lutron Electronics Co., Inc.
- 18 Not available with SpectraSync (2750T or 2765T).

For questions about configuration options, contact Hubbell Representative.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LCAT24-35MLG-EDU-C588

Type:**A-ML****Notes:**

MHCS22-227151

**LCAT24**

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE								
	XW	VW	MW	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X
EDD		X	X	X	X	X		
ESD				X	X	X	X	X
LUTH	X	X	X	X	X	X		
DALIP		X	X	X	X	X	X	X
347	X	X	X	X	X	X		X

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense

2 [See link to Philips commissioning](#)3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)**Wireless Switch Accessories¹**

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
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Catalog Number:
 LCAT24-35MLG-EDU-C588

Type:
A-ML

Notes:

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS (CONTINUED)

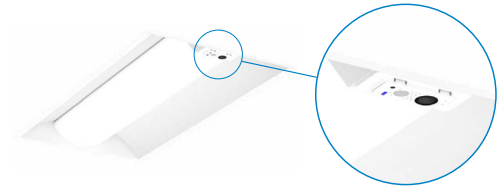
SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

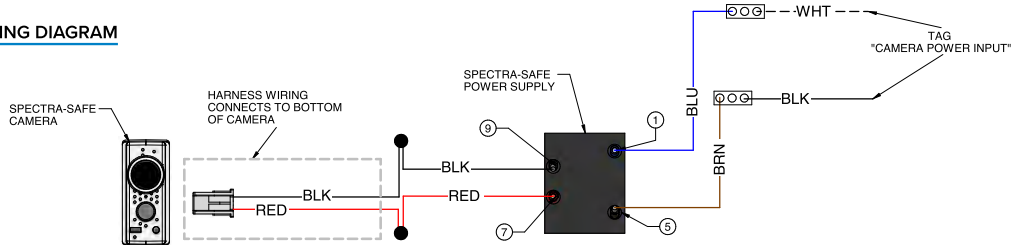
Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (N)
5	VAC in (L)
7	+Vout
9	-Vout



SpectraSync™ Color Tuning Technology:

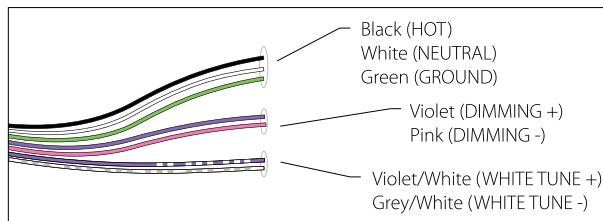
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

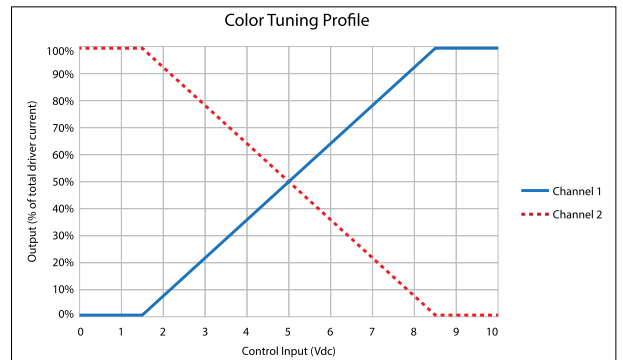


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35MLG-EDU-C588

Notes:

Type:

A-ML

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASYN[™]



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2240	117	2341	123	2383	125	2414	126	2493	131	2456	129
	VW	28	2990	108	3124	113	3180	115	3221	117	3327	121	3277	119
	MW	30	3218	107	3363	111	3424	113	3467	115	3582	119	3528	117
	LW	36	4084	113	4268	118	4345	120	4400	122	4545	126	4477	124
	ML	39	4566	118	4771	123	4857	125	4919	127	5081	131	5005	129
Rectangle	HL	44	5209	118	5443	124	5541	126	5612	128	5797	132	5710	130
	XW	20	2489	123	2601	128	2648	130	2682	132	2770	136	2728	134
	VW	28	3085	109	3224	114	3282	116	3324	118	3434	122	3382	120
	MW	30	3323	110	3472	115	3534	117	3580	119	3698	122	3642	121
	LW	36	4230	117	4420	122	4500	125	4557	126	4707	130	4637	128
	ML	39	4711	121	4923	127	5012	129	5076	131	5243	135	5164	133
	HL	43	5295	123	5533	128	5633	131	5705	132	5893	137	5804	135

DELIVERED LUMENS [View 90 CRI data on supplemental document](#)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
XW		3000K	2448	18.7	131
		3500K	2532	18.7	135
		4000K	2560	18.7	137
	R	5000K	2560	18.7	137
		3000K	2350	18.6	126
		3500K	2532	18.7	135
VW		4000K	2560	18.7	137
		5000K	2560	18.7	137
		3000K	2350	18.6	126
	R	3500K	2532	18.7	135
		4000K	2560	18.7	137
		5000K	2560	18.7	137
MW		3000K	3112	24.3	128
		3500K	3303	24.3	136
		4000K	3339	24.3	138
	R	5000K	3339	24.3	138
		3000K	2953	24.3	122
		3500K	3135	24.3	129
LW		4000K	3169	24.3	130
		5000K	3169	24.3	130
		3000K	3379	26.4	128
	R	3500K	3587	26.4	136
		4000K	3626	26.4	137
		5000K	3626	26.4	137
LW		3000K	3205	26.5	121
		3500K	3402	26.5	128
		4000K	3439	26.5	130
	R	5000K	3439	26.5	130
		3000K	4302	32.1	134
		3500K	4567	32.1	142
LW		4000K	4617	32.1	144
		5000K	4617	32.1	144
		3000K	4041	32.2	125
	R	3500K	4290	32.2	133
		4000K	4337	32.2	135
		5000K	4337	32.2	135

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
ML		3000K	4683	36.0	130
		3500K	4971	36.0	138
		4000K	5026	36.0	140
	R	5000K	5026	36.0	140
		3000K	4448	36.1	123
		3500K	4722	36.1	131
HL		4000K	4774	36.1	132
		5000K	4774	36.1	132
		3000K	5391	39.7	136
	R	3500K	5723	39.7	144
		4000K	5786	39.7	146
		5000K	5786	39.7	146
VL		3000K	5065	39.8	127
		3500K	5377	39.8	135
		4000K	5436	39.8	137
	R	5000K	5436	39.8	137
		3000K	6933	52.9	131
		3500K	7358	52.9	139
XL		4000K	7440	52.9	141
		5000K	7440	52.9	141
		3000K	6542	53.1	123
	R	3500K	6942	53.1	131
		4000K	7019	53.1	132
		5000K	7019	53.1	132
XL		3000K	7798	63.0	124
		3500K	8273	63.0	131
		4000K	8367	63.0	133
	R	5000K	8367	63.0	133
		3000K	7517	62.9	119
		3500K	7894	62.9	126
XL		4000K	7894	62.9	126
		5000K	7517	62.9	120





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35MLG-EDU-C588

Type:
A-ML

Notes:

MHCS22-227151



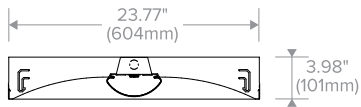
LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

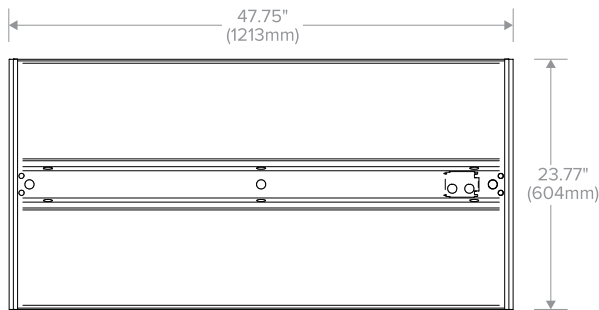
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

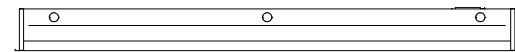
GRID



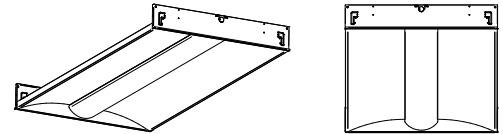
Grid, recessed section



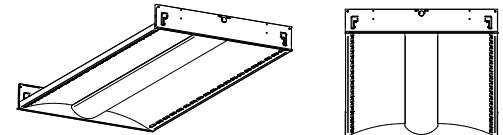
Grid, back of housing



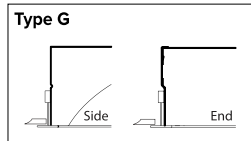
GRID, STATIC



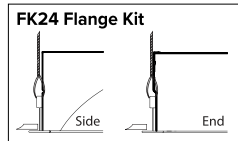
GRID, AIR RETURN



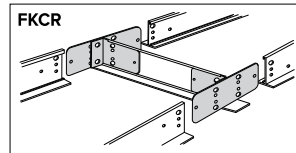
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

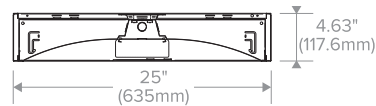
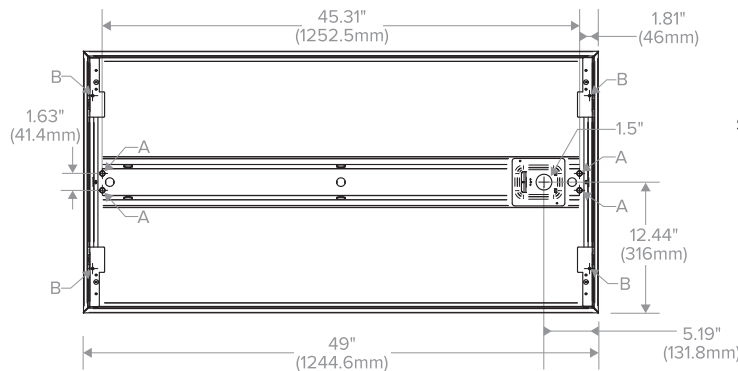


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24s & FKCR adapters:
 Width 24³/₈", Length [48" x (# in row)] + ³/₈".
 Example: (48" x 2) + ³/₈" = 96³/₈"

Flange kit cut out dimension for single unit only: 24³/₈" x 48³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface section (SM)

Surface Mount:
 Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:
 Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

Surface Mount (SM) and Cable Mount (CM), back of housing

* For Cable Mount a 2" x 3" access plate with (4) 3/8" KOs provided in place of Mounting Collar shown.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT24-35MLG-EDU-C588

Notes:

Type:
A-ML

MHCS22-227151



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

PHOTOMETRY

LCAT24-35LWG-EU

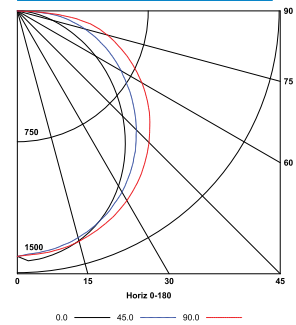
LUMINAIRE DATA

Test No.	16519
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4396
Watts	36.10
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.32

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1098	25
0-40	1804	41
0-60	3240	73.7
0-90	4396	100
0-180	4396	100

POLAR GRAPH



LCAT24-35MLG-EU

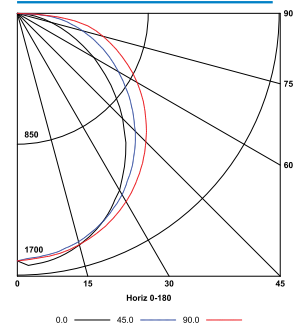
LUMINAIRE DATA

Test No.	16522
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4914
Watts	38.80
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1250	25.4
0-40	2049	41.7
0-60	3648	74.2
0-90	4914	100
0-180	4914	100

POLAR GRAPH



LCAT24-35HLG-EU

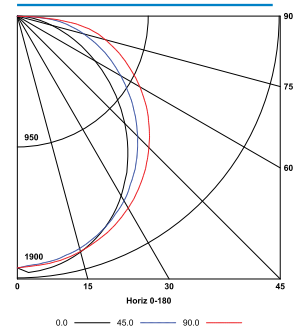
LUMINAIRE DATA

Test No.	16525
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5607
Watts	44.00
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.31

ZONAL LUMEN SUMMARY

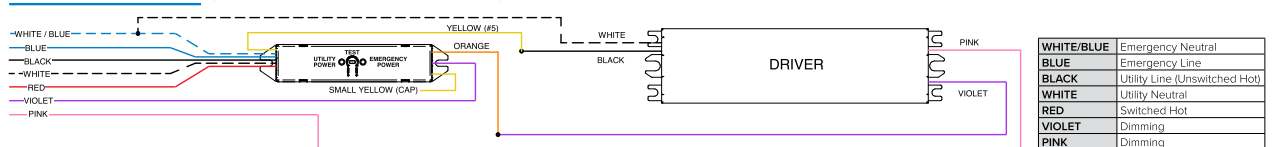
Zone	Lumens	% Luminaire
0-30	1422	25.4
0-40	2333	41.6
0-60	4161	74.2
0-90	5607	100
0-180	5607	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



All product and company names, logos and product identifiers are trademarks or registered trademarks of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.



**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

LCAT22-35MLG-EDU-C588

Type:**B-ML**

Notes:

MHCS22-227151

Columbia
LIGHTING

LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

FEATURES

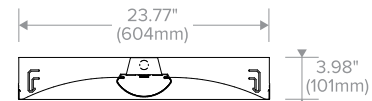
- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters



See Certification Specifications

RELATED PRODUCTS

Ø [LCAT12](#) Ø [LCAT14](#) Ø [LCAT24](#)

CONTROLS TECHNOLOGY

Grid, recessed section

SPECIFICATIONS**CONSTRUCTION**

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1510–4794
Wattage Range	12–35
Efficacy Range (LPW)	121–141
Reported Life (Hours)	L80/60,000



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35MLG-EDU-C588

Type:
B-ML

Notes:

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT22-35MLG-ESDU

CATALOG # _____

LCAT22	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver	
LCAT22 2' x 2' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	VW 1510-1681	G Grid Lay-in ²	Blank	Static	E Fixed Output
	9	>90	35 3500K	MW 1998-2253	SM Surface Mount ^{3,11}	Curve	A Air Return Side Slots	ED 0-10V Dimming ⁶
			40 4000K	LW 2581-2903	CM Cable Suspended Mount ^{3,4}	Rectangular		ED1 0-10V 1% Dimming
			50 5000K	ML 3141-3532				EDD 0-10V Dim-to-Dark
			2750T 2700K-5000K SpectraSync™ Tunable White ¹	HL 4056-4286				ESD Step Dimming ^{6, 7, 13}
			2765T 2700K-6500K SpectraSync™ Tunable White ¹	VL 4253-4794				LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6, 7, 13}
								DALIP DALI Power Bus ^{7, 13, 14}

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	<p>ELL14 Emergency Battery Pack Installed, 1400 Lumens^{7, 8}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{7, 8}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{7, 8, 9}</p> <p>DTS Dimming Bypass Module^{7, 10}</p> <p>C388 3-wire Flex¹⁵</p> <p>C488 4-wire Flex¹⁵</p> <p>C588 5-wire Flex¹⁵</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)³</p> <p>INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)³</p> <p>CP Chicago Plenum</p> <p>SAF SpectraSAFE™ Integrated Surveillance Lighting System¹¹</p>	<p>NX Standalone</p> <p>NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount^{12, 14}</p> <p>NX Networked - Wired</p> <p>NXE NX, Dual SmartPORTS^{13, 14}</p> <p>NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTS^{13, 14}</p> <p>NX Networked - Wireless</p> <p>NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor^{12, 13, 14}</p> <p>NXWE NX Wireless Enabled^{12, 13, 14}</p> <p>NX Networked - Wired/Wireless Hybrid</p> <p>NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTS^{13, 14}</p> <p>NXWD NX Wireless, Dual SmartPORTS^{13, 14}</p> <p>Third-Party Control Options</p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{7, 16, 18}</p> <p>LVR Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only)^{7, 16, 17, 18}</p> <p>LVS Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{7, 16, 17, 18}</p>

Accessories

- FK22** 2' x 2' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL lumen output
- 2 For drywall, order G with Flange Kit Accessory.
- 3 Not available with Air Return (A) air function.
- 4 Order hanger accessories separately.
- 5 IV minimum low-end trim recommended when paired with a 0-10V dimmer
- 6 Limitations apply based on lumen packages (see Product Exceptions & Details)
- 7 Not available in 347V
- 8 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
- 9 Not available for use in Canada
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram

- 11 SpectraSync-NX-SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
- 13 NX is not available with ESD, LUTH, or DALIP driver options
- 14 NX combined with SpectraSync is not available in 347V
- 15 For NX control and Flex Wire together, consult factory

Third-Party Control Options

- 16 LVS, LVR and ODPG only available with DALIP driver option
- 17 VIVE is a trademark of Lutron Electronics Co., Inc.
- 18 Not available with SpectraSync (2750T or 2765T)

For questions about configuration options, contact Hubbell Representative



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**
LCAT22-35MLG-EDU-C588**Type:****B-ML**

Notes:

MHCS22-227151

Columbia
LIGHTING**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE						
	VW	MW	LW	ML	HL	VL
E	X	X	X	X	X	X
ED	X	X	X	X	X	X
ED1	X	X	X	X	X	X
EDD		X	X	X	X	
ESD			X	X	X	X
LUTH		X	X	X		
DALIP	X	X	X	X	X	X
347	X	X	X	X	X	X

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.**NX DISTRIBUTED**
INTELLIGENCE

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense

2 [See link to Philips commissioning](#)3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)**Wireless Switch Accessories¹**

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35MLG-EDU-C588

Type:
B-ML

Notes:

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS (CONTINUED)

SpectraSAFE™ Integrated Surveillance Lighting System

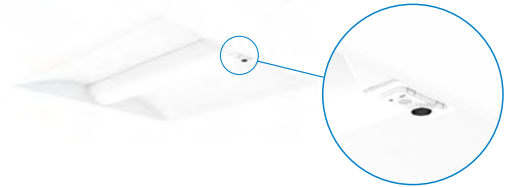
Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

Software & Support

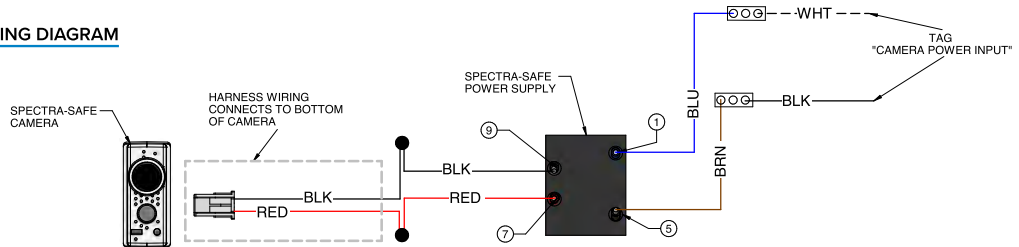
- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

SPECTRASAFE



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (N)
5	VAC in (L)
7	+Vout
9	-Vout



SpectraSync™ Color Tuning Technology:

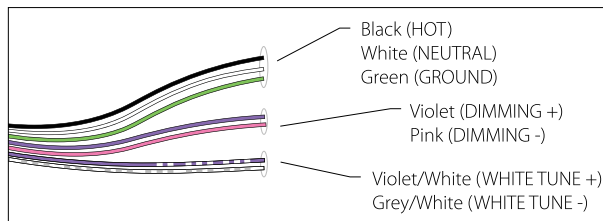
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

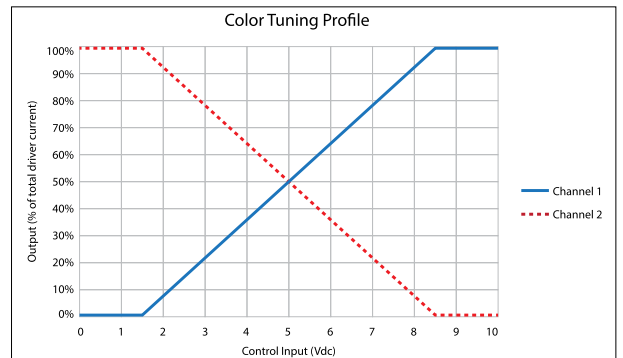


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35MLG-EDU-C588

Notes:

Type:
B-ML

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASync™



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	VW	14	1500	110	1567	115	1595	117	1616	119	1669	123	1644	121
	MW	18	1961	109	2049	114	2086	116	2113	117	2182	121	2149	119
	LW	23	2582	114	2698	119	2747	122	2782	123	2873	127	2830	125
	ML	29	3177	111	3320	116	3380	118	3423	119	3536	123	3483	121
	HL	32	3444	108	3599	113	3664	115	3711	117	3833	121	3775	119
Rectangle	VW	13	1479	110	1545	115	1573	117	1593	119	1645	123	1621	121
	MW	18	1930	109	2017	114	2053	116	2080	117	2148	121	2116	120
	LW	23	2547	113	2661	118	2709	120	2743	121	2834	125	2791	124
	ML	29	3127	109	3267	114	3326	116	3368	117	3479	121	3427	119
	HL	32	3391	107	3543	112	3607	114	3653	116	3773	119	3717	118

DELIVERED LUMENS [View 90 CRI data on supplemental document](#)

Product Availability 80 CRI							
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW		
VW		3000K	1561	12.3	127		
		3500K	1663	12.3	135		
		4000K	1681	12.3	137		
		5000K	1681	12.3	137		
		3000K	1510	12.3	123		
	R	3500K	1609	12.2	132		
		4000K	1627	12.2	133		
		5000K	1627	12.2	133		
		MW		3000K	2099	16.4	128
				3500K	2229	16.4	136
4000K	2253			16.4	138		
5000K	2253			16.4	138		
3000K	1998			16.4	122		
R	3500K		2121	16.4	129		
	4000K		2144	16.4	131		
	5000K		2144	16.4	131		
	LW			3000K	2705	20.6	131
				3500K	2871	20.6	139
4000K		2903		20.6	141		
5000K		2903		20.6	141		
3000K		2581		20.6	125		
R		3500K	2740	20.6	133		
		4000K	2770	20.6	134		
		5000K	2770	20.6	134		
		ML		3000K	3291	25.8	127
				3500K	3494	25.8	135
4000K	3532			25.8	137		
5000K	3532			25.8	137		
3000K	3141			25.9	121		
R	3500K		3334	25.9	129		
	4000K		3371	25.9	130		
	5000K		3371	25.9	130		

Product Availability 80 CRI (continued)							
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW		
HL		3000K	4196	33.5	125		
		3500K	4239	33.1	128		
		4000K	4286	33.1	129		
		5000K	4286	33.1	129		
		3000K	4056	33.5	121		
	R	3500K	4100	33.1	124		
		4000K	4146	33.1	125		
		5000K	4146	33.1	125		
		VL		3000K	4468	35.1	127
				3500K	4741	35.1	135
4000K	4794			35.1	136		
5000K	4794			35.1	136		
3000K	4253			35.2	121		
R	3500K		4513	35.2	128		
	4000K		4564	35.2	130		
	5000K		4564	35.2	130		





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35MLG-EDU-C588

Notes:

Type:

B-ML

MHCS22-227151



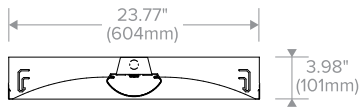
LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

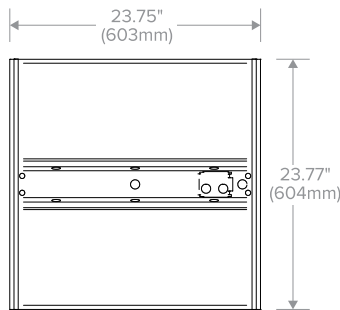
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

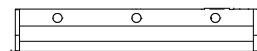
GRID



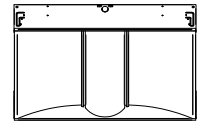
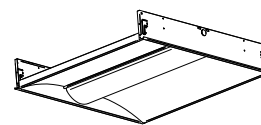
Grid, recessed section



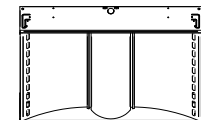
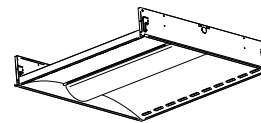
Grid, back of housing



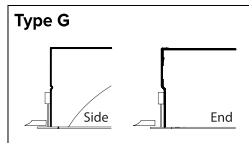
GRID, STATIC



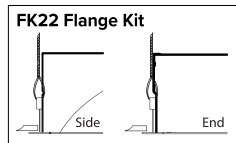
GRID, AIR RETURN



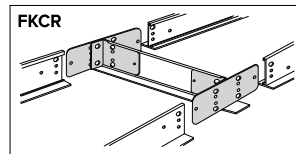
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

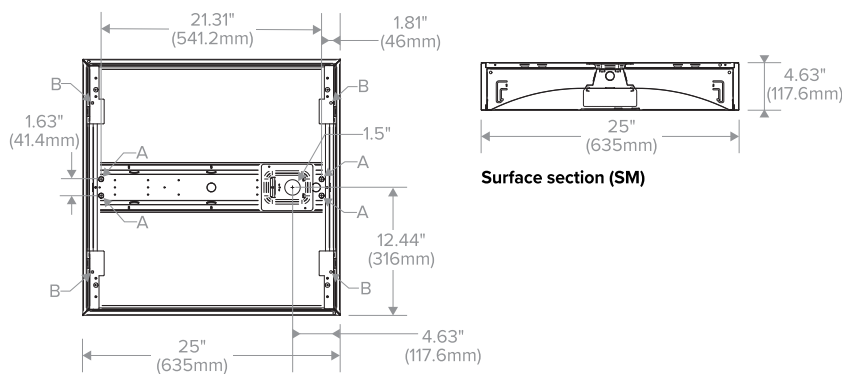


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 & (1) FKCR)

Row cut out dimensions using FK22s & FKCR adapters: Width 24³/₈", Length [24" x (# in row)] + ³/₈". Example: (24" x 2) + ³/₈" = 48³/₈"

Flange kit cut out dimension for single unit only: 24³/₈" x 24³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount (SM) and Cable Mount (CM), back of housing

* For Cable Mount a 2' x 3' access plate with (4) ⁷/₈" KOs provided in place of Mounting Collar shown.

Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:

Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35MLG-EDU-C588

Notes:

Type:
B-ML

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

PHOTOMETRY

LCAT22-35LWG-EU

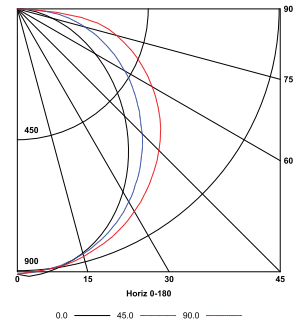
LUMINAIRE DATA

Test No.	16540
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	2769
Watts	22.60
Efficacy	123
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	705	25.5
0-40	1154	41.7
0-60	2056	74.3
0-90	2769	100
0-180	2769	100

POLAR GRAPH



LCAT22-35MLG-EU

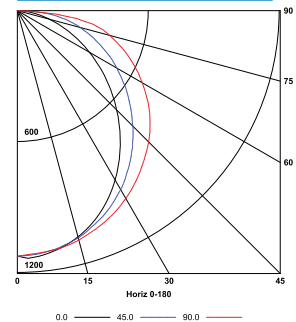
LUMINAIRE DATA

Test No.	16543
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3420
Watts	28.70
Efficacy	119
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	871	25.5
0-40	1424	41.7
0-60	2539	74.2
0-90	3420	100
0-180	3420	100

POLAR GRAPH



LCAT22-35HLG-EU

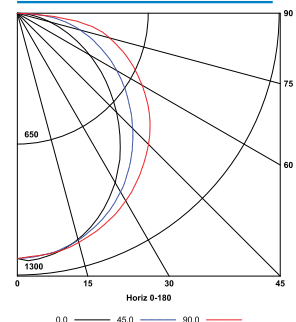
LUMINAIRE DATA

Test No.	16546
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3707
Watts	31.80
Efficacy	117
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

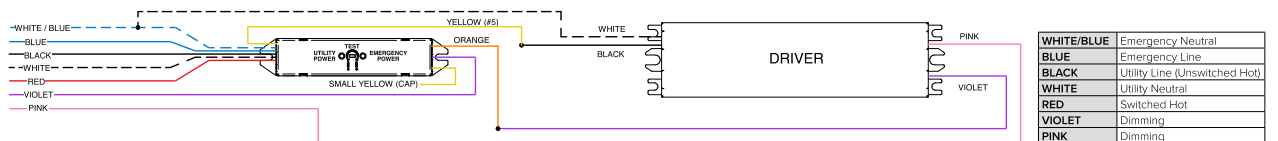
Zone	Lumens	% Luminaire
0-30	943	25.4
0-40	1543	41.6
0-60	2751	74.2
0-90	3707	100
0-180	3707	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



All product and company names, logos and product identifiers are trademarks or registered trademarks of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**
LCAT22-35HLG-EDU-C588**Type:****B-HL**

Notes:

MHCS22-227151

Columbia
LIGHTING**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____



See Certification Specifications

RELATED PRODUCTSØ [LCAT12](#) Ø [LCAT14](#) Ø [LCAT24](#)**CONTROLS TECHNOLOGY**

Grid, recessed section

SPECIFICATIONS**CONSTRUCTION**

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1510–4794
Wattage Range	12–35
Efficacy Range (LPW)	121–141
Reported Life (Hours)	L80/60,000



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35HLG-EDU-C588

Type:
B-HL

Notes:

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT22-35MLG-ESDU

CATALOG # _____

LCAT22 Model	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver	
LCAT22 2' x 2' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	VW 1510-1681	G Grid Lay-in ²	Blank	Static	E Fixed Output
	9	>90	35 3500K	MW 1998-2253	SM Surface Mount ^{3,11}	Curve	A Air Return Side Slots	ED 0-10V Dimming ⁸
			40 4000K	LW 2581-2903	CM Cable Suspended Mount ^{3,4}	R Rectangular		ED1 0-10V 1% Dimming
			50 5000K	ML 3141-3532				EDD 0-10V Dim-to-Dark
			2750T 2700K-5000K SpectraSync™ Tunable White ¹	HL 4056-4286				ESD Step Dimming ^{6, 7, 13}
			2765T 2700K-6500K SpectraSync™ Tunable White ¹	VL 4253-4794				LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6, 7, 13}
								DALIP DALI Power Bus ^{7, 13, 14}

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	<p>ELL14 Emergency Battery Pack Installed, 1400 Lumens^{7, 8}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{7, 8}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{7, 8, 9}</p> <p>DTS Dimming Bypass Module^{7, 10}</p> <p>C388 3-wire Flex¹⁵</p> <p>C488 4-wire Flex¹⁵</p> <p>C588 5-wire Flex¹⁵</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)³</p> <p>INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)³</p> <p>CP Chicago Plenum</p> <p>SAF SpectraSAFE™ Integrated Surveillance Lighting System¹¹</p>	<p>NX Standalone</p> <p>NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount^{12, 14}</p> <p>NX Networked - Wired</p> <p>NXE NX, Dual SmartPORTS^{13, 14}</p> <p>NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTS^{13, 14}</p> <p>NX Networked - Wireless</p> <p>NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor^{12, 13, 14}</p> <p>NXWE NX Wireless Enabled^{12, 13, 14}</p> <p>NX Networked - Wired/Wireless Hybrid</p> <p>NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTS^{13, 14}</p> <p>NXWD NX Wireless, Dual SmartPORTS^{13, 14}</p> <p>Third-Party Control Options</p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{7, 16, 18}</p> <p>LVR Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only)^{7, 16, 17, 18}</p> <p>LVS Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{7, 16, 17, 18}</p>

Accessories

- FK22** 2' x 2' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL lumen output
- 2 For drywall, order G with Flange Kit Accessory.
- 3 Not available with Air Return (A) air function.
- 4 Order hanger accessories separately.
- 5 IV minimum low-end trim recommended when paired with a 0-10V dimmer
- 6 Limitations apply based on lumen packages (see Product Exceptions & Details)
- 7 Not available in 347V
- 8 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
- 9 Not available for use in Canada
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram

- 11 SpectraSync/NX/SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
- 13 NX is not available with ESD, LUTH, or DALIP driver options
- 14 NX combined with SpectraSync is not available in 347V
- 15 For NX control and Flex Wire together, consult factory

Third-Party Control Options

- 16 LVS, LVR and ODPG only available with DALIP driver option
- 17 VIVE is a trademark of Lutron Electronics Co., Inc.
- 18 Not available with SpectraSync (2750T or 2765T)

For questions about configuration options, contact Hubbell Representative



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LCAT22-35HLG-EDU-C588

Type:**B-HL**

Notes:

MHCS22-227151

**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE						
	VW	MW	LW	ML	HL	VL
E	X	X	X	X	X	X
ED	X	X	X	X	X	X
ED1	X	X	X	X	X	X
EDD		X	X	X	X	
ESD			X	X	X	X
LUTH		X	X	X		
DALIP	X	X	X	X	X	X
347	X	X	X	X	X	X

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense

2 [See link to Philips commissioning](#)3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)**Wireless Switch Accessories¹**

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white





Job Name:

Southeast Water Conservancy - Remodel
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LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
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 CATALOG #: _____

CONTROLS (CONTINUED)

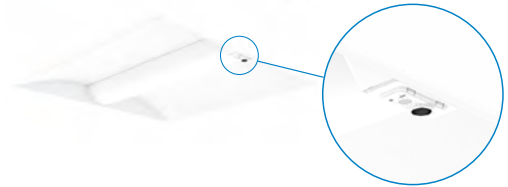
SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

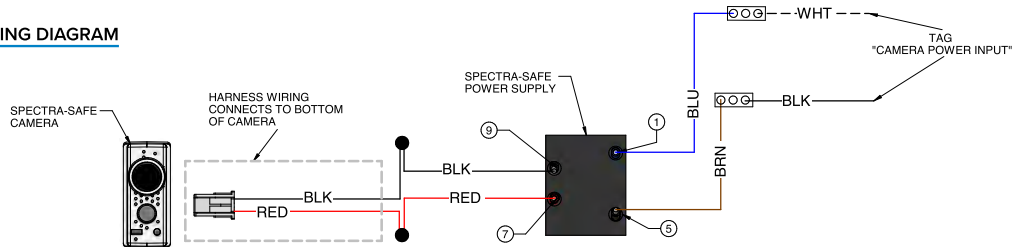
Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (N)
5	VAC in (L)
7	+Vout
9	-Vout



SpectraSync™ Color Tuning Technology:

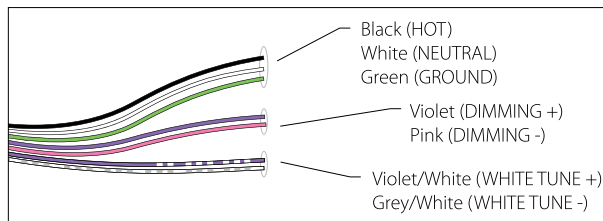
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

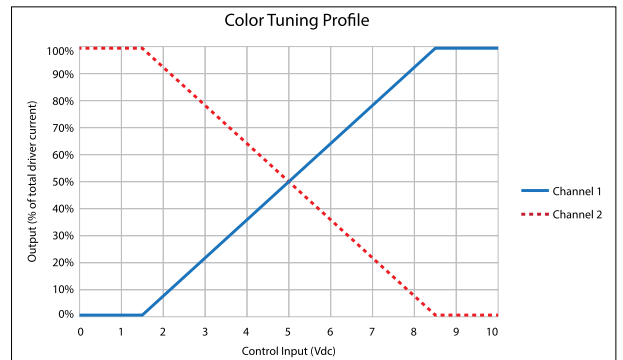


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35HLG-EDU-C588

Notes:

Type:

B-HL

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASync™



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	VW	14	1500	110	1567	115	1595	117	1616	119	1669	123	1644	121
	MW	18	1961	109	2049	114	2086	116	2113	117	2182	121	2149	119
	LW	23	2582	114	2698	119	2747	122	2782	123	2873	127	2830	125
	ML	29	3177	111	3320	116	3380	118	3423	119	3536	123	3483	121
	HL	32	3444	108	3599	113	3664	115	3711	117	3833	121	3775	119
Rectangle	VW	13	1479	110	1545	115	1573	117	1593	119	1645	123	1621	121
	MW	18	1930	109	2017	114	2053	116	2080	117	2148	121	2116	120
	LW	23	2547	113	2661	118	2709	120	2743	121	2834	125	2791	124
	ML	29	3127	109	3267	114	3326	116	3368	117	3479	121	3427	119
	HL	32	3391	107	3543	112	3607	114	3653	116	3773	119	3717	118

DELIVERED LUMENS [View 90 CRI data on supplemental document](#)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
VW		3000K	1561	12.3	127
		3500K	1663	12.3	135
		4000K	1681	12.3	137
		5000K	1681	12.3	137
	R	3000K	1510	12.3	123
		3500K	1609	12.2	132
		4000K	1627	12.2	133
		5000K	1627	12.2	133
MW		3000K	2099	16.4	128
		3500K	2229	16.4	136
		4000K	2253	16.4	138
		5000K	2253	16.4	138
	R	3000K	1998	16.4	122
		3500K	2121	16.4	129
		4000K	2144	16.4	131
		5000K	2144	16.4	131
LW		3000K	2705	20.6	131
		3500K	2871	20.6	139
		4000K	2903	20.6	141
		5000K	2903	20.6	141
	R	3000K	2581	20.6	125
		3500K	2740	20.6	133
		4000K	2770	20.6	134
		5000K	2770	20.6	134
ML		3000K	3291	25.8	127
		3500K	3494	25.8	135
		4000K	3532	25.8	137
		5000K	3532	25.8	137
	R	3000K	3141	25.9	121
		3500K	3334	25.9	129
		4000K	3371	25.9	130
		5000K	3371	25.9	130

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
HL		3000K	4196	33.5	125
		3500K	4239	33.1	128
		4000K	4286	33.1	129
		5000K	4286	33.1	129
	R	3000K	4056	33.5	121
		3500K	4100	33.1	124
		4000K	4146	33.1	125
		5000K	4146	33.1	125
VL		3000K	4468	35.1	127
		3500K	4741	35.1	135
		4000K	4794	35.1	136
		5000K	4794	35.1	136
	R	3000K	4253	35.2	121
		3500K	4513	35.2	128
		4000K	4564	35.2	130
		5000K	4564	35.2	130





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35HLG-EDU-C588

Notes:

Type:
B-HL

MHCS22-227151



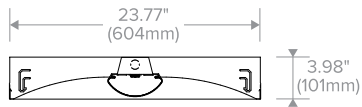
LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

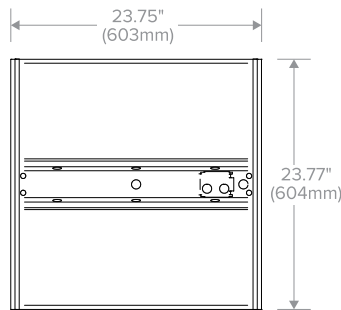
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

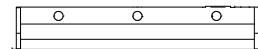
GRID



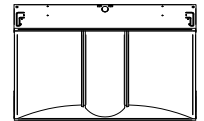
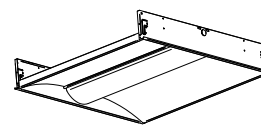
Grid, recessed section



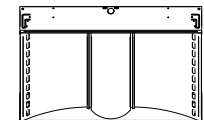
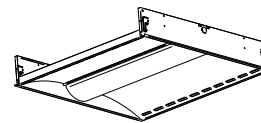
Grid, back of housing



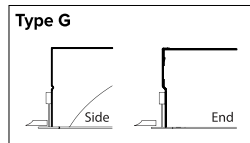
GRID, STATIC



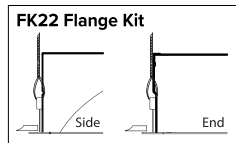
GRID, AIR RETURN



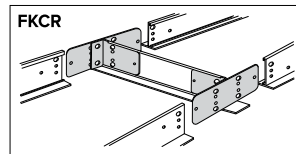
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

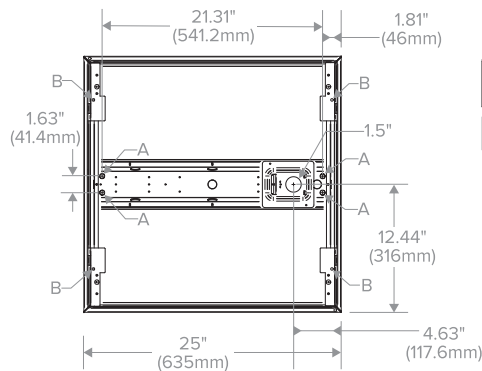


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 & (1) FKCR)

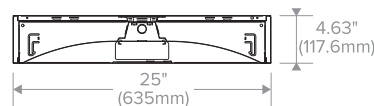
Row cut out dimensions using FK22s & FKCR adapters: Width 24 3/8", Length [24" x (# in row)] + 3/8". Example: (24" x 2) + 3/8" = 48 3/8"

Flange kit cut out dimension for single unit only: 24 3/8" x 24 3/8"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount (SM) and Cable Mount (CM), back of housing



Surface section (SM)

Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:

Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

* For Cable Mount a 2' x 3" access plate with (4) 3/8" KOs provided in place of Mounting Collar shown.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LCAT22-35HLG-EDU-C588

Notes:

Type:
B-HL

MHCS22-227151



LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

PHOTOMETRY

LCAT22-35LWG-EU

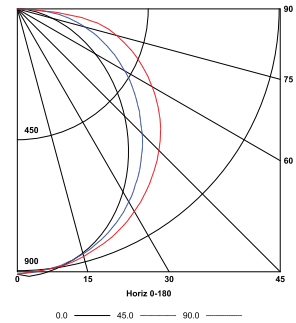
LUMINAIRE DATA

Test No.	16540
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	2769
Watts	22.60
Efficacy	123
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	705	25.5
0-40	1154	41.7
0-60	2056	74.3
0-90	2769	100
0-180	2769	100

POLAR GRAPH



LCAT22-35MLG-EU

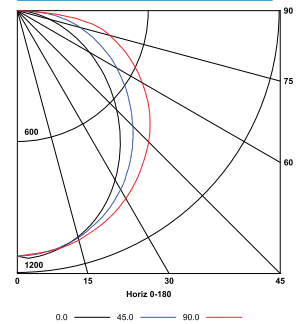
LUMINAIRE DATA

Test No.	16543
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3420
Watts	28.70
Efficacy	119
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	871	25.5
0-40	1424	41.7
0-60	2539	74.2
0-90	3420	100
0-180	3420	100

POLAR GRAPH



LCAT22-35HLG-EU

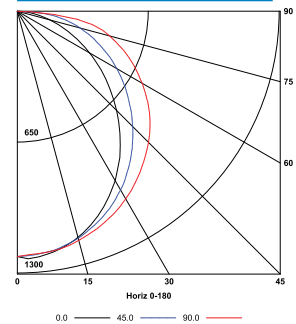
LUMINAIRE DATA

Test No.	16546
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3707
Watts	31.80
Efficacy	117
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

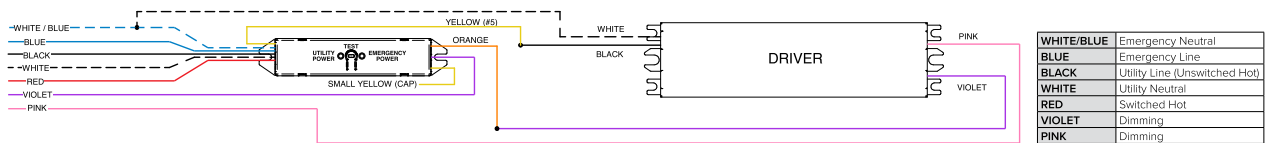
Zone	Lumens	% Luminaire
0-30	943	25.4
0-40	1543	41.6
0-60	2751	74.2
0-90	3707	100
0-180	3707	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



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Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 MPS4-35ML-CW-EDU

Type:

C

Notes:

MHCS22-227151

Columbia
 LIGHTING

MPS

MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

FEATURES

- Uninterrupted ribbon of light; row mounting optional
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Three lens options as well as less lens (NL)
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, wall mount or suspended

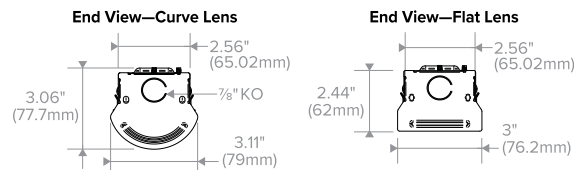


CONTROLS TECHNOLOGY



RELATED PRODUCTS

- [Revalume™ Linear Wrap](#)
- [Reverie™ Decorative Low Bay](#)



SPECIFICATIONS

CONSTRUCTION

- Housing, wireway, and ends are formed from code-gauge steel
- Housing components act as heat sink for LED heat dissipation
- White painted parts are treated with a five stage phosphate bonding process and finished with high reflectance baked enamel

OPTICS

- Available with or without frosted acrylic lens

INSTALLATION

- Knockouts are provided for electrical access and mounting

ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance
- Driver options include fixed output for on/off function, step dimming (high/low/off), or continuous 0–10V dimming
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life
- Drivers < 10% THD at 120V, power factor > 0.95

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products
- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate cCSA labels
- Damp Location label standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options

CERTIFICATIONS (CONTINUED)

- Adheres to LM79, LM80, and TM21 industry standards
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 10 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1600–16,732
Wattage Range	13–113
Efficacy Range (LPW)	128–155
Reported Life (Hours)	L80/60,000





Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
MPS4-35ML-CW-EDU

Type:
C
MHCS22-227151

Notes:



MPS
MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____

ORDERING GUIDE

Example: MPS4-40ML-CW-EDU

CATALOG # _____

MPS		Color Temp		Nominal Lumens		Lens		Distribution ³		Driver	
Model	Size¹	CRI									
MPS	2' 2'	Blank >80	30	3000K	XW	4' (2600), 8' (5200)	C Curve, Frosted Acrylic	N Narrow Distribution ⁴	E Fixed Output		
MultiPurpose Linear	4' 4'	9 90	35	3500K	VW	2'(1600), 4'(3300), 8' (6600)		W Wide Distribution	ED 0-10V Dimming ⁵		
	8' 8'		40	4000K	MW	2'(2200), 4'(3600), 8' (7200)	F Flat, Frosted Acrylic		ED1 0-10V 1% Dimming		
			50	5000K	LW	2'(2400), 4'(4000), 8' (7900)	NL Less Lens		EDD 0-10V Dim-to-Dark		
			2750T	2700K-5000K SpectraSync ⁶ Tunable White ²	ML	2'(3400), 4'(4500), 8' (8900)	CP Curve, Frosted Polycarbonate		ESD Step Dimming		
					HL	2'(3700), 4'(5800), 8' (11,500)			LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ⁶		
			2765T	2700K-6500K SpectraSync ⁶ Tunable White ²	VL	4' (6800), 8' (13,500)			DALIP DALI Power Bus ⁷		
					XL	4' (7800), 8' (15,500)					

Voltage	Options
U 120V-277V	ELL14 Emergency Battery Pack, 10W ^{8, 9, 10}
347 347V (E, ED, ED1 only)	ELL14H2 Emergency Battery Pack, 2-Hour Run Time ^{8, 9, 10, 11}
	GLR Fast Blow Fuse
	GTD Generator Transfer Device ¹²
	DTS Dimming Bypass Module ¹³
	MPSCE Injection Molded ABS Material Curve Endcap ²⁴
	MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black
	MPSFE Injection Molded ABS Material Flat Endcap ²⁴
	MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black
	MB Matte Black
	ZT ZET Metallic Silver
	PAF Painted After Fabrication
	SAF SpectraSAFE™ Integrated Surveillance Lighting System ¹⁴
	MST MASTER fixture that controls one or more SATELLITE fixtures in a continuous row application ^{16, 17, 18, 19, 20, 21, 22}
	SAT SATELLITE fixture controlled by MASTER fixture in a continuous row application ^{17, 18, 19, 20, 21, 22}
	INT Intermediate (provides ends with wiring access for continuous row mounting) ^{19, 21, 22, 23}
	EOR End of Row (provides end wiring access for continuous row mounting) ^{19, 21, 22, 23}

Control Options ^{23, 24, 25}
NX / BTSMP Standalone
NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount ^{24, 28}
BTSL BTSMP-LMI, PIR BT Occupancy/Daylight ^{27, 28}
NX Networked - Wired
NXE NX, Dual SmartPORTs ^{15, 27, 28, 29}
NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs ^{15, 27, 28, 29}
NX Networked - Wireless
NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor ^{15, 27, 28}
NXWE NX Wireless Enabled ^{15, 27, 28}
Third-Party Control Options
ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{30, 31}
LVR Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{30, 31, 32}
LVS Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) ^{30, 31, 32}

Accessories	
<input type="checkbox"/> S18 18" Stern, Canopy	<input type="checkbox"/> MPSCRK-C Continuous Row Kit, Curve
<input type="checkbox"/> SS18 18" Swivel Stern-45° Swivel	<input type="checkbox"/> MPSCRK-F Continuous Row Kit, Flat
<input type="checkbox"/> CM24SCF3-KIT 24" Adjustable Cable Mounting Kit, 3-wire feed ²³	<input type="checkbox"/> MPSWG2 2" Wire Guard
<input type="checkbox"/> CM48SCF3-KIT 48" Adjustable Cable Mounting Kit, 3-wire feed ²³	<input type="checkbox"/> MPSWG4 4" Wire Guard, two Required for 8' Fixture
<input type="checkbox"/> CM24NF-KIT Single Point Non-Feed Cable Mount with Canopy, Single - 24" ³³	<input type="checkbox"/> MPSCE Injection Molded ABS Material Curve Endcap
<input type="checkbox"/> CM48NF-KIT Single Point Non-Feed Cable Mount with Canopy, Single - 48" ³³	<input type="checkbox"/> MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black
<input type="checkbox"/> CSHC Chain Hanger Assembly	<input type="checkbox"/> MPSFE Injection Molded ABS Material Flat Endcap
<input type="checkbox"/> MPSZT Zip Tee Hanger - 1 1/2" Spacer on T-Bar Ceiling	<input type="checkbox"/> MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black
<input type="checkbox"/> MPSTH Slide Tong Hanger	

- Notes:
- Foil continuous row mounting, see [Continuous Row Mount Example Guide](#) on page 3
 - See [SpectraSync and NX Availability Table](#) on page 6
 - Applicable to lens only
 - Only available with Curve, Frosted Acrylic lens
 - IV minimum low-end trim recommended when paired with a 0-10V dimmer
 - Not available in VL or XL packages
 - DALIP only available when LVS, LVR or ODPG control options are selected
 - Delivered Emergency Lumens = ELL14 = 1210 lms
 - Not available in 2ft size or with thru wire on XL, 4ft, and 8ft
 - Emergency battery pack max ambient temperature: 25°C
 - Not available for use in Canada
 - Only available with fixed output driver
 - For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Not available with ESD driver option. Universal voltage only. DTS with 2' cannot be combined with Controls or SpectraSync options. See page 10 for wiring diagram
 - SpectraSync+NX+SAF can not be configured. Only available with NXE or NXWE. Not available in 347V
 - For use with suspended mounting options only. Not available on surface mount options
- Continuous-Row Options:**

- MST option not available with INT row position
 - Multiple SAT fixtures can be controlled by one MST fixture. Any one SAT fixture can have no more than one connected MST fixture
 - NX is supported for this application, consult Brand for use with other controls systems
 - Not available with DTS, GTD, ATSD
 - Not available with LUTH
 - All fixtures in a row must be the same driver type and voltage
 - Includes quick-connect wiring harness
 - Suspension support required at every fixture coupling; see Mounting Accessories Guide
- NX In-Fixture Control Options:**
- Standard PAF when this option is chosen
 - Control Options include Injection Molded ABS End Cap
 - Fixtures with Control Options are Dry Location rated only
 - Only available with 0-10V dimming drivers (ED, ED1 & EDD)
 - Not available in 2ft when SpectraSync and SpectraSAFE are chosen
 - Not available with surface mounting
- Third-Party Control Options:**
- LVS, LVR and ODPG only available with DALIP driver option
 - Not available with SpectraSync (2750T or 2765T)
 - VIVE is a trademark of Lutron Electronics Co., Inc
- Accessory Notes:**
- See [Columbia Mounting Accessories page](#) for additional options





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 MPS4-35ML-CW-EDU

Type:

C

Notes:

MHCS22-227151



MPS
 MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE (CONTINUED)

CONTINUOUS ROW MOUNT EXAMPLE GUIDE					
Continuous Row Length	MPS4	MPS8	MPSCRK-*	CM**SCF*-KIT	CM**NF-KIT
12' — Option 1	1	1	1	1	1
12' — Option 2	3	0	2	1	1
16' — Option 1	0	2	1	1	1
16' — Option 2	2	1	2	1	2
32' — Option 1	0	4	3	2	1
32' — Option 2	2	3	4	2	1

[Link to Columbia Mounting Accessories page](#)

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE — 2'					
	VW	MW	LW	ML	HL
E	x	x	x	x	x
ED	x	x	x	x	x
ED1	x	x	x	x	x
EDD	x	x	x	x	x
ESD	x	x	x	x	x
LUTH	x	x	x	x	x
347	x	x	x	x	x
DALIP	x	x	x	x	x

DRIVER AVAILABILITY TABLE — 4' & 8'								
	XW	VW	MW	LW	ML	HL	VL	XL
E	x	x	x	x	x	x	x	x
ED	x	x	x	x	x	x	x	x
ED1	x	x	x	x	x	x	x	x
EDD	x	x	x	x	x	x	x	x
ESD	x	x	x	x	x	x	x	x
347	x	x	x	x	x	x	x	x
LUTH	x	x	x	x	x	x		
DALIP	x	x	x	x	x	x	x	x

TEMPERATURE TABLE (C°) — 4' & 8'											
		80 CRI									
		E/ED/ED1		ESDU		ED347		EDD		LUT	
Size	Lumen Package	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount
2'	VW	35	40	35	40	35	40	35	40	35	40
	MW	35	40	35	40	35	40	35	40	35	40
	LW	35	40	35	40	35	40	35	40	35	40
	ML	35	40	35	40	35	40	35	40	35	40
	HL	30	35	30	35	30	35	30	35	30	35
	XW	35	45	35	45	35	45	30	35	30	35
4'	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	HL	35	40	35	40	35	40	25	30	30	35
	VL	30	30	30	30	30	30	30	30	—	—
8'	XL*	25	25	25	25	25	25	25	25	—	—
	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
VL	30	30	30	30	30	30	30	30	—	—	
XL*	25	25	25	25	25	25	25	25	—	—	

*XL not available with thru wire





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 MPS4-35ML-CW-EDU

Notes:

Type:

C

MHCS22-227151



MPS
 MULTIPURPOSE LINEAR

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²

¹ NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

² To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

¹ Wireless switches only compatible with ODPG Philips EasySense

² [See link to Philips commissioning](#)

³ Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)

Wireless Switch Accessories¹

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white



SPECTRASAFE

SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL



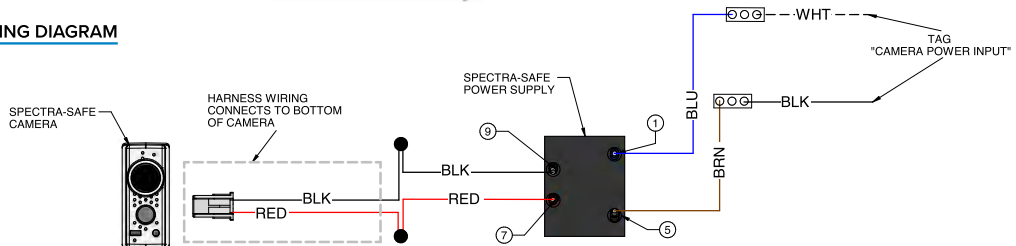
Note: Camera and end cap add 2.2" to the overall length.

Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin#	Single
1	VAC in (N)
5	VAC in (L)
7	+Vout
9	-Vout





Job Name:
 Southeast Water Conservancy - Remodel
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 MPS4-35ML-CW-EDU

Type:
C
 MHCS22-227151

Notes:



MPS
 MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS (CONTINUED)

SpectraSync™ Color Tuning Technology:

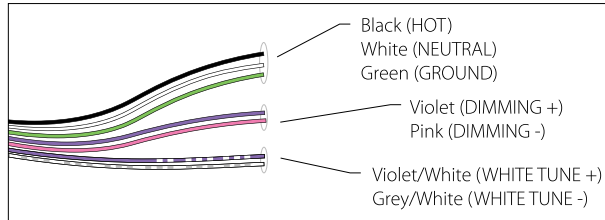
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH™ COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

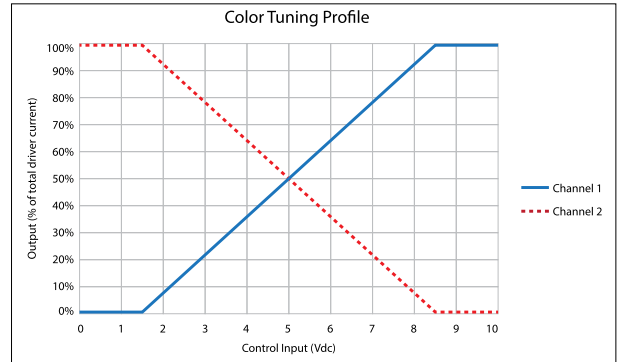


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NDTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

SPECTRASYNCH™ AND NX AVAILABILITY TABLE



Size	Lumen package	Only With 80 CRI			Only With 80 CRI		
		No Battery Pack			With Battery Pack		
		CTC	NX	CTC+NX	CTC	NX	CTC+NX
2ft	VW	Y	Y	N	—	—	—
	MW	Y	Y	N	—	—	—
	LW	Y	Y	N	—	—	—
	ML	N	Y	N	—	—	—
	HL	N	Y	N	—	—	—
4ft	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	Y	Y	Y	Y	Y	Y
	LW	Y	Y	Y	Y	Y	Y
	ML	Y	Y	Y	Y	Y	Y
	HL	Y	Y	Y	Y	Y	Y
	VL	N	Y	N	N	Y	N
8ft	XL	N	Y	N	N	Y	N
	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	N	Y	N	N	Y	N
	LW	N	Y	N	N	Y	N
	ML	N	Y	N	N	Y	N
	HL	N	Y	N	N	Y	N
VL	N	Y	N	N	Y	N	
XL	N	Y	N	N	Y	N	





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
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Catalog Number:
 MPS4-35ML-CW-EDU

Notes:

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C

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MPS
 MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS

STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW	
MPS4-XW	3500K	CURVE	WIDE	2,544	18.1	141	
		CURVE	NARROW	2,490	18.1	138	
		FLAT	WIDE	2,460	18.1	136	
	4000K	No Lens			2,719	18.1	150
		CURVE	WIDE		2,573	18.1	142
		CURVE	NARROW		2,518	18.1	139
		FLAT	WIDE		2,488	18.1	137
		No Lens			2,750	18.1	152
		CURVE	WIDE		3,223	23.6	137
MPS4-VW	3500K	CURVE	NARROW	3,221	23.6	137	
		FLAT	WIDE	3,073	23.5	131	
		No Lens			3,454	23.6	146
	4000K	CURVE	WIDE		3,258	23.6	138
		CURVE	NARROW		3,256	23.6	138
		FLAT	WIDE		3,107	23.5	132
		No Lens			3,492	23.6	148
		CURVE	WIDE		3,541	26.7	133
		CURVE	NARROW		3,504	26.7	131
MPS4-MW	3500K	FLAT	WIDE	3,453	26.8	128	
		No Lens			3,811	26.7	143
		CURVE	WIDE		3,580	26.7	134
	4000K	CURVE	NARROW		3,543	26.7	133
		FLAT	WIDE		3,491	26.8	130
		No Lens			3,853	26.7	144
		CURVE	WIDE		3,878	27.3	142
		CURVE	NARROW		3,836	27.4	140
		FLAT	WIDE		3,753	27.4	137
MPS4-LW	3500K	No Lens			4,172	27.4	152
		CURVE	WIDE		3,921	27.3	144
		CURVE	NARROW		3,878	27.4	142
	4000K	FLAT	WIDE		3,794	27.4	138
		No Lens			4,218	27.4	154
		CURVE	WIDE		4,419	31.6	140
		CURVE	NARROW		4,370	31.6	138
		FLAT	WIDE		4,230	31.6	134
		No Lens			4,784	31.7	151
MPS4-ML	3500K	CURVE	WIDE		4,468	31.6	141
		CURVE	NARROW		4,418	31.6	140
		FLAT	WIDE		4,277	31.6	135
	4000K	No Lens			4,837	31.7	153
		CURVE	WIDE		5,658	41.7	136
		CURVE	NARROW		5,592	41.7	134
		FLAT	WIDE		5,393	41.5	130
		No Lens			5,489	41.8	131
		CURVE	WIDE		5,720	41.7	137
MPS4-HL	3500K	CURVE	NARROW		5,654	41.7	136
		FLAT	WIDE		5,452	41.5	131
		No Lens			5,549	41.8	133
	4000K	CURVE	WIDE		6,643	47.1	141
		CURVE	NARROW		6,571	47.1	140
		FLAT	WIDE		4,983	36.3	137
		No Lens			7,217	47.2	153
		CURVE	WIDE		6,717	47.1	143
		CURVE	NARROW		6,644	47.1	141
MPS4-VL	3500K	FLAT	WIDE		5,038	36.3	139
		No Lens			7,297	47.2	155
		CURVE	WIDE		7,646	56.4	136
	4000K	CURVE	NARROW		7,522	56.4	133
		FLAT	WIDE		7,325	56.6	129
		No Lens			8,273	56.6	146
		CURVE	WIDE		7,732	56.4	128
		CURVE	NARROW		7,608	56.4	135
		FLAT	WIDE		7,408	56.6	131
MPS4-XL	3500K	No Lens			8,366	56.6	148
		CURVE	WIDE		5,089	36.2	141
		CURVE	NARROW		4,980	36.2	138
	4000K	FLAT	WIDE		4,921	36.2	136
		No Lens			5,439	36.2	150
		CURVE	WIDE		5,146	36.2	142
		CURVE	NARROW		5,037	36.2	139
		FLAT	WIDE		4,977	36.2	137
		No Lens			5,500	36.2	152
MPS8-XW	3500K	CURVE	WIDE		5,089	36.2	141
		CURVE	NARROW		4,980	36.2	138
		FLAT	WIDE		4,921	36.2	136
	4000K	No Lens			5,439	36.2	150
		CURVE	WIDE		5,146	36.2	142
		CURVE	NARROW		5,037	36.2	139
		FLAT	WIDE		4,977	36.2	137
		No Lens			5,500	36.2	152





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 MPS4-35ML-CW-EDU

Notes:

Type:

C

MHCS22-227151



MPS
 MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS (CONTINUED)

STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW	
MPS8-VW	3500K	CURVE	WIDE	6,446	47.2	137	
		CURVE	NARROW	6,442	47.2	136	
		FLAT	WIDE	6,146	47	131	
	4000K	No Lens			6,908	47.2	146
		CURVE	WIDE		6,517	47.2	138
		CURVE	NARROW		6,513	47.2	138
		FLAT	WIDE		6,214	47	132
		No Lens			6,984	47.2	148
		CURVE	WIDE		7,082	53.4	133
MPS8-MW	3500K	CURVE	NARROW	7,008	53.4	131	
		FLAT	WIDE	6,906	53.6	129	
		No Lens			7,622	53.4	143
	4000K	CURVE	WIDE		7,160	53.4	134
		CURVE	NARROW		7,085	53.4	133
		FLAT	WIDE		6,982	53.6	130
		No Lens			7,706	53.4	144
		CURVE	WIDE		7,756	54.6	142
		CURVE	NARROW		7,672	54.8	140
MPS8-LW	3500K	FLAT	WIDE	7,506	54.8	137	
		No Lens			8,344	54.8	152
		CURVE	WIDE		7,841	54.6	144
	4000K	CURVE	NARROW		7,756	54.8	142
		FLAT	WIDE		7,589	54.8	138
		No Lens			8,436	54.8	154
		CURVE	WIDE		8,838	63.2	140
		CURVE	NARROW		8,740	63.2	138
		FLAT	WIDE		8,460	63.2	134
MPS8-ML	3500K	No Lens			9,568	63.4	151
		CURVE	WIDE		8,935	63.2	141
		CURVE	NARROW		8,836	63.2	140
	4000K	FLAT	WIDE		8,553	63.2	135
		No Lens			9,673	63.4	153
		CURVE	WIDE		11,316	83.4	136
		CURVE	NARROW		11,184	83.4	134
		FLAT	WIDE		10,786	83	130
		No Lens			10,978	83.6	131
MPS8-HL	3500K	CURVE	WIDE		11,440	83.4	137
		CURVE	NARROW		11,307	83.4	136
		FLAT	WIDE		10,905	83	131
	4000K	No Lens			11,099	83.6	133
		CURVE	WIDE		13,286	94.2	141
		CURVE	NARROW		13,142	94.2	140
		FLAT	WIDE		9,965	72.6	137
		No Lens			14,433	94.4	153
		CURVE	WIDE		13,434	94.2	143
MPS8-VL	3500K	CURVE	NARROW		13,288	94.2	141
		FLAT	WIDE		10,076	72.6	139
		No Lens			14,594	94.4	155
	4000K	CURVE	WIDE		15,291	112.8	136
		CURVE	NARROW		15,045	112.8	133
		FLAT	WIDE		14,650	113.2	129
		No Lens			16,545	113.2	146
		CURVE	WIDE		15,464	112.8	137
		CURVE	NARROW		15,215	112.8	135
MPS8-XL	3500K	FLAT	WIDE		14,816	113.2	131
		No Lens			16,732	113.2	148
		CURVE	WIDE				
	4000K	CURVE	WIDE				





Job Name:

Southeast Water Conservancy - Remodel
Architect: No Architect
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Catalog Number:
MPS4-35ML-CW-EDU

Notes:

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C

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MPS

MULTIPURPOSE LINEAR

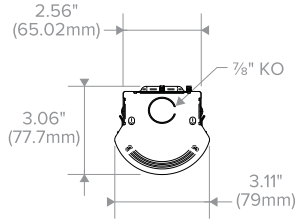
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TYPE: _____ PROJECT: _____

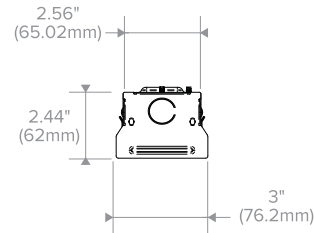
CATALOG #: _____

DIMENSIONS

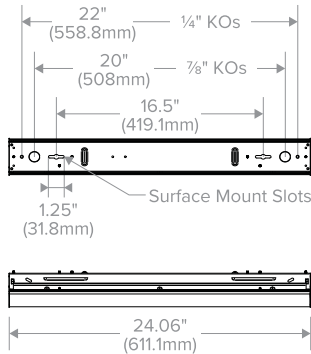
MPS END View - Curve Lens



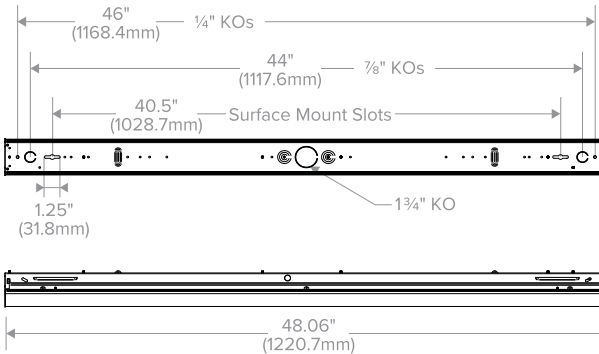
MPS END View - FLAT Lens



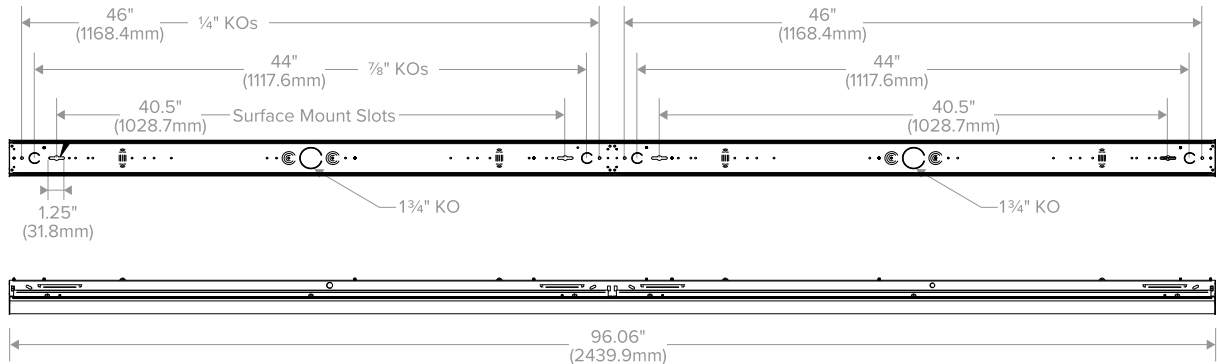
MPS 2' Dimensions



MPS 4' Dimensions



MPS 8' Dimensions





Job Name:
 Southeast Water Conservancy - Remodel
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MPS
 MULTIPURPOSE LINEAR

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY

MPS4-40ML-CN-EDU

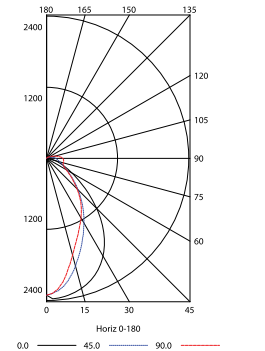
LUMINAIRE DATA

Test No.	21.00769
Description	4' Multi-Purpose Strip-Light w/ Curved, Narrow-Distribution Acrylic Lens
Delivered Lumens	4423
Watts	31.6
Efficacy	140
Mounting	Surface
Spacing Criterion	0° = 1.22 90° = 0.78

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1472	33.3
0-40	2227	50.4
0-60	3359	75.9
0-90	4126	93.3
0-180	4423	100.0

POLAR GRAPH



MPS4-40ML-CW-EDU

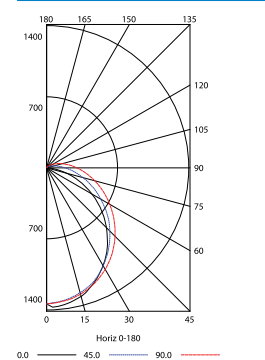
LUMINAIRE DATA

Test No.	21.00759
Description	4' Multi-Purpose Strip-Light w/ Diffuse, Curved Acrylic Lens
Delivered Lumens	4469
Watts	31.6
Efficacy	141
Mounting	Surface
Spacing Criterion	0° = 1.23 90° = 1.28

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1036	23.2
0-40	1693	37.9
0-60	3010	67.4
0-90	4158	93.0
0-180	4469	100.0

POLAR GRAPH



MPS4-40ML-FW-EDU

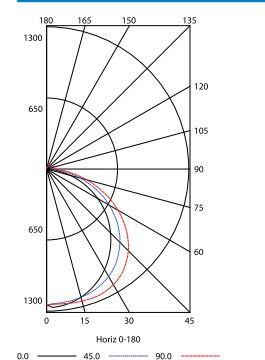
LUMINAIRE DATA

Test No.	21.00779
Description	4' Multi-Purpose Strip-Light w/ Flat, Wide-Distribution Acrylic Lens
Delivered Lumens	4279
Watts	31.6
Efficacy	135
Mounting	Surface
Spacing Criterion	0° = 1.26 90° = 1.45

ZONAL LUMEN SUMMARY

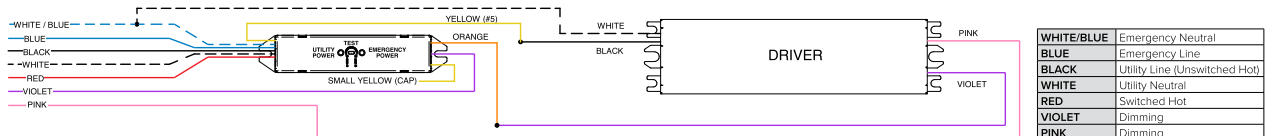
Zone	Lumens	% Luminaire
0-30	1006	23.5
0-40	1684	39.4
0-60	3089	72.2
0-90	4070	95.1
0-180	4279	100.0

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



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**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H

Notes:

Type:**D-10L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

FEATURES

- 4" LED downlight delivering 1000-6000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Optional housing accessories available
- Five beam distributions
- 2700K–5000K, 80+ and 90+ CRI (2 SDCM)
- Dimming protocols include 0-10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem
- NX Distributed Intelligence™ wired and wireless controls capability available



With CL Lens Option

CONTROL TECHNOLOGY**SPECIFICATIONS****CONSTRUCTION**

- Standard Fixture Module designed for Non-IC, Direct Install construction
- Optional Non-IC frame or IC housing available with pre-installed bar hangers
- Die cast aluminum fixture module support ring with spring steel clips for secure mounting to ceiling
- Driver J-Box can be installed and accessed from below the ceiling as direct install or easily snap on to optional housing frame/enclosure
- Light Engine connections use plenum rated (CMP) cable

OPTICS

- High purity spun aluminum reflector, self-flanged
- 57° visual cutoff to source image and 31° cutoff to source
- Specular or Semi-Specular anodized or White painted cone reflector finish/colors
- Painted flange options in White or Black
- Optional clear lens trim for wet location applications
- Wide Angle and Soft Focus lens filter/clip accessories available

ELECTRICAL

- Chip-on-board LED with 2 SDCM
- Multiple CCTs, 80+ or 90+ CRI
- Long LED life: L90 at >50,000 hours (TM-21)
- Universal voltage 120–277V driver, 347V optional
- UL Class 2, inherent short circuit and overload protection, RoHS compliant
- Flicker-free dimming options in a wide range of protocols from 1% to <0.1% performance
- 0–10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem options
- Integral and remote emergency battery options available

INSTALLATION

- Accommodates ceiling thickness from 0.50" to 2.50"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation types.)

CERTIFICATIONS

- cCSAus certified to UL 1598
- For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- Suitable for wet locations, covered ceiling when used with CL lens trim; all other configurations, suitable for damp locations
- EM/EMR: Certified under UL 924 standard for emergency lighting and power equipment
- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____

LITEFRAME[®]
2.0**RELATED PRODUCTS**

Ø [LFR-4RDS](#)
Shallow

Ø [LFR-4RA](#)

Ø [LFR-4RW](#)

Ø [LiteFrame](#)
Family

SERVICE PROGRAMS

KEY DATA	
Lumen Range	1000–6000
Wattage Range	8–51
Efficacy Range (LPW)	110-131
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–425 (120V)

*Based on Specular, 35K, 80 CRI



Job Name:
Southeast Water Conservancy - Remodel
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Catalog Number:
LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H
Notes:

Type:
D-10L
MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

— Service Program



Click icon for Stocked item list

ORDERING GUIDE

Example: LFR-4RD-M-10L35K8-WD-DM1 / LFR-4RD-T-S / LFR-4RD-H

CATALOG # _____

FIXTURE MODULE

LFR-4RD-M	Lumen Output			CCT	CRI	Distribution	Driver Options	Control Options	Voltage	Module Options
Ap/Ship/Funct	10L	1500	27K	2700K	8	80+	DM1 0-10V Dimming to 1%	NXE NX Enabled, Dual SmartPorts ³	Standard 120-277V	CP Chicago Plenum ^{5,6}
LFR-4RD-M 4" Round Downlight Fixture Module for Direct Install <i>(Non-IC frame or IC housing available under Housing Options below)</i>	15L	1500	30K	3000K	9	90+	DM01 0-10V Dimming to < 1% ²	NXWE NX Wireless Enabled ³	34 347V ⁴	EM Emergency Battery Pack with integral test switch and indicator light ⁶
	20L	2000	35K	3500K			PDM Phase (Forward/Reverse) Dimming to 1% ²	NXWD NX Wireless Enabled, Dual SmartPorts ³		EMR Emergency Battery Pack with remote test switch and indicator light ⁶
	25L	2500	40K	4000K			DMX DMX with RDM dimming to < 0.1% ²			DTS Device Transfer Switch with Dimming Bypass ^{6,7}
	30L	3000	50K	5000K			DALI DALI Dimming to 1% ²			
	35L	3500					2DM Lutron Hi-Lume 2-wire Dimming to 1% (120V Forward Phase only) ²			
	40L	4000					EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²			
	45L	4500								
	50L	5000 ¹								
	60L	6000 ¹								

TRIM (Ships separately)

LFR-4RD-T	Distribution	Reflector Finish/Color	Flange Color Options	Lens Options	Lower Trim Options
Aperture/Shape/Function		S Specular ¹²	Standard matches reflector color	Standard no lens	EM Pre-punched reflector for EM integral test switch and indicator ⁹
LFR-4RD-T 4" Round Downlight Trim Assembly	Standard NR, MD, WD, XW VNR Very Narrow	SS Semi-Specular	WT White Flange ⁸	CL Clear Lens (Wet Listed) ⁹	
		WC Painted White Cone and Flange	BT Black Flange		

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function
<input checked="" type="checkbox"/> LFR-4RD-H 4" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> LFR-4RD-H-IC 4" Housing Enclosure, New Construction, IC Rated ^{10,11}

Accessories

- SFL4** Soft Focus Lens and Clip, 4" Round
- WAL4** Wide Angle 80° Lens and Clip, 4" Round
- LiteGear** LiteGear® Inverter, 125VA–250VA
- LPS Series** LightPower Micro-Inverter, 20VA–55VA

Notes:

- 1 50L and 60L require marked spacing. See line art for more details.
- 2 DM01, PDM, DMX, DALI available up to 50L. 2DM and EDM available 15L–40L.
- 3 NX requires DM1 driver option.
- 4 347V requires DM1 driver option; 10L–40L not available with Controls, DTS, EM, EMR.
- 5 CP available up to 35L; not available with DMX, Controls, EM or EMR options.
- 6 Module options not available in combination.
- 7 DTS available with DM1, DM01, or DALI.
- 8 WT not needed for WC.
- 9 CL lens and EM trim options not available in combination.
- 10 IC available up to 35L; 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam types.)
- 11 IC Housing not for use in combination with Controls or with Module Options CP, EM, EMR, DTS.
- 12 XW distribution is not available for Specular (S) reflector finish.





Job Name:
 Southeast Water Conservancy - Remodel
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Catalog Number:
 LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H
 Notes:

Type:
D-10L
 MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NX Networked – Wireless								
NXWE ²	N/A	Yes	Yes	No	No	Yes	Yes	No ³
NX Networked – Wired/Wireless								
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,3}

1 NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network

2 Programming via App requires factory assistance

3 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

PERFORMANCE DATA TABLE

Performance data shown is 3500K 80+CRI with Specular reflector except Extra Wide distribution which is Semi-Specular.

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	979	7.6	129
		Narrow	1023	7.6	135
		Medium	997	7.6	131
		Wide	995	7.6	131
		Extra Wide	947	7.6	125
15L	1500	Very Narrow	1471	11.8	125
		Narrow	1536	11.8	130
		Medium	1498	11.8	127
		Wide	1494	11.8	127
		Extra Wide	1422	11.8	121
20L	2000	Very Narrow	1898	15.2	124
		Narrow	1982	15.3	130
		Medium	1933	15.3	127
		Wide	1928	15.3	126
		Extra Wide	1835	15.2	121
25L	2500	Very Narrow	2465	20.9	118
		Narrow	2574	20.9	123
		Medium	2510	20.9	120
		Wide	2504	20.9	120
		Extra Wide	2384	20.9	114
30L	3000	Very Narrow	2938	26.0	113
		Narrow	3068	26.0	118
		Medium	2992	26.0	115
		Wide	2985	26.0	115
		Extra Wide	2842	26.0	109
35L	3500	Very Narrow	3571	29.4	121
		Narrow	3729	29.4	127
		Medium	3637	29.4	124
		Wide	3628	29.4	123
		Extra Wide	3454	29.4	117
40L	4000	Very Narrow	3982	32.9	121
		Narrow	4157	32.9	126
		Medium	4055	32.9	123
		Wide	4045	32.9	123
		Extra Wide	3851	32.9	117
50L	5000	Very Narrow	4844	42.0	115
		Narrow	5058	42.0	120
		Medium	4933	42.0	117
		Wide	4921	42.0	117
		Extra Wide	4684	42.0	112
60L	6000	Very Narrow	5778	53.4	108
		Narrow	6033	53.4	113
		Medium	5884	53.4	110
		Wide	5870	53.4	110
		Extra Wide	5588	53.4	105





Job Name:

Southeast Water Conservancy - Remodel
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LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H

Notes:

Type:

D-10L

MHCS22-227151



LFR-4RD

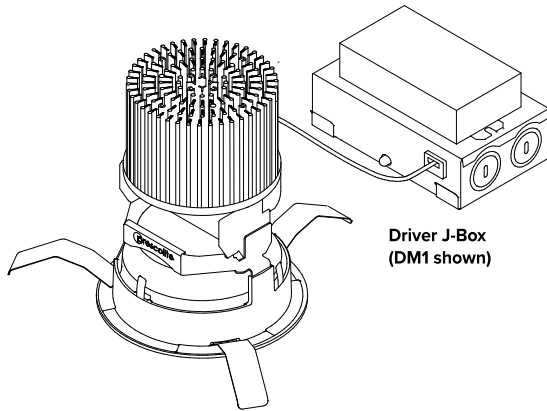
LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

LFR-4RD-M

Fixture Module consists of Light Engine and Driver J-Box assemblies.
 Overall dimensions for each are dependent upon configuration selected.
 See the following pages for details.



**Light Engine
 with Trim assembly installed**

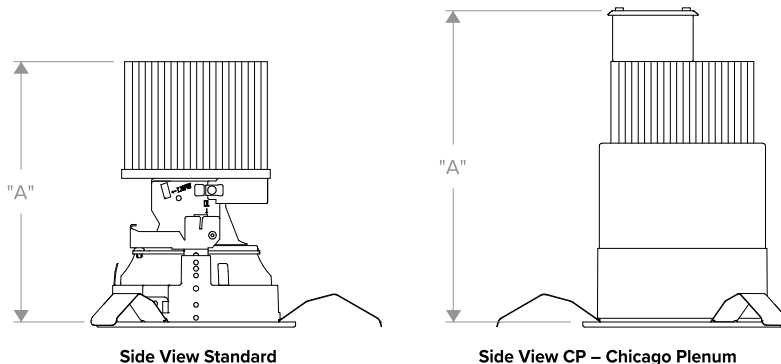
**Driver J-Box
 (DM1 shown)**

DIMENSIONAL DATA	
APERTURE	ø4.00" (101.6mm)
OVERALL	ø5.37" (136.5mm)
FLANGE WIDTH	0.69" (17.5mm)
CEILING CUTOUT	ø4.75" (120.7mm)
CEILING THICKNESS	0.50" - 2.50" (12.7 - 63.5mm)

LFR-4RD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *				
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION		
		VNR	NR / MD/ WD	XW
10L-30L	STANDARD	6.24" (158.5mm)	5.45" (138.5mm)	5.1" (129.5mm)
	CP	7.63" (193.8mm)	6.85" (173.9mm)	6.50" (165.0mm)
35L-50L	STANDARD	7.82" (198.6mm)	7.03" (178.6mm)	6.68" (169.7mm)
	CP	9.22" (234.1mm)	8.43" (214.0mm)	8.08" (205.1mm)
60L	STANDARD	7.82" (198.6mm)	7.03" (178.6mm)	6.68" (169.7mm)
	CP	9.22" (234.1mm)	8.43" (214.0mm)	8.08" (205.1mm)

* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.
 ** For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture.
 *** Non-IC rating requires 3" from insulation and combustible materials.



Side View Standard

Side View CP – Chicago Plenum



Job Name:
 Southeast Water Conservancy - Remodel
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Catalog Number:
 LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H
 Notes:

Type:
D-10L

MHCS22-227151



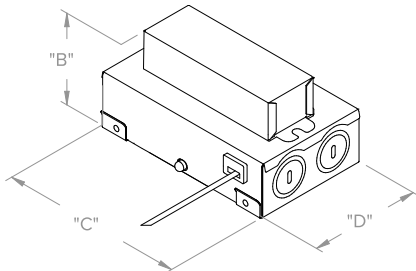
LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

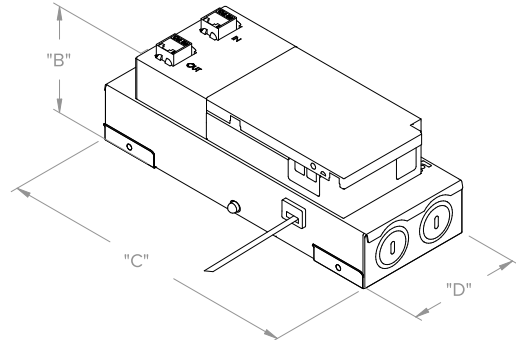
DIMENSIONS CONTINUED

DRIVER J-BOX

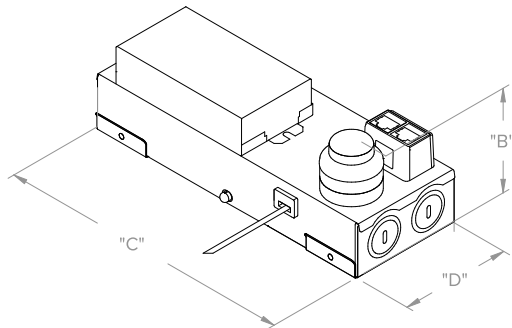
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 CATALOG #: _____



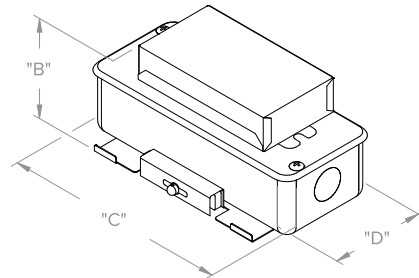
DM1 / DM01 / PDM / DALI



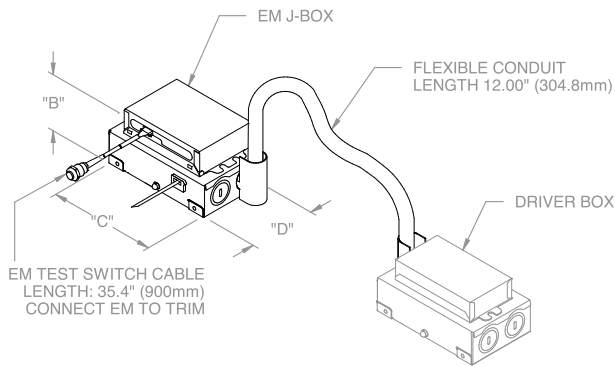
DMX



NX CONTROLS OPTION



CP



EM/EMR OPTION

EM/EMR Driver J-Box Conduit (provided) connects to Driver J-Box (see Driver J-Box for additional details)

OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/CONTROLS OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.50" (88.9mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	5.00" (127.0mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EM/EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	4.00" (101.6mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	5.00" (127mm)



Job Name:

Southeast Water Conservancy - Remodel
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 Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H

Notes:

Type:

D-10L

MHCS22-227151

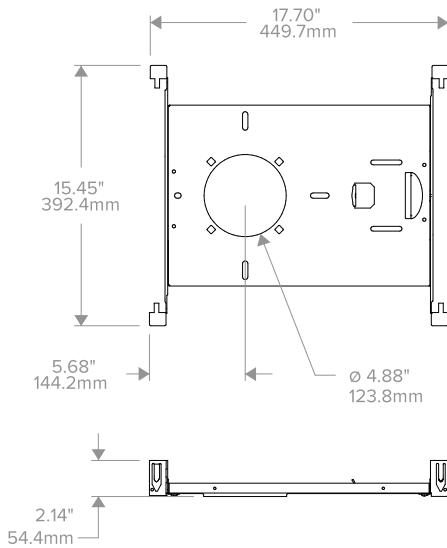
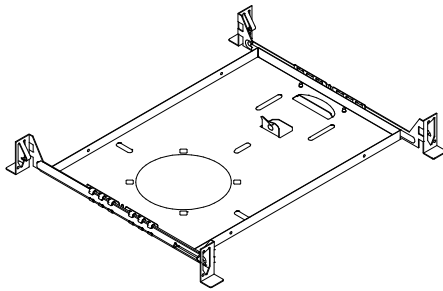


LFR-4RD

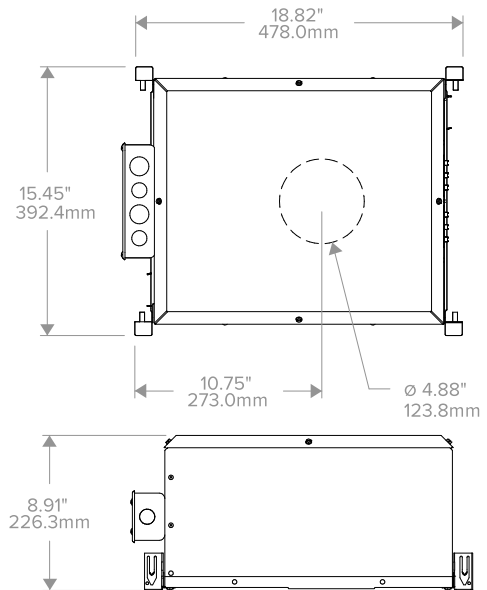
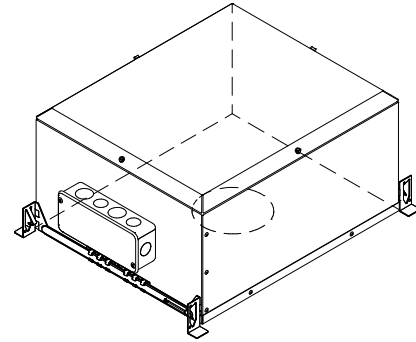
LITEFRAME 4" ROUND DOWNLIGHT

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS



**LFR-4RD-H
NON-IC HOUSING FRAME**



**LFR-4RD-H-IC
IC HOUSING**
Not for use with CP Shroud

PHOTOMETRY

LFR-4RD-M-20L35K8VNR-DM1 / LFR-4RD-T-VNR-S

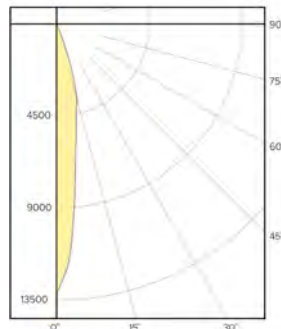
LUMINAIRE DATA

Test No.	21.01485
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1898
Watts	15.3W
Efficacy	124.4
Mounting	Recessed
Spacing Criterion	0.3
Beam Angle (FWHM)	17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1892	99.7
0-60	1897	99.9
0-90	1898	100.0
0-180	1898	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	13194
5	9489
15	3804
25	148
35	10
45	4
55	2
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	430
65°	292
75°	0
85°	0

*Candela/Square Meter

**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H

Notes:

Type:**D-10L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

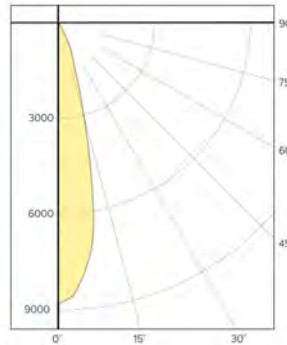
CATALOG #: _____

PHOTOMETRY CONTINUED**LFR-4RD-M-20L35K8NR-DM1 / LFR-4RD-T-S****LUMINAIRE DATA**

Test No.	21.00574
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1982
Watts	15.3W
Efficacy	129.9
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	26

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1978	99.3
0-60	1981	100.0
0-90	1982	100.0
0-180	1982	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	8819
5	8106
15	3103
25	858
35	7
45	2
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	349
55°	215
65°	292
75°	0
85°	0

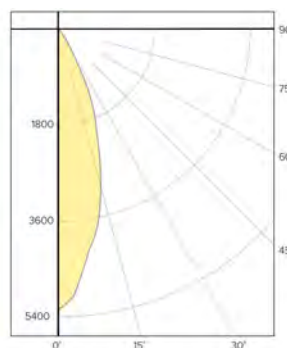
*Candela/Square Meter

LFR-4RD-M-20L35K8MD-DM1 / LFR-4RD-T-S**LUMINAIRE DATA**

Test No.	21.00585
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1933
Watts	15.3W
Efficacy	126.7
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	34

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1928	99.8
0-60	1931	99.9
0-90	1933	100.0
0-180	1933	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	5267
5	4677
15	3033
25	1352
35	55
45	3
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	523
55°	215
65°	292
75°	0
85°	0

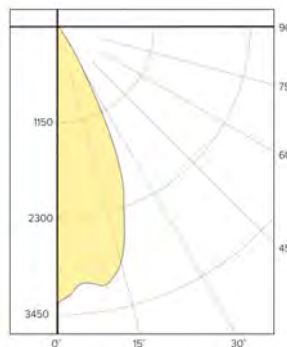
*Candela/Square Meter

LFR-4RD-M-20L35K8WD-DM1 / LFR-4RD-T-S**LUMINAIRE DATA**

Test No.	21.00577
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1928
Watts	15.3W
Efficacy	126.4
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	49

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1922	99.7
0-60	1927	99.9
0-90	1928	100.0
0-180	1928	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	3329
5	3118
15	2946
25	1625
35	117
45	4
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-10L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-H

Notes:

Type:

D-10L

MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY CONTINUED

LFR-4RD-M-20L35K8XW-DM1 / LFR-4RD-T-SS

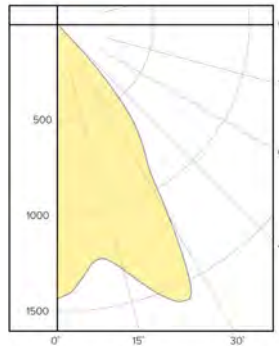
LUMINAIRE DATA

Test No.	21.01456
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1835
Watts	15.2W
Efficacy	120.8
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	65

ZONAL LUMEN SUMMARY

Zone	Lumens	% Linaire
0-40	1686	91.9
0-60	1826	99.5
0-90	1835	100
0-180	1835	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1431
5	1345
15	1323
25	1589
35	781
45	80
55	16
65	6
75	2
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	13955
55°	3441
65°	1751
75°	953
85°	0

*Candela/Square Meter

LUMEN MULTIPLIER

Option	27K8	30K8	35K8	40K8	50K8	27K9	30K9	35K9	40K9	50K9
Multiplier	0.93	0.96	1.00	1.01	1.03	0.78	0.82	0.85	0.87	0.89

Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

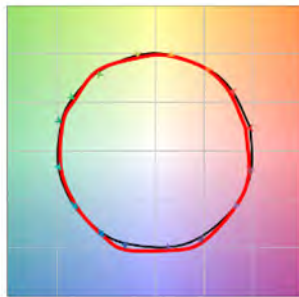
LENS OPTION / LENS FILTER ACCESSORY MULTIPLIER (Based on Clear Specular)

Option	CL (Clear Lens)	SFL4 (Soft Focus Accessory)	WAL4 (Wide Angle Accessory)
Multiplier	0.95	0.96	0.83

Multiply lumen/lens multipliers to calculate applicable combinations. Example: 30K8 with Clear Lens option (CL) = 0.96 x 0.95 = **0.91**

TM-30 DATA

**COLOR VECTOR GRAPHIC
3500K, 90 CRI**



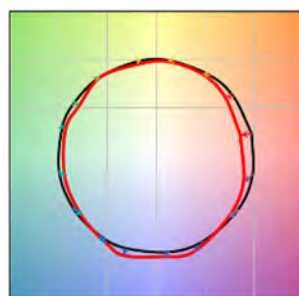
— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
3500K, 90 CRI**



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R _i	85	90
R _g	95	99
CCT (K)	3422	3416
D _{uv}	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R _a	85	93
CIE R _g	16	66

**COLOR VECTOR GRAPHIC
3500K, 80 CRI**



— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
3500K, 80 CRI**



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**LFR-4RD-M-10L35K8-WD-DM1 LFR-
4RD-T-SS LFR-4RD-H

Notes:

Type:**D-10L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ELECTRICAL DATA

DRIVER DATA		
Input Voltage	120-277 V	347 V
Input Frequency	50/60 Hz	50/60 Hz
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering (FCC 47 CFR Part 15)	Class A	Class A

* Values for DM1 option shown, values for other dimming options may vary.

ADDITIONAL INFORMATION**Dimming Compatability**

See the DIMMING link for more information on dimming compatibility and recommended dimmer list

DMXSee instruction sheet on www.prescolite.com for connection & installation information.**Central Inverters**For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.LiteGear: www.dual-lite.com/products/litegear_lg_seriesLPS Series: www.dual-lite.com/products/lps

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**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS

Notes:

Type:**D-20L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

FEATURES

- 4" LED downlight delivering 1000-6000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Optional housing accessories available
- Five beam distributions
- 2700K–5000K, 80+ and 90+ CRI (2 SDCM)
- Dimming protocols include 0-10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem
- NX Distributed Intelligence™ wired and wireless controls capability available



With CL Lens Option

CONTROL TECHNOLOGY**SPECIFICATIONS****CONSTRUCTION**

- Standard Fixture Module designed for Non-IC, Direct Install construction
- Optional Non-IC frame or IC housing available with pre-installed bar hangers
- Die cast aluminum fixture module support ring with spring steel clips for secure mounting to ceiling
- Driver J-Box can be installed and accessed from below the ceiling as direct install or easily snap on to optional housing frame/enclosure
- Light Engine connections use plenum rated (CMP) cable

OPTICS

- High purity spun aluminum reflector, self-flanged
- 57° visual cutoff to source image and 31° cutoff to source
- Specular or Semi-Specular anodized or White painted cone reflector finish/colors
- Painted flange options in White or Black
- Optional clear lens trim for wet location applications
- Wide Angle and Soft Focus lens filter/clip accessories available

ELECTRICAL

- Chip-on-board LED with 2 SDCM
- Multiple CCTs, 80+ or 90+ CRI
- Long LED life: L90 at >50,000 hours (TM-21)
- Universal voltage 120–277V driver, 347V optional
- UL Class 2, inherent short circuit and overload protection, RoHS compliant
- Flicker-free dimming options in a wide range of protocols from 1% to <0.1% performance
- 0–10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem options
- Integral and remote emergency battery options available

INSTALLATION

- Accommodates ceiling thickness from 0.50" to 2.50"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation types.)

LITEFRAME[®]
2.0**RELATED PRODUCTS**Ø [LFR-4RDS](#)
ShallowØ [LFR-4RA](#)Ø [LFR-4RW](#)Ø [LiteFrame](#)
Family**SERVICE PROGRAMS****CERTIFICATIONS**

- cCSAus certified to UL 1598
- For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- Suitable for wet locations, covered ceiling when used with CL lens trim; all other configurations, suitable for damp locations
- EM/EMR: Certified under UL 924 standard for emergency lighting and power equipment
- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA

KEY DATA	
Lumen Range	1000–6000
Wattage Range	8–51
Efficacy Range (LPW)	110-131
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–425 (120V)

*Based on Specular, 35K, 80 CRI



Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS
Notes:

Type:
D-20L
MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

— Service Program



Click icon for Stocked item list

ORDERING GUIDE

Example: LFR-4RD-M-10L35K8-WD-DM1 / LFR-4RD-T-S / LFR-4RD-H

CATALOG #

FIXTURE MODULE

LFR-4RD-M													
Ap/Ship/Funct	Lumen Output		CCT	CRI	Distribution		Driver Options		Control Options		Voltage	Module Options	
LFR-4RD-M 4" Round Downlight Fixture Module for Direct Install <i>(Non-IC frame or IC housing available under Housing Options below)</i>	10L	1000	27K	2700K	8	80+	VNR Very Narrow (17deg/0.3 SC) NR Narrow (26"/0.4 SC) MD Medium (34"/0.6 SC) WD Wide (49"/0.7 SC) XW Extra Wide (65"/1.0 SC) ¹²	DM1 0-10V Dimming to 1% DM01 0-10V Dimming to < 1% ² PDM Phase (Forward/Reverse) Dimming to 1% ² DMX DMX with RDM dimming to < 0.1% ² DALI DALI Dimming to 1% ² 2DM Lutron Hi-Lume 2-wire Dimming to 1% (120V Forward Phase only) ² EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²	NXE NX Enabled, Dual SmartPorts ³ NXWE NX Wireless Enabled ³ NXWD NX Wireless Enabled, Dual SmartPorts ³	<i>Standard</i> 120-277V 34 347V ⁴	CP Chicago Plenum ^{5,6} EM Emergency Battery Pack with integral test switch and indicator light ⁶ EMR Emergency Battery Pack with remote test switch and indicator light ⁶ DTS Device Transfer Switch with Dimming Bypass ^{6,7}		
	15L	1500	30K	3000K	9	90+							
	20L	2000	35K	3500K									
	25L	2500	40K	4000K									
	30L	3000	50K	5000K									
	35L	3500											
	40L	4000											
	45L	4500											
50L	5000 ¹												
60L	6000 ¹												

TRIM (Ships separately)

LFR-4RD-T								
Aperture/Shape/Function	Distribution		Reflector Finish/Color	Flange Color Options	Lens Options		Lower Trim Options	
LFR-4RD-T 4" Round Downlight Trim Assembly	Standard		S Specular ¹²	Standard matches reflector color		Standard no lens		EM Pre-punched reflector for EM integral test switch and indicator ⁹
	NR, MD, WD, XW		SS Semi-Specular	WT White Flange ⁸	CL Clear Lens (Wet listed) ⁹			
	VNR Very Narrow		WC Painted White Cone and Flange	BT Black Flange				

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function	
<input type="checkbox"/> LFR-4RD-H	4" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> LFR-4RD-H-IC	4" Housing Enclosure, New Construction, IC Rated ^{10,11}

Accessories

- SFL4** Soft Focus Lens and Clip, 4" Round
- WAL4** Wide Angle 80° Lens and Clip, 4" Round
- LiteGear** LiteGear® Inverter, 125VA–250VA
- LPS Series** LightPower Micro-Inverter, 20VA–55VA

Notes:

- ¹ 50L and 60L require marked spacing. See line art for more details.
- ² DM01, PDM, DMX, DALI available up to 50L. 2DM and EDM available 15L–40L.
- ³ NX requires DM1 driver option.
- ⁴ 347V requires DM1 driver option; 10L–40L not available with Controls, DTS, EM, EMR.
- ⁵ CP available up to 35L; not available with DMX, Controls, EM or EMR options.
- ⁶ Module options not available in combination.
- ⁷ DTS available with DM1, DM01, or DALI.
- ⁸ WT not needed for WC.
- ⁹ CL lens and EM trim options not available in combination.
- ¹⁰ IC available up to 35L; 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam types.)
- ¹¹ IC Housing not for use in combination with Controls or with Module Options CP, EM, EMR, DTS.
- ¹² XW distribution is not available for Specular (S) reflector finish.



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS
Notes:

Type:
D-20L
 MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NX Networked – Wireless								
NXWE ²	N/A	Yes	Yes	No	No	Yes	Yes	No ³
NX Networked – Wired/Wireless								
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,3}

1 NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network

2 Programming via App requires factory assistance

3 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

PERFORMANCE DATA TABLE

Performance data shown is 3500K 80+CRI with Specular reflector except Extra Wide distribution which is Semi-Specular.

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	979	7.6	129
		Narrow	1023	7.6	135
		Medium	997	7.6	131
		Wide	995	7.6	131
		Extra Wide	947	7.6	125
15L	1500	Very Narrow	1471	11.8	125
		Narrow	1536	11.8	130
		Medium	1498	11.8	127
		Wide	1494	11.8	127
		Extra Wide	1422	11.8	121
20L	2000	Very Narrow	1898	15.2	124
		Narrow	1982	15.3	130
		Medium	1933	15.3	127
		Wide	1928	15.3	126
		Extra Wide	1835	15.2	121
25L	2500	Very Narrow	2465	20.9	118
		Narrow	2574	20.9	123
		Medium	2510	20.9	120
		Wide	2504	20.9	120
		Extra Wide	2384	20.9	114
30L	3000	Very Narrow	2938	26.0	113
		Narrow	3068	26.0	118
		Medium	2992	26.0	115
		Wide	2985	26.0	115
		Extra Wide	2842	26.0	109
35L	3500	Very Narrow	3571	29.4	121
		Narrow	3729	29.4	127
		Medium	3637	29.4	124
		Wide	3628	29.4	123
		Extra Wide	3454	29.4	117
40L	4000	Very Narrow	3982	32.9	121
		Narrow	4157	32.9	126
		Medium	4055	32.9	123
		Wide	4045	32.9	123
		Extra Wide	3851	32.9	117
50L	5000	Very Narrow	4844	42.0	115
		Narrow	5058	42.0	120
		Medium	4933	42.0	117
		Wide	4921	42.0	117
		Extra Wide	4684	42.0	112
60L	6000	Very Narrow	5778	53.4	108
		Narrow	6033	53.4	113
		Medium	5884	53.4	110
		Wide	5870	53.4	110
		Extra Wide	5588	53.4	105





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS

Notes:

Type:

D-20L

MHCS22-227151



LFR-4RD

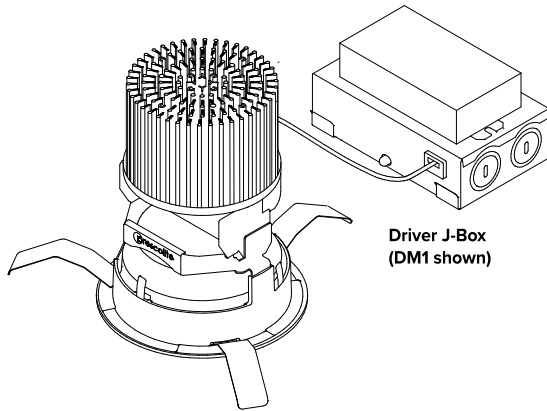
LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

LFR-4RD-M

Fixture Module consists of Light Engine and Driver J-Box assemblies.
 Overall dimensions for each are dependent upon configuration selected.
 See the following pages for details.



**Light Engine
 with Trim assembly installed**

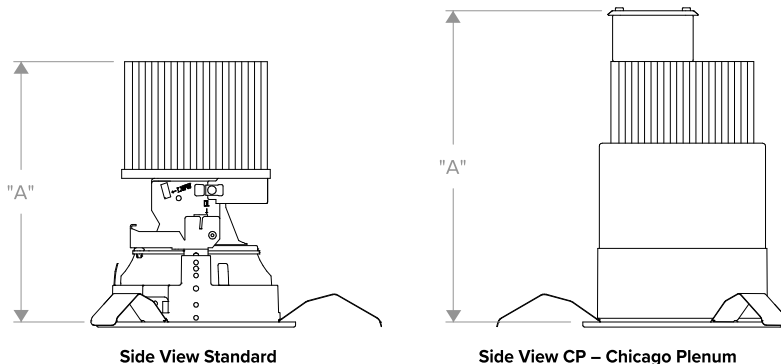
**Driver J-Box
 (DM1 shown)**

DIMENSIONAL DATA	
APERTURE	ø4.00" (101.6mm)
OVERALL	ø5.37" (136.5mm)
FLANGE WIDTH	0.69" (17.5mm)
CEILING CUTOUT	ø4.75" (120.7mm)
CEILING THICKNESS	0.50" - 2.50" (12.7 - 63.5mm)

LFR-4RD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *				
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION		
		VNR	NR / MD/ WD	XW
10L-30L	STANDARD	6.24" (158.5mm)	5.45" (138.5mm)	5.1" (129.5mm)
	CP	7.63" (193.8mm)	6.85" (173.9mm)	6.50" (165.0mm)
35L-50L	STANDARD	7.82" (198.6mm)	7.03" (178.6mm)	6.68" (169.7mm)
	CP	9.22" (234.1mm)	8.43" (214.0mm)	8.08" (205.1mm)
60L	STANDARD	7.82" (198.6mm)	7.03" (178.6mm)	6.68" (169.7mm)
	CP	9.22" (234.1mm)	8.43" (214.0mm)	8.08" (205.1mm)

* Note: Add ½" minimum plenum clearance above overall Light Engine Height.
 ** For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture.
 *** Non-IC rating requires 3" from insulation and combustible materials.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS
 Notes:

Type:
D-20L

MHCS22-227151



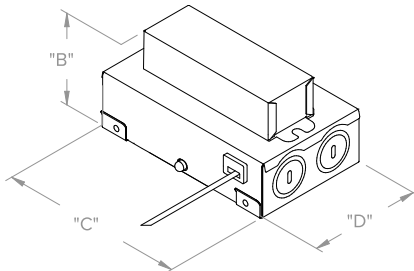
LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

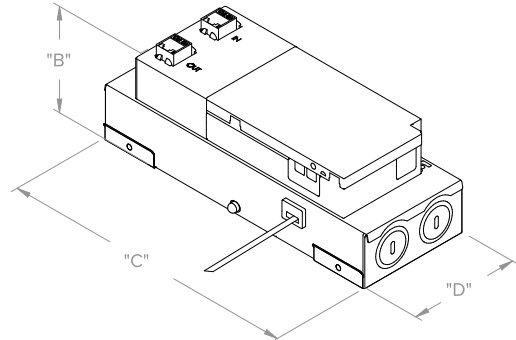
DIMENSIONS CONTINUED

DRIVER J-BOX

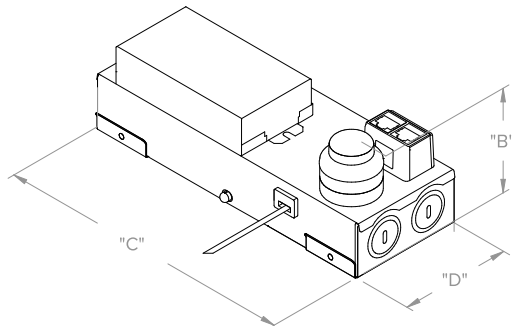
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 CATALOG #: _____



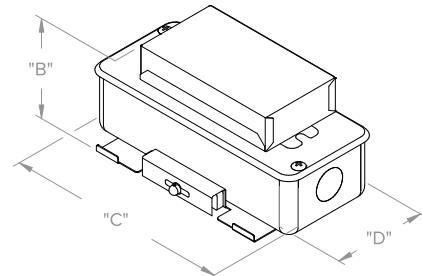
DM1 / DM01 / PDM / DALI



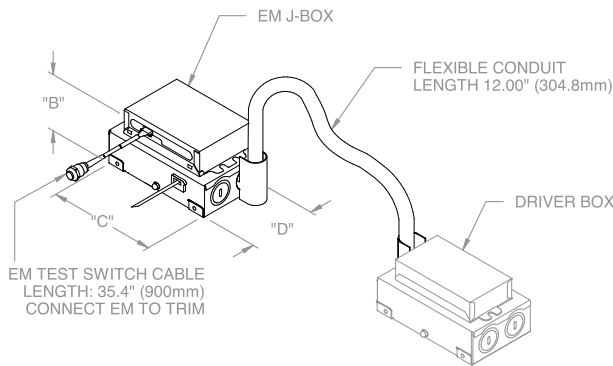
DMX



NX CONTROLS OPTION



CP



EM/EMR OPTION

EM/EMR Driver J-Box Conduit (provided) connects to Driver J-Box (see Driver J-Box for additional details)

OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/CONTROLS OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.50" (88.9mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	5.00" (127.0mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EM/EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	4.00" (101.6mm)
CP	1.89" (47.6mm)	6.50" (165.1mm)	2.72" (69.1mm)	5.00" (127.0mm)



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS

Notes:

Type:

D-20L

MHCS22-227151

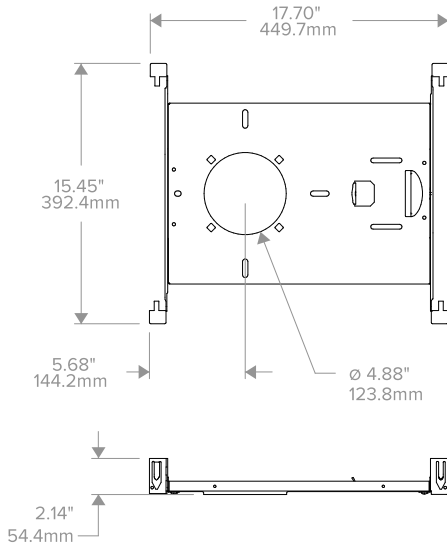
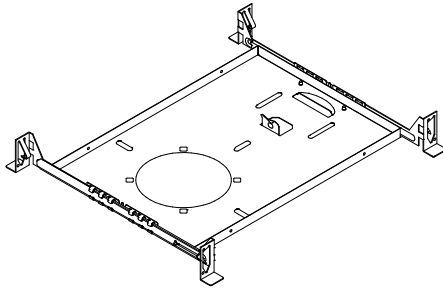


LFR-4RD

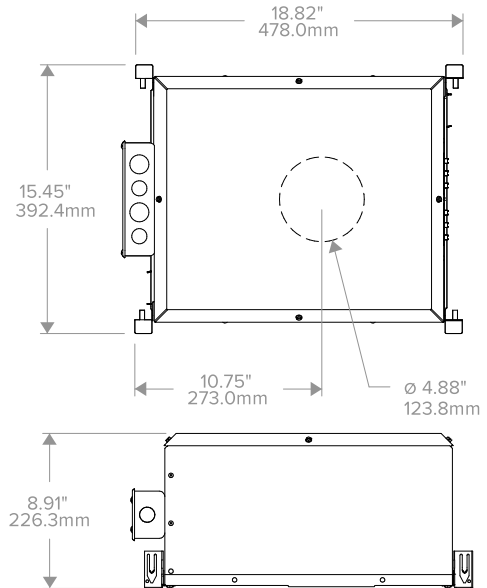
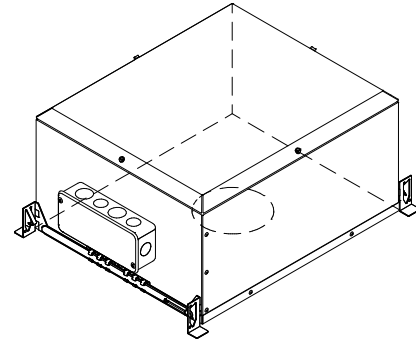
LITEFRAME 4" ROUND DOWNLIGHT

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS



**LFR-4RD-H
NON-IC HOUSING FRAME**



**LFR-4RD-H-IC
IC HOUSING**
Not for use with CP Shroud

PHOTOMETRY

LFR-4RD-M-20L35K8VNR-DM1 / LFR-4RD-T-VNR-S

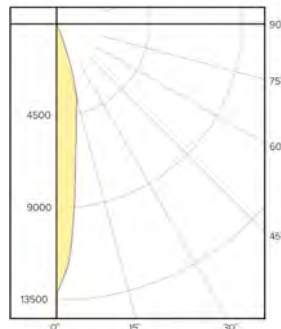
LUMINAIRE DATA

Test No.	21.01485
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1898
Watts	15.3W
Efficacy	124.4
Mounting	Recessed
Spacing Criterion	0.3
Beam Angle (FWHM)	17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1892	99.7
0-60	1897	99.9
0-90	1898	100.0
0-180	1898	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	13194
5	9489
15	3804
25	148
35	10
45	4
55	2
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	430
65°	292
75°	0
85°	0

*Candela/Square Meter

**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS

Notes:

Type:**D-20L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

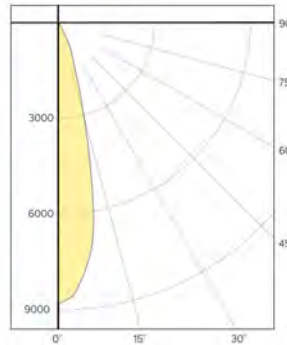
CATALOG #: _____

PHOTOMETRY CONTINUED**LFR-4RD-M-20L35K8NR-DM1 / LFR-4RD-T-S****LUMINAIRE DATA**

Test No.	21.00574
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1982
Watts	15.3W
Efficacy	129.9
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	26

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1978	99.3
0-60	1981	100.0
0-90	1982	100.0
0-180	1982	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	8819
5	8106
15	3103
25	858
35	7
45	2
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	349
55°	215
65°	292
75°	0
85°	0

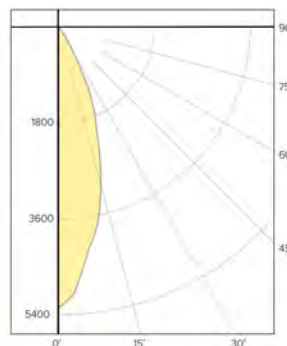
*Candela/Square Meter

LFR-4RD-M-20L35K8MD-DM1 / LFR-4RD-T-S**LUMINAIRE DATA**

Test No.	21.00585
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1933
Watts	15.3W
Efficacy	126.7
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	34

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1928	99.8
0-60	1931	99.9
0-90	1933	100.0
0-180	1933	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	5267
5	4677
15	3033
25	1352
35	55
45	3
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	523
55°	215
65°	292
75°	0
85°	0

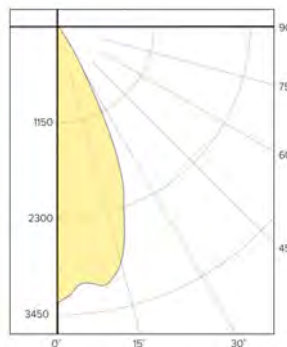
*Candela/Square Meter

LFR-4RD-M-20L35K8WD-DM1 / LFR-4RD-T-S**LUMINAIRE DATA**

Test No.	21.00577
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1928
Watts	15.3W
Efficacy	126.4
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	49

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1922	99.7
0-60	1927	99.9
0-90	1928	100.0
0-180	1928	100.0

POLAR GRAPH**CANDELA DISTRIBUTION**

Degree	Candela
0	3329
5	3118
15	2946
25	1625
35	117
45	4
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LFR-4RD-M-20L35K8-WD-DM1 LFR-4RD-T-SS LFR-4RD-T-SS

Notes:

Type:

D-20L

MHCS22-227151



LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

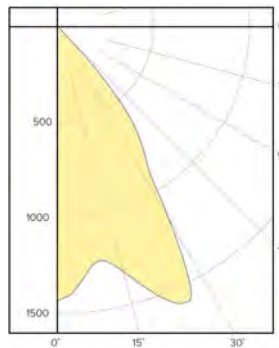
PHOTOMETRY CONTINUED

LFR-4RD-M-20L35K8XW-DM1 / LFR-4RD-T-SS

LUMINAIRE DATA

Test No.	21.01456
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1835
Watts	15.2W
Efficacy	120.8
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	65

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1431
5	1345
15	1323
25	1589
35	781
45	80
55	16
65	6
75	2
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	13955
55°	3441
65°	1751
75°	953
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1686	91.9
0-60	1826	99.5
0-90	1835	100
0-180	1835	100.0

LUMEN MULTIPLIER

Option	27K8	30K8	35K8	40K8	50K8	27K9	30K9	35K9	40K9	50K9
Multiplier	0.93	0.96	1.00	1.01	1.03	0.78	0.82	0.85	0.87	0.89

Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

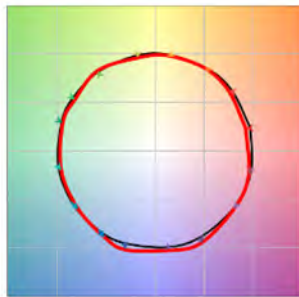
LENS OPTION / LENS FILTER ACCESSORY MULTIPLIER (Based on Clear Specular)

Option	CL (Clear Lens)	SFL4 (Soft Focus Accessory)	WAL4 (Wide Angle Accessory)
Multiplier	0.95	0.96	0.83

Multiply lumen/lens multipliers to calculate applicable combinations. Example: 30K8 with Clear Lens option (CL) = 0.96 x 0.95 = **0.91**

TM-30 DATA

**COLOR VECTOR GRAPHIC
3500K, 90 CRI**



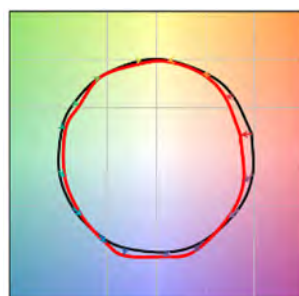
— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
3500K, 90 CRI**



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R _i	85	90
R _g	95	99
CCT (K)	3422	3416
D _{uv}	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R _a	85	93
CIE R _g	16	66

**COLOR VECTOR GRAPHIC
3500K, 80 CRI**



— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
3500K, 80 CRI**



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**LFR-4RD-M-20L35K8-WD-DM1 LFR-
4RD-T-SS LFR-4RD-T-SS

Notes:

Type:**D-20L**

MHCS22-227151

**LFR-4RD**

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ELECTRICAL DATA

DRIVER DATA		
Input Voltage	120-277 V	347 V
Input Frequency	50/60 Hz	50/60 Hz
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering (FCC 47 CFR Part 15)	Class A	Class A

* Values for DM1 option shown, values for other dimming options may vary.

ADDITIONAL INFORMATION**Dimming Compatability**

See the DIMMING link for more information on dimming compatibility and recommended dimmer list

DMXSee instruction sheet on www.prescolite.com for connection & installation information.**Central Inverters**For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.LiteGear: www.dual-lite.com/products/litegear_lg_seriesLPS Series: www.dual-lite.com/products/lps

All product and company names, logos and product identifiers are trademarks™ or registered trademarks® of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**LFR-4RW-M-10L35K8-LWW-DM1
LFR-4RW-T-LWW-SS

Notes:

Type:**E-10L**

MHCS22-227151

**LFR-4RW**

LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____**LITEFRAME**
2.0**FEATURES**

- 4" LED lensed wall wash delivering 1000-6000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Optional housing accessories available
- Provides smooth, uniform illumination
- 2700K–5000K, 80+ and 90+ CRI (2 SDCM)
- Dimming protocols include 0-10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem
- NX Distributed Intelligence™ wired and wireless controls capability available

**RELATED PRODUCTS**Ø [LFR-4RD](#)Ø [LFR-4RA](#)Ø [LFR-4RDS](#)Ø [Liteframe Family](#)**SERVICE PROGRAMS****CONTROL TECHNOLOGY****SPECIFICATIONS****CONSTRUCTION**

- Standard Fixture Module designed for Non-IC, Direct Install construction
- Optional Non-IC frame or IC housing available with pre-installed bar hangers
- Die cast aluminum fixture module support ring with spring steel clips for secure mounting to ceiling
- Driver J-Box can be installed and accessed from below the ceiling as direct install or easily snap on to optional housing frame/enclosure
- Light Engine connections use plenum rated (CMP) cable

OPTICS

- Tempered Glass Lens Standard
- Provides uniform light distribution down the wall
- High purity spun aluminum reflector, self-flanged
- Specular or Semi-Specular anodized or White painted cone reflector finish/colors
- Painted flange options in White or Black

ELECTRICAL

- Chip-on-board LED with 2 SDCM
- Multiple CCTs, 80+ or 90+ CRI
- Long LED life: L90 at >50,000 hours (TM-21)
- Universal voltage 120–277V driver, 347V optional
- UL Class 2, inherent short circuit and overload protection, RoHS compliant
- Flicker-free dimming options in a wide range of protocols from 1% to <0.1% performance
- 0–10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and EcoSystem options
- Remote emergency battery option available

INSTALLATION

- Accommodates ceiling thickness from 0.50" to 1.25"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation types.)

CERTIFICATIONS

- cCSAus certified to UL 1598
- For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- Suitable for wet locations, covered ceiling
- EMR: Certified under UL 924 standard for emergency lighting and power equipment
- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA

KEY DATA	
Lumen Range	1000–6000
Wattage Range	8–54
Efficacy Range (LPW)	91-108
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–450 (120V)

*Based on Specular, 35K, 80 CRI



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RW-M-10L35K8-LWW-DM1
 LFR-4RW-T-LWW-SS
 Notes:

Type:
E-10L
 MHCS22-227151



LFR-4RW

LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

— Service Program



Click icon for Stocked item list

ORDERING GUIDE

Example: LFR-4RW-M-10L35K8-LWW-DM1 / LFR-4RW-T-LWW-S / LFR-4RW-H

CATALOG #

FIXTURE MODULE

LFR-4RW-M	Lumen Output			CCT	CRI	Distribution	Driver Options	Control Options	Voltage	Module Options	
Ap/Shp/Funct	10L	1000	27K	2700K	8	80+	LWW Lensed Wall Wash	DM1 0-10V Dimming to 1%	NXE NX Enabled, Dual SmartPorts ³	Standard 120-277V	CP Chicago Plenum ^{5,6}
LFR-4RW-M 4" Round Lensed Wall Wash Fixture Module for Direct Install	15L	1500	30K	3000K	9	90+		DM01 0-10V Dimming to < 1% ²	NXWE NX Wireless Enabled ³	34 347V ⁴	EMR Emergency Battery Pack with remote test switch and indicator light ⁶
<i>(Non-IC frame or IC housing available under Housing Options below)</i>	20L	2000	35K	3500K			PDM Phase (Forward/Reverse) Dimming to 1% ²	NXWD NX Wireless Enabled, Dual SmartPorts ³			DTS Device Transfer Switch with Dimming Bypass ^{6,7}
	25L	2500	40K	4000K			DMX DMX with RDM dimming to < 0.1% ²				
	30L	3000	50K	5000K			DALI DALI Dimming to 1% ²				
	35L	3500					2DM Lutron Hi-Lume 2-wire Dimming to 1% (120V Forward Phase only) ²				
	40L	4000					EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²				
	45L	4500									
	50L	5000 ¹									
	60L	6000 ¹									

TRIM (Ships separately)

LFR-4RW-T	Aperture/Shape/Function	Distribution	Reflector Finish/Color	Flange Color Options
LFR-4RW-T	4" Round Lensed Wall Wash Trim Assembly	LWW Lensed Wall Wash	S Specular	Standard matches reflector color
			SS Semi-Specular	
			WC Painted White Cone and Flange	WT White Flange ⁸
				BT Black Flange

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function
<input type="checkbox"/> LFR-4RD-H 4" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> LFR-4RD-H-IC 4" Housing Enclosure, New Construction, IC Rated ^{9,10}

Accessories

- LiteGear** LiteGear[®] Inverter, 125VA-250VA
- LPS Series** LightPower Micro-Inverter, 20VA-55VA

Notes:

- 1 50L and 60L require marked spacing. See line art for more details.
- 2 DM01, PDM, DMX, DALI available up to 50L. 2DM and EDM available 15L-40L.
- 3 NX requires DM1 driver option.
- 4 347V requires DM1 driver option; available 10L-40L; not available with Controls, DTS, EMR.
- 5 CP available up to 35L; not available with DMX, Controls, or EMR options.
- 6 Module options not available in combination.
- 7 DTS available with DM1, DM01, or DALI.
- 8 WT not needed for WC.
- 9 IC available up to 35L; 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam types.)
- 10 IC Housing not for use in combination with Controls or with Module Options CP, EMR, DTS.

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LFR-4RW-M-10L35K8-LWW-DM1

LFR-4RW-T-LWW-SS

Notes:

Type:**E-10L**

MHCS22-227151

**LFR-4RW**

LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

CONTROLS**NX Distributed Intelligence™ Lighting Controls:**

Supports applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NX Networked – Wireless								
NXWE ²	N/A	Yes	Yes	No	No	Yes	Yes	No ³
NX Networked – Wired/Wireless								
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,3}

1 NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network

2 Programming via App requires factory assistance

3 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

PERFORMANCE DATA TABLE

Performance data provided below is for 3500K, 80 CRI with Specular Clear reflector

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Lensed WW	821	7.6	108
15L	1500		1233	11.8	104
20L	2000		1591	15.3	104
25L	2500		2066	20.9	99
30L	3000		2463	26.0	95
35L	3500		2994	29.4	102
40L	4000		3338	32.9	101
50L	5000		4061	42.0	97
60L	6000		4844	53.4	91



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LFR-4RW-M-10L35K8-LWW-DM1
 LFR-4RW-T-LWW-SS

Notes:

Type:

E-10L

MHCS22-227151



LFR-4RW

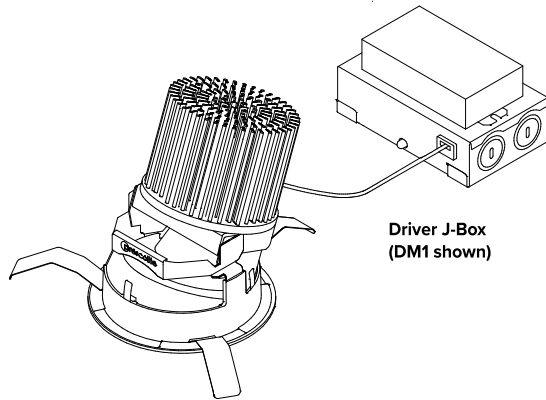
LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

LFR-4RW-M

Fixture Module consists of Light Engine and Driver J-Box assemblies.
 Overall dimensions for each are dependent upon configuration selected.
 See the following pages for details.



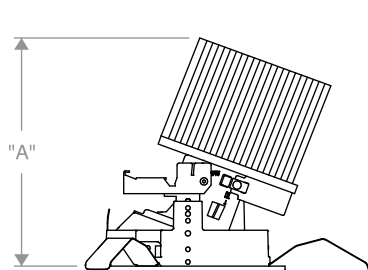
**Light Engine
 with Trim assembly installed**

DIMENSIONAL DATA	
APERTURE	Ø 4.00" (101.6mm)
OVERALL	Ø 5.37" (136.5mm)
FLANGE WIDTH	0.69" (17.5mm)
CEILING CUTOUT	Ø 4.75" (120.7mm)
CEILING THICKNESS	0.50" - 2.50" (12.7 - 63.5mm)

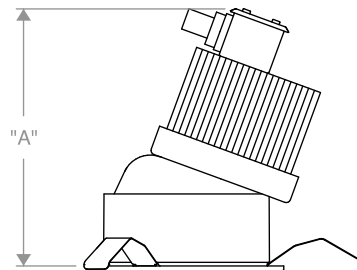
LFR-4RW LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION
		LWW
10L-30L	STANDARD	4.81" (122.2mm)
	CP	5.80" (147.3mm)
35L-50L	STANDARD	6.29" (159.8mm)
	CP	7.28" (184.9mm)
60L	STANDARD	6.29" (159.8mm)
	CP	7.28" (184.9mm)

* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.
 ** For ≥50L: Marked spacing required 18" fixture center to center; 18" fixture center to building member; 0.5" above fixture.
 *** Non-IC rating requires 3" from insulation and combustible materials.



Side View Standard



Side View CP - Chicago Plenum



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RW-M-10L35K8-LWW-DM1
 LFR-4RW-T-LWW-SS
 Notes:

Type:
E-10L

MHCS22-227151



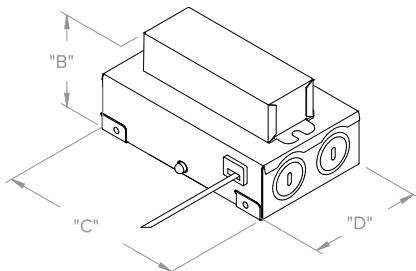
LFR-4RW

LITEFRAME 4" ROUND LENSED WALL WASH

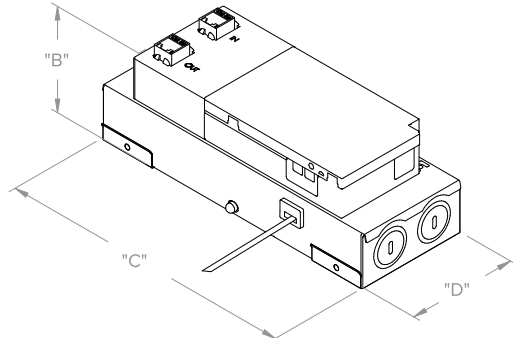
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS CONTINUED

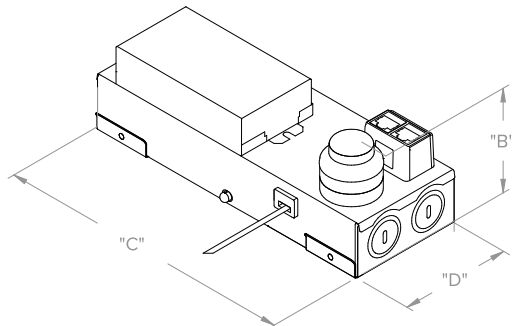
DRIVER J-BOX



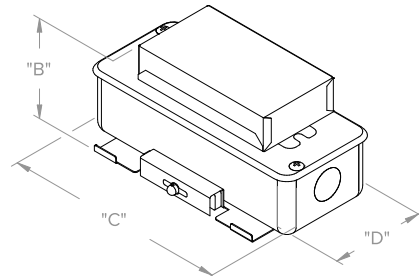
DM1 / DM01 / PDM / DALI



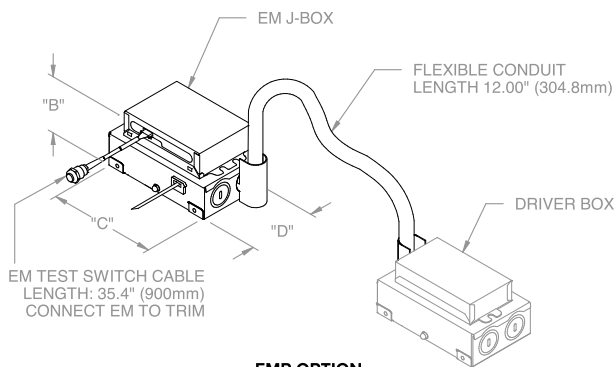
DMX



NX CONTROLS OPTION



CP



EMR OPTION

EM/Driver J-Box Conduit (provided) connects to Driver J-Box (see Driver J-Box for additional details)

OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/CONTROLS/OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.50" (88.9mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	5.00" (127.0mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	4.00" (101.6mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	5.00" (127mm)



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RW-M-10L35K8-LWW-DM1
 LFR-4RW-T-LWW-SS
 Notes:

Type:
E-10L

MHCS22-227151



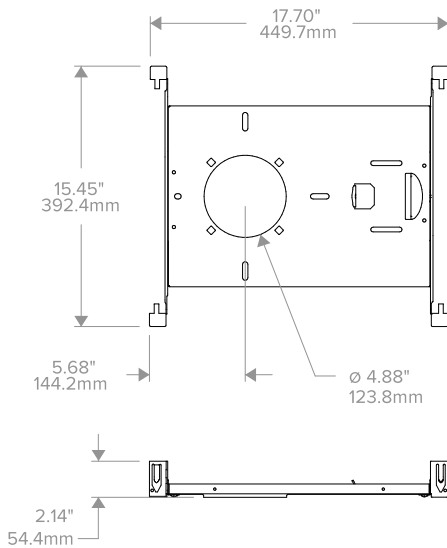
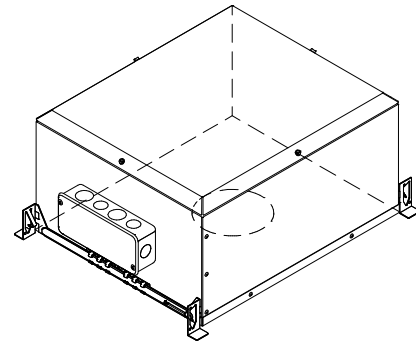
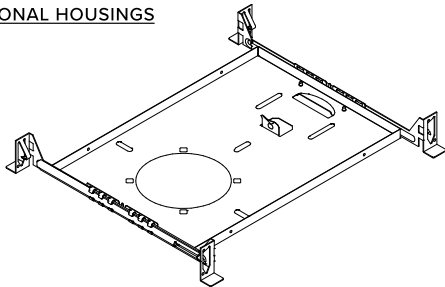
LFR-4RW

LITEFRAME 4" ROUND LENSED WALL WASH

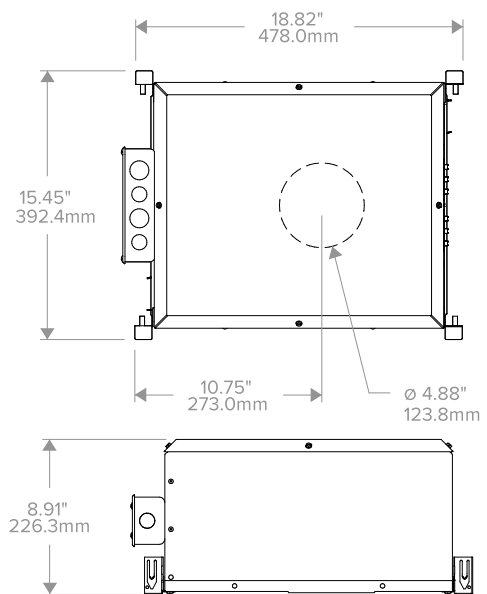
DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS



**LFR-4RD-H
 NON-IC HOUSING FRAME**



**LFR-4RD-H-IC
 IC HOUSING**
 Not for use with CP Shroud



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LFR-4RW-M-10L35K8-LWW-DM1
 LFR-4RW-T-LWW-SS
 Notes:

Type:
E-10L

MHCS22-227151



LFR-4RW

LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

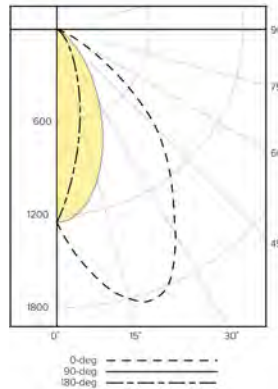
PHOTOMETRY

LFR-4RW-M-20L35K8LWW-DM1 / LFR-4RW-T-LWW-S

LUMINAIRE DATA

Test No.	21.00599
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1591
Watts	15.2W
Efficacy	104.3
Mounting	Recessed

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1246
5	1466
15	1800
25	1751
35	1305
45	910
55	399
65	108
75	13
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	158737
55°	85803
65°	31521
75°	6195
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1164	73.2
0-60	1549	97.4
0-90	1591	100.0
0-180	1591	100.0

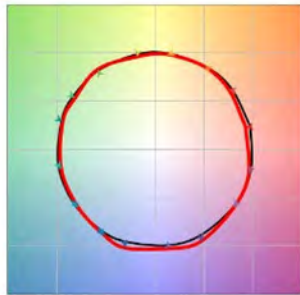
LUMEN MULTIPLIER

Option	27K8	30K8	35K8	40K8	50K8	27K9	30K9	35K9	40K9	50K9
Multiplier	0.93	0.96	1.00	1.01	1.03	0.78	0.82	0.85	0.87	0.89

Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

TM-30 DATA

**COLOR VECTOR GRAPHIC
 3500K, 90 CRI**



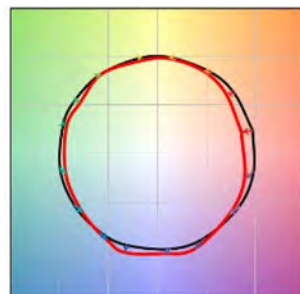
— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
 3500K, 90 CRI**



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R _t	85	90
R _g	95	99
CCT (K)	3422	3416
D _{uv}	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R _a	85	93
CIE R _s	16	66

**COLOR VECTOR GRAPHIC
 3500K, 80 CRI**



— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC
 3500K, 80 CRI**



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LFR-4RW-M-10L35K8-LWW-DM1

LFR-4RW-T-LWW-SS

Notes:

Type:**E-10L**

MHCS22-227151

**LFR-4RW**

LITEFRAME 4" ROUND LENSED WALL WASH

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ELECTRICAL DATA

DRIVER DATA		
Input Voltage	120-277 V	347 V
Input Frequency	50/60 Hz	50/60 Hz
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering (FCC 47 CFR Part 15)	Class A	Class A

* Values for DM1 option shown, values for other dimming options may vary.

ADDITIONAL INFORMATION**Dimming Compatability**

See the DIMMING link for more information on dimming compatability and recommended dimmer list.

DMXSee instruction sheet on www.prescolite.com for connection & installation information.**Central Inverters**For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.LiteGear: www.dual-lite.com/products/litegear_lg_seriesLPS Series: www.dual-lite.com/products/lps

All product and company names, logos and product identifiers are trademarks™ or registered trademarks® of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**
RLW4-35ML-FAW-EDU

Notes:

Type:**G-ML**

MHCS22-227151

Columbia
LIGHTING**RLW**

REVALUME™ LINEAR WRAP

FEATURES

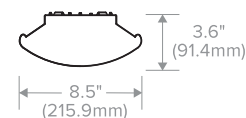
- Uninterrupted ribbon of light for single or row mount applications
- Optional integral emergency battery pack
- Decorative injection molded ABS material endcaps
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, stem mount or cable mount
- DLC® (Design Lights Consortium) Qualified - see www.designlights.org



See Certification Specifications

CONTROLS TECHNOLOGYDATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____**RELATED PRODUCTS**

- [Reverie™ Decorative Low Bay](#)
- [Multipurpose Linear](#)



END VIEW (ALL SIZES)

SPECIFICATIONS**CONSTRUCTION**

- Housing, and wireway are formed from code-gauge steel
- Back of housing knockouts are provided for electrical access and mounting
- Decorative injection molded ABS material endcaps

SHIELDING

- Round frosted acrylic lens offers a smooth appearance and even light distribution

FINISH

- White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel

ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance
- Driver options include fixed output for on/off function, step dimming (high/low/off), or continuous 0–10V dimming
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life. Drivers < 10% THD at 120V, power factor > 0.95

CONTROLS

- Optional SpectraSync™ offers two modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATION

- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels.
- Damp location labeling is standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATION (CONTINUED)

- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 6 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1513–14711
Wattage Range	12–112
Efficacy Range (LPW)	115–144
Reported Life (Hours)	L80/60,000



Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
RLW4-35ML-FAW-EDU

Type:
G-ML

Notes:

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: RLW4-40ML-FAW-EDU

CATALOG # _____

RLW						FA	W
Model	Size	Color Temp		Nominal Lumens ²		Shielding	Distribution
RLW Revalume™ Linear Wrap	2' 2"	30	3000K	XW	4' (2700), 8' (5400) ³	FA Frosted Acrylic	W Wide
	4' 4"	35	3500K	VW	2' (1600), 4' (3400), 8' (6800) ³		
	8' 8"	40	4000K	MW	2' (2200), 4' (3800), 8' (7700) ³		
		50	5000K	LW	2' (2600), 4' (4200), 8' (8500) ³		
		2750T	2700K-5000K SpectraSync™ Tunable White ¹	ML	2' (3400), 4' (5300), 8' (9800) ³		
		2765T	2700K-6500K SpectraSync™ Tunable White ¹	HL	2' (3800), 4' (6000), 8' (11,800) ⁴		
			VL	2' (4500), 4' (7800), 8' (14,200) ⁴			

Driver	Voltage	Options	Control Options
E Fixed Output	U 120-277V	ELL14 Emergency Battery Pack, 1400 Lumens ⁶	NX Standalone
ED 0-10V Dimming	347 347V	GTD Generator Transfer Device ⁷	NXOS NX, PIR BT Occupancy/Daylight Sensor, Round Ceiling Mount ¹⁹
ED1 0-10V 1% Dimming		DTS Dimming Bypass Module ⁸	Third-Party Control Options
EDD 0-10V Dim-to-Dark		GLR Fast Blow Fuse	LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{20, 21, 22}
ESD Step Dimming		INT Intermediate (provides ends with wiring access for continuous row mounting) ^{9, 10, 11, 12, 13}	LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) ^{20, 21, 22}
LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology		EOR End of Row (provides end wiring access for continuous row mounting) ^{10, 11, 12, 13}	ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{20, 22}
DALIP DALI Power Bus ⁵		SAF SpectraSAFE™ Integrated Surveillance Lighting System ¹⁴	
		MST MASTER fixture that controls one or more SATELLITE fixtures in a continuous row application ^{10, 11, 12, 15, 16, 17, 18}	
		SAT SATELLITE fixture controlled by MASTER fixture in a continuous row application ^{10, 11, 12, 16, 17, 18}	

Accessories (Order Separately)

- RLWWG2 2' Wire Guard
- RLWWG4 4' Wire Guard
- S18 18" Stem, Canopy
- SS18 18" Swivel Stem-45° Swivel
- CM24SCF3-KIT 24" Adjustable Cable Mounting Kit, 3-wire feed
- CM48SCF3-KIT 48" Adjustable Cable Mounting Kit, 3-wire feed

Notes:

- 1 Only available with ED driver.
 - 2 Nominal Lumens. Refer to performance tables for exact values and available lumen outputs for fixture size.
 - 3 RLW4 & RLW8: lumen packages XW & ML qualified up to 40°C.
 - 4 RLW4 & RLW8: lumen packages HL & VL qualified up to 35°C.
 - 5 DALIP only available when LVS, LVR or ODPG control options are selected.
 - 6 For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative. Not available with 2'.
 - 7 Available for universal voltage and fixed output driver options only.
 - 8 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 6 for wiring diagram.
 - 9 Suspension support required at every fixture coupling; see [Mounting Accessories Guide](#).
 - 10 Not available with DTS, GTD or ATSD.
 - 11 All fixtures in a row must be the same driver type and voltage.
 - 12 Includes quick-connect wiring harness.
 - 13 A row-connector kit will be included with each fixture when EOR or INT is selected.
 - 14 Not available with Control Options. Not available in 347. Not available with through wiring.
 - 15 MST option not available with INT row position.
 - 16 Multiple SAT fixtures can be controlled by one MST fixture. Any one SAT fixture can have no more than one connected MST fixture.
 - 17 NX is supported for this application, consult Brand for use with other controls systems.
 - 18 Not available with LUTH.
- NX In-Fixture Control Options:**
- 19 Only available with ED and ED1 drivers. Universal voltage only.
- Third-Party Control Options:**
- 20 LVS, LVR and ODPG only available with DALIP driver option.
 - 21 VIVE is a trademark of Lutron Electronics Co., Inc.
 - 22 Not available with SpectraSync (2750T or 2765T).





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35ML-FAW-EDU

Type:
G-ML

Notes:

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE									
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming	Commissioning
NX Standalone									
NXOS	NXSMP-OMNI	No	Yes	Yes	Yes	Yes	Yes	Yes	On-site

SpectraSync™ Color Tuning Technology:

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASync COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K-5000K 2700K-6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

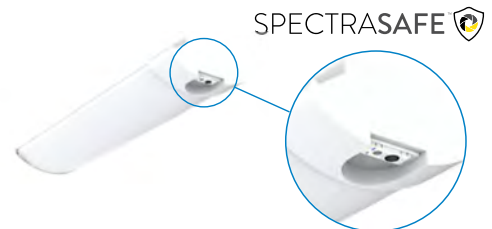
SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- Multiple wiring configurations available
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

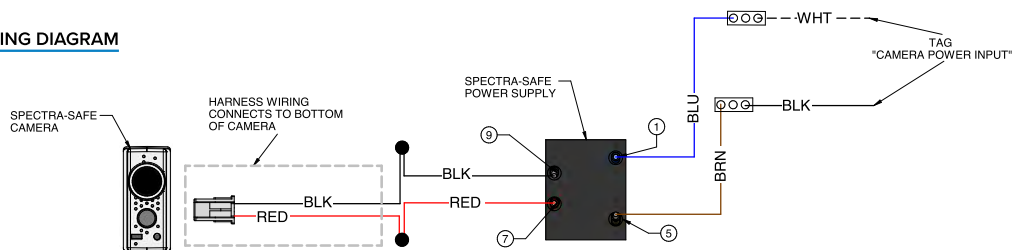
Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (NI)
5	VAC in (LI)
7	+Vout
9	-Vout



**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

RLW4-35ML-FAW-EDU

Type:**G-ML**

Notes:

MHCS22-227151

Columbia
 LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS

FIXTURE	COLOR	LUMENS	WATTS	LPW
RLW2-VW	3000K	1513	11.6	130
	3500K	1541	11.6	133
	4000K	1559	11.6	134
	5000K	1612	11.6	139
RLW2-MW	3000K	2020	16.3	124
	3500K	2057	16.3	126
	4000K	2082	16.3	128
	5000K	2152	16.3	132
RLW2-LW	3000K	2553	22.1	116
	3500K	2600	22.1	118
	4000K	2631	22.1	119
	5000K	2720	22.1	123
RLW2-ML	3000K	3297	26.6	124
	3500K	3357	26.6	126
	4000K	3397	26.6	128
	5000K	3511	26.6	132
RLW2-HL	3000K	3594	29.5	122
	3500K	3660	29.5	124
	4000K	3704	29.5	126
	5000K	3828	29.5	130
RLW2-VL	3000K	4354	37.2	117
	3500K	4434	37.2	119
	4000K	4487	37.2	121
	5000K	4638	37.2	125
RLW4-XW	3000K	2711	19.5	140
	3500K	2673	19.4	138
	4000K	2705	19.4	139
	5000K	2755	19.4	142
RLW4-VW	3000K	3275	25.2	130
	3500K	3335	25.2	132
	4000K	3375	25.2	134
	5000K	3488	25.2	138
RLW4-MW	3000K	3854	28.8	134
	3500K	3925	28.8	136
	4000K	3972	28.8	138
	5000K	4106	28.8	143
RLW4-LW	3000K	4174	33.9	123
	3500K	4251	33.9	125
	4000K	4302	33.9	127
	5000K	4447	33.9	131
RLW4-ML	3000K	5128	40.4	127
	3500K	5222	40.4	129
	4000K	5285	40.4	131
	5000K	5462	40.4	135

**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

RLW4-35ML-FAW-EDU

Type:**G-ML**

Notes:

MHCS22-227151

Columbia
 LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS

FIXTURE	COLOR	LUMENS	WATTS	LPW
RLW4-HL	3000K	5553	48.1	115
	3500K	5655	48.1	118
	4000K	5723	48.1	119
	5000K	5915	48.1	123
RLW4-VL	3000K	7510	55.9	135
	3500K	7645	55.9	137
	4000K	7767	55.9	139
	5000K	8024	55.7	144
RLW8-XW	3000K	4989	39	128
	3500K	5080	38.8	131
	4000K	5141	38.8	132
	5000K	5314	38.8	137
RLW8-VW	3000K	6397	50.4	127
	3500K	6514	50.4	129
	4000K	6592	50.4	131
	5000K	6814	50.4	135
RLW8-MW	3000K	7157	57.6	124
	3500K	7288	57.6	127
	4000K	7375	57.6	128
	5000K	7623	57.6	132
RLW8-LW	3000K	8349	67.8	123
	3500K	8502	67.8	125
	4000K	8604	67.8	127
	5000K	8893	67.8	131
RLW8-ML	3000K	9525	80.8	118
	3500K	9700	80.8	120
	4000K	9816	80.8	121
	5000K	10146	80.8	126
RLW8-HL	3000K	11106	96.2	115
	3500K	11310	96.2	118
	4000K	11446	96.2	119
	5000K	11830	96.2	123
RLW8-VL	3000K	13811	111.8	124
	3500K	14064	111.8	126
	4000K	14233	111.8	127
	5000K	14711	111.4	132



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35ML-FAW-EDU

Notes:

Type:

G-ML

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

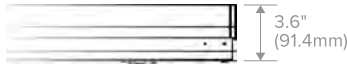
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TYPE: _____ PROJECT: _____

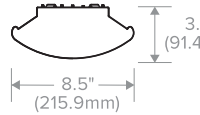
CATALOG #: _____

DIMENSIONS

FIXTURE HEIGHT (ALL SIZES)

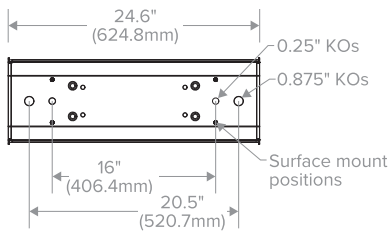


END VIEW (ALL SIZES)

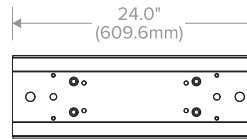


- KOs (ALL SIZES)**
- 0.25" (1/4") KOs are for CM (Cable Mount) Kits
 - 0.875" (7/8") KOs are for wiring and stem mounting

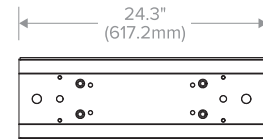
2' SINGLE ASSEMBLY



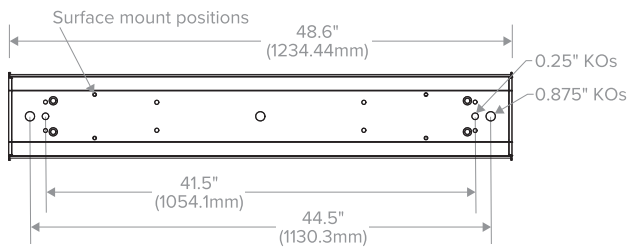
2' INTERMEDIATE ASSEMBLY



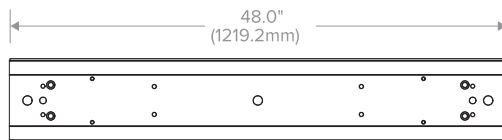
2' END OF ROW ASSEMBLY



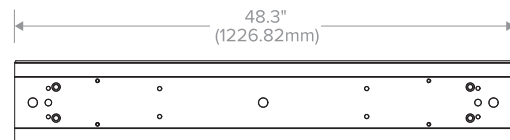
4' SINGLE ASSEMBLY



4' INTERMEDIATE ASSEMBLY



4' END OF ROW ASSEMBLY





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35ML-FAW-EDU

Notes:

Type:
G-ML

MHCS22-227151

Columbia
 LIGHTING

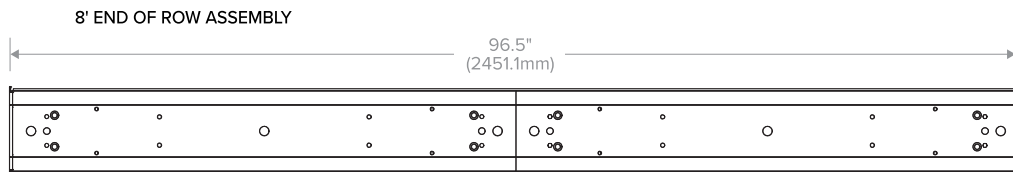
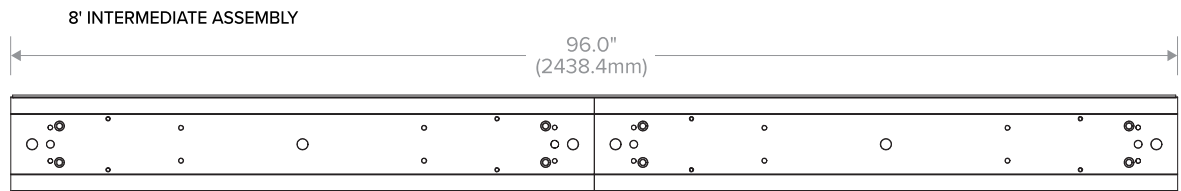
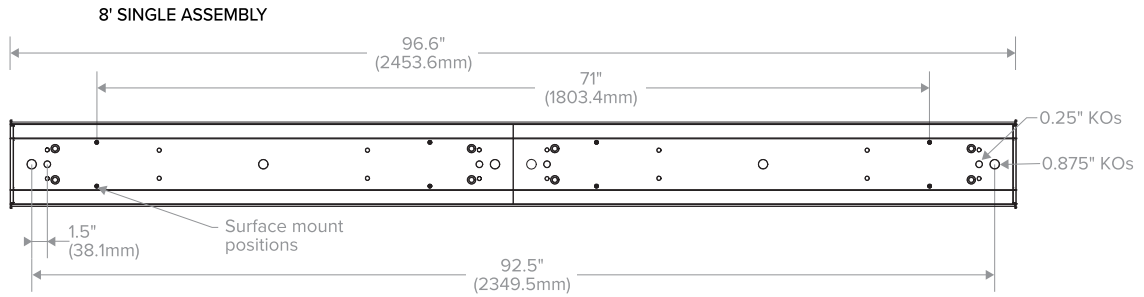
RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

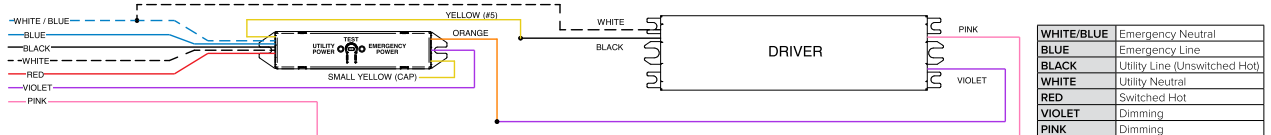
TYPE: _____ PROJECT: _____

CATALOG #: _____



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
RLW4-35ML-FAW-EDU

Notes:

Type:**G-ML**

MHCS22-227151

Columbia
LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

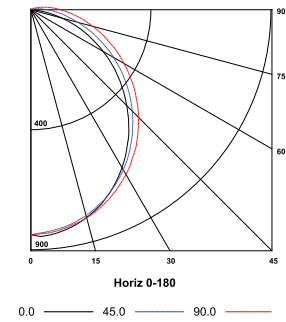
CATALOG #: _____

PHOTOMETRY**RLW4-30XW-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01231
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	2502
Watts	19.5
Efficacy	128
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

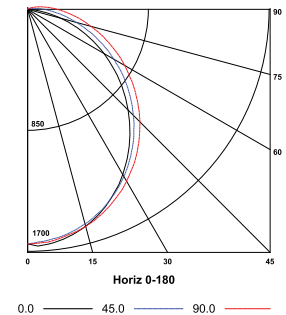
Zone	Lumens	% Lamp	% Fixt.
0-30	646	25.8	25.8
0-40	1051	42.0	42.0
0-60	1841	73.6	73.6
0-90	2431	97.1	97.1
0-180	2502	100.0	100.0

POLAR GRAPH**RLW4-35VW-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01221
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	3234
Watts	40.4
Efficacy	128
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

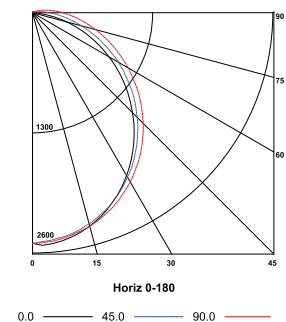
Zone	Lumens	% Lamp	% Fixt.
0-30	1263	25.8	25.8
0-40	2056	42.0	42.0
0-60	3607	73.6	73.6
0-90	4755	97.0	97.0
0-180	4901	100.0	100.0

POLAR GRAPH**RLW4-50VL-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01234
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	7476
Watts	55.7
Efficacy	134
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1914	25.6	25.6
0-40	3118	41.7	41.7
0-60	5479	73.3	73.3
0-90	7241	96.9	96.9
0-180	7476	100.0	100.0

POLAR GRAPH

All product and company names, logos and product identifiers are trademarks ™ or registered trademarks ® of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

RLW4-35VL-FAW-EDU

Notes:

Type:**G-VL**

MHCS22-227151

Columbia
LIGHTING**RLW**

REVALUME™ LINEAR WRAP

FEATURES

- Uninterrupted ribbon of light for single or row mount applications
- Optional integral emergency battery pack
- Decorative injection molded ABS material endcaps
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, stem mount or cable mount
- DLC® (Design Lights Consortium) Qualified - see www.designlights.org



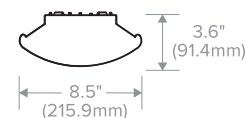
See Certification Specifications

CONTROLS TECHNOLOGY

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

**RELATED PRODUCTS**

- [Reverie™ Decorative Low Bay](#)
- [Multipurpose Linear](#)



END VIEW (ALL SIZES)

SPECIFICATIONS**CONSTRUCTION**

- Housing, and wireway are formed from code-gauge steel
- Back of housing knockouts are provided for electrical access and mounting
- Decorative injection molded ABS material endcaps

SHIELDING

- Round frosted acrylic lens offers a smooth appearance and even light distribution

FINISH

- White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel

ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance
- Driver options include fixed output for on/off function, step dimming (high/low/off), or continuous 0–10V dimming
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life. Drivers < 10% THD at 120V, power factor > 0.95

CONTROLS

- Optional SpectraSync™ offers two modes of tunable white solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATION

- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels.
- Damp location labeling is standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATION (CONTINUED)

- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 6 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1513–14711
Wattage Range	12–112
Efficacy Range (LPW)	115–144
Reported Life (Hours)	L80/60,000



Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
RLW4-35VL-FAW-EDU

Type:
G-VL

Notes:

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: RLW4-40ML-FAW-EDU

CATALOG # _____

RLW		Color Temp		Nominal Lumens ²		FA	W
Model	Size					Shielding	Distribution
RLW Revalume™ Linear Wrap	2' 2"	30	3000K	XW	4' (2700), 8' (5400) ³	FA Frosted Acrylic	W Wide
	4' 4"	35	3500K	VW	2' (1600), 4' (3400), 8' (6800) ³		
	8' 8"	40	4000K	MW	2' (2200), 4' (3800), 8' (7700) ³		
		50	5000K	LW	2' (2600), 4' (4200), 8' (8500) ³		
		2750T	2700K-5000K SpectraSync™ Tunable White ¹	ML	2' (3400), 4' (5300), 8' (9800) ³		
		2765T	2700K-6500K SpectraSync™ Tunable White ¹	HL	2' (3800), 4' (6000), 8' (11,800) ⁴		
				VL	2' (4500), 4' (7800), 8' (14,200) ⁴		

Driver	Voltage	Options	Control Options
E Fixed Output	U 120-277V	ELL14 Emergency Battery Pack, 1400 Lumens ⁶	NX Standalone
ED 0-10V Dimming	347 347V	GTD Generator Transfer Device ⁷	NXOS NX, PIR BT Occupancy/Daylight Sensor, Round Ceiling Mount ¹⁹
ED1 0-10V 1% Dimming		DTS Dimming Bypass Module ⁸	Third-Party Control Options
EDD 0-10V Dim-to-Dark		GLR Fast Blow Fuse	LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{20, 21, 22}
ESD Step Dimming		INT Intermediate (provides ends with wiring access for continuous row mounting) ^{9, 10, 11, 12, 13}	LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) ^{20, 21, 22}
LUTH Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology		EOR End of Row (provides end wiring access for continuous row mounting) ^{10, 11, 12, 13}	ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{20, 22}
DALIP DALI Power Bus ⁵		SAF SpectraSAFE™ Integrated Surveillance Lighting System ¹⁴	
		MST MASTER fixture that controls one or more SATELLITE fixtures in a continuous row application ^{10, 11, 12, 15, 16, 17, 18}	
		SAT SATELLITE fixture controlled by MASTER fixture in a continuous row application ^{10, 11, 12, 16, 17, 18}	

Accessories (Order Separately)

RLWWG2	2' Wire Guard
RLWWG4	4' Wire Guard
S18	18" Stem, Canopy
SS18	18" Swivel Stem-45° Swivel
CM24SCF3-KIT	24" Adjustable Cable Mounting Kit, 3-wire feed
CM48SCF3-KIT	48" Adjustable Cable Mounting Kit, 3-wire feed

Notes:

- 1 Only available with ED driver.
- 2 Nominal Lumens. Refer to performance tables for exact values and available lumen outputs for fixture size.
- 3 RLW4 & RLW8: lumen packages XW & ML qualified up to 40°C.
- 4 RLW4 & RLW8: lumen packages HL & VL qualified up to 35°C.
- 5 DALIP only available when LVS, LVR or ODPG control options are selected.
- 6 For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative. Not available with 2'.
- 7 Available for universal voltage and fixed output driver options only.
- 8 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 6 for wiring diagram.
- 9 Suspension support required at every fixture coupling; see [Mounting Accessories Guide](#).
- 10 Not available with DTS, GTD or ATSD.
- 11 All fixtures in a row must be the same driver type and voltage.

- 12 Includes quick-connect wiring harness.
- 13 A row-connector kit will be included with each fixture when EOR or INT is selected.
- 14 Not available with Control Options. Not available in 347. Not available with through wiring.
- 15 MST option not available with INT row position.
- 16 Multiple SAT fixtures can be controlled by one MST fixture. Any one SAT fixture can have no more than one connected MST fixture.
- 17 NX is supported for this application, consult Brand for use with other controls systems.
- 18 Not available with LUTH.
- NX In-Fixture Control Options:**
- 19 Only available with ED and ED1 drivers. Universal voltage only.
- Third-Party Control Options:**
- 20 LVS, LVR and ODPG only available with DALIP driver option.
- 21 VIVE is a trademark of Lutron Electronics Co., Inc.
- 22 Not available with SpectraSync (2750T or 2765T).





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35VL-FAW-EDU

Type:
G-VL

Notes:

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE									
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming	Commissioning
NX Standalone									
NXOS	NXSMP-OMNI	No	Yes	Yes	Yes	Yes	Yes	Yes	On-site

SpectraSync™ Color Tuning Technology:

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASync COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K-5000K 2700K-6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

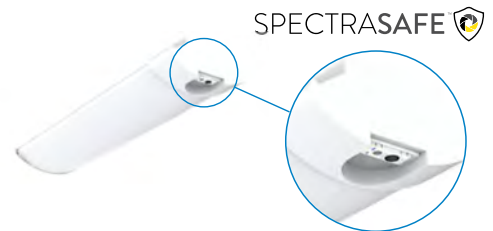
SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- Multiple wiring configurations available
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

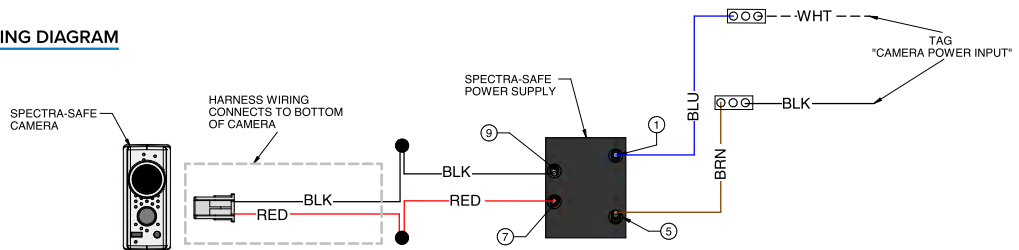
Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (NI)
5	VAC in (LI)
7	+Vout
9	-Vout



**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

RLW4-35VL-FAW-EDU

Type:**G-VL**

Notes:

MHCS22-227151

Columbia
 LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS

FIXTURE	COLOR	LUMENS	WATTS	LPW
RLW2-VW	3000K	1513	11.6	130
	3500K	1541	11.6	133
	4000K	1559	11.6	134
	5000K	1612	11.6	139
RLW2-MW	3000K	2020	16.3	124
	3500K	2057	16.3	126
	4000K	2082	16.3	128
	5000K	2152	16.3	132
RLW2-LW	3000K	2553	22.1	116
	3500K	2600	22.1	118
	4000K	2631	22.1	119
	5000K	2720	22.1	123
RLW2-ML	3000K	3297	26.6	124
	3500K	3357	26.6	126
	4000K	3397	26.6	128
	5000K	3511	26.6	132
RLW2-HL	3000K	3594	29.5	122
	3500K	3660	29.5	124
	4000K	3704	29.5	126
	5000K	3828	29.5	130
RLW2-VL	3000K	4354	37.2	117
	3500K	4434	37.2	119
	4000K	4487	37.2	121
	5000K	4638	37.2	125
RLW4-XW	3000K	2711	19.5	140
	3500K	2673	19.4	138
	4000K	2705	19.4	139
	5000K	2755	19.4	142
RLW4-VW	3000K	3275	25.2	130
	3500K	3335	25.2	132
	4000K	3375	25.2	134
	5000K	3488	25.2	138
RLW4-MW	3000K	3854	28.8	134
	3500K	3925	28.8	136
	4000K	3972	28.8	138
	5000K	4106	28.8	143
RLW4-LW	3000K	4174	33.9	123
	3500K	4251	33.9	125
	4000K	4302	33.9	127
	5000K	4447	33.9	131
RLW4-ML	3000K	5128	40.4	127
	3500K	5222	40.4	129
	4000K	5285	40.4	131
	5000K	5462	40.4	135

**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

RLW4-35VL-FAW-EDU

Type:**G-VL**

Notes:

MHCS22-227151

Columbia
 LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS

FIXTURE	COLOR	LUMENS	WATTS	LPW
RLW4-HL	3000K	5553	48.1	115
	3500K	5655	48.1	118
	4000K	5723	48.1	119
	5000K	5915	48.1	123
RLW4-VL	3000K	7510	55.9	135
	3500K	7645	55.9	137
	4000K	7767	55.9	139
	5000K	8024	55.7	144
RLW8-XW	3000K	4989	39	128
	3500K	5080	38.8	131
	4000K	5141	38.8	132
	5000K	5314	38.8	137
RLW8-VW	3000K	6397	50.4	127
	3500K	6514	50.4	129
	4000K	6592	50.4	131
	5000K	6814	50.4	135
RLW8-MW	3000K	7157	57.6	124
	3500K	7288	57.6	127
	4000K	7375	57.6	128
	5000K	7623	57.6	132
RLW8-LW	3000K	8349	67.8	123
	3500K	8502	67.8	125
	4000K	8604	67.8	127
	5000K	8893	67.8	131
RLW8-ML	3000K	9525	80.8	118
	3500K	9700	80.8	120
	4000K	9816	80.8	121
	5000K	10146	80.8	126
RLW8-HL	3000K	11106	96.2	115
	3500K	11310	96.2	118
	4000K	11446	96.2	119
	5000K	11830	96.2	123
RLW8-VL	3000K	13811	111.8	124
	3500K	14064	111.8	126
	4000K	14233	111.8	127
	5000K	14711	111.4	132



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35VL-FAW-EDU

Notes:

Type:

G-VL

MHCS22-227151



RLW

REVALUME™ LINEAR WRAP

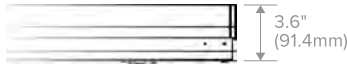
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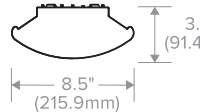
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DIMENSIONS

FIXTURE HEIGHT (ALL SIZES)

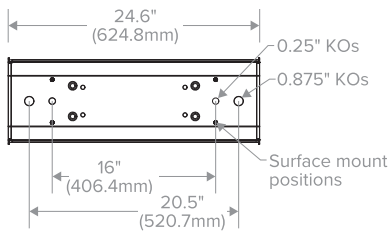


END VIEW (ALL SIZES)

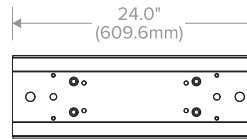


- KOs (ALL SIZES)**
- 0.25" (1/4") KOs are for CM (Cable Mount) Kits
 - 0.875" (7/8") KOs are for wiring and stem mounting

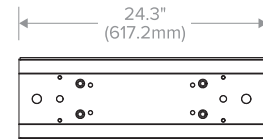
2' SINGLE ASSEMBLY



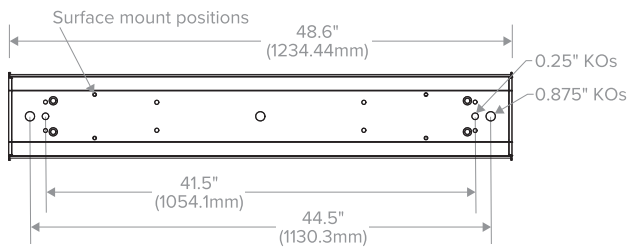
2' INTERMEDIATE ASSEMBLY



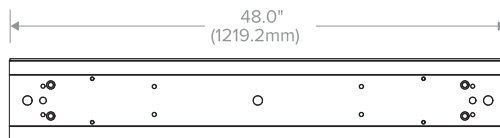
2' END OF ROW ASSEMBLY



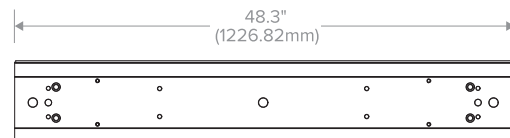
4' SINGLE ASSEMBLY



4' INTERMEDIATE ASSEMBLY



4' END OF ROW ASSEMBLY





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 RLW4-35VL-FAW-EDU

Notes:

Type:

G-VL

MHCS22-227151

Columbia
 LIGHTING

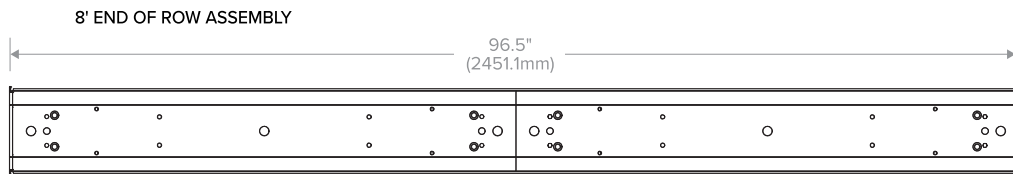
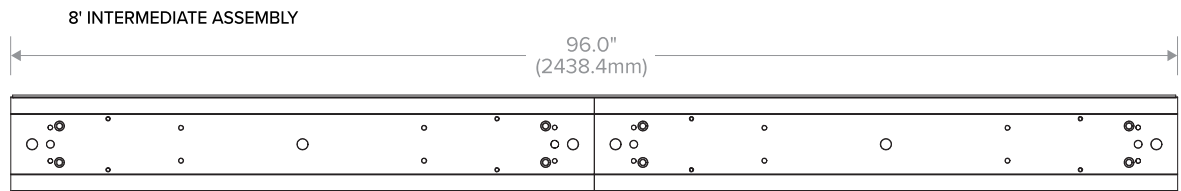
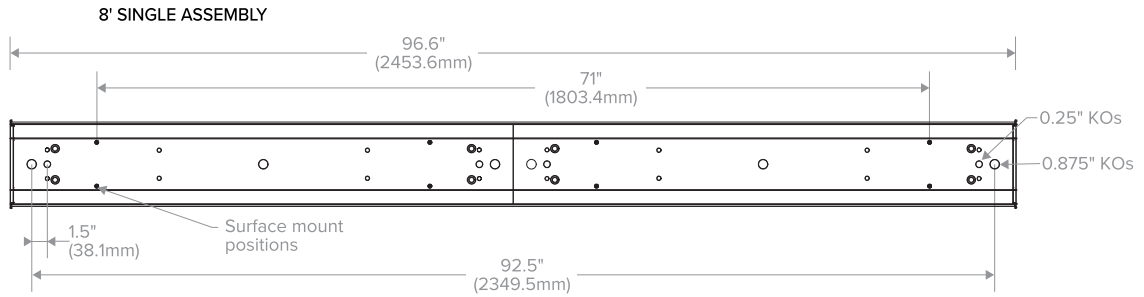
RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

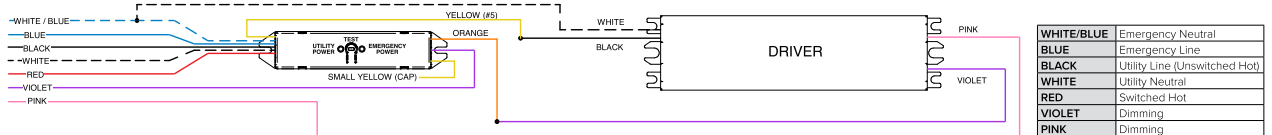
TYPE: _____ PROJECT: _____

CATALOG #: _____



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
RLW4-35VL-FAW-EDU

Notes:

Type:**G-VL**

MHCS22-227151

Columbia
LIGHTING

RLW

REVALUME™ LINEAR WRAP

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

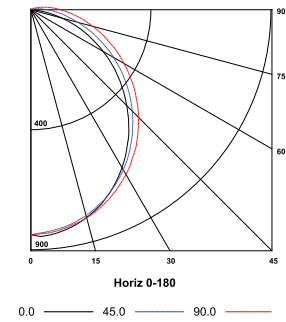
CATALOG #: _____

PHOTOMETRY**RLW4-30XW-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01231
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	2502
Watts	19.5
Efficacy	128
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

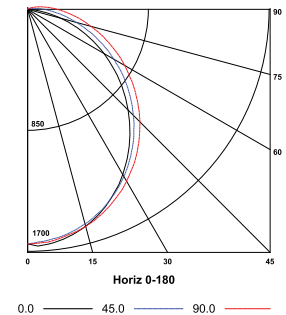
Zone	Lumens	% Lamp	% Fixt.
0-30	646	25.8	25.8
0-40	1051	42.0	42.0
0-60	1841	73.6	73.6
0-90	2431	97.1	97.1
0-180	2502	100.0	100.0

POLAR GRAPH**RLW4-35VW-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01221
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	3234
Watts	40.4
Efficacy	128
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

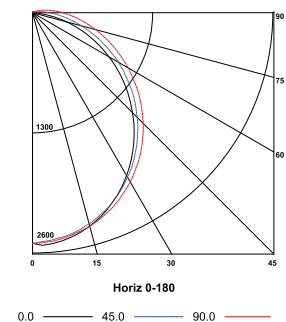
Zone	Lumens	% Lamp	% Fixt.
0-30	1263	25.8	25.8
0-40	2056	42.0	42.0
0-60	3607	73.6	73.6
0-90	4755	97.0	97.0
0-180	4901	100.0	100.0

POLAR GRAPH**RLW4-50VL-FAW-EDU****LUMINAIRE DATA**

Test No.	18.01234
Description	Revalume Linear Surface, Wraps 8.5" x 48" with frosted acrylic refractor
Delivered Lumens	7476
Watts	55.7
Efficacy	134
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.25

ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1914	25.6	25.6
0-40	3118	41.7	41.7
0-60	5479	73.3	73.3
0-90	7241	96.9	96.9
0-180	7476	100.0	100.0

POLAR GRAPH

All product and company names, logos and product identifiers are trademarks ™ or registered trademarks ® of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

CWM4-35MLSM-FRWA-EDU

Type:**VAN****Notes:**

MHCS22-227151

Columbia
LIGHTING

CWM

CONTEMPORARY LED WALL MOUNT

FEATURES

- Simplistic modular design with interchangeable lenses and end caps
- Available in semi-recessed, flush mount and direct/indirect configurations
- Easy removal of lens allows access to electrical components for modular replaceability
- Luminaire installs in three easy steps without disassembling the fixture
- Slender profile meets ADA requirements for wall mounted product
- Wide lumen package offering for a variety of wall mount applications including stairwell, corridor, and vanity
- Best in class efficacy and reduced input wattage; excellent energy savings compared to legacy fluorescent products

**CONTROL TECHNOLOGY**

SpectraSync™
Color Tuning Technology

NX DISTRIBUTED
INTELLIGENCE

SPECIFICATIONS**CONSTRUCTION**

- The luminaire chassis is designed from anodized extruded aluminum
- End caps are injection molded or die cast for a finished appearance and provide smooth edges for ease of handling
- Fixture provides easy access to electrical components via removal of lens and chassis.

OPTICS

- High efficiency acrylic lens features linear prisms for high performance without glare or pixelation
- Optional 1/8" 3form material can be added as a decorative element or to match existing 3form features in various applications. For custom selections please consult factory

INSTALLATION

- Semi-recessed or surface mounting options
- Semi-recessed mounting option requires the use of a 4-gang junction box for proper mounting and assembly
- A Snap-Tite conduit adapter is recommended for conduit installation to surface mount option

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- NX is available in U.S., Canada and Mexico. For other locations consult factory

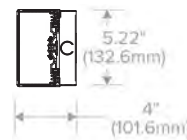
CERTIFICATIONS

- Built to UL 1598 and 2108 standards and bear appropriate cCSAus labels
- Damp Location labeling is standard
- Emergency equipped fixtures are listed to UL924 standards for emergency situations
- Adheres to LM79, LM80, and TM21 industry standards
- DLC® (DesignLights Consortium) Qualified - see www.designlights.org

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____



Surface Mount Cross Section (FR, SB, SF lenses)
 See additional dimensions on pages 5-6



CWM with DIS lens and FA end cap options

KEY DATA	
Lumen Range	1004-4408
Wattage Range	14-43
Efficacy Range (LPW)	66-123
Reported Life (Hours)	L80/60,000



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 CWM4-35MLSM-FRWA-EDU

Type:
VAN

Notes:

MHCS22-227151



CWM

CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: CWM4-40MLSM-FRFP-EDU

CATALOG # _____

CWM		CRI	Color Temp	Delivered Lumens ²	Mounting	Lens
Model	Size	Blank >80	30 3000K	XW 4' (2530) ¹	SM Surface Mount	FR Frosted Rectilinear Lens
CWM Contemporary LED Wall Mount	2' 2' 4' 4'		35 3500K	VW 2' (1664), 4' (3239)	SR Semi-Recessed	SB Slotted Lens with Bamboo Insert
			40 4000K	MW 2' (2013), 4' (3633)		SF Slotted Lens with Fabric Insert
			50 5000K	LW 2' (2439), 4' (4273) ²		DIS Direct/Indirect Straight Aluminum Lens
			2750T 2700K-5000K SpectraSync™ Tunable White ³	ML 2' (3310), 4' (483) ³		DISB Direct/Indirect Straight Aluminum Lens with Bamboo Insert
			2765T 2700K-6500K SpectraSync™ Tunable White ³			DISF Direct/Indirect Straight Aluminum Lens with Fabric Insert
						DIC Direct/Indirect Curved Aluminum Lens
						DICB Direct/Indirect Curved Aluminum Lens with Bamboo Insert
						DICF Direct/Indirect Curved Aluminum Lens with Fabric Insert

End Caps	Driver	Voltage	Options	Control Options
FP Flat Plastic End Caps ⁶	E Fixed Output	U 120-277V	ELL14 Emergency Battery Pack, 1400 Lumens ⁹	NX Networked - Wired
FA Flat Aluminum End Caps ⁷	ED 0-10V Dimming		GLR Fast Blow Fuse	NXE NX, Dual SmartPorts ^{12, 13, 14}
WA Aluminum End Caps with Glow Ends ⁸	ED1 0-10V 1% Dimming		LVC1 Low Voltage Controller for individual control of the reading function ^{9, 10, 11}	Third-Party Control Options
			LVC2 Low Voltage Controller for individual or sequential control of two (2) independent functions. Use LVC Selection Chart included in this document to complete ordering code (Ex. LVC21, LVC22) ^{9, 10, 11}	HFU High Frequency Ultra-sonic Occupancy Sensor ^{15, 16, 17}
			LVCD Low voltage controller for up to three (3) functions with one (1) or two (2) functions having 0-10v dimming and the remaining function(s) being controlled independently. Use LVC Selection Chart on next page to complete ordering code (Ex. LVCDST5, LVCDSTM4) ^{9, 10, 11}	OW Occupancy Sensor, Wattstopper ^{15, 16, 17}
			P4L 4-Pole Pull Switch (mounted to the left as facing the luminaire) ^{13, 14, 17}	
			P4R 4-Pole Pull Switch (mounted to the right as facing the luminaire) ^{13, 14, 17}	

Accessories: Optional Integral Sensors

Cat# Suffix	Sensor Manufacturer	Sensor Function	Dim-To-Off Daylighting	Powerpack included in luminaire housing
<input type="checkbox"/> OW	Wattstopper	Occupancy Sensor	No	Yes
<input type="checkbox"/> HFU	Wattstopper	High Frequency Ultrasonic Occupancy	No	Yes

- Notes:
- Available with ED driver only. N/A with ELL14 (2) or SR (2&4) options
 - Based on the 4000K with FR lens. See [CWM Performance Data Sheet](#) for extended lumen data
 - XW only available with 4'
 - LW with SR mounting not compatible with through wiring on 4' version
 - ML not available with SR mounting option. ML Direct/Indirect only available in 2'
 - Not available on Direct/Indirect
 - Standard for Direct/Indirect
 - Battery backup only available with SM mounting option
 - LVC and Pull Switch only available with Direct/Indirect lens option
 - LVC and Pull Switch available in 120V only
 - LVC and Pull Switch available in Surface Mount only
- NX In-Fixture Control Options:**
- NX controls can only be used with NX Sensor options
 - Not available with LVC or Pull Switch
 - NX is available with ED and ED1 drivers only
- Third-Party Control Options:**
- HFU and OW only available with SM mounting option
 - Not recommended for stainless steel applications
 - Only available with ED driver

**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

CWM4-35MLSM-FRWA-EDU

Type:**VAN**

Notes:

MHCS22-227151

Columbia
LIGHTING

CWM

CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE (CONTINUED)**LVC SELECTION CHART**

The Low Voltage Controller (LVC) option allows control of the luminaire functions from a patient pillow switch, bed side rail or wall switch with normally-open momentary dry contacts. Depending on the number of modes to be controlled, various control options are available.

Independent	I	Dedicated On/Off control for a single load.
Sequential	S	On/Off Control of two loads by sequentially cycling through them
Step dim	ST	Stepped light levels in 25% increments with each toggle of the low voltage switch.
Smooth dim	SM	Smooth increase in light level from a starting point of 25% by continuing to press the switch. When released, pressed and held again, the light level decreases until the switch is released.

LVC ORDERING CODE	FUNCTION	
	AMBIENT (top compartment)	READING (bottom compartment)
LVC1		I
LVC21	I or S*	I or S*
LVCDST4	ST	I
LVCDST5	I	ST
LVCDST6	ST	ST
LVCDSM4	SM	I
LVCDSM5	I	SM
LVCDSM6	SM	SM

*The selection of Individual (I) or sequential (S) control is determined by in-field connections at the control(s).



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 CWM4-35MLSM-FRWA-EDU

Notes:

Type:
VAN

MHCS22-227151



CWM

CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE									
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming	Commissioning
NX Networked – Wired									
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires a dongle ¹	On-site

¹ NXBTC/R needs to be plugged into an available SmartPort on the fixture network

SpectraSync™ Color Tuning Technology:

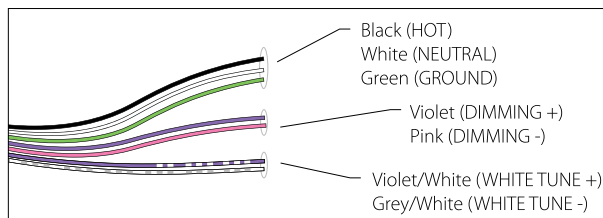
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K-5000K 2700K-6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space
Scheduled White	2700K-5000K 2700K-6500K	Mimics the rhythm of natural light or follows an alternative user-defined schedule throughout the day, enhancing an occupant's mood and well-being

SpectraSync Tunable White

Available in two options: 2750T (2700K-5000K) or 2765T (2700K-6500K). Requires two 0-10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

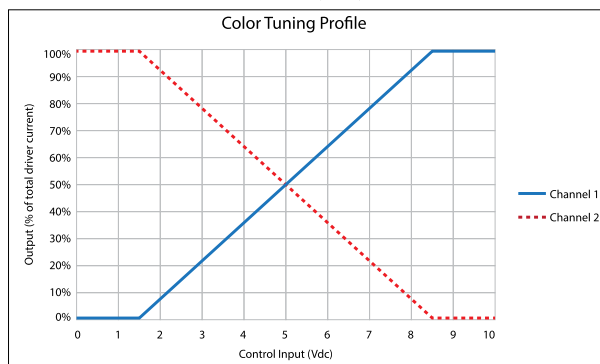


SpectraSync Tunable White luminaires are provided with two 0-10V circuits. The violet and pink circuit is for wiring to any qualified 0-10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0-10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 CWM4-35MLSM-FRWA-EDU

Notes:

Type:

VAN

MHCS22-227151



CWM

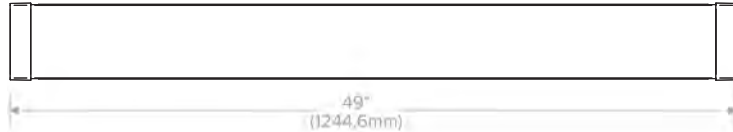
CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

DIMENSIONS

SURFACE MOUNT — FR, SB, SF LENSES

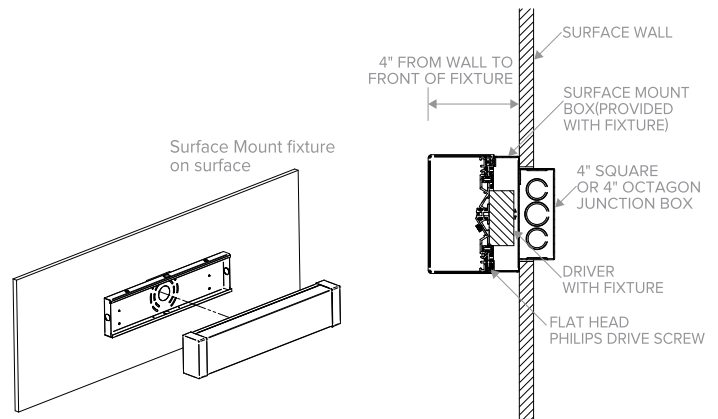
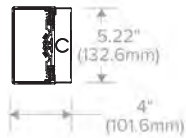
Front view, 4'



Front view, 2'

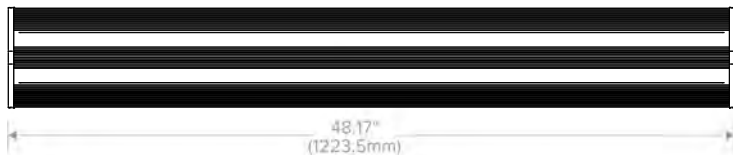


Cross section, both sizes

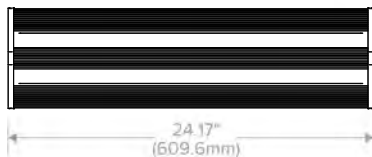


SURFACE MOUNT — DIRECT/INDIRECT LENSES

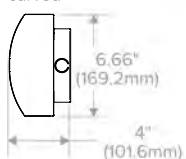
Front view, 4'



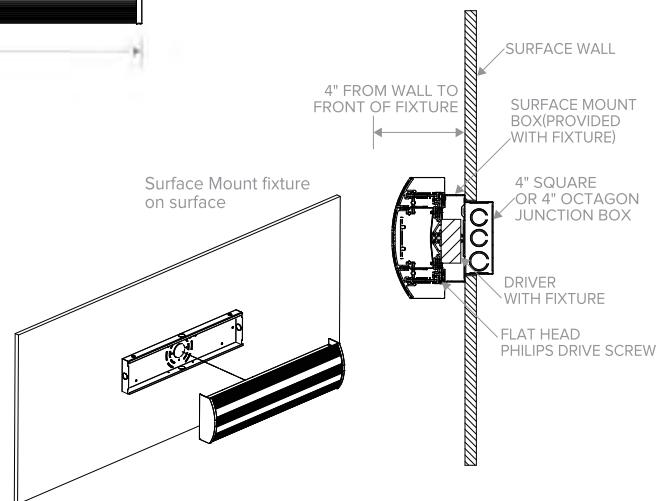
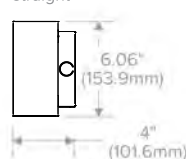
Front view, 2'



Cross section, both sizes, curved



Cross section, both sizes, straight





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 CWM4-35MLSM-FRWA-EDU

Notes:

Type:

VAN

MHCS22-227151

Columbia
 LIGHTING

CWM

CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS, CONT'D

SEMI-RECESSED — FR, SB, SF LENSES

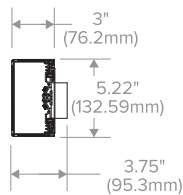
Front view, 4'



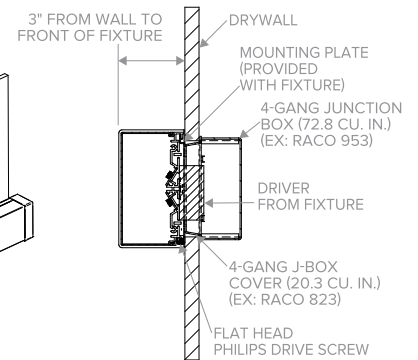
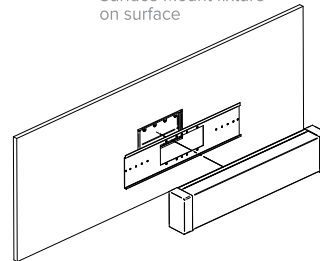
Front view, 2'



Cross section, both sizes



Surface Mount fixture on surface



SEMI-RECESSED — DIRECT/INDIRECT LENSES

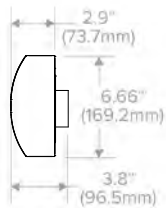
Front view, 4'



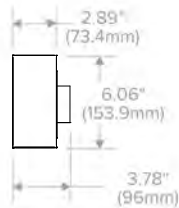
Front view, 2'



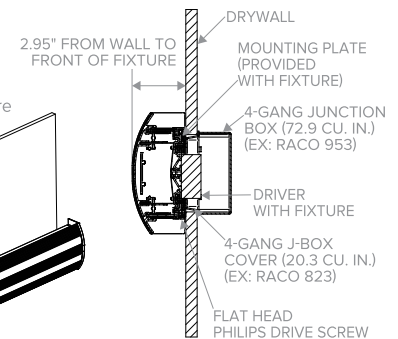
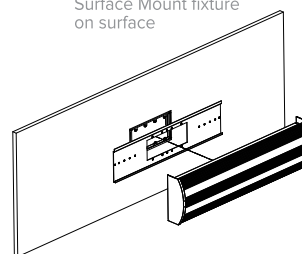
Cross section, both sizes, curved



Cross section, both sizes, straight



Surface Mount fixture on surface





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 CWM4-35MLSM-FRWA-EDU

Notes:

Type:
VAN

MHCS22-227151



CWM

CONTEMPORARY LED WALL MOUNT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY

CWM4-35LWXX-FRYY-EDU

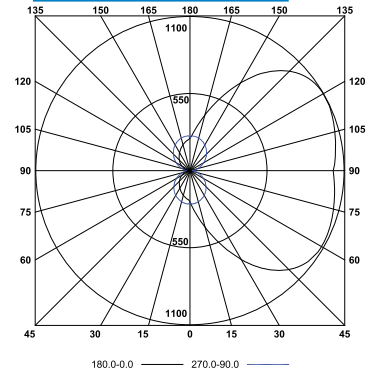
LUMINAIRE DATA

Test No.	16631
Description	CWM Contemporary Wall Mount, Surface 4ft Wall Mount with Frosted Lens
Delivered Lumens	4210
Watts	32.00
Efficacy	132
Mounting	Wall Mount
Spacing Criterion	0° = N/A 90° = N/A

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	241	5.7
0-40	459	10.9
0-60	1085	25.8
0-90	2099	49.8
0-180	4210	100

POLAR GRAPH



CWM4-35LWXX-DIS-EDU

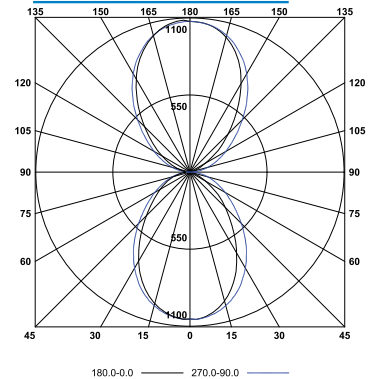
LUMINAIRE DATA

Test No.	17817
Description	CWM Contemporary Wall Mount, Surface 4ft Direct-Indirect Wall Mount with Frosted Lens
Delivered Lumens	4233
Watts	43.40
Efficacy	98
Mounting	Wall Mount
Spacing Criterion	0° = N/A 90° = N/A

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	755	17.8
0-40	1159	27.4
0-60	1785	42.2
0-90	2091	49.4
0-180	4233	100

POLAR GRAPH



CWM4-35LWXX-DIC-EDU

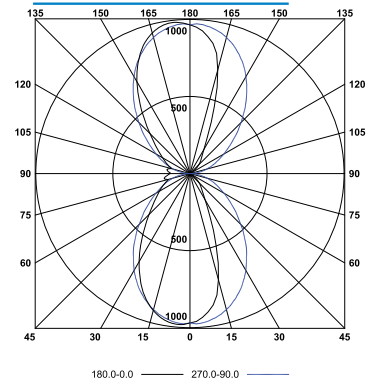
LUMINAIRE DATA

Test No.	17841
Description	CWM Contemporary Wall Mount, Surface 4ft Direct-Indirect Wall Mount with Frosted Lens
Delivered Lumens	3211
Watts	43.30
Efficacy	74
Mounting	Wall Mount
Spacing Criterion	0° = N/A 90° = N/A

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	640	19.9
0-40	935	29.1
0-60	1360	42.4
0-90	1620	50.5
0-180	3211	100

POLAR GRAPH



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Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
QUADT1-FSQ-AWW2*-W35K8-1000-
BWW2*-W35K8-1000-CX-DX-UNV-DM-W
Notes:

Type:
WW
MHCS22-227151

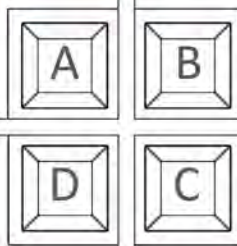
QUAD Family



The **QUAD** Luminaire features a Patented mounting system over the intersection of the ceiling grid. The Quad is a modular Downlight fixture that allows for different configurations based on optical and aesthetic requirements.

SEE PAGE 6 For More Ordering Examples

*FASTSIZE tiles made-to-order through your Armstrong rep. Contact Armstrong for compatible tiles



Project: _____
Type: _____
Notes: _____

5 Year Warranty



Patent - US Utility Patent # 10,859,242
Patent - US Design Patent # D885650

Shown: QuadT1-FSQ-ARB240K8500-BRB240K8500-CRB240K8500-DRB240K8500-...

1. ARON ID

QUADT1

QUADT1 QUAD

2. CEILING TYPE

FSQ Flat Grid - Square Quadrants
SSSQ Screw Slot Grid - Square Quadrants
DWSQ Drywall Trim - Square Quadrants
*DW Only Available in 4 or 1 quadrants - See QUAD SOLO

3. QUADRANT A

Light Source	CCT/CRI	Lumens
WW2*	W35	1000
RB1	W35K8	500

Device: _____ Add. Spec: _____

4. QUADRANT B

Light Source	CCT/CRI	Lumens
WW2*	W35	1000
RB1	W35K8	500

Device: _____ Add. Spec: _____

5. QUADRANT C

Light Source	CCT/CRI	Lumens
X	X	X
SLR	W35K9	1200

Device: _____ Add. Spec: _____

6. QUADRANT D

Light Source	CCT/CRI	Lumens
X	X	X

Device: _____ Add. Spec: _____

Light Source

RB1 Regressed Lens - Beam 1 Medium
RB2 Regressed Lens - Beam 2 Wide
*Reference Page 3 for beam distributions.
DL Drop Lens
* Specify Drop Length (.5", .75", 1")
*Reference Page 4 for Droplens
SL Spotlight
*Reference Page 9 and enter Spotlight Specification as separate line item on PO
WW1 Wall Wash Beam 1
WW2 Wall Wash Beam 2
*(N,E,S,W) Must Specify Direction of Light - See diagram On Page 5

CCT/CRI

W35 Static White
*Specify CCT
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI
C RGBW
*Specify White CCT
*Only Available for R & DL & WW Light Sources
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI

Quadrant Lumens

125 125 lm @ 1.5 W
250 250 lm @ 3.1 W
400 400 lm @ 4.8 W
500 500 lm @ 6.0 W
750 750 lm @ 9.0 W
1000 1000 lm @ 12.1 W
**Contact factory for different lumen packages within the same fixture (i.e) ARB1W30K8500_BRB1W30K8300
**Quadrant Wattage Taken @ 35KB with RB1 Lensing
**For Spotlight Lumen Packages, Refer to Page 9

IoT

SPK Speaker *Reference Page 11 and enter Speaker Code in Add. Spec
SNR Sensor *Reference Page 13 and enter Sensor Code in Add. Spec
SEC Security *Contact Factory For Details Security Camera Code in Add. Spec
*Contact Factory For Different Paint Color Options of IoT Devices - White Color Standard

7. VOLTAGE

EX. UNV

UNV 120-277V
347 347V
POE Power over Ethernet

8. DRIVER/CONTROL

EX. DM

DM Factory 0-10V Dim 1%
BT Bluetooth
DALI Dali System
DMX DMX System
**See Page 3 for Bluetooth Information, Consult Factory

9. FINISH

EX. W

W Matte White
BLK Matte Black
C1 Custom Color (Specify RAL)
C2 Custom Color (Trim & Bevel Different Colors)
*Contact Factory C2 - Custom Trim & Bevel

10. EM/OPTIONS

EM10

E10W Emergency 10W; Integral
ICC Independent Quadrant Dimming Control (Max 2 Dimming Channels)
CP Chicago Plenum

EXAMPLE Fixture

QuadT1-FSQ-ARB1W35K8500-BRB1W35K8500-CRB1W35K8500-DRB1W35K8500-UNV-DM-W

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-AWW2*-W35K8-1000-
 BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

WW

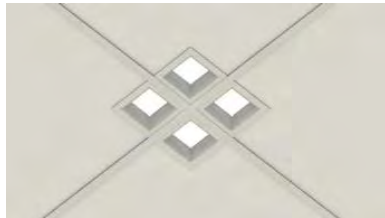
MHCS22-227151

QUAD Family



Housing Types

Flat Housing



- Notate "FSQ" in Ordering Guide
- Designed for Flat 9/16" & 15/16" Grids

Screw Slot Housing



- Notate "SSSQ" in Ordering Guide
- Designed for Dimensional 9/16" Grids

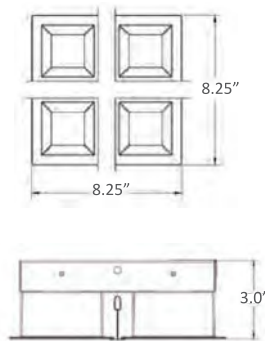
Drywall Housing



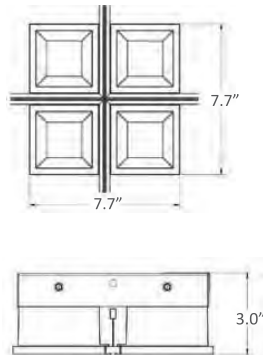
- Notate "DWSQ" in Ordering Guide

Dimensions

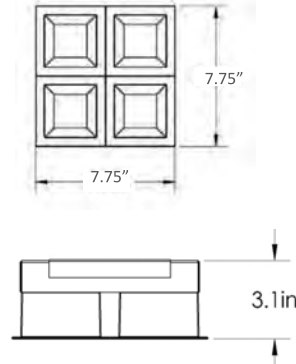
Flat Housing



Screw Slot Housing

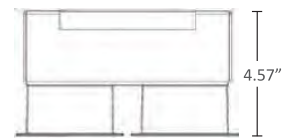


Drywall Housing



EM Housing

**Height Dimension for all housing Types with EM Battery*



**Used for RGBW & EM Options*

Construction

- Cast Aluminum housing
- Powder coated paint
- Galvanized sheet metal components
- Mate with Flat 15/16", 9/16" and Dimensional 9/16" TBars

Optical

- Symmetric and asymmetric distributions
- Coated Acrylic light guide
- Coated Acrylic diffuser
- Minimum 80 or 90 CRI
- 3000K, 3500K, 4000K
- ≤ 3 SDCM

Electrical

- Integral high efficiency driver
- 0-10V dimming (1%) standard
- Class 2
- Optional remote battery pack

Weight

- 4Q = 10 lbs
- 3Q = 8.5 lbs
- 2Q = 7.0 lbs
- 1Q = 5.5 lbs

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-AWW2*-W35K8-1000-
 BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

WW

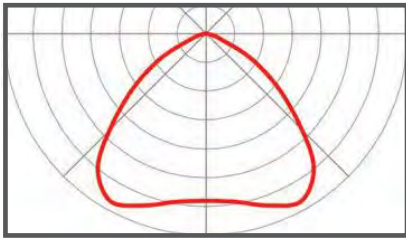
MHCS22-227151

QUAD Family

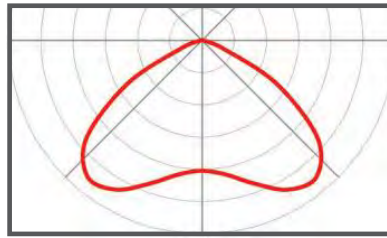
ARON™

Beam Options

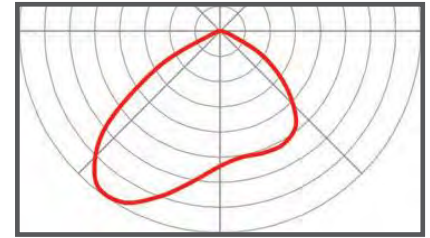
Contact factory for custom configurations



RB1 - Medium



RB2- Wide



WW- Wall Wash Asymmetric

*See Page X

Fixture Wattages

*Fixture Wattage Tested with RB2 Lensing

Lumens/Quadrant	Watts/Quadrant
125	1.53
250	3.0
500	6.0
750	9.0

Lumens/Fixture	Watts/Fixture
750	9.0
1000	12.0
1500	18.1
2000	24.1
2500	30.1
3000	35.8

Bluetooth Technology



BubblyNet

With our BubblyNet OEM partnership, realize the power of bluetooth lighting control! Offering wall controllers, integrated fixture sensors, tunable white/ rgbw control. Contact Factory for More Information

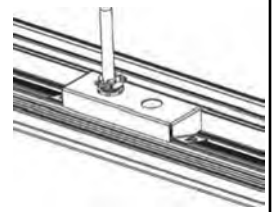


PoE Technology

Igor

NuLEDs
 Lighting Over IP®

Our Partnerships with Igor and NuLEDs offer PoE Integration using low voltage cat 5, cat 6 cabling. Contact Factory For more Information.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AWW2*-W35K8-1000-
 BWW2*-W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW
 MHCS22-227151

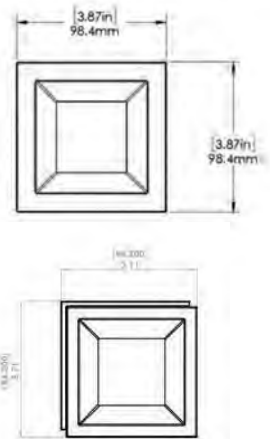
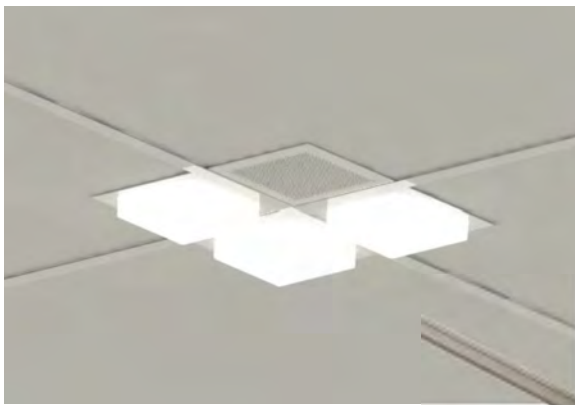
QUAD Family



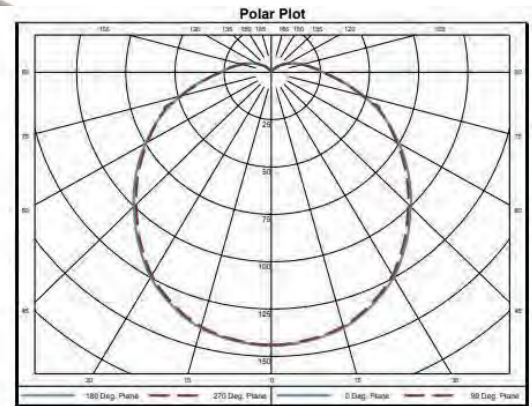
Lens Options

Drop Lens

The QUAD offers a new and unique look with its drop lens option. Made from thermoformed acrylic optimum light diffusion material, the drop lens creates a dimensional look within the ceiling while providing functional lighting. Drop lens lengths available in .5", .75", and 1"



QuadT1-FSQ-ASPK-BDL1"35K8500
 -CDL1"35K8500-DDL1"35K8500



Model Tested:

QUADT1-FSQ-DL1-500-B3-35K8-UNV-DM-W
 **SEE QUAD SOLO CUT SHEET

Zone	Lumens	% of Luminaire
0-40	187	32.7%
0-60	341	59.8%
0-90	504	88.3%
90-180	67	11.7%

Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	3.44	0.6%	60-65	35.34	6.2%	120-125	3.64	0.6%
5-10	10.21	1.8%	65-70	32.89	5.8%	125-130	2.57	0.4%
10-15	16.72	2.9%	70-75	29.60	5.2%	130-135	1.72	0.3%
15-20	22.73	4.0%	75-80	25.49	4.5%	135-140	1.04	0.2%
20-25	28.00	4.9%	80-85	21.58	3.8%	140-145	0.53	0.1%
25-30	32.44	5.7%	85-90	17.96	3.1%	145-150	0.21	0.0%
30-35	35.72	6.3%	90-95	14.96	2.6%	150-155	0.07	0.0%
35-40	37.83	6.6%	95-100	12.37	2.2%	155-160	0.04	0.0%
40-45	38.92	6.8%	100-105	10.16	1.8%	160-165	0.04	0.0%
45-50	39.28	6.9%	105-110	8.22	1.4%	165-170	0.03	0.0%
50-55	38.73	6.8%	110-115	6.48	1.1%	170-175	0.02	0.0%
55-60	37.36	6.5%	115-120	4.95	0.9%	175-180	0.01	0.0%

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Catalog Number:
 QUADT1-FSQ-AWW2*-W35K8-1000-
 BWW2*-W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW
 MHCS22-227151

QUAD Family



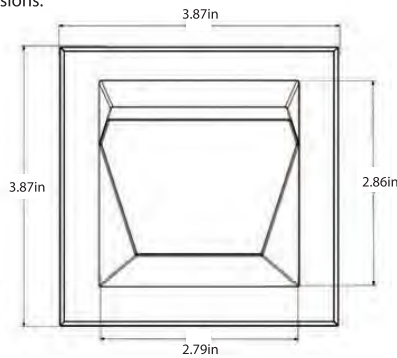
Lens Options

Wall Wash

General / Dimensions:

Material: Die Cast aluminum Casing, Powder Coat Finish
 Applications: Retail, Corridor, Restaurants, Commercial

Dimensions:



Description

The QUAD Tbar Wall Wash Quadrant allows for great illumination across the vertical plane. The QUAD Wall Wash can be specified in a multi-directional form factor - see below for proper ordering instructions and examples.

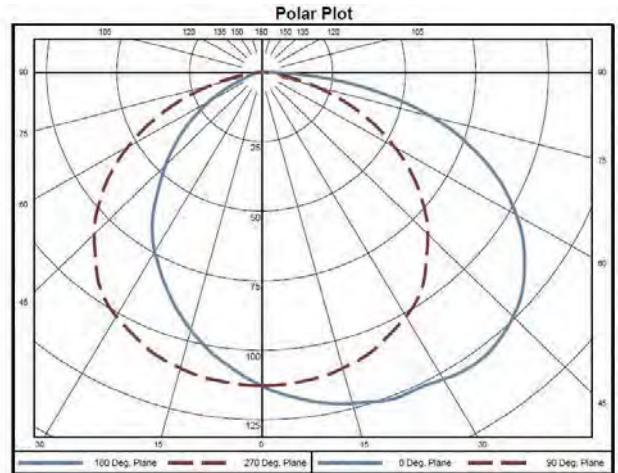
Example Product Codes:



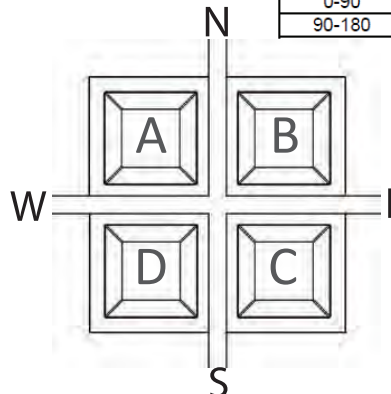
Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-ARB1W35K8500-BRB1W35K8500-
 CWW1SW35K8500-DWW1SW35K8500-UNV-DM-W



Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-AX-BX-CWW1SW35K8500-
 DRB1W35K8500-500-B2-35K8-UNV-DM-W



Zone	Lumens	% of Luminaire
0-40	151	41.6%
0-60	277	76.6%
0-90	361	100.0%
90-180	0	0.0%



Specify Direction of the Wall Wash Quadrant
 In relation to the Fixture:
 For Example, if Wall Wash quadrant is specified
 in Quadrant C, Specify if this will face North,
 East, South, or West

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Job Name:
 Southeast Water Conservancy - Remodel
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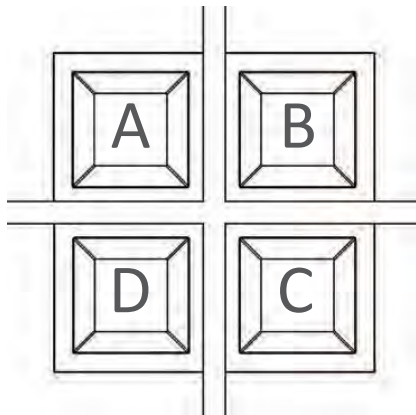
Catalog Number:
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 BWW2*-W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW
 MHCS22-227151

QUAD Family

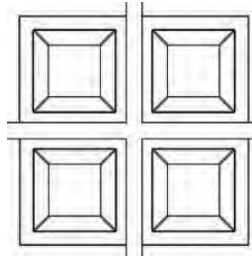


Sample Configurations & Ordering Guide

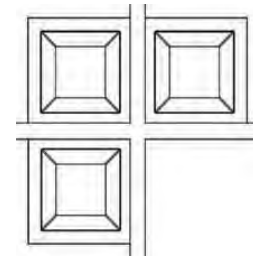


- Match labeled quadrant with corresponding column on ordering guide.
- Notate "RB1, RB2" to use quadrant with regressed lens.
- Notate "SL" to use quadrant with Spotlight
- Notate "DL" And Specify Drop Length to use quadrant with Drop Lens
- Notate "WW1, WW2" to use quadrant with Wall Wash Lensing (Must Specify Direction of light using (N,E,S,W).
- If choosing a lighting application quadrant, specify CCT & Lumens Per Quadrant
- If choosing an IoT Application notate "SPK, SNR, SEC" And list any additional IoT device specification in quadrant
- Notate "X" to omit quadrant from fixture.

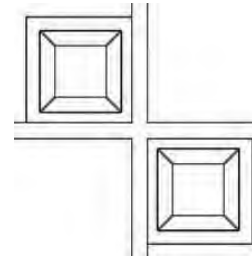
Important Ordering Notes:
 For Armstrong Custom Tile Program - please see page 7 and coordinate with EC/GC



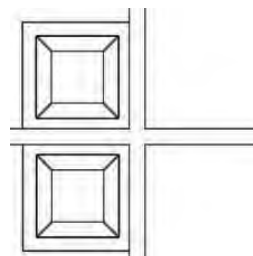
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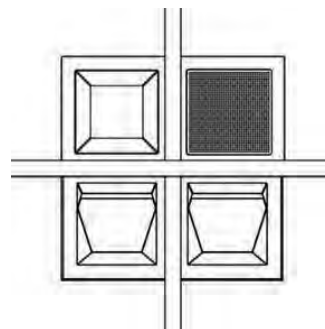
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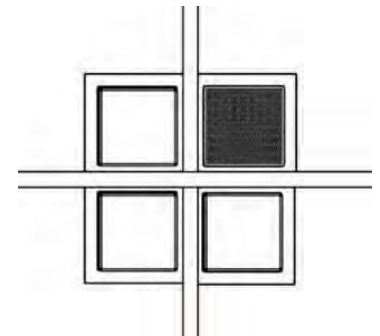
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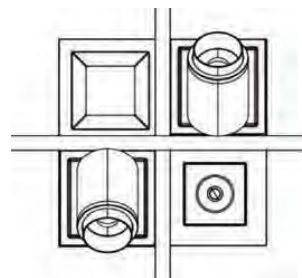
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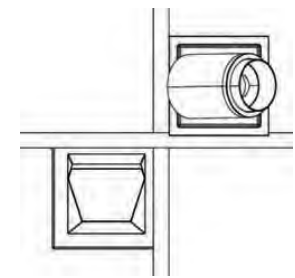
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QuadT1-FSQ-ADL1"3W5K81000-BSPK-CDL1"35K81000-DDL1"35K81000.....



QuadT1-FSQ-ARB1W35K8500-BSLW35K91000-CSNR-DSLW35K8500.....



QuadT1-FSQ-AX-BSL35K91000-CX-DWW1SW35K8750.....

Notes:
 - Coordinate lighting fixture install with ceiling contractor
 - Contact your local Armstrong representative for Made-To-Order ceiling tiles. (See page 6)

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Job Name:

Southeast Water Conservancy - Remodel
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 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-AWW2*-W35K8-1000-BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

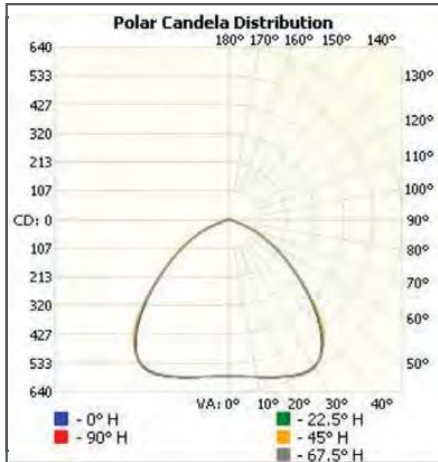
WW

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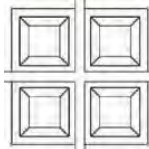
QUAD Family

ARON™

Model Tested: QuadT1-FSQ-ARB1W35K8400-BRB1W35K8400-CRB1W35K8400-DRB1W35K8400-UNV-DM-W



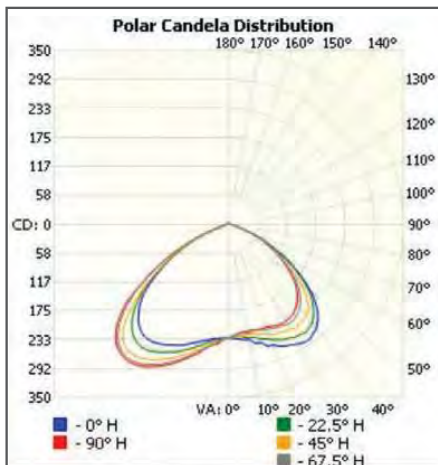
Configuration: 4 Quadrant
Lumens/Quadrant: 403
Total Lumens: 1613
Input Watts: 19.77 W
Efficacy: 81.6 lm/W



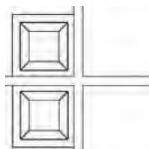
Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	582	582	582	582	582
5	585	585	585	584	585
10	594	593	593	592	593
15	606	606	604	604	606
20	620	620	618	619	621
25	633	632	629	631	633
30	631	629	628	629	632
35	598	598	602	600	599
40	526	530	543	532	528
45	433	437	451	441	437
50	337	340	340	344	340
55	250	256	249	259	253
60	180	189	177	187	182
65	122	124	121	127	122
70	59	67	70	69	60
75	21	22	27	22	21
80	11	11	11	11	11
85	3	3	3	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	56.1	3.5
10-20	172.0	10.7
20-30	291.1	18.0
30-40	370.9	23.0
40-50	338.0	20.9
50-60	229.2	14.2
60-70	122.3	7.6
70-80	29.9	1.9
80-90	4.4	0.3

Model Tested: QuadT1-FSQ-ARB1W35K8400-BX-CX-DRB1W35K8400-UNV-DM-W



Configuration: 2 Quadrant Parallel
Lumens/Quadrant: 422
Total Lumens: 845
Input Watts: 9.76 W
Efficacy: 86.6 lm/W



Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	229	229	229	229	229
5	232	225	227	223	221
10	236	233	226	223	219
15	247	239	229	221	220
20	260	248	237	225	221
25	271	257	241	230	226
30	279	264	244	234	227
35	283	267	244	231	223
40	273	260	241	221	212
45	253	240	225	202	194
50	218	210	190	174	168
55	170	166	146	140	134
60	122	120	105	104	100
65	76	76	68	68	67
70	33	38	38	37	34
75	13	13	16	14	14
80	7	7	7	8	8
85	2	2	2	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	22.3	2.6
10-20	70.5	8.3
20-30	125.3	14.8
30-40	177.5	21
40-50	197.1	23.3
50-60	155.2	18.4
60-70	77.3	9.1
70-80	17.2	2
80-90	2.9	0.3

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**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-AWW2*-W35K8-1000-
BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW**

MHCS22-227151

QUAD TBar

Spotlight Ordering Guide

ARON™

Beam Adjustable Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH		
Spotlight - Field Adj SP01	27K9 30K9 35K9 40K9	2700K - 90CRI 3000K - 90CRI 3500K - 90CRI 4000K - 90CRI	1200 lumens (BA)	W White BLK Black SLV Silver	STD No Dim DM 0-10V Dimming

GX Series Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH	BEAM ANGLE	DIMMING	
Spotlight - GX SP02	27K9 30K9 35K9 40K9	2700K - 90CRI 3000K - 90CRI 3500K - 90CRI 4000K - 90CRI	900 lumens (GX10) 1150 lumens (GX15) 1800 lumens (GX25)	W White BLK Black SLV Silver	20 20 Degrees 38 38 Degrees 60 60 Degrees	STD No Dim DM 0-10V Dimming

Include the Quantity and Product ID on Purchase Order Beneath
QUAD Product Ordered
** See Example Product Codes

For More Information or Further Ordering Questions,
Please Consult Factory

Description

The QUAD Tbar Spotlight offers a unique solution to grid mounted accent lighting. Easily mount the fixture with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, with the ability to have 4 spotlights in 1 fixture.

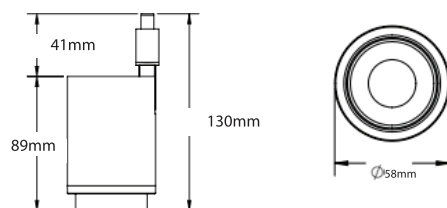
We have Two OEM partners for our spotlight solution. The first, by LPA, offers a field adjustable beam angle, 14-50°, with high CRI. Available in 2700K-4000K. Obtain the perfect aim illumination angle for any solution with full horizontal rotation and up to 90° vertical adjustability.

Our Second, by Bruck Lighting, Offers various static beam angles, with different lumen outputs. The GX series offers variable accent light solutions while achieving an architecturally clean look in the QUAD Tbar Housing.

No more track needed - just drop the fixture on the TBar.

Beam Adjustable (BA) General / Dimensions:

Light Output: Up to 1200lm
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Field Adjustable Beam: 14-50°
Integral Driver
Limited Warranty: 5 years
LED Type: CREE CMA 1200 lm Chip

Dimensions:

GX Series General / Dimensions:

Light Output: 900lm, 1150lm, 1800lm Options
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Static Beam : 20°, 38°, 60° Options
Integral Driver
Limited Warranty: 5 years



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Page 8/12

1/1/22

Designed and Manufactured in the USA

2022 ARON Lighting
aronlighting.com
484.681.5687**ARON**



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AWW2*-W35K8-1000-
 BWW2*-W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW
 MHCS22-227151

QUAD TBar

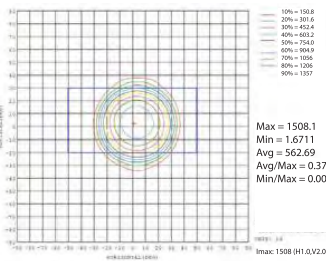


Spotlight Ordering Guide

Beam Adjustable (BA) Photometric and Performance Data

Input Voltage: 220
 Wattage: 15W
 Efficiency: 64.14 lm/W
 Current: 710mA

Polar Candela Distribution



Illuminance Cone Distribution

Height	Eavg,Emax	Diameter
1 m	979.6,15051x	95.80 cm
2 m	244.9,376.31x	191.60 cm
3 m	108.8,167.21x	287.40 cm
4 m	61.22,94.061x	383.20 cm
5 m	39.18,60.201x	479.00 cm
6 m	27.21,41.811x	574.80 cm
7 m	19.99,30.721x	670.60 cm
8 m	15.31,23.521x	766.40 cm
9 m	12.09,18.581x	862.20 cm
10 m	9.796,15.051x	958.00 cm

Flux out: 732.1 lm
 Angle: 51.19deg



Example Product Codes:



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-ASL-BX-CX-DX-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:1) SP01-40K90-1500-W-ND

GX Series Photometric and Performance Data

GX10



Input Voltage: 120 AC
 Wattage: 10W
 Efficiency: 83 lm/W

GX15



Input Voltage: 120 AC
 Wattage: 15W
 Efficiency: 76 lm/W

GX25



Input Voltage: 120 AC
 Wattage: 22W
 Efficiency: 81 lm/W

See IES Files on www.aronlighting.com for Photometric Data on the GX10, 15, and 25



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-AR-BR-CSL-DSL-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:2) SP01-35K9-1500-W-ND



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-AWW2*-W35K8-1000-
BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW**

MHCS22-227151

QUAD TBar

ARON™

Speaker Ordering Guide

Speaker Addons

ARON PO ID	
Sub:	SB-01
Receiver:	RE-01
Mixer:	MIX-01

**General / Dimensions:**

Broad Coverage Pattern: 160°

Material: Die Cast aluminum Casing, Powder Coat Finish

Driver: 60 mm (2.5 in) mid/high driver with butyl rubber surround
16-ohm allows for parallelling of multiple units on
a low-Z amplifier

Applications: Retail, Corridor, Restaurants, Commercial

Grill: Many options in color and dimension for a reveal or flush aesthetic

Sub: Designed to be paired with 40CS/T subwoofer-satellite system

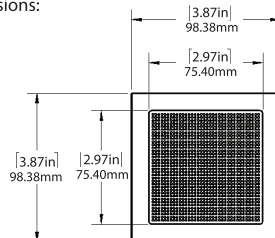
Description

The QUAD TBar Speaker offers a unique solution to grid mounted sound solutions. Easily mount the speaker with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, recommended to have one speaker in one fixture..

No more need for cluttered ceilings at the center of the tile - just drop the fixture and speaker on the TBar. Only a single dropdown required for these various technologies!

Our speaker partner, JBL, is well renowned within the sound industry. This integrated partnership pairs great light quality with equally competitive sound quality in quite a small form factor.

Dimensions:



Example Product Codes:

**Page 1 QUAD Fixture Product Code:**

QUADT1-FSQ-ASPK-BR-CR-DR-500-B2-35K8-UNV-DM-W

**Page 1 QUAD Fixture Product Code:**

QUADT1-FSQ-ASPK-BX-CX-DX-500-B2-35K8-UNV-DM-W

***Subwoofer, Receiver, and Mixer Available**

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1/1/22

Designed and Manufactured in the USA

2022 ARON Lighting
aronlighting.com
484.681.5687

ARON



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

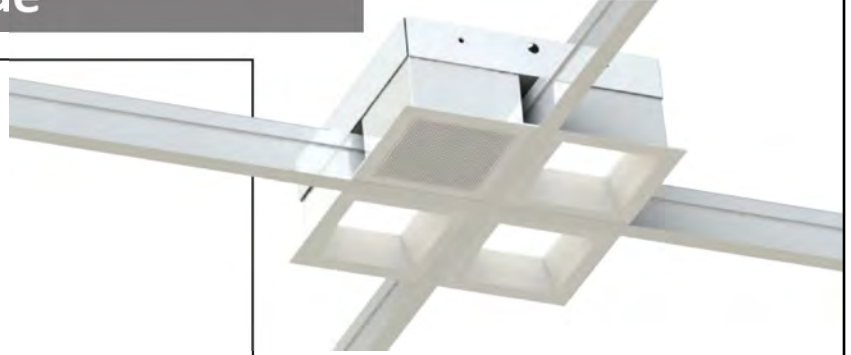
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 BWW2*-W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW
 MHCS22-227151

QUAD TBar



Speaker Ordering Guide



Specifications and Performance Data

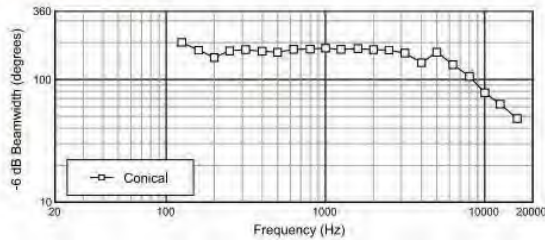
System:

- Frequency Range (-10 dB): 140 Hz - 20 kHz
- Frequency Response (± 3 dB): 180 Hz - 17 kHz Im/W
- Power Capacity: 30W Continuous Program Power
15W Continuous Pink Noise
- Nominal Sensitivity (2.83V/1m): 82 dB
- Nominal Coverage Angle: 160° conical coverage
- Directivity Factor (Q): 6.6
- Directivity Index (DI): 6.8 dB
- Rated Maximum SPL: 94 dB @ 1m (3.3 ft) average, 114 dB peak
- Rated Impedance: 16 ohms

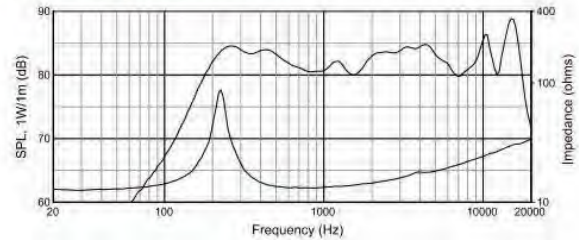
Transducer

Driver: 60 mm (2.5 in) with polypropylene cone, butyl rubber surround, copper-clad coil, vented aluminum former

Beamwidth:

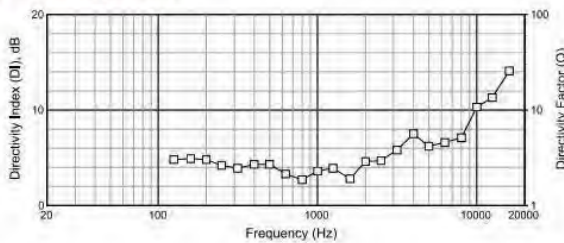


Frequency Response:

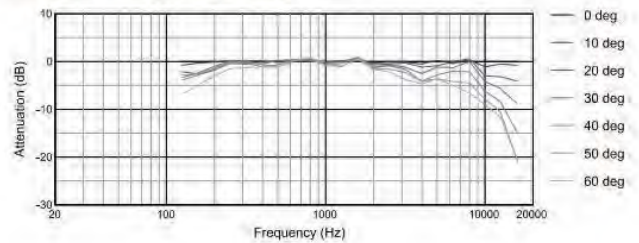


Half-space (2pi, mounted in ceiling)

Directivity Index:



Off-Axis Frequency Response:



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**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-AWW2*-W35K8-1000-
BWW2*-W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW**

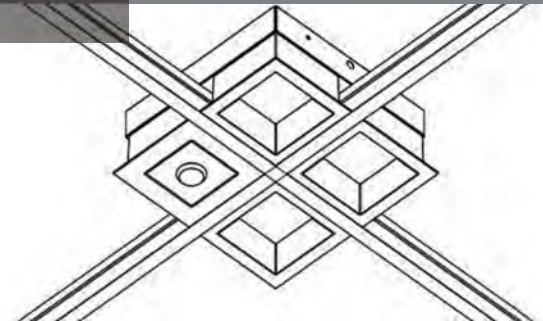
MHCS22-227151

QUAD TBar

ARON™

Sensor Ordering Guide

PRODUCT ID		Sensor Specifications	
Enlighted Smart Sensor - Micro 8-pin	ENS01-	Enlighted One	001
		Enlighted Connected	002
		Enlighted IoT	003



Shown: ASNR-BR-CR-DR.....

General

Material: Die Cast aluminum Casing, Powder Coat Finish

Integral Driver

Applications: Retail, Corridor, Accent Lighting, Restaurants, Commercial

Description

The QUAD Tbar Comes Sensor Ready with our Enlighted OEM Partnership. Easily install at the intersection of any TBar your lighting and IoT controls. All drivers are integral to the fixture while keeping a low plenum profile.

The Sensor can be ordered in any configuration of Quadrants, with recessed downlights, a speaker, and spotlight!

Enlighted Micro Sensor - 8Pin

**TECHNICAL SPECIFICATIONS**

Motion Sensing: Digital Passive IR

Photosensor: Light Pipe/Photosensor Array

Enclosure: ABS/Polycarbonate blend

Type: Closed Loop Light Sensor

Operating Temp: 32° to 122° F / 0° to 50° C

Power Consumption: 200 mW max.

Voltage: 12-30 V

Wireless Standards: IEEE 802.15.4

Bluetooth 4.0 Low Energy (BLE)

Radio Frequency: 2400-2483.5 MHz

Wireless Range: 150 ft. (46 m) radius open range

Encryption: AES-128

Two Dimming Outputs: 10mA source/sink each

ORDERING INFORMATIONSU-5e-xxx* Micro Sensor, 8-pin
(*see Product codes)SU-CL-IoT-UPG Connected Lighting to IoT
Sensor UpgradeSU-IL-IoT-UPG Independent Lighting to IoT
Sensor Upgrade

HCMC-SU-5E Hard Ceiling Mount Carrier

TMC-SU-5E Tile Mount Carrier

CPL-RJ45 Female RJ45 Coupler

CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4

CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4

CBL-5E-CU4-12N 12 inch Cable for CU-4

CBL-5E-5W-30N 30 inch Profile 0 Driver Cable



Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
QUADT1-FSQ-AX-BWW2*-35K8-CX-
DX-UNV-DM-W

Notes:

Type:
WW1

MHCS22-227151

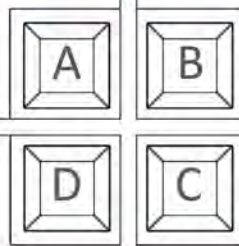
QUAD Family



The **QUAD** Luminaire features a Patented mounting system over the intersection of the ceiling grid. The Quad is a modular Downlight fixture that allows for different configurations based on optical and aesthetic requirements.

SEE PAGE 6 For More Ordering Examples

*FASTSIZE tiles made-to-order through your Armstrong rep. Contact Armstrong for compatible tiles



Project: _____
Type: _____
Notes: _____

5 Year Warranty



Patent - US Utility Patent # 10,859,242
Patent - US Design Patent # D885650

Shown: QuadT1-FSQ-ARB240K8500-BRB240K8500-CRB240K8500-DRB240K8500-...

1. ARON ID

QUADT1

QUADT1 QUAD

2. CEILING TYPE

FSQ Flat Grid - Square Quadrants
SSSQ Screw Slot Grid - Square Quadrants
DWSQ Drywall Trim - Square Quadrants
*DW Only Available in 4 or 1 quadrants - See QUAD SOLO

3. QUADRANT A

Light Source	CCT/CRI	Lumens
RB1	W35K8	500

Device: _____ Add. Spec: _____

4. QUADRANT B

Light Source	CCT/CRI	Lumens
WW2*	W35	1000

Device: _____ Add. Spec: _____

5. QUADRANT C

Light Source	CCT/CRI	Lumens
SLR	W35K9	1200

Device: _____ Add. Spec: _____

6. QUADRANT D

Light Source	CCT/CRI	Lumens
X	X	X

Device: _____ Add. Spec: _____

Light Source

RB1 Regressed Lens - Beam 1 Medium
RB2 Regressed Lens - Beam 2 Wide
*Reference Page 3 for beam distributions.
DL Drop Lens
* Specify Drop Length (5", 7.5", 1")
*Reference Page 4 for Droplens
SL Spotlight
*Reference Page 9 and enter Spotlight Specification as separate line item on PO
WW1 Wall Wash Beam 1
WW2 Wall Wash Beam 2
*(N,E,S,W) Must Specify Direction of Light - See diagram On Page 5

CCT/CRI

W35 Static White
*Specify CCT
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI
C RGBW
*Only Available for R & DL & WW Light Sources
*Specify White CCT
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI

Quadrant Lumens

125 125 lm @ 1.5 W
250 250 lm @ 3.1 W
400 400 lm @ 4.8 W
500 500 lm @ 6.0 W
750 750 lm @ 9.0 W
1000 1000 lm @ 12.1 W
**Contact factory for different lumen packages within the same fixture (i.e) ARB1W30K8500_BRB1W30K8300
**Quadrant Wattage Taken @ 35KB with RB1 Lensing
**For Spotlight Lumen Packages, Refer to Page 9

IoT

SPK Speaker
*Reference Page 11 and enter Speaker Code in Add. Spec
SNR Sensor
*Reference Page 13 and enter Sensor Code in Add. Spec
SEC Security
*Contact Factory For Details Security Camera Code in Add. Spec
*Contact Factory For Different Paint Color Options of IoT Devices - White Color Standard

7. VOLTAGE

EX. UNV

UNV 120-277V
347 347V
POE Power over Ethernet

8. DRIVER/CONTROL

EX. DM

DM Factory 0-10V Dim 1%
BT Bluetooth
DALI Dali System
DMX DMX System
**See Page 3 for Bluetooth Information, Consult Factory

9. FINISH

EX. W

W Matte White
BLK Matte Black
C1 Custom Color (Specify RAL)
C2 Custom Color (Trim & Bevel Different Colors)
*Contact Factory C2 - Custom Trim & Bevel

10. EM/OPTIONS

EM10

E10W Emergency 10W; Integral
ICC Independent Quadrant Dimming Control (Max 2 Dimming Channels)
CP Chicago Plenum

EXAMPLE Fixture

QuadT1-FSQ-ARB1W35K8500-BRB1W35K8500-CRB1W35K8500-DRB1W35K8500-UNV-DM-W



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W
 Notes:

Type:
WW1

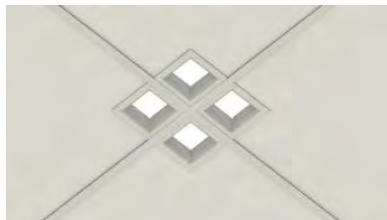
MHCS22-227151

QUAD Family



Housing Types

Flat Housing



- Notate "FSQ" in Ordering Guide
- Designed for Flat 9/16" & 15/16" Grids

Screw Slot Housing



- Notate "SSSQ" in Ordering Guide
- Designed for Dimensional 9/16" Grids

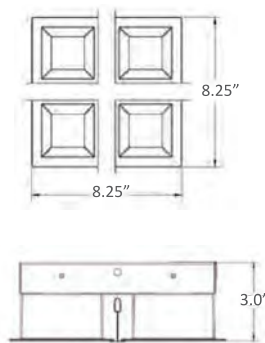
Drywall Housing



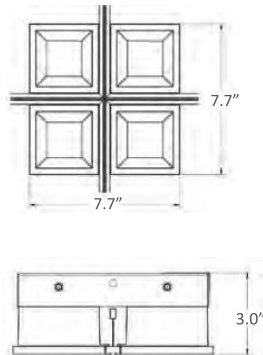
- Notate "DWSQ" in Ordering Guide

Dimensions

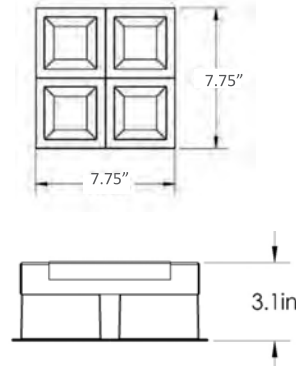
Flat Housing



Screw Slot Housing

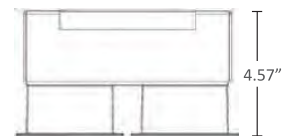


Drywall Housing



EM Housing

**Height Dimension for all housing Types with EM Battery*



**Used for RGBW & EM Options*

Construction

- Cast Aluminum housing
- Powder coated paint
- Galvanized sheet metal components
- Mate with Flat 15/16", 9/16" and Dimensional 9/16" TBars

Optical

- Symmetric and asymmetric distributions
- Coated Acrylic light guide
- Coated Acrylic diffuser
- Minimum 80 or 90 CRI
- 3000K, 3500K, 4000K
- ≤ 3 SDCM

Electrical

- Integral high efficiency driver
- 0-10V dimming (1%) standard
- Class 2
- Optional remote battery pack

Weight

- 4Q = 10 lbs
- 3Q = 8.5 lbs
- 2Q = 7.0 lbs
- 1Q = 5.5 lbs

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W
 Notes:

Type:
WW1

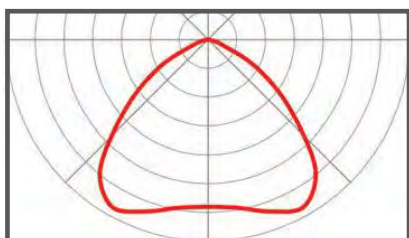
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QUAD Family

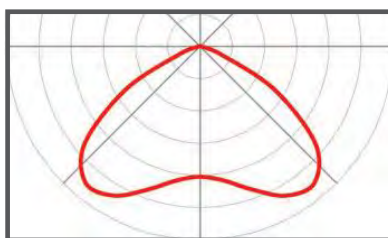
ARON™

Beam Options

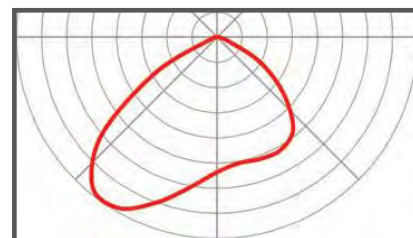
Contact factory for custom configurations



RB1 - Medium



RB2- Wide



WW- Wall Wash Asymmetric

*See Page X

Fixture Wattages

*Fixture Wattage Tested with RB2 Lensing

Lumens/Quadrant	Watts/Quadrant
125	1.53
250	3.0
500	6.0
750	9.0

Lumens/Fixture	Watts/Fixture
750	9.0
1000	12.0
1500	18.1
2000	24.1
2500	30.1
3000	35.8

Bluetooth Technology



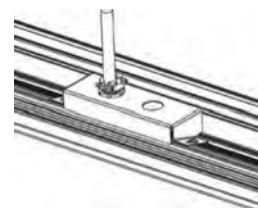
With our BubblyNet OEM partnership, realize the power of bluetooth lighting control! Offering wall controllers, integrated fixture sensors, tunable white/ rgbw control. Contact Factory for More Information



PoE Technology



Our Partnerships with Igor and NuLEDs offer PoE Integration using low voltage cat 5, cat 6 cabling. Contact Factory For more Information.



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.

Page 3/12

1/25/2022

Designed and Manufactured in the USA

2022 ARON Lighting
 aronlighting.com
 484.681.5687

ARON



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W

Notes:

Type:
WW1

MHCS22-227151

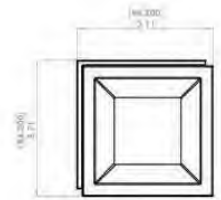
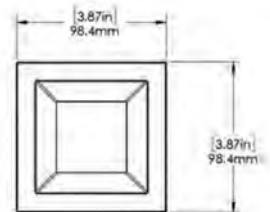
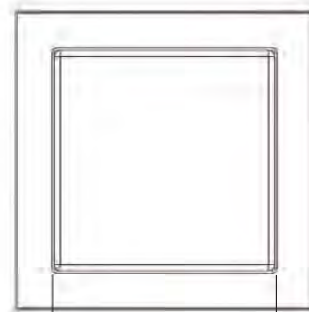
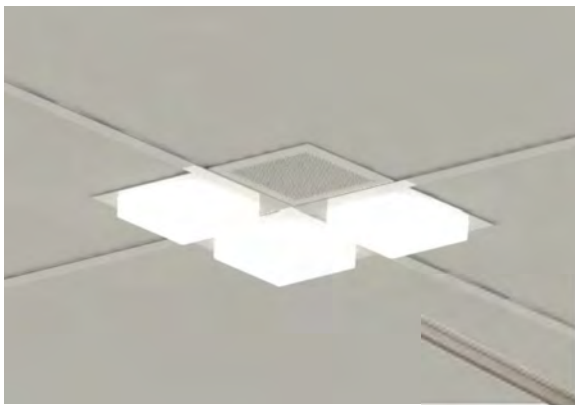
QUAD Family

ARON™

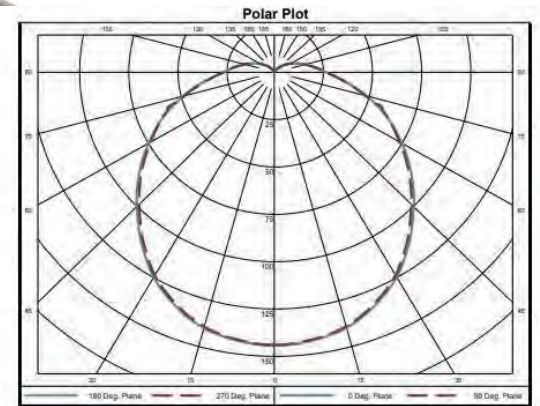
Lens Options

Drop Lens

The QUAD offers a new and unique look with its drop lens option. Made from thermoformed acrylic optimum light diffusion material, the drop lens creates a dimensional look within the ceiling while providing functional lighting. Drop lens lengths available in .5", .75", and 1"



QuadT1-FSQ-ASPK-BDL1"35K8500
 -CDL1"35K8500-DDL1"35K8500



Model Tested:

QUADT1-FSQ-DL1-500-B3-35K8-UNV-DM-W

**SEE QUAD SOLO CUT SHEET

Zone	Lumens	% of Luminaire
0-40	187	32.7%
0-60	341	59.8%
0-90	504	88.3%
90-180	67	11.7%

Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	3.44	0.6%	60-65	35.34	6.2%	120-125	3.64	0.6%
5-10	10.21	1.8%	65-70	32.89	5.8%	125-130	2.57	0.4%
10-15	16.72	2.9%	70-75	29.60	5.2%	130-135	1.72	0.3%
15-20	22.73	4.0%	75-80	25.49	4.5%	135-140	1.04	0.2%
20-25	28.00	4.9%	80-85	21.58	3.8%	140-145	0.53	0.1%
25-30	32.44	5.7%	85-90	17.96	3.1%	145-150	0.21	0.0%
30-35	35.72	6.3%	90-95	14.96	2.6%	150-155	0.07	0.0%
35-40	37.83	6.6%	95-100	12.37	2.2%	155-160	0.04	0.0%
40-45	38.92	6.8%	100-105	10.16	1.8%	160-165	0.04	0.0%
45-50	39.28	6.9%	105-110	8.22	1.4%	165-170	0.03	0.0%
50-55	38.73	6.8%	110-115	6.48	1.1%	170-175	0.02	0.0%
55-60	37.36	6.5%	115-120	4.95	0.9%	175-180	0.01	0.0%

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Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W
 Notes:

Type:
WW1

MHCS22-227151

QUAD Family



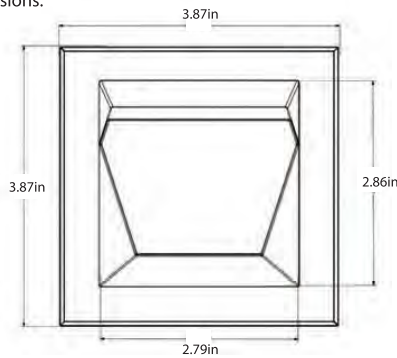
Lens Options

Wall Wash

General / Dimensions:

Material: Die Cast aluminum Casing, Powder Coat Finish
 Applications: Retail, Corridor, Restaurants, Commercial

Dimensions:



Description

The QUAD Tbar Wall Wash Quadrant allows for great illumination across the vertical plane. The QUAD Wall Wash can be specified in a multi-directional form factor - see below for proper ordering instructions and examples.

Example Product Codes:



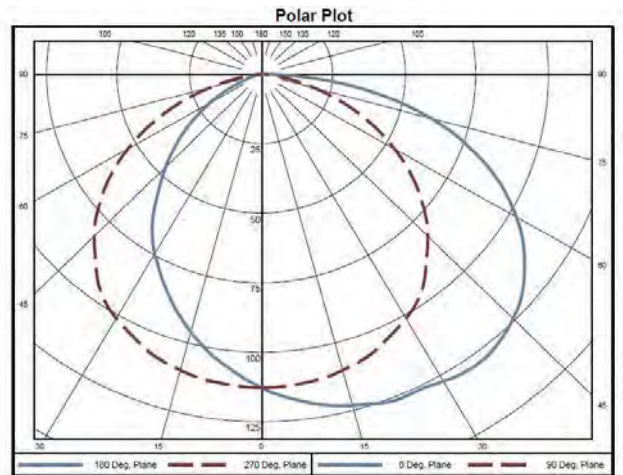
Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-ARB1W35K8500-BRB1W35K8500-
 CWW1SW35K8500-DWW1SW35K8500-UNV-DM-W

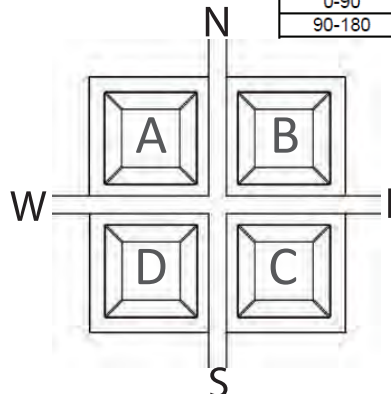


Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-AX-BX-CWW1SW35K8500-
 DRB1W35K8500-500-B2-35K8-UNV-DM-W



Zone	Lumens	% of Luminaire
0-40	151	41.6%
0-60	277	76.6%
0-90	361	100.0%
90-180	0	0.0%



Specify Direction of the Wall Wash Quadrant
 In relation to the Fixture:
 For Example, if Wall Wash quadrant is specified
 in Quadrant C, Specify if this will face North,
 East, South, or West

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Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W

Notes:

Type:

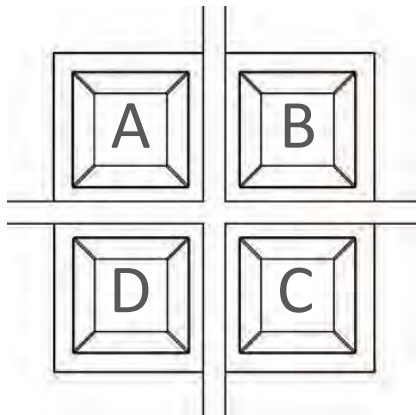
WW1

MHCS22-227151

QUAD Family

ARON™

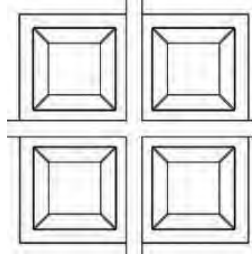
Sample Configurations & Ordering Guide



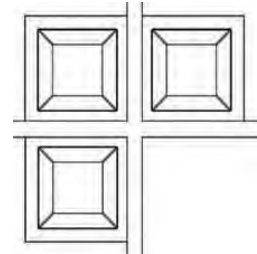
- Match labeled quadrant with corresponding column on ordering guide.
- Notate "RB1, RB2" to use quadrant with regressed lens.
- Notate "SL" to use quadrant with Spotlight
- Notate "DL" And Specify Drop Length to use quadrant with Drop Lens
- Notate "WW1, WW2" to use quadrant with Wall Wash Lensing (Must Specify Direction of light using (N,E,S,W).
- If choosing a lighting application quadrant, specify CCT & Lumens Per Quadrant
- If choosing an IoT Application notate "SPK, SNR, SEC" And list any additional IoT device specification in quadrant
- Notate "X" to omit quadrant from fixture.

Important Ordering Notes:

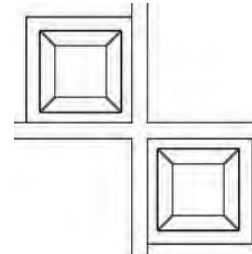
For Armstrong Custom Tile Program - please see page 7 and coordinate with EC/GC



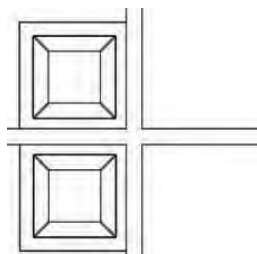
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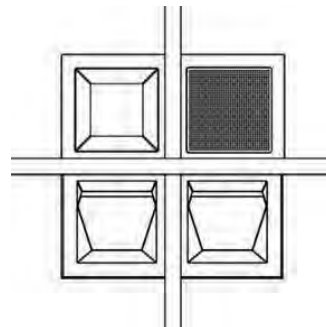
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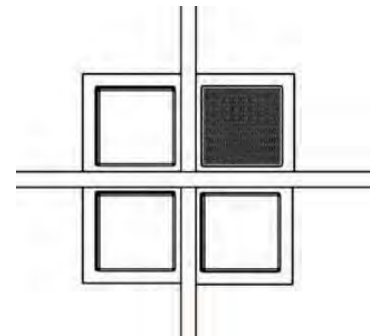
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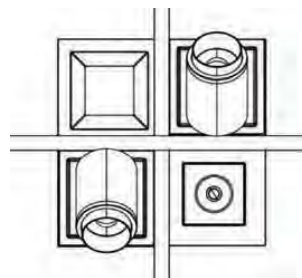
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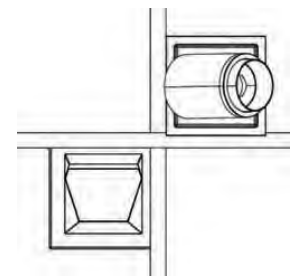
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QuadT1-FSQ-ADL1"3W5K81000-BSPK-CDL1"35K81000-DDL1"35K81000.....



QuadT1-FSQ-ARB1W35K8500-BSLW35K91000-CSNR-DSLW35K8500.....



QuadT1-FSQ-AX-BSL35K91000-CX-DWW1SW35K8750.....

Notes:

Coordinate lighting fixture install with ceiling contractor
 Contact your local Armstrong representative for Made-To-Order ceiling tiles. (See page 6)

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W

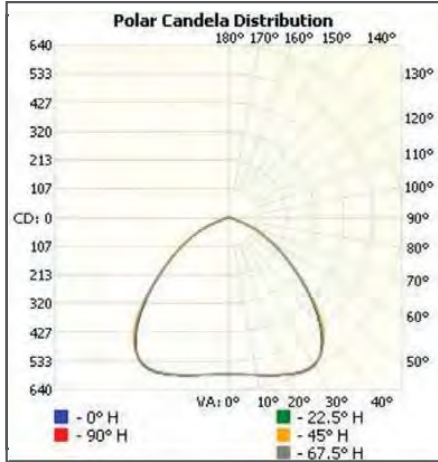
Notes:

Type:
WW1

MHCS22-227151

QUAD Family

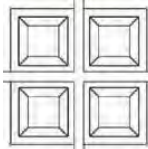
Model Tested: QuadT1-FSQ-ARB1W35K8400-BRB1W35K8400-CRB1W35K8400-DRB1W35K8400-UNV-DM-W



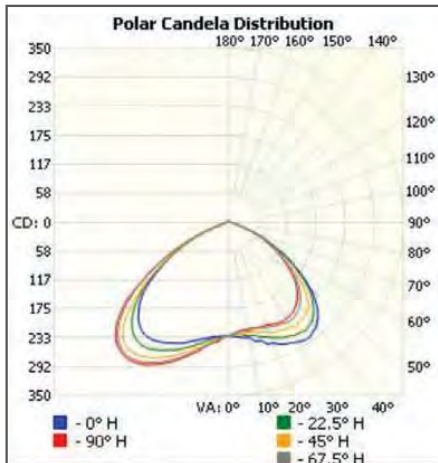
Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	582	582	582	582	582
5	585	585	585	584	585
10	594	593	593	592	593
15	606	606	604	604	606
20	620	620	618	619	621
25	633	632	629	631	633
30	631	629	628	629	632
35	598	598	602	600	599
40	526	530	543	532	528
45	433	437	451	441	437
50	337	340	340	344	340
55	250	256	249	259	253
60	180	189	177	187	182
65	122	124	121	127	122
70	59	67	70	69	60
75	21	22	27	22	21
80	11	11	11	11	11
85	3	3	3	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	56.1	3.5
10-20	172.0	10.7
20-30	291.1	18.0
30-40	370.9	23.0
40-50	338.0	20.9
50-60	229.2	14.2
60-70	122.3	7.6
70-80	29.9	1.9
80-90	4.4	0.3

Configuration: 4 Quadrant
Lumens/Quadrant: 403
Total Lumens: 1613
Input Watts: 19.77 W
Efficacy: 81.6 lm/W



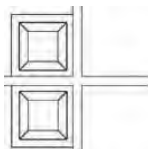
Model Tested: QuadT1-FSQ-ARB1W35K8400-BX-CX-DRB1W35K8400-UNV-DM-W



Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	229	229	229	229	229
5	232	225	227	223	221
10	236	233	226	223	219
15	247	239	229	221	220
20	260	248	237	225	221
25	271	257	241	230	226
30	279	264	244	234	227
35	283	267	244	231	223
40	273	260	241	221	212
45	253	240	225	202	194
50	218	210	190	174	168
55	170	166	146	140	134
60	122	120	105	104	100
65	76	76	68	68	67
70	33	38	38	37	34
75	13	13	16	14	14
80	7	7	7	8	8
85	2	2	2	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	22.3	2.6
10-20	70.5	8.3
20-30	125.3	14.8
30-40	177.5	21
40-50	197.1	23.3
50-60	155.2	18.4
60-70	77.3	9.1
70-80	17.2	2
80-90	2.9	0.3

Configuration: 2 Quadrant Parallel
Lumens/Quadrant: 422
Total Lumens: 845
Input Watts: 9.76 W
Efficacy: 86.6 lm/W



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-AX-BWW2*-35K8-CX-
DX-UNV-DM-W

Notes:

Type:**WW1**

MHCS22-227151

QUAD TBar

Spotlight Ordering Guide

ARON™

Beam Adjustable Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH	
Spotlight - Field Adj SP01	27K9 2700K - 90CRI 30K9 3000K - 90CRI 35K9 3500K - 90CRI 40K9 4000K - 90CRI	1200 lumens (BA)	W White BLK Black SLV Silver	STD No Dim DM 0-10V Dimming

GX Series Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH	BEAM ANGLE	DIMMING
Spotlight - GX SP02	27K9 2700K - 90CRI 30K9 3000K - 90CRI 35K9 3500K - 90CRI 40K9 4000K - 90CRI	900 lumens (GX10) 1150 lumens (GX15) 1800 lumens (GX25)	W White BLK Black SLV Silver	20 20 Degrees 38 38 Degrees 60 60 Degrees	STD No Dim DM 0-10V Dimming

Include the Quantity and Product ID on Purchase Order Beneath
QUAD Product Ordered

** See Example Product Codes

For More Information or Further Ordering Questions,
Please Consult Factory



Description

The QUAD Tbar Spotlight offers a unique solution to grid mounted accent lighting. Easily mount the fixture with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, with the ability to have 4 spotlights in 1 fixture.

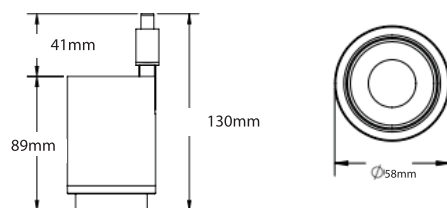
We have Two OEM partners for our spotlight solution. The first, by LPA, offers a field adjustable beam angle, 14-50°, with high CRI. Available in 2700K-4000K. Obtain the perfect aim illumination angle for any solution with full horizontal rotation and up to 90° vertical adjustability.

Our Second, by Bruck Lighting, Offers various static beam angles, with different lumen outputs. The GX series offers variable accent light solutions while achieving an architecturally clean look in the QUAD Tbar Housing.

No more track needed - just drop the fixture on the TBar.

Beam Adjustable (BA) General / Dimensions:

Light Output: Up to 1200lm
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Field Adjustable Beam: 14-50°
Integral Driver
Limited Warranty: 5 years
LED Type: CREE CMA 1200 lm Chip

Dimensions:

GX Series General / Dimensions:

Light Output: 900lm, 1150lm, 1800lm Options
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Static Beam : 20°, 38°, 60° Options
Integral Driver
Limited Warranty: 5 years



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.

Page 8/12

1/1/22

Designed and Manufactured in the USA

2022 ARON Lighting
aronlighting.com
484.681.5687**ARON**



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W
 Notes:

Type:
WW1
 MHCS22-227151

QUAD TBar

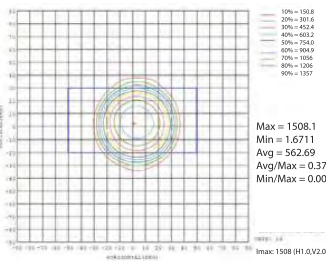


Spotlight Ordering Guide

Beam Adjustable (BA) Photometric and Performance Data

Input Voltage: 220
 Wattage: 15W
 Efficiency: 64.14 lm/W
 Current: 710mA

Polar Candela Distribution



Illuminance Cone Distribution

Height	Eavg,Emax	Diameter
1 m	979.6,15051x	95.80 cm
2 m	244.9,376.31x	191.60 cm
3 m	108.8,167.21x	287.40 cm
4 m	61.22,94.061x	383.20 cm
5 m	39.18,60.201x	479.00 cm
6 m	27.21,41.811x	574.80 cm
7 m	19.99,30.721x	670.60 cm
8 m	15.31,23.521x	766.40 cm
9 m	12.09,18.581x	862.20 cm
10 m	9.796,15.051x	958.00 cm

Flux out: 732.1 lm
 Angle: 51.19deg



Example Product Codes:



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-ASL-BX-CX-DX-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:1) SP01-40K90-1500-W-ND



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-AR-BR-CSL-DSL-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:2) SP01-35K9-1500-W-ND

GX Series Photometric and Performance Data

GX10



Input Voltage: 120 AC
 Wattage: 10W
 Efficiency: 83 lm/W

GX15



Input Voltage: 120 AC
 Wattage: 15W
 Efficiency: 76 lm/W

GX25



Input Voltage: 120 AC
 Wattage: 22W
 Efficiency: 81 lm/W

See IES Files on www.aronlighting.com for Photometric Data on the GX10, 15, and 25





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W
 Notes:

Type:
WW1
 MHCS22-227151

QUAD TBar



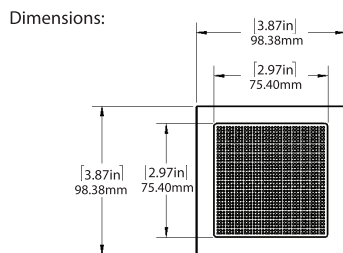
Speaker Ordering Guide

Speaker Addons	
ARON PO ID	
Sub:	SB-01
Receiver:	RE-01
Mixer:	MIX-01



General / Dimensions:

- Broad Coverage Pattern: 160°
- Material: Die Cast aluminum Casing, Powder Coat Finish
- Driver: 60 mm (2.5 in) mid/high driver with butyl rubber surround
 16-ohm allows for parallelling of multiple units on a low-Z amplifier
- Applications: Retail, Corridor, Restaurants, Commercial
- Grill: Many options in color and dimension for a reveal or flush aesthetic
- Sub: Designed to be paired with 40CS/T subwoofer-satellite system



Description

The QUAD Tbar Speaker offers a unique solution to grid mounted sound solutions. Easily mount the speaker with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, recommended to have one speaker in one fixture..

No more need for cluttered ceilings at the center of the tile - just drop the fixture and speaker on the TBar. Only a single dropdown required for these various technologies!

Our speaker partner, JBL, is well renowned within the sound industry. This integrated partnership pairs great light quality with equally competitive sound quality in quite a small form factor.



Example Product Codes:



Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-ASPK-BR-CR-DR-500-B2-35K8-UNV-DM-W



Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-ASPK-BX-CX-DX-500-B2-35K8-UNV-DM-W

***Subwoofer, Receiver, and Mixer Available**





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-AX-BWW2*-35K8-CX-
 DX-UNV-DM-W

Notes:

Type:

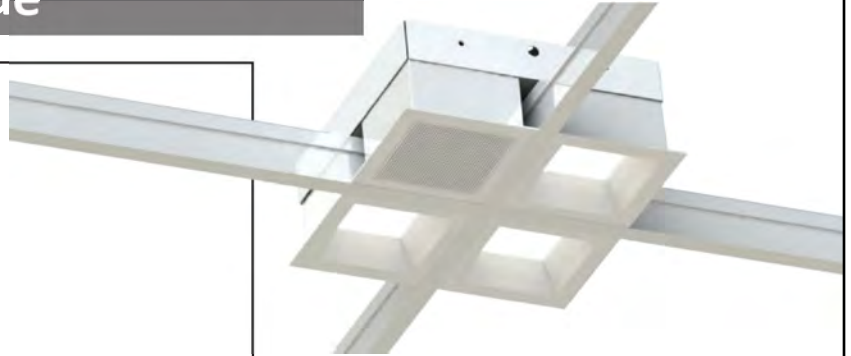
WW1

MHCS22-227151

QUAD TBar



Speaker Ordering Guide



Specifications and Performance Data

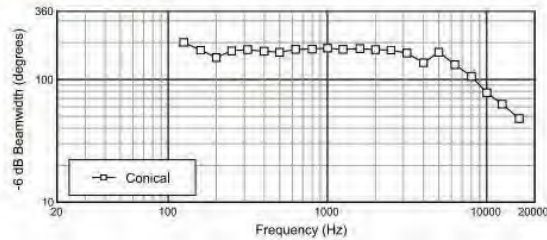
System:

- Frequency Range (-10 dB): 140 Hz - 20 kHz
- Frequency Response (± 3 dB): 180 Hz - 17 kHz 1m/W
- Power Capacity: 30W Continuous Program Power
15W Continuous Pink Noise
- Nominal Sensitivity (2.83V/1m): 82 dB
- Nominal Coverage Angle: 160° conical coverage
- Directivity Factor (Q): 6.6
- Directivity Index (DI): 6.8 dB
- Rated Maximum SPL: 94 dB @ 1m (3.3 ft) average, 114 dB peak
- Rated Impedance: 16 ohms

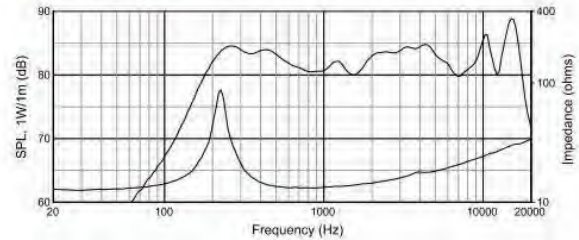
Transducer

Driver: 60 mm (2.5 in) with polypropylene cone, butyl rubber surround, copper-clad coil, vented aluminum former

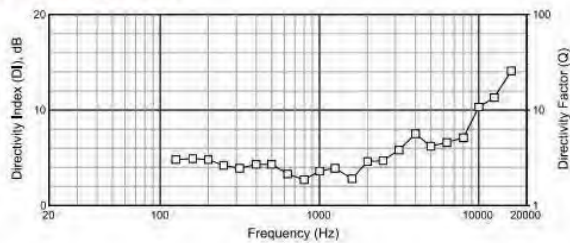
Beamwidth:



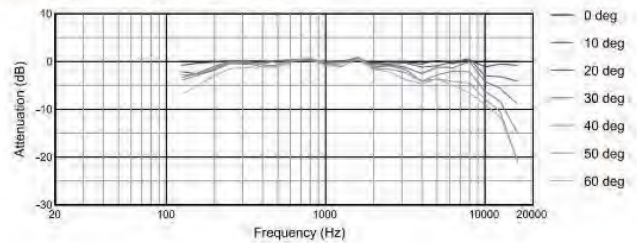
Frequency Response:



Directivity Index:



Off-Axis Frequency Response:



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-AX-BWW2*-35K8-CX-
DX-UNV-DM-W

Notes:

Type:**WW1**

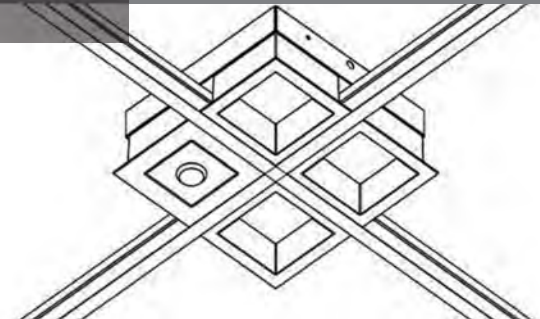
MHCS22-227151

QUAD TBar

ARON™

Sensor Ordering Guide

PRODUCT ID		Sensor Specifications	
Enlighted Smart Sensor - Micro 8-pin	ENS01-	Enlighted One	001
		Enlighted Connected	002
		Enlighted IoT	003



Shown: ASNR-BR-CR-DR.....

General

Material: Die Cast aluminum Casing, Powder Coat Finish

Integral Driver

Applications: Retail, Corridor, Accent Lighting, Restaurants, Commercial

Description

The QUAD Tbar Comes Sensor Ready with our Enlighted OEM Partnership. Easily install at the intersection of any TBar your lighting and IoT controls. All drivers are integral to the fixture while keeping a low plenum profile.

The Sensor can be ordered in any configuration of Quadrants, with recessed downlights, a speaker, and spotlight!

Enlighted Micro Sensor - 8Pin

**TECHNICAL SPECIFICATIONS**

Motion Sensing: Digital Passive IR

Photosensor: Light Pipe/Photosensor Array

Enclosure: ABS/Polycarbonate blend

Type: Closed Loop Light Sensor

Operating Temp: 32° to 122° F / 0° to 50° C

Power Consumption: 200 mW max.

Voltage: 12-30 V

Wireless Standards: IEEE 802.15.4

Bluetooth 4.0 Low Energy (BLE)

Radio Frequency: 2400-2483.5 MHz

Wireless Range: 150 ft. (46 m) radius open range

Encryption: AES-128

Two Dimming Outputs: 10mA source/sink each

ORDERING INFORMATIONSU-5e-xxx* Micro Sensor, 8-pin
(*see Product codes)SU-CL-IoT-UPG Connected Lighting to IoT
Sensor UpgradeSU-IL-IoT-UPG Independent Lighting to IoT
Sensor Upgrade

HCMC-SU-5E Hard Ceiling Mount Carrier

TMC-SU-5E Tile Mount Carrier

CPL-RJ45 Female RJ45 Coupler

CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4

CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4

CBL-5E-CU4-12N 12 inch Cable for CU-4

CBL-5E-5W-30N 30 inch Profile 0 Driver Cable



Job Name:
Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
QUADT1-FSQ-ARB2-W35-1000-BWW2*-
W35K8-1000-CX-DX-UNV-DM-W
Notes:

Type:
WW2
MHCS22-227151

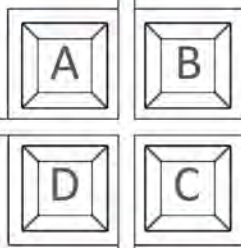
QUAD Family



The **QUAD** Luminaire features a Patented mounting system over the intersection of the ceiling grid. The Quad is a modular Downlight fixture that allows for different configurations based on optical and aesthetic requirements.

SEE PAGE 6 For More Ordering Examples

*FASTSIZE tiles made-to-order through your Armstrong rep. Contact Armstrong for compatible tiles



Project: _____
Type: _____
Notes: _____

5 Year Warranty



Patent - US Utility Patent # 10,859,242
Patent - US Design Patent # D885650

Shown: QuadT1-FSQ-ARB240K8500-BRB240K8500-CRB240K8500-DRB240K8500-...

1. ARON ID

QUADT1

QUADT1 QUAD

2. CEILING TYPE

FSQ Flat Grid - Square Quadrants
SSSQ Screw Slot Grid - Square Quadrants
DWSQ Drywall Trim - Square Quadrants
*DW Only Available in 4 or 1 quadrants - See QUAD SOLO

3. QUADRANT A

Light Source	CCT/CRI	Lumens
RB2 W35 1000		
EX. RB1 W35K8 500		
Device	-OR-	Add. Spec

4. QUADRANT B

Light Source	CCT/CRI	Lumens
WW2* W35 1000		
EX. RB1 W35K8 500		
Device	-OR-	Add. Spec

5. QUADRANT C

Light Source	CCT/CRI	Lumens
X X X		
EX. SLR W35K9 1200		
Device	-OR-	Add. Spec

6. QUADRANT D

Light Source	CCT/CRI	Lumens
X X X		
EX. Device	-OR-	Add. Spec

Light Source

RB1 Regressed Lens - Beam 1 Medium
RB2 Regressed Lens - Beam 2 Wide
*Reference Page 3 for beam distributions.
DL Drop Lens
* Specify Drop Length (.5", .75", 1")
*Reference Page 4 for Droplens
SL Spotlight
*Reference Page 9 and enter Spotlight Specification as separate line item on PO
WW1 Wall Wash Beam 1
WW2 Wall Wash Beam 2
*(N,E,S,W) Must Specify Direction of Light - See diagram On Page 5

CCT/CRI

W35 Static White
*Specify CCT
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI
-OR-
C RGBW
*Specify White CCT
*Only Available for R & DL & WW Light Sources
27K8 - 2700K, 80CRI
27K9 - 2700K, 90CRI
30K8 - 3000K, 80CRI
30K9 - 3000K, 90CRI
35K8 - 3500K, 80CRI
35K9 - 3500K, 90CRI
40K8 - 4000K, 80CRI
40K9 - 4000K, 90CRI

Quadrant Lumens

125 125 lm @ 1.5 W
250 250 lm @ 3.1 W
400 400 lm @ 4.8 W
500 500 lm @ 6.0 W
750 750 lm @ 9.0 W
1000 1000 lm @ 12.1 W
**Contact factory for different lumen packages within the same fixture (i.e) ARB1W30K8500_BRB1W30K8300
**Quadrant Wattage Taken @ 35KB with RB1 Lensing
**For Spotlight Lumen Packages, Refer to Page 9

IoT

SPK Speaker *Reference Page 11 and enter Speaker Code in Add. Spec
SNR Sensor *Reference Page 13 and enter Sensor Code in Add. Spec
SEC Security *Contact Factory For Details Security Camera Code in Add. Spec
*Contact Factory For Different Paint Color Options of IoT Devices - White Color Standard

*FOR NO QUADRANT - LIST "X" In Light Source

7. VOLTAGE

EX. UNV

UNV 120-277V
347 347V
POE Power over Ethernet

8. DRIVER/CONTROL

EX. DM

DM Factory 0-10V Dim 1%
BT Bluetooth
DALI Dali System
DMX DMX System
**See Page 3 for Bluetooth Information, Consult Factory

9. FINISH

EX. W

W Matte White
BLK Matte Black
C1 Custom Color (Specify RAL)
C2 Custom Color (Trim & Bevel Different Colors)
*Contact Factory C2 - Custom Trim & Bevel

10. EM/OPTIONS

EM10

E10W Emergency 10W; Integral
ICC Independent Quadrant Dimming Control (Max 2 Dimming Channels)
CP Chicago Plenum

EXAMPLE Fixture

QuadT1-FSQ-ARB1W35K8500-BRB1W35K8500-CRB1W35K8500-DRB1W35K8500-UNV-DM-W

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

WW2

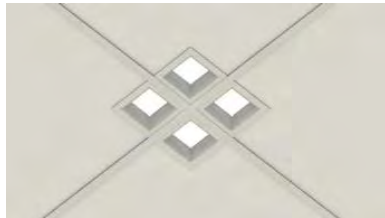
MHCS22-227151

QUAD Family



Housing Types

Flat Housing



- Notate "FSQ" in Ordering Guide
- Designed for Flat 9/16" & 15/16" Grids

Screw Slot Housing



- Notate "SSSQ" in Ordering Guide
- Designed for Dimensional 9/16" Grids

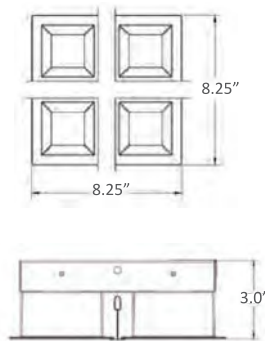
Drywall Housing



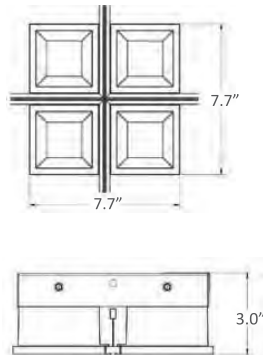
- Notate "DWSQ" in Ordering Guide

Dimensions

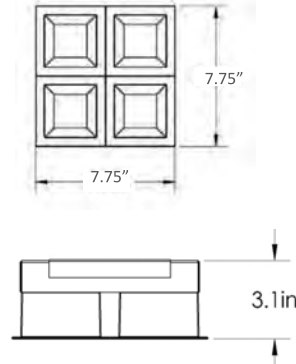
Flat Housing



Screw Slot Housing

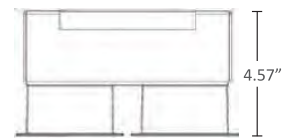


Drywall Housing



EM Housing

**Height Dimension for all housing Types with EM Battery*



**Used for RGBW & EM Options*

Construction

- Cast Aluminum housing
- Powder coated paint
- Galvanized sheet metal components
- Mate with Flat 15/16", 9/16" and Dimensional 9/16" TBars

Optical

- Symmetric and asymmetric distributions
- Coated Acrylic light guide
- Coated Acrylic diffuser
- Minimum 80 or 90 CRI
- 3000K, 3500K, 4000K
- ≤ 3 SDCM

Electrical

- Integral high efficiency driver
- 0-10V dimming (1%) standard
- Class 2
- Optional remote battery pack

Weight

- 4Q = 10 lbs
- 3Q = 8.5 lbs
- 2Q = 7.0 lbs
- 1Q = 5.5 lbs

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W
 Notes:

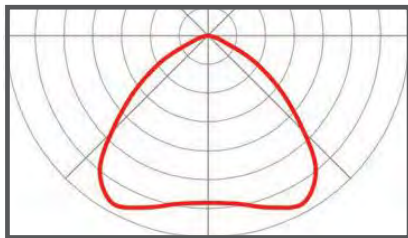
Type:
WW2
 MHCS22-227151

QUAD Family

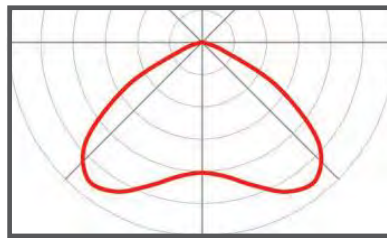


Beam Options

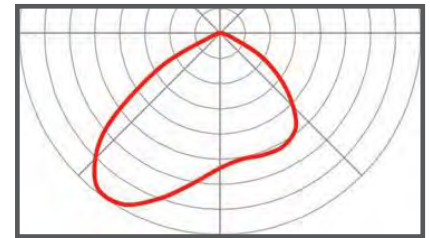
Contact factory for custom configurations



RB1 - Medium



RB2- Wide



WW- Wall Wash Asymmetric

*See Page X

Fixture Wattages

*Fixture Wattage Tested with RB2 Lensing

Lumens/Quadrant	Watts/Quadrant
125	1.53
250	3.0
500	6.0
750	9.0

Lumens/Fixture	Watts/Fixture
750	9.0
1000	12.0
1500	18.1
2000	24.1
2500	30.1
3000	35.8

Bluetooth Technology



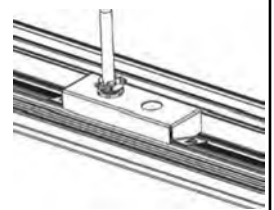
With our BubblyNet OEM partnership, realize the power of bluetooth lighting control! Offering wall controllers, integrated fixture sensors, tunable white/ rgbw control. Contact Factory for More Information



PoE Technology



Our Partnerships with Igor and NuLEDs offer PoE Integration using low voltage cat 5, cat 6 cabling. Contact Factory For more Information.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW2
 MHCS22-227151

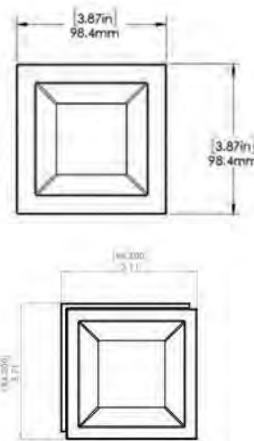
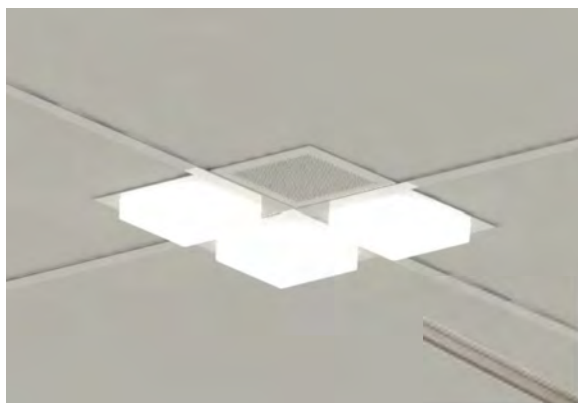
QUAD Family

ARON™

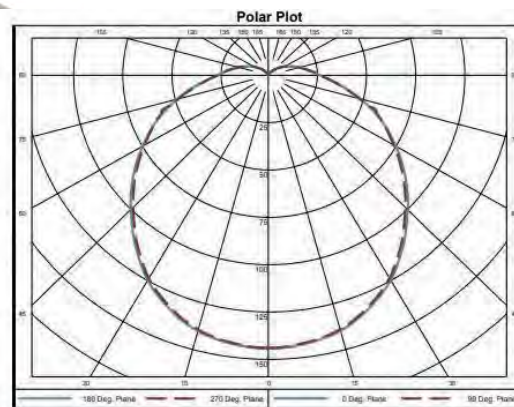
Lens Options

Drop Lens

The QUAD offers a new and unique look with its drop lens option. Made from thermoformed acrylic optimum light diffusion material, the drop lens creates a dimensional look within the ceiling while providing functional lighting. Drop lens lengths available in .5", .75", and 1"



QuadT1-FSQ-ASPK-BDL1"35K8500
 -CDL1"35K8500-DDL1"35K8500



Model Tested:

QUADT1-FSQ-DL1-500-B3-35K8-UNV-DM-W
 **SEE QUAD SOLO CUT SHEET

Zone	Lumens	% of Luminaire
0-40	187	32.7%
0-60	341	59.8%
0-90	504	88.3%
90-180	67	11.7%

Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	3.44	0.6%	60-65	35.34	6.2%	120-125	3.64	0.6%
5-10	10.21	1.8%	65-70	32.89	5.8%	125-130	2.57	0.4%
10-15	16.72	2.9%	70-75	29.60	5.2%	130-135	1.72	0.3%
15-20	22.73	4.0%	75-80	25.49	4.5%	135-140	1.04	0.2%
20-25	28.00	4.9%	80-85	21.58	3.8%	140-145	0.53	0.1%
25-30	32.44	5.7%	85-90	17.96	3.1%	145-150	0.21	0.0%
30-35	35.72	6.3%	90-95	14.96	2.6%	150-155	0.07	0.0%
35-40	37.83	6.6%	95-100	12.37	2.2%	155-160	0.04	0.0%
40-45	38.92	6.8%	100-105	10.16	1.8%	160-165	0.04	0.0%
45-50	39.28	6.9%	105-110	8.22	1.4%	165-170	0.03	0.0%
50-55	38.73	6.8%	110-115	6.48	1.1%	170-175	0.02	0.0%
55-60	37.36	6.5%	115-120	4.95	0.9%	175-180	0.01	0.0%

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W
 Notes:

Type:
WW2
 MHCS22-227151

QUAD Family



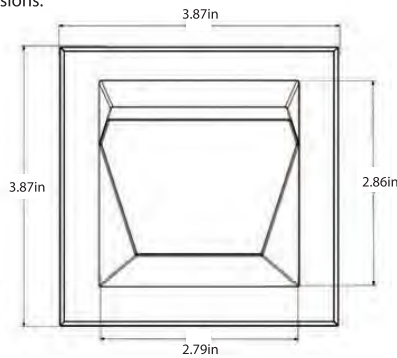
Lens Options

Wall Wash

General / Dimensions:

Material: Die Cast aluminum Casing, Powder Coat Finish
 Applications: Retail, Corridor, Restaurants, Commercial

Dimensions:



Description

The QUAD Tbar Wall Wash Quadrant allows for great illumination across the vertical plane. The QUAD Wall Wash can be specified in a multi-directional form factor - see below for proper ordering instructions and examples.

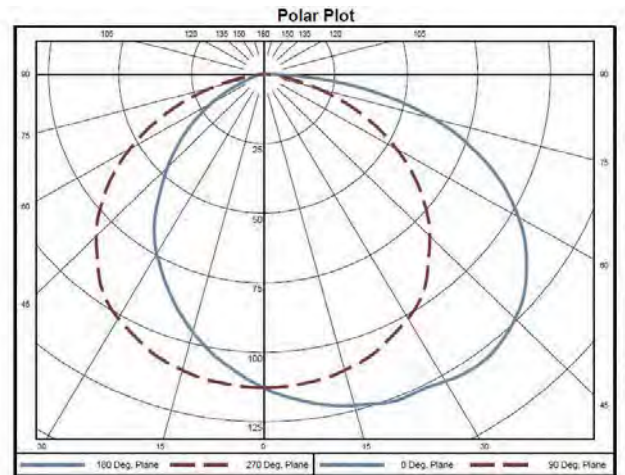
Example Product Codes:



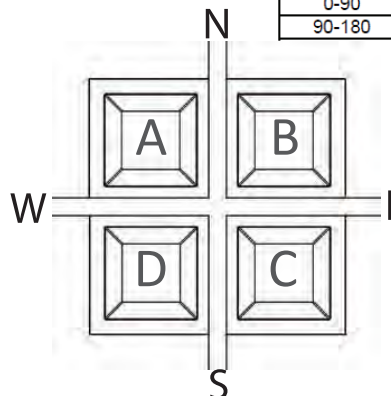
Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-ARB1W35K8500-BRB1W35K8500-
 CWW1SW35K8500-DWW1SW35K8500-UNV-DM-W



Page 1 QUAD Fixture Product Code:
 QUADT1-FSQ-AX-BX-CWW1SW35K8500-
 DRB1W35K8500-500-B2-35K8-UNV-DM-W



Zone	Lumens	% of Luminaire
0-40	151	41.6%
0-60	277	76.6%
0-90	361	100.0%
90-180	0	0.0%



Specify Direction of the Wall Wash Quadrant
 In relation to the Fixture:
 For Example, if Wall Wash quadrant is specified
 in Quadrant C, Specify if this will face North,
 East, South, or West

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

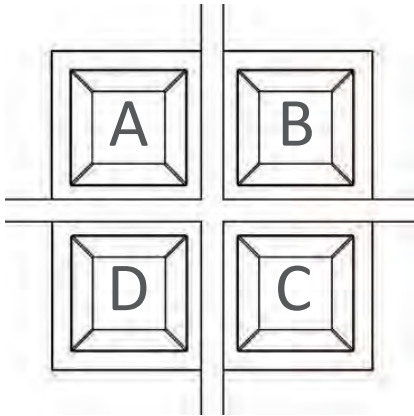
WW2

MHCS22-227151

QUAD Family

ARON™

Sample Configurations & Ordering Guide



- Match labeled quadrant with corresponding column on ordering guide.

- Notate "RB1, RB2" to use quadrant with regressed lens.

-Notate "SL" to use quadrant with Spotlight

-Notate "DL" And Specify Drop Length to use quadrant with Drop Lens

-Notate "WW1, WW2" to use quadrant with Wall Wash Lensing (Must Specify Direction of light using (N,E,S,W).

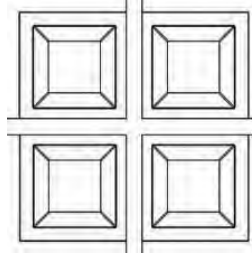
-If choosing a lighting application quadrant, specify CCT & Lumens Per Quadrant

-If choosing an IoT Application notate "SPK, SNR, SEC" And list any additional IoT device specification in quadrant

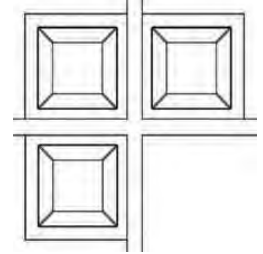
- Notate "X" to omit quadrant from fixture.

Important Ordering Notes:

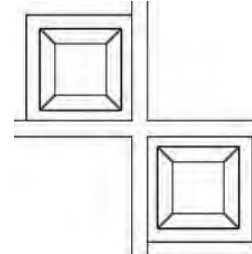
For Armstrong Custom Tile Program - please see page 7 and coordinate with EC/GC



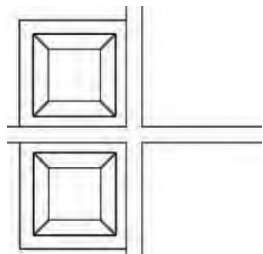
QuadT1-FSQ-ARB1W35K8500-BRB1W35K8500-CRB1W35K8500-DRB1W35K8500.....



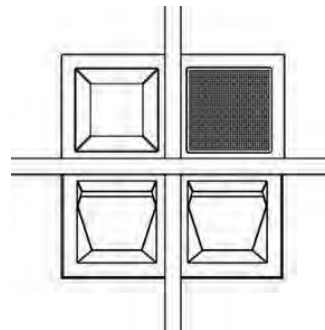
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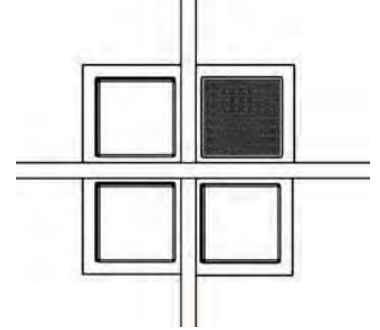
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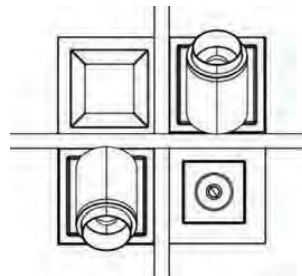
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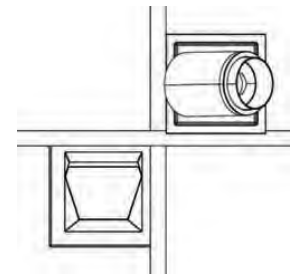
QuadT1-FSQ-ARB1W35K8500-BSPK-CWW1SW35K8750-DWW1SW35K8750.....



QuadT1-FSQ-ADL1"3W5K81000-BSPK-CDL1"35K81000-DDL1"35K81000.....



QuadT1-FSQ-ARB1W35K8500-BSLW35K91000-CSNR-DSLW35K8500.....



QuadT1-FSQ-AX-BSL35K91000-CX-DWW1SW35K8750.....

Notes:

- Coordinate lighting fixture install with ceiling contractor
 - Contact your local Armstrong representative for Made-To-Order ceiling tiles. (See page 6)

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.





Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

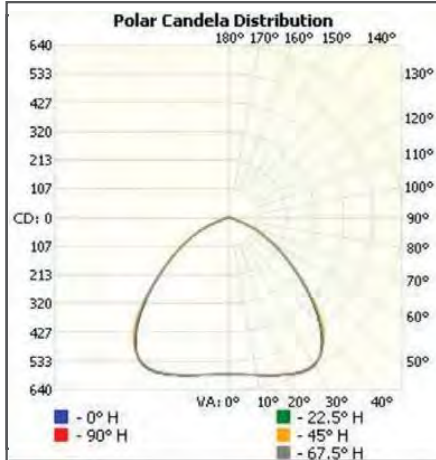
WW2

MHCS22-227151

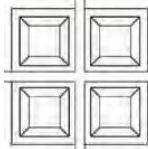
QUAD Family



Model Tested: QuadT1-FSQ-ARB1W35K8400-BRB1W35K8400-CRB1W35K8400-DRB1W35K8400-UNV-DM-W



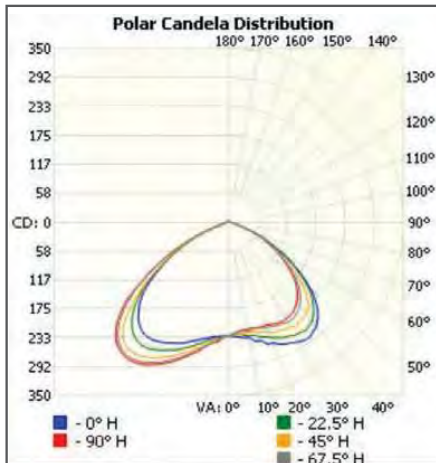
Configuration: 4 Quadrant
Lumens/Quadrant: 403
Total Lumens: 1613
Input Watts: 19.77 W
Efficacy: 81.6 lm/W



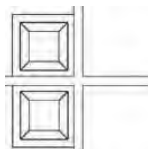
Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	582	582	582	582	582
5	585	585	585	584	585
10	594	593	593	592	593
15	606	606	604	604	606
20	620	620	618	619	621
25	633	632	629	631	633
30	631	629	628	629	632
35	598	598	602	600	599
40	526	530	543	532	528
45	433	437	451	441	437
50	337	340	340	344	340
55	250	256	249	259	253
60	180	189	177	187	182
65	122	124	121	127	122
70	59	67	70	69	60
75	21	22	27	22	21
80	11	11	11	11	11
85	3	3	3	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	56.1	3.5
10-20	172.0	10.7
20-30	291.1	18.0
30-40	370.9	23.0
40-50	338.0	20.9
50-60	229.2	14.2
60-70	122.3	7.6
70-80	29.9	1.9
80-90	4.4	0.3

Model Tested: QuadT1-FSQ-ARB1W35K8400-BX-CX-DRB1W35K8400-UNV-DM-W



Configuration: 2 Quadrant Parallel
Lumens/Quadrant: 422
Total Lumens: 845
Input Watts: 9.76 W
Efficacy: 86.6 lm/W



Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	229	229	229	229	229
5	232	225	227	223	221
10	236	233	226	223	219
15	247	239	229	221	220
20	260	248	237	225	221
25	271	257	241	230	226
30	279	264	244	234	227
35	283	267	244	231	223
40	273	260	241	221	212
45	253	240	225	202	194
50	218	210	190	174	168
55	170	166	146	140	134
60	122	120	105	104	100
65	76	76	68	68	67
70	33	38	38	37	34
75	13	13	16	14	14
80	7	7	7	8	8
85	2	2	2	3	3
90	0	0	0	0	0

Zonal Lumens		
Zone	Lumens	% Luminaire
0-10	22.3	2.6
10-20	70.5	8.3
20-30	125.3	14.8
30-40	177.5	21
40-50	197.1	23.3
50-60	155.2	18.4
60-70	77.3	9.1
70-80	17.2	2
80-90	2.9	0.3

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-ARB2-W35-1000-BWW2*-
W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW2**

MHCS22-227151

QUAD TBar

Spotlight Ordering Guide

ARON™

Beam Adjustable Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH		
Spotlight - Field Adj SP01	27K9 30K9 35K9 40K9	2700K - 90CRI 3000K - 90CRI 3500K - 90CRI 4000K - 90CRI	1200 lumens (BA)	W White BLK Black SLV Silver	STD No Dim DM 0-10V Dimming

GX Series Ordering Code

PRODUCT ID	CCT	LUMENS	FINISH	BEAM ANGLE	DIMMING	
Spotlight - GX SP02	27K9 30K9 35K9 40K9	2700K - 90CRI 3000K - 90CRI 3500K - 90CRI 4000K - 90CRI	900 lumens (GX10) 1150 lumens (GX15) 1800 lumens (GX25)	W White BLK Black SLV Silver	20 20 Degrees 38 38 Degrees 60 60 Degrees	STD No Dim DM 0-10V Dimming

Include the Quantity and Product ID on Purchase Order Beneath
QUAD Product Ordered
** See Example Product Codes

For More Information or Further Ordering Questions,
Please Consult Factory

Description

The QUAD Tbar Spotlight offers a unique solution to grid mounted accent lighting. Easily mount the fixture with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, with the ability to have 4 spotlights in 1 fixture.

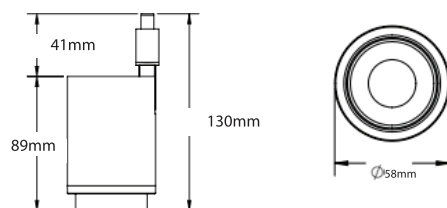
We have Two OEM partners for our spotlight solution. The first, by LPA, offers a field adjustable beam angle, 14-50°, with high CRI. Available in 2700K-4000K. Obtain the perfect aim illumination angle for any solution with full horizontal rotation and up to 90° vertical adjustability.

Our Second, by Bruck Lighting, Offers various static beam angles, with different lumen outputs. The GX series offers variable accent light solutions while achieving an architecturally clean look in the QUAD Tbar Housing.

No more track needed - just drop the fixture on the TBar.

Beam Adjustable (BA) General / Dimensions:

Light Output: Up to 1200lm
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Field Adjustable Beam: 14-50°
Integral Driver
Limited Warranty: 5 years
LED Type: CREE CMA 1200 lm Chip

Dimensions:

GX Series General / Dimensions:

Light Output: 900lm, 1150lm, 1800lm Options
Material: Die Cast aluminum Casing, Powder Coat Finish
Aiming: 350° Horizontal Coverage and 90° Vertical Rotation
Static Beam : 20°, 38°, 60° Options
Integral Driver
Limited Warranty: 5 years



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.

Page 8/12

1/1/22

Designed and Manufactured in the USA

2022 ARON Lighting
aronlighting.com
484.681.5687**ARON**



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:

WW2

MHCS22-227151

QUAD TBar

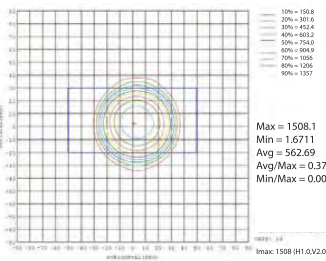


Spotlight Ordering Guide

Beam Adjustable (BA) Photometric and Performance Data

Input Voltage: 220
 Wattage: 15W
 Efficiency: 64.14 lm/W
 Current: 710mA

Polar Candela Distribution



Illuminance Cone Distribution

Height	Eavg,Emax	Angle: 51.19deg	Diameter
Flux out: 732.1 lm			
1 m	979.6,15051x		95.80 cm
2 m	244.9,376.31x		191.60 cm
3 m	108.8,167.21x		287.40 cm
4 m	61.22,94.061x		383.20 cm
5 m	39.18,60.201x		479.00 cm
6 m	27.21,41.811x		574.80 cm
7 m	19.99,30.721x		670.60 cm
8 m	15.31,23.521x		766.40 cm
9 m	12.09,18.581x		862.20 cm
10 m	9.796,15.051x		958.00 cm



Example Product Codes:



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-ASL-BX-CX-DX-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:1) SP01-40K90-1500-W-ND

GX Series Photometric and Performance Data

GX10



Input Voltage: 120 AC
 Wattage: 10W
 Efficiency: 83 lm/W

GX15



Input Voltage: 120 AC
 Wattage: 15W
 Efficiency: 76 lm/W

GX25



Input Voltage: 120 AC
 Wattage: 22W
 Efficiency: 81 lm/W

See IES Files on www.aronlighting.com for Photometric Data on the GX10, 15, and 25



Page 1 QUAD Fixture Product Code:

QUADT1-FSQ-AR-BR-CSL-DSL-500-B2-35K8-UNV-DM-W

Page 7 Spotlight Product Code:

(qty:2) SP01-35K9-1500-W-ND



**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**QUADT1-FSQ-ARB2-W35-1000-BWW2*-
W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW2**

MHCS22-227151

QUAD TBar

ARON™

Speaker Ordering Guide

Speaker Addons

ARON PO ID	
Sub:	SB-01
Receiver:	RE-01
Mixer:	MIX-01

**General / Dimensions:**

Broad Coverage Pattern: 160°

Material: Die Cast aluminum Casing, Powder Coat Finish

Driver: 60 mm (2.5 in) mid/high driver with butyl rubber surround
16-ohm allows for parallelling of multiple units on
a low-Z amplifier

Applications: Retail, Corridor, Restaurants, Commercial

Grill: Many options in color and dimension for a reveal or flush aesthetic

Sub: Designed to be paired with 40CS/T subwoofer-satellite system

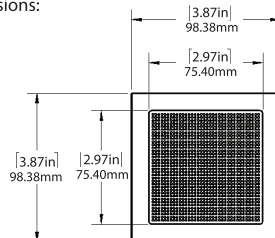
Description

The QUAD TBar Speaker offers a unique solution to grid mounted sound solutions. Easily mount the speaker with or without other downlight quadrants at the intersection of any TBar grid system. There are multiple configurations available, recommended to have one speaker in one fixture..

No more need for cluttered ceilings at the center of the tile - just drop the fixture and speaker on the TBar. Only a single dropdown required for these various technologies!

Our speaker partner, JBL, is well renowned within the sound industry. This integrated partnership pairs great light quality with equally competitive sound quality in quite a small form factor.

Dimensions:



Example Product Codes:

**Page 1 QUAD Fixture Product Code:**

QUADT1-FSQ-ASPK-BR-CR-DR-500-B2-35K8-UNV-DM-W

**Page 1 QUAD Fixture Product Code:**

QUADT1-FSQ-ASPK-BX-CX-DX-500-B2-35K8-UNV-DM-W

***Subwoofer, Receiver, and Mixer Available**

ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.

Page 10/12

1/1/22

Designed and Manufactured in the USA

2022 ARON Lighting
aronlighting.com
484.681.5687

ARON



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 QUADT1-FSQ-ARB2-W35-1000-BWW2*-
 W35K8-1000-CX-DX-UNV-DM-W

Notes:

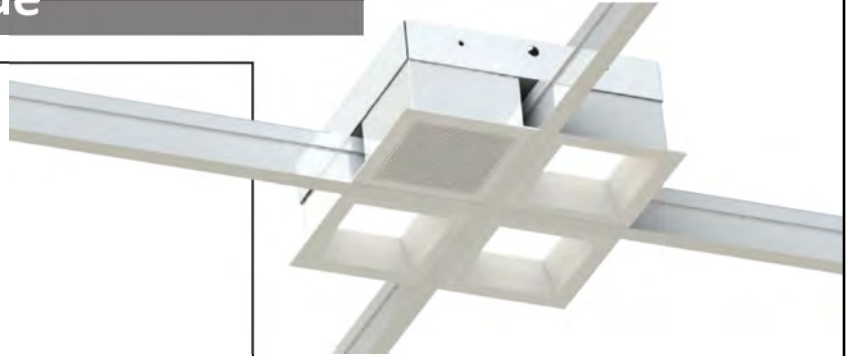
Type:
WW2

MHCS22-227151

QUAD TBar



Speaker Ordering Guide



Specifications and Performance Data

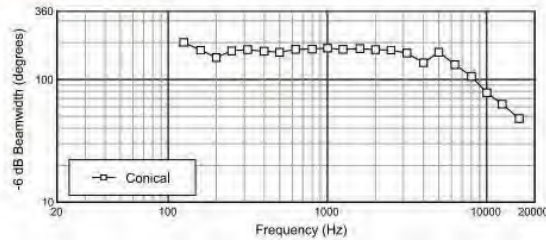
System:

- Frequency Range (-10 dB): 140 Hz - 20 kHz
- Frequency Response (± 3 dB): 180 Hz - 17 kHz Im/W
- Power Capacity: 30W Continuous Program Power
15W Continuous Pink Noise
- Nominal Sensitivity (2.83V/1m): 82 dB
- Nominal Coverage Angle: 160° conical coverage
- Directivity Factor (Q): 6.6
- Directivity Index (DI): 6.8 dB
- Rated Maximum SPL: 94 dB @ 1m (3.3 ft) average, 114 dB peak
- Rated Impedance: 16 ohms

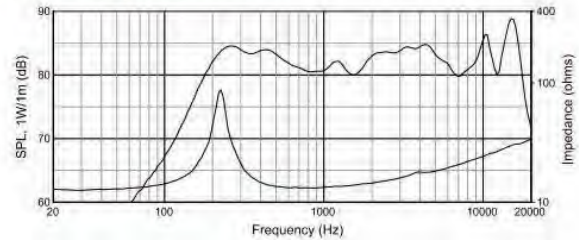
Transducer

- Driver: 60 mm (2.5 in) with polypropylene cone, butyl rubber surround, copper-clad coil, vented aluminum former

Beamwidth:

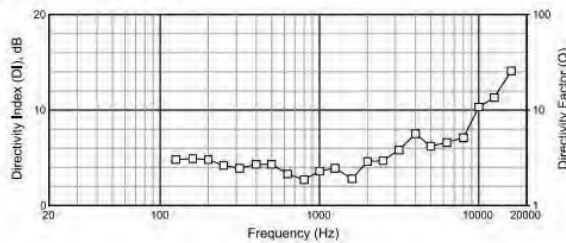


Frequency Response:

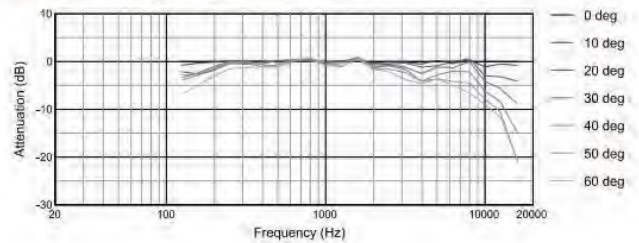


Half-space (2pi, mounted in ceiling)

Directivity Index:



Off-Axis Frequency Response:



ARON Lighting reserves the right to make any design changes for continuous improvement which will not affect the overall appearance, performance or pricing.



**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

QUADT1-FSQ-ARB2-W35-1000-BWW2*-
W35K8-1000-CX-DX-UNV-DM-W

Notes:

Type:**WW2**

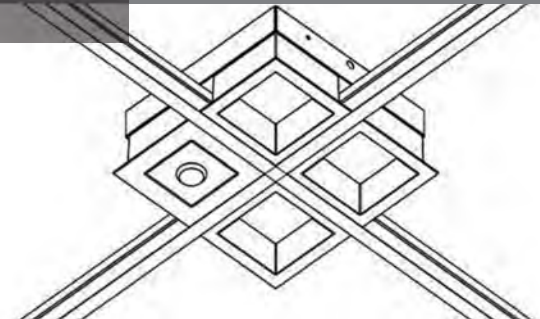
MHCS22-227151

QUAD TBar

ARON™

Sensor Ordering Guide

PRODUCT ID		Sensor Specifications	
Enlighted Smart Sensor - Micro 8-pin	ENS01-	Enlighted One	001
		Enlighted Connected	002
		Enlighted IoT	003



Shown: ASNR-BR-CR-DR.....

General

Material: Die Cast aluminum Casing, Powder Coat Finish

Integral Driver

Applications: Retail, Corridor, Accent Lighting, Restaurants, Commercial

Description

The QUAD Tbar Comes Sensor Ready with our Enlighted OEM Partnership. Easily install at the intersection of any TBar your lighting and IoT controls. All drivers are integral to the fixture while keeping a low plenum profile.

The Sensor can be ordered in any configuration of Quadrants, with recessed downlights, a speaker, and spotlight!

Enlighted Micro Sensor - 8Pin

**TECHNICAL SPECIFICATIONS**

Motion Sensing: Digital Passive IR

Photosensor: Light Pipe/Photosensor Array

Enclosure: ABS/Polycarbonate blend

Type: Closed Loop Light Sensor

Operating Temp: 32° to 122° F / 0° to 50° C

Power Consumption: 200 mW max.

Voltage: 12-30 V

Wireless Standards: IEEE 802.15.4

Bluetooth 4.0 Low Energy (BLE)

Radio Frequency: 2400-2483.5 MHz

Wireless Range: 150 ft. (46 m) radius open range

Encryption: AES-128

Two Dimming Outputs: 10mA source/sink each

ORDERING INFORMATIONSU-5e-xxx* Micro Sensor, 8-pin
(*see Product codes)SU-CL-IoT-UPG Connected Lighting to IoT
Sensor UpgradeSU-IL-IoT-UPG Independent Lighting to IoT
Sensor Upgrade

HCMC-SU-5E Hard Ceiling Mount Carrier

TMC-SU-5E Tile Mount Carrier

CPL-RJ45 Female RJ45 Coupler

CBL-5E-CU4-30N 30 inch Sensor Cable for CU-4

CBL-5E-CU4-7F 7 foot Sensor Cable for CU-4

CBL-5E-CU4-12N 12 inch Cable for CU-4

CBL-5E-5W-30N 30 inch Profile 0 Driver Cable

**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:
CUSO4DB-H-ND

Notes:

Type:

AA

MHCS22-227151

**CUSO**

SLIM LED AC/EMERGENCY OUTDOOR LIGHT

FEATURES

- Includes self-diagnostic/self-test feature to monitor proper operation
- Quick installation
- Universal 120-277VAC input, 60Hz.
- Includes long-life 7.2V Nickel Cadmium battery for UL recognized 90 minute operation
- Full re-charge within 24 hours
- Provided with water-proof test switch and AC-On indicator
- 0°C to 50°C Standard Model, -25°C to 50°C with optional heater
- UL924 and Wet Location Listed

**SPECIFICATIONS****DESCRIPTION**

- The CUSO Series is an architectural, low-profile outdoor light, offering "normally On" AC and emergency lighting with powerful LED illumination
- The housing is fully sealed and gasketed, and has an IP65 rating
- Designed for wall mounting with universal K/O pattern in back-plate for easy installation to most standard size junction boxes
- Includes a single ½" NPT conduit entry in the top, center of the housing
- Illumination provided by 8 high power LEDs which achieve 1,600 lumens in AC and 600 lumens in emergency
- Available in 3000K or 4000K color temperature

- Models at 3000K include a photo-sensor and PIR (passive infra-red) motion detector which cannot be altered
- The unit will only turn on in AC mode when motion is detected. Models at 4000K include a photo-sensor and do not include motion detector
- The unit can be controlled by a switch, timer or the photo-cell

APPLICATION

- The CUSO Series can be applied in areas that are susceptible to rain and severe moisture like parking decks, and outdoor commercial applications to meet all Path of Egress requirements

ORDERING GUIDE

Catalog Number	Description
CUSO DB	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Dark Bronze
CUSO DB-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Dark Bronze, Heater
CUSO BK	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Black
CUSO BK-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., Black, Heater
CUSO WH	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., White
CUSO WH-H	Outdoor AC/EM, 3000K, Photo-sensor and PIR Motion Detect, Self-Diag., White, Heater
CUSO4DB-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Dark Bronze
CUSO4DB-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Dark Bronze, Heater
CUSO4BK-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Black
CUSO4BK-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., Black, Heater
CUSO4WH-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., White
CUSO4WH-H-ND	Outdoor AC/EM, 4000K, Photo-sensor, Self-Diag., White, Heater

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____

tradeSELECT™

**RELATED PRODUCTS**

- ⌘ [Exit & Message Signs](#)
- ⌘ [Emergency Lighting Units](#)
- ⌘ [Battery Packs](#)
- ⌘ [Remote Heads & Fixtures](#)

COMPLIANCES

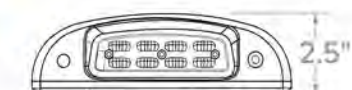
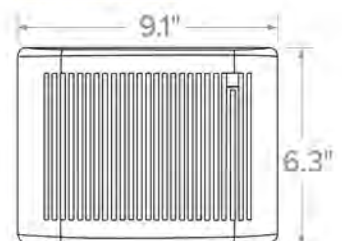
- UL924 Listed for Wet Location
- NFPA 101
- NFPA 70
- OSHA

WARRANTY

- 5 year full unit warranty
- See [HLI Standard Warranty](#) for additional information

ENERGY CONSUMPTION

	Max.	Max. with heater
120VAC, 60Hz	3.59W	3.40W
277VAC, 60Hz	3.59W	3.40W

DIMENSIONS

Single Carton Weight	4 lbs.
Master Carton Quantity	6 each

**Job Name:**

Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls

Catalog Number:

LMRC-111

Notes:

Type:**116/117**

MHCS22-227151



WATTSTOPPER®

ON/OFF/0-10 VOLT DIMMING ROOM CONTROLLERS

LMRC-110 SERIES

Plenum-rated controllers with line voltage relay(s) and 0-10 volt dimming output(s)

Knockout mounting for easy installation; Class 1 and/or Class 2 connection for 0-10V wiring

Available with or without metering (+/- 2% accuracy)



Plug n' Go™ automatic configuration for quick installation and maximum energy efficiency

Store 16 scene preset levels for each load

Support energy saving manual-on, partial-on and dimming control strategies

DESCRIPTION

LMRC-110 series room controllers include one or two relay(s) to switch a total of 10 amps, a high-efficiency switching power supply and dual 0-10 volt outputs per relay for control of dimmable loads including compatible LED drivers or electronic ballasts. They are the foundation of a Digital Lighting Management (DLM) system, and allow integration of occupancy sensors, daylighting controls and switches for energy-efficient control.

OPERATION

LMRC-110 series room controllers operate on one 120 or 277 volt, 10 amp feed and provide Class 2 power to sensors and switches via the DLM local network. Once powered up, Plug n' Go automatically configures system components for the most energy-efficient operation. The room controllers then dim or switch lighting or motor loads in response to input from the communicating devices. When a dimming input is received, the relay switches on when the dimmed level rises above zero, and off when it reaches zero, to coordinate control of power and the 0-10 volt signal to the load. They also monitor the current draw of the total connected load. Each room controller stores up to 16 scene preset levels for each dimmed output. Additionally, the LMCT-100-2 wireless configuration tool can be used for load configuration.

FEATURES

- Push n' Learn™ functionality for personalization without the need for tools or a PC
- Digital Lighting Management components plug together on a free-topology Cat 5e DLM local network eliminating wiring errors
- On/Off/Dim local override button for each load
- LED indicates status of each load
- 0-10V signal opens on loss of LMRC power
- Optional lamp burn in; 12 or 100 hours
- Optional instantaneous current and voltage measurement of total connected load
- 2 RJ45 ports; molded cable tie ring for strain relief
- Zero-crossing circuitry for each relay for reliability and increased product life
- UL 2043 plenum rated
- This product meets the materials restrictions of RoHS
- BAA/TAA-compliant models available

Room controllers include circuitry to open their 0-10V signal on loss of LMRC's power, so any separately powered ballast or driver connected to those 0-10V wires will go to full brightness.

PLUG N' GO AUTOMATIC CONFIGURATION

DLM room controllers manage Plug n' Go automatic system configuration, which establishes functionality based on the installed components. When room controllers are connected only to occupancy sensors, the system defaults to automatic on/off operation. If a wall switch is added to a system with one load, the load defaults to manual-on/automatic-off operation. If there is a wall switch and multiple loads, load one turns on automatically, while additional loads default to manual-on control; all loads turn off automatically. At system startup, default dimming parameters are established including: levels for scene presets 1-4; fade times; and fade and ramp rates. Dimming and system parameters may be customized using Push n' Learn.

APPLICATIONS

LMRC-110 series room controllers are ideal for single or multiple zone on/off or dimming control applications including private offices, open offices, conference rooms and classrooms. Metering models help facility managers who want to track building power usage for lighting or other loads. A network bridge (LMBC-300) is required to expose DLM local network power measurement readings to a segment manager or BAS.

PROJECT

LOCATION/
TYPE

**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LMRC-111

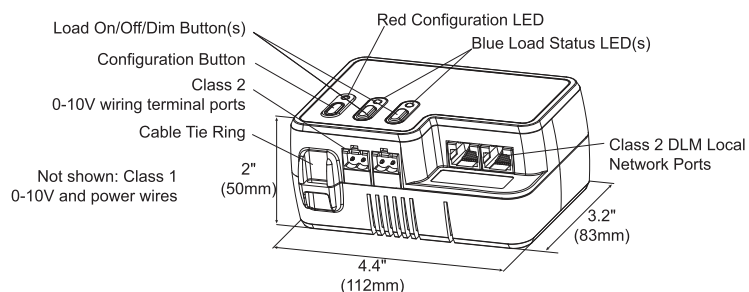
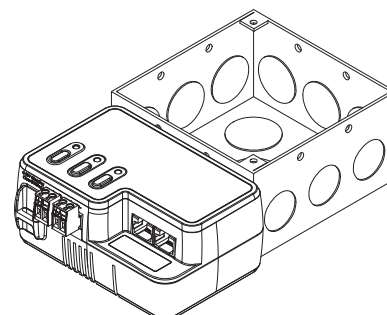
Notes:

Type:**116/117**

MHCS22-227151

DIGITAL LIGHT MANAGEMENT | Load Controllers**SPECIFICATIONS**

- Voltage: 120/277VAC; 50/60Hz
- Maximum 10A combined load per Room Controller; each relay rated for 10A ballast, E-ballast or incandescent
- Galvanically isolated Class 1 pigtailed and Class 2 terminals for 0-10VDC signal; sinks up to 50mA per output (Class 1/ Class 2) per channel for control of compatible ballasts (25 if each sources 2mA)
- In VDC, up to 150mA across 2 RJ45 ports
- DLM local network parameters:
 - Maximum current: 800mA
 - Category 5e cable: 150' per device to 1,000' max.
 - Up to 64 loads
 - Up to 48 communicating devices
 - Maximum 4 LMPB-100, LMPL-101 or LMRC-100 Series Room Controllers
- Operating conditions: for indoor use only; @120/277V: 32-131°F (0-55°C); 5-95% RH, non-condensing
- UL and cUL listed (E101196)
- FCC part 15 compliant
- Five year warranty

CONTROLS & MOUNTING**Controls and Dimensions****Mounting**

Mount to 1/2" KO on a deep J-box

Load Parameter (for each dimmed output)	Default Setting	Available Options
High trim	85%	1-100%
Low trim	0%	0-99%
Preset On Level	50%	0-100%
Preset level: Scenes 1-16	1: 100%, 2: 75%, 3: 50%, 4: 25%, 5-16: 100%	All: 0-100%
Preset fade time	2 seconds	0 seconds - 18 hours
Lamp burn in time	0	0, 12 or 100 hours



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LMRC-111

Notes:

Type:

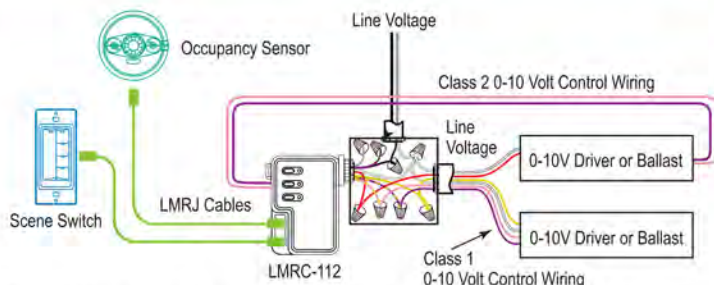
116/117

MHCS22-227151

WATTSTOPPER®



SAMPLE CONNECTION DIAGRAM WITH CLASS 1 & CLASS 2 DIMMING CONTROL WIRING



Wire Color	Function
Black	Line In
White	Neutral
Red	Load A Switched Hot
Yellow	Load B Switched Hot
Purple	Load A 0-10V (+)
Pink	Load A 0-10V (-)
Purple/Yellow	Load B 0-10V (+)
Pink/Yellow	Load B 0-10V (-)

Plug DLM local network components together in any configuration using Cat 5e cables with RJ45 connectors.

NOTE: Per UL, starting in 2021, the 0-10V negative dimming wire color has been changed from gray to pink.

ORDERING INFORMATION

Catalog #	Description	Voltage	Total Rating	Class 2 Outputs
LMRC-111	1 Relay Room Controller, 0-10V dimming	120/277VAC	10A ballast, E-ballast or incandescent	24VDC, 150mA and 0-10VDC (0-10VDC signal also provided as Class 1)
LMRC-111-U	1 Relay Room Controller, 0-10V dimming, BAA/TAA compliant*			
LMRC-111-M	1 Relay Room Controller, 0-10V dimming, with meter,			
LMRC-111-M-U	1 Relay Room Controller, 0-10V dimming, with meter, BAA/TAA compliant*			
LMRC-112	2 Relay Room Controller, 0-10V dimming			
LMRC-112-U	2 Relay Room Controller, 0-10V dimming, BAA/TAA compliant*			
LMRC-111-M	2 Relay Room Controller, 0-10V dimming, with meter,			
LMRC-111-M-U	2 Relay Room Controller, 0-10V dimming, with meter, BAA/TAA compliant*			
LMCT-100-2	Digital Wireless Configuration Tool			

*Product is compliant with Buy American Act and Trade Agreement Act

28736r2 Rev 05/21

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LMDC-100

Type:

MHCS22-227151

Notes:

WATTSTOPPER®

DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSOR

LMDC-100

Combines passive infrared and ultrasonic technologies for most comprehensive coverage

Component of Digital Lighting Management integrated control system

Quick access to Push n' Learn for system personalization



Digital sensor with LCD display and programming pushbuttons behind snap-off cover

IR transceiver for wireless configuration and remote control

Low profile design for architectural appeal



DESCRIPTION

The LMDC-100 low profile Dual Technology Ceiling Mount Occupancy Sensor uses both passive infrared (PIR) and ultrasonic technologies to achieve precise occupancy sensing for energy-efficient control of lighting and plug loads. It is a digital sensor, and is part of a Wattstopper Digital Lighting Management (DLM) system.

OPERATION

The LMDC-100 operates on Class 2 power supplied to a DLM local network by one or more DLM room controllers. It works with the room controller(s) to turn loads on and off based on occupancy. Default operation is established by Plug n' Go, which automatically configures system components to maximize energy savings. Initially, all occupancy sensors control all loads on the same local network. Each LMDC-100 may be assigned to a specific load; load assignments and load parameters may be changed using Push n' Learn. The LMDC-100 may be reconfigured either using the pushbuttons and an LCD screen conveniently located behind the snap-off front sensor cover, or with a wireless configuration tool.

FEATURES

- Plug n' Go™ automatic configuration for quick installation and maximum energy savings
- Push n' Learn™ functionality for customization without the need for tools or a PC
- Digital Lighting Management components plug together on a free-topology Category 5e DLM local network
- Infrared (IR) transceiver for wireless configuration and control
- 360 degree PIR coverage
- Ultrasonic diffusion technology spreads coverage to a wider area (patented); 40KHz signal
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- The product meets the materials restrictions of RoHS
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- BAA/TAA-compliant models available

DIGITAL SETTINGS AND IR COMMUNICATION

The LMDC-100 includes a unique, easy-to-access, LCD screen that displays sensor parameters and simplifies changing those parameters. Time delay and sensitivity can be precisely adjusted. Additionally, walk through mode can be activated and detection and retrigger technologies may be changed. Changes are made at the sensor with easy-to-use pushbuttons, or via the LMCT-100-2 wireless configuration tool, which communicates with the sensor using a bi-directional infrared (IR) signal. The LMDC-100 IR transceiver allows wireless system operation in addition to configuration. The LCD display also facilitates system personalization, showing load information when in Push n' Learn mode.

APPLICATIONS

The LMDC-100 senses both large and small motions and is recommended for spaces including conference rooms, private offices, open offices and classrooms where using just one detection technology could result in false triggers. Mounted at ten feet, the LMDC-100 can detect motion throughout an area of approximately 1,000 square feet.

PROJECT

LOCATION/
TYPE



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LMDC-100

Notes:

Type:

MHCS22-227151



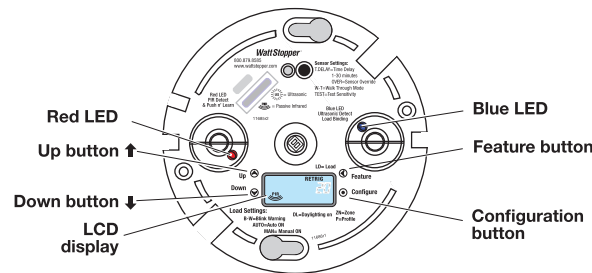
DIGITAL LIGHT MANAGEMENT | Occupancy Sensors

SPECIFICATIONS

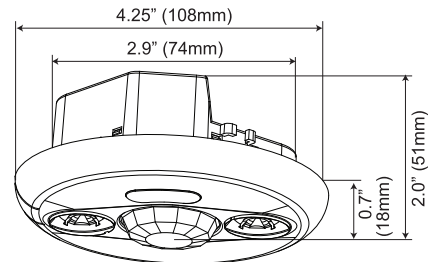
- Input voltage: 24VDC from DLM network
- Current consumption: 20mA
- DLM local network connection: 2 RJ45 ports
- LCD display and pushbuttons for setting sensor and system parameters
- Infrared (IR) transceiver
- Ultrasonic frequency: 40 kHz
- Operating conditions: for indoor use only; 32-104°F (0-40°C); 5-95% RH, non-condensing
- UL and cUL listed
- FCC part 15 compliant
- Five year warranty

CONTROLS & DIMENSIONS

Product Controls and Sensor Settings



Product Dimensions

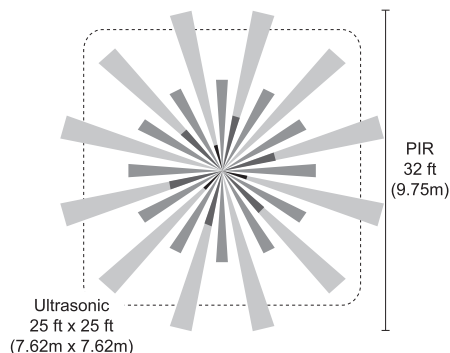


Mount to a 4" octagonal box (as shown) or directly to ceiling tile using spring clips (included). Box mounting required for plenum rating. See installation instructions for more details.

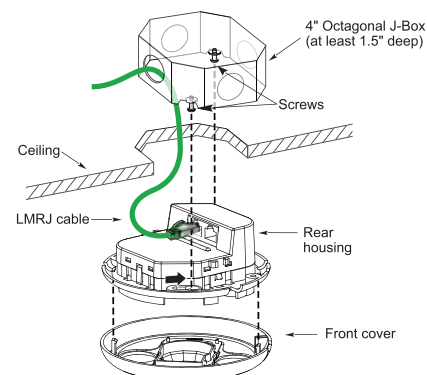
Sensor Parameter	Available Options	Default Setting
Time Delay	1-30 min. (1 min. increments) /Override	20 minutes
Walk Thru	On/Off	Off
PIR Sensitivity	10-100% (10% increments)/Off	90%
Ultrasonic Sensitivity	10-100% (10% increments)/Off	70%
Test Mode	Activate	Off
Detection Technology	Ultrasonic/PIR/Both/Neither	Both
Retrigger Technology	Ultrasonic/PIR/Both/Neither	Either

COVERAGE & MOUNTING

Coverage Patterns



Mounting Options



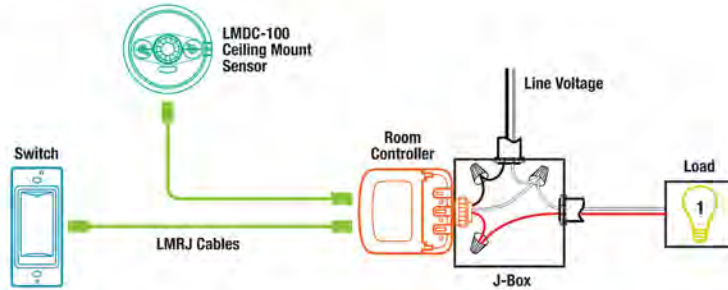


WATTSTOPPER®



WIRING

Sample Connection Diagram



Plug DLM local network components together in any configuration using Cat 5e cables with RJ45 connectors.

ORDERING INFORMATION

Catalog #	Color	Description
LMDC-100	White	Dual Technology Ceiling Mount Occupancy Sensor
LMDC-100-U	White	Dual Technology Ceiling Mount Occupancy Sensor, BAA/TAA compliant*
LMCT-100-2		Digital Wireless Configuration Tool

*Product is compliant with Buy American Act and Trade Agreement Act

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

LMDM-101-*

Type:

MHCS22-227151

Notes:

WATTSTOPPER®

DIMMING WALL SWITCH

LMDM-101

Low voltage switch for control
of dimmable loads

Component of Digital Lighting
Management integrated
control system

Plugs to other components using
Cat 5e cables with RJ45 connectors
eliminating wiring errors



LED bar graph indicates relative
light level of controlled load

Active Dim feature enables temporary
adjustment of any selected load

Plug n' Go automatic configuration
and Push n' Learn for personalization



DESCRIPTION

The LMDM-101 Dimming Wall Switch is a low voltage device for dimming control of one or more lighting loads. It is part of a Digital Lighting Management (DLM) system and can dim load(s) connected to DLM dimming room controllers and switch load(s) connected to DLM on/off room controllers.

OPERATION

The LMDM-101 operates on Class 2 power supplied to a DLM local network by one or more room controllers. Plug n' Go automatic configuration assigns all loads connected to dimming room controllers to the dimming switch upon system startup. When multiple switches are installed, default operation is for multi-way control; each switch controls all of the loads on the system. Dimming switches may be reconfigured using Push n' Learn to control only selected loads. The LMDM-101 may be used to raise or lower light levels, recall a preset level and turn lights on or off. In Active Dim mode, users can temporarily adjust the level of any dimmable load or scene on the local network by selecting a load or scene button.

FEATURES

- Hidden configuration button for easy access to Push n' Learn
- Used with DLM dimming room controller
- Digital Lighting Management components plug together on a free-topology Category 5e DLM local network
- Provides full function dimming control in multi-way applications, such as 3-way, 4-way, and beyond
- Infrared (IR) transceiver for wireless configuration and control
- LED status indicator
- Sleek single gang device fits decorator wall plates
- Six color options and custom engraving options; standard buttons may be replaced in the field
- The product meets the materials restrictions of RoHS
- BAA/TAA-compliant models available

PROJECT

LOCATION/
TYPE



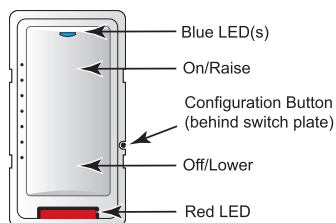
DIGITAL LIGHT MANAGEMENT | Personal Controls

SPECIFICATIONS

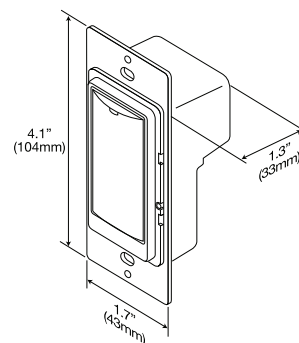
- Input voltage: 24VDC from DLM local network
- Current consumption: 5mA
- DLM local network connection: 2 RJ45 ports
- Control button with LED status indicator
- 7-LED dimming level indicator
- Infrared (IR) transceiver
- Hidden configuration button for access to Push n' Learn mode
- Operating conditions: for indoor use only; 32-131°F (0-55°C); 5-95% RH, non-condensing
- UL and cUL listed
- FCC part 15 compliant
- Five year warranty

CONTROLS & DIMENSIONS

Controls

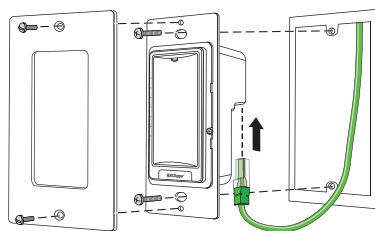


Dimensions

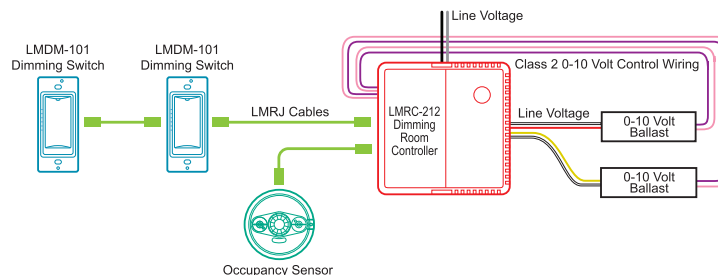


MOUNTING & CONNECTING

Mounting



Sample Connection Diagram with 0-10 Volt Dimming



LMDM-100 Dimming Wall Switches fit in standard single gang boxes.

Plug DLM local network components together in any configuration using Cat 5e cables with RJ45 connectors.

ORDERING INFORMATION

Catalog #	Color	Description
<input type="checkbox"/> LMDM-101-W	White	1-Button Dimming Wall Switch
<input type="checkbox"/> LMDM-101-W-U	White	1-Button Dimming Wall Switch, BAA/TAA compliant*
<input type="checkbox"/> LMDM-101-LA	Light Almond	1-Button Dimming Wall Switch
<input type="checkbox"/> LMDM-101-I	Ivory	1-Button Dimming Wall Switch
<input type="checkbox"/> LMDM-101-I-U	Ivory	1-Button Dimming Wall Switch, BAA/TAA compliant*
<input type="checkbox"/> LMDM-101-G	Gray	1-Button Dimming Wall Switch
<input type="checkbox"/> LMDM-101-B	Black	1-Button Dimming Wall Switch
<input type="checkbox"/> LMDM-101-R	Red	1-Button Dimming Wall Switch
<input type="checkbox"/> LMCT-100-2		Digital Wireless Configuration Tool

LMDM-101-* - *Specify Finish

Switches do not include face plates. Order decorator style plate separately.
*Product is compliant with Buy American Act and Trade Agreement Act.



Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LMRJ-P25

Notes:

Type:

MHCS22-227151



WATTSTOPPER®

PRE-TERMINATED CABLES AND SEGMENT NETWORK WIRE

LMRJ & LM-MSTP

Pre-terminated LMRJ cables for DLM local networks in lengths up to 100 feet

Cables and wire available in a choice of colors for use in exposed locations

Wattstopper LM-MSTP wire required for wired segment networks. This wire is not needed for wireless DLM networks using the wireless bridge (LMBC-600).



Standard green color and markings for DLM provide easy identification of LMRJ cables in plenum

UL and cUL listed and labeled

LMRJ cables available in plenum and non-plenum rating

5 year warranty



DESCRIPTION

LMRJ Series cables connect Digital Lighting Management (DLM) components without the need for tools or point-to-point discrete wiring. Cables are pre-terminated with industry standard RJ45 connectors compatible with any RJ45 port on DLM components. LMRJ cables utilize B to B wiring.

Plenum-rated LM-MSTP Segment Network wire carries the MS/TP (RS485) signal. Wire is 1.5 pair (twisted pair + 1 conductor) + shield, white/black/green. Use of LM-MSTP is mandatory for wired DLM network projects. Another option is to avoid the need for LM-MSTP wire through the use of wireless bridges (model LMBC-650).

SPECIFICATIONS

- LMRJ: UL/cUL, CM 75°C, 4PR, 24AWG, FT4
- LMRJ-P: UL/cUL, CMP 75°C, 4PR, 24AWG, FT6
- LM-MSTP: UL/cUL, CMP/CL3P 75°C, 22AWG, FT6

*PEP designation applies to LMRJ cables only

OPERATION AND APPLICATIONS

LMRJ cables can be plugged into any available RJ45 port on a DLM device and connected to any other DLM device. These cables facilitate the creation of a local network of DLM components that automatically configure and function together. While LMRJ series cables are rated Cat 5e, they are not recommended for general data use in other than DLM network applications.

LM-MSTP wire is used to create a linear topology (daisy-chain) segment network for control by a segment manager or building automation system.

PROJECT		LOCATION/ TYPE	
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**Job Name:**

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:

LMRJ-P25

Type:

MHCS22-227151

Notes:

DIGITAL LIGHT MANAGEMENT | Interfaces and Accessories

**ORDERING INFORMATION****Non-Plenum Rated Local Network Cables**

Catalog #	Green cable with white stripe
<input type="checkbox"/> LMRJ-01	Six-inch Jumper
<input type="checkbox"/> LMRJ-03	3' Cable
<input type="checkbox"/> LMRJ-10	10' Cable
<input type="checkbox"/> LMRJ-15	15' Cable
<input type="checkbox"/> LMRJ-25	25' Cable
<input type="checkbox"/> LMRJ-35	35' Cable
<input type="checkbox"/> LMRJ-50	50' Cable
<input type="checkbox"/> LMRJ-75	75' Cable
<input type="checkbox"/> LMRJ-100	100' Cable

Plenum Rated Local Network Cables

Catalog #	Green cable with black stripe	Catalog #	White cable
<input type="checkbox"/> LMRJ-P03	3' Cable	<input type="checkbox"/> LMRJ-P03-W	3' Cable
<input type="checkbox"/> LMRJ-P10	10' Cable	<input type="checkbox"/> LMRJ-P10-W	10' Cable
<input type="checkbox"/> LMRJ-P15	15' Cable	<input type="checkbox"/> LMRJ-P15-W	15' Cable
<input checked="" type="checkbox"/> LMRJ-P25	25' Cable	<input type="checkbox"/> LMRJ-P25-W	25' Cable
<input type="checkbox"/> LMRJ-P35	35' Cable	<input type="checkbox"/> LMRJ-P35-W	35' Cable
<input type="checkbox"/> LMRJ-P50	50' Cable	<input type="checkbox"/> LMRJ-P50-W	50' Cable
<input type="checkbox"/> LMRJ-P75	75' Cable	<input type="checkbox"/> LMRJ-P75-W	75' Cable
<input type="checkbox"/> LMRJ-P100	100' Cable	<input type="checkbox"/> LMRJ-P100-W	100' Cable

Underminated Plenum Rated Segment Network Wire

Catalog #	Description
<input type="checkbox"/> LM-MSTP	Green-jacketed segment network wire, 1.5 pair, max diameter 0.185", available by the foot
<input type="checkbox"/> LM-MSTP-W	White-jacketed segment network wire, 1.5 pair, max diameter 0.185", available by the foot
<input type="checkbox"/> LM-MSTP-B	Black-jacketed segment network wire, 1.5 pair, max diameter 0.185", available by the foot
<input type="checkbox"/> LM-MSTP-DB	Segment network wire, 1.5 pair, max diameter 0.185", rated for direct burial
<input type="checkbox"/> LM-MSTP-S1000	Green-jacketed LM-MSTP wire; 1000' reel
<input type="checkbox"/> LM-MSTP-S2000	Green-jacketed LM-MSTP wire; 2000' reel
<input type="checkbox"/> LM-MSTP-S4000	Green-jacketed LM-MSTP wire; 4000' reel

Notice

LMRJ and LM-MSTP cables are UL-rated and listed as a CM or CMP cable, depending on the model and fall under NEC Article 800.

In NFPA 70, 2020 NEC, under Article 800 (General Requirements for Communications System), it states the following: "Informational Note No 3: Paint, plaster, cleaners, abrasives, corrosive residues, or other contaminants may result in an undetermined alteration of the wire and cable properties." (see Section 800.24).

All CM-rated cables have passed a very specific test which ensures they do not spread flames beyond what is permitted under the UL limit. You can install CM cables in the wall or ceiling. CMP-rated cables are made from material that completely retards the spread of flames. These cables are specifically designed for plenum applications.

Per the NEC, the properties of these cables may change by coming in contact with, being covered by, or otherwise exposed to other products or substances.

27402r1 Rev 05/21

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**
LMCT-100-2

Notes:

Type:**TOOL**

MHCS22-227151

WATTSTOPPER®

WIRELESS CONFIGURATION TOOL WITH USB

LMCT-100-2

Wireless advanced configuration capabilities for Digital Lighting Management systems

Component of Digital Lighting Management integrated control systems

Easy-to-read OLED screen

Micro-USB port allows easy updating of firmware.



2-way IR communication for data upload, download, confirmation and storage

Easy-to-use navigation pad

Configures occupancy sensors, switches, room controllers, photosensors and DLM relay panels



DESCRIPTION

The LMCT-100-2 Wireless Configuration Tool is a handheld tool for advanced remote configuration of any Wattstopper Digital Lighting Management (DLM) system. The tool enables system and device modifications via pushbutton, without ladders or tools, as well as easy duplication of settings between DLM local networks.

OPERATION

Powered by three AAA batteries, the LMCT-100-2 features an easy-to-read organic LED (OLED) screen and bi-directional communication with IR-enabled DLM devices. Its intuitive navigation pad provides a familiar interface for users who can see the current system parameters of a DLM local network and make changes by navigating through simple menus. Adjustable occupancy sensor parameters include sensitivity, time delay and trigger modes. Load parameter settings (also referred to as Push n' Learn™) include blink warning, Auto- or Manual-on mode, and re-assigning specific loads to different sensors. Button configuration options include type (load or scene), mode, fade times and scene lock. Dimming parameters include low/high trim, preset level and lamp burn in time. Daylighting adjustments include operating mode, setpoints, fade times and time delays. The LMCT is also used to adjust the light level of dimmed loads. As new DLM products are released, a micro-USB port allows for easy firmware updates via software.

FEATURES

- Remotely reconfigures and reports DLM occupancy sensor parameters: PIR and ultrasonic sensitivity; time delay; walk through mode; trigger mode (for dual technology sensors)
- Remotely reconfigures and reports DLM dimming parameters: load type (dim/switch); low/high trim; preset on level; lamp burn-in
- Manually adjusts light level of dimmed loads to facilitate scene setting
- Remotely configures, reconfigures and reports DLM photosensor settings: light levels; operating mode (on/off, bi-level, tri-level, dimming); setpoints; time delays; fade times; test mode
- Micro-USB port provided for firmware updates, allowing easy updates for support of new DLM products
- The product meets the materials restrictions of RoHS

CONFIGURATION AND PERSONALIZATION

The LMCT-100-2 simplifies the replication of occupancy sensor settings from one DLM local network to another and facilitates scene setting. It can store up to nine sensor profiles and assign them to sensors in any DLM local network. For projects where identical settings may be desired across a large number of spaces, this capability provides a streamlined method of configuration. Settings can be copied throughout a building or in different buildings. The LMCT also allows manual adjustment of individual load levels. This powerful feature allows different lighting scenes to be set and stored without the need for dimming switches in each space. Scenes can be recalled by scene switches or multi-button switches configured for scene control.

APPLICATIONS

Designers and installers can use the LMCT-100-2 to ensure conformity with design intent. It simplifies changes to occupancy sensor settings, load configurations and dimming parameters by making the adjustment process ladder-free. An LMCT-100-2 is required for calibrating the LMLS-500 photosensor. The self-calibrating LMLS-400 does not require the use of an LMCT-100-2 unless operating parameters need to be adjusted. The LMCT-100-2 is also required for configuration and maintenance of LMCP series relay control panels.

PROJECT		LOCATION/ TYPE	
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Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 LMCT-100-2

Notes:

Type:

TOOL

MHCS22-227151



DIGITAL LIGHT MANAGEMENT | Configuration Tools

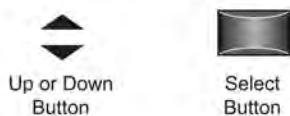
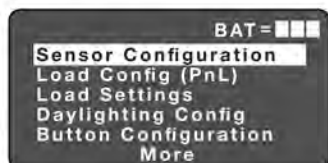
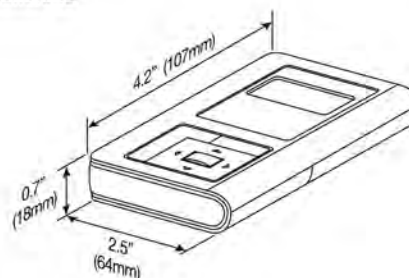
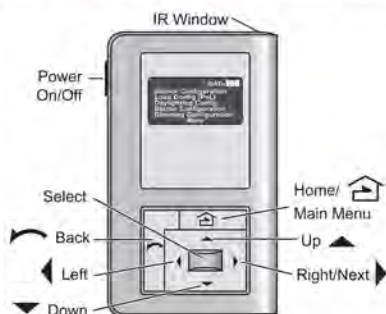
SPECIFICATIONS

- Three AAA 1.5 volt batteries (included)
- OLED display 1.4"W x .75"H (36mm x 19mm)
- Infrared (IR) transceiver (36kHz frequency)
- IR range: up to 32' (10m)
- Micro-USB port for firmware updating
- Includes carrying case with belt clip
- Operating temperature: 32-104°F (0-40°C)
- FCC part 15 compliant
- Five year warranty

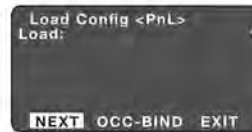
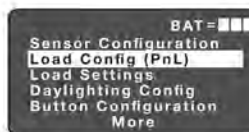
CONFIGURATION MENUS

LMCT-100-2 Handheld Remote with Menu Screens

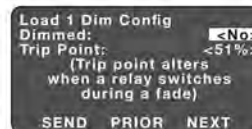
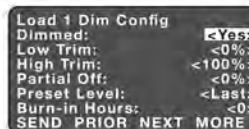
Dimensions



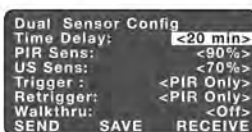
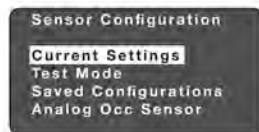
The Home (or Main) menu displays after the power-up process completes. It contains information on the battery status and six menu choices.



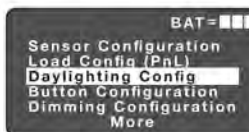
The Load Configuration function (also referred to as Push n' Learn) enables users to identify load numbers, view and change load parameters and load bindings to sensors.



The Dimming Configuration function enables users to customize parameters for performance and savings. Setting a high level trim below 100% saves energy and increases lamp life.



The Sensor Configuration function enables users to change sensor parameters, including time delay and sensitivity, save configurations, enter test mode and apply saved configurations.



The Daylighting Configuration function enables users to initiate automatic calibration of the LMLS-400, calibrate the LMLS-500, and adjust setpoints and other parameters for both photosensors and enter test mode.

ORDERING INFORMATION

Catalog #	Description
LMCT-100-2	Wireless Configuration Tool with USB
LMCT-100-2-U	Wireless Configuration Tool with USB, BAA/TAA compliant*

*Product is compliant with Buy American Act and Trade Agreement Act

**Job Name:**Southeast Water Conservancy - Remodel
Architect: No Architect
Controls: Unregistered Controls**Catalog Number:**

DW-311-*

Notes:

Type:**W.OCC**

MHCS22-227151

WATTSTOPPER®

DUAL TECHNOLOGY 0-10 VOLT DIMMING WALL SWITCH OCCUPANCY SENSOR

DW-311

Defaults to Manual-ON operation for maximum energy savings

High sensitivity and dense coverage for exceptional performance

Color-matched lens and low profile for appealing design



Supports Partial-ON operation for energy code compliance or incentives

120/277VAC and 347VAC models

Allows fully functional multi-way control from up to four switch locations

DESCRIPTION

The DW-311 dual technology dimming wall switch sensor can turn lights OFF and ON based on occupancy and allow the user to increase or decrease the lighting level. It combines the benefits of passive infrared (PIR) and ultrasonic occupancy detection technologies and works with 0-10 VDC dimming drivers and ballasts to control lighting loads including LEDs.

OPERATION

The DW-311 installs in a single gang junction box. Factory default operation is for Manual-ON, so that users turn lights on only when needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings enable a variety of control options such as Auto-ON operation, high and low trim, ramp up and fade down times, power loss mode, smart light level, walk-through and test modes. Additional DIP switch settings allow the user to choose which sensing technologies turn ON, hold ON or retrigger the lighting.

On loss of normal power to the DW-311, the 0-10V dimming control will open. Any light fed with a separate circuit but controlled by the unit's 0-10V signal will go to 100%. When combined with a

Wattstopper ELCU-200, this ensures lights fed with a separate Emergency Power Circuit but dimmed with the DW-311's 0-10V signal circuit will go to 100% when normal power fails.

PARTIAL-ON OPTION

When set for Automatic-ON operation, the DW-311 typically comes ON to the last non-zero light level for occupant comfort and convenience. However, this default setting may be changed to a fixed light level value of 50%, 75% or 100%. The dimmed level options (Preset On Level) support new state and federal energy code requirements.

APPLICATIONS

This dual technology sensor has the flexibility to work in a variety of applications including spaces that benefit from enhanced small motion detection. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms. Multiple DW-311 sensors may be used to control a lighting load in spaces with up to four switch locations; each device provides fully functional dimming control. When additional sensors are used for multi-way control, each connected sensor expands the coverage area.

FEATURES

- Vandal resistant lens combines precise coverage with durability
- Presentation mode may be deactivated to allow Auto-ON operation after 15 second time delay for spaces with transient occupancy
- Optional smart light level adapts ambient light hold off threshold to meet user needs
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy verification of coverage
- Selectable audible and/or visual alerts for impending shutoff
- LED indicates occupancy detection
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Zero-crossing for long relay life
- No derating required for multi-gang applications
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- This product meets the material restrictions of RoHS

PROJECT

LOCATION/
TYPE



Job Name:

Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 DW-311-*

Notes:

Type:

W.OCC

MHCS22-227151



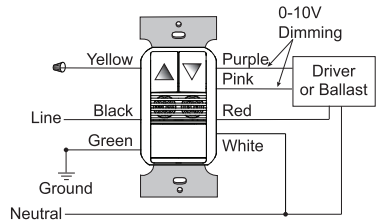
SENSORS | Wall Switch Sensors

SPECIFICATIONS

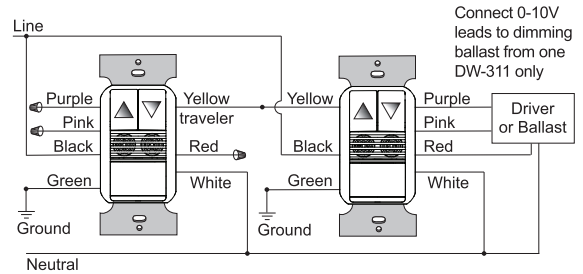
- DW-311: 120/277VAC; 50/60Hz
- DW-311-347: 347VAC; 50/60Hz
- 8" flying leads for line, load, ground, and multi-way connections
- Dimming control signal: 0-10VDC, sinks up to 50mA for control of compatible ballasts (25 if each sources 2mA); Class 1 wiring
- Time delays: 3, 5, 15 or 30 minutes, walk-through, test-mode
- Power up after power loss: On, Off or last state
- Coverage: Major motion, PIR 35' x 30'; Ultrasonic 20' x 20', Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions (L x W x D): 2.73" x 1.75" x 1.81" (69mm x 44mm x 46mm)
- UL and cUL listed (E101196). Complementary Listed to "Emergency Lighting Equipment"; (UL924)
- Five year warranty

WIRING AND CONTROLS

Wiring Diagrams



Note: Requires Class 1 wiring for 0-10V dimming.

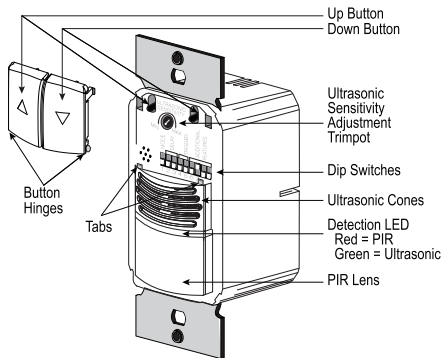


Multi-way wiring

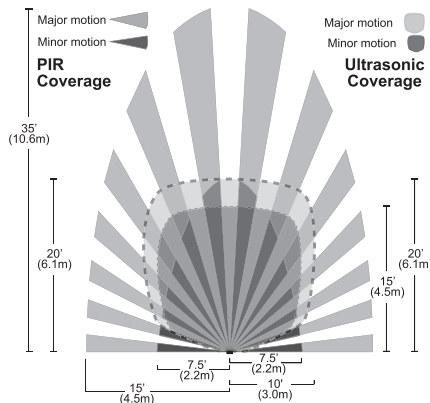
Note: All units should be on the same phase.

NOTE: Per UL, the 0-10V negative dimming wire color has been changed from gray to pink.

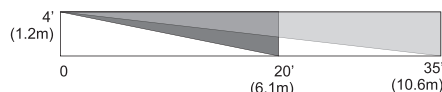
Product Controls



COVERAGE PATTERNS



For best performance, Legrand recommends using this sensor in spaces no larger than 18' x 15'.





Job Name:
 Southeast Water Conservancy - Remodel
 Architect: No Architect
 Controls: Unregistered Controls

Catalog Number:
 DW-311-*

Notes:

Type:

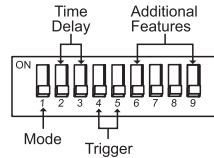
W.OCC

MHCS22-227151

WATTSTOPPER®



DIP SWITCH SETTINGS



Mode	1
Manual - On	↑
Auto - On	↓

↑=ON ↓=OFF

Time Delay	2	3
Test/3 min	↓	↓
5 minutes	↓	↑
15 minutes	↑	↓
30 minutes	↑	↑

Trigger Mode	Initial Occupancy	Maintain Occupancy	Re-trigger	4	5
Standard	Both	Either	Either	↓	↓
Option A	PIR	Either	Either	↓	↑
Option B	PIR	PIR	PIR	↑	↓
Option C	Both	Both	Both	↑	↑

Default Values Shown in **Bold**

Additional Features	6	7	8	9	Green LED # of Blinks
Exit Programming Mode	↓	↓	↓	↓	
Visual Alert	↓	↓	↓	↑	1=OFF, 2=ON
Audio Alert	↓	↑	↓	↓	1=ON, 2=OFF
Walk-Thru	↓	↓	↑	↑	1=OFF, 2=ON
PIR Sensitivity	↓	↑	↓	↓	1=100%, 2=50%
High Trim	↓	↑	↑	↑	1=10V, 2=Manual Adjustment
Low Trim	↓	↑	↓	↓	1=0V, 2=Manual Adjustment
Ramp Up Time	↓	↑	↑	↑	1=1, 2=2.5, 3=5, 4=10s
Fade Down Time	↑	↓	↓	↓	1=2.5, 2=5, 3=15, 4=30s
Light Level Adjust	↑	↓	↓	↑	1=Disable, 2=Enable, 3=Smart Light Level
Power Loss Mode	↑	↓	↓	↓	1=Keep Last State, 2=Default On, 3=Default Off
Presentation Mode	↑	↓	↑	↑	1=ON, 2=OFF
Service Mode	↑	↑	↓	↓	1=OFF, 2=ON
Preset On Level	↑	↑	↑	↑	1=Last Non-Zero Value, 2=50%, 3=75%, 4=100%
Non-Dim Mode	↑	↑	↓	↓	1=OFF, 2=ON
Reset To Default	↑	↑	↑	↑	Press and Hold UP or DOWN for 5 seconds

***SPECIFY FINISH**

ORDERING INFORMATION

Catalog #	Color	Voltage	Load Rating
<input type="checkbox"/> DW-311-W	White	120VAC; 50/60Hz	@ 120VAC: 0-1000W ballast, E-ballast, LED, tungsten; 1/4hp motor
<input type="checkbox"/> DW-311-W-U	White		
<input type="checkbox"/> DW-311-LA	Light Almond		
<input type="checkbox"/> DW-311-I	Ivory		
<input type="checkbox"/> DW-311-I-U	Ivory		
<input type="checkbox"/> DW-311-G	Gray	277VAC; 50/60Hz	@ 277VAC: 0-1200W ballast, E-ballast, LED; 1/4hp motor
<input type="checkbox"/> DW-311-B	Black		
<input type="checkbox"/> DW-311-R	Red		
<input type="checkbox"/> DW-311-R-U	Red		
<input type="checkbox"/> DW-311-347-W	White		
<input type="checkbox"/> DW-311-347-LA	Light Almond		
<input type="checkbox"/> DW-311-347-I	Ivory		
<input type="checkbox"/> DW-311-347-G	Gray		
<input type="checkbox"/> DW-311-347-B	Black		
<input type="checkbox"/> DW-311-347-R	Red		

-U = BAA/TAA compliant. Product is compliant with Buy American Act and Trade Agreement Act

Order wall plate separately.

26611r5 Rev 10/2021