

# LTR-4RD-RFH SpectraSync

LITEISTRY 4" ROUND DOWNLIGHT WITH COLOR TUNING

LITEISTRY™

## FEATURES

- 4" architectural LED downlight delivering 600 – 1500 lm
- Four beam distributions from 0.4 to 1.2 Spacing Criteria
- Quiet reflector appearance with superior 50° optical cutoff
- SpectraSync™ Color Tuning technology allows the flexibility to tailor CCT to aesthetic preferences
- Available in Dim to Warm (2200K-3000K) or Tunable White (2700K-5000K or 2700K-6500K), 90+ CRI
- Available for Retrofit (non-IC) applications
- Standard with 0-10V dimming to 5%



## RELATED PRODUCTS

Ø 3" LITEISTRY Family

Ø 4" LITEISTRY Family

Ø 6" LITEISTRY Family

## CONTROL TECHNOLOGY



## SPECIFICATIONS

### CONSTRUCTION

- Die cast aluminum mounting ring with 5 axis adjustable junction box
- Retrofit housing allows below ceiling installation without removing the existing fixture
- Pre-wired junction box with snap-on covers for easy access
- Snap-in connection from driver compartment allows easy installation
- Light Engine connections use plenum rated (CMP) cable

### OPTICS

- Visually pleasing 50° cutoff to source and source image
- The light distribution is free of distracting bright spots or pixelation and the perimeter has a smooth transition
- Optical grade silicone lens integral to light engine
- High purity spun aluminum reflector, self-flanged
- Large selection of anodized finishes and colors
- Painted cones and flange options available

### ELECTRICAL

- LED array with 3 SDCM color consistency
- Dim to Warm (2200K-3000K) or Tunable White (2700K-5000K or 2700K-6500K) options available
- 90+ CRI standard
- Long LED life: L70 at >60,000 hours (TM-21)
- Universal voltage 120V–277V driver
- UL Class 2, inherent short circuit and overload protection, RoHS compliant
- Flicker free 0–10V dimming to 5%
- Refer to additional spec sheets for information on [standard LITEISTRY](#) or [PowerHUBB™ PoE enabled](#) solutions

### INSTALLATION

- Accommodates ceiling thickness up to 2"
- Light Engine/Driver fully serviceable from above or below the ceiling

### CERTIFICATIONS

- cCSAus certified to UL 1598
- Suitable for wet locations, covered ceiling
- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 6/6/2020. See [Buy American Solutions](#).

### WARRANTY

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

KEY DATA	
Lumen Range	600-1500
Wattage Range	10-25
Efficacy Range (LPW)	52-64*
Reported Life (Hours)	L70 / >60,000
Input Current (mA)	83-208 (120V)

\*Based on Specular, 30K, 90 CRI



DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_

TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

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## ORDERING GUIDE

Example: LTR-4RD-RFH-SL10L-DMTW-LTR-4RD-T-SL2230TD9MD-S

CATALOG #

### HOUSING

LTR-4RD-RFH		Lumen Package		Lumen Output		Driver Options		Voltage		Housing Options	
Aperture/Shape/Function											
LTR-4RD-RFH	4" Round Downlight Retrofit Housing <sup>5</sup>	SL	Standard Lumen	06L	600	DMTW	SpectraSync™ Dim to Warm, 0-10V Dimming to 5% <sup>1</sup>	Standard	120-277V	F	Fuse
				10L	1000						
		ML	Medium Lumen	15L	1500	DMT	SpectraSync™ Tunable White, 0-10V Dimming to 5% <sup>2</sup>				
LTR-4RD-RFHW	4" Round Downlight Retrofit Housing (for Wide Diameter) <sup>5</sup>										

### TRIM

LTR-4RD-T		Lumen Package		CCT		CRI		Distribution	
Aperture/Shape/Function									
LTR-4RD-T	4" Round Downlight Light Engine/Trim Assembly	SL	Standard Lumen	2230TD	2200K-3000K SpectraSync™ Dim to Warm	9	90+CRI	NR	Narrow (0.4 SC/29°)
		ML	Medium Lumen	2750T	2700K-5000K SpectraSync™ Tunable White			MD	Medium (0.7 SC/44°)
				2765T	2700K-6500K SpectraSync™ Tunable White			WD	Wide (0.9 SC/61°)
								XW	Extra Wide (1.2 SC/78°)

### TRIM CONTINUED

Reflector Finish	Reflector Color	Flange Color Options	Lower Trim Options	Reflector Options
<i>Finish not applicable with painted reflectors (WC or BC)</i>	Standard Clear	Standard matches reflector color	WF Wide Flange	AM Antimicrobial Coating <sup>4</sup>
S Specular	CG Champagne Gold	WT White Flange <sup>3</sup>		
SS Semi-Specular	BL Black	BT Black Flange <sup>3</sup>		
MFC American Matte™	LW Light Wheat			
VS Softglow®	PW Pewter			
VSS SoftSheen™	WC Painted White Cone and Flange			
	BC Painted Black Cone and Flange			

### Accessories

- LiteGear LiteGear® Inverter, 125VA-250VA
- LPS Series LightPower Micro-Inverter, 20VA-55VA
- MOR4-R-WH Metal Oversized Ring, 4" Round, White (8.25" outside diameter)
- MOR4-R-BL Metal Oversized Ring, 4" Round, Black (8.25" outside diameter)

### Notes:

- 1 Must select 2230TD with DMTW driver.
- 2 Must select either 2750T or 2765T with DMT driver.
- 3 WT not needed for WC, BT not needed for BC.
- 4 AM available with WC or Specular Clear (S or SWT). Consult factory for other colors.
- 5 See line art for compatibility with existing aperture diameters.

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## CONTROLS

### SpectraSync™ Color Tuning Technology:

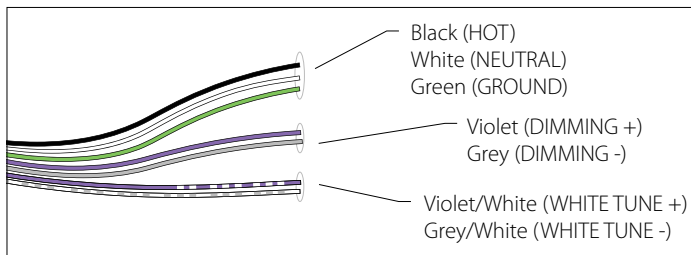
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Dim to Warm	2200K-3000K	Mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed
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.

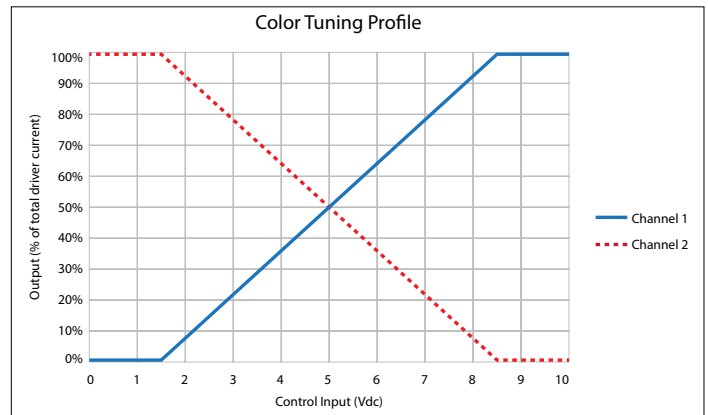


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### 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

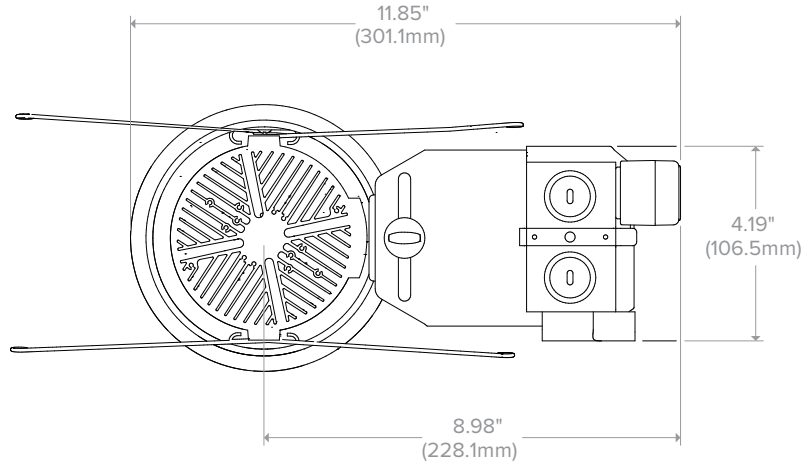


To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

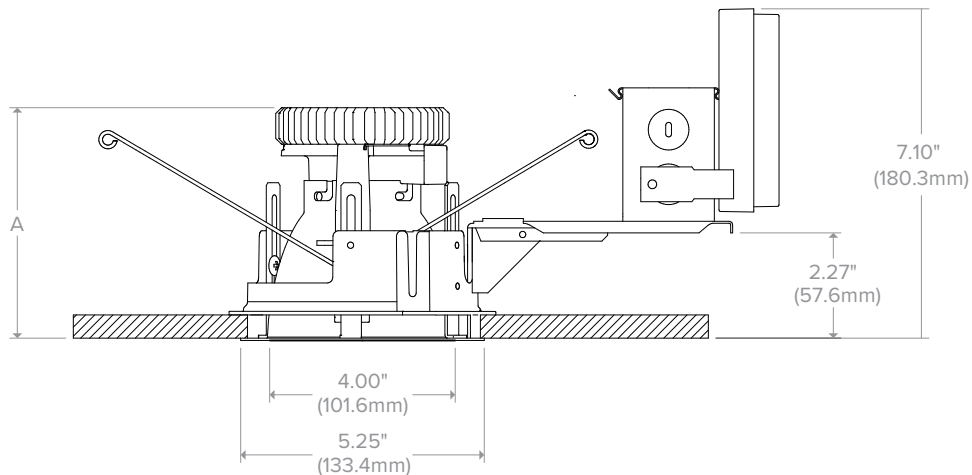
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## DIMENSIONS



Top View



Housing Compatibility Guide			
Existing Frame Opening**		Use Housing	Use Flange Option
MIN	MAX		
4.75" (120.7mm)	5.00" (127.0mm)	-RFH	(Standard)
5.00" (127.0mm)	5.50" (139.7mm)	-RFHW	WF

Dimensional Data		
Aperture		4.00" (101.6mm)
Flange:	Standard	5.25" (133.4mm)
	Wide (WF)	5.75" (146.1mm)
Ceiling Cutout:	Standard	5.00" (127.0mm)
Ceiling Thickness:		0.50" to 2.00" (12.7mm to 50.8mm)

Lumen Package	"A"
06L-10L	4.97" (126.2mm)
15L	7.33" (186.2mm)

### LTR-4RD-RFH-RFHW

# LTR-4RD-RFH SpectraSync

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## PHOTOMETRY

### LTR-4RD-RFH-ML15L-DMTW / LTR-4RD-T-ML2230TD9NRS

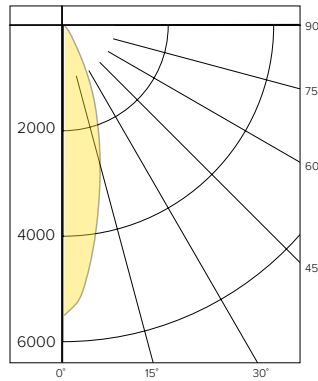
#### LUMINAIRE DATA

Test No.	R19.01948-C01
Description	1500 lm, Narrow, 3000K, 90 CRI
Delivered Lumens	1608
Watts	25.0W
Efficacy	64.0
Mounting	Pendant
Spacing Criterion	0.5
Beam Angle (FWHM)	29

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2208	98.6
0-60	2237	99.9
0-90	1608	100.0
0-180	1608	100.0

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	5179
5	4571
15	2396
25	920
35	163
45	16
55	1
65	1
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	2823
55°	316
65°	215
75°	0
85°	0

\*Candela/Square Meter

### LTR-4RD-RFH-ML15L-DMTW / LTR-4RD-T-ML2230TD9MDS

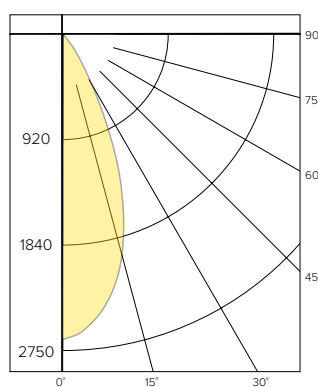
#### LUMINAIRE DATA

Test No.	R19.01974-C01
Description	1500 lm, Medium, 3000K, 90 CRI
Delivered Lumens	1477
Watts	25.0W
Efficacy	59.0
Mounting	Pendant
Spacing Criterion	0.7
Beam Angle (FWHM)	44

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1449	98.1
0-60	1476	99.9
0-90	1477	100.0
0-180	1477	100.0

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	2654
5	2561
15	2081
25	1035
35	258
45	25
55	2
65	1
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	4363
55°	475
65°	215
75°	0
85°	0

\*Candela/Square Meter

### LTR-4RD-RFH-ML15L-DMTW / LTR-4RD-T-ML2230TD9WDS

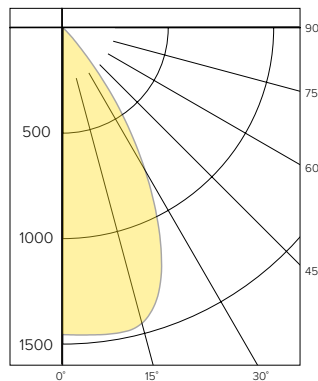
#### LUMINAIRE DATA

Test No.	R19.01946-C01
Description	1500 lm, Wide, 3000K, 90 CRI
Delivered Lumens	1321
Watts	25.0W
Efficacy	53.0
Mounting	Pendant
Spacing Criterion	1.0
Beam Angle (FWHM)	61

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1275	96.5
0-60	1320	99.9
0-90	1321	100.0
0-180	1321	100.0

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	1405
5	1412
15	1409
25	1052
35	445
45	40
55	3
65	1
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	6926
55°	633
65°	429
75°	0
85°	0

\*Candela/Square Meter

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## PHOTOMETRY CONTINUED

### LTR-4RD-RFH-ML15L-DMTW / LTR-4RD-T-ML2230TD9XWS

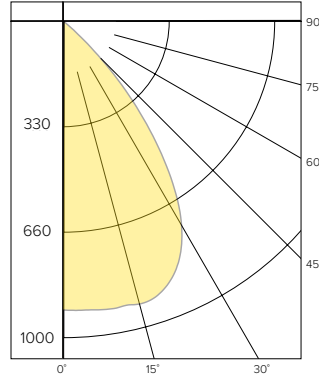
#### LUMINAIRE DATA

Test No.	R19.01945-C01
Description	1500 lm, Extra Wide, 3000K, 90 CRI
Delivered Lumens	1303
Watts	25.0W
Efficacy	52.0
Mounting	Pendant
Spacing Criterion	1.2
Beam Angle (FWHM)	78

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1160	89.0
0-60	1301	99.9
0-90	1303	100.0
0-180	1303	100.0

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	809
5	822
15	905
25	943
35	647
45	155
55	4
65	1
75	1
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	26926
55°	790
65°	429
75°	350
85°	0

\*Candela/Square Meter

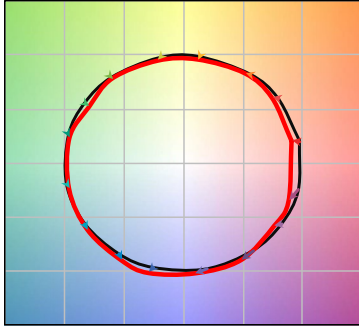
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## TM-30 DATA

### SPECTRASYNCTM TUNABLE WHITE (2765T)

**COLOR VECTOR GRAPHIC**  
2700K, 90+ CRI

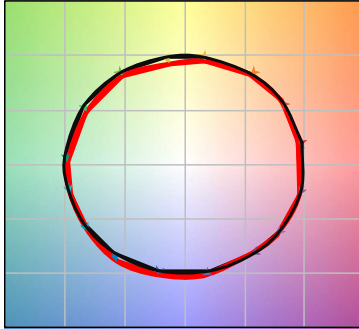


— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
2700K, 90+ CRI

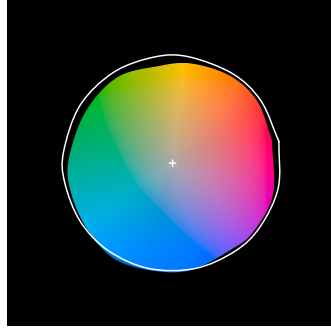


**COLOR VECTOR GRAPHIC**  
4600K, 90+ CRI

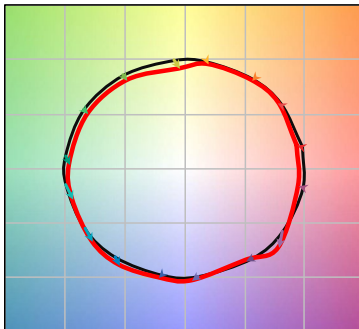


— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
4600K, 90+ CRI



**COLOR VECTOR GRAPHIC**  
6500K, 90+ CRI



— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
6500K, 90+ CRI



TEST RESULTS - TUNABLE WHITE @ 1500 LUMENS (NOMINAL)			
Value	2700K	4600K	6500K
Luminous Flux (lm)	1407	1604	1660
Wattage (W)	23.9	24.3	24.6
Efficacy (lm/W)	59	66	68
R <sub>f</sub>	90	89	87
R <sub>g</sub>	97	98	96
CCT (K)	2817	4588	6518
D <sub>UV</sub>	-0.0013	-0.0040	0.0018
x	0.4482	0.3565	0.3131
y	0.4047	0.3531	0.3273
CIE R <sub>a</sub>	91	95	94
CIE R <sub>g</sub>	47	81	76

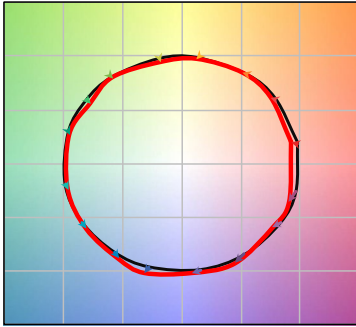
# LTR-4RD-RFH SpectraSync

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## TM-30 DATA CONTINUED

### SPECTRASYNCTM DIM TO WARM (2230TD)

**COLOR VECTOR GRAPHIC**  
3000K, 90+ CRI @ 100%

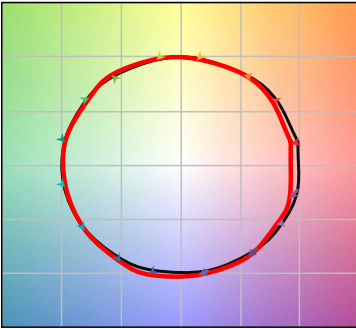


— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
3000K, 90+ CRI @ 100%

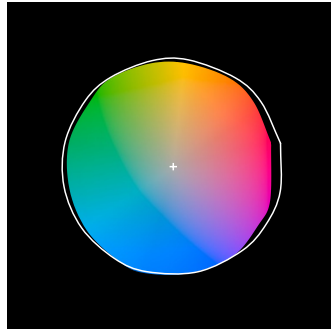


**COLOR VECTOR GRAPHIC**  
2600K, 90 CRI @ 50% DIM

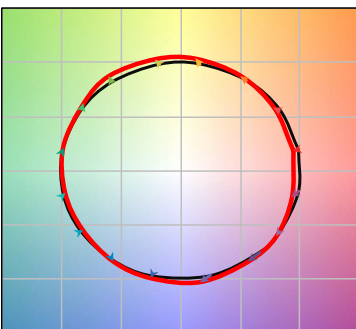


— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
2600K, 90 CRI @ 50% DIM

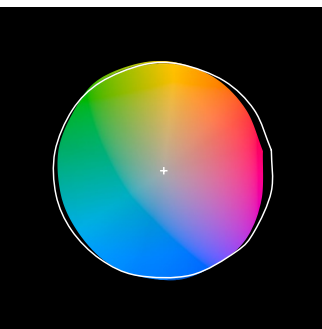


**COLOR VECTOR GRAPHIC**  
2200K, 90 CRI @ 5% DIM



— Reference Illuminant — Test Source

**COLOR DISTORTION GRAPHIC**  
2200K, 90 CRI @ 5% DIM



TEST RESULTS - DIM TO WARM @ 3 DIMMING LEVELS			
Value	100%	50% Dim	5% Dim
Luminous Flux (lm)	1501	772	53
Wattage (W)	24.3	14	3.4
Efficacy (lm/W)	62	55	16
R <sub>t</sub>	90	92	91
R <sub>g</sub>	97	99	102
CCT (K)	3123	2590	2282
D <sub>uv</sub>	-0.0017	-0.0015	-0.0029
x	0.4261	0.4662	0.4907
y	0.3965	0.4082	0.4068
CIE R <sub>a</sub>	92	93	93
CIE R <sub>g</sub>	53	60	64





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DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_

TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

## ELECTRICAL DATA

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

WATTAGE DATA		
Lumen Output	Nominal Lumens	Wattage
06L	600	10
10L	1000	18
15L	1500	25

\* Wattage may vary based on configuration and options selected

## ADDITIONAL INFORMATION

### Central Inverters

For full fixture output in back-up mode, we recommend you visit [www.dual-lite.com](http://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\\_series](http://www.dual-lite.com/products/litegear_lg_series)

LPS Series: [www.dual-lite.com/products/lps](http://www.dual-lite.com/products/lps)