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LFR-6SQW SpectraSync

LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

LITEFRAME 2.0

FEATURES

- 6" LED lensed wall wash delivering 1000–3000 lumens

- Direct Install from below ceiling for New Construction or Remodel applications

- Optional housing accessories available

- Provides smooth, uniform illumination

- 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

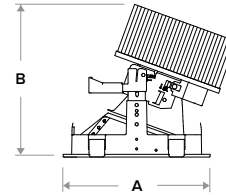- NX Lighting Controls wired and wireless controls capability available

SERVICE PROGRAMS

STOCK

CSA ® C US

WET LOCATION

CONTROLS TECHNOLOGY

NX WIRELESS   NX WIRED   SpectraSync™ Color Tuning Technology

Typical Dimensions and Weights			
Lumen Package	"A" Width Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 30L	7.38 (187)	5.92 (150)	4.6 (2.1)

See DIMENSIONS section for complete details

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, 4 panel aluminum reflector, self-flanged

- Specular or Semi-Specular anodized or White painted cone reflector finish/colors

- Painted flange options in White or Black

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%

- NX Lighting Controls provides options for standalone and networked functionality with wired or wireless connectivity for NX system deployments

- 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

- Suitable for wet locations, covered ceiling

- EMR: Certified under UL 924 standard for emergency lighting and power equipment

- EMR: Emergency battery packs are California Energy Commission (CEC) Title 20 Compliant

- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	1000–3000
Wattage Range	12–42
Efficacy Range (LPW)	62–77
Reported Life (Hours)	L70 / >60,000
Input Current (mA)	100–350 (120V)

*Based on Specular, 30K, 90 CRI

Current ◉

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LFR-6SQW SpectraSync
LITEFRAME 6" SQUARE LENSED WALL WASH WITH COLOR TUNING

ORDERING GUIDE

Gray Shading = Service Program **STOCK**

Example: LFR–6SQW–M–10L2230TD9–LWW–DMTW / LFR–6SQW–LWW–S / LFR-6SQD-H

CATALOG #

FIXTURE MODULE

LFR-6SQW-M	—				—		—				—	
Ap/Shp/Funct		**Lumen Output**	**CCT**		**CRI**	**Distribution**		**Driver Options**	**Control Options**	**Voltage**		**Module Options**
LFR-6SQW-M 6" Square Lensed Wall Wash Fixture Module for Direct Install *(Non-IC frame or IC housing available under Housing Options below)*		**10L** 1000 **15L** 1500 **20L** 2000 **25L** 2500 **30L** 3000	**2230TD** 2200K–3000K SpectraSync™ Dim to Warm **2750T** 2700K–5000K SpectraSync™ Tunable White **2765T** 2700K–6500K SpectraSync™ Tunable White		**9** 90+	**LWW** Lensed Wall Wash		**DMTW** SpectraSync™ Dim to Warm, 0–10V Dimming to 5%[1] **DMT** SpectraSync™ Tunable White, 0–10V Dimming to 5%[2]	**NX Lighting Controls** *Networked Wireless* **NXW** NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor *Networked Wired* **NXE** NX Wired Dual RJ45 SmartPORTS, without Sensor	*Standard 120–277V*		**CP** Chicago Plenum [3, 4] **EMR** 6W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light [4] **DTS** Device Transfer Switch with Dimming Bypass [4]

TRIM (Ships separately)

LFR-6SQW-T	—		—			
Aperture/Shape/Function		**Distribution**	**Reflector Finish/Color**	**Flange Color Options**	**Lower Trim Options**	
LFR-6SQW-T 6" Square Lensed Wall Wash Trim Assembly		**LWW** Lensed Wall Wash	**S** Specular **SS** Semi-Specular **WC** Painted White Cone and Flange	*Standard matches reflector color* **WT** White Flange [5] **BT** Black Flange	**FM** Flush Mount Flange [8]	

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function		
☐	**LFR-6SQD-H**	6" Housing Frame, New Construction, Non-IC
☐	**LFR-6SQD-H-IC**	6" Housing Enclosure, New Construction, IC Rated [6, 7]

Accessories		
☐	**LiteGear**	LiteGear® Inverter, 125VA–250VA
☐	**LPS Series**	LightPower Micro-Inverter, 20VA–55VA
☐	**LF-FMR6-SQ**	Flush Mount Mud-in Ring, 6" Square [8]
☐	**LF-MOR6-SQ-WH**	Metal Oversized Ring, 6" Square, White (10.3" outside dimension)

Notes:
1. Must select 2230TD with DMTW driver.
2. Must select either 2750T or 2765T with DMT driver.
3. CP not available with Controls.
4. Module options not available in combination.
5. WT not needed for WC.
6. IC available up to 25L; 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.)
7. IC Housing not for use in combination with Controls or with Module Options CP, EMR, DTS.
8. Flush Mount Flange (FM) requires FMR accessory (sold separately).

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WITH COLOR TUNING

NX LIGHTING CONTROLS

Control Option Ordering Logic & Description			Control Option Functionality								Control Option Components	
			Networkable	Grouping	Scheduling	Occupancy/ Motion	Daylight Harvesting	0-10V Dimming	On/Off Control	Bluetooth App Programming		
NX Wireless	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor	✓	✓	✓	–	–	✓	✓	✓		NXRM2-H
NX Wired	NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor	✓	✓	✓	–	–	✓	✓	✓₁		NXDSP

1   Requires NXBTC, order separately.

NX LIGHTING CONTROLS APP

The NX Lighting Controls App is a free to use mobile application for programming both an NX Lighting Controls System or Standalone Bluetooth Sensors. The mobile app allows you to configure devices, discover and setup wireless enabled luminaires and program your NX system settings.

Android   Apple iOS

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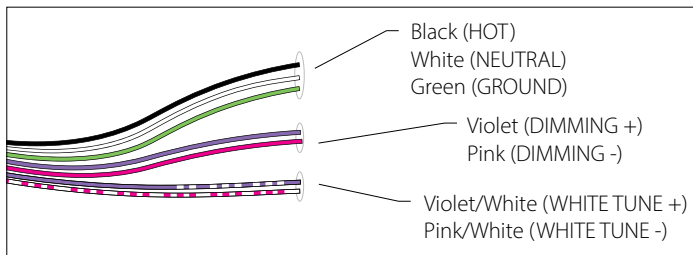## SPECTRASYNC™ COLOR TUNING TECHNOLOGY

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

SPECTRASYNC 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.

Black (HOT)
White (NEUTRAL)
Green (GROUND)

Violet (DIMMING +)
Pink (DIMMING -)

Violet/White (WHITE TUNE +)
Pink/White (WHITE TUNE -)

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 pink/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:
- Current: NX Lighting Controls Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DVTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers

Color Tuning Profile

Output (% of total driver current) vs Control Input (Vdc)

— Channel 1
---- Channel 2
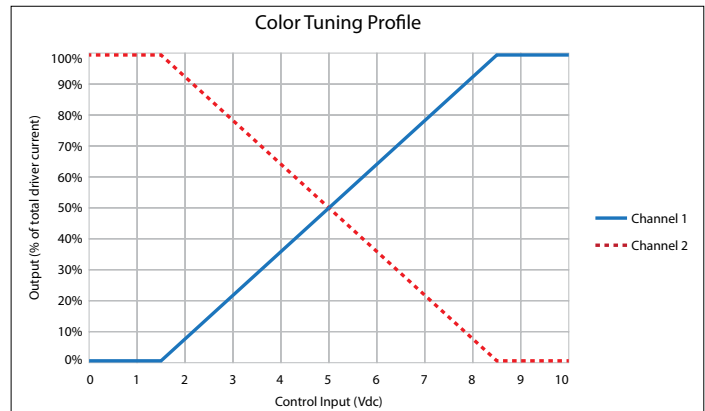
To enable scheduling and for use with NX wall control preset stations please refer to SpectraSync technical sheet.

PERFORMANCE DATA TABLE

Performance data provided below is for 2230TD, 90 CRI with Specular Clear reflector finish/color

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Lensed Wall Wash	921	11.9	77
15L	1500		1126	18.3	62
20L	2000		1869	25.1	75
25L	2500		2335	33.0	71
30L	3000		2806	42.0	67

Current

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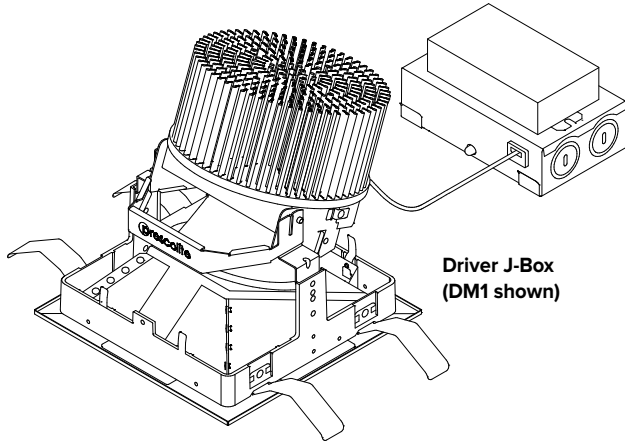**PRE_LFR-6SQW_SpectraSync_Spec_R02**

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LFR-6SQW SpectraSync
LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

DIMENSIONS

LFR-6SQW-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.

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

**Light Engine
with Trim assembly installed**

DIMENSIONAL DATA		
APERTURE		□ 6.00" (152.4mm)
FLANGE WIDTH	Standard	0.69" (17.5mm)
	Flush Mount	0.20" (5.1mm)
FLANGE TO FLANGE	Standard	□ 7.38" (187.4mm)
	Flush Mount	□ 6.40" (162.6mm)
CEILING CUTOUT	Standard	□ 6.75" (171.5mm)
	Flush Mount	□ 6.88" (174.7mm)
CEILING THICKNESS		0.50" – 2.50" (12.7 – 63.5mm)

LFR-6SQW LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION
		LWW
10L–30L	STANDARD	6.43" (163.3mm)
	CP	8.68" (220.5mm)

*   Note: Add ½" minimum plenum clearance above overall Light Engine Height.
** Non-IC rating requires 3" from insulation and combustible materials.

"A"
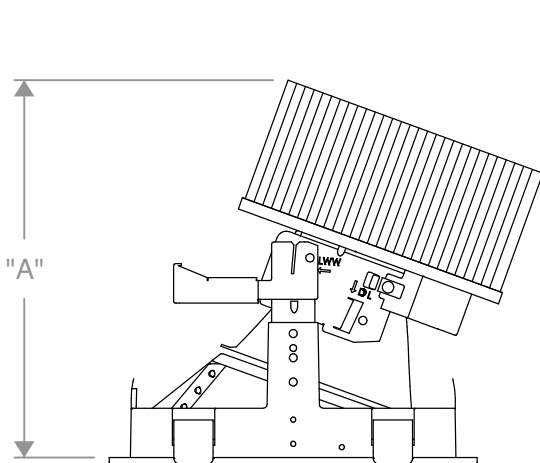
Side View Standard

"A"
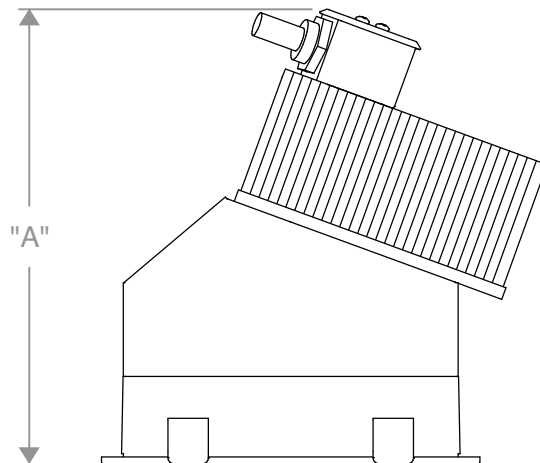
Side View CP – Chicago Plenum

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without notice. All values are design or typical values when measured under laboratory conditions.

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Rev 12/20/23
PRE_LFR-6SQW_SpectraSync_Spec_R02
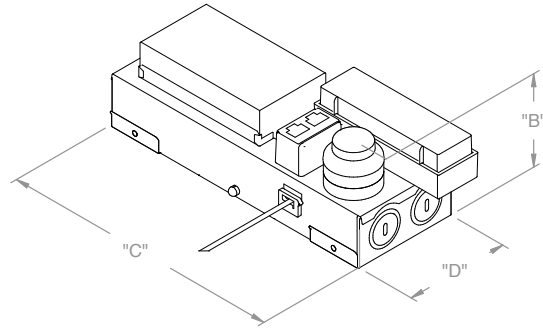
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LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

DIMENSIONS CONTINUED

DRIVER J-BOX
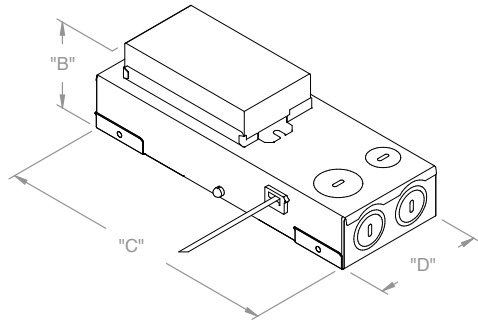
DMT/DMTW

NX CONTROLS OPTION

CP

EM J-BOX

FLEXIBLE CONDUIT
LENGTH 12.00" (304.8mm)
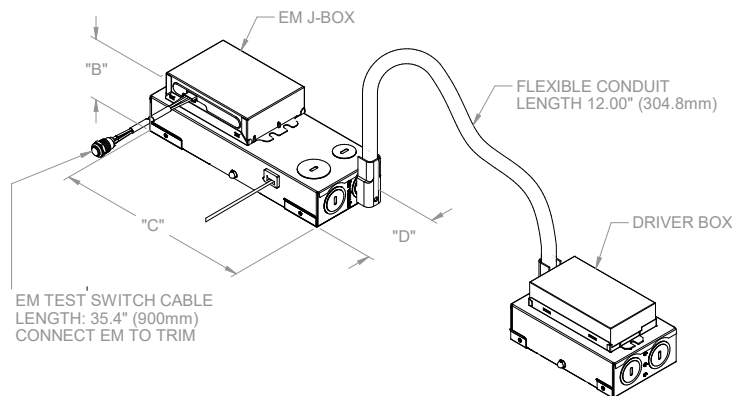
DRIVER BOX

EM TEST SWITCH CABLE
LENGTH: 35.4" (900mm)
CONNECT EM TO TRIM
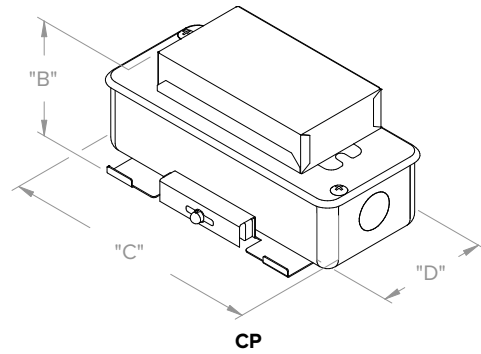
DMT/DMTW EM/EMR OPTION
EM/EMR/Driver J-Box Conduit (provided) connects to Driver J-Box
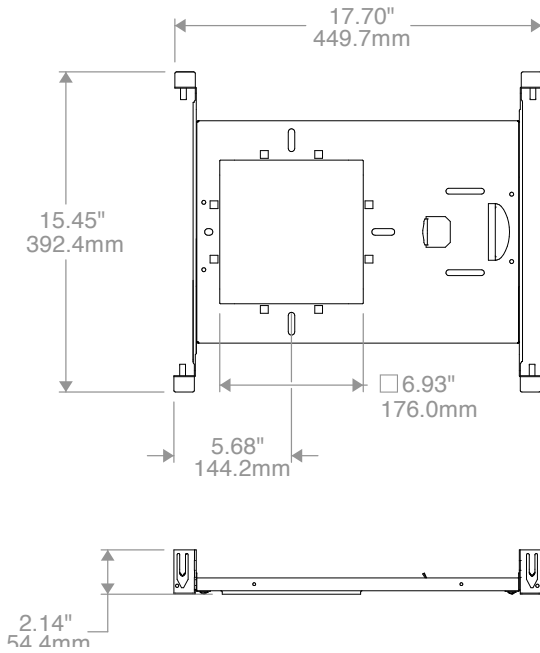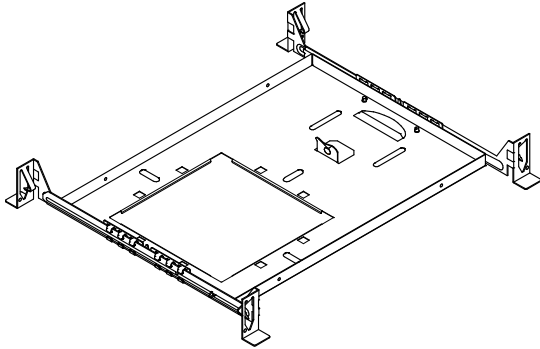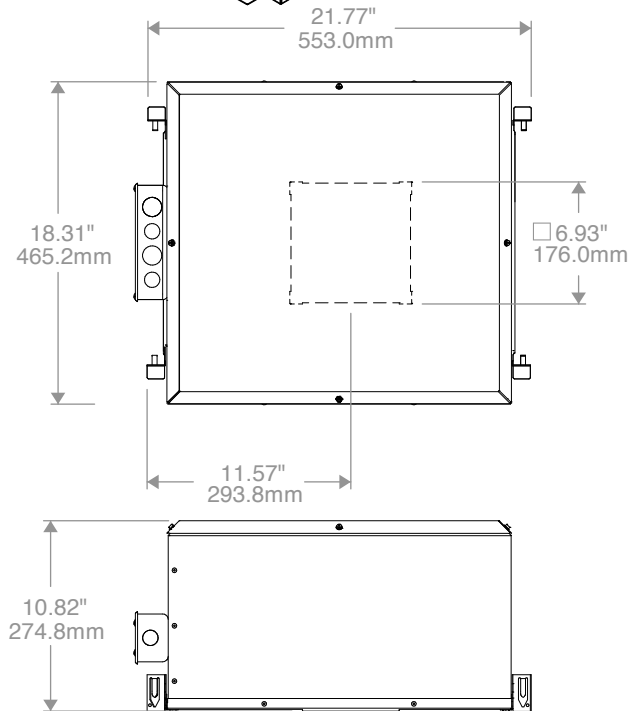(see Driver J-Box for additional details)

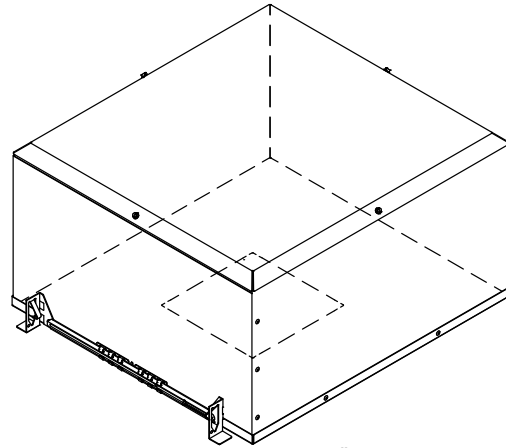| OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/ CONTROLS OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DMT/DMTW	2.67" (67.8mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.00" (76.2mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.75" (95.3mm)
EM	2.73" (69.3mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.00" (76.2mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	3.00" (76.2mm)

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LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS

17.70"
449.7mm

15.45"
392.4mm

□ 6.93"
176.0mm

5.68"
144.2mm

2.14"
54.4mm

**LFR-6SQD-H
NON-IC HOUSING FRAME**

21.77"
553.0mm

18.31"
465.2mm

□ 6.93"
176.0mm

11.57"
293.8mm

10.82"
274.8mm

**LFR-6SQD-H-IC
IC HOUSING**
Not for use with CP Shroud

□ 6.72"
(170.7mm)

□ 10.30"
(261.6mm)
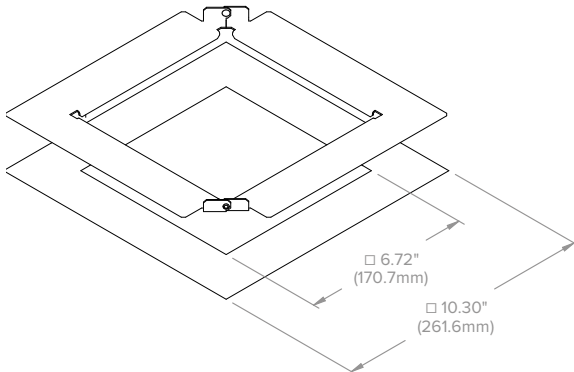
**LF-MOR6-SQ
METAL OVERSIZED RING**
(See LF-MOR Installation Instruction for more details)

PRE_LFR-6SQW_SpectraSync_Spec_R02

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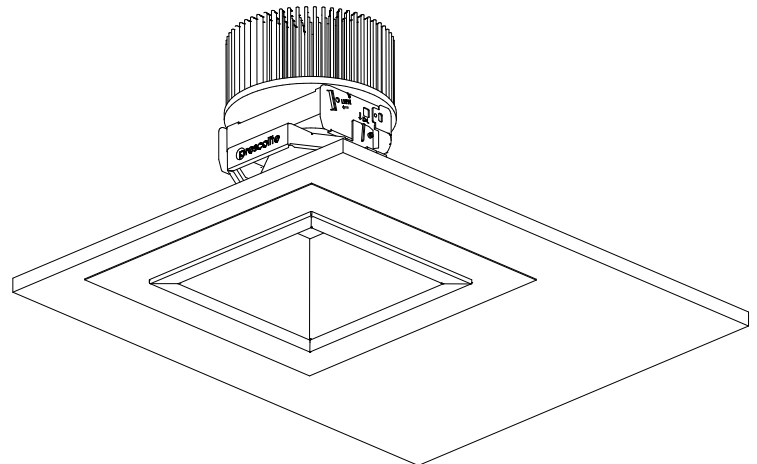
LFR-6SQW SpectraSync
LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

PHOTOMETRY

LFR-6SQW-M-20L2230TD9LWW-DMTW / LFR-6SQW-T-LWW-S

LUMINAIRE DATA

Test No.	22.01200
Description	2000 lm, Lensed Wall Wash, 3000K, 90 CRI
Delivered Lumens	1869
Watts	25W
Efficacy	75
Mounting	Recessed/Ceiling
Beam Angle (FWHM)	57

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1326	70.9
0-60	1810	96.8
0-90	1869	100.0
0-180	1869	100.0

POLAR GRAPH
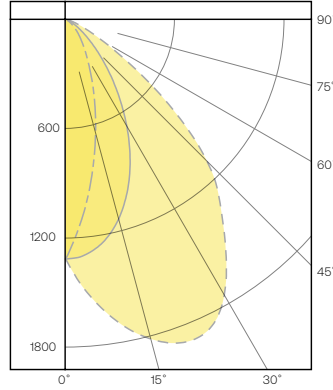
CANDELA DISTRIBUTION

Degree	Candela
0	1314
5	1521
15	1815
25	1870
35	1529
45	1090
55	442
65	112
75	21
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	66370
55°	33179
65°	11410
75°	3493
85°	0

*Candela/Square Meter
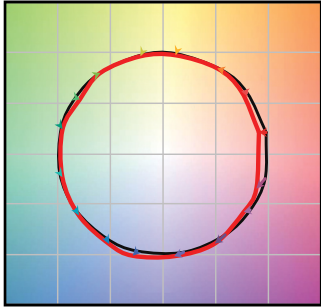
PRE_LFR-6SQW_SpectraSync_Spec_R02

LFR-6SQW SpectraSync

LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

TM-30 DATA

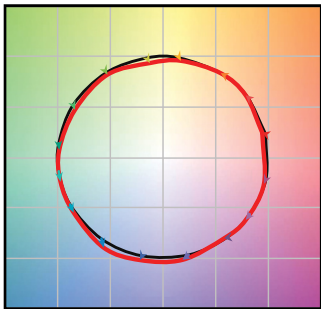### SPECTRASYNC™ TUNABLE WHITE (2765T)

COLOR VECTOR GRAPHIC
2700K, 90+ CRI

— Reference Illuminant   — Test Source
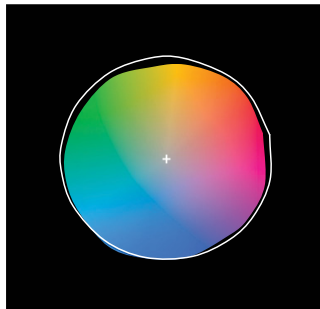
COLOR DISTORTION GRAPHIC
2700K, 90+ CRI

TEST RESULTS - TUNABLE WHITE @ 1500 LUMENS (NOMINAL)			
Value	2700K	4600K	6500K
Luminous Flux (lm)	1469	1779	1692
Wattage (W)	20.5	20.1	20.6
Efficacy (lm/W)	71.7	88.5	82.1
R_f	90	89	87
R_g	97	99	97
CCT (K)	2799	4177	7184
D_{UV}	0.0032	0.0088	0.0024
x	0.4468	0.3680	0.3047
y	0.3992	0.3515	0.3109
CIE R_a	90	94	94
CIE R_g	46.7	85.4	87.7

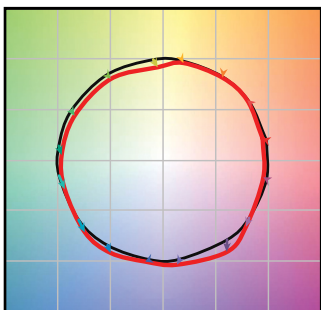**COLOR VECTOR GRAPHIC**
4600K, 90+ CRI

— Reference Illuminant   — Test Source

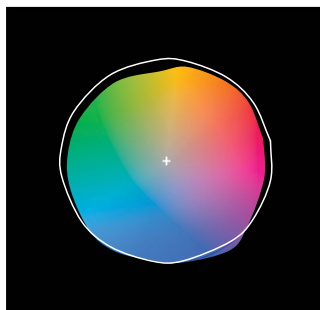**COLOR DISTORTION GRAPHIC**
4600K, 90+ CRI

COLOR VECTOR GRAPHIC
6500K, 90+ CRI

— Reference Illuminant   — Test Source

COLOR DISTORTION GRAPHIC
6500K, 90+ CRI

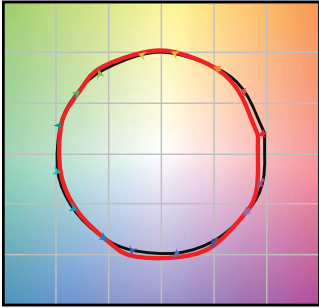PRE_LFR-6SQW_SpectraSync_Spec_R02

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LFR-6SQW SpectraSync
LITEFRAME 6" SQUARE LENSED WALL WASH
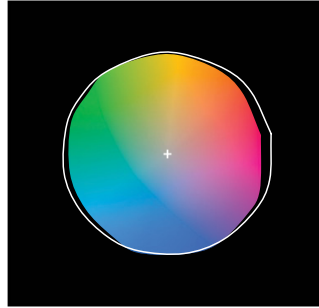WITH COLOR TUNING

TM-30 DATA CONTINUED

SPECTRASYNC™ DIM TO WARM (2230TD)
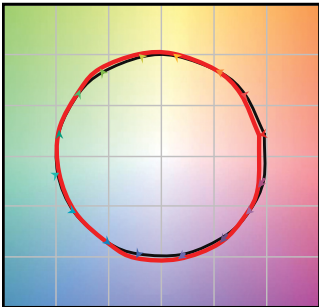
COLOR VECTOR GRAPHIC
3000K, 90+ CRI @ 100%

— Reference Illuminant   — Test Source

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

TEST RESULTS - DIM TO WARM @ 3 DIMMING LEVELS			
Value	100%	50% Dim	5% Dim
Luminous Flux (lm)	1470	833	50
Wattage (W)	20.3	20.1	20.6
Efficacy (lm/W)	71.7	88.5	82.1
R_f	90	89	87
R_g	97	99	97
CCT (K)	2799	4177	7184
D_{UV}	0.0032	0.0088	0.0024
x	0.4468	0.3680	0.3047
y	0.3992	0.3515	0.3109
CIE R_a	90	94	94
CIE R_9	46.7	85.4	87.7

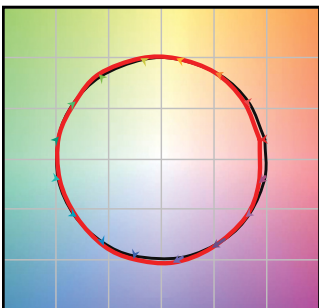**COLOR VECTOR GRAPHIC**
2600K, 90 CRI @ 50% DIM

— Reference Illuminant   — Test Source

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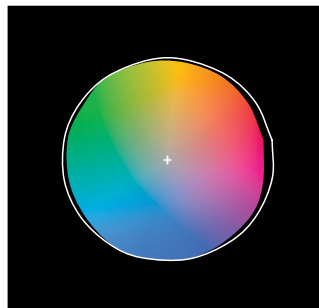**2600K, 90 CRI @ 50% DIM**

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

— Reference Illuminant   — Test Source

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

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LITEFRAME 6" SQUARE LENSED WALL WASH
WITH COLOR TUNING

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

ADDITIONAL INFORMATION

Dimming Compatibility
For more details and recommended dimmer list, see Dimming Compatibility Information on currentlighting.com/prescolite.

Central Inverters
For full fixture output in back-up mode, we recommend you visit currentlighting.com/dual-lite for your Central Lighting Inverter options. Please contact your local Current representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

Lumen Output in Emergency Mode
To determine the lumen output in emergency mode, multiply the battery pack wattage by the fixture lumens per watt (LPW).
For example, 6W x 120 LPW = 720 lumens in emergency mode.

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