prescolite

LFR-6RDS SpectraSync
LITEFRAME 6" ROUND SHALLOW DOWNLIGHT WITH COLOR TUNING

LITEFRAME
2.0

FEATURES

- 6" LED shallow downlight delivering 1000–1500 lumens

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

- Optional housing accessories available

- Four beam distributions

- 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

ST✓CK

CONTROLS TECHNOLOGY

NX WIRELESS · NX WIRED · SpectraSync Color Tuning Technology
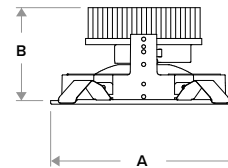
Typical Dimensions and Weights

Lumen Package	"A" Diameter Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 15L	7.13 (181)	3.56 (90)	4 (1.8)

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

- High purity spun aluminum reflector, self-flanged

- 61° visual cutoff to source image and 45° cutoff to source

- 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 2.50"

- Fixture Module including driver fully accessible from above or below the ceiling

CERTIFICATIONS

- cCSAus certified to UL 1598

- Suitable for damp locations

- 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	1000–1500
Wattage Range	12.8–19.6
Efficacy Range (LPW)	68–81
Reported Life (Hours)	L70 / >60,000
Input Current (mA)	107–163 (120V)

*Based on Specular, 30K, 90 CRI

Current

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DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LFR-6RDS SpectraSync
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ORDERING GUIDE

Gray Shading = Service Program **ST⊘CK**

Example: LFR–6RDS–M–10L2230TD9–WD–DMTW / LFR–6RDS–T–S / LFR-6RD-H

CATALOG # _____

FIXTURE MODULE

LFR-6RDS-M	–			–		–				–		
Ap/Shp/Funct		**Lumen Output**	**CCT**	**CRI**		**Distribution**		**Driver Options**	**Control Options**	**Voltage**		**Module Options**
LFR-6RDS-M 6" Round Shallow Downlight Fixture Module for Direct Install _(Non-IC frame or IC housing available under Housing Options below)_		**10L** 1000 **15L** 1500	**2230TD** 2200K–3000K SpectraSync™ Dim to Warm **2750T** 2700K–5000K SpectraSync™ Tunable White **2765T** 2700K–6500K SpectraSync™ Tunable White	**9** 90+		**VNR** Very Narrow (22°/0.4 SC) **NR** Narrow (25°/0.4 SC) **MD** Medium (34°/0.6 SC) **WD** Wide (55°/0.8 SC)		**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-6RDS-T	–			
Aperture/Shape/Function		**Reflector Finish/Color**	**Flange Color Options**	**Lower Trim Options**
LFR-6RDS-T 6" Round Shallow Downlight Trim Assembly		**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 Mud-In Ring [8]

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function		
☐	**LFR-6RD-H**	6" Housing Frame, New Construction, Non-IC
☐	**LFR-6RD-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-R	Flush Mount Mud-in Ring, 6" [8]
☐ LF-MOR6-R-WH	Metal Oversized Ring, 6" Round, White (10.12" outside diameter)
☐ LFR-SCA6-___	Sloped Ceiling Adapter, 6" White [9]

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 10L
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).
9. Specify slope angle 5°–35° in 5° increments. Not available with FM option.

Current

PRE_LFR-6RDS-Spectrasync_Spec_R03

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LFR-6RDS SpectraSync
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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

PRE_LFR-6RDS-Spectrasync_Spec_R03

LFR-6RDS SpectraSync

LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
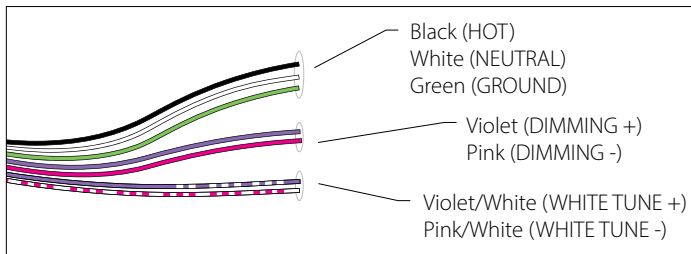WITH COLOR TUNING

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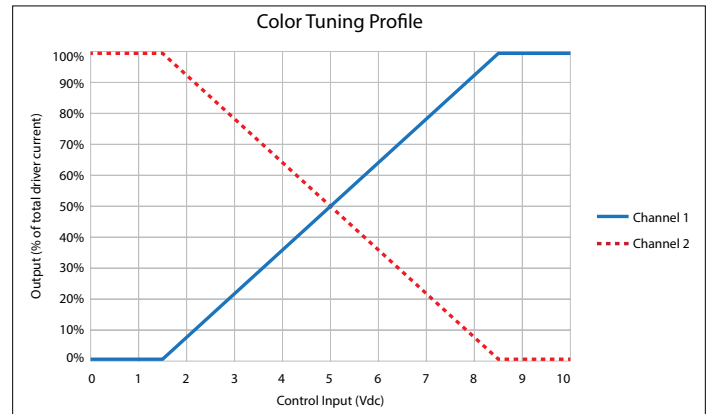
To enable scheduling and for use with NX wall control preset stations please refer to SpectraSync technical sheet.

PERFORMANCE DATA TABLE

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

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	1009	12.8	79
		Narrow	999	12.8	78
		Medium	970	12.8	76
		Wide	1043	12.8	81
15L	1500	Very Narrow	1380	19.6	70
		Narrow	1366	19.6	70
		Medium	1327	19.6	68
		Wide	1426	19.6	73

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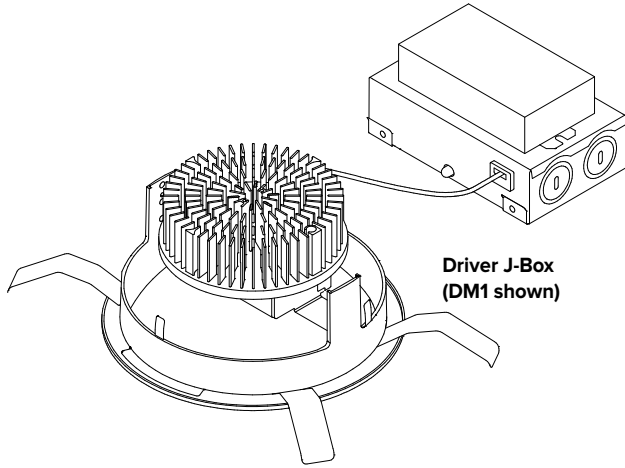
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DIMENSIONS

LFR-6RDS-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		Ø5.75" (101.6mm)
OVERALL		Ø7.13" (181.0mm)
FLANGE WIDTH	Standard	0.69" (17.5mm)
	Flush Mount	0.20" (5.1mm)
FLANGE TO FLANGE	Standard	Ø7.13" (136.6mm)
	Flush Mount	Ø6.15" (156.2mm)
CEILING CUTOUT	Standard	Ø6.50" (165.1mm)
	Flush Mount	Ø6.63" (168.4mm)
CEILING THICKNESS		0.50" – 2.50" (12.7 – 63.5mm)

LFR-6RDS LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION
		VNR / NR / MD / WD
10L-15L	STANDARD	3.56" (90.4mm)
	CP	4.95" (125.7mm)

* Note: Add ½" minimum plenum clearance above overall Light Engine Height.
** Non-IC rating requires 3" from insulation and combustible materials.
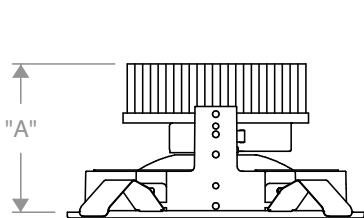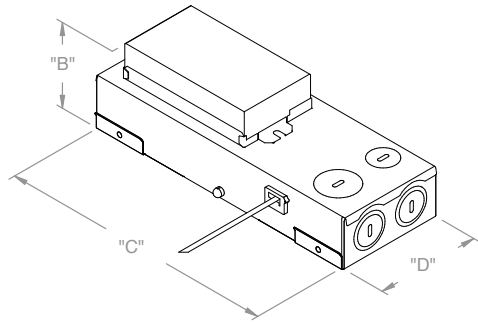
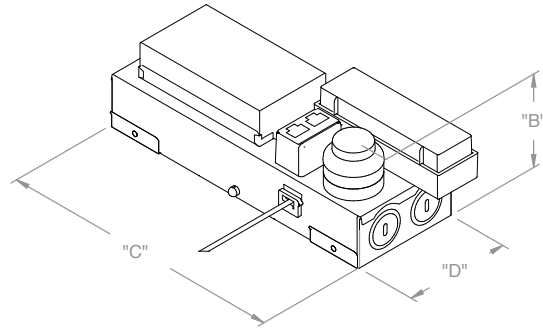**Side View Standard**
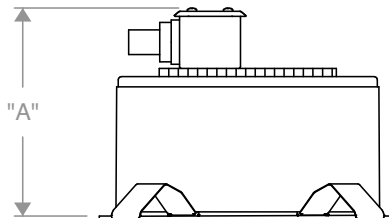
Side View CP – Chicago Plenum

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LFR-6RDS SpectraSync

LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
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DIMENSIONS CONTINUED

DRIVER J-BOX

DMT/DMTW

NX CONTROLS OPTION

CP

EM J-BOX

FLEXIBLE CONDUIT
LENGTH 12.00" (304.8mm)
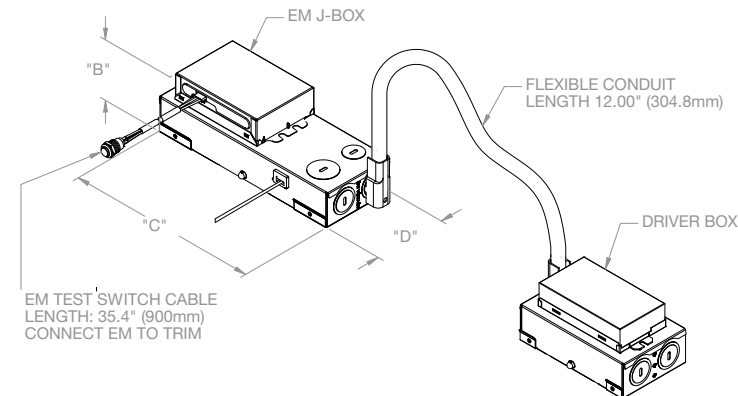
DRIVER BOX

EM TEST SWITCH CABLE
LENGTH: 35.4" (900mm)
CONNECT EM TO TRIM
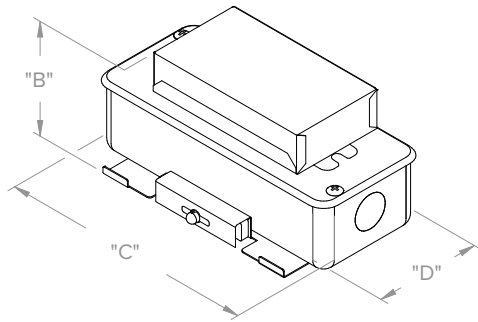
DMT/DMTW EM/EMR OPTION

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)

PRE_LFR-6RDS-Spectrasync_Spec_R03

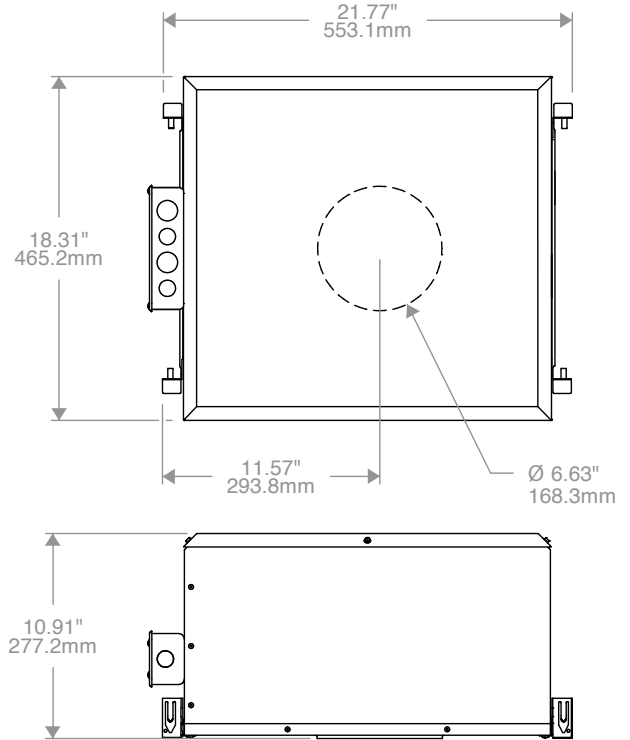# prescolite

LFR-6RDS SpectraSync
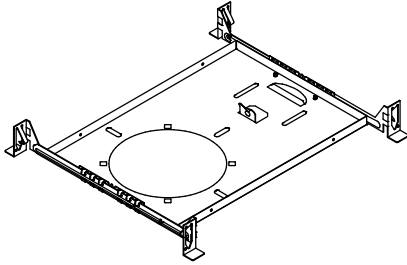LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
WITH COLOR TUNING

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS

17.70"
449.7mm

15.45"
392.4mm

Ø 6.63"
168.3mm

5.68"
144.2mm

2.14"
54.4mm

LFR-6RD-H
NON-IC HOUSING FRAME

21.77"
553.1mm

18.31"
465.2mm

11.57"
293.8mm

Ø 6.63"
168.3mm

10.91"
277.2mm

LFR-6RD-H-IC
IC HOUSING
Not for use with CP Shroud
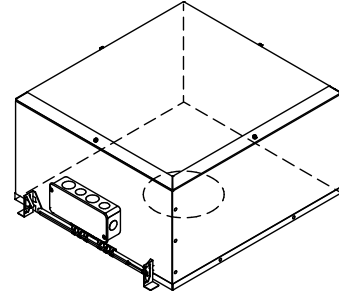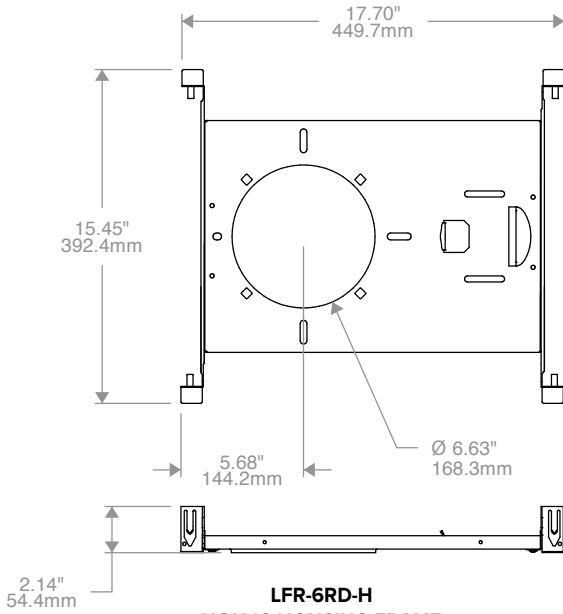
Metal 2-piece adapter (included)
to be installed above ceiling

Ø 6.50"
(165.1mm)

Ø 10.05"
(255.3mm)
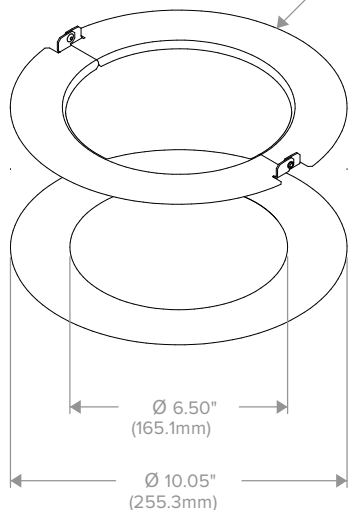
ROUND LF-MOR6-R
METAL OVERSIZED RING
(See LF-MOR Installation Instruction for more details)

Current ◉

currentlighting.com/prescolite
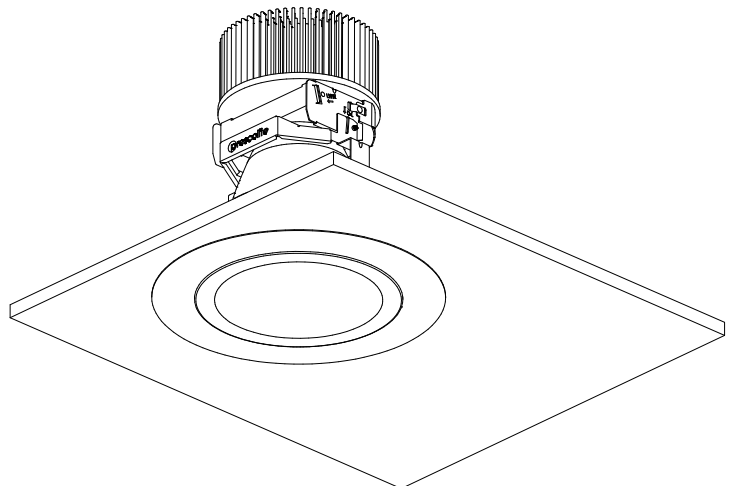
LFR-6RDS SpectraSync

LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
WITH COLOR TUNING

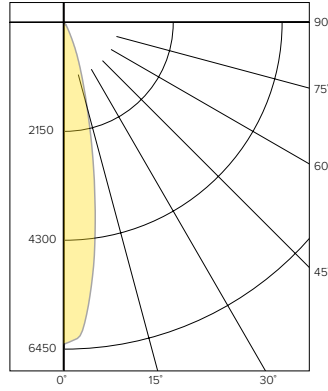## PHOTOMETRY

LFR-6RDS-M-15L2230TD9VNR-DMTW / LFR-6RDS-T-S

LUMINAIRE DATA

Test No.	22.00496
Description	1500 lm, Very Narrow, 3500K, 90 CRI
Delivered Lumens	2230
Watts	19.7W
Efficacy	70
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	22

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1314	95.0
0–60	1378	95.2
0–90	1380	100.0
0–180	1380	100.0

POLAR GRAPH

CANDELA DISTRIBUTION

Degree	Candela
0	6353
5	5603
15	1861
25	463
35	132
45	55
55	24
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	4643
55°	2498
65°	141
75°	0
85°	0

*Candela/Square Meter

LFR-6RDS-M-15L2230TD9NR-DMT / LFR-6RDS-T-S

LUMINAIRE DATA

Test No.	22.00497
Description	1500 lm, Narrow, 3500K, 90 CRI
Delivered Lumens	1366
Watts	19.6W
Efficacy	70
Mounting	Recessed
Spacing Criterion	0.5
Beam Angle (FWHM)	29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1287	94.2
0–60	1363	99.8
0–90	1366	100.0
0–180	1366	100.0

POLAR GRAPH
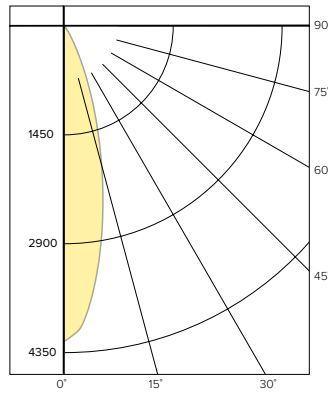
CANDELA DISTRIBUTION

Degree	Candela
0	4203
5	3778
15	1971
25	637
35	164
45	64
55	29
65	2
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	5403
55°	3018
65°	282
75°	0
85°	0

*Candela/Square Meter

LFR-6RDS-M-15L2230TD9MD-DMT / LFR-6RDS-T-S

LUMINAIRE DATA

Test No.	22.00498
Description	1500 lm, Medium, 3500K, 90 CRI
Delivered Lumens	1327
Watts	19.6W
Efficacy	68
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	35

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1240	93.5
0–60	1322	99.7
0–90	1327	100.0
0–180	1327	100.0

POLAR GRAPH
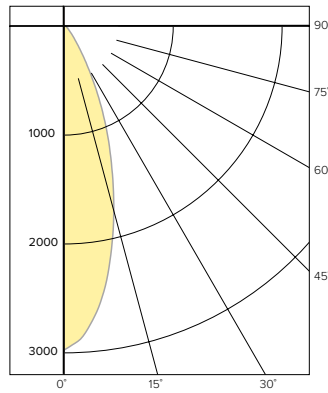
CANDELA DISTRIBUTION

Degree	Candela
0	2982
5	2759
15	1765
25	783
35	215
45	68
55	33
65	3
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	5740
55°	3434
65°	424
75°	0
85°	0

*Candela/Square Meter

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PHOTOMETRY CONTINUED

LFR-6RDS-M-15L2230TD9WD-DMT / LFR-6RDS-T-S

LUMINAIRE DATA

Test No.	22.00499
Description	1500 lm, Wide, 3500K, 90 CRI
Delivered Lumens	1426
Watts	19.6W
Efficacy	73
Mounting	Recessed
Spacing Criterion	0.9
Beam Angle (FWHM)	62

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1341	94.0
0–60	1425	99.9
0–90	1426	100.0
0–180	1426	100.0

POLAR GRAPH
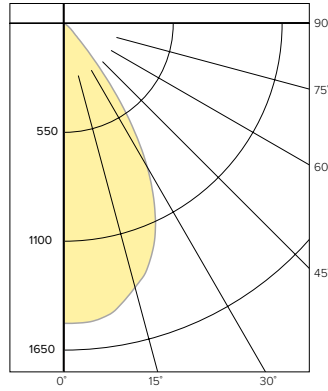
CANDELA DISTRIBUTION

Degree	Candela
0	1515
5	1512
15	1380
25	1088
35	521
45	70
55	18
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	5909
55°	1873
65°	141
75°	0
85°	0

*Candela/Square Meter

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.
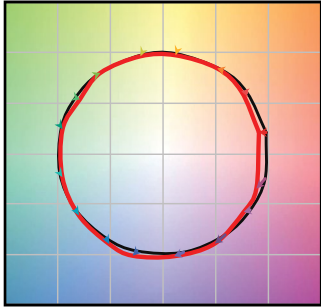
LFR-6RDS SpectraSync

LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
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TM-30 DATA

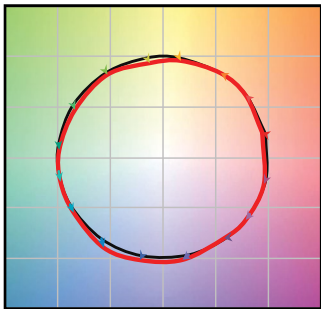### SPECTRASYNC™ TUNABLE WHITE (2765T)

COLOR VECTOR GRAPHIC
2700K, 90+ CRI

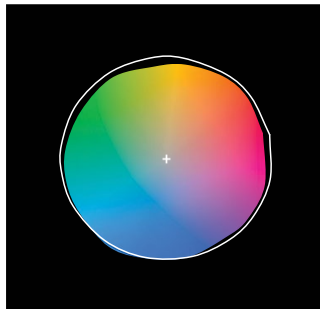—— Reference Illuminant   —— Test Source

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_9	46.7	85.4	87.7

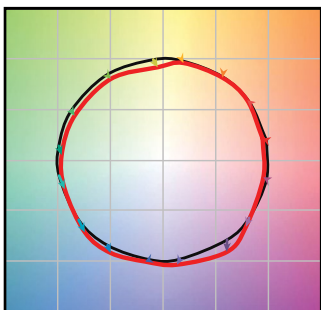**COLOR VECTOR GRAPHIC**
4600K, 90+ CRI

—— Reference Illuminant   —— Test Source

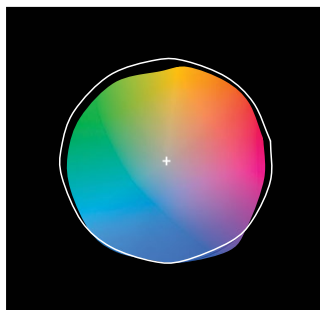**COLOR DISTORTION GRAPHIC**
4600K, 90+ CRI

COLOR VECTOR GRAPHIC
6500K, 90+ CRI

—— Reference Illuminant   —— Test Source

COLOR DISTORTION GRAPHIC
6500K, 90+ CRI

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PRE_LFR-6RDS-Spectrasync_Spec_R03
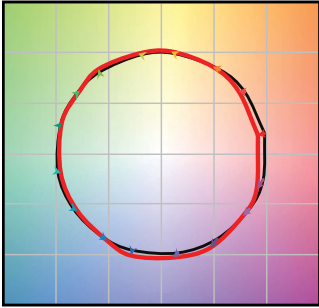
prescolite

LFR-6RDS SpectraSync
LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
WITH COLOR TUNING

TM-30 DATA CONTINUED

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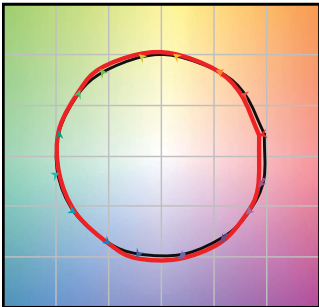
COLOR VECTOR GRAPHIC
3000K, 90+ CRI @ 100%

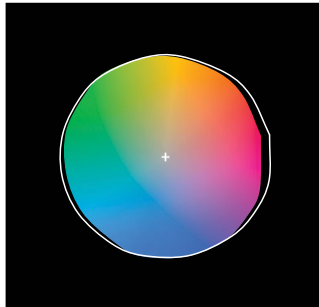—— Reference Illuminant —— Test Source

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
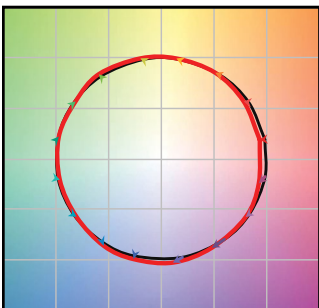**2600K, 90 CRI @ 50% DIM**

—— Reference Illuminant —— Test Source

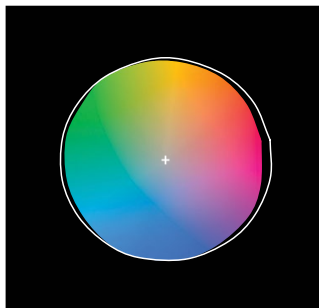**COLOR DISTORTION GRAPHIC**
2600K, 90 CRI @ 50% DIM

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

—— Reference Illuminant —— Test Source

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

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LFR-6RDS SpectraSync
LITEFRAME 6" ROUND SHALLOW DOWNLIGHT
WITH COLOR TUNING

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

DMX
See instruction sheet on currentlighting.com/prescolite for connection & installation information.

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.

Current

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