

LFR-4RD SpectraSync

LITEFRAME 4" ROUND DOWNLIGHT
WITH COLOR TUNING

LITEFRAME
2.0

FEATURES

- 4" LED downlight delivering 1000–2000 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



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

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%
- 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

CERTIFICATIONS

- cCSAus certified to UL 1598
- Suitable for wet locations, covered ceiling when used with CL lens trim; all other configurations, suitable for damp locations
- IP65 rated (room side) when properly installed per installation instructions with CL lens option
- 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

KEY DATA	
Lumen Range	1000–2000
Wattage Range	12.5–32.2
Efficacy Range (LPW)	59–85
Reported Life (Hours)	L70 / >60,000
Input Current (mA)	104–268 (120V)

*Based on Specular, 30K, 90 CRI

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ORDERING GUIDE

CATALOG # **Example:** LFR-4RD-M-10L2230TD9-WD-DMTW / LFR-4RD-T-S / LFR-4RD-H

FIXTURE MODULE

LFR-4RD-M	Lumen Output		CCT	CRI	Distribution	Driver Options	Control Options	Voltage	Module Options	
Ap/Shp/Funct	10L	1000	2230TD	2200K-3000K SpectraSync™ Dim to Warm	9 90+	NR Narrow (26°/0.4 SC)	DMTW SpectraSync™ Dim to Warm, 0-10V Dimming to 5% ¹	NXE NX Wired Dual RJ45 SmartPORTS, without Sensor	<i>Standard 120-277V</i>	CP Chicago Plenum ^{3,4}
LFR-4RD-M 4" Round Downlight Fixture Module for Direct Install	15L	1500	2750T	2700K-5000K SpectraSync™ Tunable White	MD Medium (34°/0.6 SC)	DMT SpectraSync™ Tunable White, 0-10V Dimming to 5% ²	NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor		EM Emergency Battery Pack with integral test switch and indicator light ⁴	
<i>(Non-IC frame or IC housing available under Housing Options below)</i>	20L	2000	2765T	2700K-6500K SpectraSync™ Tunable White	WD Wide (49°/0.7 SC)				EMR Emergency Battery Pack with remote test switch and indicator light ⁴	
					XW Extra Wide (65°/1.0 SC) ⁹				DTS Device Transfer Switch with Dimming Bypass ⁴	

TRIM (Ships separately)

LFR-4RD-T	Reflector Finish/Color	Flange Color Options	Lens Options	Lower Trim Options
Aperture/Shape/Function	S Specular ⁹	<i>Standard matches reflector color</i>	<i>Standard no lens</i>	
LFR-4RD-T 4" Round Downlight Trim Assembly	SS Semi-Specular	WT White Flange ⁵	CL Clear Lens (Wet listed) ⁹	EM Pre-punched reflector for EM integral test switch and indicator ⁶
	WC Painted White Cone and Flange	BT Black Flange		FM Flush Mount Mud-In Ring ¹⁰

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 ^{7,8}

Accessories	
<input type="checkbox"/> LiteGear	LiteGear® Inverter, 125VA-250VA
<input type="checkbox"/> LPS Series	LightPower Micro-Inverter, 20VA-55VA
<input type="checkbox"/> LF-FMR4-R	Flush Mount Mud-in Ring, 4" ¹⁰
<input type="checkbox"/> LF-MOR4-R-WH	Metal Oversized Ring, 4" Round, White (8.3" outside diameter)
<input type="checkbox"/> LFR-SCA4-__	Sloped Ceiling Adapter, 4" White ¹¹

Notes:

- Must select 2230TD with DMTW driver.
- Must select either 2750T or 2765T with DMT driver.
- CP not available with Controls.
- Module options not available in combination.
- WT not needed for WC.
- CL lens and EM trim options not available in combination.
- IC available up to 10L
- IC Housing not for use in combination with Controls or with Module Options CP, EM, EMR, DTS.
- XW distribution is not available for Specular (S) reflector finish.
- Flush Mount Flange (FM) requires FMR accessory (sold separately).
- Specify slope angle 5°-35° in 5° increments. Not available with EM or FM options.

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CONTROLS

NX Lighting Controls:

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

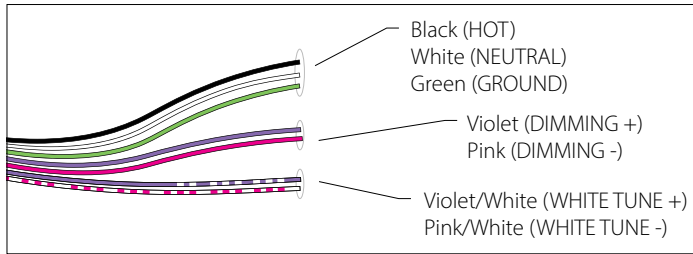


NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC ¹
NX Networked – Wireless								
NXW ²	N/A	Yes	Yes	No	No	Yes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

- 1 NXBTC needs to be plugged into an available NX SmartPort™ on the fixture network
- 2 Programming via App requires factory assistance

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.

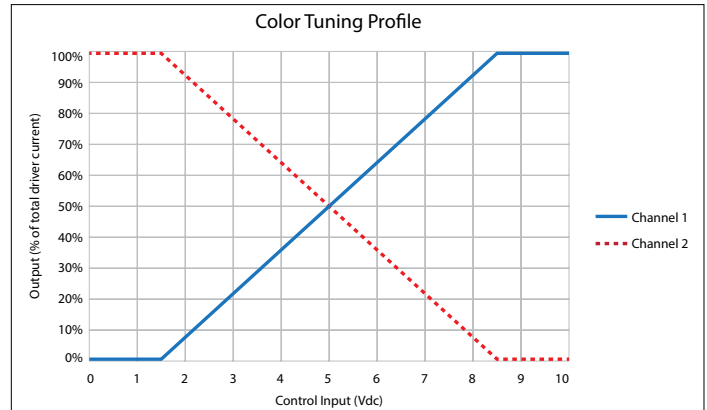


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and pink/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

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: DTV, 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 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	Narrow	1063	12.5	85
		Medium	1037	12.5	83
		Wide	1024	12.5	82
		Extra Wide	991	12.5	79
15L	1500	Narrow	1611	20.5	78
		Medium	1572	20.5	77
		Wide	1553	20.5	76
		Extra Wide	1502	20.4	73
20L	2000	Narrow	2023	32.2	63
		Medium	1974	32.2	61
		Wide	1950	32.2	61
		Extra Wide	1886	32.2	59

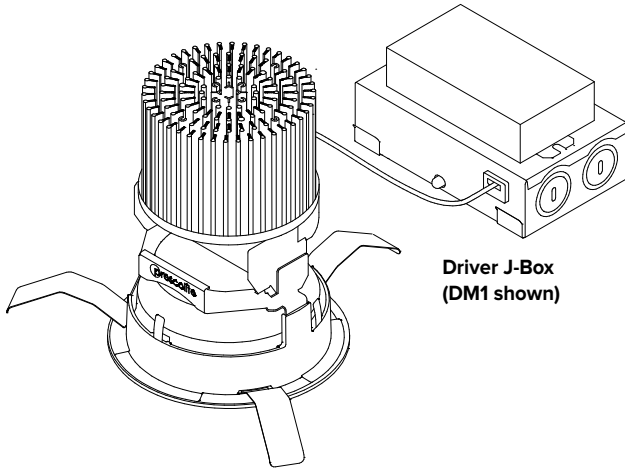
LFR-4RD SpectraSync

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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**

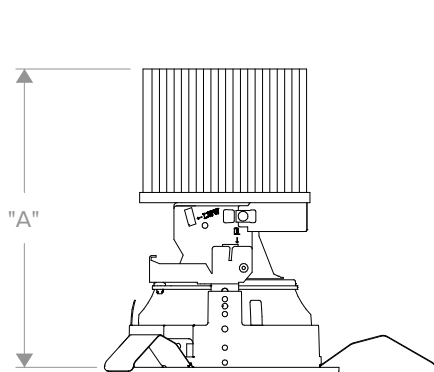
**Driver J-Box
(DM1 shown)**

DIMENSIONAL DATA		
APERTURE		Ø4.00" (101.6mm)
OVERALL		Ø5.37" (136.5mm)
FLANGE WIDTH	Standard	0.69" (17.5mm)
	Flush Mount	0.19" (4.8mm)
FLANGE TO FLANGE	Standard	Ø5.37" (136.6mm)
	Flush Mount	Ø4.38" (111.2mm)
CEILING CUTOUT	Standard	Ø4.75" (120.7mm)
	Flush Mount	Ø4.88" (123.9mm)
CEILING THICKNESS		0.50" – 2.50" (12.7 – 63.5mm)

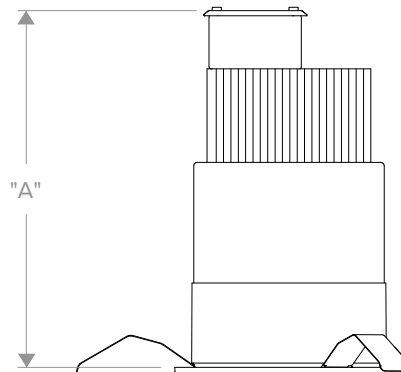
LFR-4RD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *			
LUMEN PACKAGE	FIXTURE MODULE	NR / MD / WD	
		NR / MD / WD	XW
10L-15L	STANDARD	5.45" (138.5mm)	5.1" (129.5mm)
	CP	8.51" (216.2mm)	8.16" (207.3mm)
20L	STANDARD	7.03" (178.6mm)	6.68" (169.7mm)
	CP	8.51" (216.2mm)	8.16" (207.3mm)

* Note: Add 1/2" 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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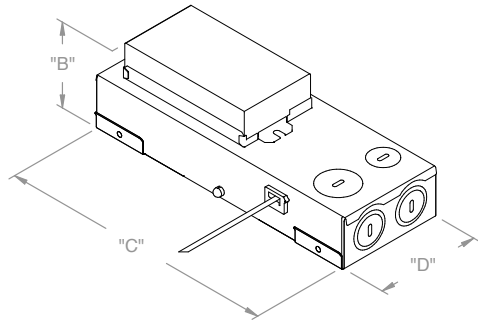
DIMENSIONS CONTINUED

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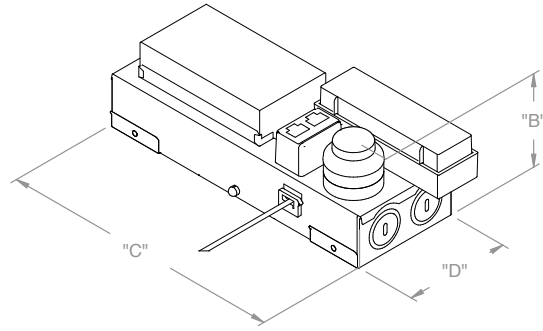
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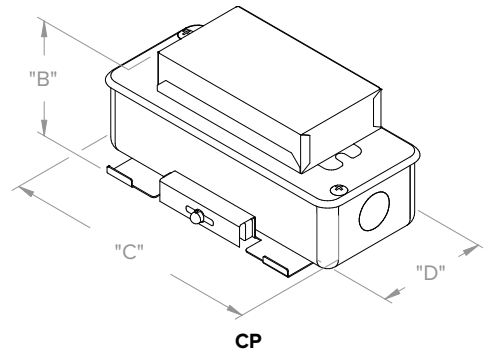
DRIVER J-BOX



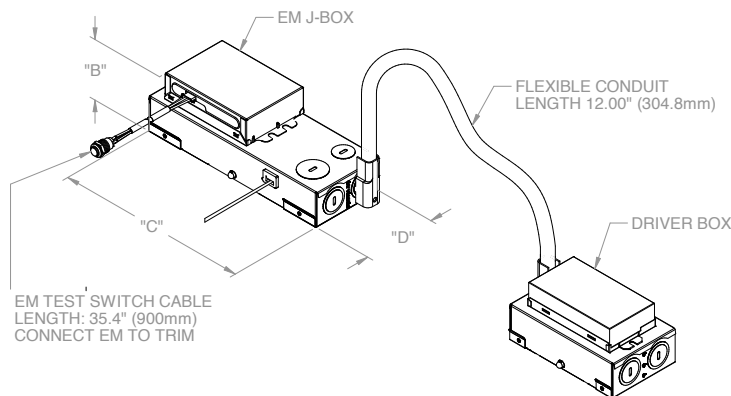
DMT/DMTW



NX CONTROLS OPTION



CP



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)	4.00" (101.6mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EM	2.73" (69.3mm)	8.68" (220.5mm)	3.23" (82.0mm)	4.00" (101.6mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	5.00" (127.0mm)

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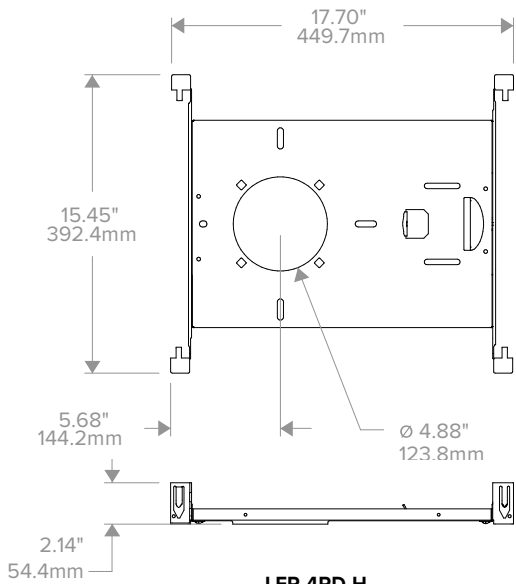
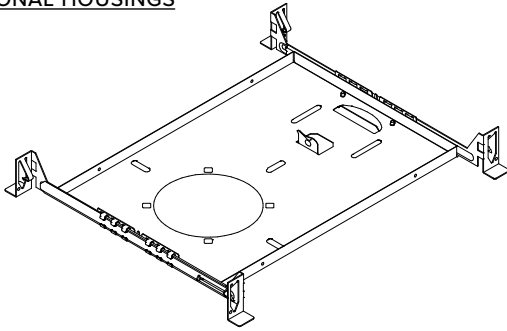
DIMENSIONS CONTINUED

OPTIONAL HOUSINGS

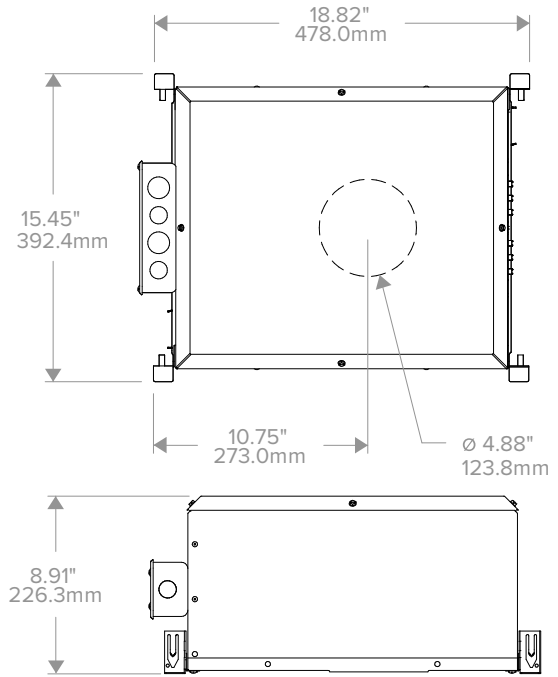
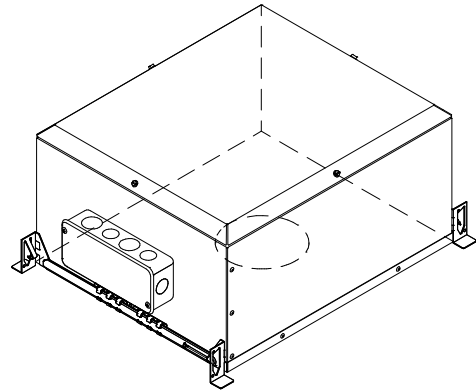
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CATALOG #: _____

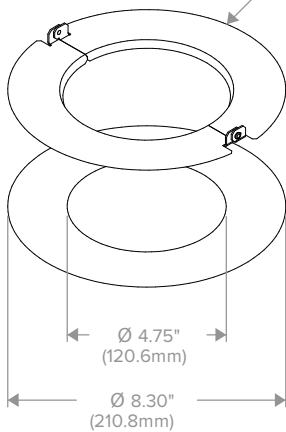


**LFR-4RD-H
NON-IC HOUSING FRAME**

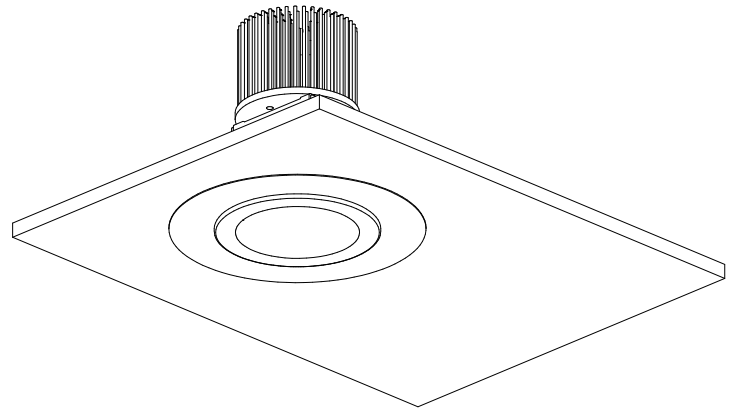


**LFR-4RD-H-IC
IC HOUSING**
Not for use with CP Shroud

Metal 2-piece adapter (included)
to be installed above ceiling



**ROUND LF-MOR4-R
METAL OVERSIZED RING**
(See LF-MOR Installation Instruction for more details)



LFR-4RD SpectraSync

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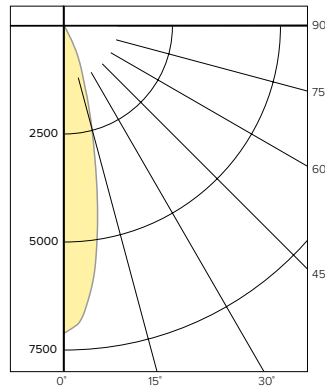
PHOTOMETRY

LFR-4RD-M-15L2230TD9NR-DMTW / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	22.00484
Description	1500 lm, Narrow, 3000K, 90 CRI
Delivered Lumens	1611
Watts	20.6W
Efficacy	78
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	24

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	7112
5	6376
15	2510
25	704
35	44
45	12
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	2093
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

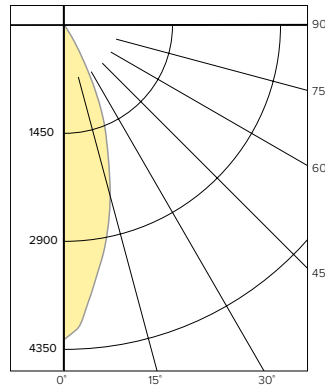
Zone	Lumens	% Luminaire
0-40	1600	99.3
0-60	1611	100.0
0-90	1611	100.0
0-180	1611	100.0

LFR-4RD-M-15L2230TD9MD-DMTW / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	22.00485
Description	1500 lm, Medium, 3000K, 90 CRI
Delivered Lumens	1572
Watts	20.5W
Efficacy	77
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	34

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	4227
5	3739
15	2401
25	1060
35	107
45	14
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	2442
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

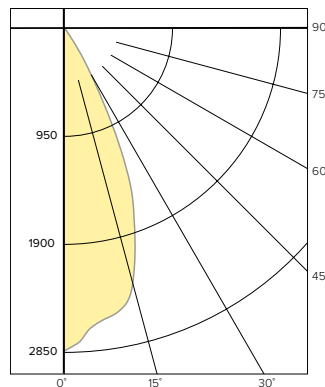
Zone	Lumens	% Luminaire
0-40	1557	99.0
0-60	1571	99.9
0-90	1572	100.0
0-180	1572	100.0

LFR-4RD-M-15L2230TD9WD-DMTW/ LFR-4RD-T-S

LUMINAIRE DATA

Test No.	22.00486
Description	1500 lm, Wide, 3000K, 90 CRI
Delivered Lumens	1553
Watts	20.5W
Efficacy	76
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	47

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2844
5	2656
15	2340
25	1198
35	151
45	15
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	2617
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1535	99.8
0-60	1552	99.9
0-90	1553	100.0
0-180	1553	100.0

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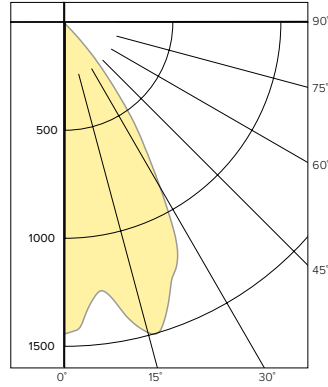
PHOTOMETRY CONTINUED

LFR-4RD-M-15L2230TD9XW-DMTW / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	22.00503
Description	1500 lm, Extra Wide, 3000K, 90 CRI
Delivered Lumens	1502
Watts	20.5W
Efficacy	74
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	62

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1442
5	1321
15	1482
25	1238
35	570
45	49
55	2
65	1
75	1
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	8547
55°	430
65°	477
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1434	95.5
0-60	1501	99.9
0-90	1502	100.0
0-180	1502	100.0

LENS OPTION MULTIPLIER (Based on Clear Specular)

Option	CL (Clear Lens)
Multiplier	0.95

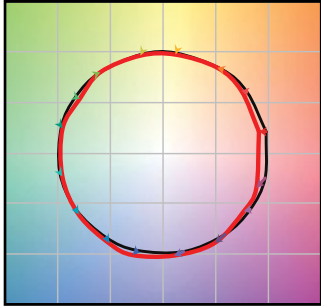
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TM-30 DATA

SPECTRASYNC™ TUNABLE WHITE (2765T)

COLOR VECTOR GRAPHIC
2700K, 90+ CRI



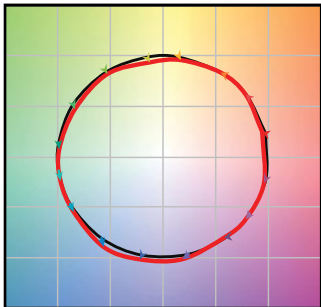
— Reference Illuminant — Test Source

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 _r	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

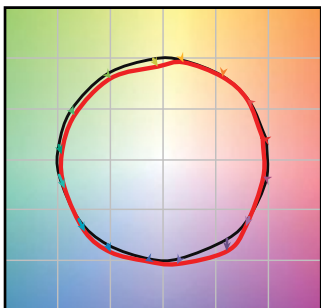


— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
4600K, 90+ CRI



COLOR VECTOR GRAPHIC
6500K, 90+ CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
6500K, 90+ CRI



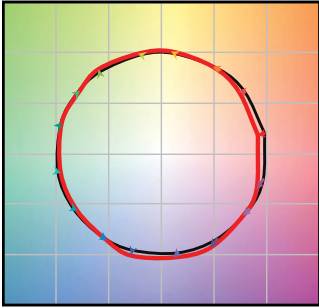
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TM-30 DATA CONTINUED

SPECTRASYNCTM DIM TO WARM (2230TD)

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



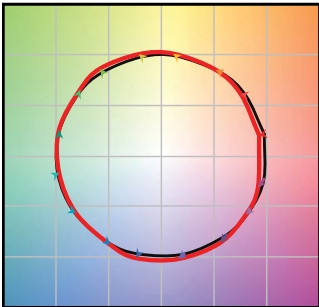
— Reference Illuminant — Test Source

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



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 _r	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
2600K, 90 CRI @ 50% DIM

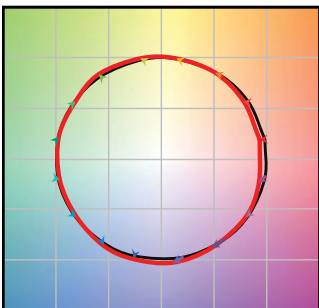


— Reference Illuminant — Test Source

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 4" ROUND DOWNLIGHT
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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

* 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.

Central Inverters

For full fixture output in back-up mode, we recommend you visit currentlighting.com/dual-lite.com 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.