

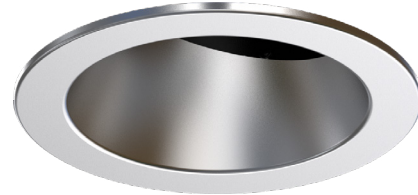
# LFR-4RA SpectraSync

LITEFRAME 4" ROUND ADJUSTABLE  
 WITH COLOR TUNING

LITEFRAME  
 2.0

## FEATURES

- 4" LED adjustable accent delivering 1000–2000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications, optional IC and CP housing accessories available
- Select from Angle Cut Cone, Pinhole or Slot trim styles
- Available in four beam distributions
- Precise hot aiming/locking 0–40° tilt, full 361° rotation
- 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, IC or CP 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/enclosures
- Light Engine connections use plenum rated (CMP) cable

### OPTICS

- Manual friction adjustment with angle indicator and thumbscrew lock for precise hot aiming
- Vertical Tilt: 40° (≤ 0.75" ceiling thickness); 30° (up to 1.25" ceiling thickness)
- Smooth 361° horizontal rotation with locking screw
- Multiple beam distributions allow dramatic effects with minimal occlusion
- High purity spun aluminum reflector, self-flanged
- Standard Angle Cut cone in Specular or Semi-Specular anodized or White with painted flange options

### OPTICS (CONTINUED)

- Optional Pinhole or Slot trim styles available 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%
- Emergency battery pack option available with remote test switch and indicator light

### INSTALLATION

- Accommodates ceiling thickness from 0.50" to 1.25"
- Fixture Module including driver fully accessible from above or below the ceiling
- Chicago Plenum requires CP housing option

### CERTIFICATIONS

- cCSAus certified to UL 1598
- Suitable for damp locations
- 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)	45–68
Reported Life (Hours)	L70 / >60,000
Input Current (mA)	104–268 (120V)

\*Based on Specular, 30K, 90 CRI

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## ORDERING GUIDE

  = Service Program



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

CATALOG #

### FIXTURE MODULE

LFR-4RA-M	Lumen Output		CCT	CRI	Distribution		Driver Options	Control Options	Voltage	Module Options	
<b>Ap/Shp/Funct</b>	<b>10L</b>	1000	<b>2230TD</b>	2200K-3000K SpectraSync™ Dim to Warm	<b>9</b>	90+	<b>NR</b> Narrow (25°)	<b>DMTW</b> SpectraSync™ Dim to Warm, 0-10V Dimming to 5% <sup>1</sup>	<b>NXE</b> NX Wired Dual RJ45 SmartPORTS, without Sensor	<i>Standard 120-277V</i>	<b>EMR</b> Emergency Battery Pack with remote test switch and indicator light <sup>3</sup>
<b>LFR-4RA-M</b> 4" Round Adjustable Fixture Module for Direct Install  <i>(Non-IC frame, IC or CP housings available under Housing Options below)</i>	<b>15L</b>	1500	<b>2750T</b>	2700K-5000K SpectraSync™ Tunable White	<b>MD</b>	Medium (34°)	<b>DMT</b> SpectraSync™ Tunable White, 0-10V Dimming to 5% <sup>2</sup>	<b>NXW</b> NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor		<b>DTS</b> Device Transfer Switch with Dimming Bypass <sup>3</sup>	
	<b>20L</b>	2000	<b>2765T</b>	2700K-6500K SpectraSync™ Tunable White	<b>WD</b>	Narrow (48°)					

### TRIM (Ships separately)

LFR-4RA-T	Trim Style	Reflector Finish/Color	Flange Color Options
<b>Aperture/Shape/Function</b>			
<b>LFR-4RA-T</b> 4" Round Adjustable Trim Assembly	<i>Standard Cut Cone</i>	<b>S</b> Specular	<i>Standard matches reflector color</i>
	<b>PH</b> Pinhole <sup>7</sup>	<b>SS</b> Semi-Specular	<b>WT</b> White Flange <sup>6</sup>
	<b>SLT</b> Slot <sup>7</sup>	<b>WC</b> Painted White Cone and Flange	<b>BT</b> Black Flange

### HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function	
<input type="checkbox"/> <b>LFR-4RD-H</b>	4" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> <b>LFR-4RD-H-IC</b>	4" Housing Enclosure, New Construction, IC Rated <sup>7,8</sup>
<input type="checkbox"/> <b>LFR-4RD-H-CP</b>	4" Housing Enclosure, New Construction, Chicago Plenum <sup>9</sup>

Accessories	
<input type="checkbox"/> <b>LiteGear</b>	LiteGear® Inverter, 125VA-250VA
<input type="checkbox"/> <b>LPS Series</b>	LightPower Micro-Inverter, 20VA-55VA
<input type="checkbox"/> <b>LF-MOR4-R-WH</b>	Metal Oversized Ring, 4" Round, White (8.3" outside diameter)

Notes:

- 1 Must select 2230TD with DMTW driver.
- 2 Must select either 2750T or 2765T with DMT driver.
- 3 Module options not available in combination.
- 4 DTS available with DM1, DM01, or DALI.
- 5 PH and SLT available in painted reflector/flange only. Must specify WT or BT.
- 6 WT not needed for WC.
- 7 IC available up to 10L
- 8 IC housing not available for use in combination with Controls or with Module options EMR, DTS.
- 9 CP available up to 10L; not available with DMX, Controls, or EMR 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.



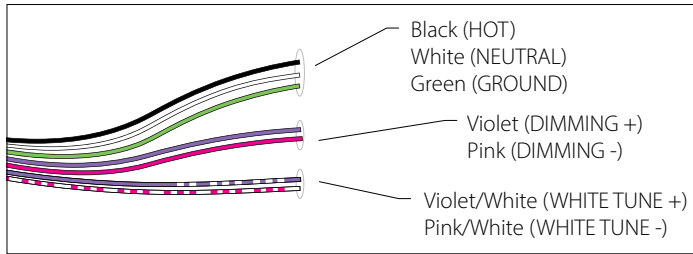
NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>NX Networked – Wired</b>								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC <sup>1</sup>
<b>NX Networked – Wireless</b>								
NXW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

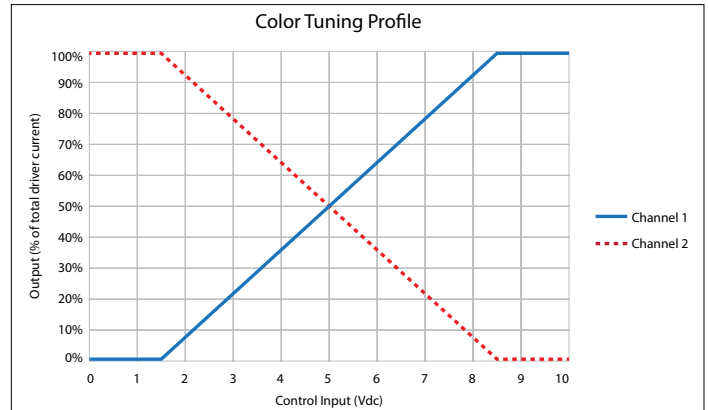


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and pink/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### 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: DTVV, 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 SUMMARY

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	845	12.5	68
		Medium	761	12.5	61
		Wide	757	12.5	61
15L	1500	Narrow	1282	20.5	62
		Medium	1154	20.5	56
		Wide	1148	20.4	56
20L	2000	Narrow	1610	32.2	50
		Medium	1449	32.2	45
		Wide	1441	32.2	45

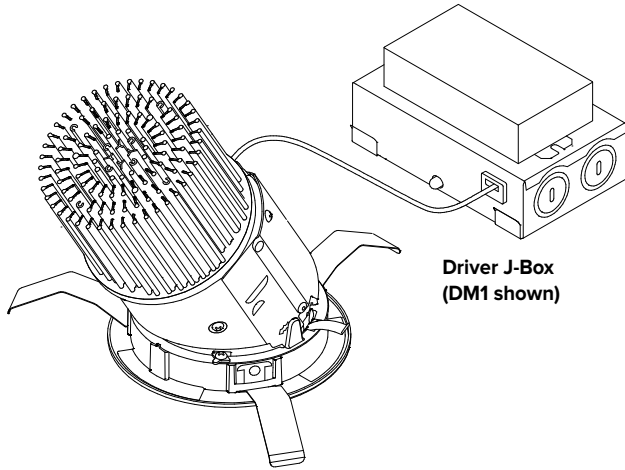
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## DIMENSIONS

### LFR-4RA-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.



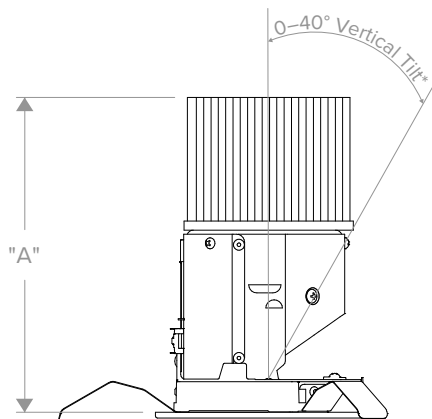
DIMENSIONAL DATA	
APERTURE	Ø 4.00" (101.6mm)
OVERALL	Ø 5.37" (136.5mm)
FLANGE WIDTH	0.71" (18.0mm)
CEILING CUTOUT	Ø 4.75" (120.7mm)
CEILING THICKNESS	0.50"-1.25" (12.7-31.8mm)

**Light Engine  
with Trim assembly installed**

### LFR-4RA LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *	
LUMEN PACKAGE	NR / MD/ WD
10L-15L	5.89" (149.7mm)
20L	7.47" (189.8mm)

\* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.  
\*\* Non-IC rating requires 3" from insulation and combustible materials.



\* Vertical Tilt:  
0-40° up to 0.75" ceiling thickness  
0-35° for 0.75" to 1" ceiling thickness  
0-30° for 1" to 1.25" ceiling thickness

**Side View Standard**

# LFR-4RA SpectraSync

LITEFRAME 4" ROUND ADJUSTABLE  
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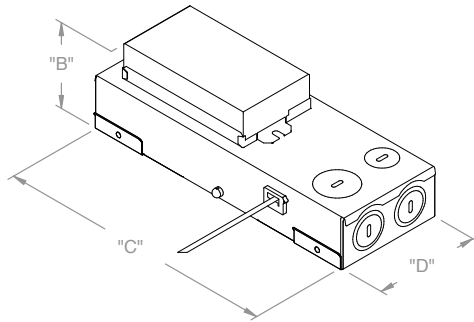
## DIMENSIONS CONTINUED

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

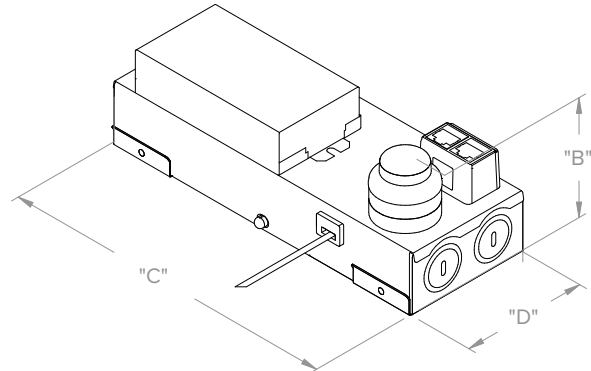
TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

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

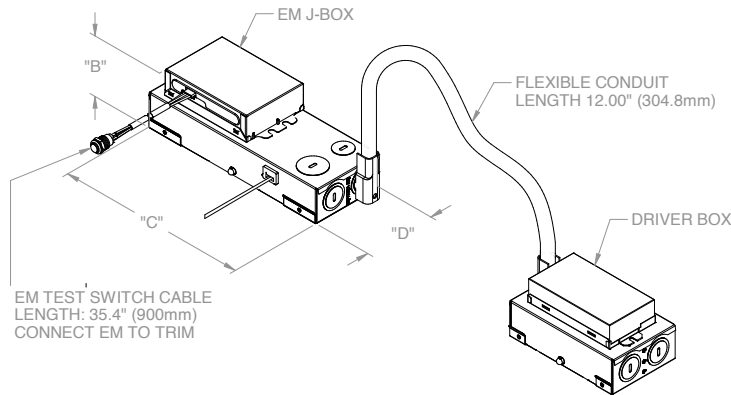
### DRIVER J-BOX



**DMT/DMTW**



**NX CONTROLS OPTION**



### DMT/DMTW EM/EMR OPTION

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

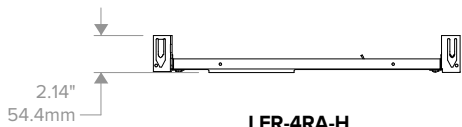
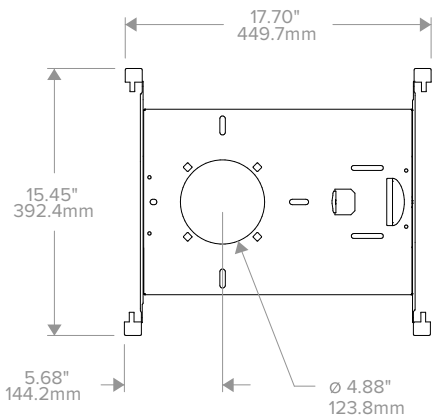
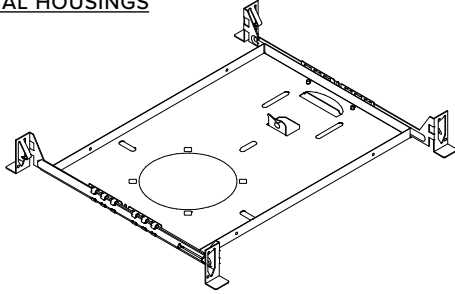
OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/ CONTROLS OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DMT/DMTW	2.67" (67.8mm)	8.68" (220.5mm)	3.23" (82.0mm)	4.00" (101.6mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EM	2.73" (69.3mm)	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)

# LFR-4RA SpectraSync

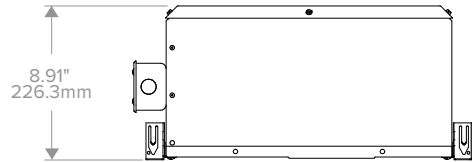
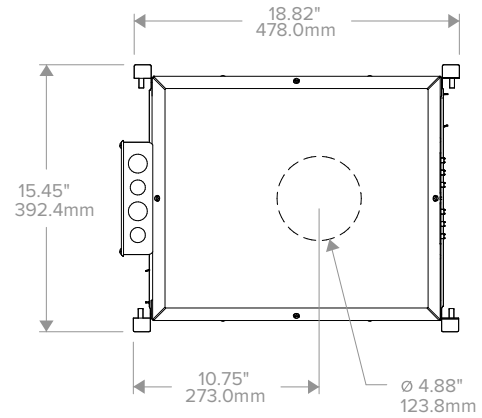
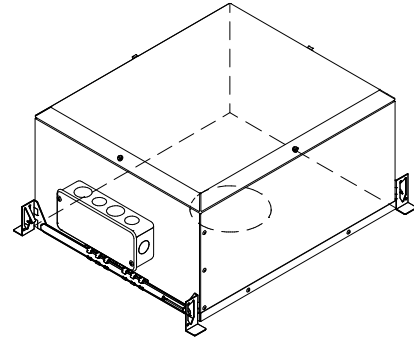
LITEFRAME 4" ROUND ADJUSTABLE  
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## DIMENSIONS CONTINUED

### OPTIONAL HOUSINGS

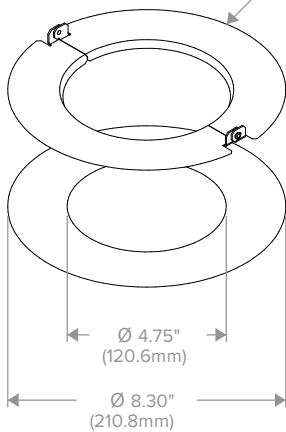


**LFR-4RA-H  
NON-IC HOUSING FRAME**



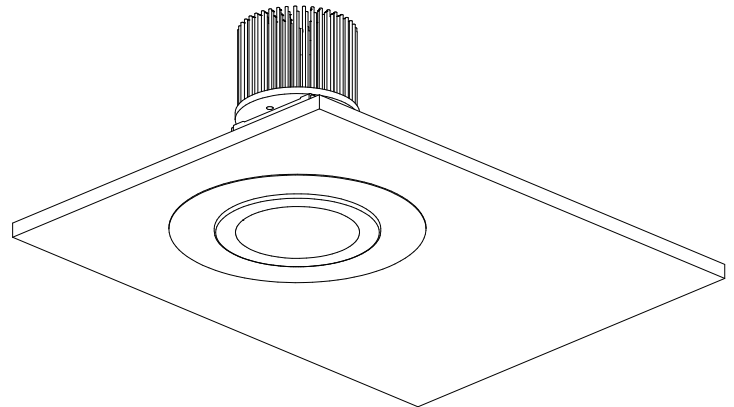
**LFR-4RD-H-IC  
LFR-4RD-H-CP  
IC or CP HOUSING**

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-4RA SpectraSync

LITEFRAME 4" ROUND ADJUSTABLE  
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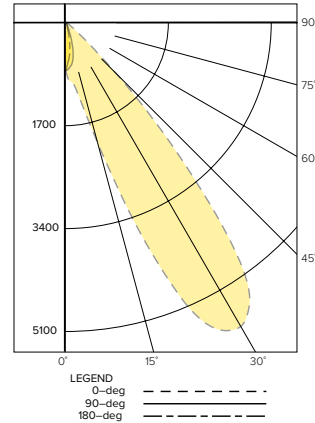
## PHOTOMETRY

### LFR-4RA-M-15L2230TD9NR-DMT / LFR-4RA-T-S

#### LUMINAIRE DATA

Test No.	22.00521
Description	1500 lm, Narrow, 3500K, 90 CRI
Delivered Lumens	1282
Watts	20.5W
Efficacy	63
Mounting	Recessed
Beam Angle (FWHM)	23

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	804
5	987
15	2120
25	5500
35	5217
45	1005
55	49
65	4
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	175309
55°	10537
65°	1167
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

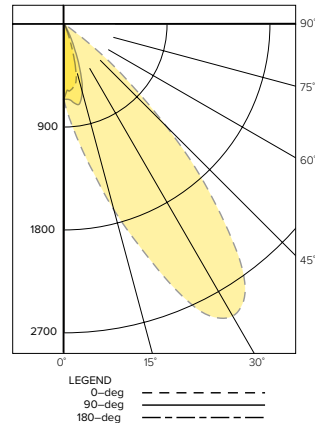
Zone	Lumens	% Luminaire
0-40	1157	90.3
0-60	1281	99.9
0-90	1282	100.0
0-180	1282	100.0

### LFR-4RA-M-15L2230TD9MD-DMT / LFR-4RA-T-S

#### LUMINAIRE DATA

Test No.	22.00522
Description	1500 lm, Medium, 3500K, 90 CRI
Delivered Lumens	1154
Watts	20.5W
Efficacy	56
Mounting	Recessed
Beam Angle (FWHM)	33

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	659
5	907
15	1676
25	2744
35	2761
45	1280
55	91
65	7
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	223279
55°	19569
65°	2043
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

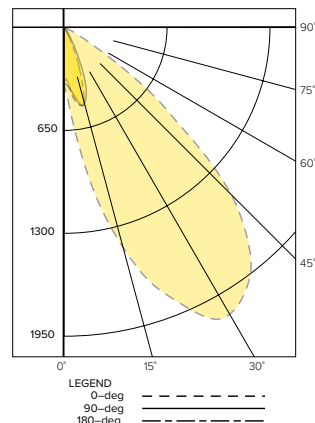
Zone	Lumens	% Luminaire
0-40	974	84.4
0-60	1153	99.9
0-90	1154	100.0
0-180	1154	100.0

### LFR-4RA-M-15L2230TD9WD-DMT / LFR-4RA-T-S

#### LUMINAIRE DATA

Test No.	22.00523
Description	1500 lm, Wide, 3000K, 90 CRI
Delivered Lumens	1148
Watts	20.4W
Efficacy	56
Mounting	Recessed
Beam Angle (FWHM)	46

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	356
5	571
15	1438
25	1937
35	2015
45	1495
55	463
65	12
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	260783
55°	99566
65°	3502
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	874	76.2
0-60	1144	99.7
0-90	1148	100.0
0-180	1148	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.

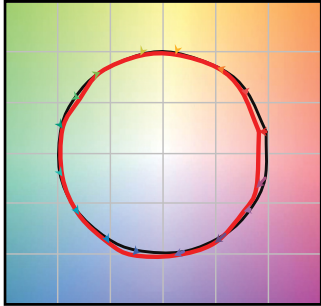
# LFR-4RA SpectraSync

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## TM-30 DATA

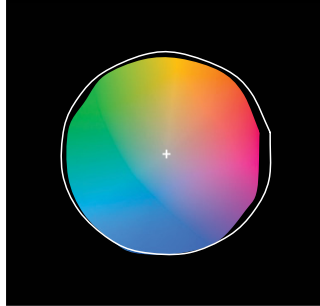
### SPECTRASYNCTM TUNABLE WHITE (2765T)

COLOR VECTOR GRAPHIC  
2700K, 90+ CRI



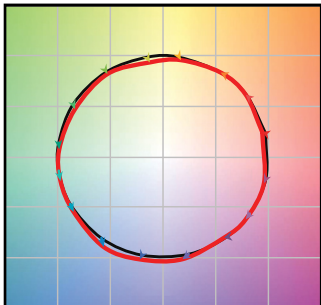
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC  
2700K, 90+ CRI



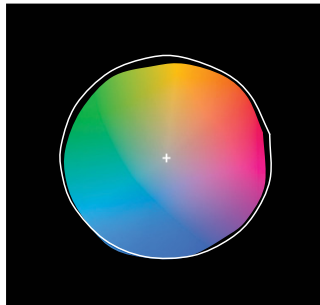
TEST RESULTS - TUNABLE WHITE @ 1500 LUMENS (NOMINAL)			
Value	2700K	4600K	6500K
Luminous Flux (lm)	1469	1779	1692
Wattage (W)	20.5	20.1	20.6
Efficacy (lm/W)	71.7	88.5	82.1
R <sub>r</sub>	90	89	87
R <sub>g</sub>	97	99	97
CCT (K)	2799	4177	7184
D <sub>uv</sub>	0.0032	0.0088	0.0024
x	0.4468	0.3680	0.3047
y	0.3992	0.3515	0.3109
CIE R <sub>a</sub>	90	94	94
CIE R <sub>g</sub>	46.7	85.4	87.7

COLOR VECTOR GRAPHIC  
4600K, 90+ CRI

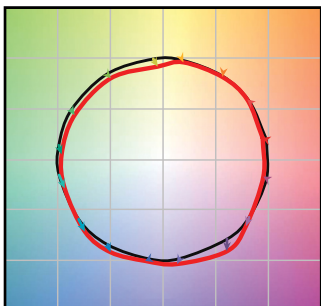


— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC  
4600K, 90+ CRI

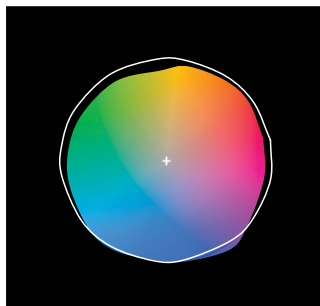


COLOR VECTOR GRAPHIC  
6500K, 90+ CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC  
6500K, 90+ CRI





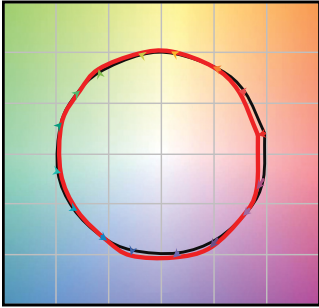
# LFR-4RA SpectraSync

LITEFRAME 4" ROUND ADJUSTABLE  
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## TM-30 DATA CONTINUED

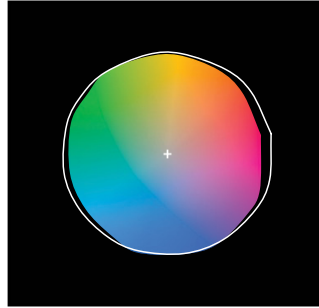
### SPECTRASYNCTM DIM TO WARM (2230TD)

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



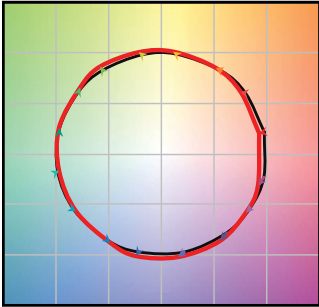
— Reference Illuminant — Test Source

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 <sub>r</sub>	90	89	87
R <sub>g</sub>	97	99	97
CCT (K)	2799	4177	7184
D <sub>uv</sub>	0.0032	0.0088	0.0024
x	0.4468	0.3680	0.3047
y	0.3992	0.3515	0.3109
CIE R <sub>a</sub>	90	94	94
CIE R <sub>g</sub>	46.7	85.4	87.7

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

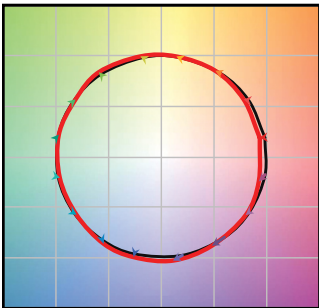


— Reference Illuminant — Test Source

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



# LFR-4RA SpectraSync

LITEFRAME 4" ROUND ADJUSTABLE  
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

\* 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](http://currentlighting.com/prescolite).

### Central Inverters

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