

# LFR-6RA

LITEFRAME 6" ROUND ADJUSTABLE

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

## FEATURES

- 6" LED adjustable accent delivering 1000–8000 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
- 2700K-5000K, 80+ and 90+ CRI (2 SDCM)
- Dimming protocols include 0–10V, Phase (Forward/Reverse), DALI, DMX, and Lutron EcoSystem
- NX Lighting Controls wired and wireless controls capability available



## CONTROLS 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
- Optional Pinhole or Slot trim styles available in White or Black

### ELECTRICAL

- Chip-on-board LED with 2 SDCM
- Multiple CCTs, 80+ or 90+ CRI
- Long LED life: L90 at >50,000 hours (TM-21)
- Universal voltage 120-277V driver, 347V optional
- UL Class 2, inherent short circuit and overload protection
- Flicker-free dimming options in a wide range of protocols from 1% to <0.1% performance
- 0–10V, Phase (Forward/Reverse), DALI, DMX, and Lutron EcoSystem options
- NX Lighting Controls provides options for standalone and networked functionality with wired or wireless connectivity for NX system deployments
- Emergency battery pack option available with remote test switch and indicator light

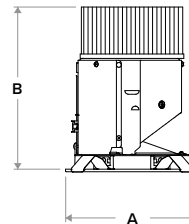
### INSTALLATION

- Accommodates ceiling thickness from 0.50" to 1.25"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L–15L 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.)
- Chicago Plenum requires CP housing option

## LITEFRAME 2.0



## SERVICE PROGRAMS



Typical Dimensions and Weights			
Lumen Package	"A" Diameter Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 35L	7.13 (181)	6.94 (176)	5.5 (2.5)
40L - 50L	7.13 (181)	7.51 (191)	5.8 (2.6)
60L - 80L	7.13 (181)	8.7 (221)	6.4 (2.9)

See DIMENSIONS section for complete details

### CERTIFICATIONS

- cCSAus certified to UL 1598
- For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- 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	1000–8000
Wattage Range	8–71
Efficacy Range (LPW)	75–122
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–592 (120V)

\*Based on Specular, 35K, 80 CRI

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Gray Shading = Service Program **STOCK**

## ORDERING GUIDE

Example: LFR-6RA-M-10L35K8-WD-DM1 / LFR-6RA-T-S / LFR-6RD-H

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

### FIXTURE MODULE

LFR-6RA-M	Lumen Output			CCT	CRI	Distribution	Driver Options	Control Options	Voltage	Module Options		
<b>Ap/Shp/Funct</b>	<b>10L</b>	<b>1000</b>	<b>27K</b>	<b>2700K</b>	<b>8</b>	<b>80+</b>	<b>VNR</b> Very Narrow (14°)	<b>DM1</b> 0–10V Dimming to 1%	<b>NX Lighting Controls</b>	<i>Standard</i> 120–277V	<b>EMR</b> 6W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light <sup>5</sup>	
<b>LFR-6RA-M</b> 6" Round Adjustable Fixture Module for Direct Install	<b>15L</b>	<b>1500</b>	<b>30K</b>	<b>3000K</b>	<b>9</b>	<b>90+</b>	<b>NR</b> Narrow (25°)	<b>DM01</b> 0–10V Dimming to < 1% <sup>2</sup>	<b>Networked Wireless</b>	<b>34</b>	<b>347V<sup>4</sup></b>	<b>DTS</b> Device Transfer Switch with Dimming Bypass <sup>5,6</sup>
<i>(Non-IC frame, IC or CP housings available under Housing Options below)</i>	<b>20L</b>	<b>2000</b>	<b>35K</b>	<b>3500K</b>			<b>MD</b> Medium (35°)	<b>PDM</b> Phase (Forward/Reverse) Dimming to 1% <sup>2</sup>	<b>NXW</b> NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor <sup>3</sup>			
	<b>25L</b>	<b>2500</b>	<b>40K</b>	<b>4000K</b>			<b>WD</b> Wide (45°)	<b>DMX</b> DMX with RDM dimming to < 0.1% <sup>2</sup>	<b>Networked Wired</b>			
	<b>30L</b>	<b>3000</b>	<b>50K</b>	<b>5000K</b>				<b>DALI</b> DALI Dimming to 1% <sup>2</sup>	<b>NXE</b> NX Wired Dual RJ45 SmartPORTS, without Sensor <sup>3</sup>			
	<b>35L</b>	<b>3500</b>						<b>EDM</b> Lutron Hi-Lume EcoSystem Dimming to 1% <sup>2</sup>				
	<b>40L</b>	<b>4000</b>										
	<b>50L</b>	<b>5000</b>										
	<b>60L</b>	<b>6000<sup>1</sup></b>										
	<b>70L</b>	<b>7000<sup>1</sup></b>										
	<b>80L</b>	<b>8000<sup>1</sup></b>										

### TRIM (Ships separately)

LFR-6RA-T	Trim Style	Reflector Finish/Color	Flange Color Options
<b>Aperture/Shape/Function</b>			
<b>LFR-6RA-T</b> 6" 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>8</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-6RD-H</b> 6" Housing Frame, New Construction, Non-IC	
<input type="checkbox"/> <b>LFR-6RD-H-IC</b> 6" Housing Enclosure, New Construction, IC Rated <sup>9,10</sup>	
<input type="checkbox"/> <b>LFR-6RD-H-CP</b> 6" Housing Enclosure, New Construction, Chicago Plenum <sup>11</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-MOR6-R-WH</b>	Metal Oversized Ring, 6" Round, White (10.12" outside diameter)



Notes:

- 60L–80L require marked spacing. See line art for more details.
- DM01, PDM, DMX, DALI available up to 50L. EDM available 15L–40L.
- NX requires DM1 driver option.
- 347V requires DM1 driver option; available 10L–40L; not available with Controls, DTS, EMR.
- Module options not available in combination.
- DTS available with DM1, DM01 or DALI.
- PH and SLT available in painted reflector/flange only. Must specify WT or BT.
- WT not needed for WC.
- IC available up to 35L; 10L–15L 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.)
- IC housing not available for use in combination with Controls or with Module options EMR, DTS.
- CP available up to 35L; not available with DMX, Controls, or EMR options.

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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	✓	✓	✓	-	-	✓	✓	✓ <sup>1</sup>		NXDSP

<sup>1</sup> 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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## PERFORMANCE SUMMARY

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

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	615	7.3	84
		Narrow	890	7.3	122
		Medium	843	7.3	116
		Wide	741	7.3	101
15L	1500	Very Narrow	946	11.4	83
		Narrow	1369	11.4	120
		Medium	1297	11.4	114
		Wide	1139	11.4	100
20L	2000	Very Narrow	1460	14.5	101
		Narrow	1763	14.6	122
		Medium	1670	14.6	115
		Wide	1467	14.6	101
25L	2500	Very Narrow	1605	19.5	82
		Narrow	2322	19.5	119
		Medium	2199	19.5	113
		Wide	1932	19.5	99
30L	3000	Very Narrow	1965	24.3	81
		Narrow	2843	24.3	117
		Medium	2693	24.3	111
		Wide	2366	24.3	97
35L	3500	Very Narrow	2308	29.1	79
		Narrow	3338	29.1	115
		Medium	3162	29.1	109
		Wide	2778	29.1	95
40L	4000	Very Narrow	2555	32.6	78
		Narrow	3696	32.6	113
		Medium	3502	32.6	107
		Wide	3076	32.6	94
50L	5000	Very Narrow	3182	42.3	75
		Narrow	4603	42.3	109
		Medium	4361	42.3	103
		Wide	3831	42.3	91
60L	6000	Very Narrow	3947	50.1	79
		Narrow	5709	50.1	114
		Medium	5409	50.1	108
		Wide	4752	50.1	95
70L	7000	Very Narrow	4594	59.5	77
		Narrow	6645	59.5	112
		Medium	6295	59.5	106
		Wide	5530	59.5	93
80L	8000	Very Narrow	5274	70.1	75
		Narrow	7628	70.1	109
		Medium	7226	70.1	103
		Wide	6349	70.1	91

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

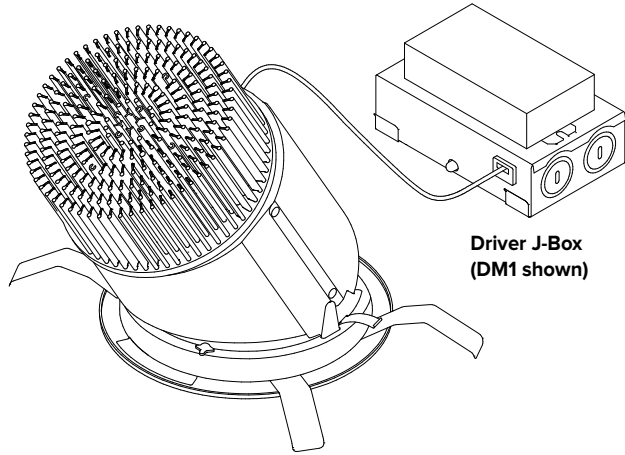
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CATALOG #: \_\_\_\_\_

## DIMENSIONS

### LFR-6RA-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**

DIMENSIONAL DATA	
APERTURE	Ø 5.75" (146.1mm)
OVERALL	Ø 7.13" (181.0mm)
FLANGE WIDTH	0.71" (18.0mm)
CEILING CUTOUT	Ø 6.50" (165.1mm)
CEILING THICKNESS	0.50"-1.25" (12.7-31.8mm)

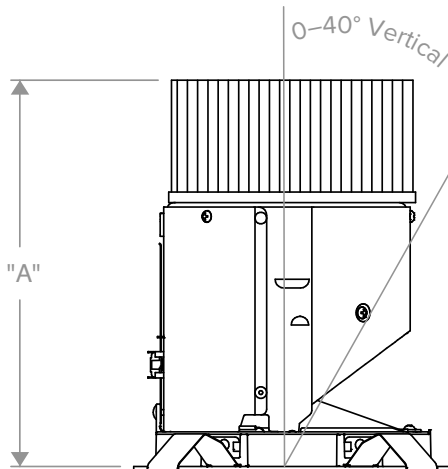
### LFR-6RA LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	BEAM DISTRIBUTION	
	VNR	NR / MD/ WD
10L-35L	8.16" (207.3mm)	6.94" (176.3mm)
40L-50L	8.73" (221.7mm)	7.51" (190.7mm)
60L-80L	9.92" (252.0mm)	8.70" (221.0mm)

\* Note: Add ½" minimum plenum clearance above overall Light Engine Height.

\*\* For ≥60L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture

\*\*\* Non-IC rating requires 3" from insulation and combustible materials.



**Side View Standard**

\* 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

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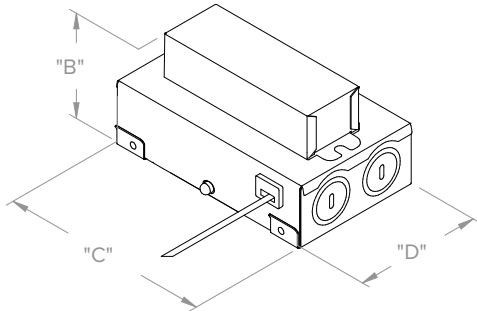
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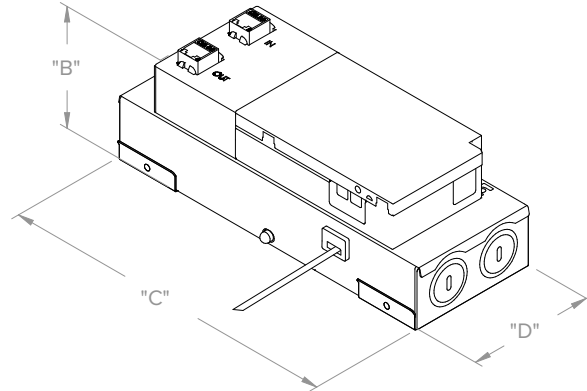
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## DIMENSIONS CONTINUED

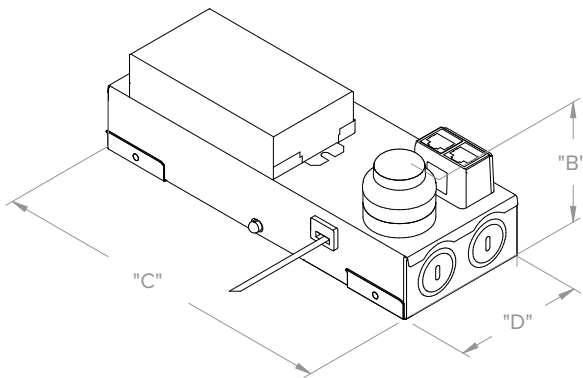
### DRIVER J-BOX



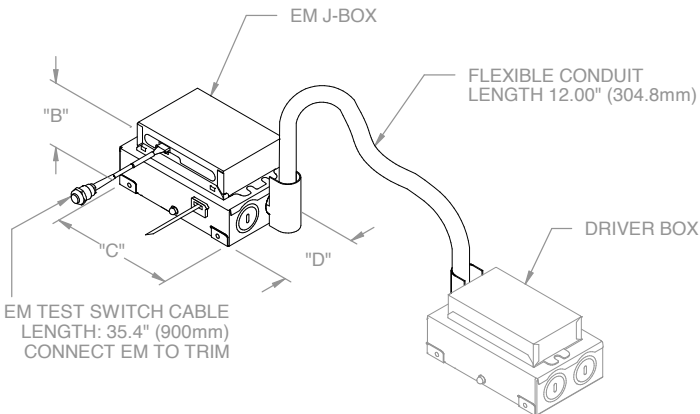
**DM1 / DM01 / PDM / DALI**



**DMX**



**NX CONTROLS OPTION**



**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
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.00" (76.2mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.50" (88.9mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.75" (95.3mm)
EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.00" (76.2mm)

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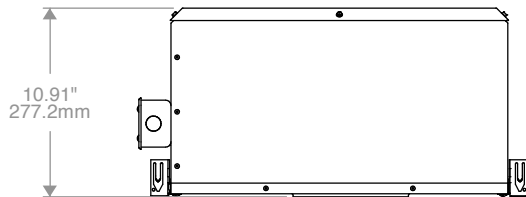
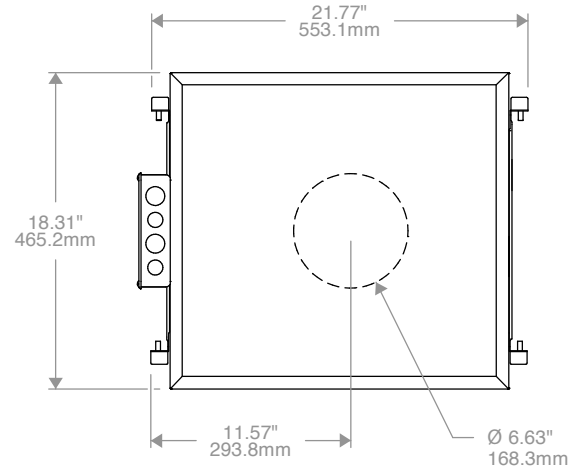
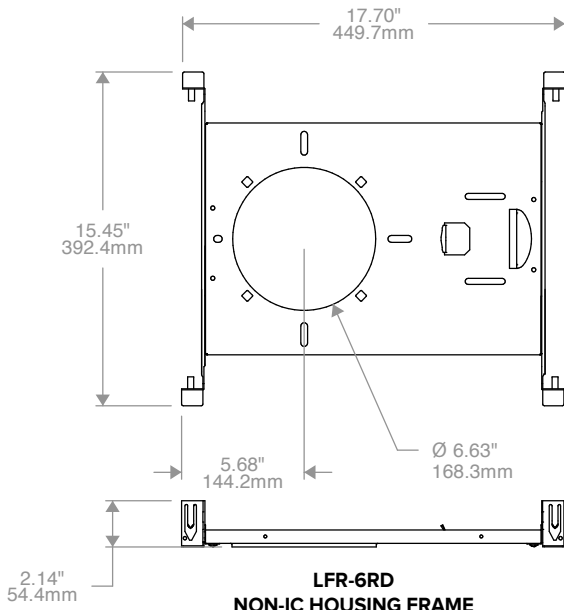
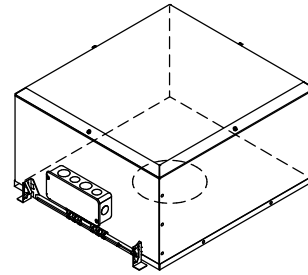
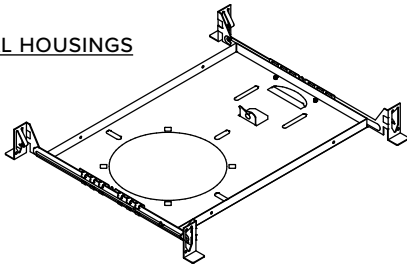
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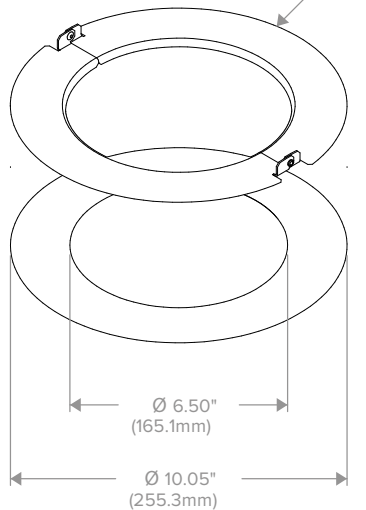
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## DIMENSIONS CONTINUED

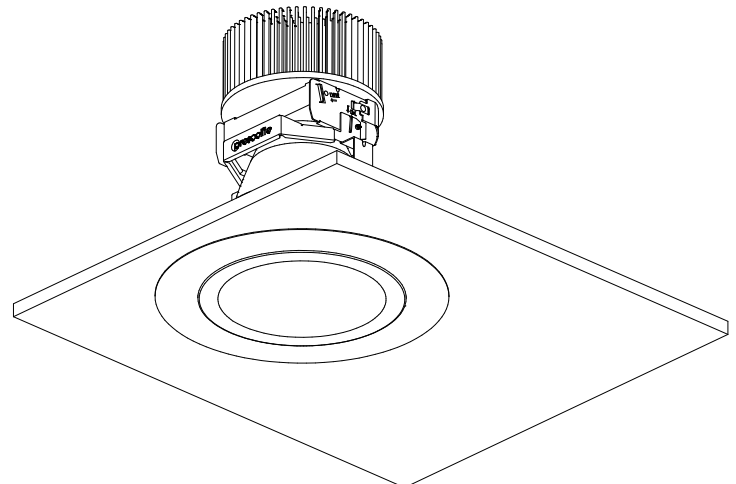
### OPTIONAL HOUSINGS



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



(See LF-MOR Installation Instruction for more details)



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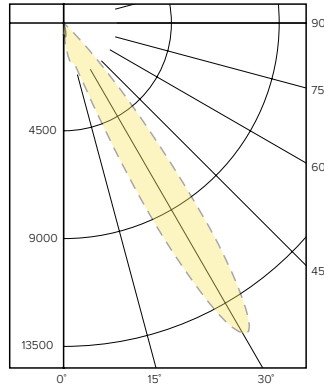
## PHOTOMETRY

### LFR-6RA-M-20L35K8VNR-DM1 / LFR-6RA-T-S

#### LUMINAIRE DATA

Test No.	21.01695
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1460
Watts	14.6W
Efficacy	101
Mounting	Recessed
Beam Angle (FWHM)	14

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	503
5	869
15	1828
25	9950
35	11230
45	733
55	39
65	6
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	61877
55°	4059
65°	847
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

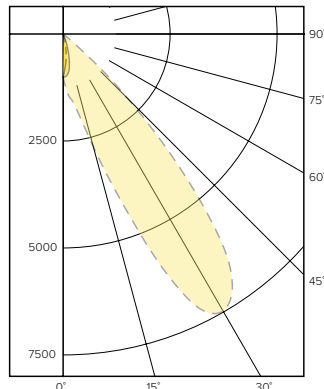
Zone	Lumens	% Luminaire
0-40	1361	93.2
0-60	1458	99.9
0-90	1460	100.0
0-180	1460	100.0

### LFR-6RA-M-20L35K8NR-DM1 / LFR-6RA-T-S

#### LUMINAIRE DATA

Test No.	21.01450
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1763
Watts	14.6W
Efficacy	122
Mounting	Recessed
Beam Angle (FWHM)	25

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	1006
5	1435
15	2725
25	6758
35	6853
45	2168
55	48
65	11
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	183013
55°	4995
65°	1554
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

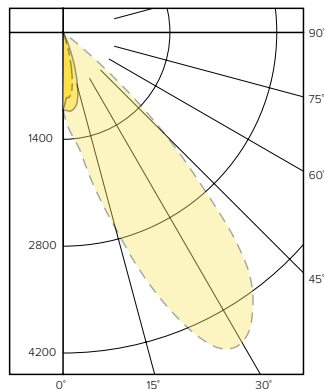
Zone	Lumens	% Luminaire
0-40	1540	87.4
0-60	1761	99.9
0-90	1763	100.0
0-180	1763	100.0

### LFR-6RA-M-20L35K8MD-DM1 / LFR-6RA-T-S

#### LUMINAIRE DATA

Test No.	21.01451
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1763
Watts	14.6W
Efficacy	122
Mounting	Recessed
Beam Angle (FWHM)	35

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	564
5	614
15	2294
25	4134
35	4219
45	1693
55	45
65	47
75	13
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	142915
55°	4683
65°	6638
75°	2998
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1152	86.1
0-60	1331	99.5
0-90	1338	100.0
0-180	1338	100.0



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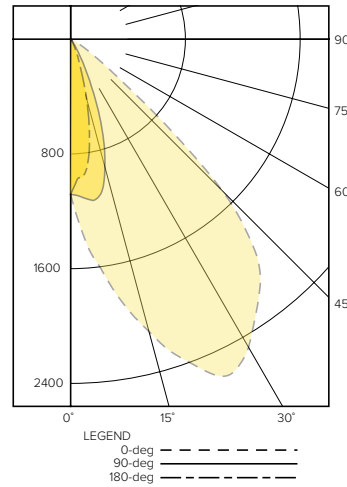
## PHOTOMETRY CONTINUED

### LFR-6RA-M-20L35K8WD-DM1 / LFR-6RA-T-S

#### LUMINAIRE DATA

Test No.	21.01452
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1467
Watts	14.6W
Efficacy	101.0
Mounting	Recessed
Beam Angle (FWHM)	45

#### POLAR GRAPH



#### CANDELA DISTRIBUTION

Degree	Candela
0	1082
5	1470
15	2110
25	2588
35	2270
45	1499
55	187
65	21
75	0
85	0
90	0

#### LUMINANCE DATA\*

Vertical Angle	Average
45°	126539
55°	19461
65°	2966
75°	0
85°	0

\*Candela/Square Meter

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1234	84.1
0-60	1463	99.7
0-90	1467	100.0
0-180	1467	100.0

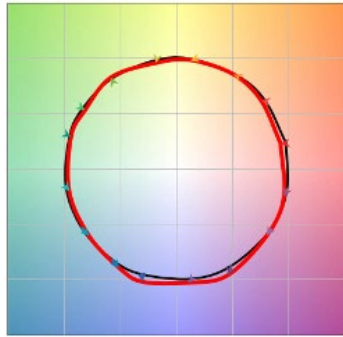
#### LUMEN MULTIPLIER

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 above 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.

#### TM-30 DATA

##### COLOR VECTOR GRAPHIC 3500K, 90 CRI



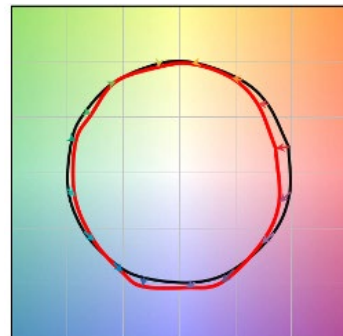
— Reference Illuminant — Test Source

##### COLOR DISTORTION GRAPHIC 3500K, 90 CRI



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R <sub>t</sub>	85	90
R <sub>g</sub>	95	99
CCT (K)	3422	3416
D <sub>uv</sub>	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R <sub>a</sub>	85	93
CIE R <sub>g</sub>	16	66

##### COLOR VECTOR GRAPHIC 3500K, 80 CRI



— Reference Illuminant — Test Source

##### COLOR DISTORTION GRAPHIC 3500K, 80 CRI



# LFR-6RA

LITEFRAME 6" ROUND ADJUSTABLE

## 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](http://currentlighting.com/prescolite).

### DMX

See instruction sheet on [currentlighting.com/prescolite](http://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](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.

### 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.