

LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

LITEFRAME[™] 2.0



FEATURES

- 4" LED downlight delivering 1000–6000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Optional housing accessories available
- Five beam distributions
- 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



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
- Wide Angle and Soft Focus lens filter/clip accessories available

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
- 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
- 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
- For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- Suitable for wet locations, covered ceiling when used with CL lens trim; all other configurations, suitable for damp locations
- CL Lens Option: IP65 rated (room side) when properly installed per installation instructions
- 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
- ENERGY STAR® certified models available (For list and additional information, visit www.energystar.gov)

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	1000–6000
Wattage Range	8–54
Efficacy Range (LPW)	105–135
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–450 (120V)

*Based on Specular, 35K, 80 CRI

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 = Service Program



ORDERING GUIDE

Example: LFR-4RD-M-10L35K8-WD-DM1 / LFR-4RD-T-S / LFR-4RD-H

CATALOG #

FIXTURE MODULE

LFR-4RD-M	Lumen Output		CCT		CRI	Distribution	Driver Options	Control Options	Voltage	Module Options
Ap/Shp/Funct	10L	1000	27K	2700K	8 80+	VNR Very Narrow (17°/0.3 SC)	DM1 0–10V Dimming to 1%	NXE NX Wired Dual RJ45 SmartPORTS, without Sensor ³	<i>Standard</i> 120–277V	CP Chicago Plenum ^{5,6}
<i>(Non-IC frame or IC housing available under Housing Options below)</i>	15L	1500	30K	3000K	9 90+	NR Narrow (26°/0.4 SC)	DM01 0–10V Dimming to < 1% ²	NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ³	34 347V ⁴	EM Emergency Battery Pack with integral test switch and indicator light ⁶
	20L	2000	35K	3500K		MD Medium (34°/0.6 SC)	PDM Phase (Forward/Reverse) Dimming to 1% ²			EMR Emergency Battery Pack with remote test switch and indicator light ⁶
	25L	2500	40K	4000K		WD Wide (49°/0.7 SC)	DMX DMX with RDM dimming to < 0.1% ²	DTS Device Transfer Switch with Dimming Bypass ^{6,7}		
	30L	3000	50K	5000K		XW Extra Wide (65°/1.0 SC) ¹²	DALI DALI Dimming to 1% ²			
	35L	3500					EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²			
	40L	4000								
	50L	5000 ¹								
60L	6000 ¹									

TRIM (Ships separately)

LFR-4RD-T	Distribution	Reflector Finish/Color	Flange Color Options	Lens Options	Lower Trim Options
Aperture/Shape/Function					
LFR-4RD-T 4" Round Downlight Trim Assembly	<i>Standard</i> NR, MD, WD, XW VNR Very Narrow	S Specular ¹² SS Semi-Specular WC Painted White Cone and Flange	<i>Standard matches reflector color</i> WT White Flange ⁸ BT Black Flange	<i>Standard no lens</i> CL Clear Lens (Wet listed) ⁹	EM Pre-punched reflector for EM integral test switch and indicator ⁹ FM Flush Mount Mud-In Ring ¹³

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 ^{10,11}

Notes:

- 50L and 60L 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, EM, EMR.
- CP not available with PDM, DMX, or Controls.
- Module options not available in combination.
- DTS available with DM1, DM01, or DALI.
- WT not needed for WC.
- CL lens and EM trim options not available in combination.
- IC available up to 35L; 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 types.)
- 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.

Accessories

- SFL4** Soft Focus Lens and Clip, 4" Round
- WAL4** Wide Angle 80° Lens and Clip, 4" Round
- LiteGear** LiteGear® Inverter, 125VA–250VA
- LPS Series** LightPower Micro-Inverter, 20VA–55VA
- LF-FMR4-R** Flush Mount Mud-in Ring, 4" ¹³
- LF-MOR4-R-WH** Metal Oversized Ring, 4" Round, White (8.3" outside diameter)
- LFR-SCA4-___** Sloped Ceiling Adapter, 4" White¹⁴

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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

PERFORMANCE DATA TABLE

Performance data shown is 3500K 80+CRI with Specular reflector except Extra Wide distribution which is Semi-Specular.

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	979	7.6	129
		Narrow	1023	7.6	135
		Medium	997	7.6	131
		Wide	995	7.6	131
		Extra Wide	947	7.6	125
15L	1500	Very Narrow	1471	11.8	125
		Narrow	1536	11.8	130
		Medium	1498	11.8	127
		Wide	1494	11.8	127
		Extra Wide	1422	11.8	121
20L	2000	Very Narrow	1937	15.2	127
		Narrow	1982	15.3	130
		Medium	1933	15.3	127
		Wide	1928	15.3	126
		Extra Wide	1835	15.2	121
25L	2500	Very Narrow	2465	20.9	118
		Narrow	2574	20.9	123
		Medium	2510	20.9	120
		Wide	2504	20.9	120
		Extra Wide	2384	20.9	114
30L	3000	Very Narrow	2938	26.0	113
		Narrow	3068	26.0	118
		Medium	2992	26.0	115
		Wide	2985	26.0	115
		Extra Wide	2842	26.0	109
35L	3500	Very Narrow	3571	29.4	121
		Narrow	3729	29.4	127
		Medium	3637	29.4	124
		Wide	3628	29.4	123
		Extra Wide	3454	29.4	117
40L	4000	Very Narrow	3982	32.9	121
		Narrow	4157	32.9	126
		Medium	4055	32.9	123
		Wide	4045	32.9	123
		Extra Wide	3851	32.9	117
50L	5000	Very Narrow	4844	42.0	115
		Narrow	5058	42.0	120
		Medium	4933	42.0	117
		Wide	4921	42.0	117
		Extra Wide	4684	42.0	112
60L	6000	Very Narrow	5778	53.4	108
		Narrow	6033	53.4	113
		Medium	5884	53.4	110
		Wide	5870	53.4	110
		Extra Wide	5588	53.4	105

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DATE: _____ LOCATION: _____

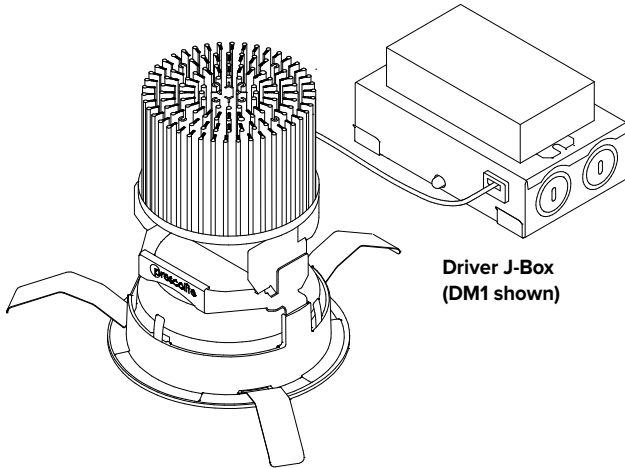
TYPE: _____ PROJECT: _____

CATALOG #: _____

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**

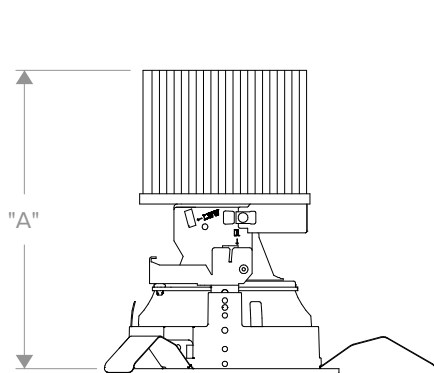
**Driver J-Box
(DM1 shown)**

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)

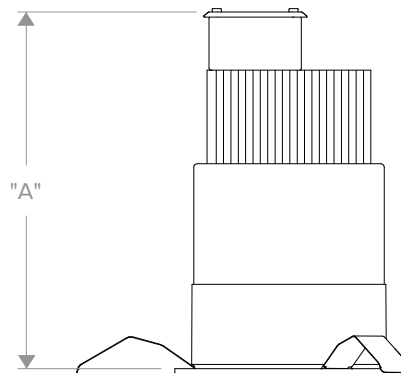
LFR-4RD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *				
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION		
		VNR	NR / MD/ WD	XW
10L-30L	STANDARD	6.24" (158.5mm)	5.45" (138.5mm)	5.1" (129.5mm)
	CP	9.22" (324.1mm)	8.43" (214.0mm)	8.08" (205.1mm)
35L-60L	STANDARD	7.82" (198.6mm)	7.03" (178.6mm)	6.68" (169.7mm)
	CP	9.22" (234.1mm)	8.43" (214.0mm)	8.08" (205.1mm)

* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.
** For ≥50L: 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



Side View CP - Chicago Plenum

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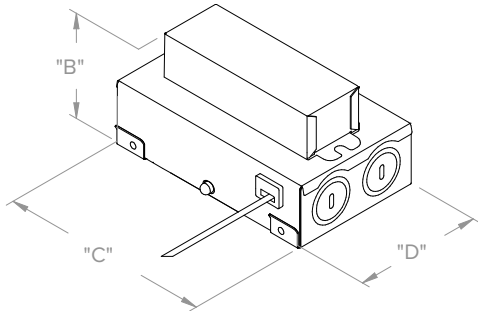
DIMENSIONS CONTINUED

DRIVER J-BOX

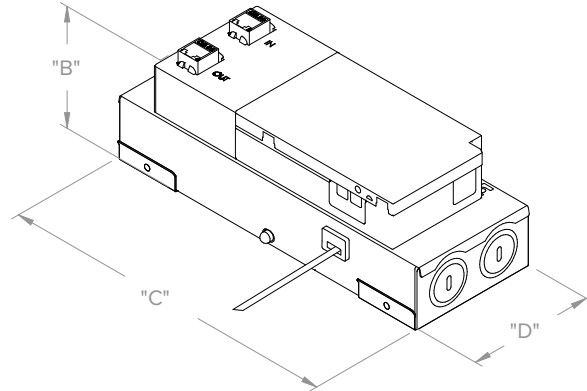
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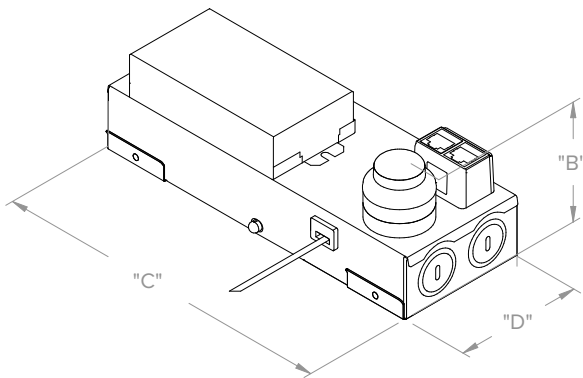
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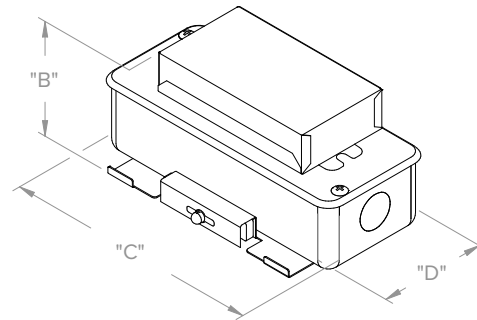
DM1 / DM01 / PDM / DALI



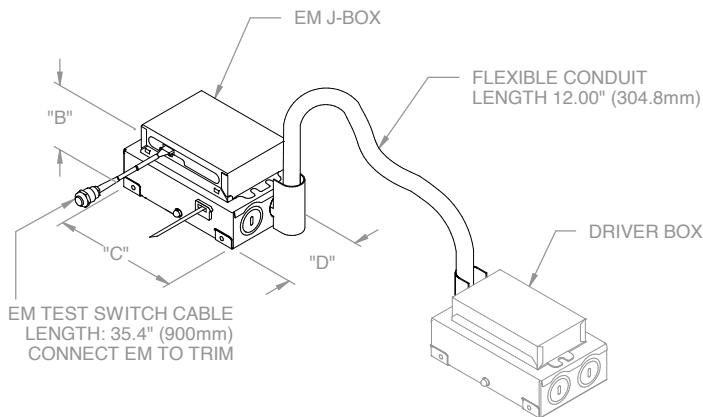
DMX



NX CONTROLS OPTION



CP



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
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.50" (88.9mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	5.00" (127.0mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	6.00" (152.4mm)
EM/EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	4.00" (101.6mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	5.00" (127mm)

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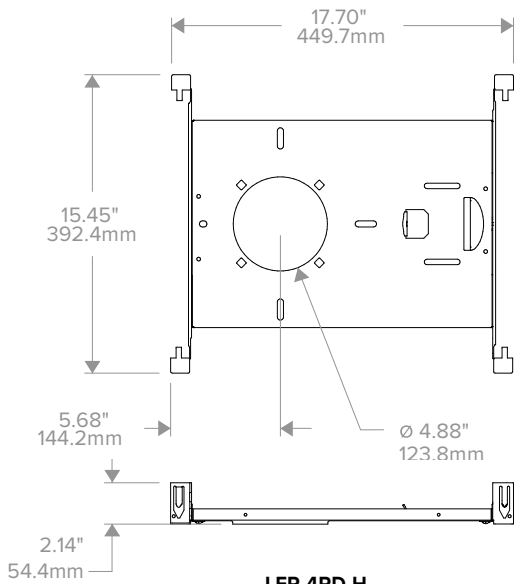
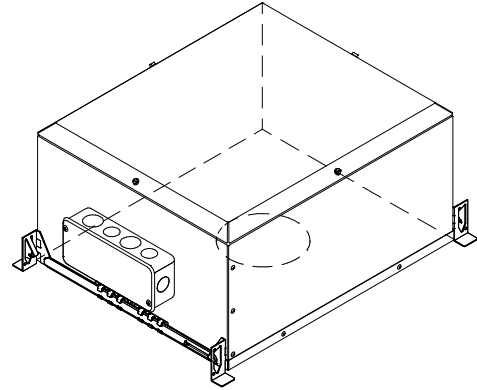
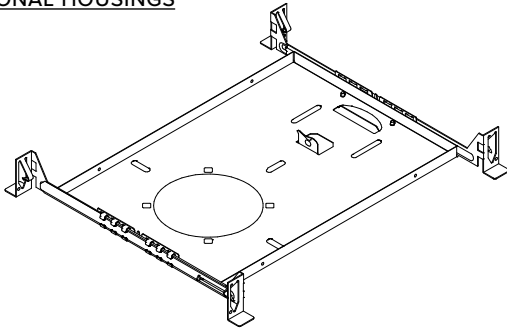
DIMENSIONS CONTINUED

OPTIONAL HOUSINGS

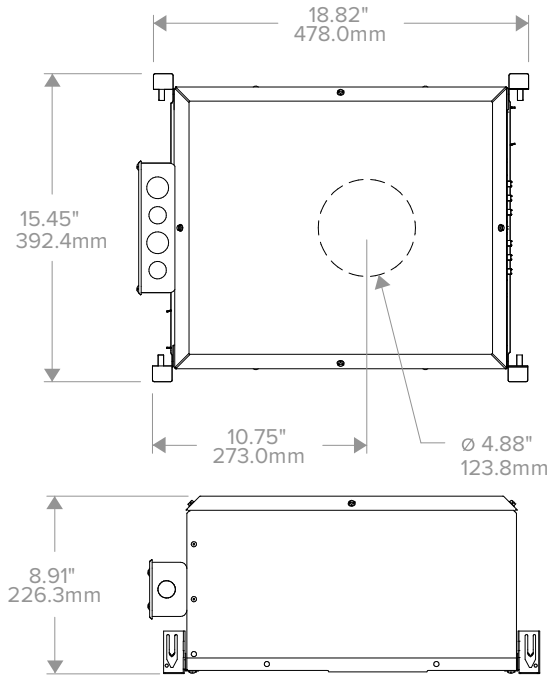
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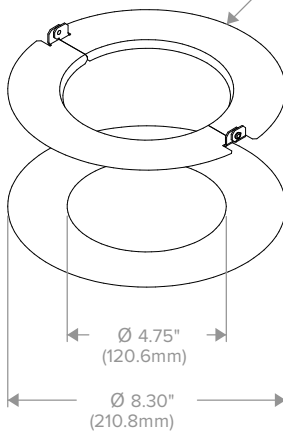


**LFR-4RD-H
NON-IC HOUSING FRAME**

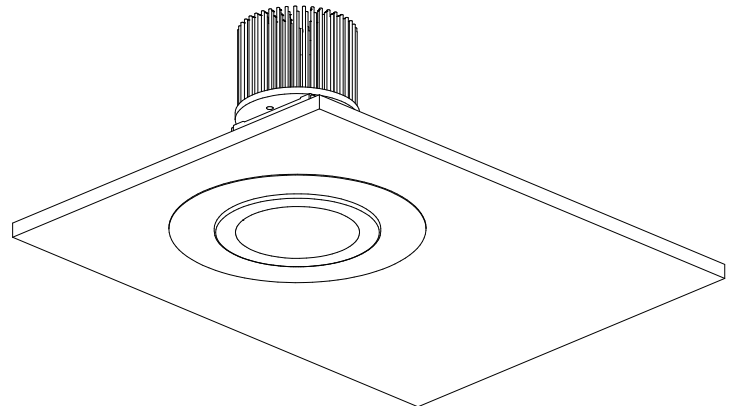


**LFR-4RD-H-IC
IC HOUSING**
Not for use with CP Shroud

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

LITEFRAME 4" ROUND DOWNLIGHT

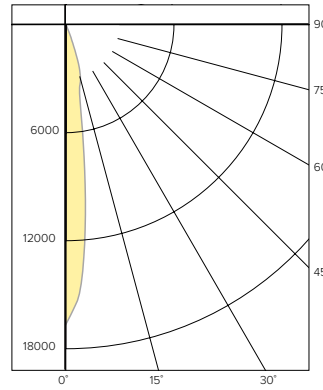
PHOTOMETRY

LFR-4RD-M-20L35K8VNR-DM1 / LFR-4RD-T-VNR-S

LUMINAIRE DATA

Test No.	21.001652
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1937
Watts	15.2W
Efficacy	127
Mounting	Recessed
Spacing Criterion	0.3
Beam Angle (FWHM)	15

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	16778
5	12300
15	3246
25	139
35	7
45	3
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	523
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

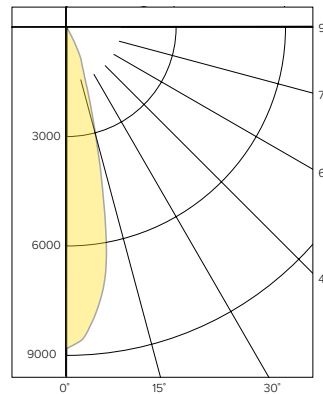
Zone	Lumens	% Luminaire
0-40	1932	99.8
0-60	1936	99.9
0-90	1937	100.0
0-180	1937	100.0

LFR-4RD-M-20L35K8NR-DM1 / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	21.00574
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1982
Watts	15.3W
Efficacy	130
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	26

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	8819
5	8106
15	3103
25	858
35	7
45	2
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	349
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

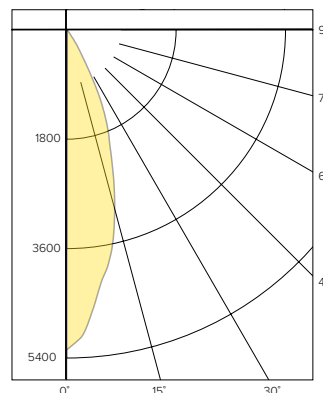
Zone	Lumens	% Luminaire
0-40	1978	99.3
0-60	1981	100.0
0-90	1982	100.0
0-180	1982	100.0

LFR-4RD-M-20L35K8MD-DM1 / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	21.00585
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1933
Watts	15.3W
Efficacy	127
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	34

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	5267
5	4677
15	3033
25	1352
35	55
45	3
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	523
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1928	99.8
0-60	1931	99.9
0-90	1933	100.0
0-180	1933	100.0

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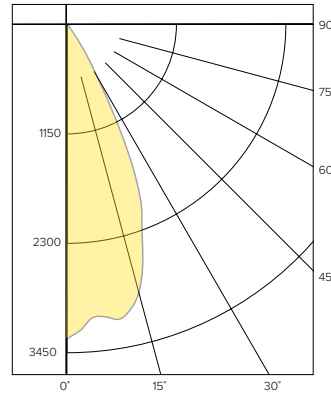
PHOTOMETRY CONTINUED

LFR-4RD-M-20L35K8WD-DM1 / LFR-4RD-T-S

LUMINAIRE DATA

Test No.	21.00577
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1928
Watts	15.3W
Efficacy	126
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	49

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	3329
5	3118
15	2946
25	1625
35	117
45	4
55	1
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	215
65°	292
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

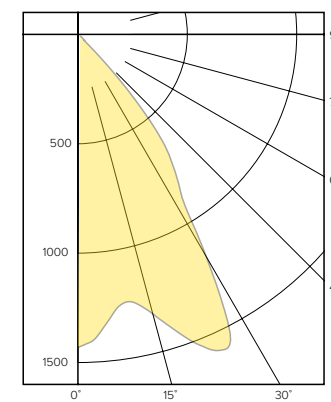
Zone	Lumens	% Luminaire
0-40	1922	99.7
0-60	1927	99.9
0-90	1928	100.0
0-180	1928	100.0

LFR-4RD-M-20L35K8XW-DM1 / LFR-4RD-T-SS

LUMINAIRE DATA

Test No.	21.01456
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1835
Watts	15.2W
Efficacy	121
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	65

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1431
5	1345
15	1323
25	1589
35	781
45	80
55	16
65	6
75	2
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	13955
55°	3441
65°	1751
75°	953
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1686	91.9
0-60	1826	99.5
0-90	1835	100.00
0-180	1835	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.

LENS OPTION / LENS FILTER ACCESSORY MULTIPLIER (Based on Clear Specular)

Option	CL (Clear Lens)	SFL4 (Soft Focus Accessory)	WAL4 (Wide Angle Accessory)
Multiplier	0.95	0.96	0.83

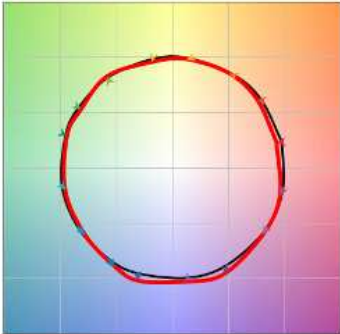
Multiply lumen/lens multipliers to calculate applicable combinations. Example: 30K8 with Clear Lens option (CL) = 0.96 x 0.95 = 0.91

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LITEFRAME 4" ROUND DOWNLIGHT

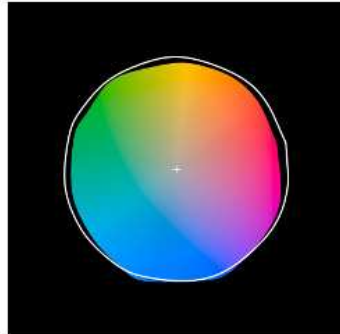
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI



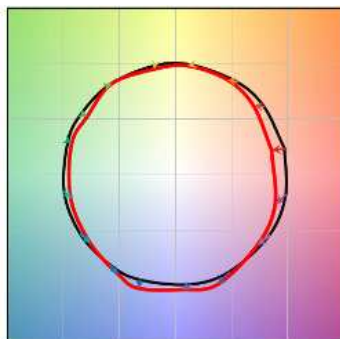
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 90 CRI



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R _t	85	90
R _g	95	99
CCT (K)	3422	3416
D _{uv}	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R _a	85	93
CIE R _g	16	66

COLOR VECTOR GRAPHIC
3500K, 80 CRI



— Reference Illuminant — Test Source

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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.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.