

LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

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, Lutron 2-wire Forward Phase, and EcoSystem
- NX Distributed Intelligence™ wired and wireless controls capability available



RELATED PRODUCTS

- [LFR-4RDS Shallow](#)
- [LFR-4RA](#)
- [LFR-4RW](#)
- [LiteFrame Family](#)

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, RoHS compliant
- Flicker-free dimming options in a wide range of protocols from 1% to <0.1% performance
- 0–10V, Phase (Forward/Reverse), DALI, DMX, Lutron 2-wire Forward Phase, and 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
- 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
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1000–6000
Wattage Range	8–51
Efficacy Range (LPW)	110-131
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–425 (120V)

*Based on Specular, 35K, 80 CRI

LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

= Service Program



Click icon for Stocked item list

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											
LFR-4RD-M 4" Round Downlight Fixture Module for Direct Install <i>(Non-IC frame or IC housing available under Housing Options below)</i>	10L	1000	27K	2700K	8	80+	VNR Very Narrow (17deg/0.3 SC) NR Narrow (26°/0.4 SC) MD Medium (34°/0.6 SC) WD Wide (49°/0.7 SC) XW Extra Wide (65°/1.0 SC) ¹²	DM1 0-10V Dimming to 1%	NXE NX Enabled, Dual SmartPorts ³	<i>Standard</i> 120-277V	CP Chicago Plenum ^{5,6} EM Emergency Battery Pack with integral test switch and indicator light ⁶ EMR Emergency Battery Pack with remote test switch and indicator light ⁶ DTS Device Transfer Switch with Dimming Bypass 6,7
	15L	1500	30K	3000K	9	90+		DMO1 0-10V Dimming to < 1% ²			
	20L	2000	35K	3500K				PDM Phase (Forward/ Reverse) Dimming to 1% ²	NXWD NX Wireless Enabled, Dual SmartPorts ³		
	25L	2500	40K	4000K				DMX DMX with RDM dimming to < 0.1% ²			
	30L	3000	50K	5000K				DALI DALI Dimming to 1% ²			
	35L	3500						2DM Lutron Hi-Lume 2-wire Dimming to 1% (120V Forward Phase only) ²			
	40L	4000						EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²			
	45L	4500									
	50L	5000 ¹									
	60L	6000 ¹									

TRIM (Ships separately)

LFR-4RD-T	Distribution	Reflector Finish/Color	Flange Color Options	Lens Options	Lower Trim Options
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

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}

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

Notes:

- 1 50L and 60L require marked spacing. See line art for more details.
- 2 DMO1, PDM, DMX, DALI available up to 50L. 2DM and EDM available 15L–40L.
- 3 NX requires DM1 driver option.
- 4 347V requires DM1 driver option; 10L–40L not available with Controls, DTS, EM, EMR.
- 5 CP available up to 35L; not available with DMX, Controls, EM or EMR options.
- 6 Module options not available in combination.
- 7 DTS available with DM1, DMO1, or DALI.
- 8 WT not needed for WC.
- 9 CL lens and EM trim options not available in combination.
- 10 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.)
- 11 IC Housing not for use in combination with Controls or with Module Options CP, EM, EMR, DTS.
- 12 XW distribution is not available for Specular (S) reflector finish.

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DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports applications in a variety of deployment options- wired, wireless, hybrid. 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/R ¹
NX Networked – Wireless								
NXWE ²	N/A	Yes	Yes	No	No	Yes	Yes	No ³
NX Networked – Wired/Wireless								
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,3}

- 1 NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network
- 2 Programming via App requires factory assistance
- 3 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

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	1898	15.2	124
		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

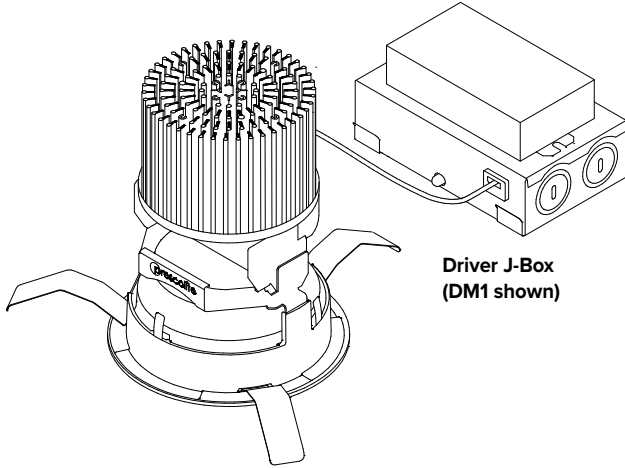
LFR-4RD

LITEFRAME 4" ROUND DOWNLIGHT

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**

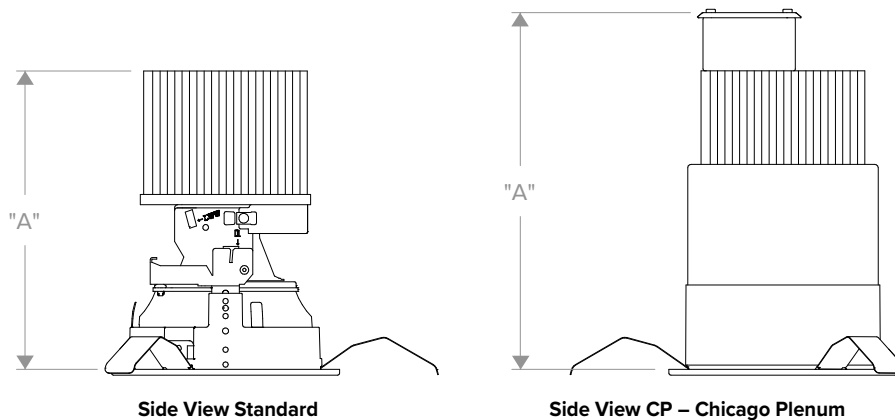
**Driver J-Box
(DM1 shown)**

DIMENSIONAL DATA	
APERTURE	ø4.00" (101.6mm)
OVERALL	Ø5.37" (136.5mm)
FLANGE WIDTH	0.69" (17.5mm)
CEILING CUTOUT	ø4.75" (120.7mm)
CEILING THICKNESS	0.50" - 2.50" (12.7 - 63.5mm)

LFR-4RD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *				
LUMEN PACKAGE	FITTURE MODULE	BEAM DISTRIBUTION		
		VNR	NR / MD/ WD	XW
10L-30L	STANDARD	6.24" (158.5mm)	5.45" (138.5mm)	5.1" (129.5mm)
	CP	7.63" (193.8mm)	6.85" (173.9mm)	6.50" (165.0mm)
35L-50L	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)
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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LITEFRAME 4" ROUND DOWNLIGHT

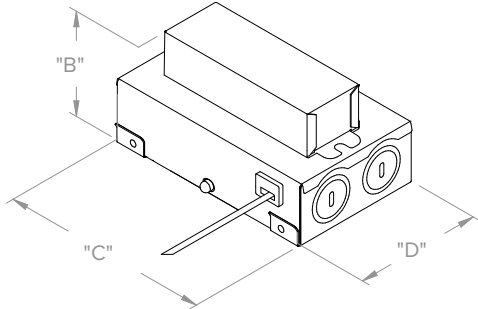
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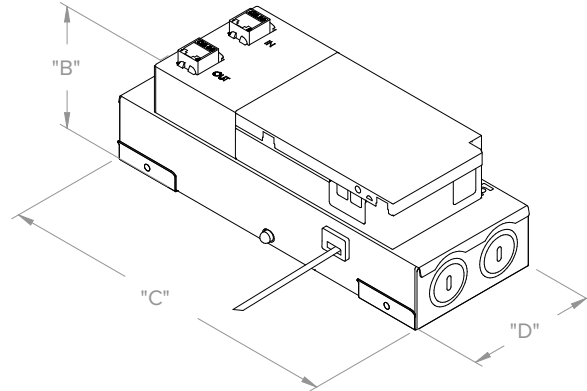
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DIMENSIONS CONTINUED

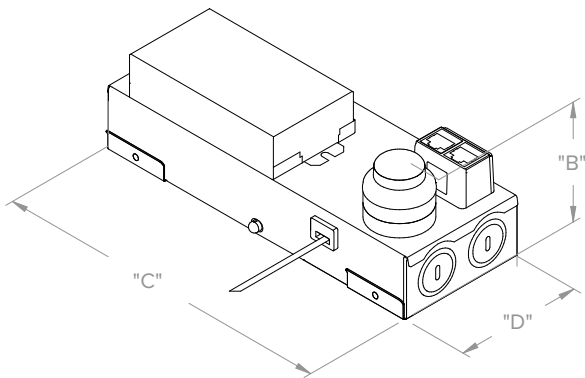
DRIVER J-BOX



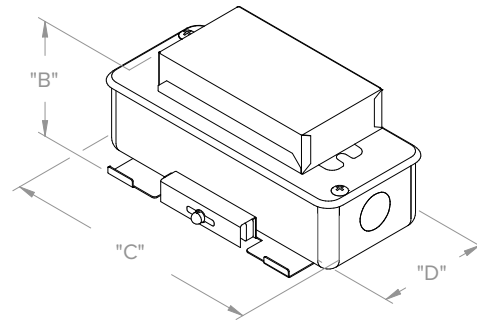
DM1 / DM01 / PDM / DALI



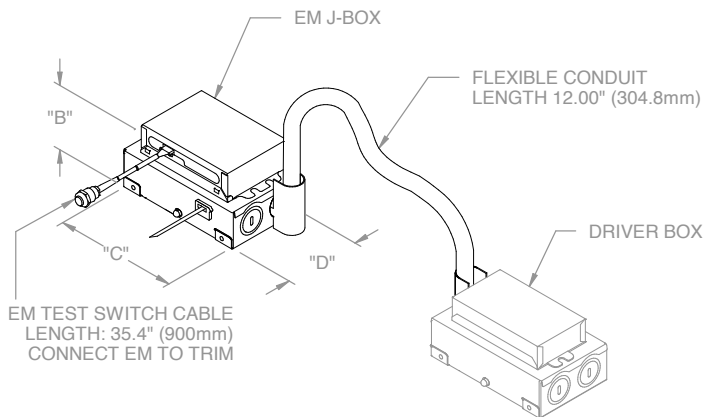
DMX



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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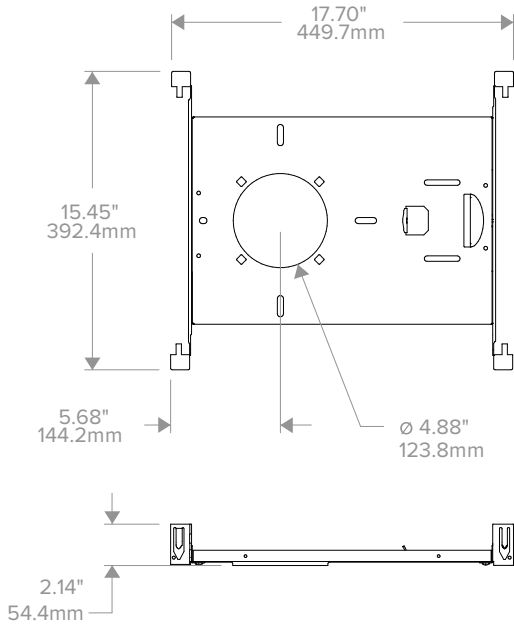
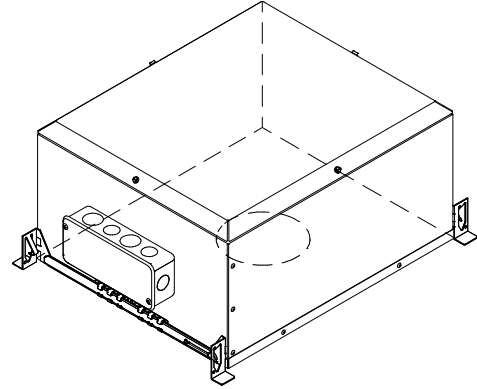
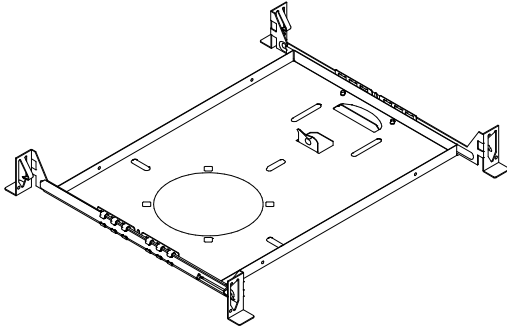
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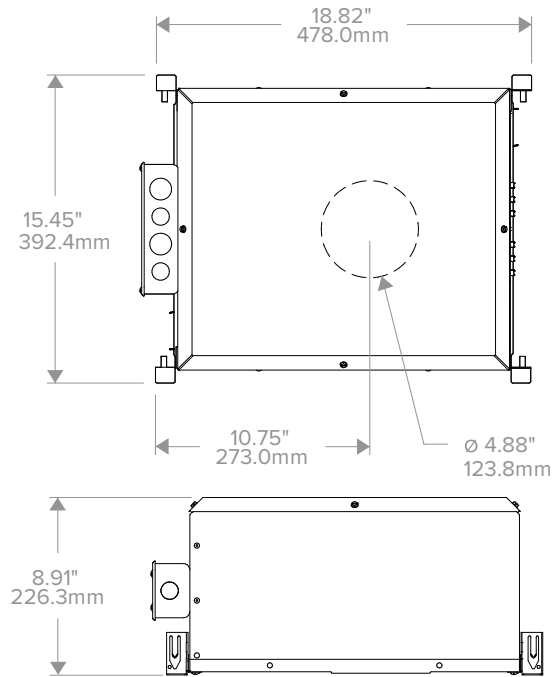
CATALOG #: _____

DIMENSIONS CONTINUED

OPTIONAL HOUSINGS



LFR-4RD-H
NON-IC HOUSING FRAME



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

PHOTOMETRY

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

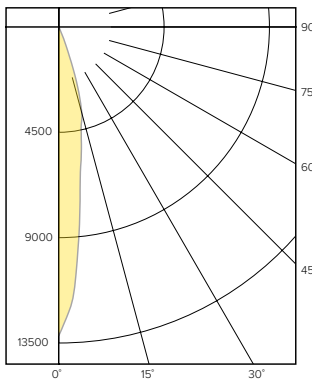
LUMINAIRE DATA

Test No.	21.01485
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1898
Watts	15.3W
Efficacy	124.4
Mounting	Recessed
Spacing Criterion	0.3
Beam Angle (FWHM)	17

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1892	99.7
0-60	1897	99.9
0-90	1898	100.0
0-180	1898	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	13194
5	9489
15	3804
25	148
35	10
45	4
55	2
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	698
55°	430
65°	292
75°	0
85°	0

*Candela/Square Meter

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PHOTOMETRY CONTINUED

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

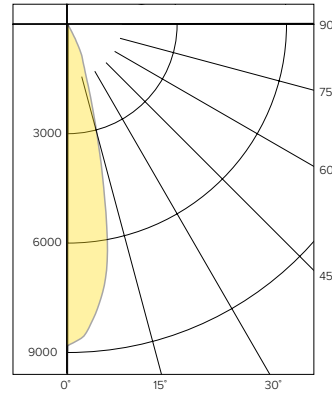
LUMINAIRE DATA

Test No.	21.00574
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1982
Watts	15.3W
Efficacy	129.9
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	26

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

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

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

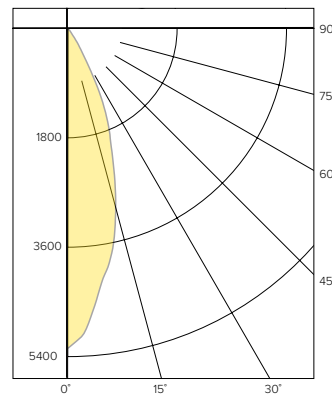
LUMINAIRE DATA

Test No.	21.00585
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1933
Watts	15.3W
Efficacy	126.7
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	34

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

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

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

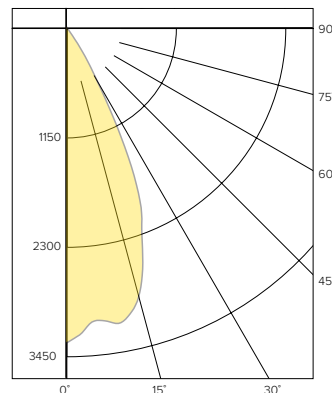
LUMINAIRE DATA

Test No.	21.00577
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1928
Watts	15.3W
Efficacy	126.4
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	49

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

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

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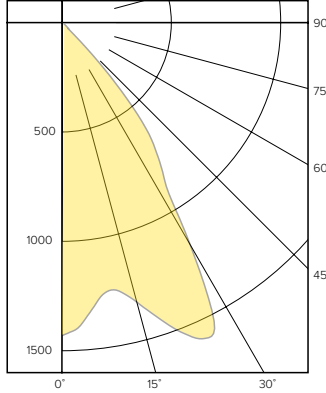
PHOTOMETRY CONTINUED

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	120.8
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
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.

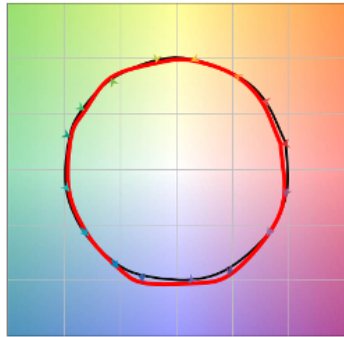
LENS OPTION / LENS FILTER ACCESSORY MULTIPLIER (Based on Clear Specular)

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**

TM-30 DATA

COLOR VECTOR GRAPHIC 3500K, 90 CRI



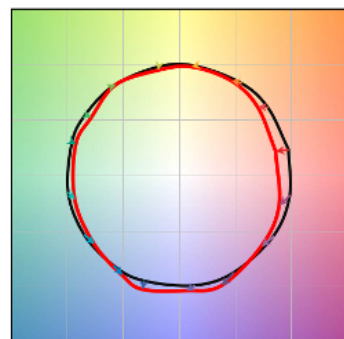
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC 3500K, 90 CRI



TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R _r	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 _s	16	66

COLOR VECTOR GRAPHIC 3500K, 80 CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC 3500K, 80 CRI



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LITEFRAME 4" ROUND DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

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 Compatability

See the DIMMING link for more information on dimming compatibility and recommended dimmer list

DMX

See instruction sheet on www.prescolite.com for connection & installation information.

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

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