

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



CONTROLS 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, four panel aluminum reflector, self-flanged
- 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
- NX Lighting Controls provides options for standalone and networked functionality with wired or wireless connectivity for NX system deployments
- Integral and remote emergency battery options available

INSTALLATION

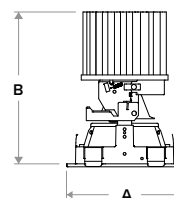
- Accommodates ceiling thickness from 0.50" to 2.50"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation types.)

LITEFRAME[®]
2.0



SERVICE PROGRAMS

STOCK QS10



Typical Dimensions and Weights			
Lumen Package	"A" Width (SQ) Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 30L	5.38 (137)	5.45 (138)	4 (1.8)
35L - 60L	5.38 (137)	7.03 (179)	4.3 (1.9)

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 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
- EM/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	1000–6000
Wattage Range	8–54
Efficacy Range (LPW)	104–136
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–450 (120V)

*Based on Specular, 35K, 80 CRI

LFR-4SQD

LITEFRAME 4" SQUARE DOWNLIGHT

ORDERING GUIDE

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

Gray Shading = Service Program

STOCK

QS10
Limit of 150 Luminaries

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

CATALOG #

FIXTURE MODULE

LFR-4SQD-M	Ap/Shp/Funct	Lumen Output	CCT	CRI	Distribution	Driver Options	Control Options	Voltage	Module Options
LFR-4SQD-M 4" Square Downlight Fixture Module for Direct Install (Non-IC frame or IC housing available under Housing Options below)		10L 1000	27K 2700K	8 80+	VNR Very Narrow (15°/0.3 SC)	DM1 0–10V Dimming to 1%	NX Lighting Controls	Standard 120–277V	CP Chicago Plenum ^{5,6}
		15L 1500	30K 3000K	9 90+	NR Narrow (25°/0.4 SC)	DM01 0–10V Dimming to < 1% ²	Networked Wireless	34 347V ⁴	EM 6W Emergency Battery Pack (CEC Title 20 Compliant) with integral test switch and indicator light ⁶
		20L 2000	35K 3500K		MD Medium (30°/0.5 SC)	PDM Phase (Forward/ Reverse) Dimming to 1% ²	NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ³		EMR 6W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light ⁶
		25L 2500	40K 4000K		WD Wide (46°/0.7 SC)	DMX DMX with RDM dimming to < 0.1% ²	Networked Wired		
		30L 3000	50K 5000K		XW Extra Wide (57°/0.9 SC) ¹²	DALI DALI Dimming to 1% ²	NXE NX Wired Dual RJ45 SmartPORTS, without Sensor ³		DTS Device Transfer Switch with Dimming Bypass ^{6,7}
		35L 3500				EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²			
		40L 4000							
		50L 5000 ¹							
		60L 6000 ¹							

TRIM (Ships separately)

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

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function
<input type="checkbox"/> LFR-4SQD-H 4" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> LFR-4SQD-H-IC 4" Housing Enclosure, New Construction, IC Rated ^{10,11}

Accessories

<input type="checkbox"/> SFL4	Soft Focus Lens and Clip, 4" Square
<input type="checkbox"/> WAL4	Wide Angle 80° Lens and Clip, 4" Square
<input type="checkbox"/> LiteGear	LiteGear® Inverter, 125VA–250VA
<input type="checkbox"/> LPS Series	LightPower Micro-Inverter, 20VA–55VA
<input type="checkbox"/> LF-FMR4-SQ	Flush Mount Mud-in Ring, 4" Square ¹³
<input type="checkbox"/> LF-MOR4-SQ-WH	Metal Oversized Ring, 4" Square, White (8.3" outside dimension)

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 insulation 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 requires FMR accessory.

DATE:LOCATION:

TYPE:PROJECT:

CATALOG #:

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	✓	✓	✓	-	-	✓	✓	✓ ¹		NXDSP

1 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

LFR-4SQD

LITEFRAME 4" SQUARE DOWNLIGHT

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

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	977	7.7	128
		Narrow	1039	7.7	136
		Medium	1013	7.7	132
		Wide	1011	7.7	132
		Extra Wide	1002	7.7	131
15L	1500	Very Narrow	1468	11.7	125
		Narrow	1563	11.7	133
		Medium	1523	11.7	130
		Wide	1520	11.7	130
		Extra Wide	1506	11.7	129
20L	2000	Very Narrow	1882	15.2	124
		Narrow	2003	14.9	135
		Medium	1951	14.9	131
		Wide	1948	14.9	131
		Extra Wide	1930	15.2	127
25L	2500	Very Narrow	2408	20.3	119
		Narrow	2563	20.3	126
		Medium	2497	20.3	123
		Wide	2493	20.3	123
		Extra Wide	2470	20.3	122
30L	3000	Very Narrow	2907	25.6	114
		Narrow	3093	25.6	121
		Medium	3014	25.6	118
		Wide	3009	25.6	118
		Extra Wide	2981	25.6	117
35L	3500	Very Narrow	3519	29.2	120
		Narrow	3745	29.2	128
		Medium	3649	29.2	125
		Wide	3643	29.2	125
		Extra Wide	3609	29.2	123
40L	4000	Very Narrow	3899	32.9	119
		Narrow	4149	32.9	126
		Medium	4043	32.9	123
		Wide	4036	32.9	123
		Extra Wide	3998	32.9	122
50L	5000	Very Narrow	4816	42.8	112
		Narrow	5125	42.8	120
		Medium	4993	42.8	117
		Wide	4985	42.8	116
		Extra Wide	4938	42.8	115
60L	6000	Very Narrow	5679	53.3	107
		Narrow	6043	53.3	113
		Medium	5888	53.3	111
		Wide	5878	53.3	110
		Extra Wide	5823	53.3	109

LFR-4SQD

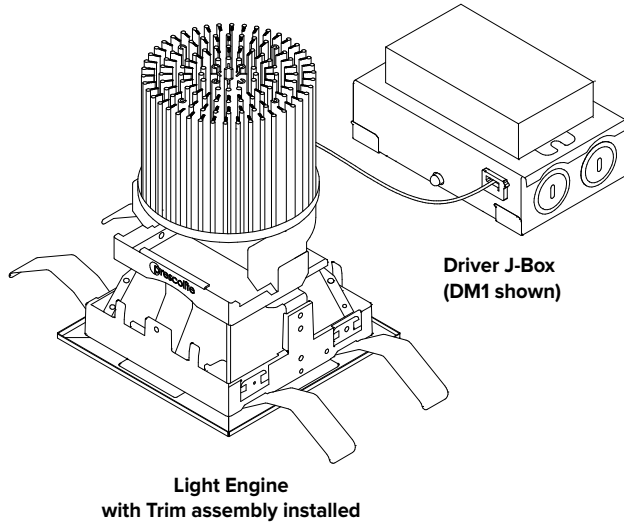
LITEFRAME 4" SQUARE DOWNLIGHT

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

DIMENSIONS

LFR-4SQD-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.

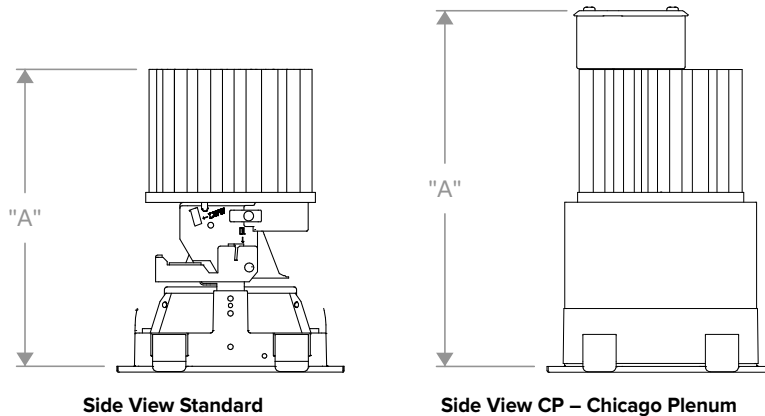


DIMENSIONAL DATA		
APERTURE		□ 4.00" (101.6mm)
FLANGE WIDTH	Standard	0.69" (17.5mm)
	Flush Mount	0.18" (4.6mm)
FLANGE TO FLANGE	Standard	□ 5.38" (136.7mm)
	Flush Mount	□ 4.37" (111.0mm)
CEILING CUTOUT	Standard	□ 4.75" (120.7mm)
	Flush Mount	□ 4.88" (123.9mm)
CEILING THICKNESS		0.50" – 2.50" (12.7 – 63.5mm)

LFR-4SQD 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)	5.10" (129.5mm)
	CP	9.22" (234.1mm)	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)

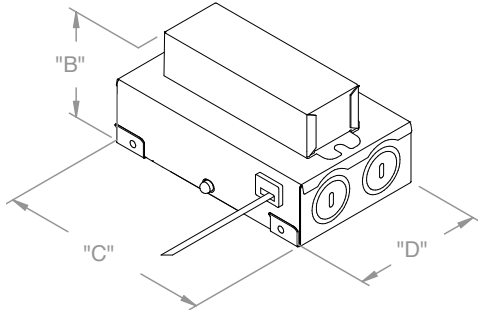
* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.
** For ≥50L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture.
*** Non-IC rating requires 3" from insulation and combustible materials.



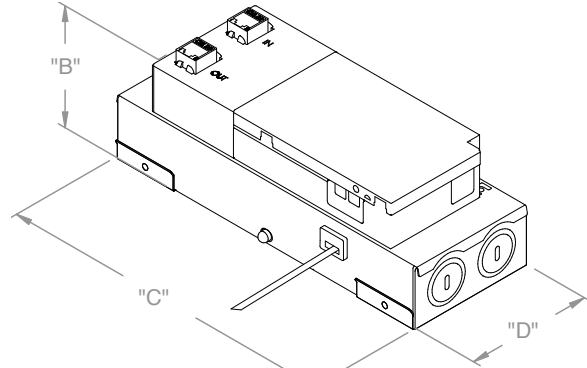
DIMENSIONS CONTINUED

DRIVER J-BOX

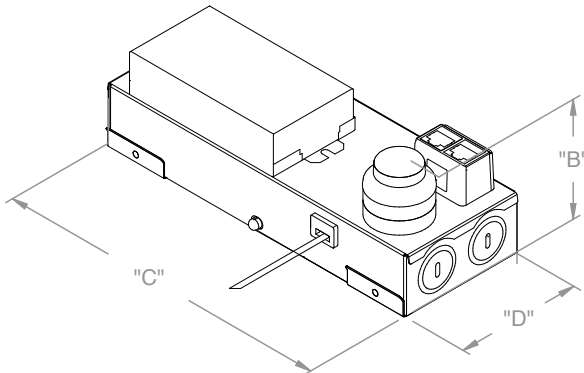
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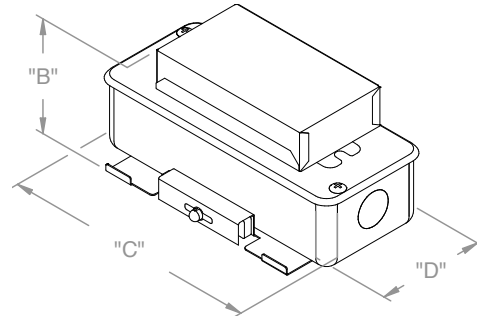
DM1 / DM01 / PDM / DALI



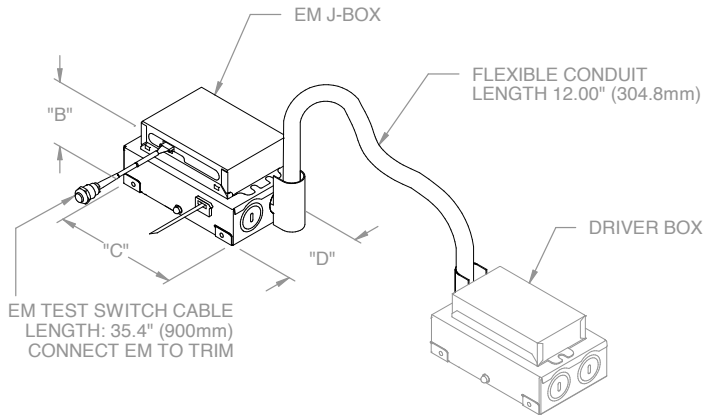
DMX



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)

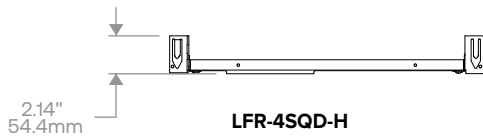
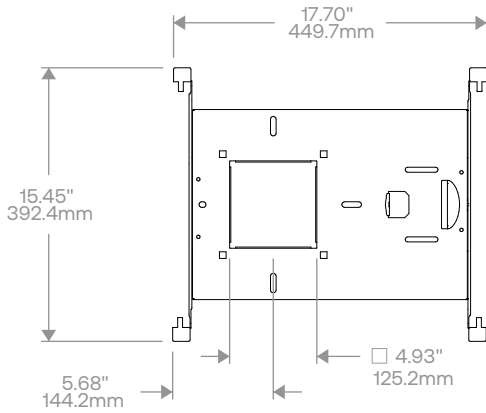
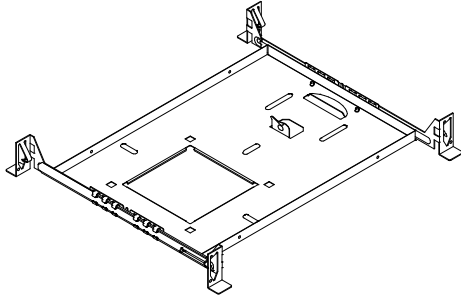
LFR-4SQD

LITEFRAME 4" SQUARE DOWNLIGHT

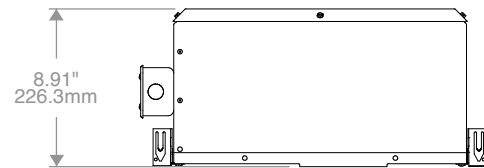
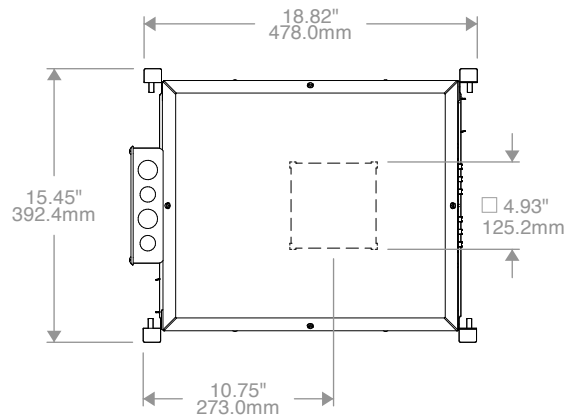
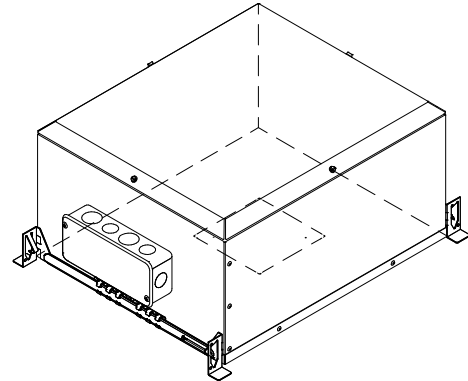
DIMENSIONS CONTINUED

OPTIONAL HOUSINGS

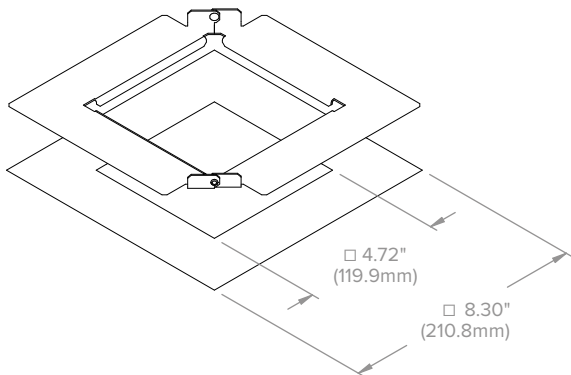
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CATALOG #:	



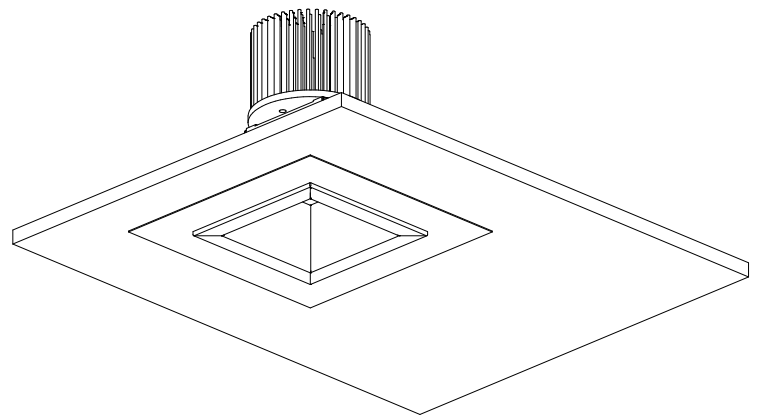
LFR-4SQD-H
NON-IC HOUSING FRAME



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



LF-MOR4-SQ
METAL OVERSIZED RING
(See LF-MOR Installation Instruction for more details)



PHOTOMETRY

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

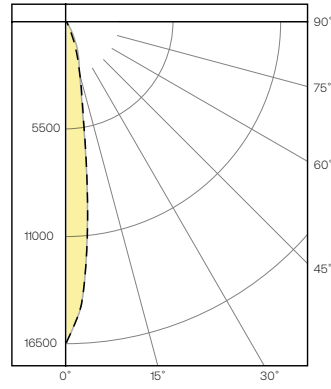
LUMINAIRE DATA

Test No.	22.00575
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1882
Watts	15.2W
Efficacy	124
Mounting	Recessed/Ceiling
Spacing Criterion	0.3
Beam Angle (FWHM)	15

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1879	99.3
0-60	1882	99.9
0-90	1882	100.0
0-180	1882	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	16396
5	11795
15	2445
25	92
35	6
45	2
55	1
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	274
55°	169
65°	0
75°	0
85°	0

*Candela/Square Meter

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

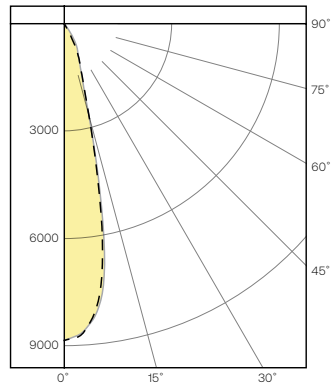
LUMINAIRE DATA

Test No.	22.00825
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	2003
Watts	14.9W
Efficacy	124
Mounting	Recessed/Ceiling
Spacing Criterion	0.4
Beam Angle (FWHM)	25

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1952	97.5
0-60	2002	100.0
0-90	2003	100.0
0-180	2003	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	8836
5	8350
15	2653
25	812
35	3
45	1
55	0
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	137
55°	0
65°	0
75°	0
85°	0

*Candela/Square Meter

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

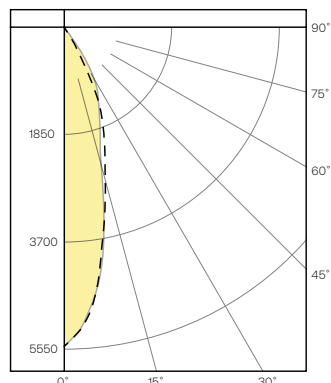
LUMINAIRE DATA

Test No.	22.00828
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1951
Watts	14.9W
Efficacy	131
Mounting	Recessed/Ceiling
Spacing Criterion	0.5
Beam Angle (FWHM)	30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1948	99.9
0-60	1951	100.0
0-90	1951	100.0
0-180	1951	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	5484
5	4941
15	2722
25	1372
35	36
45	2
55	0
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	274
55°	0
65°	0
75°	0
85°	0

*Candela/Square Meter

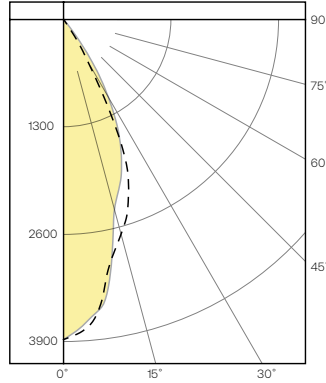
PHOTOMETRY CONTINUED

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

LUMINAIRE DATA

Test No.	22.00832
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1948
Watts	14.9W
Efficacy	131
Mounting	Recessed/Ceiling
Spacing Criterion	0.7
Beam Angle (FWHM)	46

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	3870
5	3702
15	2686
25	1636
35	90
45	2
55	0
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	274
55°	0
65°	0
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

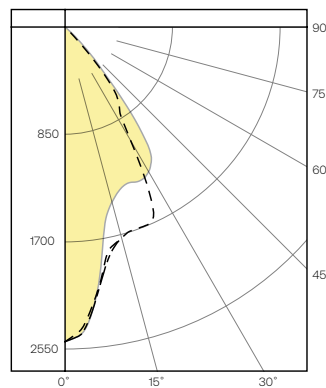
Zone	Lumens	% Luminaire
0-40	1943	90.3
0-60	1948	99.7
0-90	1948	100.0
0-180	1948	100.0

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

LUMINAIRE DATA

P22.00839	22.00839
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1930
Watts	15.2W
Efficacy	127
Mounting	Recessed/Ceiling
Spacing Criterion	0.9
Beam Angle (FWHM)	57

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2487
5	2260
15	1727
25	1654
35	742
45	10
55	1
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	1370
55°	169
65°	0
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1803	93.4
0-60	1930	100.0
0-90	1930	100.0
0-180	1930	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.

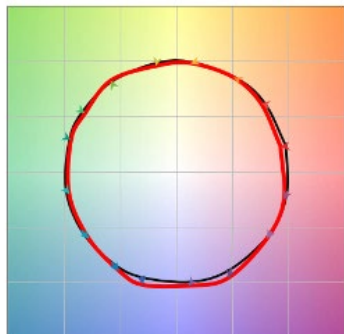
LENS OPTION / LENS FILTER ACCESSORY MULTIPLIER (Based on Clear Specular)

Option	CL (Clear Lens)	SFL4 (Soft Focus Accessory)	WAL4 (Wide Angle Accessory)
Multiplier	0.95	0.95	0.80

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



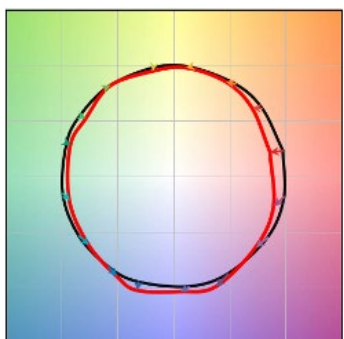
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 90 CRI



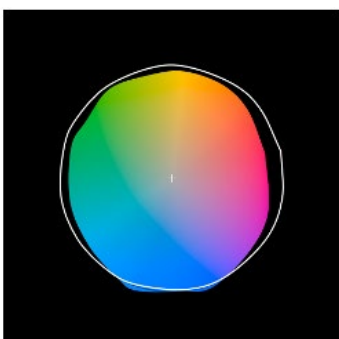
TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R_i	85	90
R_g	95	99
CCT (K)	3422	3416
D_{uv}	-0.0008	-0.0019
x	0.4089	0.408
y	0.3906	0.3877
CIE R_a	85	93
CIE R_g	16	66

COLOR VECTOR GRAPHIC
3500K, 80 CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 CRI



LFR-4SQD

LITEFRAME 4" SQUARE DOWNLIGHT

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.

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.