

LFR-6SQD (SH)

LITEFRAME 6" SQUARE
 NON-CONDUCTIVE SHOWER DOWNLIGHT

LITEFRAME[™] 2.0



FEATURES

- 6" LED downlight delivering 1000–8000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Non-conductive dead-front trim with four regressed lens options
- Suitable for wet locations, covered ceiling
- IP65 rated (room side)
- 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



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

- Durable, non-conductive trim with 1/2" regressed lens
- Lens options include acrylic, polycarbonate, or tempered glass micro-prism, and clear acrylic
- Smooth room side lens surface for easy wipe down
- Available in white or black trim and flange color

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
- Remote emergency battery options available

INSTALLATION

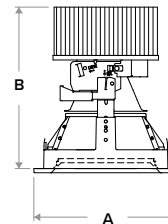
- Accommodates ceiling thickness from 0.50" to 2.50"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L–15L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation types.)

CERTIFICATIONS

- cCSAus certified to UL 1598
- For ≥60L: Marked spacing required 36" fixture center to center; 18" fixture center to building member; 0.5" above fixture
- IP65 rated (room side) when properly installed per installation instructions
- Suitable for wet locations, covered ceiling. EMR: 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



Typical Dimensions and Weights			
Lumen Package	"A" Width (SQ) Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 35L	7.57 (192)	6.71 (170)	5 (2.3)
40L - 50L	7.57 (192)	7.28 (185)	5.3 (2.4)
60L - 80L	7.57 (192)	8.47 (215)	5.9 (2.7)

See DIMENSIONS section for complete details

KEY DATA	
Lumen Range	1000–8000
Wattage Range	8–70
Efficacy Range (LPW)	86–100
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–582 (120V)

*Based on Specular, 35K, 80 CRI

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Gray Shading = Service Program



ORDERING GUIDE

Example: LFR-6SQD-M-10L35K8-WD-DM1 / LFR-6SQD-T-SH-WTAML / LFR-6SQD-H

CATALOG #

FIXTURE MODULE

LFR-6SQD-M	Lumen Output		CCT		CRI	Distribution	Driver Options	Control Options	Voltage	Module Options
Ap/Shp/Funct										
LFR-6SQD-M 6" Square Downlight Fixture Module for Direct Install	10L	1000	27K	2700K	8 80+	WD Wide (50°/0.9 SC)	DM1 0–10V Dimming to 1%	NX Lighting Controls <u>Networked Wireless</u>	<i>Standard</i> 120–277V	CP Chicago Plenum ^{4,5} EMR 6W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light ⁵ DTS Device Transfer Switch with Dimming Bypass ^{5,6}
	15L	1500	30K	3000K	9 90+		DM01 0–10V Dimming to < 1% ¹			
	20L	2000	35K	3500K			PDM Phase (Forward/ Reverse) Dimming to 1% ¹	<u>Networked Wired</u> NXE NX Wired Dual RJ45 SmartPORTS, without Sensor ²		
	25L	2500	40K	4000K			DMX DMX with RDM dimming to < 0.1% ¹			
	30L	3000	50K	5000K			DALI DALI Dimming to 1% ¹			
	35L	3500					EDM Lutron Hi-Lume EcoSystem Dimming to 1% ¹			
	40L	4000								
	50L	5000								
	60L	6000 ¹								
	70L	7000 ¹								
	80L	8000 ¹								

TRIM (Ships separately)

LFR-6SQD-T	Trim Style		Flange Color Options	Lens Options
Aperture/Shape/Function				
LFR-6SQD-T 6" Square Downlight Trim Assembly	SH	Non-Conductive Shower Trim	WT White Trim and Flange BT Black Trim and Flange	AML Acrylic, Micro-prism PML Polycarbonate, Micro-prism GML Tempered glass, Micro-prism ACL Acrylic, Clear

HOUSING OPTIONS (Ships separately)

Aperture/Shape/Function	
<input type="checkbox"/> LFR-6SQD-H	6" Housing Frame, New Construction, Non-IC
<input type="checkbox"/> LFR-6SQD-H-IC	6" Housing Enclosure, New Construction, IC Rated ^{7,8}

Accessories	
<input type="checkbox"/> LiteGear	LiteGear® Inverter, 125VA–250VA
<input type="checkbox"/> LPS Series	LightPower Micro-Inverter, 20VA–55VA
<input type="checkbox"/> LF-MOR6-SQ-WH	Metal Oversized Ring, 6" Square, White (10.3" outside dimension)

Notes:



- 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.
- CP not available with PDM, DMX, or Controls.
- Module options not available in combination.
- DTS available with DM1, DM01 or DALI.
- 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 for use in combination with Controls or with Module Options CP, EMR, DTS.

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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	✓	✓	✓	-	-	✓	✓	✓ 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

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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	Acrylic Micro-prism (AML)	737	7.5	99
		Polycarbonate Micro-prism (PML)	711	7.5	95
		Tempered Glass Micro-prism (GML)	743	7.5	100
		Acrylic Clear (ACL)	741	7.5	99
15L	1500	Acrylic Micro-prism (AML)	1128	11.4	99
		Polycarbonate Micro-prism (PML)	1088	11.4	95
		Tempered Glass Micro-prism (GML)	1138	11.4	100
		Acrylic Clear (ACL)	1134	11.4	99
20L	2000	Acrylic Micro-prism (AML)	1439	14.5	99
		Polycarbonate Micro-prism (PML)	1389	14.5	96
		Tempered Glass Micro-prism (GML)	1452	14.5	100
		Acrylic Clear (ACL)	1446	14.5	100
25L	2500	Acrylic Micro-prism (AML)	1882	19.4	97
		Polycarbonate Micro-prism (PML)	1816	19.4	94
		Tempered Glass Micro-prism (GML)	1899	19.4	98
		Acrylic Clear (ACL)	1892	19.4	97
30L	3000	Acrylic Micro-prism (AML)	2299	24.2	95
		Polycarbonate Micro-prism (PML)	2219	24.2	92
		Tempered Glass Micro-prism (GML)	2320	24.2	96
		Acrylic Clear (ACL)	2312	24.2	96
35L	3500	Acrylic Micro-prism (AML)	2691	28.9	93
		Polycarbonate Micro-prism (PML)	2597	28.9	90
		Tempered Glass Micro-prism (GML)	2715	28.9	94
		Acrylic Clear (ACL)	2705	28.9	94
40L	4000	Acrylic Micro-prism (AML)	3030	32.3	94
		Polycarbonate Micro-prism (PML)	2924	32.3	91
		Tempered Glass Micro-prism (GML)	3056	32.3	95
		Acrylic Clear (ACL)	3045	32.3	94
50L	5000	Acrylic Micro-prism (AML)	3766	41.9	90
		Polycarbonate Micro-prism (PML)	3634	41.9	87
		Tempered Glass Micro-prism (GML)	3799	41.9	91
		Acrylic Clear (ACL)	3785	41.9	90
60L	6000	Acrylic Micro-prism (AML)	4626	49.5	93
		Polycarbonate Micro-prism (PML)	4465	49.5	90
		Tempered Glass Micro-prism (GML)	4667	49.5	94
		Acrylic Clear (ACL)	4651	49.5	94
70L	7000	Acrylic Micro-prism (AML)	5402	59.0	92
		Polycarbonate Micro-prism (PML)	5213	59.0	88
		Tempered Glass Micro-prism (GML)	5450	59.0	92
		Acrylic Clear (ACL)	5430	59.0	92
80L	8000	Acrylic Micro-prism (AML)	6177	69.2	89
		Polycarbonate Micro-prism (PML)	5961	69.2	86
		Tempered Glass Micro-prism (GML)	6231	69.2	90
		Acrylic Clear (ACL)	6209	69.2	90

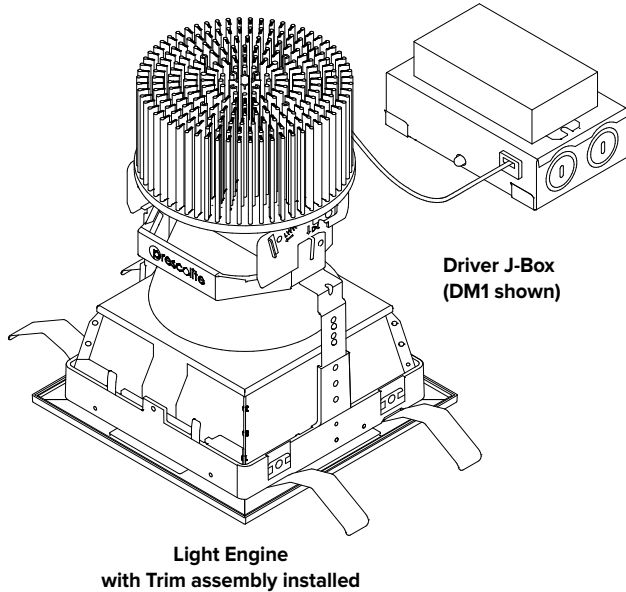
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DIMENSIONS

LFR-6SQD-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.

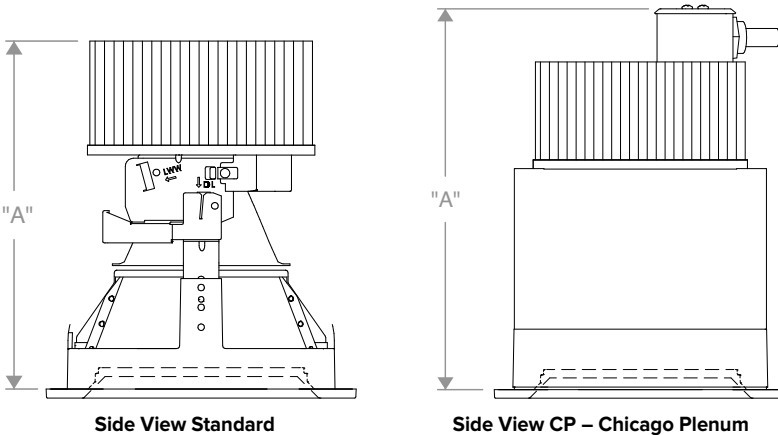


DIMENSIONAL DATA	
APERTURE	□ 6.00" (152.4mm)
FLANGE WIDTH	0.93" (23.6mm)
FLANGE TO FLANGE	□ 7.57" (187.4mm)
CEILING CUTOUT	□ 6.75" (171.5mm)
CEILING THICKNESS	0.50" – 2.50" (12.7 – 63.5mm)

LFR-6SQD LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	FIXTURE MODULE	
10L-35L	STANDARD	6.71" (170.5mm)
	CP	8.11" (205.9mm)
40L-50L	STANDARD	7.28" (185.0mm)
	CP	8.68" (220.4mm)
60L-80L	STANDARD	8.47" (215.2mm)
	CP	9.89" (250.6mm)

* Note: Add 1/2" 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.



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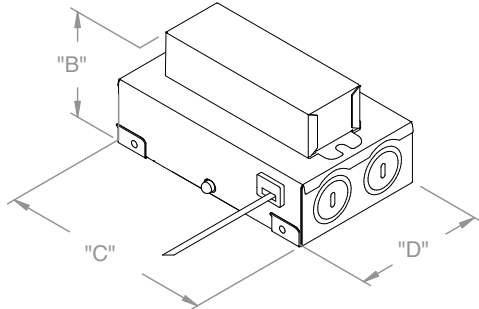
DIMENSIONS CONTINUED

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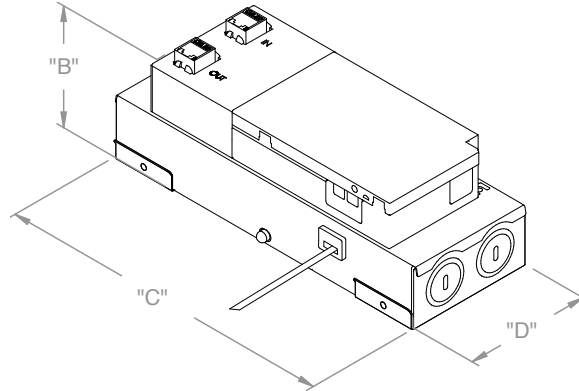
TYPE: _____ PROJECT: _____

CATALOG #: _____

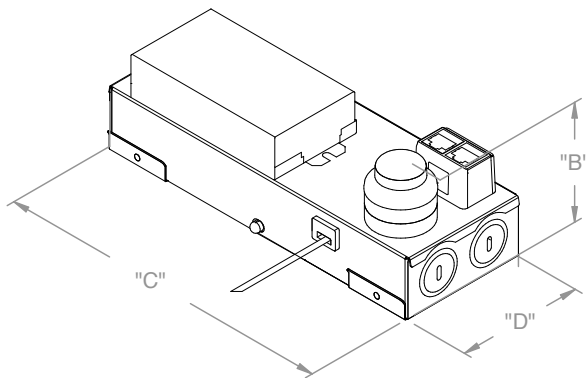
DRIVER J-BOX



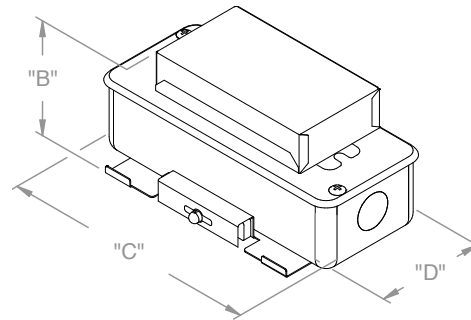
DM1 / DM01 / PDM / DALI



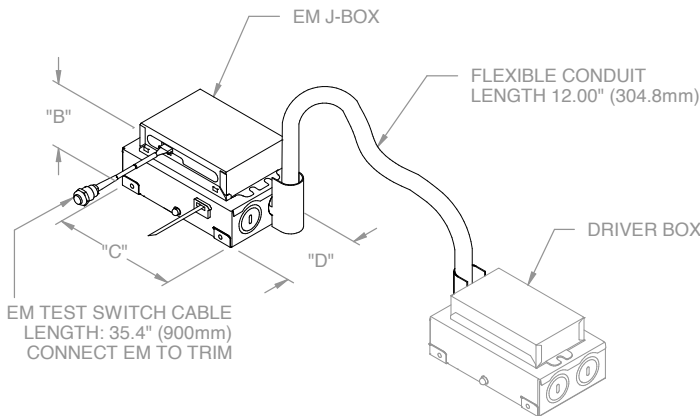
DMX



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)

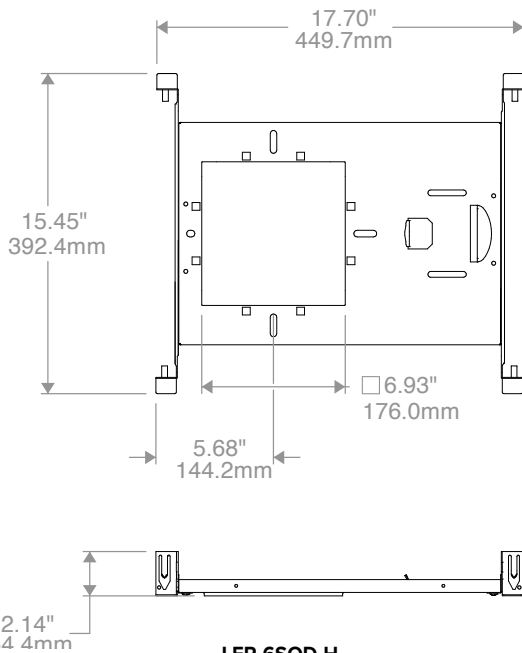
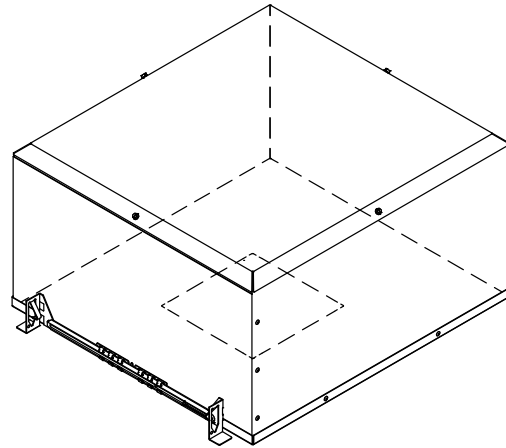
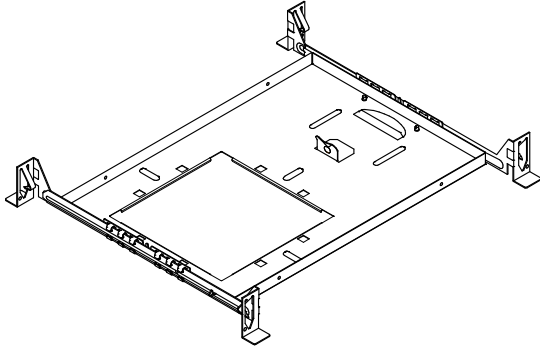
OVERALL DRIVER J-BOX DIMENSIONS (ALL LUMEN OUTPUTS)				
DRIVER/ CONTROLS OPTIONS	"B" (HEIGHT)	"C" (LENGTH)	"D" (WIDTH)	MINIMUM J-BOX PLENUM CLEARANCE
DM1 / DM01 / PDM / DALI	2.67" (67.8mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.00" (76.2mm)
DMX	3.07" (78.0mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.50" (88.9mm)
NX	3.02" (76.7mm)	8.68" (220.5mm)	3.23" (82.0mm)	3.75" (95.3mm)
EM/EMR	2.73" (69.3mm)	5.34" (135.6mm)	3.23" (82.0mm)	3.00" (76.2mm)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	3.00" (76.2mm)

LFR-6SQD (SH)

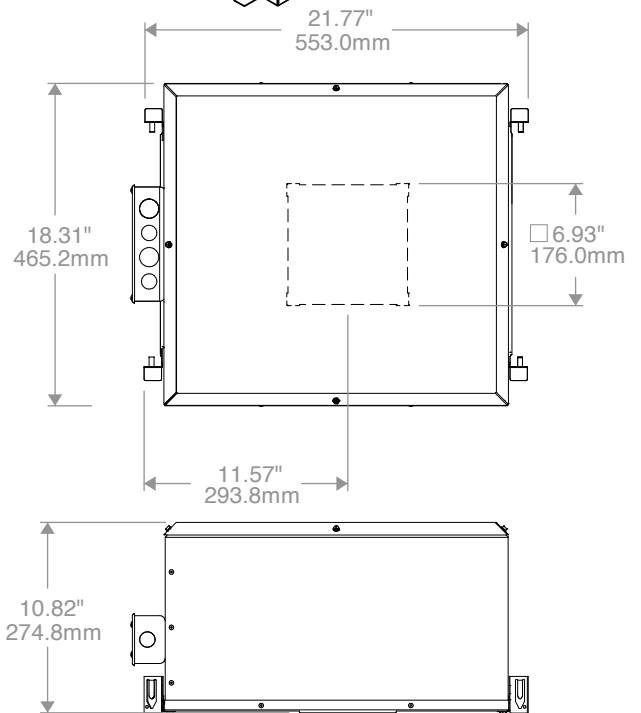
LITEFRAME 6" SQUARE
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DIMENSIONS CONTINUED

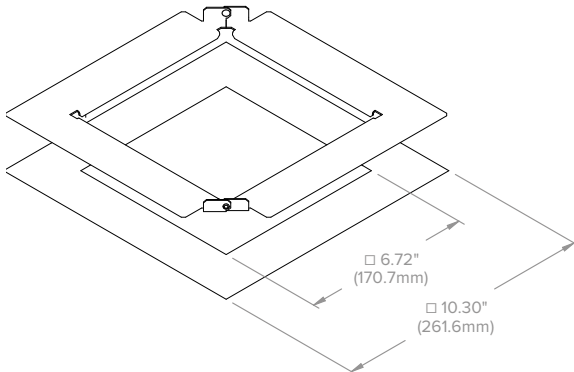
OPTIONAL HOUSINGS



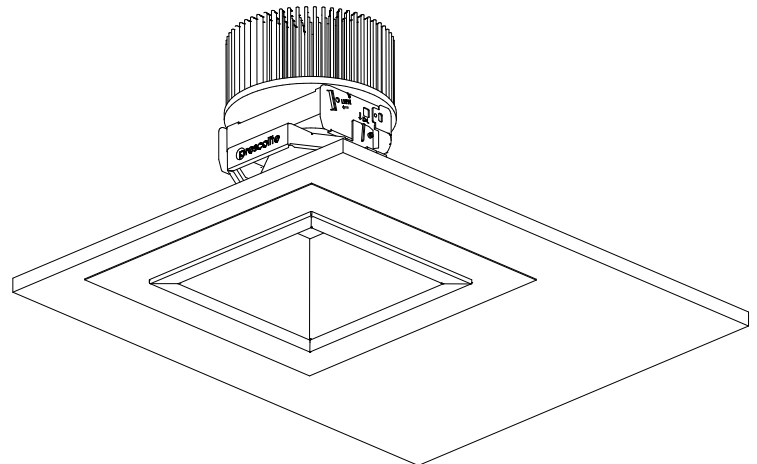
**LFR-6SQD-H
NON-IC HOUSING FRAME**



**LFR-6SQD-H-IC
IC HOUSING**
Not for use with CP Shroud



**LF-MOR6-SQ
METAL OVERSIZED RING**
(See LF-MOR Installation Instruction for more details)



LFR-6SQD (SH)

LITEFRAME 6" SQUARE
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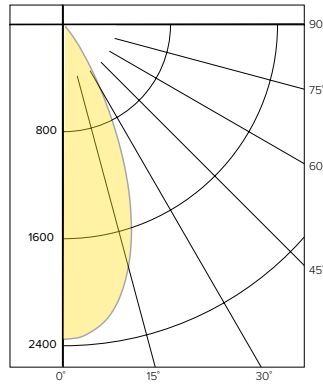
PHOTOMETRY

LFR-6SQD-M-20L35K8-DM1 / LFR-6SQD-T-SH-WTGML

LUMINAIRE DATA

Test No.	22.00607
Description	2000 lm, Acrylic Micro-prism lens, 3500K, 80 CRI
Delivered Lumens	1452
Watts	14.5W
Efficacy	100
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	47

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2352
5	2309
15	1881
25	1008
35	274
45	53
55	18
65	10
75	5
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	3514
55°	1471
65°	1109
75°	906
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

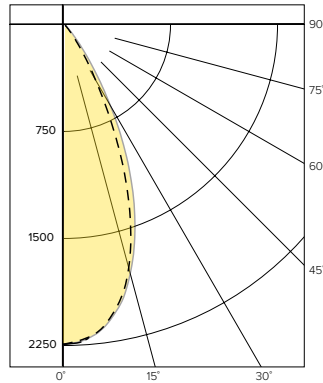
Zone	Lumens	% Luminaire
0-40	1373	94.6
0-60	1436	98.9
0-90	1452	100.0
0-180	1452	100.0

LFR-6SQD-M-20L35K8-DM1 / LFR-6SQD-T-SH-WTPML

LUMINAIRE DATA

Test No.	22.00608
Description	2000 lm, Polycarbonate Micro-prism lens, 3500K, 80 CRI
Delivered Lumens	1389
Watts	14.5W
Efficacy	96
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	45

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2247
5	2200
15	1774
25	869
35	214
45	47
55	19
65	11
75	5
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	3116
55°	1553
65°	1220
75°	906
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

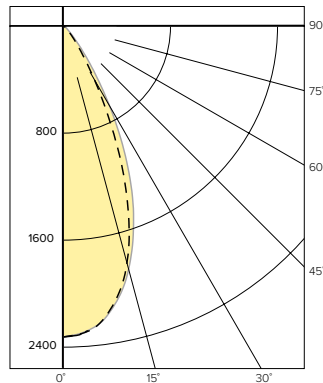
Zone	Lumens	% Luminaire
0-40	1310	94.4
0-60	1374	98.9
0-90	1389	100.0
0-180	1389	100.0

LFR-6SQD-M-20L35K8-DM1 / LFR-6SQD-T-SH-WTAML

LUMINAIRE DATA

Test No.	22.00609
Description	2000 lm, Tempered Glass Micro-prism lens, 3500K, 80 CRI
Delivered Lumens	1439
Watts	14.5W
Efficacy	99
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	45

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2329
5	2290
15	1843
25	898
35	213
45	47
55	19
65	11
75	5
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	3116
55°	1553
65°	1220
75°	906
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1359	94.4
0-60	1423	98.9
0-90	1439	100.0
0-180	1439	100.0

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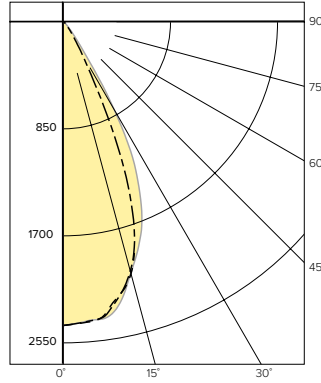
PHOTOMETRY CONTINUED

LFR-6SQD-M-20L35K8-DM1 / LFR-6SQD-T-SH-WTACL

LUMINAIRE DATA

Test No.	22.00610
Description	2000 lm, Acrylic Clear lens, 3500K, 80 CRI
Delivered Lumens	1446
Watts	14.5W
Efficacy	100
Mounting	Recessed
Spacing Criterion	0.8
Beam Angle (FWHM)	46

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2418
5	2398
15	2081
25	837
35	118
45	15
55	9
65	6
75	2
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	994
55°	736
65°	666
75°	362
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1411	97.5
0-60	1438	99.4
0-90	1446	100.0
0-180	1446	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

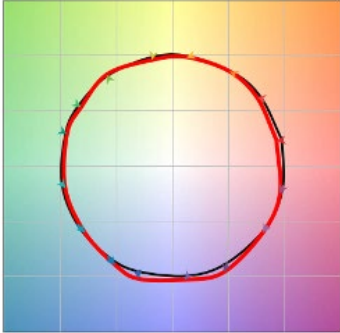
Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

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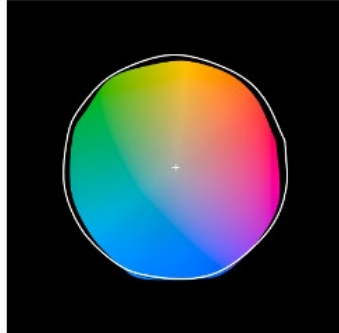
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI



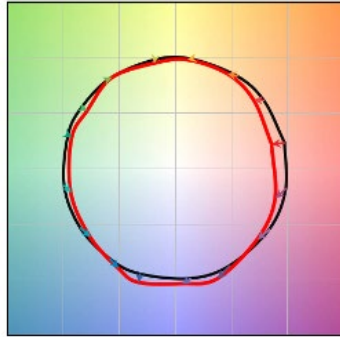
— Reference Illuminant — Test Source

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_s	16	66

COLOR VECTOR GRAPHIC
3500K, 80 CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 CRI



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LITEFRAME 6" SQUARE

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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 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.