

LFR-6SQDS

LITEFRAME 6" SQUARE SHALLOW DOWNLIGHT

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

FEATURES

- 6" LED shallow downlight delivering 1000–3000 lumens
- Direct Install from below ceiling for New Construction or Remodel applications
- Optional housing accessories available
- Four 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

LITEFRAME[™]
2.0



SERVICE PROGRAMS

STOCK QS10



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

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 option available

INSTALLATION

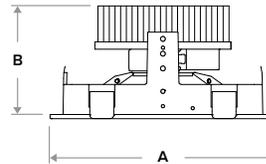
- Accommodates ceiling thickness from 0.50" to 2.50"
- Fixture Module including driver fully accessible from above or below the ceiling
- 10L–15L Fixture Modules are inherently protected IC without the use of IC housing enclosure. (IC housing is still recommended when using loose-fill or spray foam insulation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

CERTIFICATIONS

- cCSAus certified to UL 1598
- For 30L: 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



Typical Dimensions and Weights			
Lumen Package	"A" Width Inches (mm)	"B" Height Inches (mm)	Weight lbs (kg)
10L - 30L	7.38 (187)	3.56 (90)	4.0 (1.8)

See DIMENSIONS section for complete details

KEY DATA	
Lumen Range	1000–3000
Wattage Range	8–29
Efficacy Range (LPW)	99–129
Reported Life (Hours)	L90 / >50,000
Input Current (mA)	66–242 (120V)

*Based on Specular, 35K, 80 CRI

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Gray Shading = Service Program



ORDERING GUIDE

Example: LFR-6SQDS-M-10L35K8-WD-DM1 / LFR-6SQDS-T-S / LFR-6SQD-H

CATALOG # _____

FIXTURE MODULE

LFR-6SQDS-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 (19°/0.3 SC)	DM1 0–10V Dimming to 1%	NX Lighting Controls	<i>Standard</i> 120–277V	CP Chicago Plenum ^{5,6}
LFR-6SQDS-M 6" Square Shallow Downlight Fixture Module for Direct Install	15L	1500	30K	3000K	9 90+	NR Narrow (26°/0.4 SC)	DM01 0–10V Dimming to < 1%	Networked Wireless	34 347V ⁴	EMR 6W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light ⁶
(Non-IC frame or IC housing available under Housing Options below)	20L	2000	35K	3500K	MD Medium (35°/0.6 SC)	PDM Phase (Forward/Reverse) Dimming to 1%	NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor ³			
	25L	2500	40K	4000K	WD Wide (55°/0.9 SC)	DMX DMX with RDM dimming to < 0.1%	Networked Wired			
	30L	3000 ¹	50K	5000K		DALI DALI Dimming to 1% ²	NXE NX Wired Dual RJ45 SmartPORTS, without Sensor ³	DTS Device Transfer Switch with Dimming Bypass ^{6,7}		
							EDM Lutron Hi-Lume EcoSystem Dimming to 1% ²			

TRIM (Ships separately)

LFR-6SQDS-T	Distribution	Reflector Finish/Color	Flange Color Options	Lower Trim Options
Aperture/Shape/Function				
LFR-6SQDS-T 6" Square Shallow Downlight Trim Assembly	<i>Standard</i> VNR, NR, MD, WD	S Specular	<i>Standard matches reflector color</i>	FM Flush Mount Flange ¹¹
		SS Semi-Specular	WT White Flange ⁸	
		WC Painted White Cone and Flange	BT Black Flange	

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 ^{9,10}

Accessories
<input type="checkbox"/> LiteGear LiteGear® Inverter, 125VA–250VA
<input type="checkbox"/> LPS Series LightPower Micro-Inverter, 20VA–55VA
<input type="checkbox"/> LF-FMR6-SQ Flush Mount Mud-in Ring, 6" Square ¹¹
<input type="checkbox"/> LF-MOR6-SQ-WH Metal Oversized Ring, 6" Square, White (10.3" outside dimension)

Notes:

- 30L requires marked spacing. See line art for more details.
- EDM available 15L–30L.
- NX requires DM1 driver option.
- 347V requires DM1 driver option; not available with Controls, DTS, EMR.
- CP not available with PDM, DMX, Controls.
- Module options not available in combination.
- DTS available with DM1, DM01, or DALI.
- WT not needed for WC.
- IC available up to 30L; 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 types.)
- IC Housing not for use in combination with Controls or with Module Options CP, EMR, DTS.
- Flush Mount Flange requires FMR accessory (sold separately).

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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

PERFORMANCE DATA TABLE

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

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
10L	1000	Very Narrow	967	7.7	126
		Narrow	955	7.7	124
		Medium	928	7.7	121
		Wide	992	7.7	129
15L	1500	Very Narrow	1502	12.4	121
		Narrow	1483	12.4	120
		Medium	1441	12.4	116
		Wide	1540	12.4	124
20L	2000	Very Narrow	1916	16.1	119
		Narrow	1893	16.1	117
		Medium	1839	16.1	114
		Wide	1965	16.3	121
25L	2500t	Very Narrow	2496	22.6	110
		Narrow	2466	22.6	109
		Medium	2396	22.6	106
		Wide	2560	22.6	113
30L	3000	Very Narrow	2974	28.8	103
		Narrow	2938	28.8	102
		Medium	2855	28.8	99
		Wide	3050	28.8	106

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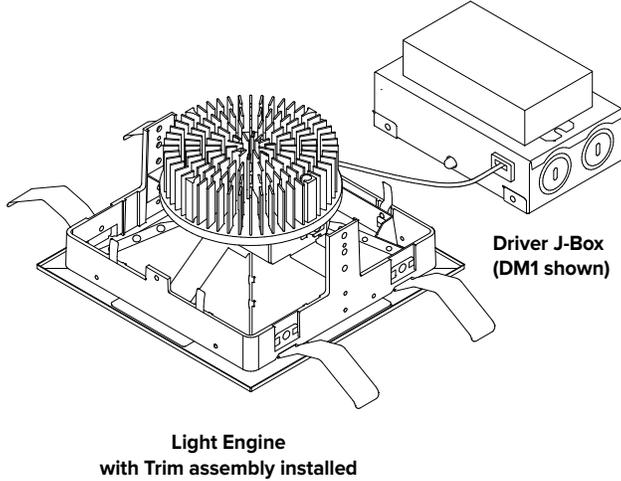
TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS

LFR-6SQDS-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.

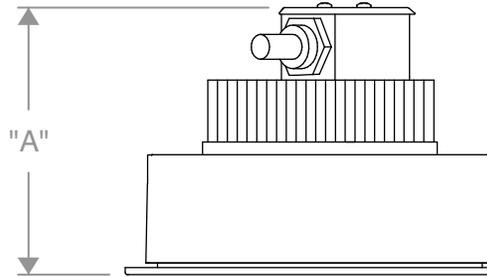
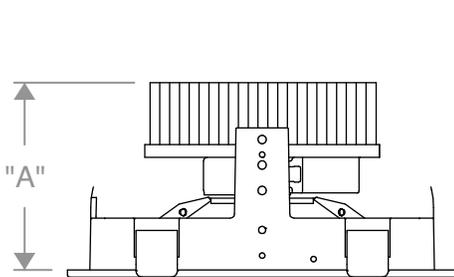


DIMENSIONAL DATA		
APERTURE		□ 6.00" (152.4mm)
FLANGE WIDTH	Standard	0.69" (17.5mm)
	Flush Mount	0.20" (5.1mm)
FLANGE TO FLANGE	Standard	□ 7.38" (187.4mm)
	Flush Mount	□ 6.40" (162.6mm)
CEILING CUTOUT	Standard	□ 6.75" (171.5mm)
	Flush Mount	□ 6.88" (174.7mm)
CEILING THICKNESS		0.50" – 2.50" (12.7 – 63.5mm)

LFR-6SQDS LIGHT ENGINE

OVERALL LIGHT ENGINE HEIGHT "A" *		
LUMEN PACKAGE	FIXTURE MODULE	BEAM DISTRIBUTION
		VNR / NR / MD / WD
10L-30L	STANDARD	3.56" (90.4mm)
	CP	4.95" (125.7mm)

* Note: Add 1/2" minimum plenum clearance above overall Light Engine Height.
 ** For 30L: 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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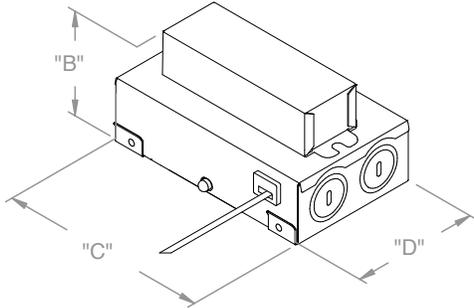
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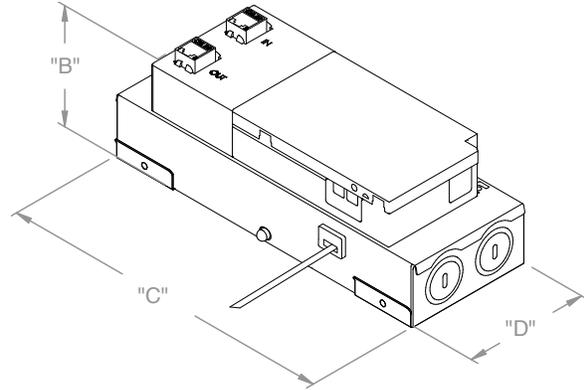
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DIMENSIONS CONTINUED

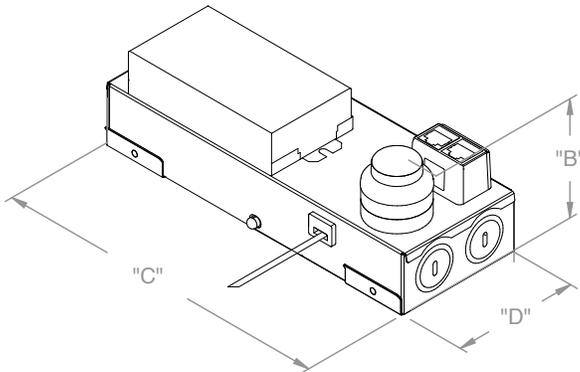
DRIVER J-BOX



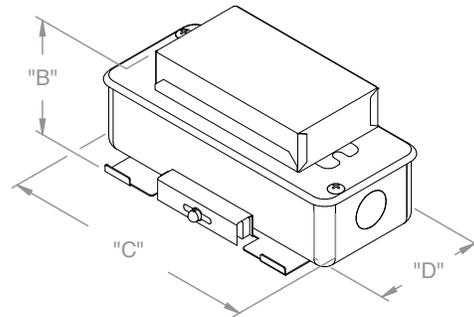
DM1 / DM01 / PDM / DALI



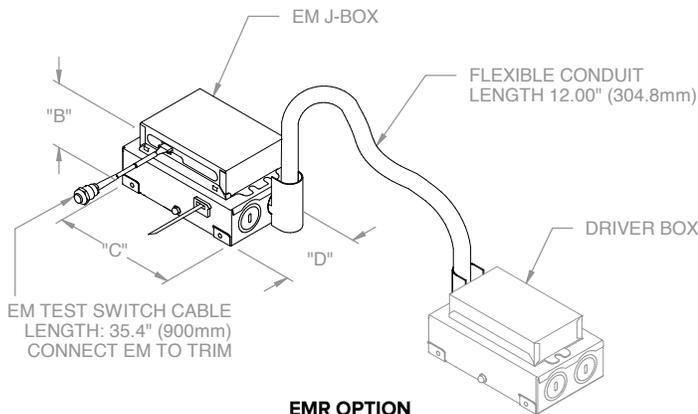
DMX



NX CONTROLS OPTION



CP



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)
CP	1.89" (73.4mm)	6.50" (165.1mm)	2.72" (69.1mm)	3.00" (76.2mm)

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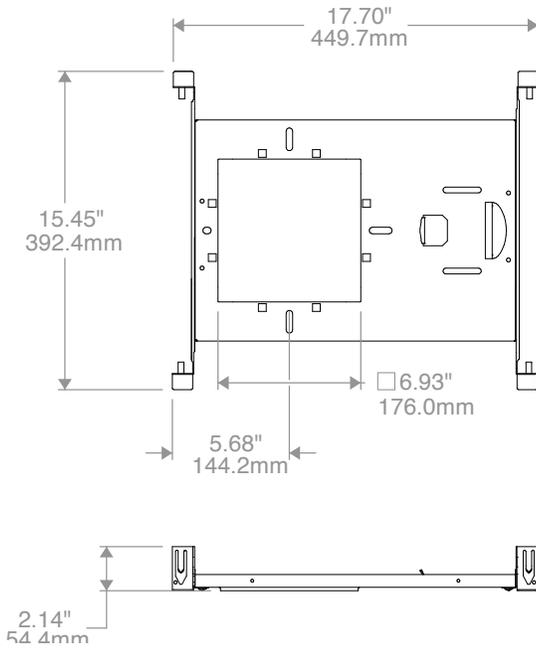
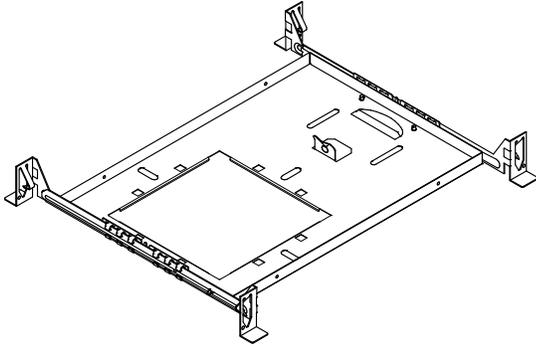
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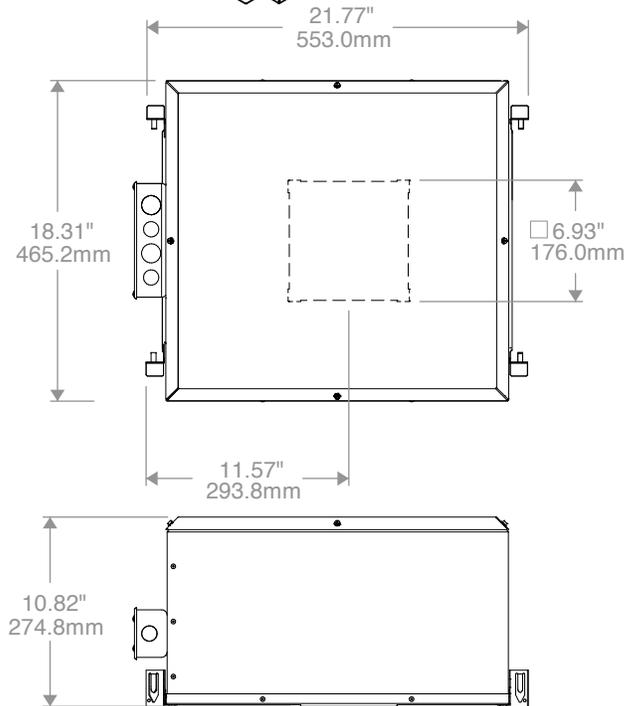
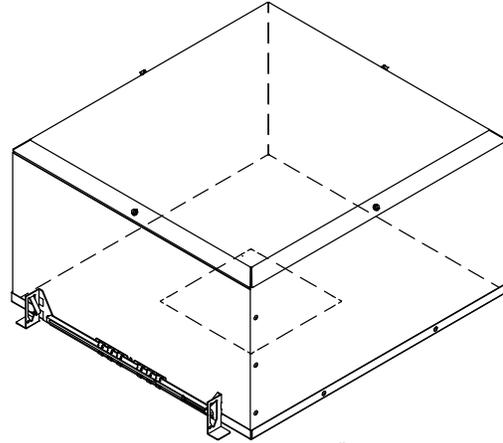
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DIMENSIONS CONTINUED

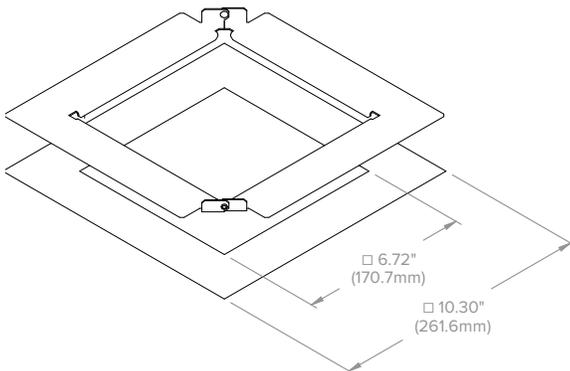
OPTIONAL HOUSINGS



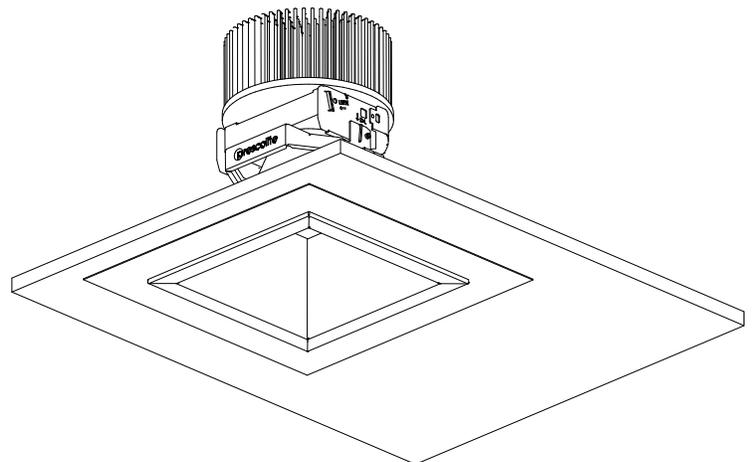
**LFR-6SQD-H
NON-IC HOUSING FRAME**



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



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



LFR-6SQDS

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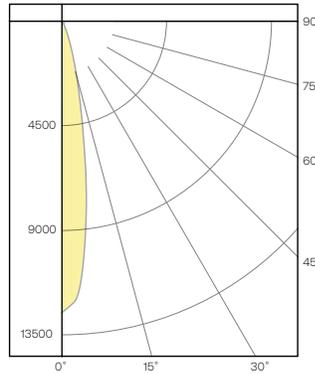
PHOTOMETRY

LFR-6SQDS-M-20L35K8VNR-DM1 / LFR-6SQDS-T-VNR-S

LUMINAIRE DATA

Test No.	22.00802
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1916
Watts	16.1W
Efficacy	119
Mounting	Recessed/Ceiling
Spacing Criterion	0.3
Beam Angle (FWHM)	19

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	12524
5	10475
15	2461
25	432
35	120
45	55
55	26
65	3
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	334
55°	195
65°	306
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

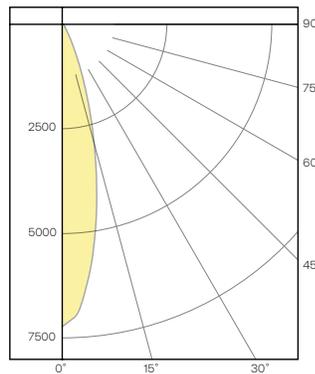
Zone	Lumens	% Luminaire
0-40	1839	96.0
0-60	1909	99.6
0-90	1916	100.0
0-180	1916	100.0

LFR-6SQDS-M-20L35K8NR-DM1 / LFR-6SQDS-T-S

LUMINAIRE DATA

Test No.	22.00803
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1893
Watts	16.1W
Efficacy	118
Mounting	Recessed/Ceiling
Spacing Criterion	0.4
Beam Angle (FWHM)	26

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	7238
5	6378
15	2930
25	682
35	149
45	67
55	29
65	3
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	408
55°	217
65°	306
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

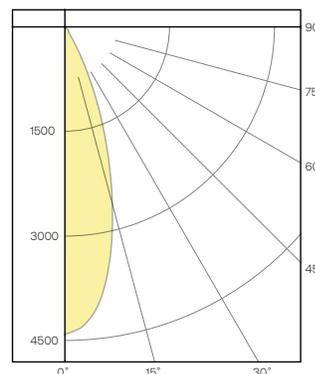
Zone	Lumens	% Luminaire
0-40	1798	95.0
0-60	1883	99.5
0-90	1893	100.0
0-180	1893	100.0

LFR-6SQDS-M-20L35K8MD-DM1 / LFR-6SQDS-T-S

LUMINAIRE DATA

Test No.	22.00804
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1839
Watts	16.1W
Efficacy	114
Mounting	Recessed/Ceiling
Spacing Criterion	0.6
Beam Angle (FWHM)	35

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	4401
5	4191
15	2661
25	977
35	212
45	91
55	40
65	4
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	554
55°	300
65°	408
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1708	92.9
0-60	1825	99.2
0-90	1839	100.0
0-180	1839	100.0

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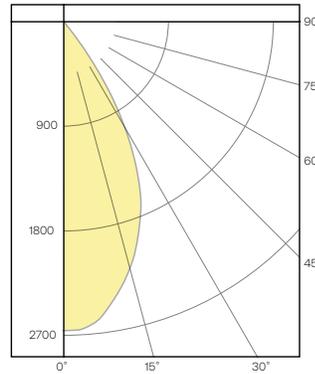
PHOTOMETRY CONTINUED

LFR-6SQDS-M-20L35K8WD-DM1 / LFR-6SQDS-T-S

LUMINAIRE DATA

Test No.	22.00799
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1965
Watts	16.3W
Efficacy	121
Mounting	Recessed/Ceiling
Spacing Criterion	0.9
Beam Angle (FWHM)	55

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2655
5	2622
15	2207
25	1547
35	546
45	46
55	18
65	1
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	2801
55°	1351
65°	102
75°	0
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1899	96.7
0-60	1961	99.8
0-90	1965	100.0
0-180	1965	100.0

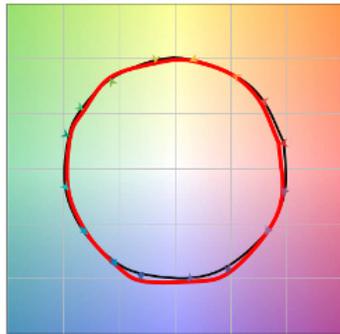
LUMEN MULTIPLIER

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.

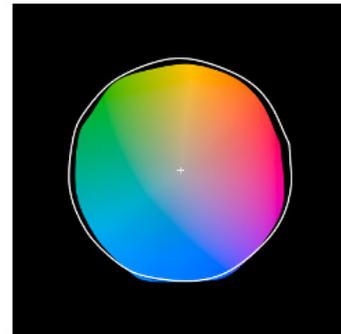
TM-30 DATA

COLOR VECTOR GRAPHIC 3500K, 90 CRI



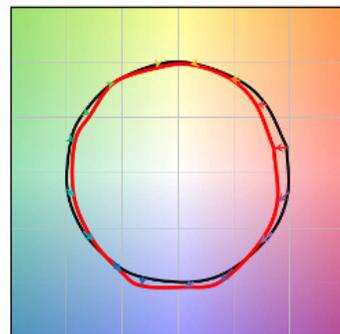
— Reference Illuminant — Test Source

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

COLOR DISTORTION GRAPHIC 3500K, 80 CRI



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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.