lifeshield
Lighting for Complex Spaces

LTR-6SQD (CR)
6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

FEATURES

- 6" square architectural LED downlight delivering 600–4000 lumens

- Five beam distributions allow for controlled illumination with a non-institutional appearance

- 50° cutoff to source and source image provides a low glare, distraction free environment with enhanced visual acuity for intricate tasks

- Options for color temperature range from 2700K–5000K in 80+ or 90+ CRI, as well as an option for Amber (590 nm) support a wide array of applications

- Aluminum anodized reflectors accommodate a wide array of colors and finishes

- Closed cell silicone gasket protects against dust and water ingress. Supports an ISO 3 cleanroom rating.

- Wet location and IP66/IP69K ingress protection ratings allow use in wet environments, including hose down and high temperature, sanitation applications

- Durable, marine grade, die cast aluminum bezel trim (low-copper alloy) with optional antimicrobial paint finish is NSF2 certified

- Flush, .250" thick polycarbonate lens allows for easy wipe down and impedes the accumulation of dirt and organic material

Certifications: CSA c-us | WET LOCATION | NSF2 | IP66 | IP69K | IK10 | ISO 3 | UL924 | IC | CCEA | BAA (-BAA Option) | TAA (-TAA Option)

MIL461G, IEC AVAILABLE ON LTR 6RD (SR)

CONTROLS TECHNOLOGY

NX WIRELESS | NX WIRED

SERVICE PROGRAMS

tradeSELECT | QS10

Typical Dimensions and Weights				
Lumen Package	"A" Length Inches (mm)	"B" Width Inches (mm)	"C" Height Inches (mm)	Weight lbs (kg)
06L - 15L	14.56 (370)	14.36 (365)	6 (152)	8 (3.6)
20L - 30L	14.56 (370)	14.36 (365)	6.78 (172)	8.4 (3.8)
35L - 40L	14.56 (370)	14.36 (365)	7.96 (202)	9 (4.1)

See DIMENSIONS section for complete details

SPECIFICATIONS

CONSTRUCTION

- Corrosion resistant, marine grade (low copper alloy), die cast aluminum bezel trim, optional tamper resistant hardware

- Flush, impact resistant .250" thick, clear polycarbonate lens for ease of wipe down.

- Closed cell silicone gasket prevents dust and water ingress for IP66, IP69K, ISO3 certification

- Standard Non-IC, options for IC and Chicago Plenum

- Steel platform with black finish and pre-installed bar hangers simplify installation

- Pre-wired junction box with snap-on covers provide easy wiring access

- Snap-in quick connectors simplify electrical connections to the driver compartment

- Light engine connections use plenum rated (CMP) cable

OPTICS

- Visually pleasing 50° cutoff to source and source image

- The light distribution is free of distracting bright spots or pixelation and the perimeter has a smooth transition

- Optical grade silicone lens is integral to the light engine to ensure precise beam control

- High purity aluminum reflector enables reliable and consistent finish and color

- Large selection of anodized inner reflector finishes and colors as well as painted cone options

- White painted bezel trim finish, antimicrobial white paint as option

ELECTRICAL

- Chip-on-board LED with 2 SDCM

- Multiple CCTs, 80+ or 90+ CRI

- Long LED life: L90 at >55,000 hours (TM-21)

- Universal voltage 120V–277V driver, 347V optional

- UL Class 2, inherent short circuit and overload protection

- Flicker free 0–10V dimming with 1% or <1% performance

- DALI and Lutron EcoSystem options

- NX Lighting Controls provides options for standalone and networked functionality with wired or wireless connectivity for NX system deployments

- Battery pack with remote test switch and indicator available

INSTALLATION

- Accommodates ceiling thickness up to 2" (See DIMENSIONS section for details)

- Universal adjustable mounting brackets also accept 0.5" EMT conduit or 1.5" or 0.75" lathing channel (by others) or Prescolite accessory bar hangers (B24 or B6)

- Light Engine/Driver fully serviceable from above or below the ceiling
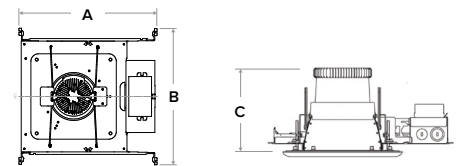
CERTIFICATIONS

- CSA certified, UL1598

- Suitable for wet location (under covered ceiling), IP66 and IP69K rated.

- ISO3 certified per ISO 14644-1:2015 ISO class 3 standards

CERTIFICATIONS (CONTINUED)

- NSF2 Non-Food Zone certified

- EMR: Certified under UL 924 standard for emergency lighting and power equipment

- EMR: Emergency battery packs are California Energy Commission (CEC) Title 20 Compliant

- Meets IK10 per IEC 60068-2-75 impact testing

- Approved for 8 (4 in / 4 out) No. 12AWG conductors rated for 90°C through wiring

- For -BAA Option: This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) See Buy America(n) Solutions

- For -TAA Option: Product configurations meet federal procurement law requirements under the Trade Agreements Act (FAR 52.225-11) See Buy America(n) Solutions

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	600–4000
Wattage Range	8–52
Efficacy Range (LPW)	62–87*
Life (Hours)	L90 / 55,000
Input Current (mA)	66-434 (120V)

* Based on Specular, 35K, 80 CRI

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Page 1 of 9
Rev 11/07/24
LS_LTR-6SQD-CR_Spec_R03

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Lighting for Complex Spaces

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LTR-6SQD (CR)
6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

Gray Shading = Service Program   tradeSELECT®   QS10 Limit of 150 Luminaries

ORDERING GUIDE

Example: LTR–6SQD–H–SL10L–DM1 / LTR–6SQD–T–SL35K8MD–SS / LTR–6SQD–CE–WTAM

CATALOG # [_____]

HOUSING

LTR-6SQD-H –

Aperture/Shape/Function		Lumen Package		Lumen Output	
LTR-6SQD-H	6" Square Downlight New Construction Housing	SL	Standard Lumen	06L	600
				10L	1000
				15L	1500
		ML	Medium Lumen	20L	2000
				25L	2500
				30L	3000
		HL	High Lumen	35L	3500
				40L	4000

–

Driver Options		Control Options		Voltage		Housing Options	
DM1	0–10V Dimming to 1%	**NX Lighting Controls** **Networked Wireless**		*Standard* 120–277V		CP	Chicago Plenum [5,7]
DM01	0–10V Dimming to < 1% [2]	NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [3]	34	347V [4]	IC	IC rated [6,7]
DALI	DALI Dimming to 1% [2]					EMR	7W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light [7]
EDM	Lutron Hi-Lume EcoSystem Dimming to 1% [2]	**Networked Wired**				DTS	Device Transfer Switch with Dimming Bypass [7,8]
		NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor [3]			GTD	Generator Transfer Device [7,10]
						F	Fuse [7]
						BAA	Buy American Act (FAR 52.225-9) Compliant
						TAA	Trade Agreements Act (FAR 52.225-11) Compliant

TRIM

LTR-6SQD-T –

Aperture/Shape/Function		Lumen Package		CCT		CRI		Distribution	
LTR-6SQD-T	6" Square Downlight Light Engine/ Trim Assembly	SL	Standard Lumen	27K	2700K	8	80+CRI	VNR	Very Narrow (0.3 SC/20°) [9]
		ML	Medium Lumen	30K	3000K	9	90+CRI	NR	Narrow (0.5 SC/30°)
		HL	High Lumen	35K	3500K			MD	Medium (0.7 SC/40°)
				40K	4000K			WD	Wide (0.9 SC/59°)
				50K	5000K [1]			XW	Extra Wide (1.1 SC/74°)
				AMB	Amber				

TRIM CONTINUED

–

Reflector Finish		Reflector Color		Reflector Options	
Finish not applicable with painted reflectors (WC or BC)		*Standard Clear*		BAA	Buy American Act (FAR 52.225-9) Compliant
S	Specular	CG	Champagne Gold	TAA	Trade Agreements Act (FAR 52.225-11) Compliant
SS	Semi-Specular	BL	Black		
VS	Softglow®	LW	Light Wheat		
		PW	Pewter		
		WC	Painted White Cone and Flange		
		BC	Painted Black Cone and Flange		

Notes:
1. 5000K available in 80+ CRI only.
2. EDM available in 10L–35L.
3. NX requires DM1 driver option.
4. 347V requires DM1 driver option; available 06L–30L; not available with Controls, F, GTD, DTS, EMR.
5. CP not available with Controls, or EMR options.
6. IC available up to 20L; not available with Controls options.
7. Housing options (except Fuse, BAA/TAA) not available in combination.
8. DTS available with DM1, DM01, or DALI. Not available with NXE.
9. VNR not available with AMB CCT.
10. Not available with NXE.

BEZEL

–

Bezel Type		Bezel Trim Color		Options	
LTR-6SQD-CE	6" Square Bezel Trim Assembly with Clear Polycarbonate Lens, Stainless Steel Philips Head Screws (included)	WT	White	BAA	Buy American Act (FAR 52.225-9) Compliant
LTR-6SQD-CEVR	6" Square Bezel Trim Assembly with Clear Polycarbonate Lens, Stainless steel tamper resistant Torx® center pin reject (included)	WTAM	White Antimicrobial	TAA	Trade Agreements Act (FAR 52.225-11) Compliant

Accessories		
☐	B24	Set of two (2) 24" bar hangers for T-bar ceilings
☐	B6	Set of two bar hangers for ceiling joist up to 24" centers
☐	LiteGear	LiteGear® Inverter, 25VA–250VA
☐	LPS Series	LightPower Micro-Inverter, 20VA–55VA

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NX LIGHTING CONTROLS

 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	✓	✓	✓	–	–	✓	✓	✓	<image>	NXRM2-H
NX Wired	NXE	NX Wired Dual RJ45 SmartPORTS, without Sensor	✓	✓	✓	–	–	✓	✓	✓₁	<image>	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 provided below is for 3500K, 80 CRI

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
06L	600	Very Narrow	599	7.8	77
		Narrow	611	7.8	78
		Medium	587	7.8	75
		Wide	549	7.8	70
		Extra Wide	508	7.8	65
10L	1000	Very Narrow	958	12.0	80
		Narrow	976	12.0	81
		Medium	938	12.0	78
		Wide	877	12.0	73
		Extra Wide	812	12.0	68
15L	1500	Very Narrow	1376	18.7	74
		Narrow	1402	18.7	75
		Medium	1348	18.7	72
		Wide	1259	18.7	67
		Extra Wide	1166	18.7	62
20L	2000	Very Narrow	1891	22.2	85
		Narrow	1927	22.2	87
		Medium	1853	22.2	84
		Wide	1731	22.2	78
		Extra Wide	1603	22.1	73
25L	2500	Very Narrow	2299	27.7	83
		Narrow	2342	27.7	85
		Medium	2253	27.7	81
		Wide	2104	27.7	76
		Extra Wide	1949	27.7	70
30L	3000	Very Narrow	2739	34.3	80
		Narrow	2791	34.3	81
		Medium	2684	34.3	78
		Wide	2508	34.3	73
		Extra Wide	2322	34.3	68
35L	3500	Very Narrow	3327	43.0	77
		Narrow	3391	43.0	79
		Medium	3261	43.0	76
		Wide	3046	43.0	71
		Extra Wide	2821	43.0	66
40L	4000	Very Narrow	3804	51.6	74
		Narrow	3876	51.6	75
		Medium	3727	51.6	72
		Wide	3482	51.6	67
		Extra Wide	3224	51.6	62

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CLEANROOM / FOOD PROCESSING

DIMENSIONS
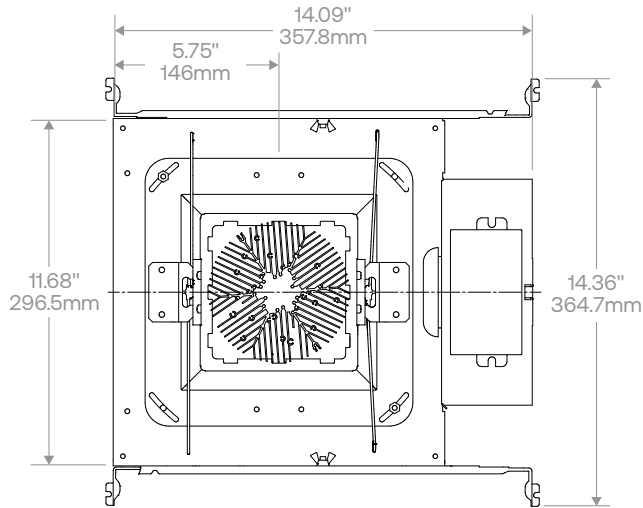
Top View

LTR-6SQD-H New Construction
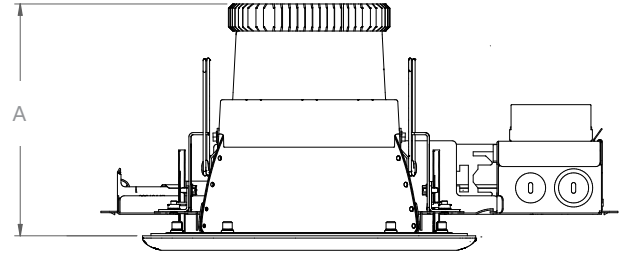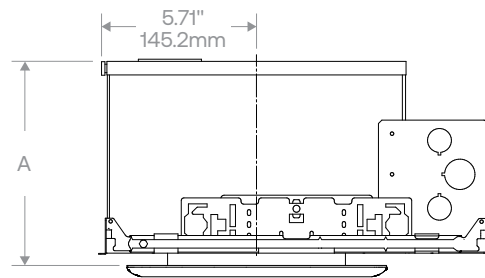

Dimensional Data	
Aperture Opening	□ 6.00" (152.4 mm)
Overall Flange	□ 9.69" (246.1 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout	□ 8.50" (215.9 mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
06L–15L	6.00" (152.4 mm)
20L–30L	6.78" (172.2 mm)
35L–40L	7.96" (202.2 mm)
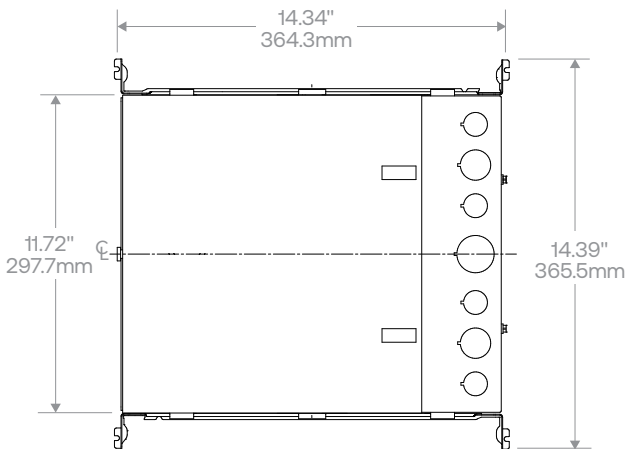
Top View

LTR-6SQD-H IC / CP

Dimensional Data	
Aperture Opening	□ 6.00" (152.4 mm)
Overall Flange	□ 9.69" (246.1 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout	□ 8.50" (215.9 mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
Standard	7.68" (195.0 mm)
CP option ≥35L	10.06" (255.5 mm)

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PHOTOMETRY

LTR-6SQD-H-ML20L-DM1 / LTR-6SQD-T-ML35K8VNR-SS / LTR-6SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01423
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1891
Watts	22.2W
Efficacy	85
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	26

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1775	93.9
0-60	1877	99.3
0-90	1891	100.0
0-180	1891	100.0

POLAR GRAPH

LEGEND
0-deg
45-deg
90-deg
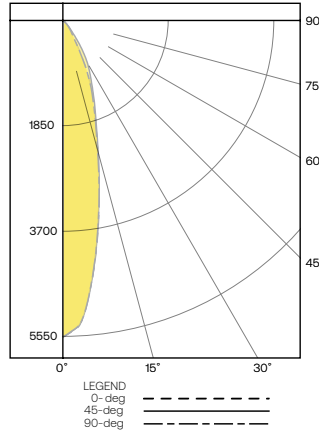
CANDELA DISTRIBUTION

Degree	Candela
0	5538
5	4905
15	2304
25	983
35	248
45	89
55	19
65	8
75	4
85	2
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	5419
55°	1426
65°	815
75°	665
85°	988

*Candela/Square Meter

LTR-6SQD-H-ML20L-DM1 / LTR-6SQD-T-ML35K8NR-SS / LTR-6SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01424
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1927
Watts	22.2W
Efficacy	87
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	37

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1801	93.4
0-60	1914	99.3
0-90	1927	100.0
0-180	1927	100.0

POLAR GRAPH

LEGEND
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45-deg
90-deg
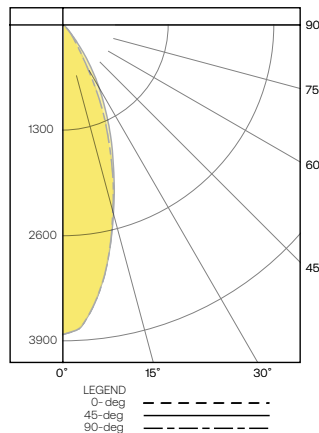
CANDELA DISTRIBUTION

Degree	Candela
0	3815
5	3599
15	2378
25	1146
35	301
45	102
55	20
65	8
75	3
85	2
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	6211
55°	1501
65°	815
75°	499
85°	988

*Candela/Square Meter

LTR-6SQD-H-ML20L-DM1 / LTR-6SQD-T-ML35K8MD-SS / LTR-6SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01651
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1853
Watts	22.2W
Efficacy	84
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	45

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1713	92.4
0-60	1839	99.3
0-90	1853	100.0
0-180	1853	100.0

POLAR GRAPH

LEGEND
0-deg
45-deg
90-deg
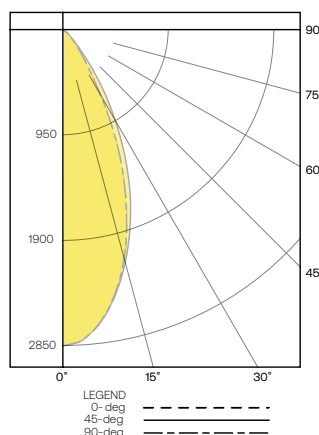
CANDELA DISTRIBUTION

Degree	Candela
0	2849
5	2756
15	2144
25	1176
35	361
45	108
55	22
65	9
75	4
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	6576
55°	1651
65°	917
75°	665
85°	494

*Candela/Square Meter

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6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

PHOTOMETRY CONTINUED

LTR-6SQD-H-ML20L-DM1 / LTR-6SQD-T-ML35K8WD-SS / LTR-6SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01426
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1731
Watts	22.2W
Efficacy	78.0
Mounting	Recessed
Spacing Criterion	0.9
Beam Angle (FWHM)	57

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1501	86.7
0-60	1714	99.0
0-90	1731	100.0
0-180	1731	100.0

POLAR GRAPH

LEGEND
0- deg
45-deg
90-deg
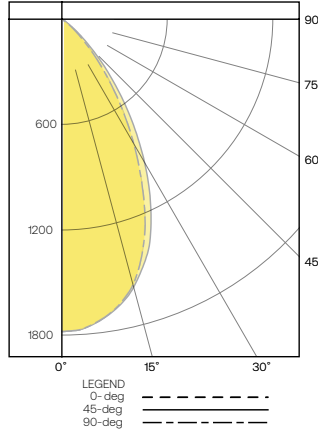
CANDELA DISTRIBUTION

Degree	Candela
0	1773
5	1747
15	1552
25	1089
35	552
45	181
55	30
65	11
75	5
85	2
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	11021
55°	2252
65°	1121
75°	832
85°	988

*Candela/Square Meter

LTR-6SQD-H-ML20L-DM1 / LTR-6SQD-T-ML35K8XW-SS / LTR-6SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01427
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1603
Watts	22.1W
Efficacy	73
Mounting	Recessed
Spacing Criterion	1.1
Beam Angle (FWHM)	69

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1354	84.0
0-60	1587	99.0
0-90	1603	100.0
0-180	1603	100.0

POLAR GRAPH

LEGEND
0- deg
45-deg
90-deg
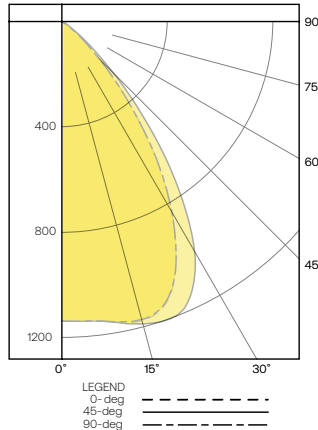
CANDELA DISTRIBUTION

Degree	Candela
0	1136
5	1140
15	1175
25	1021
35	605
45	198
55	30
65	10
75	4
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	12056
55°	2252
65°	1019
75°	665
85°	494

*Candela/Square Meter

LUMEN MULTIPLIER

Option	27K8	30K8	35K8	40K8	50K8	27K9	30K9	35K9	40K9	AMB
Multiplier	0.94	0.98	1.00	1.01	1.02	0.81	0.84	0.85	0.85	0.81

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.

REFLECTOR FINISH MULTIPLIER (Based on Clear (Standard) Color)

Option	Specular (S)	Semi-Specular (SS)	American Matte (MFC)	Softglow (VS)	Softsheen (VSS)
Multiplier	1	1	0.984	0.888	0.938

REFLECTOR COLOR MULTIPLIER (Based on Semi-Specular (SS) Finish)

Option	Clear (Standard)	Champagne Gold (CG)	Black (BL)	Light Wheat (LW)	Pewter (PW)	White Cone (WC)	Black Cone (BC)
Multiplier	1	0.974	0.444	0.861	0.915	0.984	0.442

Multiply FINISH x COLOR to calculate other reflector finish and color combinations. Example: SoftGlow Pewter (VSPW) = 0.888 (VS) x 0.915 (PW) = 0.813
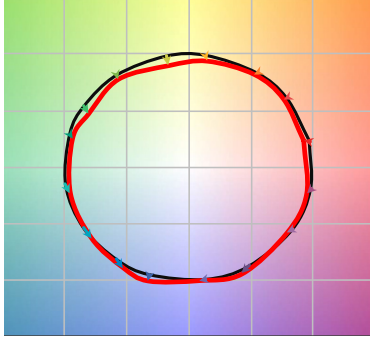
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CLEANROOM / FOOD PROCESSING
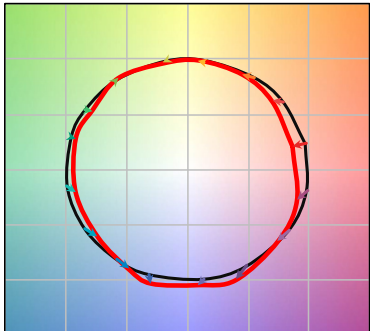
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI

—— Reference Illuminant —— Test Source
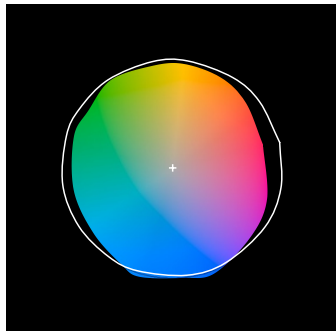
COLOR DISTORTION GRAPHIC
3500K, 90 CRI

TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R_f	84	88
R_g	95	95
CCT (K)	3411	3419
D_{uv}	0.0015	0.0042
x	0.4120	0.4147
y	0.3974	0.4052
CIE R_a	84	93
CIE R_9	11	62

COLOR VECTOR GRAPHIC
3500K, 80 CRI

—— Reference Illuminant —— Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 CRI

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LTR-6SQD (CR)
6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

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/lifeshield.

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.

Bezel Trim
See installation instructions on currentlighting.com/lifeshield for complete details.

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, 7W x 120 LPW = 840 lumens in emergency mode.