lifeshield
Lighting for Complex Spaces

LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

FEATURES

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

- Five beam distributions and wall wash 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 icons: CSA c US | WET LOCATION | NSF2 | IP66 | IP69K | IK10 | ISO 3 | UL924 | IC | CCEA | BAA (–BAA Option) | TAA (–TAA Option)
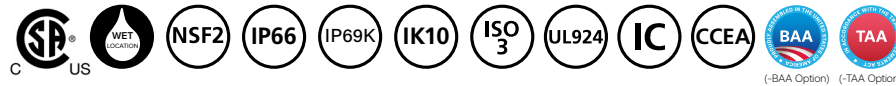
MIL461G, IEC AVAILABLE ON LTR 6RD (SR)

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)	4.83 (123)	7.7 (3.5)
20L - 30L	14.56 (370)	14.36 (365)	6.02 (153)	8.1 (3.7)
35L - 40L	14.56 (370)	14.36 (365)	7.20 (183)	8.6 (3.9)

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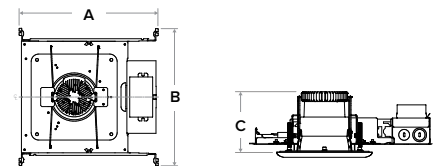- Light Engine/Driver fully serviceable from above or below the ceiling

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 Option: 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

KEY DATA	
Lumen Range	600–4000
Wattage Range	8–52
Efficacy Range (LPW)	60–81*
Life (Hours)	L90 / >55,000
Input Current (mA)	66–434 (120V)

* Based on Specular, 35K, 80 CRI

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Lighting for Complex Spaces

LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING
ORDERING GUIDE

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

Example: LTR–4SQD–H–SL10L–DM1 / LTR–4SQD–T–SL35K8MD–SS / LTR–4SQD–CE–WTAM

CATALOG #

HOUSING

LTR-4SQD-H –

Aperture/Shape/Function		Lumen Package	Lumen Output	Driver Options		Control Options	Voltage	Housing Options	
LTR-4SQD-H	4" Square Downlight New Construction Housing	**SL** Standard Lumen	**06L** 600 **10L** 1000 **15L** 1500	**DM1** 0-10V Dimming to 1% **DM01** 0-10V Dimming to < 1%	**NX Lighting Controls** *Networked Wireless*	**Standard 120-277V**	**CP** Chicago Plenum [5,7]	
		ML Medium Lumen	**20L** 2000 **25L** 2500 **30L** 3000	**DMX** DMX with RDM dimming to < 0.1%	**NXW** NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [3]	**34** 347V [4]	**IC** IC rated [6,7] **EMR** 7W Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light [7]	
		HL High Lumen	**35L** 3500 **40L** 4000	**DALI** DALI Dimming to 1% **EDM** Lutron Hi-Lume EcoSystem Dimming to 1% [2]	*Networked Wired* **NXE** NX Wired Dual RJ45 SmartPORTS, without Sensor [3]		**DTS** Device Transfer Switch with Dimming Bypass [7,8] **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-4SQD-T –

Aperture/Shape/Function		Lumen Package	CCT	CRI	Distribution	
LTR-4SQD-T	4" Square Downlight Light Engine/Trim Assembly	**SL** Standard Lumen	**27K** 2700K **30K** 3000K	**8** 80+CRI **9** 90+CRI	**VNR** Very Narrow (0.4 SC/23°) [9]	
		ML Medium Lumen	**35K** 3500K **40K** 4000K		**NR** Narrow (0.6 SC/37°) **MD** Medium (0.8 SC/46°)	
		HL High Lumen	**50K** 5000K [1] **AMB** Amber		**WD** Wide (1.0 SC/60°) **XW** Extra Wide (1.2 SC/69°)	

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 available for 06L–35L. Not available with Controls.
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 available up to 30L, not available with AMB.
10. Not available with NXE.

BEZEL

– –

Bezel Type		Bezel Trim Color		Options	
LTR-4SQD-CE	4" 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-4SQD-CEVR	4" 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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LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

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	✓	✓	✓	–	–	✓	✓	✓		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

LS_LTR-4SQD-CR_Spec_R03

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Lighting for Complex Spaces

LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

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	597	8.2	73
		Narrow	579	7.8	74
		Medium	562	7.8	72
		Wide	498	7.8	64
		Extra Wide	497	7.8	64
10L	1000	Very Narrow	981	12.5	78
		Narrow	925	12.0	77
		Medium	900	12.0	75
		Wide	796	12.0	66
		Extra Wide	795	12.0	66
15L	1500	Very Narrow	1409	18.0	78
		Narrow	1323	18.6	71
		Medium	1287	18.6	69
		Wide	1139	18.6	61
		Extra Wide	1137	18.6	61
20L	2000	Very Narrow	1771	22.8	77
		Narrow	1794	22.1	81
		Medium	1744	22.1	79
		Wide	1544	22.1	70
		Extra Wide	1541	22.1	70
25L	2500	Very Narrow	2135	29.6	72
		Narrow	2201	27.8	79
		Medium	2140	27.8	77
		Wide	1894	27.8	68
		Extra Wide	1891	27.8	68
30L	3000	Very Narrow	2495	37.0	67
		Narrow	2642	34.6	76
		Medium	2568	34.6	74
		Wide	2274	34.6	66
		Extra Wide	2269	34.6	66
35L	3500	Narrow	3156	42.9	74
		Medium	3068	42.9	72
		Wide	2716	42.9	63
		Extra Wide	2711	42.9	63
40L	4000	Narrow	3602	51.5	70
		Medium	3502	51.5	68
		Wide	3100	51.5	60
		Extra Wide	3094	51.5	60

LS_LTR-4SQD-CR_Spec_R03

DATE:	LOCATION:
TYPE:	PROJECT:
	CATALOG #:

LTR-4SQD (CR)

4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

DIMENSIONS
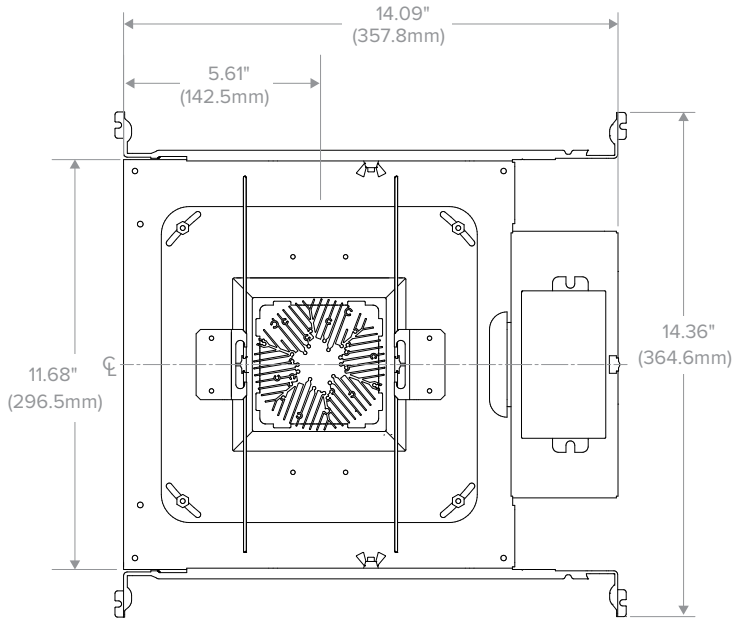
Top View

LTR-4SQD-H New Construction
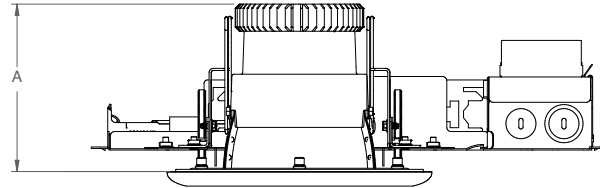
Dimensional Data	
Aperture	☐ 4.00" (101.6mm)
Flange	☐ 7.67" (194.8mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout	☐ 6.50" (165.1 mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
06L–15L	4.83" (122.7mm)
20L–30L	6.02" (152.9mm)
35L–40L	7.20" (182.9mm)
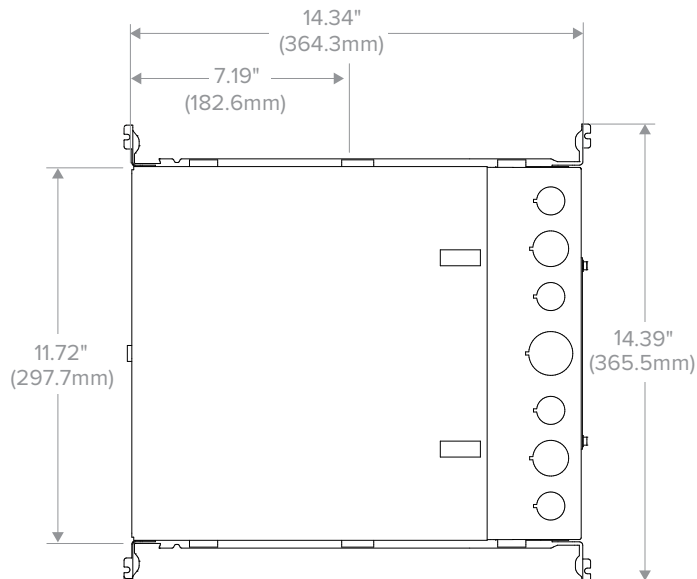
Top View

LTR-4SQD-H IC/CP
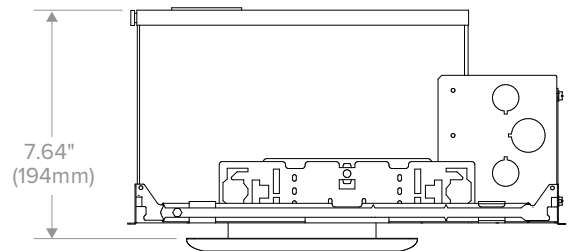
Dimensional Data	
Aperture Opening	☐ 4.00" (101.6 mm)
Overall Flange	☐ 7.68" (195.1 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout	☐ 6.50" (165.1 mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)

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LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

PHOTOMETRY

LTR-4SQD-H-ML20L-DM1 / LTR-4SQD-T-ML35K8VNR-SS / LTR-4SQD-CE-WT

LUMINAIRE DATA

Test No.	P22.01418
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	1771
Watts	22.8W
Efficacy	77
Mounting	Recessed
Spacing Criterion	0.4
Beam Angle (FWHM)	23

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1681	94.9
0-60	1758	99.3
0-90	1771	100.0
0-180	1771	100.0

POLAR GRAPH

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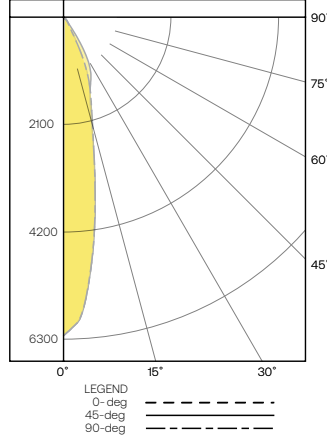
CANDELA DISTRIBUTION

Degree	Candela
0	6203
5	5317
15	2136
25	868
35	161
45	72
55	18
65	8
75	4
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	9864
55°	3040
65°	1834
75°	1497
85°	1112

*Candela/Square Meter

LTR-4SQD-H-ML20L-DM1 / LTR-4SQD-T-ML35K8NR-SS / LTR-4SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01419
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	1794
Watts	22.1W
Efficacy	81
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	36

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1673	93.3
0-60	1780	99.2
0-90	1794	100.0
0-180	1794	100.0

POLAR GRAPH

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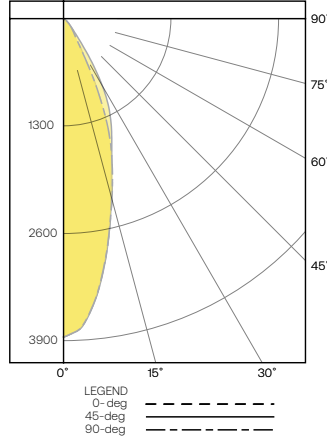
CANDELA DISTRIBUTION

Degree	Candela
0	3851
5	3578
15	2259
25	1008
35	223
45	98
55	22
65	9
75	5
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	13426
55°	3716
65°	2063
75°	1871
85°	1112

*Candela/Square Meter

LTR-4SQD-H-ML20L-DM1 / LTR-4SQD-T-ML35K8MD-SS / LTR-4SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01420
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	1744
Watts	22.1W
Efficacy	79
Mounting	Recessed
Spacing Criterion	0.7
Beam Angle (FWHM)	46

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1611	92.4
0-60	1730	99.2
0-90	1744	100.0
0-180	1744	100.0

POLAR GRAPH

LEGEND
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45-deg ——
90-deg ——
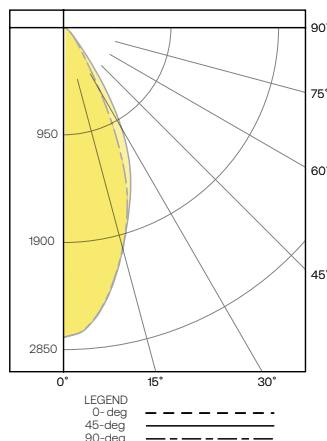
CANDELA DISTRIBUTION

Degree	Candela
0	2739
5	2633
15	2018
25	1116
35	285
45	107
55	23
65	10
75	5
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	14659
55°	3885
65°	2292
75°	1871
85°	1112

*Candela/Square Meter

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LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

PHOTOMETRY CONTINUED

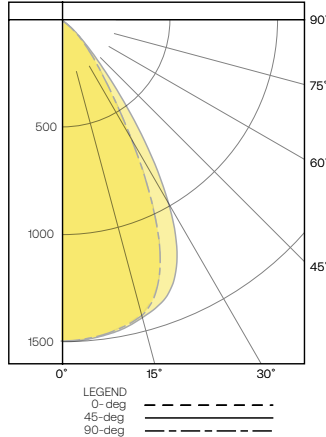## LTR-4SQD-H-ML20L-DM1 / LTR-4SQD-T-ML35K8WD-SS / LTR-4SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01421
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	1544
Watts	22.1W
Efficacy	70
Mounting	Recessed
Spacing Criterion	1.0
Beam Angle (FWHM)	58

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1369	88.7
0-60	1528	99.0
0-90	1544	100.0
0-180	1544	100.0

POLAR GRAPH

LEGEND
0-deg – – – – –
45-deg — — —
90-deg — - — - —

CANDELA DISTRIBUTION

Degree	Candela
0	1492
5	1483
15	1417
25	1046
35	388
45	143
55	29
65	11
75	5
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	19591
55°	4898
65°	2521
75°	1971
85°	1112

*Candela/Square Meter

LTR-4SQD-H-ML20L-DM1 / LTR-4SQD-T-ML35K8XW-SS / LTR-4SQD-CE-WT

LUMINAIRE DATA

Test No.	22.01422
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	1541
Watts	22.1W
Efficacy	70
Mounting	Recessed
Spacing Criterion	1.1
Beam Angle (FWHM)	67

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1302	84.5
0-60	1523	98.8
0-90	1541	100.0
0-180	1541	100.0

POLAR GRAPH

LEGEND
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90-deg — - — - —
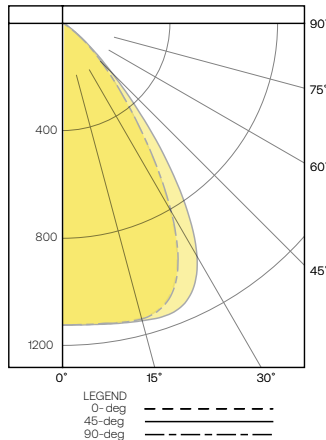
CANDELA DISTRIBUTION

Degree	Candela
0	1122
5	1124
15	1134
25	1001
35	537
45	194
55	33
65	12
75	5
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	26578
55°	5574
65°	2951
75°	1871
85°	1112

*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
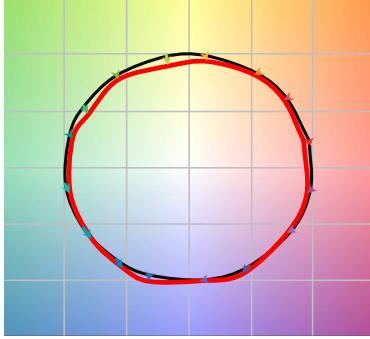
Current

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Rev 11/07/24
LS_LTR-4SQD-CR_Spec_R03

DATE:		LOCATION:	
TYPE:		PROJECT:	
CATALOG #:			

LTR-4SQD (CR)

4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING
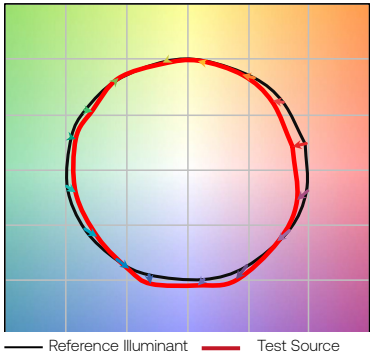
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI

— Reference Illuminant   — Test Source

COLOR DISTORTION GRAPHIC
3500K, 90 CRI

COLOR VECTOR GRAPHIC
3500K, 80 CRI

— Reference Illuminant   — Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 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

lifeshield
Lighting for Complex Spaces
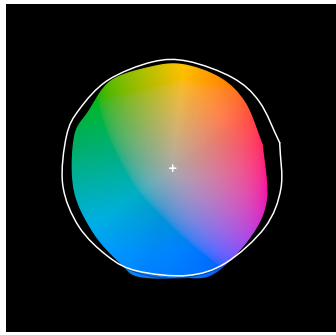
LTR-4SQD (CR)
4" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
CLEANROOM / FOOD PROCESSING

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.

Current

currentlighting.com/lifeshield