lifeshield
Lighting for Complex Spaces

DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

LTR-6SQD (SUR)

6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

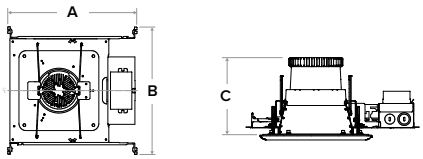
FEATURES

- 6" square architectural LED downlight delivering 600–3000 lumens
- Five beam distributions allow for controlled illumination of medical suites
- 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 providing quality illumination for a variety of surgical applications
- Aluminum anodized reflectors available in a wide array of colors and finishes
- Closed cell silicone gasket protects against dust and water ingress. Supports the fixture's ISO 3 cleanroom rating
- Suitable for wet location under covered ceiling and rated IP66 / IP69K (room side), making the product ideal for intense cleaning and sanitation
- Durable, marine grade, die cast aluminum bezel trim (low-copper alloy) and flush polycarbonate lens are available with optional antimicrobial paint finish and rated for NSF2 certification
- Standard for MIL 461G and IEC/EN 60601-1-2:2020, complies with safety and performance for EMI and medical electrical equipment and systems

C US · WET LOCATION · MIL STD 461 · IEC · NSF2 · IP66 · IP69K · IK10 · ISO 3 · UL924 · IC · CCEA · BAA · TAA

(-BAA Option) (-TAA Option)





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)

See DIMENSIONS section for complete details

SPECIFICATIONS

CONSTRUCTION

- Corrosion resistant, marine grade (low copper alloy), die cast aluminum bezel trim
- 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
- Non-IC standard, Chicago Plenum and IC options
- Steel platform with black finish and pre-installed bar hangers simplify installation
- Pre-wired junction box with snap-on covers for easy 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 driver:
  120V-277V (06L-20L)
  120V-250V (25L/30L)
- UL Class 2, inherent short circuit and overload protection
- Flicker free 0–10V dimming 1%
- 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
- NSF2 Non-Food Zone certified
- Complies with MIL-STD-461G for electromagnetic compatibility

CERTIFICATIONS (CONTINUED)

- Complies with IEC/EN 6061-1-2:2020 for basic safety and performance for electromagnetic compatibility with medical electrical equipment and systems
- 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	600–3000
Wattage Range	8–35
Efficacy Range (LPW)	62–87*
Life (Hours)	L90 / 55,000
Input Current (mA)	66–286 (120V)

* Based on Specular, 35K, 80 CRI

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6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

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

CATALOG #

HOUSING

LTR-6SQD-H	–	SUR	–			–	DM1			–
Aperture/Shape/Function		**Housing Type**		**Lumen Package**	**Lumen Output**		**Driver Options**	**Voltage**	**Housing Options**	
LTR-6SQD-H 6" Square Downlight New Construction Housing		**SUR** Surgical Suite		**SL** Standard Lumen	**06L** 600 **10L** 1000 **15L** 1500		**DM1** 0–10V Dimming to 1%	*Standard 120V–277V (06L–20L)* *120V–250V (25L/30L)*	**CP** Chicago Plenum [2] **IC** IC rated [1,2] **EMR** Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light, self-diagnostic feature [2] **F** Fuse [2] **BAA** Buy American Act (FAR 52.225-9) Compliant **TAA** Trade Agreements Act (FAR 52.225-11) Compliant	
				ML Medium Lumen	**20L** 2000 **25L** 2500 **30L** 3000					

TRIM

LTR-6SQD-T	–	SUR	–					–
Aperture/Shape/Function		**Trim Type**	**Lumen Package**	**CCT**	**CRI**	**Distribution**		
LTR-6SQD-T 6" Square Downlight Light Engine/ Trim Assembly		**SUR** Surgical Suite	**SL** Standard Lumen **ML** Medium Lumen	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K **50K** 5000K [3]	**8** 80+CRI **9** 90+CRI	**VNR** Very Narrow (0.3 SC/20°) **NR** Narrow (0.5 SC/30°) **MD** Medium (0.7 SC/40°) **WD** Wide (0.9 SC/59°) **XW** Extra Wide (1.1 SC/74°)		

TRIM CONTINUED

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

Notes:
1 IC available up to 20L
2 Housing options (except Fuse, BAA/TAA) not available in combination.
3 5000K available in 80+ CRI only.

BEZEL

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

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

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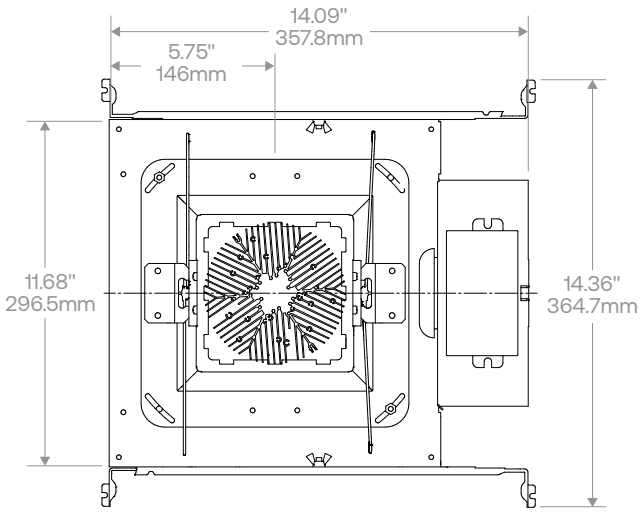
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CATALOG #:

LTR-6SQD (SUR)

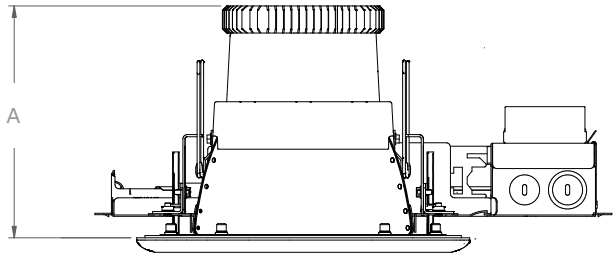
6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

DIMENSIONS



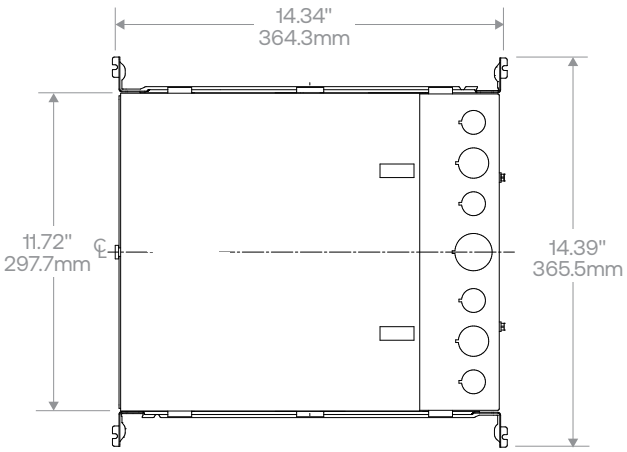
Top View

LTR-6SQD-H-SUR New Construction



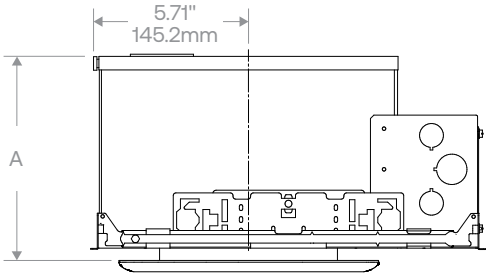
Dimensional Data	
Aperture Opening	☐ 6.00" (152.4 mm)
Overall Flange	☐ 9.69" (246.1 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout	☐ 8.50" (215.9 mm)
Ceiling Thickness	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
06L–15L	6.00" (152.4 mm)
20L–30L	6.78" (172.2 mm)



Top View

LTR-6SQD-H-SUR 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)

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6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

PHOTOMETRY

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

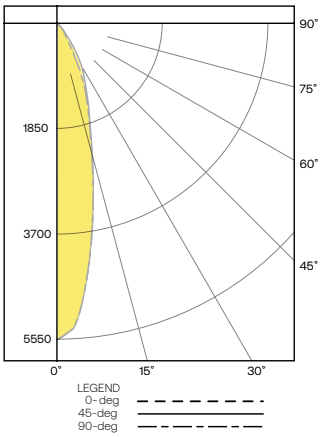
LUMINAIRE DATA

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	1892	100.0

POLAR GRAPH



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

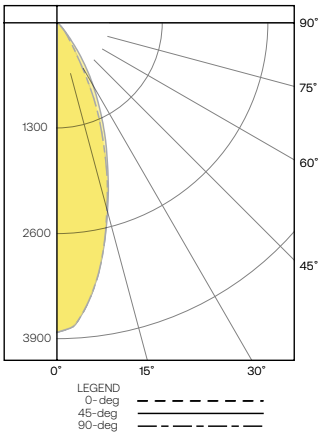
LUMINAIRE DATA

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



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

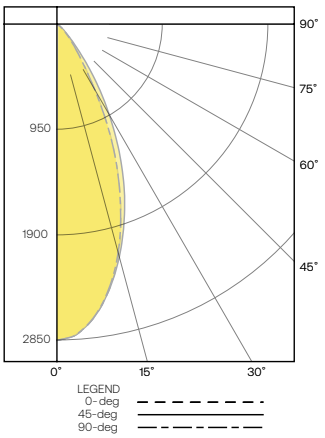
LUMINAIRE DATA

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



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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SURGICAL SUITE

PHOTOMETRY CONTINUED

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

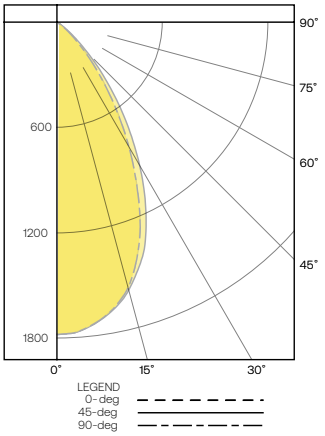
LUMINAIRE DATA

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



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

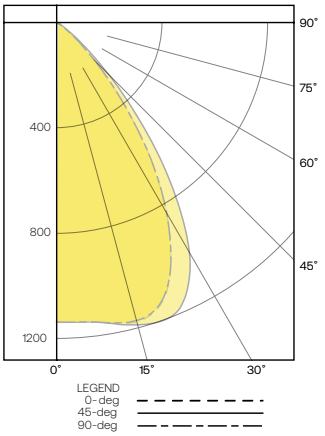
LUMINAIRE DATA

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



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
Multiplier	0.94	0.98	1.00	1.01	1.02	0.81	0.84	0.85	0.85

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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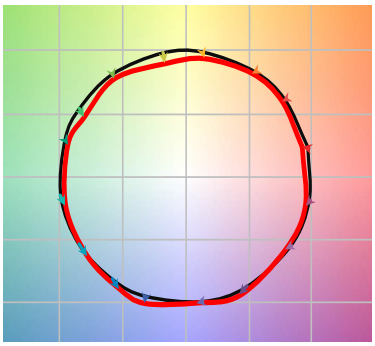
CATALOG #:

LTR-6SQD (SUR)

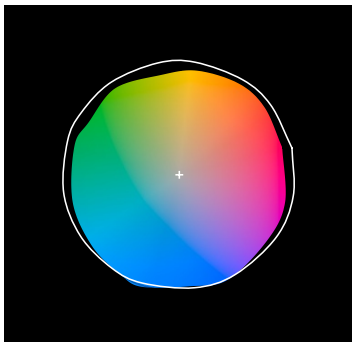
6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI

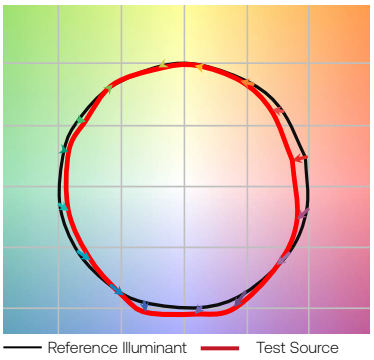


COLOR DISTORTION GRAPHIC
3500K, 90 CRI



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



COLOR DISTORTION GRAPHIC
3500K, 80 CRI



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LTR-6SQD (SUR)

6" SQUARE COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

ELECTRICAL DATA

DRIVER DATA	
Input Voltage	120V–277V (06L–20L) 120V–250V (25L/30L)
Input Frequency	50/60 Hz
Power Factor	≥0.90
THD	<20%
EMI Filtering (FCC 47 CFR Part 15)	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.

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