lifeshield
Lighting for Complex Spaces

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LTR-4RD (SUR)

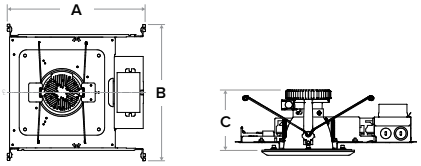
4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

FEATURES

- 4" round architectural LED downlight delivering 600–3000 lumens
- Five beam distributions and wall wash 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





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)	4.97 (126)	7.4 (3.3)
20L - 30L	14.56 (370)	14.36 (365)	6.15 (156)	7.8 (3.6)

See DIMENSIONS section for complete details

(-BAA Option) (-TAA Option)

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)	52–83*
Reported Life (Hours)	L90 / >55,000
Input Current (mA)	66–300 (120V)

*Based on 35K, 80 CRI

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lifeshield
Lighting for Complex Spaces

DATE: | LOCATION:

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CATALOG #:

LTR-4RD (SUR)

4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

ORDERING GUIDE

Example: LTR-4RD-H-SUR-SL10L-DM1-LTR-4RD-T-SUR-SL35K8MD-SS -LTR-4RD-CE-WTAM

CATALOG # _____

HOUSING

LTR-4RD-H – SUR – [ ] [ ] – DM1 [ ] [ ]

Aperture/Shape/Function		Housing Type		Lumen Package		Lumen Output		Driver Options		Voltage	Housing Options	
LTR-4RD-H	4" Round Downlight New Construction Housing	SUR	Surgical Suite	SL	Standard Lumen	06L	600	DM1	0–10V Dimming to 1%	*Standard 120V-277V (06L-20L)*	CP	Chicago Plenum [2]
						10L	1000				IC	IC rated [1,2]
						15L	1500				EMR	Emergency Battery Pack (CEC Title 20 Compliant) with remote test switch and indicator light, self-diagnostic feature [2]
				ML	Medium Lumen	20L	2000			*120V-250V (25L/30L)*	F	Fuse [2]
						25L	2500				BAA	Buy American Act (FAR 52.225-9) Compliant
						30L	3000				TAA	Trade Agreements Act (FAR 52.225-11) Compliant

TRIM

LTR-4RD-T – SUR – [ ] [ ] [ ] [ ]

Aperture/Shape/Function		Trim Type		Lumen Package		CCT		CRI		Distribution	
LTR-4RD-T	4" Round Downlight Light Engine/ Trim Assembly	SUR	Surgical Suite	SL	Standard Lumen	27K	2700K	8	80+CRI	VNR	Very Narrow (0.3 SC/20°)
LTR-4RW-T	4" Round Wall Wash Light Engine/ Trim Assembly [3]			ML	Medium Lumen	30K	3000K	9	90+CRI	NR	Narrow (0.5 SC/30°)
						35K	3500K			MD	Medium (0.7 SC/40°)
						40K	4000K			WD	Wide (0.9 SC/59°)
						50K	5000K [4]			XW	Extra Wide (1.1 SC/74°)
										WW	Single Wall Wash [3]

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		
MFC	American Matte™	LW	Light Wheat		
VS	Softglow®	PW	Pewter		
VSS	SoftSheen™	WC	Painted Matte White Cone and Flange		
		BC	Painted Matte Black Cone and Flange		

Notes:

1 IC available up to 20L

2 Housing options (except Fuse, BAA/TAA) not available in combination.

3 Wall wash trim requires WW distribution option.

4 5000K available in 80+ CRI only.

BEZEL

[ ] – [ ] – [ ]

Bezel Type		Bezel Trim Color		Options	
LTR-4RD-CE	4" Round Bezel Trim Assembly with Clear Polycarbonate Lens, Painted Stainless Steel Philips Head Screws (included)	WT	Matte White	BAA	Buy American Act (FAR 52.225-9) Compliant
LTR-4RD-CEVR	4" Round Bezel Trim Assembly with Clear Polycarbonate Lens, Painted Stainless steel tamper resistant Torx® center pin reject (included)	WTAM	Matte 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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CATALOG #:

LTR-4RD (SUR)

4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

PERFORMANCE DATA TABLE (3500K, 80CRI)

Lumen Package	Nominal Lumens	Distribution	Delivered Lumens	Watts	LPW
06L	600	Very Narrow	571	7.6	75
		Narrow	563	7.8	72
		Medium	541	7.8	69
		Wide	483	7.8	62
		Extra Wide	501	7.8	64
		Wall Wash	427	7.8	55
10L	1000	Very Narrow	935	11.3	83
		Narrow	900	12.0	75
		Medium	866	12.0	72
		Wide	773	12.0	64
		Extra Wide	802	12.0	67
		Wall Wash	682	12.0	57
15L	1500	Very Narrow	1340	17.3	77
		Narrow	1287	18.6	69
		Medium	1239	18.6	67
		Wide	1106	18.6	59
		Extra Wide	1146	18.6	62
		Wall Wash	976	18.6	52
20L	2000	Very Narrow	1678	22.8	74
		Narrow	1745	22.0	79
		Medium	1679	22.3	75
		Wide	1499	22.2	68
		Extra Wide	1554	22.2	70
		Wall Wash	1323	22.0	60
25L	2500	Very Narrow	2021	28.6	71
		Narrow	2141	27.8	77
		Medium	2060	27.8	74
		Wide	1839	27.8	66
		Extra Wide	1906	27.8	69
		Wall Wash	1623	27.8	58
30L	3000	Very Narrow	2358	36.0	66
		Narrow	2570	34.6	74
		Medium	2472	34.6	71
		Wide	2207	34.6	64
		Extra Wide	2288	34.6	66
		Wall Wash	1948	34.6	56

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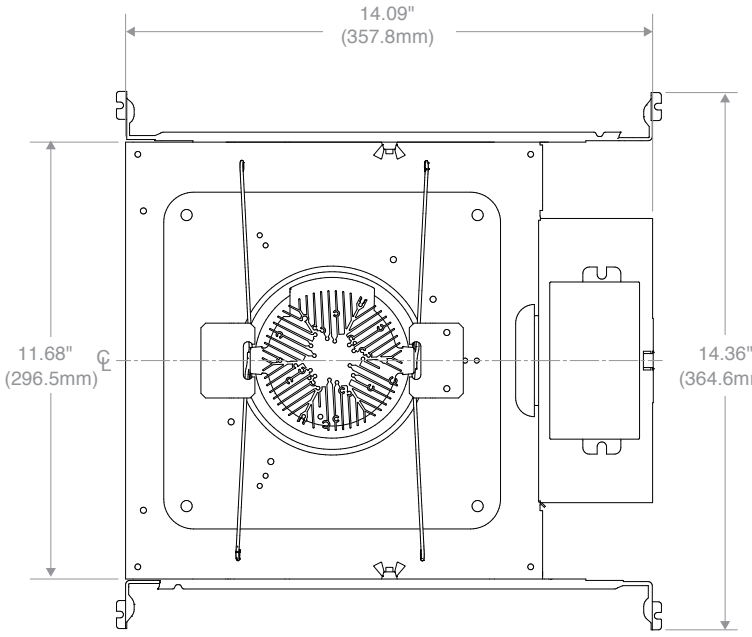
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LTR-4RD (SUR)

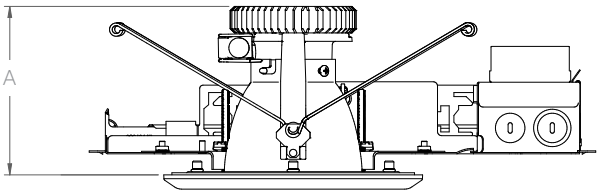
4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT
SURGICAL SUITE

DIMENSIONS



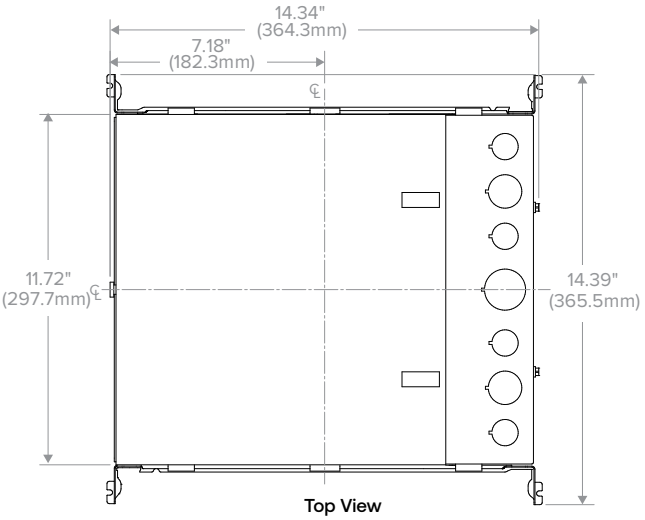
Top View

LTR-4RD-H-SUR New Construction



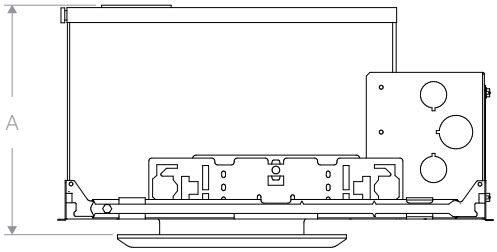
Dimensional Data	
Aperture Opening	4.00" (101.6mm)
Overall Flange	Ø 7.67" (194.8 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout:	Ø 6.50" (165.1 mm)
Ceiling Thickness:	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
06L–15L	4.97" (126.2mm)
20L–30L	6.15" (156.2mm)



Top View

LTR-4RD-H-SUR IC/CP



Dimensional Data	
Aperture Opening	4.00" (101.6mm)
Overall Flange	Ø 7.67" (194.8 mm)
Bezel (below ceiling)	0.42" (10.7 mm)
Ceiling Cutout:	Ø 6.50" (165.1 mm)
Ceiling Thickness:	0.50" to 2.00" (12.7 mm to 50.8 mm)

Lumen Package	"A"
Standard	7.68" (195.0mm)

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CATALOG #:

LTR-4RD (SUR)

4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

PHOTOMETRY

LTR-4RD-H-SUR-ML20L-DM1 / LTR-4RD-T-SUR0ML35K8VNR-SS / LTR-4RD-CE-WT

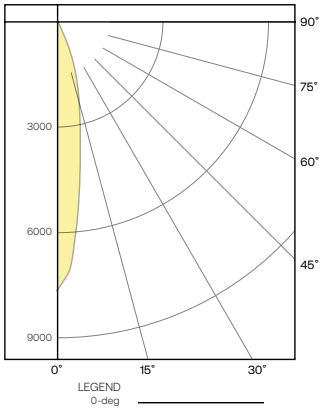
LUMINAIRE DATA

Test No.	**23.00004**
Description	**2000 lm, Very Narrow, 3500K, 80 CRI**
Delivered Lumens	**1678**
Watts	**22.8W**
Efficacy	**74**
Mounting	**Recessed**
Spacing Criterion	**0.3**
Beam Angle (FWHM)	**20**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1633	97.3
0-60	1666	99.3
0-90	1678	100.0
0-180	1678	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	7663
5	6093
15	2462
25	713
35	146
45	24
55	11
65	7
75	4
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	4186
55°	2366
65°	2043
75°	1906
85°	1415

*Candela/Square Meter

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

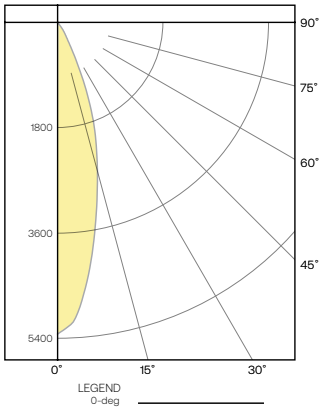
LUMINAIRE DATA

Test No.	**23.00005**
Description	**2000 lm, Narrow, 3500K, 80 CRI**
Delivered Lumens	**1745**
Watts	**22.0W**
Efficacy	**79**
Mounting	**Recessed**
Spacing Criterion	**0.5**
Beam Angle (FWHM)	**30**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1700	97.4
0-60	1736	99.5
0-90	1745	100.0
0-180	1745	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	5312
5	4757
15	2623
25	907
35	196
45	27
55	9
65	5
75	3
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	4710
55°	1935
65°	1459
75°	1430
85°	1415

*Candela/Square Meter

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

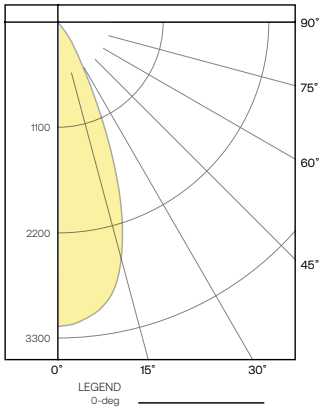
LUMINAIRE DATA

Test No.	**23.00006**
Description	**2000 lm, Medium, 3500K, 80 CRI**
Delivered Lumens	**1679**
Watts	**22.3W**
Efficacy	**75**
Mounting	**Recessed**
Spacing Criterion	**0.7**
Beam Angle (FWHM)	**43**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1633	97.3
0-60	1669	99.4
0-90	1679	100.0
0-180	1679	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	3167
5	3106
15	2546
25	1036
35	255
45	25
55	10
65	6
75	3
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	4361
55°	2150
65°	1751
75°	1430
85°	1415

*Candela/Square Meter

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LTR-4RD (SUR)

4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

PHOTOMETRY CONTINUED

LTR-4RD-H-SUR-ML20L-DM1 / LTR-4RD-T-SUR-ML35K8WD-SS / LTR-4RD-CE-WT

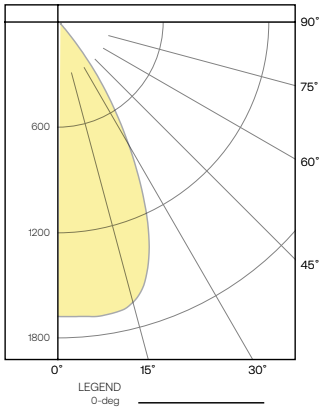
LUMINAIRE DATA

Test No.	**22.00434**
Description	**2000 lm, Wide, 3500K, 80 CRI**
Delivered Lumens	**1499**
Watts	**22.2W**
Efficacy	**68**
Mounting	**Recessed**
Spacing Criterion	**0.9**
Beam Angle (FWHM)	**58**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1427	95.2
0-60	1486	99.1
0-90	1499	100.0
0-180	1499	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1677
5	1683
15	1651
25	1181
35	445
45	41
55	16
65	8
75	4
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	7152
55°	3441
65°	2335
75°	1906
85°	1415

*Candela/Square Meter

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

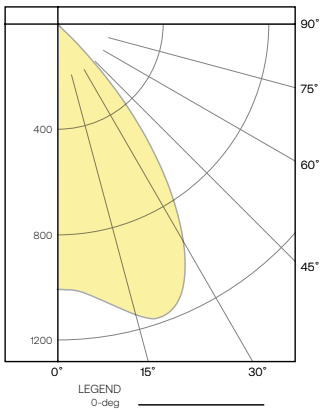
LUMINAIRE DATA

Test No.	**23.00007**
Description	**2000 lm, Extra Wide, 3500K, 80 CRI**
Delivered Lumens	**1554**
Watts	**22.2W**
Efficacy	**70**
Mounting	**Recessed**
Spacing Criterion	**1.1**
Beam Angle (FWHM)	**70**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1370	88.2
0-60	1542	99.3
0-90	1554	100.0
0-180	1554	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1002
5	1015
15	1136
25	1117
35	725
45	175
55	19
65	7
75	3
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	30526
55°	4086
65°	2043
75°	1430
85°	1415

*Candela/Square Meter

LTR-4RD-H-SUR-ML20L-DM1 / LTR-4RW-T-SUR-ML35K8WW-SS / LTR-4RD-CE-WT

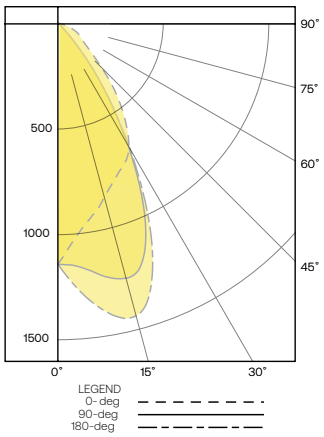
LUMINAIRE DATA

Test No.	**22.01314**
Description	**2000 lm, Single Wall Wash, 3500K, 80 CRI**
Delivered Lumens	**1323**
Watts	**22.W**
Efficacy	**60**
Mounting	**Recessed**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1133	85.7
0-60	1275	96.4
0-90	1323	100.0
0-180	1323	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1143
5	1014
15	853
25	740
35	553
45	283
55	143
65	95
75	30
85	1
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	49366
55°	30752
65°	27727
75°	14297
85°	1415

*Candela/Square Meter

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DATE: | LOCATION:

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CATALOG #:

LTR-4RD (SUR)

4" ROUND COMPLEX ENVIRONMENT DOWNLIGHT

SURGICAL SUITE

PHOTOMETRY CONTINUED

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

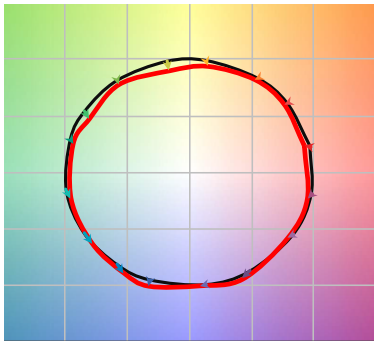
REFLECTOR COLOR MULTIPLIER (Based on Semi-Specular (SS) Finish)

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

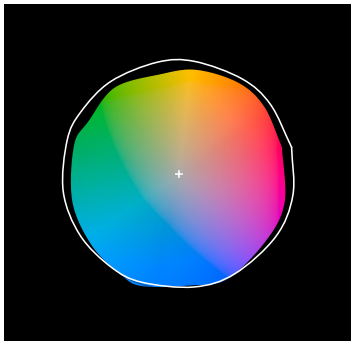
TM-30 DATA

COLOR VECTOR GRAPHIC 3500K, 90 CRI



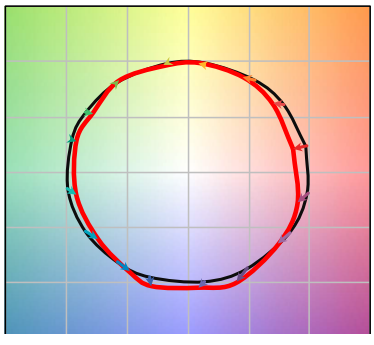
Reference Illuminant — Test Source

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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DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

LTR-4RD (SUR)

4" ROUND 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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