

LTR-6RD-RFH

LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

LITEISTRY™

FEATURES

- 6" architectural LED retrofit downlight delivering 600 – 3000 lm
- Five beam distributions from 0.3 to 1.1 Spacing Criteria
- Quiet reflector appearance with superior 50° optical cutoff
- 2700K – 5000K, 80+ and 90+ CRI options
- For use in retrofit (non-IC) applications
- Variety of dimming protocol options including 0–10V, DALI, DMX, Lutron Forward Phase, and EcoSystem



RELATED PRODUCTS

- ∅ [LTR-6RD New Construction](#)
- ∅ [LTR-6RD SpectraSync](#)
- ∅ [LTR-6RDPH PowerHUBB](#)
- ∅ [3" LITEISTRY Family](#)
- ∅ [4" LITEISTRY Family](#)
- ∅ [6" LITEISTRY Family](#)

SPECIFICATIONS

CONSTRUCTION

- Die cast aluminum mounting ring with 5-axis adjustable junction box
- Retrofit housing allows below ceiling installation without removing existing fixture
- Pre-wired junction box with snap-on covers for easy access
- Snap-in connection from driver compartment allows easy installation
- 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 integral to light engine
- High purity spun aluminum reflector, self-flanged
- Flush Mount flange option with mud-in ring available
- Large selection of anodized finishes and colors
- Painted cones and flange options available

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, RoHS compliant
- Flicker free 0-10V dimming with 1% or <1% performance
- DALI, DMX, and Lutron Forward Phase and EcoSystem options
- Refer to additional spec sheets for information on [SpectraSync™ Tunable White or Dim-to-Warm](#) solutions

INSTALLATION

- Accommodates ceiling thickness up to 2"
- Light Engine/Driver fully serviceable from above or below the ceiling

CERTIFICATIONS

- cCSAus certified to UL 1598
- Suitable for wet locations, covered ceiling
- Approved for 8 (4 in/4 out) No. 12AWG conductors rated for 90°C through wiring
- ENERGY STAR® certified models available (See list and additional information on page 8)
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 6/6/2020. See [Buy American Solutions](#).

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	600-3000
Wattage Range	8-35
Efficacy Range (LPW)	94-104*
Reported Life (Hours)	L90 / >55,000
Input Current (mA)	67-292 (120V)

*Based on Specular, 35K, 80 CRI



LTR-6RD-RFH

LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: LTR-6RD-RFH-SL10L-DM1-LTR-6RD-T-SL35K8MD-S

CATALOG #

HOUSING

LTR-6RD-RFH		Lumen Package		Lumen Output		Driver Options		Voltage		Housing Options			
Aperture/Shape/Function													
LTR-6RD-RFH	6" Round Downlight Retrofit Housing ⁵	SL	Standard Lumen	06L	600	DM1	0-10V Dimming to 1%	Standard 120-277V	34	347V ⁶	F	Fuse	
				10L	1000		DM01						0-10V Dimming to < 1%
				15L	1500		DMX						DMX with RDM dimming to < 0.1% ²
LTR-6RD-RFHW	6" Round Downlight Retrofit Housing (for Wide Diameter) ⁵	ML	Medium Lumen	20L	2000	DALI	DALI Dimming to 1%						
				25L	2500	2DM	Lutron Hi-Lume 2-wire Dimming to 1% (120V Forward Phase only) ²						
				30L	3000	EDM	Lutron Hi-Lume EcoSystem Dimming to 1% ²						

TRIM

LTR-6RD-T		Lumen Package		CCT		CRI		Distribution							
Aperture/Shape/Function															
LTR-6RD-T	6" Round Downlight Light Engine/Trim Assembly	SL	Standard Lumen	27K	2700K	8	80+CRI	VNR	Very Narrow (0.3 SC/18°) ⁷						
				ML	Medium Lumen					30K	3000K	9	90+CRI	NR	Narrow (0.5 SC/29°)
										35K	3500K				
										40K	4000K				
										50K	5000K ¹				

TRIM CONTINUED

Reflector Finish		Reflector Color		Flange Color Options		Lower Trim Options		Reflector Options	
<i>Finish not applicable with painted reflectors (WC or BC)</i>		Standard Clear		Standard matches reflector color		WF Wide Flange		AM Antimicrobial Coating ⁴	
S	Specular	CG	Champagne Gold	WT	White Flange ³				
SS	Semi-Specular	BL	Black	BT	Black Flange ³				
MFC	American Matte™	LW	Light Wheat						
VS	Softglow®	PW	Pewter						
VSS	SoftSheen™	WC	Painted White Cone and Flange						
		BC	Painted Black Cone and Flange						

Accessories

- LiteGear** LiteGear® Inverter, 125VA-250VA
- LPS Series** LightPower Micro-Inverter, 20VA-55VA
- MOR6-R-WH** Metal Oversized Ring, 6" Round, White (10" outside diameter)
- MOR6-R-BL** Metal Oversized Ring, 6" Round, Black (10" outside diameter)

Notes:

- 1 5000K available in 80+ CRI only.
- 2 2DM, EDM, DMX available in 10L-30L
- 3 WT not needed for WC, BT not needed for BC.
- 4 AM available with WC or Specular Clear (S or SWT). Consult factory for other colors.
- 5 See line art for compatibility with existing aperture diameters.
- 6 347V requires DM1 driver option; available 10L - 30L not available with Fuse option.
- 7 VNR not available with IC or CP options.



LTR-6RD-RFH

LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

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
06L	600	Very Narrow	806	7.8	103
		Narrow	717	7.8	92
		Medium	746	7.8	96
		Wide	691	7.8	89
		Extra Wide	665	7.8	85
10L	1000	Very Narrow	1288	12.0	107
		Narrow	1146	12.0	96
		Medium	1192	12.0	99
		Wide	1104	12.0	92
		Extra Wide	1063	12.0	89
15L	1500	Very Narrow	1851	18.7	99
		Narrow	1623	18.7	87
		Medium	1712	18.7	92
		Wide	1586	18.7	85
		Extra Wide	1527	18.7	82
20L	2000	Very Narrow	2355	22.6	104
		Narrow	2263	22.7	100
		Medium	2265	22.6	100
		Wide	2180	22.7	96
		Extra Wide	2139	22.7	94
25L	2500	Very Narrow	3093	27.7	112
		Narrow	2751	27.7	99
		Medium	2860	27.7	103
		Wide	2650	27.7	96
		Extra Wide	2551	27.7	92
30L	3000	Very Narrow	3686	34.3	107
		Narrow	3278	34.3	96
		Medium	3409	34.3	99
		Wide	3158	34.3	92
		Extra Wide	3040	34.3	89

LTR-6RD-RFH

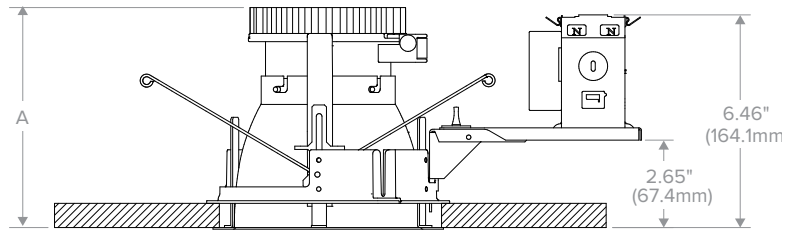
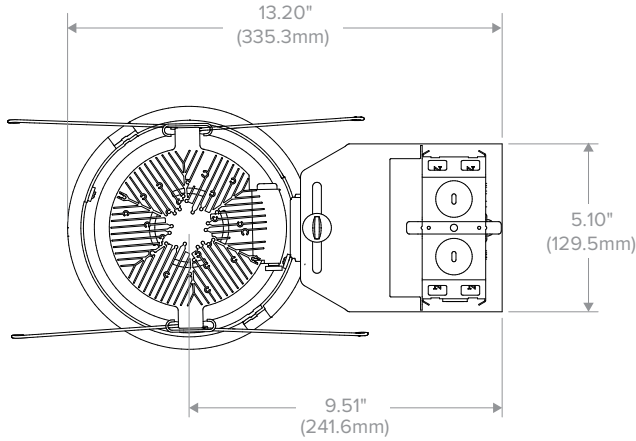
LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS



Housing Compatibility Guide			
Existing Frame Opening**		Use Housing	Use Flange Option
MIN	MAX		
6.25" (156.3mm)	6.50" (165.1mm)	-RFH	(Standard)
6.63" (168.4mm)	6.88" (172mm)	-RFHW	WF

**Measure the existing plaster frame opening at its narrowest point

Dimensional Data		
Aperture	5.75" (146.1mm)	
Flange:	Standard	7.00" (177.8mm)
	Flush Mount	6.54" (166.0mm)
	Wide (WF)	7.75" (196.9mm)
Ceiling Cutout:	Standard	6.50" (165.1mm)
	Flush Mount	6.75" (171.5mm)
Ceiling Thickness:	0.50" to 2.00" (12.7mm to 50.8mm)	

Lumen Package	"A"
06L-15L	5.90" (149.9mm)
20L-30L	6.68" (169.7mm)

PHOTOMETRY

LTR-6RD-RFH/-RFHW

LTR-6RD-RFH-ML20L-DM1 / LTR-6RD-T-ML35K8VNR-S

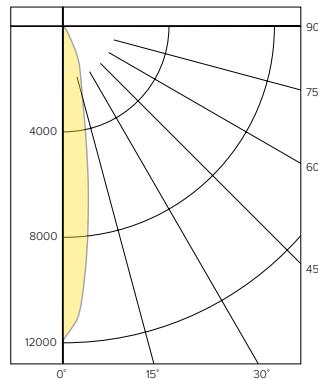
LUMINAIRE DATA

Test No.	R19.00588-02
Description	2000 lm, Very Narrow, 3500K, 80 CRI
Delivered Lumens	2355
Watts	22.6W
Efficacy	104.0
Mounting	Recessed
Spacing Criterion	0.3
Beam Angle (FWHM)	18

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2290	97.2
0-60	2355	100.0
0-90	2355	100.0
0-180	2355	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	11881
5	9399
15	2776
25	1236
35	255
45	74
55	0
65	0
75	0
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	6247
55°	0
65°	0
75°	0
85°	0

*Candela/Square Meter

LTR-6RD-RFH-ML20L-DM1 / LTR-6RD-T-ML35K8NR-S

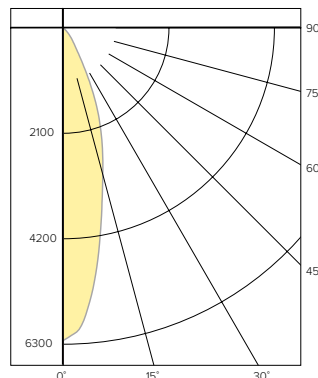
LUMINAIRE DATA

Test No.	R20.01439-02
Description	2000 lm, Narrow, 3500K, 80 CRI
Delivered Lumens	2263
Watts	22.1W
Efficacy	103.0
Mounting	Recessed
Spacing Criterion	0.5
Beam Angle (FWHM)	29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2185	96.6
0-60	2260	99.9
0-90	2263	100.0
0-180	2263	100.0

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	6222
5	5603
15	3035
25	1354
35	348
45	83
55	5
65	2
75	1
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	6712
55°	498
65°	271
75°	221
85°	0

*Candela/Square Meter

LTR-6RD-RFH

LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

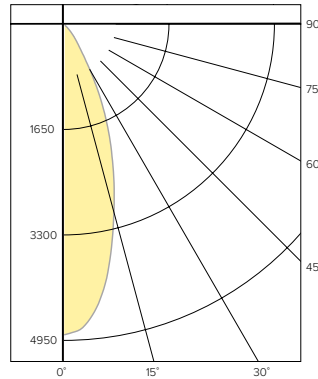
PHOTOMETRY

LTR-6RD-RFH-ML20L-DM1 / LTR-6RD-T-ML35K8MD-S

LUMINAIRE DATA

Test No.	R19.00587-C02
Description	2000 lm, Medium, 3500K, 80 CRI
Delivered Lumens	2265
Watts	22.6W
Efficacy	100.0
Mounting	Recessed
Spacing Criterion	0.6
Beam Angle (FWHM)	37

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	4851
5	4619
15	3007
25	1450
35	386
45	99
55	6
65	2
75	1
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	8357
55°	624
65°	282
75°	231
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

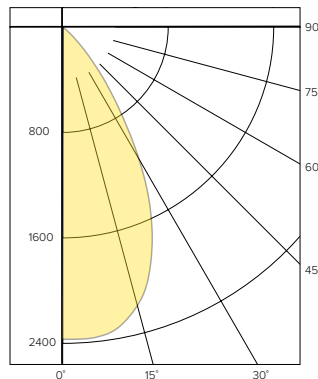
Zone	Lumens	% Luminaire
0-40	2171	95.9
0-60	2262	99.9
0-90	2265	100.0
0-180	2265	100.0

LTR-6RD-RFH-ML20L-DM1 / LTR-6RD-T-ML35K8WD-S

LUMINAIRE DATA

Test No.	R19.00585-C02
Description	2000 lm, Wide, 3500K, 80 CRI
Delivered Lumens	2180
Watts	22.6W
Efficacy	96.1
Mounting	Recessed
Spacing Criterion	0.9
Beam Angle (FWHM)	59

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	2368
5	2371
15	2189
25	1591
35	726
45	177
55	10
65	3
75	1
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	14942
55°	1041
65°	424
75°	231
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

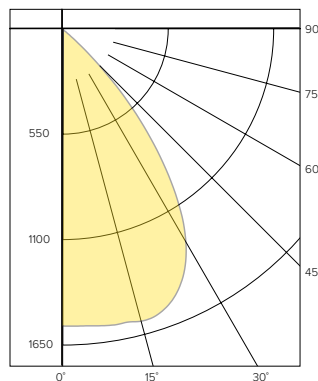
Zone	Lumens	% Luminaire
0-40	2014	92.4
0-60	2176	99.8
0-90	2180	100.0
0-180	2180	100.0

LTR-6RD-RFH-ML20L-DM1 / LTR-6RD-T-ML35K8XW-S

LUMINAIRE DATA

Test No.	R19.00586-C02
Description	2000 lm, Extra Wide, 3500K, 80 CRI
Delivered Lumens	2139
Watts	22.7W
Efficacy	94.4
Mounting	Recessed
Spacing Criterion	1.1
Beam Angle (FWHM)	76

POLAR GRAPH



CANDELA DISTRIBUTION

Degree	Candela
0	1547
5	1552
15	1576
25	1461
35	1007
45	301
55	9
65	3
75	1
85	0
90	0

LUMINANCE DATA*

Vertical Angle	Average
45°	25409
55°	937
65°	424
75°	231
85°	0

*Candela/Square Meter

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1875	87.7
0-60	2134	99.8
0-90	2139	100.0
0-180	2139	100.0

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

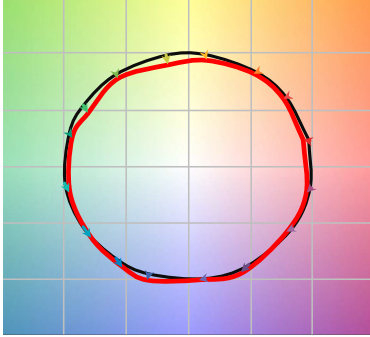
Photometrics are published below at a nominal 3500 Kelvin, 80+ CRI. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

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LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

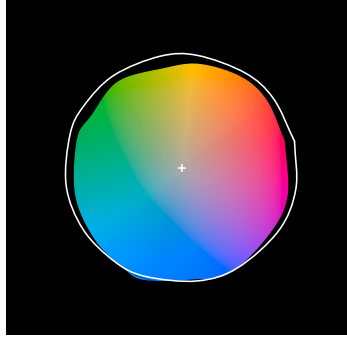
TM-30 DATA

COLOR VECTOR GRAPHIC
3500K, 90 CRI



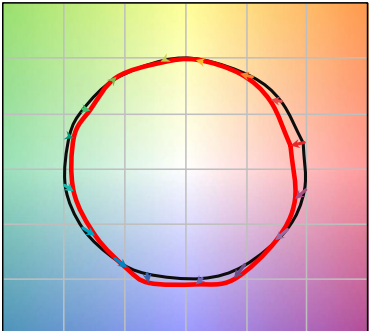
— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 90 CRI



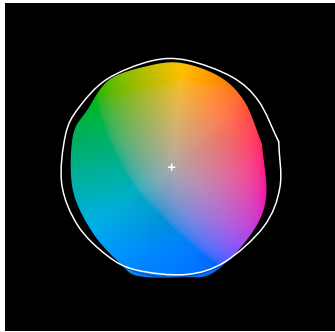
TEST RESULTS - 3500K		
Value	80+ CRI	90+ CRI
R_f	84	88
R_g	95	95
CCT (K)	3411	3419
D_{uv}	0.0015	0.0042
x	0.4120	0.4147
y	0.3974	0.4052
CIE R_a	84	93
CIE R_g	11	62

COLOR VECTOR GRAPHIC
3500K, 80 CRI



— Reference Illuminant — Test Source

COLOR DISTORTION GRAPHIC
3500K, 80 CRI



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.

WATTAGE DATA		
Lumen Output	Nominal Lumens	WATTAGE
06L	600	8
10L	1000	12
15L	1500	19
20L	2000	23
25L	2500	28
30L	3000	35

* Wattage may vary based on configuration and options selected



LTR-6RD-RFH

LITEISTRY 6" ROUND RETROFIT DOWNLIGHT

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ADDITIONAL INFORMATION

DIMMING COMPATIBILITY CHART		
Dimming Driver	Manufacturer	Web Link
DM1 /DM01	Lutron DDTV	http://bit.ly/1ljSvZg
DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9
EDM	Lutron	http://bit.ly/1vtjHAI
2DM	Lutron	http://bit.ly/1S4WjXK

DMX

See instruction sheet on www.prescolite.com for connection & installation information.

Central Inverters

For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series

LPS Series: www.dual-lite.com/products/lps

ENERGY STAR®

For a list of certified models, click on the ENERGY STAR® MODELS link or visit www.energystar.gov.

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