

FEATURES

- Converts any make or model of existing 8" commercial and industrial downlight to LED
- Specification grade construction and optical system provides exceptional visual acuity
- Provides up to 90% in energy savings
- Tool-less installation in minutes from below the ceiling
- Long life virtually eliminates maintenance costs
- Modular design
- Thermal management engineered for maximum component life
- Contains no lead or mercury
- EnergyStar®, UL and CUL certified for damp locations and RoHS compliant
- Made in USA (ARRA and Buy American Act compliant)
- Patent Pending

LRD8

LED | Commercial

8" Retrofit Downlight Series



SPECIFICATIONS

MECHANICAL

Housing: All components are made from 18 gauge galvanized steel. For ease of installation LRD comes pre-wired with 30" 18/3 BX flexible armored cable with push in connector compatible with ½" knockout on existing junction box.

Reflector: Parabolic, polished and anodized 14 gauge aluminum reflectors are precisely engineered for the LED light engine to provide a non-glare, evenly distributed and highly efficient optical system. Reflector seats into housing and is retained by four torsion springs to facilitate uniform seating assuring a secure fit over the life of the product. Possible finishes include low iridescent specular, semi-specular and diffused. For available reflector finishes, reflector colors and flange colors see model number information on reverse.

Lens: Optional frosted or transparent models.

Accessories: Goof rings (for oversize holes), remodel rings (for ceilings without a rough-in kit), 2' x 2' and 2' x 4' ceiling lay-ins. See separate spec sheets for specifications.

ELECTRICAL

LED Light Engine: The LRD utilizes a highly efficacious LED light engine with CRI greater than 80 and 50,000 hour rated life at L70. For available color temperatures see model number information on next page.

LED Driver: 0-10V and line voltage dimming available. Consult factory for additional specifications.

Warranty: 5 years when used in accordance with manufacturing guidelines. See www.lumenoptix.com for details.

LABELS & LISTINGS

UL, CUL for damp locations. RoHS, EnergyStar™ and ARRA compliant

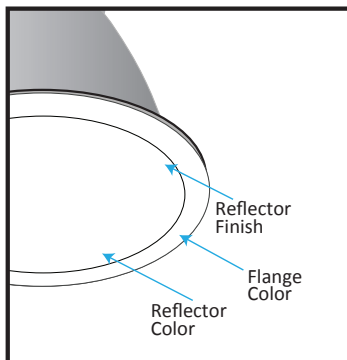
TECHNICAL DATA

LUMEN PACKAGE	1100	2000	2800
NOMINAL WATTAGE	17	30	45
POWER FACTOR	>0.9	>0.9	>0.9
THD	<10%	<10%	<10%
CRI	>80	>80	>80
INPUT FREQUENCY	50/60 Hz	50/60 Hz	50/60 Hz

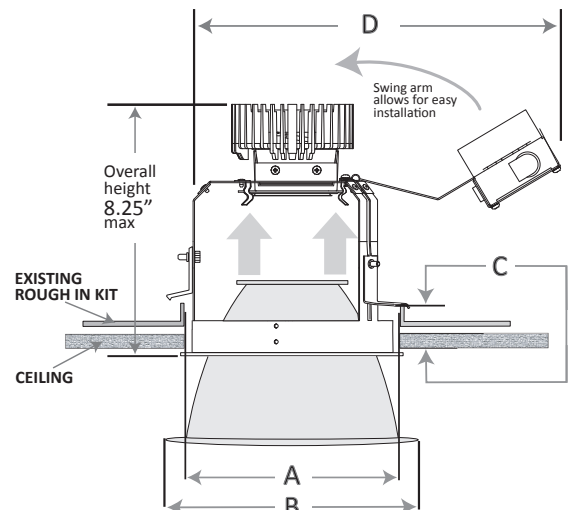


DIMENSIONS & FIXTURE CONFIGURATIONS

Product specifications subject to change without notice.
For the most current spec sheet visit our website www.lumenoptix.com



A Cut-Out Dimension	B Reflector Width
7.88" - 8.5" 8.51" - 9.75" (w/goof ring)	8.75"
C Maximum Ceiling & Rough-In Kit Thickness	D Width of LRD With Swing Arm Extended
2.875"	14.26" /2000 lumen 16.71" /2800 lumen



MODEL NUMBER / ORDERING KEY

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LED | Commercial

8" Retrofit Downlight Series

LRD8

Example base model number : LRD8-20-40-M-RM

Example extended model number: LRD8-20-40-M-RM-FW-V2

LRD8								
SERIES	LUMEN PACKAGE	COLOR TEMP.	BEAM SPREAD	REFLECTOR FINISH	REFLECTOR COLOR (ANODIZED)		FLANGE	VOLTAGE
LRD8 LED Retrofit Downlight 8"	11 1100 lumens	27 2700k	N Narrow	RM Semi-specular	(Blank) Clear	CP Pewter	(Blank) Match reflector color	(Blank) 120-277V
	20 2000 lumens	30 3000k	M Medium	RD Diffused	CZ Bronze	CT Wheat	FB Black	V2 347-480V
	28 2800 lumens	35 3500k		RS Specular	CB Black	CS Straw	FW White	V3 Dimming Low Voltage (0-10V, 120V)
		40 4000k			CK Gold	CW White (painted)	FC Custom* (painted)	V4 Dimming Low Voltage (0-10V, 277V only)
					CG Graphite	CC Custom* (painted)		V5 Dimming Powerline (2 Wire, 120V)*
					CH Warm Haze			V6 Custom Voltage Dimming*

* Consult Factory

* Consult Factory

OPTIONS (Pre-installed when specified)

EMERGENCY LIGHTING	LENS	OTHER
(Blank) No Emergency Ballast installed	(Blank) No lens installed	(Blank) No option included
EL01 Emergency ballast included, Bodine CSL17-C2	L01 Frosted lens	S01 Anti-bacterial paint (for painted surfaces only)
	L02 Transparent lens	S02 High Temperature option
		S03 Surge Protector

ACCESSORIES (Not pre-installed when specified)

GOOF RING	REMODEL RING	LAY-IN KITS
(Blank) No goof ring included	(Blank) No Remodel Ring included	K82 2' x 2' Lay-in Kit*
G8SM Goof ring for 8" LRD, Specular finish	R8 Remodel Ring for 8" LRD	K84 2' x 4' Lay-in Kit*
G8MM Goof ring for 8" LRD, Semi-specular finish		
G8DM Goof ring for 8" LRD, Diffused finish		
G8C Custom (Specify)*		

For detailed information on options and accessories see separate spec sheets for these items.

Retrofit Downlight Series

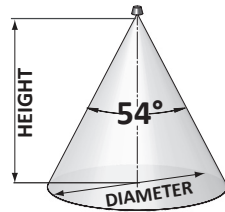
8" Medium Beam

LRD8

Luminaire – Specular Reflector, Clear Medium Distribution

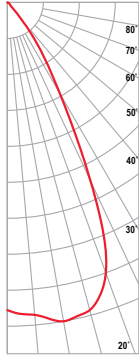
SPECIFICATIONS (4K)

NOMINAL LUMEN PACKAGE	1100	2000	2800
LUMENS	958	1741	2439
WATTS	16.6	29.5	43.4
EFFICACY RATING (LER)	57.7	59.0	56.2
SPACING CRITERION (0-180)	0.9	0.9	0.9
SPACING CRITERION (90-270)	0.9	0.9	0.9
SPACING CRITERION (DIAGONAL)	0.8	0.8	0.8



CANDLEPOWER DISTRIBUTION

DEGREE	1100 CANDELA	2000 CANDELA	2800 CANDELA
0	1184.8	2109.5	2954.5
5	1216.2	2165.5	3032.9
10	1243.4	2213.9	3100.7
15	1223.1	2177.8	3050.1
20	1110.9	1978.0	2770.3
25	758.0	1349.6	1890.2
30	402.9	717.4	1004.7
35	219.3	390.5	547.0
40	83.3	148.2	207.6
45	18.9	33.6	47.0
50	14.2	25.2	35.3
55	10.6	18.9	26.5
60	7.6	13.6	19.1



INSTALLED FOOTCANDLES

HEIGHT	LUMENS	DIAMETER (FEET)		FOOTCANDLES AT NADIR		
		BEAM	FIELD	1100	2000	2800
4'	4.1	6.3	72.6	131.8	184.7	
6'	6.1	9.4	32.3	58.6	82.1	
8'	8.2	12.5	18.1	33.0	46.2	
10'	10.2	15.6	11.6	21.1	29.5	
12'	12.2	18.8	8.1	14.6	20.5	
14'	14.3	21.9	5.9	10.8	15.1	
16'	16.3	25.0	4.5	8.2	11.5	
18'	18.3	28.1	3.6	6.5	9.1	
20'	20.4	31.3	2.9	5.3	7.4	
22'	22.4	34.4	2.4	4.4	6.1	
24'	24.5	37.5	2.0	3.7	5.1	

ZONAL LUMEN SUMMARY

SPECULAR ZONE	1100 LUMENS	2000 LUMENS	2800 LUMENS	%FIXT
0-20	447.75	814.15	1139.79	46.70
0-30	782.42	1422.67	1991.73	81.70
0-40	918.66	1670.4	2338.52	95.90
0-60	950.22	1727.78	2418.86	99.20
0-80	957.73	1741.44	2437.97	100.00
0-90	958.11	1742.14	2438.95	100.00
10-90	843.65	1534.01	2147.58	88.10
20-40	470.91	856.25	1198.73	49.10
20-50	493.08	896.57	1255.18	51.50
40-70	36.88	67.05	93.87	3.80
60-80	7.51	13.65	19.11	0.80
70-80	2.19	3.98	5.58	0.20
80-90	0.38	0.70	0.98	0.00
90-110	0.00	0.00	0.00	0.00
90-120	0.00	0.00	0.00	0.00
90-130	0.00	0.00	0.00	0.00
90-150	0.00	0.00	0.00	0.00
90-180	0.00	0.00	0.00	0.00
110-180	0.00	0.00	0.00	0.00
0-180	958.11	1742.14	2438.95	100.00

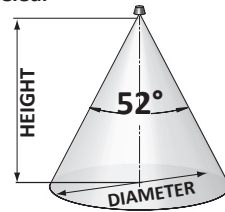
COEFFICIENTS OF UTILIZATION — ZONAL CAVITY METHOD

RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	10	0	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88			
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	84	83			
4	99	92	87	83	97	91	86	82	89	84	81	87	83	80	85	82	79	78			
5	94	87	81	77	93	86	81	77	84	79	76	82	78	75	81	77	75	73			
6	90	82	76	72	89	81	76	72	80	75	71	78	74	71	77	73	71	69			
7	86	77	72	68	85	77	71	68	76	71	67	74	70	67	73	70	67	65			
8	82	73	68	64	81	73	68	64	72	67	64	71	66	63	70	66	63	62			
9	79	70	64	60	78	69	64	60	68	64	60	67	63	60	67	63	60	59			
10	75	66	61	57	74	66	61	57	65	60	57	64	60	57	64	60	57	56			

Luminaire – Semi-Specular Reflector, Clear Medium Distribution

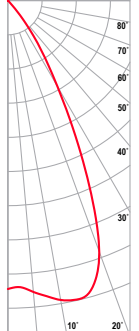
SPECIFICATIONS (4K)

NOMINAL LUMEN PACKAGE	1100	2000	2800
LUMENS	960	1745	2443
WATTS	16.6	29.5	43.4
EFFICACY RATING (LER)	56.3	59.1	56.3
SPACING CRITERION (0-180)	0.9	0.9	0.9
SPACING CRITERION (90-270)	0.9	0.9	0.9
SPACING CRITERION (DIAGONAL)	0.8	0.8	0.8



CANDLEPOWER DISTRIBUTION

DEGREE	1100 CANDELA	2000 CANDELA	2800 CANDELA
0	1196.9	2174.4	3045.4
5	1218.3	2213.3	3099.9
10	1262.1	2293.0	3211.5
15	1264.3	2296.9	3216.9
20	1105.2	2007.9	2812.2
25	740.0	1344.5	1883.0
30	410.0	744.9	1043.3
35	213.1	387.2	542.2
40	74.2	134.9	188.9
45	9.9	18.0	25.3
50	6.2	11.3	15.8
55	4.0	7.3	10.2
60	2.5	4.5	6.3



INSTALLED FOOTCANDLES

HEIGHT	LUMENS	DIAMETER (FEET)		FOOTCANDLES AT NADIR		
		BEAM	FIELD	1100	2000	2800
4'	3.9	6.0	74.8	135.9	190.3	
6'	5.9	9.0	33.2	60.4	84.6	
8'	7.8	12.1	18.7	34.0	47.6	
10'	9.8	15.1	12.0	21.7	30.5	
12'	11.7	18.1	8.3	15.1	21.1	
14'	13.7	21.1	6.1	11.1	15.5	
16'	15.6	24.1	4.7	8.5	11.9	
18'	17.6	27.1	3.7	6.7	9.4	
20'	19.5	30.1	3.0	5.4	7.6	
22'	21.5	33.2	2.5	4.5	6.3	
24'	23.4	36.2	2.1	3.8	5.3	

ZONAL LUMEN SUMMARY

SEMI-SPECULAR ZONE	1100 LUMENS	2000 LUMENS	2800 LUMENS	%FIXT
0-20	465.54	846.22	1184.53	48.50
0-30	802.31	1458.33	2041.47	83.60
0-40	938.32	1705.62	2387.64	97.70
0-60	957.87	1741.17	2437.4	99.80
0-80	960.10	1745.23	2443.09	100.00
0-90	960.19	1745.39	2443.31	100.00
10-90	842.50	1531.41	2143.78	87.70
20-40	472.78	859.41	1203.11	49.20
20-50	488.65	888.27	1243.52	50.90
40-70	21.18	38.51	53.92	2.20
60-80	2.23	4.06	5.69	0.20
70-80	0.60	1.09	1.53	0.10
80-90	0.09	0.16	0.22	0.00
90-110	0.00	0.00	0.00	0.00
90-120	0.00	0.00	0.00	0.00
90-130	0.00	0.00	0.00	0.00
90-150	0.00	0.00	0.00	0.00
90-180	0.00	0.00	0.00	0.00
110-180	0.00	0.00	0.00	0.00
0-180	960.19	1745.39	2443.31	100.00

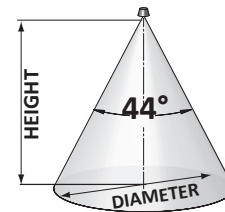
COEFFICIENTS OF UTILIZATION — ZONAL CAVITY METHOD

RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	10	0	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94			
2	109	105	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89			
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84			
4	99	93	88	84	98	91	87	83	89	85	82	87	84	81	86	83	80	79			
5	95	87	82	78	93	87	82	78	85	80	77	83	79	77	82	78	76	74			
6	91	83	77	73	89	82	77	73	81	76	73	79	75	72	78	74	72	70			
7	87	78	73	69	86	78	73	69	77	72	69	75	71	68	74	71	68	67			
8	83	74	69	65	82	74	69	65	73	68	65	72	68	65	71	67	64	63			
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60			
10	76	67	62	59	75	67	62	58	66	62	58	65	61	58	65	61	58	57			

Luminaire – Diffused Reflector, Clear Medium Distribution

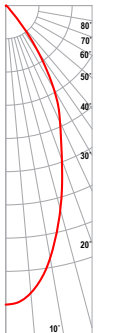
SPECIFICATIONS (4K)

NOMINAL LUMEN PACKAGE	1100	2000	2800
LUMENS	867	1576	2206
WATTS	16.6	29.5	43.4
EFFICACY RATING (LER)	50.8	53.4	50.8
SPACING CRITERION (0-180)	0.7	0.7	0.7
SPACING CRITERION (90-270)	0.7	0.7	0.7
SPACING CRITERION (DIAGONAL)	0.8	0.8	0.8



CANDLEPOWER DISTRIBUTION

DEGREE	1100 CANDELA	2000 CANDELA	2800 CANDELA
0	1368.1	2485.6	3481.2
5	1313.8	2386.9	3343.0
10	1174.0	2132.9	2987.2
15	966.6	1756.1	2459.5
20	750.6	1363.6	1909.8
25	588.1	1068.5	1496.5
30	439.2	798.0	1117.6
35	260.3	472.8	662.2
40	105.3	191.2	267.8
45	29.0	52.7	73.8
50	17.8	32.3	45.2
55	10.8	19.6	27.5
60	6.6	11.9	16.7



INSTALLED FOOTCANDLES

LUMENS		DIAMETER (FEET)		FOOTCANDLES AT NADIR		
		BEAM	FIELD	1100	2000	2800
HEIGHT	4'	3.2	6.3	85.5	155.3	217.6
	6'	4.8	9.4	38.0	69.0	96.7
	8'	6.5	12.5	21.4	38.8	54.4
	10'	8.1	15.6	13.7	24.9	34.8
	12'	9.7	18.8	9.5	17.3	24.2
	14'	11.3	21.9	7.0	12.7	17.8
	16'	12.9	25.0	5.3	9.7	13.6
	18'	14.5	28.1	4.2	7.7	10.7
	20'	16.2	31.3	3.4	6.2	8.7
	22'	17.8	34.4	2.8	5.1	7.2
24'	19.4	37.5	2.4	4.3	6.0	