

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- One fixture converts nearly any manufacturers incandescent, CFL or H.I.D. fixtures with a rough-in inner diameter of 7-5/8" to 8-1/8" diameter to high efficiency LED
- All installation can be performed from below the ceiling without removing existing fixture
- Energy savings up to 50-60% vs. CFL and HID
- Superior-quality white LED light output using Chip on Board technology
- No harmful ultraviolet or infrared wavelengths • No lead or mercury

PRODUCT SPECIFICATIONS

Optics

Reflector: Unique patent pending hyperbolic shape optimized for small, directional LED source, maximizes fixture efficiency while creating the "Silent Ceiling" appearance by reducing lamp image and aperture brightness • Geometry of hyperbolic curve provides unique aperture appearance and smoother light distribution • Medium and wide distributions available

Finishes: Low iridescent specular, semi-specular and satin Alzak® finishes available with integral white flange • See reflector options for other colors and finishes

Electrical

LED Light Engine: Compact light source delivers uniform illumination without pixilation, enabling excellent beam control • Consistent fixture-to-fixture color temperature within 3 SDCM • Replaceable light engine with quick connector mounts directly to heat sink and is easily replaceable • CRI > 80 standard, 90 & 97 CRI available, see options for compatibility

Passive Cooling: Cast aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of LED

LED Driver: Power factor >0.9 • Easily replaceable from above or below the ceiling.

Dimming: Dimmable via 0-10V protocol standard • Optional drivers available for use with Lutron EcoSystem, 2-wire dimmers DMX, or DALI • For a list of compatible dimmers, see [LED-DIM](#).

Life: Rated for 60,000 hours at 70% lumen maintenance • Available with optional Lumen Depreciation Indicator (LDI)

Operation Temperature: -20° C to 50° C

Emergency Battery Pack (Optional) output: Provides a minimum of 600 (BR), or 1100 (HBR) lumens for a minimum duration of 90 minutes

Mechanical

Retro-fit Housing: Housing installs from below ceiling • Secured in place by three (3) tension clips • Tension clips accommodate ceilings from 1/2" to 1-1/8" thick • Integral heat sink conducts heat away from LED light engine • Driver is accessible from below the ceiling and can be upgraded to accommodate future technology improvements.

Labels and Listings

- UL and cUL listed for damp locations • UL spacing requirement for 4000 lumen and above: minimum of 4' between fixture centers, 3" overhead clearance, 2' from fixture center to side wall • RoHS compliant • EMI complies with FCC 47, Part 15, Class A • ENERGY STAR® Qualified, see back page for designated products
- I.B.E.W. Union made • ARRA Compliant

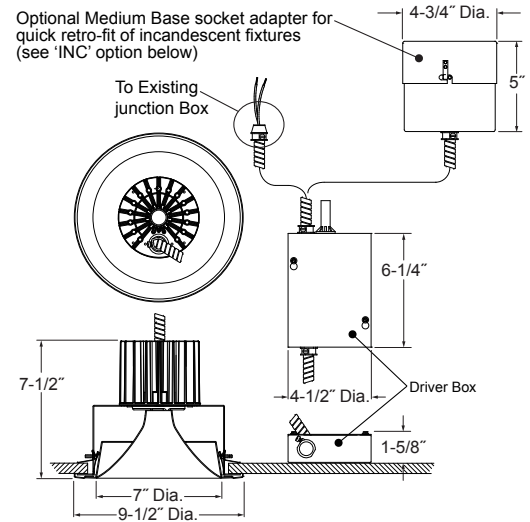
Warranty: 5 years when used in accordance with manufacturing guidelines.
Product specifications subject to change without notice.

800 TO 9000 LUMEN 8" LED RETRO-FIT SILENT CEILING DOWNLIGHT HYPERBOLIC OPEN APERTURE LRT8 SERIES



Type	Cat. No.
Project: _____	
Notes: _____	

DIMENSIONS



ORDERING INFORMATION: Rough-in, reflector and accessories each ordered separately.

Example: **LRT8-23352-G3-LDI**

ROUGH-IN	LIGHT ENGINE LUMENS	COLOR TEMP.	VOLTAGE	GENERATION	OPTIONS
LRT8				G3	
08	800 lm	27	U	G3	90 90 CRI (All lumen and CCT configurations)
13	1300 lm	2700	Universal		97 97 CRI (2800-4000 Lumens, 2700 & 3000 CCT only)
15	1500 lm	30	1		Fuse and Fuse Holder
17	1700 lm	3000	120V		CP Chicago Plenum (800-4000 Lumen only)
23	2300 lm	35	2		+ BR Emergency Battery Pack w/ Remote Test Switch (Cannot be used w/ INC option)
28	2800 lm	3500	277V		+ HBR High Lumen Emergency Battery Pack w/ Remote Test Switch (Cannot be used w/ INC option)
33	3300 lm	40	3		* INC Medium base socket adapter for quick retro-fit of incandescent fixtures (120V only)
40	4000 lm	4000	347V		* PD Lutron Driver compatible w/ 3-wire Fluorescent controls & Lutron Programmable Dimming EcoSystem®
45	4500 lm				* FDL Forward Phase Dimming Lutron Driver - 120V only (2-wire dimming, neutral wire required)
50	5000 lm				FD Phase Cut Dimming, Forward and Reverse, (800-4000 Lumen only) - 120V only
55	5500 lm				LDI Lumen Depreciation Indicator (Cannot be used w/ BR or HBR options)
60	6000 lm				DMX DMX/RDM Driver
65	6500 lm				DALI DALI Dimming Driver
70	7000 lm				
75	7500 lm				
80	8000 lm				
85	8500 lm				
90	9000 lm				

Example: **LRT800HW-CS**

REFLECTOR	DISTRIBUTION	COLOR	FINISH	OPTIONS
LRT800				
HN	C	Clear	Low Iridescent Alzak Finishes:	WH
Narrow Flood	W	White	L Specular	White Painted Flange
H			S Satin	
Medium Flood			* Q Semi-Specular (*Clear only)	
HW			Blank for White	
Wide Flood				

■ Only 800, 1300 & 1500 lumen fixtures are universal voltage (120/277V)
♦ Not Available for 4000 Lumens and up
* INC option requires 120V at socket
† Not available for 347V or CP



800 TO 9000 LUMEN 8" LED RETRO-FIT SILENT CEILING DOWNLIGHT HYPERBOLIC OPEN APERTURE LRT8 SERIES

ENGINEERING DATA: 347 Volt available, consult factory																		
VOLTAGE																		
120																		
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
CCT																		
2700K/3000K/3500K/4000K																		
INPUT CURRENT	0.064	0.102	0.12	0.151	0.202	0.250	0.290	0.375	0.358	0.383	0.426	0.457	0.501	0.553	0.604	0.645	0.694	0.769
INPUT WATTAGE	7.7W	12.2W	14.4W	18.1W	24.1W	29.8W	34.6W	45.0W	42.3W	45.3W	50.4W	54.7W	59.9W	66.2W	72.2W	77.1W	82.9W	92.0W
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	6.67	4.30	4.01	3.68	5.59	5.70	4.16	3.93	14.00	13.26	14.48	4.61	4.66	3.97	4.24	3.81	3.74	3.53
POWER FACTOR	0.991	0.993	0.993	0.995	0.994	0.995	0.997	0.998	0.996	0.996	0.996	0.996	0.996	0.997	0.996	0.996	0.996	0.996
VOLTAGE																		
277																		
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000
CCT																		
2700K/3000K/3500K/4000K																		
INPUT CURRENT	0.032	0.050	0.058	0.073	0.095	0.113	0.135	0.168	0.177	0.192	0.204	0.220	0.222	0.251	0.288	0.306	0.334	0.345
INPUT WATTAGE	8.2W	12.5W	14.6W	18.3W	24.3W	29.5W	35.0W	44.3W	42.8W	45.9W	50.8W	54.8W	61.1W	63.4W	72.7W	77.0W	83.7W	88.9W
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	11.15	10.45	10.99	11.11	10.06	8.38	8.48	7.98	21.91	19.95	21.30	22.02	23.02	21.97	20.07	19.57	17.10	14.74
POWER FACTOR	0.915	0.889	0.903	0.911	0.921	0.942	0.935	0.955	0.874	0.864	0.898	0.900	0.994	0.910	0.912	0.908	0.904	0.906

DELIVERED LUMENS/LUMENS PER WATT (4K 80CRI)																		
	LRT8-0840U		LRT8-1340U		LRT8-1540U		LRT8-1740I		LRT8-2340I		LRT8-2840I		LRT8-3340I		LRT8-4040I		LRT8-4540I	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
LRT800HN-CL	871	93.7	1413	93.6	1618	91.4	1796	80.9	2305	77.3	2501	83.9	2874	83.1	3488	77.7	4198	101.2
LRT800HN-CQ	776	83.4	1258	83.3	1441	81.4	1599	72.0	2052	68.9	2316	77.7	2662	76.9	3230	71.9	3536	85.2
LRT800HN-CS	701	75.4	1137	75.3	1302	73.5	1444	65.1	1854	62.2	2100	70.5	2413	69.8	2929	65.2	3313	79.8
LRT800H-CL	852	91.6	1369	90.7	1582	89.4	1756	79.1	2254	75.6	2436	81.8	2800	80.9	3398	75.7	3806	91.7
LRT800H-CQ	832	89.5	1350	89.4	1546	87.3	1715	77.3	2202	73.9	2363	79.3	2716	78.5	3296	73.4	3626	87.4
LRT800H-CS	738	79.4	1197	79.3	1371	77.5	1521	68.5	1953	65.5	2158	72.4	2480	71.7	3010	67.0	3200	77.1
LRT800HW-CL	910	97.9	1472	97.5	1690	95.5	1876	84.5	2408	80.8	2628	88.2	3020	87.3	3665	81.6	3992	96.2
LRT800HW-CQ	878	94.4	1423	94.3	1630	92.1	1809	81.5	2322	77.9	2532	85.0	2910	84.1	3532	78.7	3680	88.7
LRT800HW-CS	841	90.4	1363	90.3	1561	88.2	1732	78.0	2224	74.6	2426	81.4	2788	80.6	3384	75.4	3396	81.8
	LRT8-5040I		LRT8-5540I		LRT8-6040I		LRT8-6540I		LRT8-7040I		LRT8-7540I		LRT8-8040I		LRT8-8540I		LRT8-9040I	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
LRT800HN-CL	4570	99.8	5107	97.5	5265	96.4	5771	97.7	6325	95.3	6688	93.3	7005	92.3	7463	90.7	7906	86.4
LRT800HN-CQ	3849	84.0	4302	82.1	4436	81.2	4862	82.3	5328	80.2	5634	78.6	5901	77.7	6287	76.4	6660	72.8
LRT800HN-CS	3607	78.7	4031	76.9	4156	76.1	4555	77.1	4992	75.2	5279	73.6	5529	72.8	5891	71.6	6240	68.2
LRT800H-CL	4143	90.5	4631	88.4	4774	87.4	5233	88.5	5734	86.4	6064	84.6	6351	83.7	6767	82.2	7168	78.3
LRT800H-CQ	3947	86.2	4412	84.2	4548	83.3	4985	84.4	5463	82.3	5777	80.6	6050	79.7	6447	78.3	6829	74.6
LRT800H-CS	3483	76.0	3893	74.3	4013	73.5	4399	74.4	4821	72.6	5098	71.1	5339	70.3	5689	69.1	6026	65.9
LRT800HW-CL	4345	94.9	4857	92.7	5007	91.7	5488	92.9	6014	90.6	6360	88.7	6661	87.8	7097	86.2	7518	82.2
LRT800HW-CQ	4006	87.5	4477	85.4	4615	84.5	5059	85.6	5544	83.5	5863	81.8	6140	80.9	6542	79.5	6930	75.7
LRT800HW-CS	3697	80.7	4132	78.9	4260	78.0	4669	79.0	5117	77.1	5411	75.5	5667	74.7	6038	73.4	6396	69.9



**800 TO 9000 LUMEN 8" LED RETRO-FIT
SILENT CEILING DOWNLIGHT
HYPERBOLIC OPEN APERTURE
LRT8 SERIES**

ENERGY STAR® Qualified		
	PRODUCT#	FIXTURE CONFIGURATIONS = ENERGY STAR
	Universal Voltage (120V-277V), 80 CRI LRT8-(XX)(YY)U-G3 [▲] LRT800HN-(CC)(F) LRT800H-(CC)(F) LRT800HW-(CC)(F)	Lumen Package: XX = 08*, 13*, 15 CCT: YY = 27, 30, 35, 40 Voltage: Universal Voltage (120V-277V) CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q
	120V/277V, 80 CRI LRT8-(XX)(YY)(Z)-G3 [▲] LRT800HN-(CC)(F) LRT800H-(CC)(F) LRT800HW-(CC)(F)	Lumen Package: XX = 17, 23, 28, 33, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90 CCT: YY = 27, 30, 35, 40 Voltage: Z = 1, 2 CRI: 80 Reflector Color: CC = C Reflector Finish: F = L, S, Q

▲ PD and FDL options are not ENERGY STAR® Certified.

* Indicated lumen packages are not ENERGY STAR® Certified with -DMX or -DALI options when used with 277 volts.

Catalog Number: LRT8-1340U-G3; LRT800HN-CL
 PHOTOMETRIC REPORT
 Test Number: PR06152984
 Total Lumen Output: 1413
 Center Beam Candlepower: 10,137
 Luminaire Efficacy: 93.6 lm/w (4K)
 Luminaire Spacing Criteria: 0.29
 Luminaire: Clear Specular Alzak®
 Narrow Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	281.6	137.3	1.6'
7'	206.9	100.9	1.8'
8'	158.4	77.2	2.1'
9'	125.1	61.0	2.3'
10'	101.4	49.4	2.6'
11'	83.8	40.8	2.9'
12'	70.4	34.3	3.1'
13'	60.0	29.2	3.4'
14'	51.7	25.2	3.6'
15'	45.1	22.0	3.9'

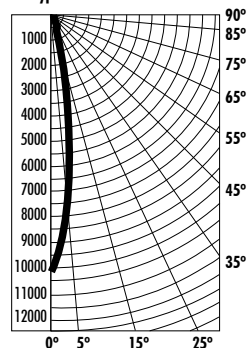
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	64	56	49
6' x 6'	44	39	34
7' x 7'	33	29	25
8' x 8'	25	22	19
9' x 9'	20	17	15
10' x 10'	16	14	12
11' x 11'	13	12	10
12' x 12'	11	10	8

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	0
55°	0
65°	0
75°	0
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	10137	
5°	7100	678
15°	1016	288
25°	587	272
35°	275	173
45°	0	0
55°	0	0
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	1238	87.7
0-40°	1411	100.0
0-60°	1411	100.0
0-90°	1411	100.0
90-180°	0	0.0
0-180°	1411	100.0

CCT MULTIPLIER

(800-2300 Lumens)
 27K = 0.91 35K = 0.98
 3K = 0.96 4K = Baseline

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	116	116	116	116	113	113	113	113	108	108	108	103	103	103	99	99	99	97
1	112	109	108	106	109	107	106	104	104	102	101	100	99	98	97	96	95	94
2	108	104	101	99	106	103	100	98	99	97	95	97	95	93	94	93	92	90
3	104	99	96	93	102	98	95	92	96	93	91	94	91	89	91	90	88	87
4	101	95	91	88	99	94	91	88	92	89	87	91	88	86	89	87	85	84
5	98	92	87	84	96	91	87	84	89	86	83	88	85	83	86	84	82	81
6	94	88	84	81	93	88	84	81	86	83	80	85	82	80	84	81	79	78
7	92	85	81	78	91	85	81	78	84	80	77	83	79	77	82	79	77	76
8	89	82	78	75	88	82	78	75	81	77	75	80	77	75	79	77	74	73
9	87	80	76	73	86	79	76	73	79	75	73	78	75	72	77	74	72	71
10	84	78	74	71	83	77	73	71	77	73	71	76	73	70	75	72	70	69

Catalog Number: LRT8-13401-G3; LRT800H-CL
 PHOTOMETRIC REPORT
 Test Number: PR02150594
 Total Lumen Output: 1369
 Center Beam Candlepower: 1895
 Luminaire Efficacy: 90.7 lm/w (4K)
 Luminaire Spacing Criteria: 0.66
 Luminaire: Clear Specular Alzak® Reflector,
 Open Bottom, Medium Distribution.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	52.6	20.2	5.3'
7'	38.6	14.8	6.1'
8'	29.6	11.4	7.0'
9'	23.4	9.0	7.9'
10'	18.9	7.3	8.8'
11'	15.6	6.0	9.7'
12'	13.1	5.1	10.5'
13'	11.2	4.3	11.4'
14'	9.7	3.7	12.3'
15'	8.4	3.2	13.2'

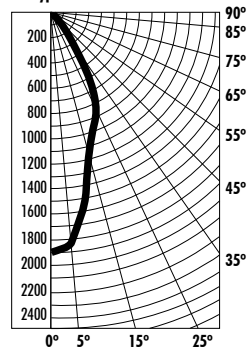
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	61	49	38
6' x 6'	42	34	26
7' x 7'	31	25	19
8' x 8'	24	19	15
9' x 9'	19	15	12
10' x 10'	15	12	9
11' x 11'	13	10	8
12' x 12'	11	8	7

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	12,995
55°	0
65°	0
75°	319
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	1893	
5°	1845	176
15°	1191	338
25°	915	423
35°	402	252
45°	228	177
55°	0	0
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	937	68.5
0-40°	1189	86.9
0-60°	1366	99.8
0-90°	1368	100.0
90-180°	0	0.0
0-180°	1368	100.0

CCT MULTIPLIER

(800-2300 Lumens)
 27K = 0.91 35K = 0.98
 3K = 0.96 4K = Baseline

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	112	110	107	105	110	107	105	103	103	102	100	100	98	97	96	95	94	92
2	107	102	98	94	104	100	96	93	97	94	91	94	92	89	91	89	88	86
3	101	95	90	86	99	93	89	85	91	87	84	88	85	83	86	84	81	80
4	96	88	83	79	94	87	82	78	85	81	77	83	80	76	81	78	76	74
5	91	83	77	73	89	82	76	72	80	75	72	78	74	71	77	73	70	69
6	86	78	72	67	85	77	71	67	75	70	67	74	70	66	73	69	66	64
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60
8	78	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56
9	74	65	59	55	73	64	59	55	63	58	55	62	58	54	62	57	54	53
10	71	61	55	52	70	61	55	51	60	55	51	59	54	51	58	54	51	50

Catalog Number: LRT8-13401-G3; LRT800HW-CL
 PHOTOMETRIC REPORT
 Test Number: PR02150596
 Total Lumen Output: 1472
 Center Beam Candlepower: 1245
 Luminaire Efficacy: 97.5 lm/w (4K)
 Luminaire Spacing Criteria: 1.03
 Luminaire: Clear Specular Alzak® Reflector,
 Open Bottom, Wide Distribution.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	32.1	9.7	8.2'
7'	23.6	7.1	9.6'
8'	18.0	5.5	10.9'
9'	14.3	4.3	12.3'
10'	11.5	3.5	13.7'
11'	9.5	2.9	15.0'
12'	8.0	2.4	16.4'
13'	6.8	2.1	17.8'
14'	5.9	1.8	19.1'
15'	5.1	1.6	20.5'

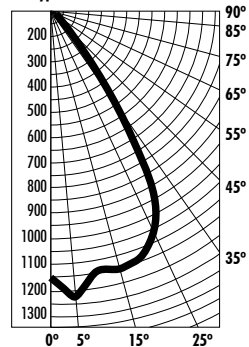
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	65	52	39
6' x 6'	45	36	27
7' x 7'	33	26	20
8' x 8'	25	20	15
9' x 9'	20	16	12
10' x 10'	16	13	10
11' x 11'	13	11	8
12' x 12'	11	9	7

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	12,416
55°	70
65°	217
75°	0
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	1155	
5°	1236	118
15°	1152	327
25°	1068	494
35°	574	360
45°	218	169
55°	1	1
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	939	63.8
0-40°	1299	88.3
0-60°	1469	99.8
0-90°	1471	100.0
90-180°	0	0
0-180°	1471	100.0

CCT MULTIPLIER

(800-2300 Lumens)
 27K = 0.91 35K = 0.98
 3K = 0.96 4K = Baseline

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	117	117	117	117	114	114	114	114	109	109	109	104	104	104	100	100	100	98
1	111	108	106	103	108	106	104	102	102	100	99	98	97	96	95	94	93	91
2	105	100	96	93	103	98	95	92	95	92	90	92	90	88	90	88	86	84
3	99	93	88	84	97	92	87	83	89	85	82	87	83	80	84	82	79	78
4	94	86	81	76	92	85	80	76	83	78	75	81	77	74	79	76	73	72
5	89	80	74	70	87	79	74	70	78	73	69	76	72	68	74	71	68	66
6	84	75	69	64	83	74	68	64	73	67	64	71	67	63	70	66	63	61
7	79	70	64	59	78	69	63	59	68									

Catalog Number: LRT8-4540-G3; LRT800HN-CL
 PHOTOMETRIC REPORT
 Test Number: PR06150281
 Total Lumen Output: 4198
 Center Beam Candpower: 13,290
 Luminaire Efficacy: 101.2 lm/w (4K)
 Luminaire Spacing Criteria: 0.43
 Luminaire: Clear Specular Alzak®,
 Narrow Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	369.2	172.5	2.6'
7'	271.2	126.7	3.0'
8'	207.7	97.0	3.4'
9'	164.1	76.7	3.9'
10'	132.9	62.1	4.3'
11'	109.8	51.3	4.7'
12'	92.3	43.1	5.2'
13'	78.6	36.7	5.6'
14'	67.8	31.7	6.0'
15'	59.1	27.6	6.5'

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

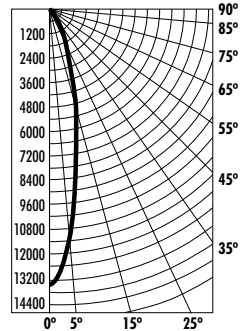
Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	188	161	134
6' x 6'	131	112	93
7' x 7'	96	82	69
8' x 8'	73	63	52
9' x 9'	58	50	41
10' x 10'	47	40	34
11' x 11'	39	33	28
12' x 12'	33	28	23

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	0
55°	0
65°	0
75°	0
85°	0

CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela Lumens
0°	13290
5°	11505 1098
15°	5207 1476
25°	2344 1085
35°	854 537
45°	0 0
55°	0 0
65°	0 0
75°	0 0
85°	0 0



ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	3659	87.2
0-40°	4195	100.0
0-60°	4195	100.0
0-90°	4195	100.0
90-180°	0	0
0-180°	4195	100.0

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	113	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	105	101	99	107	103	100	97	100	97	95	97	95	93	94	93	91	90
3	104	99	95	92	103	98	94	91	95	92	90	93	90	88	91	89	87	86
4	100	94	90	86	99	93	89	86	91	88	85	89	86	84	88	85	83	82
5	97	90	85	82	95	89	85	81	87	83	81	86	82	80	84	81	79	78
6	93	86	81	77	92	85	80	77	84	80	77	82	79	76	81	78	76	74
7	90	82	77	74	88	81	77	74	80	76	73	79	76	73	78	75	72	71
8	86	79	74	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68
9	83	75	71	67	82	75	70	67	74	70	67	73	70	67	73	69	67	66
10	80	73	68	65	80	72	68	65	71	67	64	71	67	64	70	67	64	63

CCT MULTIPLIER

(3300-4000 Lumens)
 27K = 0.91 35K = 0.99
 3K = 0.96 4K = 1.00

Catalog Number: LRT8-4540-G3; LRT800H-CL
 PHOTOMETRIC REPORT
 Test Number: PR05151282
 Total Lumen Output: 3807
 Center Beam Candpower: 3598
 Luminaire Efficacy: 91.7 lm/w (4K)
 Luminaire Spacing Criteria: 0.96
 Luminaire: Clear Specular Alzak®,
 Medium Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	98.9	30.6	7.5'
7'	72.7	22.5	8.7'
8'	55.6	17.2	10.0'
9'	44.0	13.6	11.2'
10'	35.6	11.0	12.4'
11'	29.4	9.1	13.7'
12'	24.7	7.6	14.9'
13'	21.1	6.5	16.2'
14'	18.2	5.6	17.4'
15'	15.8	4.9	18.7'

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

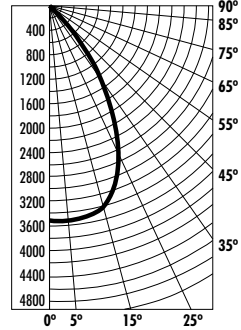
Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	169	136	104
6' x 6'	117	94	72
7' x 7'	86	69	53
8' x 8'	66	53	40
9' x 9'	52	42	32
10' x 10'	42	34	26
11' x 11'	35	28	21
12' x 12'	29	24	18

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	24011
55°	0
65°	0
75°	0
85°	0

CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela Lumens
0°	3561
5°	3595 343
15°	3469 983
25°	2626 1216
35°	1454 913
45°	452 350
55°	0 0
65°	0 0
75°	0 0
85°	0 0



ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	2542	66.8
0-40°	3455	90.8
0-60°	3805	100.0
0-90°	3805	100.0
90-180°	0	0
0-180°	3805	100.0

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	117	117	117	117	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	112	109	107	104	109	107	105	103	103	101	100	99	98	97	96	95	94	92
2	106	101	97	94	104	100	96	93	96	93	91	93	91	89	91	89	87	85
3	101	94	89	85	99	93	88	85	90	86	83	88	85	82	86	83	81	79
4	95	88	82	78	94	87	81	78	85	80	77	83	79	76	81	77	75	73
5	90	82	76	72	89	81	75	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	84	76	70	66	74	69	66	73	68	65	72	68	65	63
7	81	72	66	61	80	71	65	61	70	65	61	69	64	61	67	63	60	59
8	77	67	61	57	76	67	61	57	66	60	57	65	60	57	64	59	56	55
9	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	51
10	70	60	54	50	69	59	54	50	58	53	50	58	53	50	57	53	49	48

CCT MULTIPLIER

(3300-4000 Lumens)
 27K = 0.91 35K = 0.99
 3K = 0.96 4K = 1.00

Catalog Number: LRT8-4540-G3; LRT800HW-CL
 PHOTOMETRIC REPORT
 Test Number: PR05151382
 Total Lumen Output: 3992
 Center Beam Candpower: 3195
 Luminaire Efficacy: 96.2 lm/w (4K)
 Luminaire Spacing Criteria: 1.1
 Luminaire: Clear Specular Alzak®,
 Wide Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	79.0	23.8	8.6'
7'	58.0	17.5	10.1'
8'	44.4	13.4	11.5'
9'	35.1	10.6	12.9'
10'	28.4	8.6	14.4'
11'	23.5	7.1	15.8'
12'	19.7	5.9	17.3'
13'	16.8	5.1	18.7'
14'	14.5	4.4	20.1'
15'	12.6	3.8	21.6'

AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

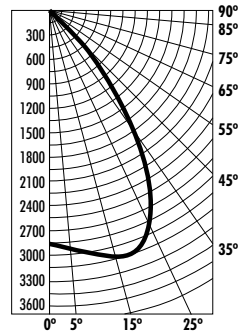
Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	176	141	105
6' x 6'	122	98	73
7' x 7'	90	72	54
8' x 8'	69	55	41
9' x 9'	54	43	33
10' x 10'	44	35	26
11' x 11'	36	29	22
12' x 12'	30	24	18

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	27872
55°	0
65°	0
75°	0
85°	0

CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela Lumens
0°	2843
5°	2992 286
15°	3171 899
25°	2874 1330
35°	1702 1069
45°	525 407
55°	0 0
65°	0 0
75°	0 0
85°	0 0



ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	2515	63.0
0-40°	3584	89.8
0-60°	3990	100.0
0-90°	3990	100.0
90-180°	0	0
0-180°	3990	100.0

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	117	117	117	117	114	114	114	114	109	109	109	104	104	104	100	100	100	98
1	111	108	106	104	109	106	104	102	102	100	99	99	97	96	95	94	93	91
2	105	100	96	93	103	99	95	92	95	92	90	93	90	88	90	88	86	84
3	100	93	88	84	98	92	87	83	89	85	82	87	83	81	84	82	79	78
4	94	86	81	76	92	85	80	76	83	79	75	81	77	74	79	76	73	72
5	89	80	74	70	87	79	74	69	78	73	69	76	72	68	74	71	68	66
6	84	75	69	64	83	74	68	64	72	67	63	71	66	63	70	66	63	61
7	79	70	64	59	78	69	63	59	68	63	59	67	62	58	65	61	58	57
8	75	65	59	55	74	65	59	55	64	58	54	63	58	54	62	57	54	52
9	71	61																

Catalog Number: LRT8-9040-G3; LRT800HN-CL
PHOTOMETRIC REPORT
 Test Number: PR06150291
 Total Lumen Output: 7906
 Center Beam Candpower: 25,029
 Luminaire Efficacy: 86.4 lm/w (4K)
 Luminaire Spacing Criteria: 0.43
 Luminaire: Clear Specular Alzak®
 Narrow Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	695.3	324.8	2.6'
7'	510.8	238.7	3.0'
8'	391.1	182.7	3.4'
9'	309.0	144.4	3.9'
10'	250.3	116.9	4.3'
11'	206.9	96.6	4.7'
12'	173.8	81.2	5.2'
13'	148.1	69.2	5.6'
14'	127.7	59.7	6.0'
15'	111.2	52.0	6.5'

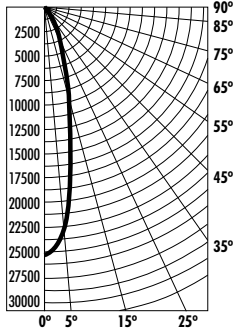
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	354	304	253
6' x 6'	246	211	176
7' x 7'	181	155	129
8' x 8'	138	119	99
9' x 9'	109	94	78
10' x 10'	89	76	63
11' x 11'	73	63	52
12' x 12'	61	53	44

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	57
55°	0
65°	0
75°	327
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	25029	
5°	21668	2068
15°	9805	2779
25°	4414	2043
35°	1609	1011
45°	1	1
55°	0	0
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	6890	87.2
0-40°	7901	100.0
0-60°	7902	100.0
0-90°	7904	100.0
90-180°	0	0
0-180°	7904	100.0

CCT MULTIPLIER

(3300-4000 Lumens)
 27K = 0.91 35K = 0.99
 3K = 0.96 4K = 1.00

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	113	111	109	107	111	109	107	105	110	103	102	101	100	99	98	97	96	94
2	109	105	101	99	107	103	100	97	100	97	95	97	95	93	94	93	91	90
3	104	99	95	92	103	98	94	91	95	92	90	93	90	88	91	89	87	86
4	100	94	90	86	99	93	89	86	91	88	85	89	86	84	88	85	83	82
5	97	90	85	82	95	89	85	81	87	83	81	86	82	80	84	81	79	78
6	93	86	81	77	92	85	80	77	84	80	77	82	79	76	81	78	76	74
7	90	82	77	74	88	81	77	74	80	76	73	79	76	73	78	75	72	71
8	86	79	74	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68
9	83	75	71	67	82	75	70	67	74	70	67	73	70	67	73	69	67	66
10	80	73	68	65	80	72	68	65	71	67	64	71	67	64	70	67	64	63

Catalog Number: LRT8-9040-G3; LRT800H-CL
PHOTOMETRIC REPORT
 Test Number: PR05151292
 Total Lumen Output: 7168
 Center Beam Candpower: 6776
 Luminaire Efficacy: 78.3 lm/w (4K)
 Luminaire Spacing Criteria: 0.96
 Luminaire: Clear Specular Alzak®
 Medium Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	186.3	57.6	7.5'
7'	136.9	42.3	8.7'
8'	104.8	32.4	10.0'
9'	82.8	25.6	11.2'
10'	67.1	20.7	12.4'
11'	55.4	17.1	13.7'
12'	46.6	14.4	14.9'
13'	39.7	12.3	16.2'
14'	34.2	10.6	17.4'
15'	29.8	9.2	18.7'

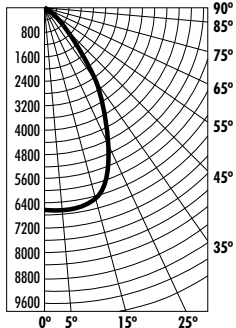
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	318	255	195
6' x 6'	221	177	135
7' x 7'	162	130	99
8' x 8'	124	100	76
9' x 9'	98	79	60
10' x 10'	80	64	49
11' x 11'	66	53	40
12' x 12'	55	44	34

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	45220
55°	0
65°	0
75°	0
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	6707	
5°	6770	646
15°	6534	1852
25°	4946	2289
35°	2738	1720
45°	852	660
55°	0	0
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	4787	66.8
0-40°	6507	90.8
0-60°	7167	100.0
0-90°	7167	100.0
90-180°	0	0
0-180°	7167	100.0

CCT MULTIPLIER

(3300-4000 Lumens)
 27K = 0.91 35K = 0.99
 3K = 0.96 4K = 1.00

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	117	117	117	117	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	112	109	107	104	109	107	105	103	103	101	100	99	98	97	96	95	94	92
2	106	101	97	94	104	100	96	93	96	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	85	90	86	83	88	85	82	86	83	81	79
4	95	88	82	78	94	87	82	78	85	80	77	83	79	76	81	77	75	73
5	90	82	76	72	89	81	76	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	84	76	70	66	74	69	66	73	68	65	72	68	65	63
7	81	72	66	61	80	71	65	61	70	65	61	69	64	61	68	63	60	59
8	77	67	61	57	76	67	61	57	66	60	57	65	60	57	64	59	56	55
9	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	51
10	70	60	54	50	69	59	54	50	58	53	50	58	53	50	57	53	49	48

Catalog Number: LRT8-9040-G3; LRT800HW-CL
PHOTOMETRIC REPORT
 Test Number: PR05151392
 Total Lumen Output: 7518
 Center Beam Candpower: 6017
 Luminaire Efficacy: 82.2 lm/w (4K)
 Luminaire Spacing Criteria: 1.1
 Luminaire: Clear Specular Alzak®
 Wide Flood Hyperbolic Reflector.
 CIE-Type: Direct



INITIAL FOOTCANDLES

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Footcandles Beam Edge	Beam Diameter
6'	148.7	44.7	8.6'
7'	109.3	32.9	10.1'
8'	83.7	25.2	11.5'
9'	66.1	19.9	12.9'
10'	53.5	16.1	14.4'
11'	44.3	13.3	15.8'
12'	37.2	11.2	17.3'
13'	31.7	9.5	18.7'
14'	27.3	8.2	20.1'
15'	23.8	7.2	21.6'

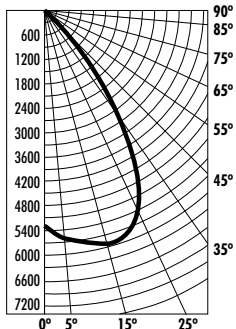
AVERAGE INITIAL FOOTCANDLES

Reflectances: 80% Ceiling, 50% Walls, 30% Floors

Luminaire Spacing	Room Cavity Ratio		
	RCR1	RCR4	RCR8
5' x 5'	331	265	198
6' x 6'	230	184	138
7' x 7'	169	135	101
8' x 8'	129	103	78
9' x 9'	102	82	61
10' x 10'	83	66	50
11' x 11'	68	55	41
12' x 12'	57	46	34

LUMINANCE DATA

Angle in Degrees	Candela/M ²
45°	52490
55°	164
65°	0
75°	0
85°	0



CANDLEPOWER DISTRIBUTION (Candelas)

Angle	Candela	Lumens
0°	5355	
5°	5634	538
15°	5971	1693
25°	5412	2505
35°	3205	2013
45°	989	766
55°	2	2
65°	0	0
75°	0	0
85°	0	0

ZONAL LUMEN SUMMARY

Zone	Lumens%	%Fixtures
0-30°	4736	63.0
0-40°	6749	89.8
0-60°	7517	100.0
0-90°	7517	100.0
90-180°	0	0
0-180°	7517	100.0

CCT MULTIPLIER

(3300-4000 Lumens)
 27K = 0.91 35K = 0.99
 3K = 0.96 4K = 1.00

COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)

Effective Floor Reflectance 20%

PCC	80			70			50			30			10			0		
	PW	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
0	117	117	117	117	114	114	114	114	109	109	109	104	104	104	100	100	100	98
1	111	108	106	104	109	106	104	102	102	101	99	99	97	96	95	94	93	91
2	105	100	96	93	103	99	95	92	96	92	90	93	90	88	90	88	86	84
3	100	93	88	84	98	92	87	83	89	85	82	87	83	81	84	82	79	78
4	94	86	81	76	92	85	80	76	83	79	75	81	77	74	79	76	73	72
5	89	80	74	70	87	79	74	69	78	73	69	76	72	68	74	71	68	66
6	84	75	69	64	83	74	68	64										