



Report of Test

LLIA001589-002

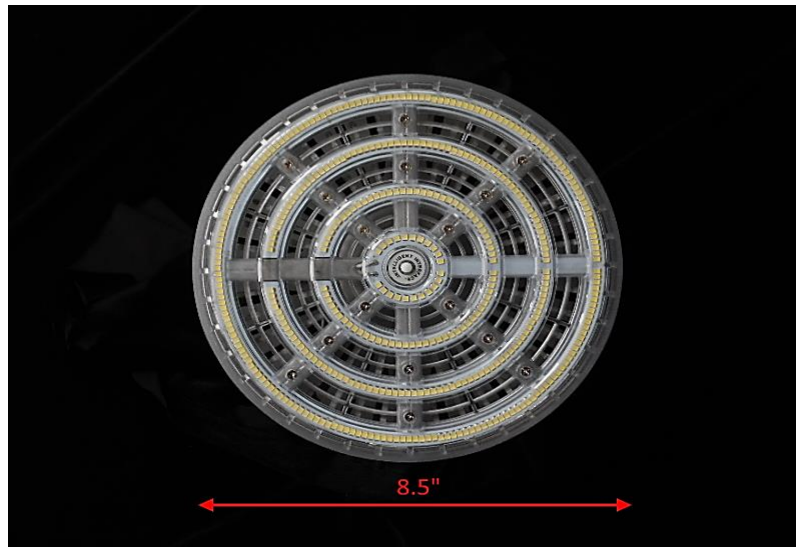
Indoor Distribution Photometry Test Report

Catalog Number: LHB115W-850-EX39

Pendent mounted high bay replacement lamp, E39 screw base, plastic housing, aluminum heat sink, clear plastic enclosure with concentric lenses below LEDs.

408 white LEDs.

Integral LED driver



Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

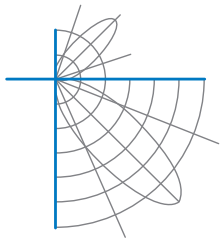
Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	15785.0 Lumens
Input Current	0.9238 A	Total Efficacy	144.8 Lm/W
Input Power	109.0 W	Downward Flux	15649.8 Lumens
Frequency	60.00 Hz	Downward Flux	99.1 % of Total
Power Factor	0.983		
Current THD	12.1 %		

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

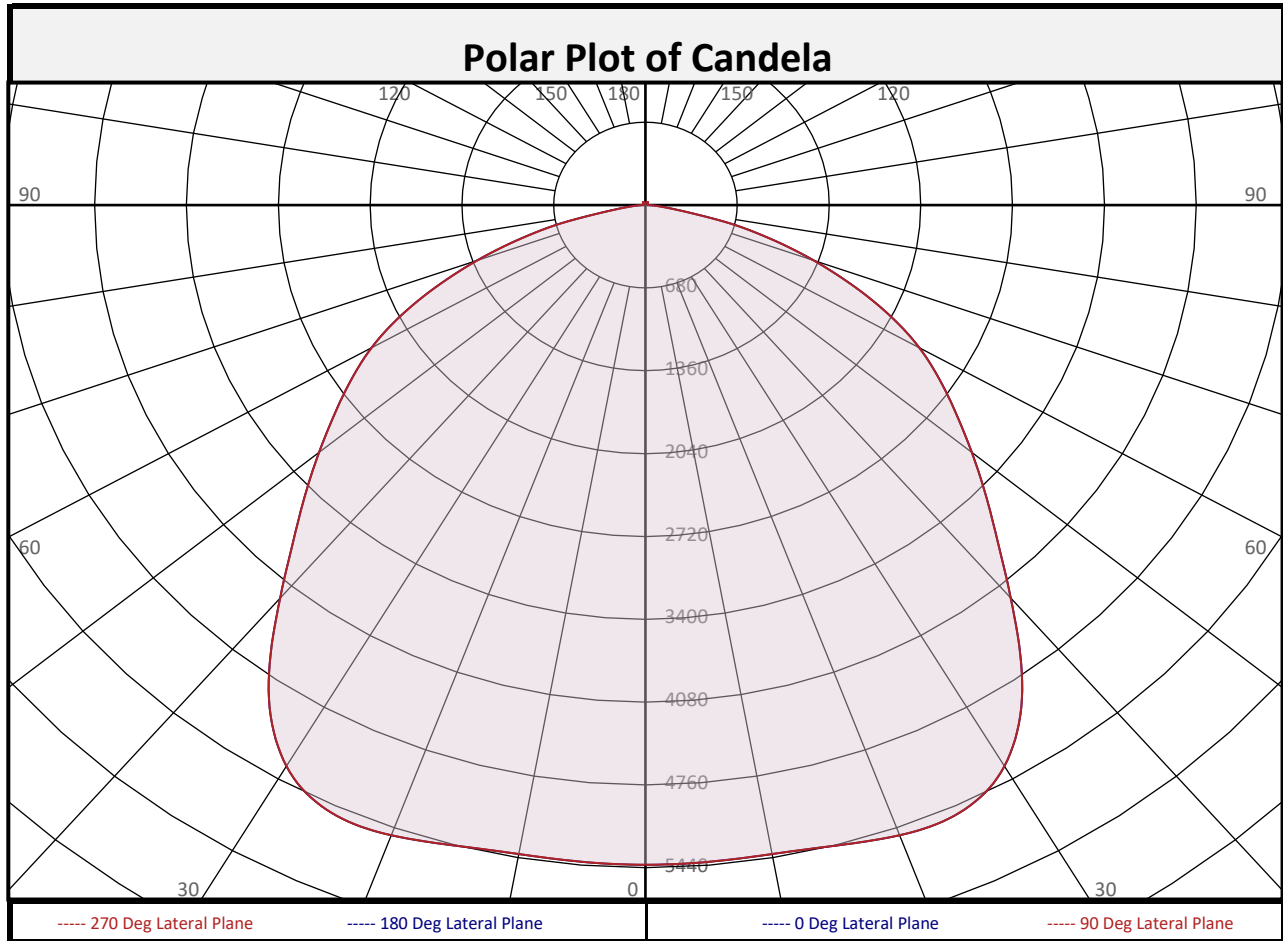
Test date: 11/18/2021

Report date: 11/19/2021

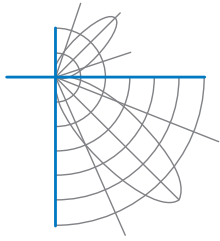
Signed: _____



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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	516.8	3.3%		90-100	25.6	0.2%		0-20	2063	13.1%
10-20	1546	9.8%		100-110	18.5	0.1%		0-30	4594	29.1%
20-30	2531	16.0%		110-120	17.0	0.1%		0-40	7611	48.2%
30-40	3018	19.1%		120-130	18.6	0.1%		0-60	12875	81.6%
40-50	2812	17.8%		130-140	19.6	0.1%		0-80	15534	98.4%
50-60	2452	15.5%		140-150	16.8	0.1%		10-90	15133	95.9%
60-70	1828	11.6%		150-160	11.9	0.1%		20-50	8360	53.0%
70-80	830.5	5.3%		160-170	6.0	0.0%		40-90	8038	50.9%
80-90	115.9	0.7%		170-180	1.3	0.0%		60-90	2775	17.6%
0-90	15650	99.1%		90-180	135.2	0.9%		0-180	15785	100.0%

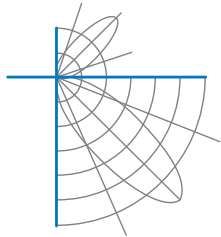


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	5416	5416	5416	5416	5416	5416	5416	5416	5416
	2.5	5414	5414	5414	5414	5414	5414	5414	5414	5414
	5	5412	5412	5412	5412	5412	5412	5412	5412	5412
	7.5	5409	5409	5409	5409	5409	5409	5409	5409	5409
	10	5410	5410	5410	5410	5410	5410	5410	5410	5410
	12.5	5421	5421	5421	5421	5421	5421	5421	5421	5421
	15	5444	5444	5444	5444	5444	5444	5444	5444	5444
	17.5	5475	5475	5475	5475	5475	5475	5475	5475	5475
	20	5505	5505	5505	5505	5505	5505	5505	5505	5505
	22.5	5521	5521	5521	5521	5521	5521	5521	5521	5521
	25	5504	5504	5504	5504	5504	5504	5504	5504	5504
	27.5	5442	5442	5442	5442	5442	5442	5442	5442	5442
	30	5318	5318	5318	5318	5318	5318	5318	5318	5318
	32.5	5124	5124	5124	5124	5124	5124	5124	5124	5124
	35	4866	4866	4866	4866	4866	4866	4866	4866	4866
	37.5	4546	4546	4546	4546	4546	4546	4546	4546	4546
	40	4208	4208	4208	4208	4208	4208	4208	4208	4208
	42.5	3897	3897	3897	3897	3897	3897	3897	3897	3897
	45	3627	3627	3627	3627	3627	3627	3627	3627	3627
	47.5	3384	3384	3384	3384	3384	3384	3384	3384	3384
50	3154	3154	3154	3154	3154	3154	3154	3154	3154	
52.5	2937	2937	2937	2937	2937	2937	2937	2937	2937	
55	2737	2737	2737	2737	2737	2737	2737	2737	2737	
57.5	2543	2543	2543	2543	2543	2543	2543	2543	2543	
60	2342	2342	2342	2342	2342	2342	2342	2342	2342	
62.5	2112	2112	2112	2112	2112	2112	2112	2112	2112	
65	1858	1858	1858	1858	1858	1858	1858	1858	1858	
67.5	1589	1589	1589	1589	1589	1589	1589	1589	1589	
70	1323	1323	1323	1323	1323	1323	1323	1323	1323	
72.5	1056	1056	1056	1056	1056	1056	1056	1056	1056	
75	800	800	800	800	800	800	800	800	800	
77.5	513	513	513	513	513	513	513	513	513	
80	269	269	269	269	269	269	269	269	269	
82.5	151	151	151	151	151	151	151	151	151	
85	87	87	87	87	87	87	87	87	87	
87.5	52	52	52	52	52	52	52	52	52	
90	29	29	29	29	29	29	29	29	29	



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		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	29	29	29	29	29	29	29	29	29
	92.5	25	25	25	25	25	25	25	25	25
	95	23	23	23	23	23	23	23	23	23
	97.5	22	22	22	22	22	22	22	22	22
	100	20	20	20	20	20	20	20	20	20
	102.5	19	19	19	19	19	19	19	19	19
	105	17	17	17	17	17	17	17	17	17
	107.5	16	16	16	16	16	16	16	16	16
	110	16	16	16	16	16	16	16	16	16
	112.5	16	16	16	16	16	16	16	16	16
	115	17	17	17	17	17	17	17	17	17
	117.5	18	18	18	18	18	18	18	18	18
	120	19	19	19	19	19	19	19	19	19
	122.5	20	20	20	20	20	20	20	20	20
	125	21	21	21	21	21	21	21	21	21
	127.5	22	22	22	22	22	22	22	22	22
	130	23	23	23	23	23	23	23	23	23
	132.5	25	25	25	25	25	25	25	25	25
	135	26	26	26	26	26	26	26	26	26
	137.5	26	26	26	26	26	26	26	26	26
140	27	27	27	27	27	27	27	27	27	
142.5	27	27	27	27	27	27	27	27	27	
145	27	27	27	27	27	27	27	27	27	
147.5	27	27	27	27	27	27	27	27	27	
150	27	27	27	27	27	27	27	27	27	
152.5	26	26	26	26	26	26	26	26	26	
155	26	26	26	26	26	26	26	26	26	
157.5	25	25	25	25	25	25	25	25	25	
160	24	24	24	24	24	24	24	24	24	
162.5	23	23	23	23	23	23	23	23	23	
165	21	21	21	21	21	21	21	21	21	
167.5	19	19	19	19	19	19	19	19	19	
170	18	18	18	18	18	18	18	18	18	
172.5	15	15	15	15	15	15	15	15	15	
175	12	12	12	12	12	12	12	12	12	
177.5	8	8	8	8	8	8	8	8	8	
180	6	6	6	6	6	6	6	6	6	



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Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
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	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		101	101	101	99
1	109	105	101	97		107	103	99	96		98	95	93		94	92	90		90	89	87	85
2	100	92	85	80		97	90	84	79		86	81	77		83	79	75		80	76	73	71
3	91	81	73	67		89	79	72	66		76	70	65		74	68	64		71	66	63	60
4	84	72	63	57		81	71	63	57		68	61	56		66	60	55		63	58	54	52
5	77	64	56	49		75	63	55	49		61	54	48		59	53	48		57	52	47	45
6	71	58	49	43		69	57	49	43		55	48	42		53	47	42		52	46	41	39
7	66	53	44	38		64	52	44	38		50	43	38		49	42	37		47	41	37	35
8	61	48	40	34		60	47	39	34		46	39	34		45	38	33		43	37	33	31
9	57	44	36	31		56	44	36	30		42	35	30		41	35	30		40	34	30	28
10	54	41	33	28		52	40	33	28		39	32	27		38	32	27		37	31	27	25

For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Circle of Light Plot				
Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)		
		0-180 deg	90-270 deg	
6.0	150.4	8.34	8.34	
8.0	84.6	11.12	11.12	
10.0	54.2	13.90	13.90	
12.0	37.6	16.68	16.68	
14.0	27.6	19.46	19.46	
16.0	21.2	22.24	22.24	

Spacing Criterion	
SC:	1.4

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	147930	147930	147930
45	119913	119913	119913
55	105052	105052	105052
65	88210	88210	88210
75	51834	51834	51834
85	9289	9289	9289

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	109.4°
Field Angle:	154.4°
90-270 Degree Plane	
Beam Angle:	109.4°
Field Angle:	154.4°



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UGR Table - Corrected

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

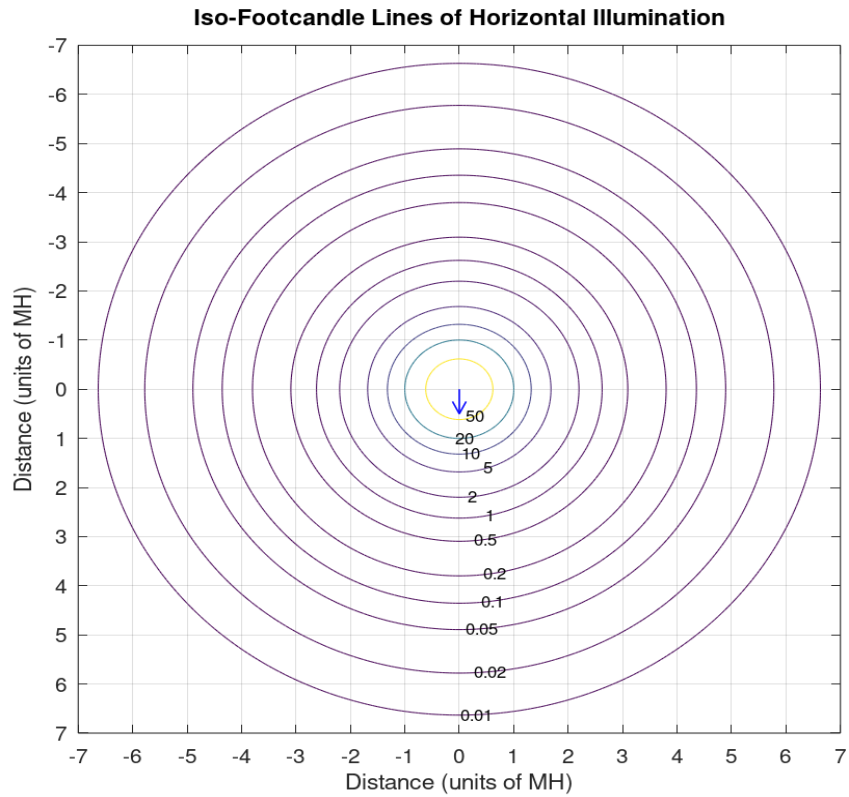
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	27.4	28.9	27.7	29.3	29.6	27.4	28.9	27.7	29.3	29.6
	3H	28.9	30.3	29.3	30.6	31.0	28.9	30.3	29.3	30.6	31.0
	4H	29.2	30.6	29.7	30.9	31.3	29.2	30.6	29.7	30.9	31.3
	6H	29.4	30.6	29.8	31.0	31.4	29.4	30.6	29.8	31.0	31.4
	8H	29.4	30.5	29.8	30.9	31.3	29.4	30.5	29.8	30.9	31.3
	12H	29.3	30.4	29.8	30.8	31.3	29.3	30.4	29.8	30.8	31.3
4H	2H	27.9	29.2	28.3	29.6	30.0	27.9	29.2	28.3	29.6	30.0
	3H	29.6	30.7	30.0	31.1	31.5	29.6	30.7	30.0	31.1	31.5
	4H	30.0	31.0	30.5	31.4	31.9	30.0	31.0	30.5	31.4	31.9
	6H	30.2	31.0	30.6	31.5	32.0	30.2	31.0	30.6	31.5	32.0
	8H	30.2	31.0	30.6	31.4	31.9	30.2	31.0	30.6	31.4	31.9
	12H	30.1	30.9	30.6	31.4	31.9	30.1	30.9	30.6	31.4	31.9
8H	4H	30.1	30.9	30.6	31.4	31.9	30.1	30.9	30.6	31.4	31.9
	6H	30.3	31.0	30.8	31.5	32.0	30.3	31.0	30.8	31.5	32.0
	8H	30.3	30.9	30.8	31.4	31.9	30.3	30.9	30.8	31.4	31.9
	12H	30.3	30.8	30.8	31.3	31.9	30.3	30.8	30.8	31.3	31.9
12H	4H	30.1	30.8	30.6	31.3	31.8	30.1	30.8	30.6	31.3	31.8
	6H	30.3	30.9	30.8	31.4	31.9	30.3	30.9	30.8	31.4	31.9
	8H	30.3	30.8	30.8	31.3	31.9	30.3	30.8	30.8	31.3	31.9

Maximum UGR = 32.0

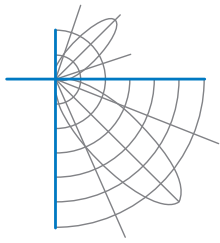


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Iso-Illuminance Plot

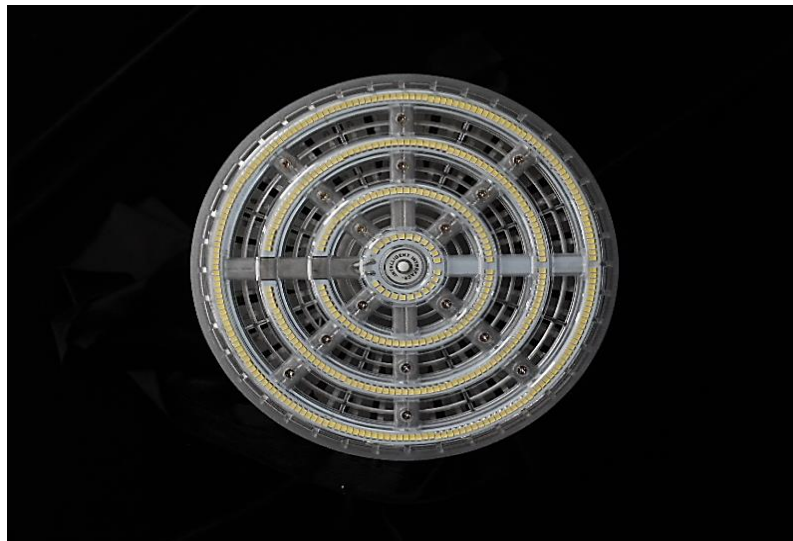


The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Additional Pictures of Test Subject





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Test Distance 9.5 m
Ambient Temperature 25.0 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of IES LM-79-19. Format of reports and angular increments based on IES LM-41-20 and LM-46-20.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE C-Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.