

Report of Test

LLIA001148-006

Indoor Distribution Photometry Test Report

Catalog Number: RTL/637WH/90/D-28

Recessed mounted, formed white aluminum housing, stepped white plastic reflector, translucent white plastic enclosure.

24 white LEDs, one LT-2835240A LED board.

One LED driver.



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

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	996.7 Lumens
Input Current	0.1127 A	Total Efficacy	77.8 Lm/W
Input Power	12.81 W	Downward Flux	996.4 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.947		
Current THD	30.5 %		

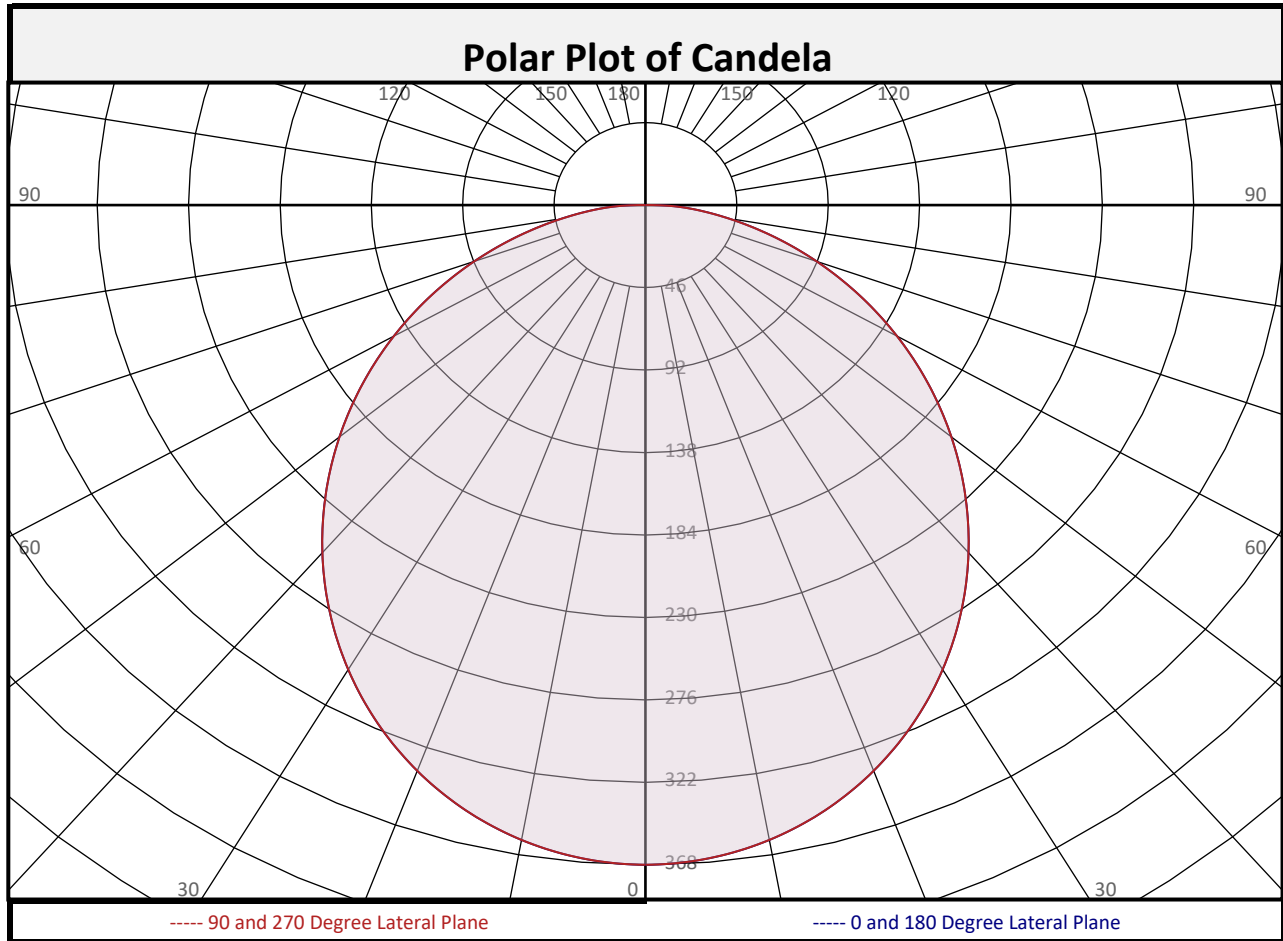
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 08/09/2019
Report date: 08/09/2019

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	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	34.7	3.5%	90-100	0.3	0.0%	0-20	133.3	13.4%	0-10	34.7	3.5%
10-20	98.5	9.9%	100-110	0.0	0.0%	0-30	280.2	28.1%	10-20	98.5	9.9%
20-30	146.9	14.7%	110-120	0.0	0.0%	0-40	453.4	45.5%	20-30	146.9	14.7%
30-40	173.3	17.4%	120-130	0.0	0.0%	0-60	784.3	78.7%	30-40	173.3	17.4%
40-50	175.5	17.6%	130-140	0.0	0.0%	0-80	971.5	97.5%	40-50	175.5	17.6%
50-60	155.4	15.6%	140-150	0.0	0.0%	10-90	961.7	96.5%	50-60	155.4	15.6%
60-70	117.6	11.8%	150-160	0.0	0.0%	20-50	495.6	49.7%	60-70	117.6	11.8%
70-80	69.6	7.0%	160-170	0.0	0.0%	40-90	543.0	54.5%	70-80	69.6	7.0%
80-90	24.9	2.5%	170-180	0.0	0.0%	60-90	212.1	21.3%	80-90	24.9	2.5%
0-90	996.4	100.0%	90-180	0.3	0.0%	0-180	996.7	100.0%	0-90	996.4	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	0	368	368	368	368	368	368	368	368	368
	2.5	367	367	367	367	367	367	367	367	367
	5	366	366	366	366	366	366	366	366	366
	7.5	363	363	363	363	363	363	363	363	363
	10	360	360	360	360	360	360	360	360	360
	12.5	355	355	355	355	355	355	355	355	355
	15	350	350	350	350	350	350	350	350	350
	17.5	343	343	343	343	343	343	343	343	343
	20	336	336	336	336	336	336	336	336	336
	22.5	328	328	328	328	328	328	328	328	328
	25	319	319	319	319	319	319	319	319	319
	27.5	309	309	309	309	309	309	309	309	309
	30	299	299	299	299	299	299	299	299	299
	32.5	288	288	288	288	288	288	288	288	288
	35	277	277	277	277	277	277	277	277	277
	37.5	265	265	265	265	265	265	265	265	265
	40	253	253	253	253	253	253	253	253	253
	42.5	240	240	240	240	240	240	240	240	240
	45	228	228	228	228	228	228	228	228	228
	47.5	214	214	214	214	214	214	214	214	214
50	201	201	201	201	201	201	201	201	201	
52.5	187	187	187	187	187	187	187	187	187	
55	174	174	174	174	174	174	174	174	174	
57.5	160	160	160	160	160	160	160	160	160	
60	146	146	146	146	146	146	146	146	146	
62.5	132	132	132	132	132	132	132	132	132	
65	119	119	119	119	119	119	119	119	119	
67.5	105	105	105	105	105	105	105	105	105	
70	92	92	92	92	92	92	92	92	92	
72.5	78	78	78	78	78	78	78	78	78	
75	66	66	66	66	66	66	66	66	66	
77.5	53	53	53	53	53	53	53	53	53	
80	42	42	42	42	42	42	42	42	42	
82.5	32	32	32	32	32	32	32	32	32	
85	23	23	23	23	23	23	23	23	23	
87.5	14	14	14	14	14	14	14	14	14	
90	4	4	4	4	4	4	4	4	4	



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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	90	4	4	4	4	4	4	4	4	4
	92.5	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0
	142.5	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0
	147.5	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	
152.5	0	0	0	0	0	0	0	0	0	
155	0	0	0	0	0	0	0	0	0	
157.5	0	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	0	0	0	0	
162.5	0	0	0	0	0	0	0	0	0	
165	0	0	0	0	0	0	0	0	0	
167.5	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	
172.5	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	
177.5	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	



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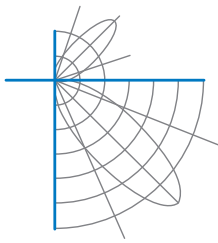
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	109	104	99	95		106	101	97	94		97	94	91		93	91	88		90	87	85	83
2	99	90	84	78		96	88	82	77		85	80	75		82	77	73		79	75	72	69
3	90	79	71	65		88	78	70	64		75	68	63		72	67	62		70	65	61	59
4	82	70	62	55		80	69	61	55		67	59	54		64	58	53		62	57	52	50
5	76	63	54	47		74	62	53	47		60	52	47		58	51	46		56	50	46	43
6	70	57	48	41		68	56	47	41		54	46	41		52	46	40		51	45	40	38
7	65	52	43	37		63	51	42	36		49	42	36		48	41	36		46	40	36	34
8	61	47	39	33		59	46	38	33		45	38	32		44	37	32		43	37	32	30
9	57	43	35	29		55	43	35	29		41	34	29		40	34	29		39	33	29	27
10	53	40	32	27		52	39	32	27		38	31	27		37	31	26		37	31	26	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	10.2	7.27	7.27	
8.0	5.8	9.69	9.69	
10.0	3.7	12.12	12.12	
12.0	2.6	14.54	14.54	
14.0	1.9	16.96	16.96	
16.0	1.4	19.38	19.38	

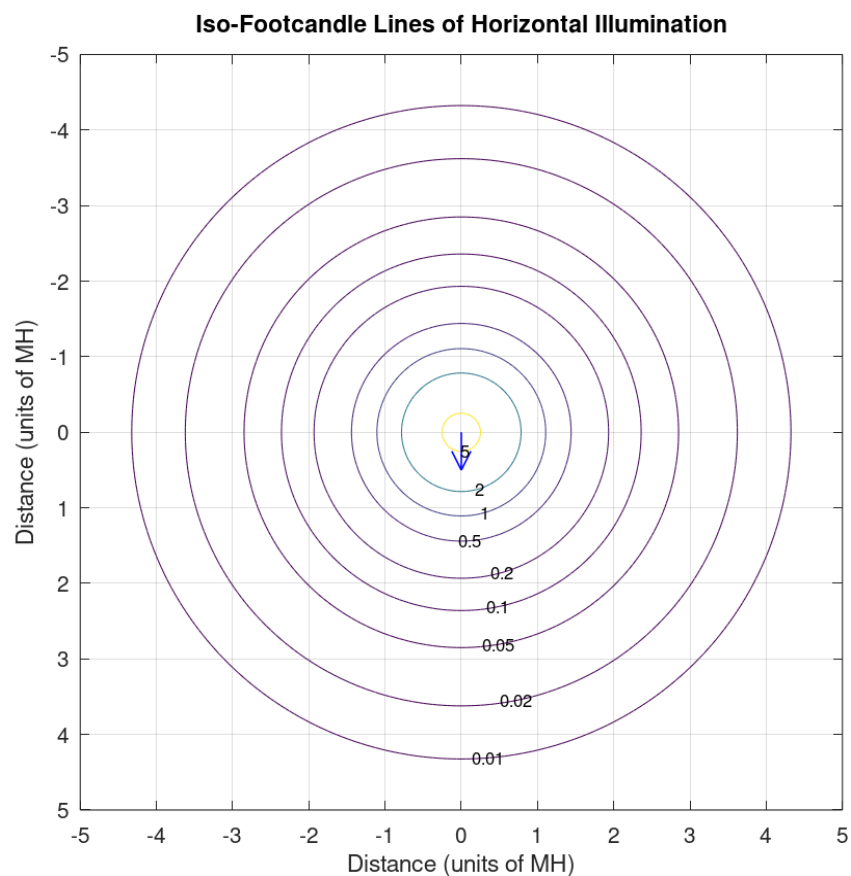
Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	74372	74372	74372
45	65027	65027	65027
55	61237	61237	61237
65	56771	56771	56771
75	51250	51250	51250
85	52777	52777	52777

Spacing Criterion	
Spacing Criterion:	1.2

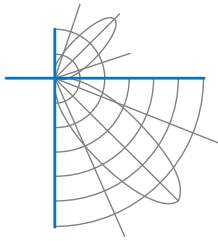


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Iso-Illuminance Plot



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 25.2 °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 publications: IES LM-79-08 and ANSI C82.77-10:2014. Format of reports and angular increments based on IES LM-41-14 and LM-46-04.

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.