



## Report of Test

**LLIA001426-010**

Indoor Distribution Photometry Test Report

Catalog Number: SMD7/RND/17/CTS-46 - 3000K Setting  
Surface mounted, cast aluminum housing, clear patterned  
plastic enclosure above translucent white plastic enclosure.

78 white LEDs

One internal LED driver



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

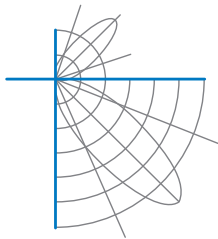
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	1578.0 Lumens
Input Current	0.1321 A	Total Efficacy	100.5 Lm/W
Input Power	15.70 W	Downward Flux	1578.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.991		
Current THD	6.0 %		

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

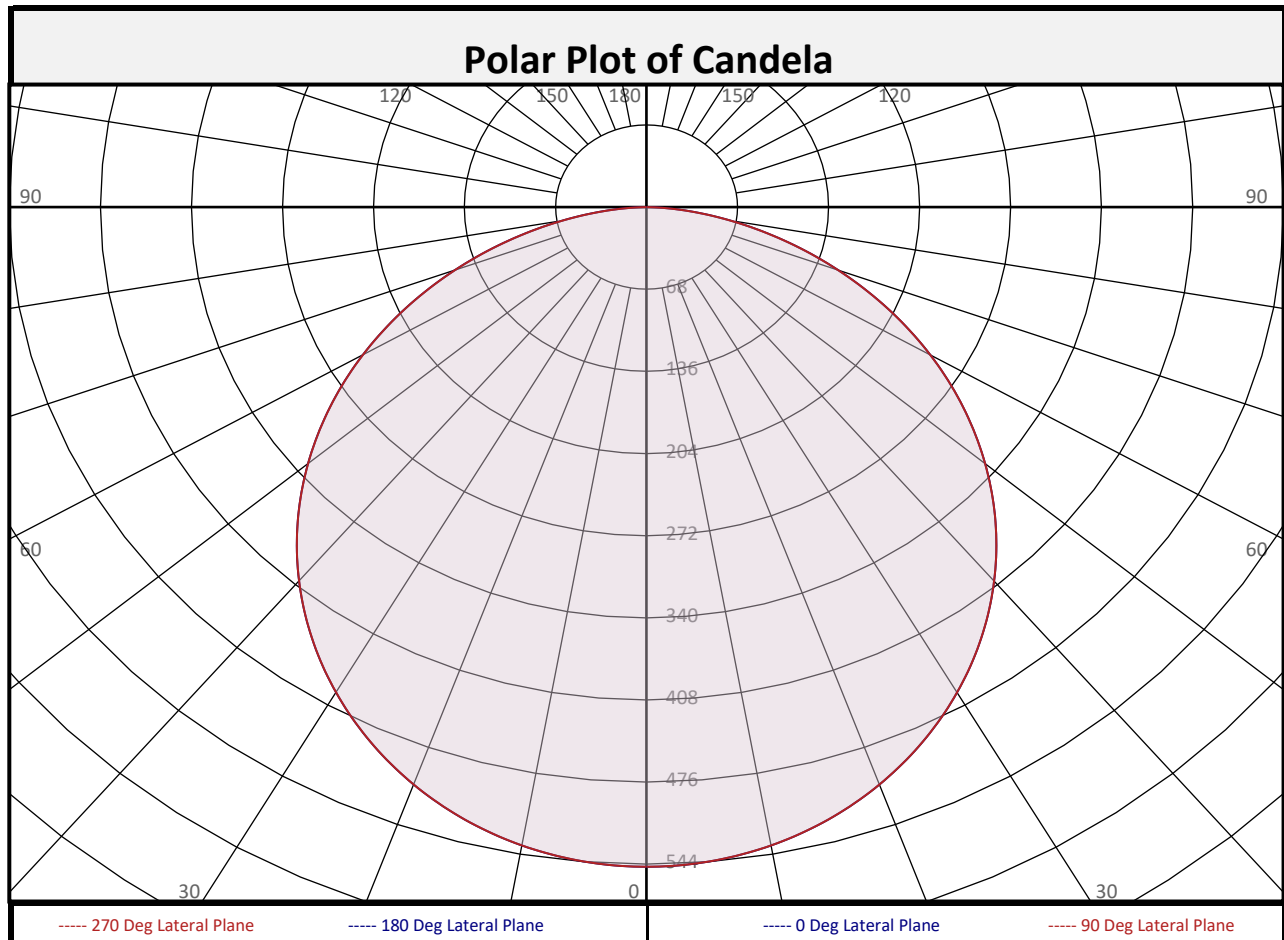
Test date: 03/18/2021

Report date: 03/19/2021

Signed: \_\_\_\_\_

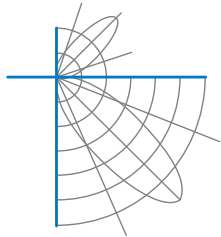


Report of Test  
LLIA001426-010



### 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	51.7	3.3%	90-100	0.0	0.0%	0-20	199.9	12.7%
10-20	148.2	9.4%	100-110	0.0	0.0%	0-30	425.0	26.9%
20-30	225.1	14.3%	110-120	0.0	0.0%	0-40	697.6	44.2%
30-40	272.7	17.3%	120-130	0.0	0.0%	0-60	1240	78.6%
40-50	284.3	18.0%	130-140	0.0	0.0%	0-80	1549	98.2%
50-60	257.9	16.3%	140-150	0.0	0.0%	10-90	1526	96.7%
60-70	196.7	12.5%	150-160	0.0	0.0%	20-50	782.1	49.6%
70-80	112.4	7.1%	160-170	0.0	0.0%	40-90	880.4	55.8%
80-90	29.1	1.8%	170-180	0.0	0.0%	60-90	338.1	21.4%
0-90	1578	100.0%	90-180	0.0	0.0%	0-180	1578	100.0%



## Report of Test

### LLIA001426-010

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	546	546	546	546	546	546	546	546	546
	2.5	546	546	546	546	546	546	546	546	546
	5	544	544	544	544	544	544	544	544	544
	7.5	541	541	541	541	541	541	541	541	541
	10	537	537	537	537	537	537	537	537	537
	12.5	531	531	531	531	531	531	531	531	531
	15	525	525	525	525	525	525	525	525	525
	17.5	517	517	517	517	517	517	517	517	517
	20	509	509	509	509	509	509	509	509	509
	22.5	499	499	499	499	499	499	499	499	499
	25	488	488	488	488	488	488	488	488	488
	27.5	477	477	477	477	477	477	477	477	477
	30	464	464	464	464	464	464	464	464	464
	32.5	450	450	450	450	450	450	450	450	450
	35	436	436	436	436	436	436	436	436	436
	37.5	420	420	420	420	420	420	420	420	420
	40	404	404	404	404	404	404	404	404	404
	42.5	387	387	387	387	387	387	387	387	387
	45	369	369	369	369	369	369	369	369	369
	47.5	350	350	350	350	350	350	350	350	350
50	330	330	330	330	330	330	330	330	330	
52.5	310	310	310	310	310	310	310	310	310	
55	289	289	289	289	289	289	289	289	289	
57.5	267	267	267	267	267	267	267	267	267	
60	245	245	245	245	245	245	245	245	245	
62.5	222	222	222	222	222	222	222	222	222	
65	199	199	199	199	199	199	199	199	199	
67.5	176	176	176	176	176	176	176	176	176	
70	152	152	152	152	152	152	152	152	152	
72.5	129	129	129	129	129	129	129	129	129	
75	106	106	106	106	106	106	106	106	106	
77.5	84	84	84	84	84	84	84	84	84	
80	63	63	63	63	63	63	63	63	63	
82.5	43	43	43	43	43	43	43	43	43	
85	25	25	25	25	25	25	25	25	25	
87.5	9	9	9	9	9	9	9	9	9	
90	0	0	0	0	0	0	0	0	0	

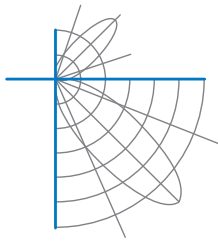


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LLIA001426-010

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	0	0	0	0	0	0	0	0	0
	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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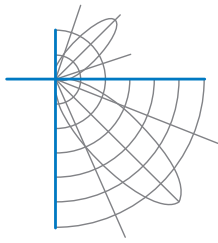
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	109	104	100	96		106	102	98	94		97	94	91		93	91	88		90	88	86	84
2	99	90	83	78		96	88	82	77		85	80	75		82	77	73		79	75	72	69
3	90	79	71	64		87	78	70	64		75	68	63		72	66	62		69	65	60	58
4	82	70	61	54		80	69	60	54		66	59	53		64	58	53		62	56	52	50
5	76	63	53	47		73	61	53	47		59	52	46		57	51	45		55	50	45	43
6	70	56	47	41		68	55	47	41		53	46	40		52	45	40		50	44	39	37
7	65	51	42	36		63	50	42	36		49	41	36		47	40	35		46	40	35	33
8	60	46	38	32		59	46	38	32		44	37	32		43	36	32		42	36	31	29
9	56	43	34	29		55	42	34	29		41	34	29		40	33	28		39	33	28	26
10	53	39	31	26		51	39	31	26		38	31	26		37	30	26		36	30	26	24

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	15.2	7.58	7.58	
8.0	8.5	10.10	10.10	
10.0	5.5	12.63	12.63	
12.0	3.8	15.16	15.16	
14.0	2.8	17.68	17.68	
16.0	2.1	20.21	20.21	

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	31230	31230	31230
45	29817	29817	29817
55	28787	28787	28787
65	26908	26908	26908
75	23429	23429	23429
85	16457	16457	16457

Spacing Criterion	
Spacing Criterion:	1.3



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### LLIA001426-010

#### UGR TABLE - CORRECTED

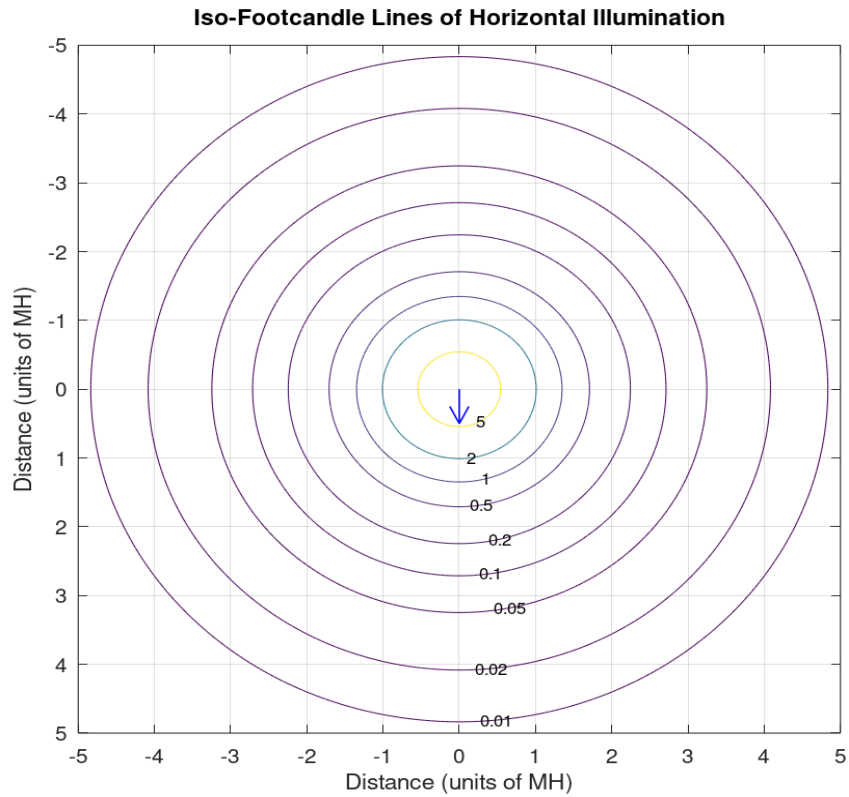
Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	23.0	24.7	23.4	25.0	25.3	23.0	24.7	23.4	25.0	25.3
	3H	24.9	26.3	25.2	26.7	27.0	24.9	26.3	25.2	26.7	27.0
	4H	25.5	26.9	25.9	27.3	27.7	25.5	26.9	25.9	27.3	27.7
	6H	26.0	27.3	26.4	27.7	28.1	26.0	27.3	26.4	27.7	28.1
	8H	26.2	27.4	26.6	27.8	28.2	26.2	27.4	26.6	27.8	28.2
	12H	26.3	27.4	26.7	27.8	28.2	26.3	27.4	26.7	27.8	28.2
4H	2H	23.7	25.1	24.1	25.4	25.8	23.7	25.1	24.1	25.4	25.8
	3H	25.7	26.9	26.1	27.3	27.7	25.7	26.9	26.1	27.3	27.7
	4H	26.5	27.6	26.9	28.0	28.4	26.5	27.6	26.9	28.0	28.4
	6H	27.1	28.1	27.6	28.5	29.0	27.1	28.1	27.6	28.5	29.0
	8H	27.3	28.2	27.8	28.6	29.1	27.3	28.2	27.8	28.6	29.1
	12H	27.4	28.2	27.9	28.7	29.2	27.4	28.2	27.9	28.7	29.2
8H	4H	26.8	27.7	27.3	28.1	28.6	26.8	27.7	27.3	28.1	28.6
	6H	27.6	28.3	28.0	28.8	29.2	27.6	28.3	28.0	28.8	29.2
	8H	27.8	28.5	28.3	29.0	29.4	27.8	28.5	28.3	29.0	29.4
	12H	28.0	28.6	28.5	29.1	29.6	28.0	28.6	28.5	29.1	29.6
12H	4H	26.9	27.6	27.3	28.1	28.6	26.9	27.6	27.3	28.1	28.6
	6H	27.6	28.3	28.1	28.7	29.3	27.6	28.3	28.1	28.7	29.3
	8H	27.9	28.5	28.4	29.0	29.5	27.9	28.5	28.4	29.0	29.5

Maximum UGR = 29.6

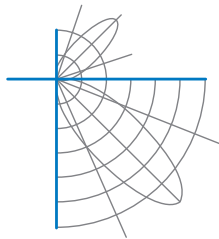


Report of Test  
LLIA001426-010

**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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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-41-14 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.