



## Report of Test

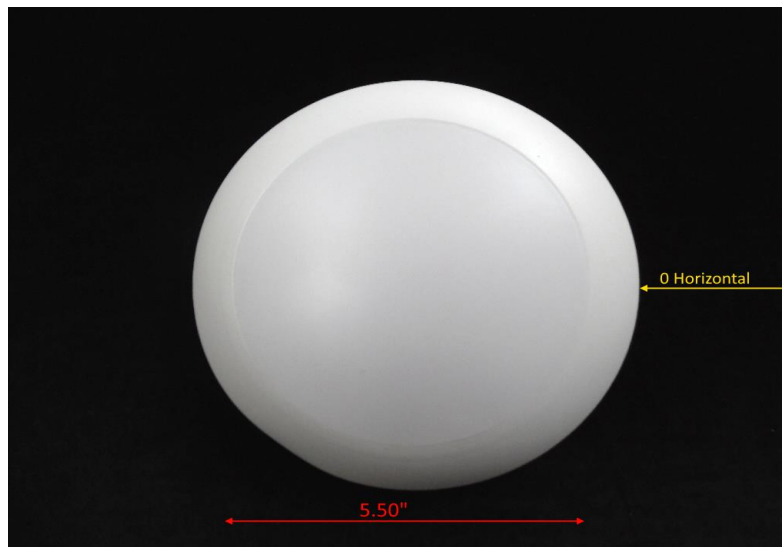
LLIA001285-002

Indoor Distribution Photometry Test Report

Catalog Number: SDL6/11W/WH/D/CTS-46 - 3000K Setting  
Recessed mounted, formed aluminum housing, clear plastic enclosure over LEDs, translucent white plastic outer enclosure.

26 white LEDs, one AL19021D LED board

One internal LED driver



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

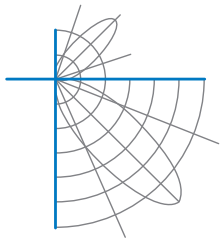
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	873.9 Lumens
Input Current	0.0956 A	Total Efficacy	77.5 Lm/W
Input Power	11.28 W	Downward Flux	868.2 Lumens
Frequency	60.00 Hz	Downward Flux	99.3 % of Total
Power Factor	0.983		
Current THD	8.4 %		

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

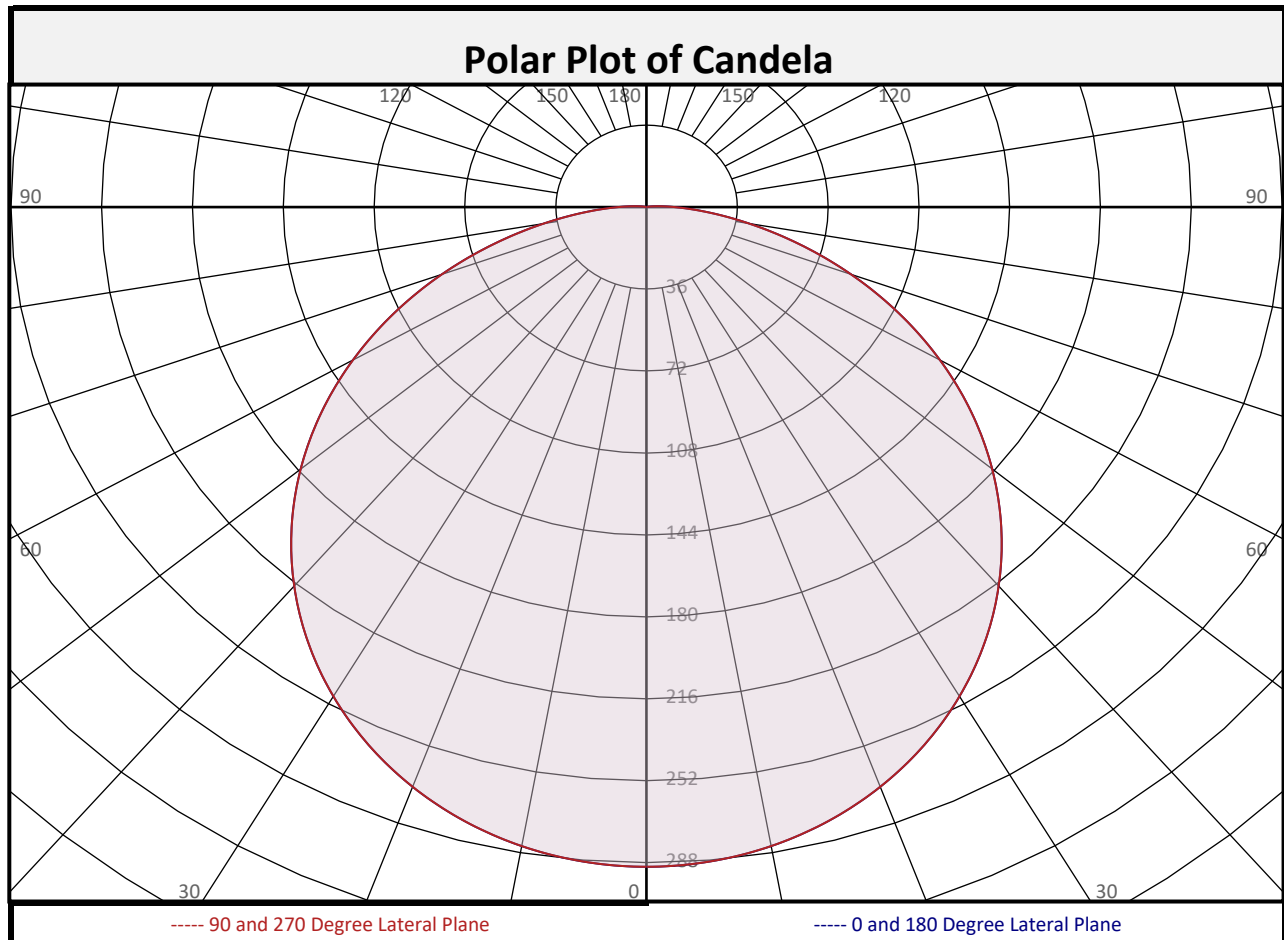
Test date: 07/20/2020

Report date: 07/21/2020

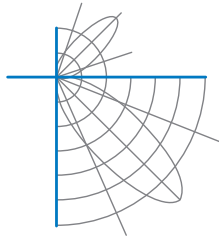
Signed: \_\_\_\_\_



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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	27.5	3.1%		90-100	5.2	0.6%		0-20	106.3	12.2%
10-20	78.8	9.0%		100-110	0.4	0.0%		0-30	226.4	25.9%
20-30	120.2	13.8%		110-120	0.0	0.0%		0-40	372.6	42.6%
30-40	146.2	16.7%		120-130	0.0	0.0%		0-60	666.4	76.3%
40-50	153.4	17.6%		130-140	0.0	0.0%		0-80	841.9	96.3%
50-60	140.4	16.1%		140-150	0.0	0.0%		10-90	840.8	96.2%
60-70	109.2	12.5%		150-160	0.0	0.0%		20-50	419.7	48.0%
70-80	66.3	7.6%		160-170	0.0	0.0%		40-90	495.6	56.7%
80-90	26.4	3.0%		170-180	0.0	0.0%		60-90	201.8	23.1%
0-90	868.2	99.4%		90-180	5.6	0.6%		0-180	873.9	100.0%

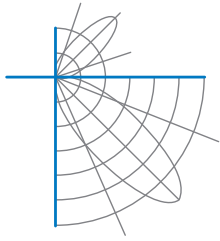


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	290	290	290	290	290	290	290	290	290
	2.5	290	290	290	290	290	290	290	290	290
	5	289	289	289	289	289	289	289	289	289
	7.5	287	287	287	287	287	287	287	287	287
	10	285	285	285	285	285	285	285	285	285
	12.5	282	282	282	282	282	282	282	282	282
	15	279	279	279	279	279	279	279	279	279
	17.5	275	275	275	275	275	275	275	275	275
	20	271	271	271	271	271	271	271	271	271
	22.5	266	266	266	266	266	266	266	266	266
	25	261	261	261	261	261	261	261	261	261
	27.5	255	255	255	255	255	255	255	255	255
	30	248	248	248	248	248	248	248	248	248
	32.5	241	241	241	241	241	241	241	241	241
	35	234	234	234	234	234	234	234	234	234
	37.5	226	226	226	226	226	226	226	226	226
	40	217	217	217	217	217	217	217	217	217
	42.5	208	208	208	208	208	208	208	208	208
	45	199	199	199	199	199	199	199	199	199
	47.5	189	189	189	189	189	189	189	189	189
50	179	179	179	179	179	179	179	179	179	
52.5	168	168	168	168	168	168	168	168	168	
55	157	157	157	157	157	157	157	157	157	
57.5	146	146	146	146	146	146	146	146	146	
60	134	134	134	134	134	134	134	134	134	
62.5	122	122	122	122	122	122	122	122	122	
65	110	110	110	110	110	110	110	110	110	
67.5	98	98	98	98	98	98	98	98	98	
70	86	86	86	86	86	86	86	86	86	
72.5	74	74	74	74	74	74	74	74	74	
75	62	62	62	62	62	62	62	62	62	
77.5	51	51	51	51	51	51	51	51	51	
80	41	41	41	41	41	41	41	41	41	
82.5	32	32	32	32	32	32	32	32	32	
85	23	23	23	23	23	23	23	23	23	
87.5	16	16	16	16	16	16	16	16	16	
90	11	11	11	11	11	11	11	11	11	

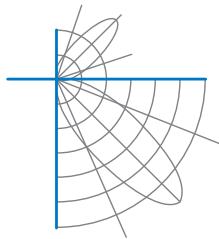


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	90	11	11	11	11	11	11	11	11	11
	92.5	7	7	7	7	7	7	7	7	7
	95	4	4	4	4	4	4	4	4	4
	97.5	2	2	2	2	2	2	2	2	2
	100	1	1	1	1	1	1	1	1	1
	102.5	1	1	1	1	1	1	1	1	1
	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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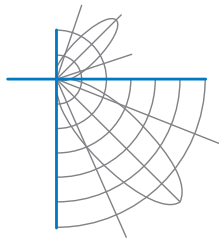
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		101	101	101	99
1	108	103	98	94		105	101	96	93		96	93	90		92	89	87		88	86	84	82
2	98	89	82	76		95	87	81	75		84	78	73		80	76	72		77	73	70	68
3	89	78	70	63		86	77	69	62		73	67	61		71	65	60		68	63	59	57
4	81	69	60	53		79	68	59	53		65	58	52		63	56	51		60	55	50	48
5	75	62	52	46		73	60	52	45		58	51	45		56	49	44		54	48	44	41
6	69	55	46	40		67	54	46	40		53	45	39		51	44	39		49	43	38	36
7	64	50	41	35		62	49	41	35		48	40	35		46	39	34		45	39	34	32
8	59	46	37	31		58	45	37	31		44	36	31		42	36	31		41	35	30	28
9	56	42	34	28		54	41	33	28		40	33	28		39	32	28		38	32	27	25
10	52	39	31	25		51	38	30	25		37	30	25		36	30	25		35	29	25	23

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	8.1	7.63	7.63	
8.0	4.5	10.18	10.18	
10.0	2.9	12.72	12.72	
12.0	2.0	15.27	15.27	
14.0	1.5	17.81	17.81	
16.0	1.1	20.36	20.36	

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	18910	18910	18910
45	16445	16445	16445
55	15347	15347	15347
65	13650	13650	13650
75	10993	10993	10993
85	7510	7510	7510

Spacing Criterion	
Spacing Criterion:	1.3



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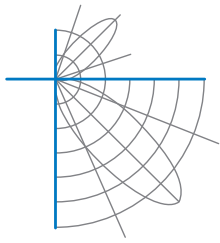
#### UGR TABLE - CORRECTED

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

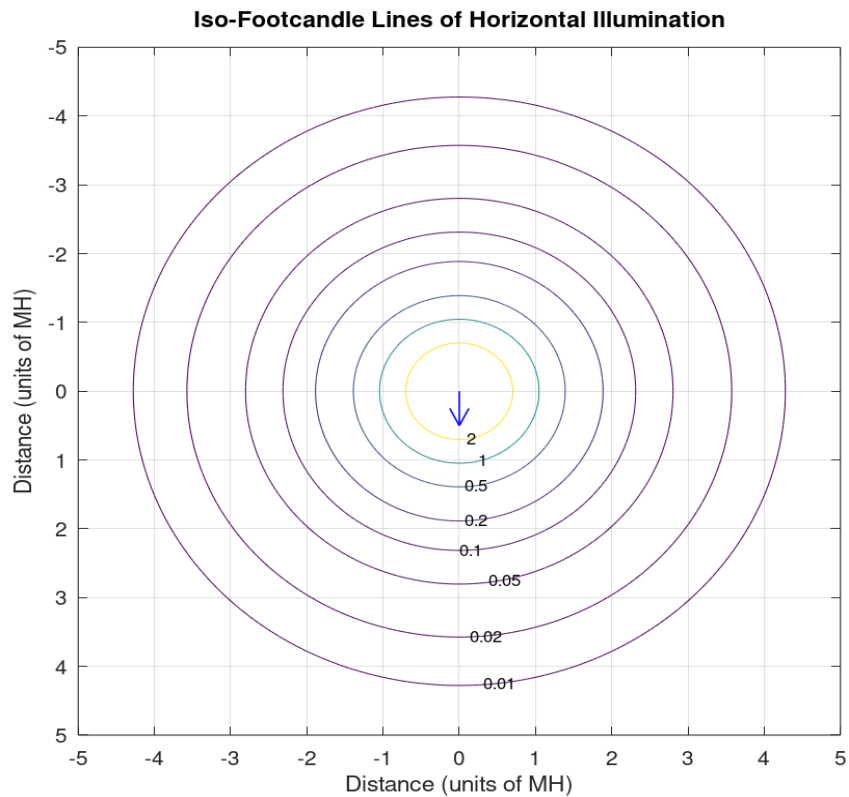
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.7	22.3	21.1	22.6	23.0	20.7	22.3	21.1	22.6	23.0
	3H	22.5	23.9	22.8	24.3	24.7	22.5	23.9	22.8	24.3	24.7
	4H	23.1	24.5	23.5	24.9	25.3	23.1	24.5	23.5	24.9	25.3
	6H	23.6	24.9	24.1	25.3	25.7	23.6	24.9	24.1	25.3	25.7
	8H	23.8	25.0	24.2	25.5	25.9	23.8	25.0	24.2	25.5	25.9
	12H	23.9	25.1	24.4	25.5	26.0	23.9	25.1	24.4	25.5	26.0
4H	2H	21.3	22.7	21.7	23.0	23.4	21.3	22.7	21.7	23.0	23.4
	3H	23.3	24.5	23.7	24.9	25.3	23.3	24.5	23.7	24.9	25.3
	4H	24.1	25.1	24.5	25.6	26.0	24.1	25.1	24.5	25.6	26.0
	6H	24.7	25.6	25.2	26.1	26.6	24.7	25.6	25.2	26.1	26.6
	8H	24.9	25.8	25.4	26.3	26.7	24.9	25.8	25.4	26.3	26.7
	12H	25.1	25.9	25.6	26.4	26.9	25.1	25.9	25.6	26.4	26.9
8H	4H	24.4	25.2	24.8	25.7	26.2	24.4	25.2	24.8	25.7	26.2
	6H	25.1	25.8	25.6	26.3	26.8	25.1	25.8	25.6	26.3	26.8
	8H	25.4	26.1	25.9	26.6	27.1	25.4	26.1	25.9	26.6	27.1
	12H	25.7	26.3	26.2	26.8	27.4	25.7	26.3	26.2	26.8	27.4
12H	4H	24.4	25.2	24.9	25.7	26.2	24.4	25.2	24.9	25.7	26.2
	6H	25.2	25.8	25.7	26.3	26.9	25.2	25.8	25.7	26.3	26.9
	8H	25.5	26.1	26.0	26.6	27.2	25.5	26.1	26.0	26.6	27.2

Maximum UGR = 27.4

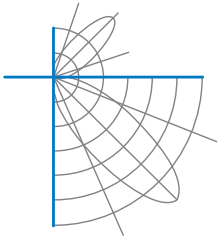


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**Iso-Illuminance Plot**



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.

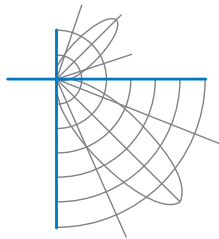


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**Additional Pictures of Test Subject**







## Report of Test

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Test Distance                    9.5 m  
Ambient Temperature        25.4 °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.