

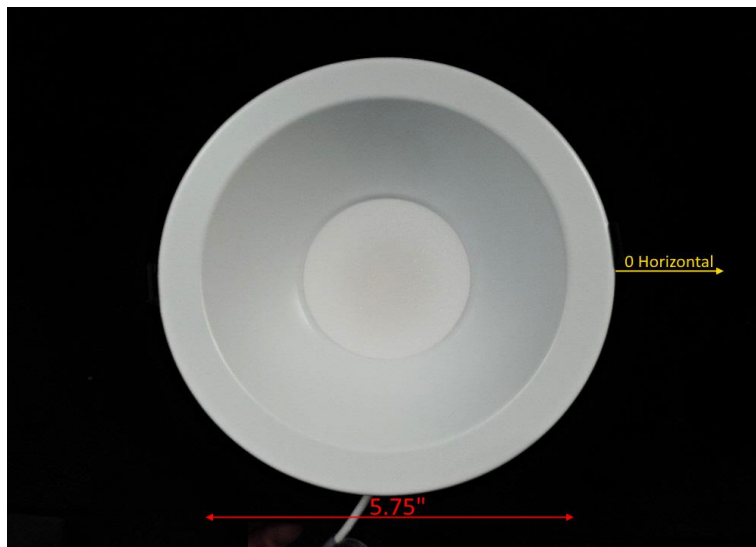


## Report of Test

LLIA002379-017

Indoor Distribution Photometry Test Report

Catalog Number: CDL6S-RM-24WPCS-U - 16W Setting - 4000K Setting  
Recessed mounted, formed white painted aluminum housing,  
white interior reflector, diffuse white plastic enclosure.  
white LEDs  
One unmarked PCB type LED driver in formed steel box.



Prepared For:  
Topaz Lighting, A Southwire Company  
925 Waverly Avenue  
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1612.0 Lumens
Input Current	0.1300 A	Total Efficacy	104.1 Lm/W
Input Power	15.48 W	Downward Flux	1612.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.992		
Current THD	6.8 %		

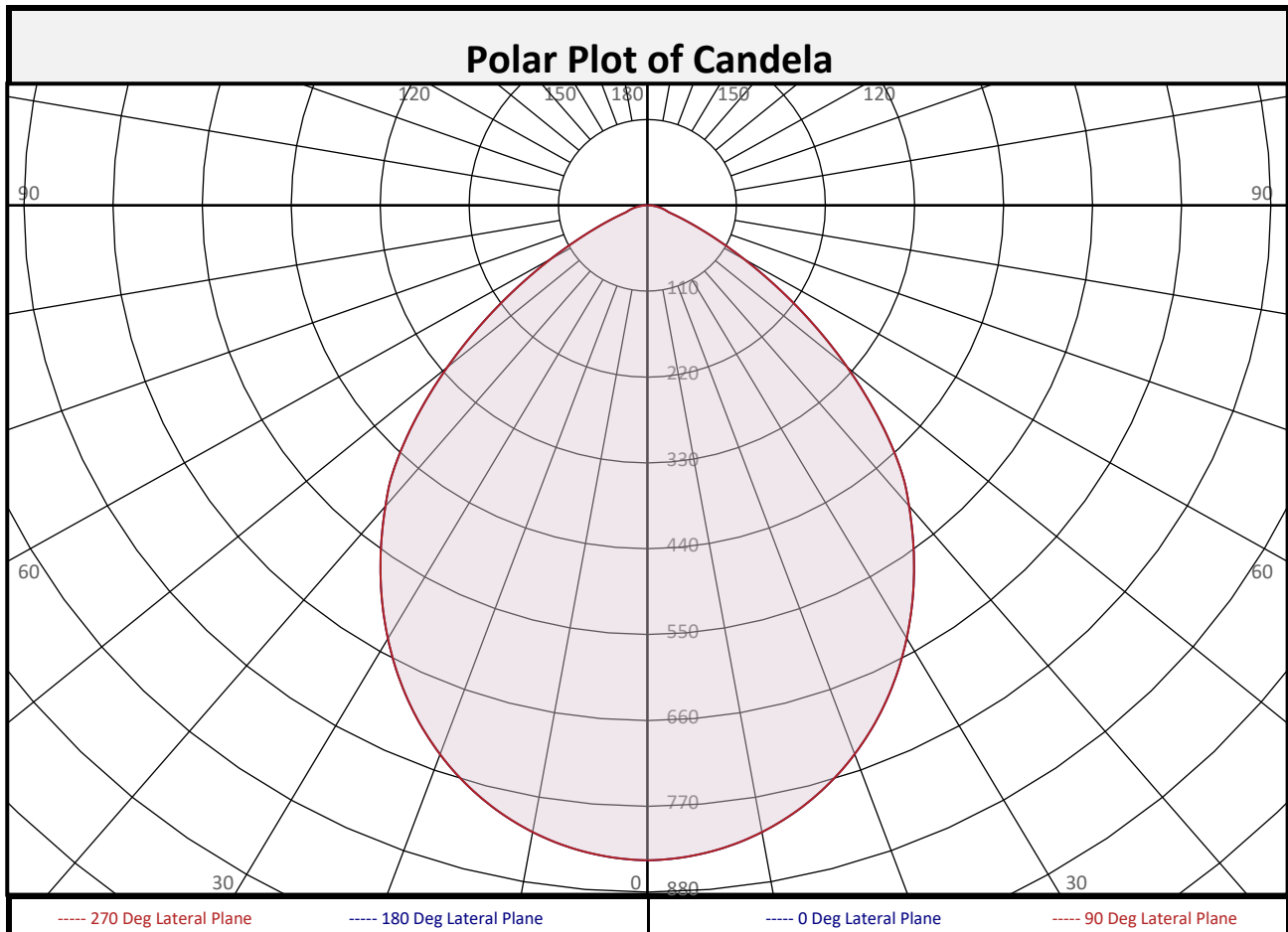
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 05/01/2024  
Report date: 05/16/2024

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



## Report of Test LLIA002379-017



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	79.0	4.9%		90-100	0.0	0.0%		0-20	300.7	18.7%
10-20	221.7	13.8%		100-110	0.0	0.0%		0-30	622.2	38.6%
20-30	321.5	19.9%		110-120	0.0	0.0%		0-40	980.8	60.8%
30-40	358.6	22.2%		120-130	0.0	0.0%		0-60	1504	93.3%
40-50	321.6	20.0%		130-140	0.0	0.0%		0-80	1604	99.5%
50-60	201.7	12.5%		140-150	0.0	0.0%		10-90	1533	95.1%
60-70	76.5	4.7%		150-160	0.0	0.0%		20-50	1002	62.1%
70-80	23.8	1.5%		160-170	0.0	0.0%		40-90	631.2	39.2%
80-90	7.6	0.5%		170-180	0.0	0.0%		60-90	107.9	6.7%
0-90	1612	100.0%		90-180	0.0	0.0%		0-180	1612	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	839	839	839	839	839	839	839	839	839
	2.5	837	837	837	837	837	837	837	837	837
	5	833	833	833	833	833	833	833	833	833
	7.5	826	826	826	826	826	826	826	826	826
	10	816	816	816	816	816	816	816	816	816
	12.5	803	803	803	803	803	803	803	803	803
	15	787	787	787	787	787	787	787	787	787
	17.5	769	769	769	769	769	769	769	769	769
	20	749	749	749	749	749	749	749	749	749
	22.5	725	725	725	725	725	725	725	725	725
	25	700	700	700	700	700	700	700	700	700
	27.5	671	671	671	671	671	671	671	671	671
	30	641	641	641	641	641	641	641	641	641
	32.5	609	609	609	609	609	609	609	609	609
	35	575	575	575	575	575	575	575	575	575
	37.5	539	539	539	539	539	539	539	539	539
	40	503	503	503	503	503	503	503	503	503
	42.5	466	466	466	466	466	466	466	466	466
	45	420	420	420	420	420	420	420	420	420
	47.5	372	372	372	372	372	372	372	372	372
50	322	322	322	322	322	322	322	322	322	
52.5	273	273	273	273	273	273	273	273	273	
55	225	225	225	225	225	225	225	225	225	
57.5	180	180	180	180	180	180	180	180	180	
60	138	138	138	138	138	138	138	138	138	
62.5	102	102	102	102	102	102	102	102	102	
65	73	73	73	73	73	73	73	73	73	
67.5	51	51	51	51	51	51	51	51	51	
70	34	34	34	34	34	34	34	34	34	
72.5	26	26	26	26	26	26	26	26	26	
75	22	22	22	22	22	22	22	22	22	
77.5	19	19	19	19	19	19	19	19	19	
80	15	15	15	15	15	15	15	15	15	
82.5	11	11	11	11	11	11	11	11	11	
85	7	7	7	7	7	7	7	7	7	
87.5	3	3	3	3	3	3	3	3	3	
90	0	0	0	0	0	0	0	0	0	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



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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.	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	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



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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	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	111	108	104	101	109	105	102	100	101	99	96	97	95	94	94	92	91	89			
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78			
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	77	74	70	69			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60			
5	82	71	63	58	80	70	63	57	68	62	57	66	61	56	64	60	56	54			
6	77	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43			
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36			
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32			

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	23.3	6.88	6.88
8.0	13.1	9.18	9.18
10.0	8.4	11.47	11.47
12.0	5.8	13.77	13.77
14.0	4.3	16.06	16.06
16.0	3.3	18.36	18.36

Spacing Criterion	
SC:	1.1

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	50098	50098	50098
45	35490	35490	35490
55	23400	23400	23400
65	10345	10345	10345
75	5139	5139	5139
85	4764	4764	4764

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	90.1°
Field Angle:	128.0°
90-270 Degree Plane	
Beam Angle:	90.1°
Field Angle:	128.0°



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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

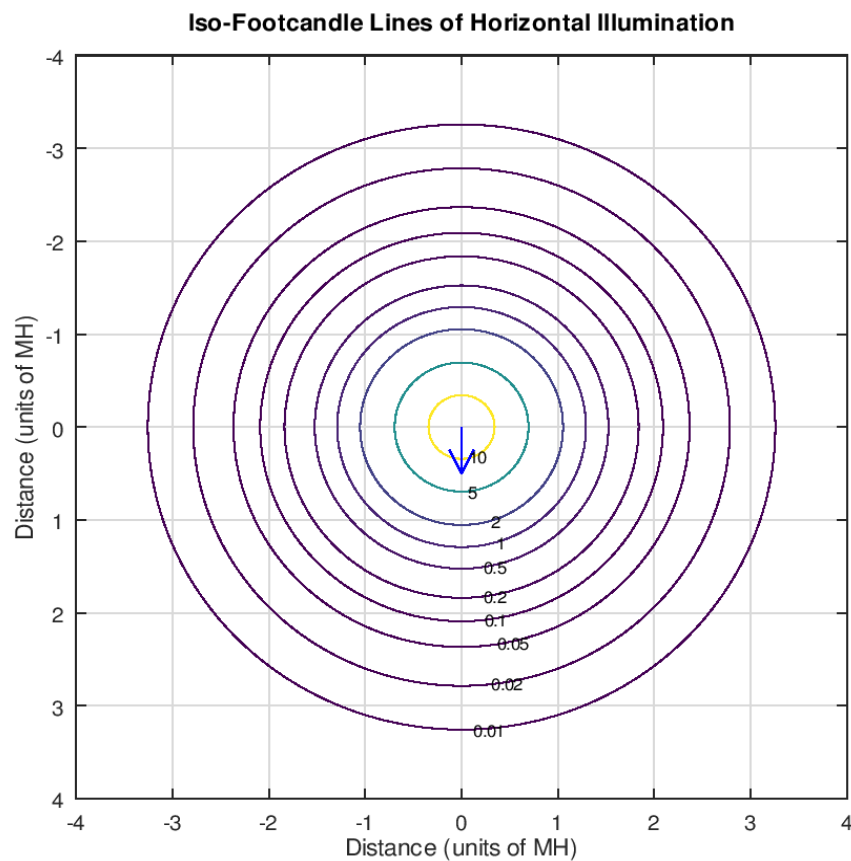
X=2H	Y=2H	20.6	22.0	21.0	22.3	22.6	20.6	22.0	21.0	22.3	22.6
	3H	20.8	22.1	21.2	22.4	22.8	20.8	22.1	21.2	22.4	22.8
	4H	20.9	22.1	21.3	22.4	22.8	20.9	22.1	21.3	22.4	22.8
	6H	20.9	22.0	21.4	22.4	22.8	20.9	22.0	21.4	22.4	22.8
	8H	21.0	22.0	21.4	22.4	22.8	21.0	22.0	21.4	22.4	22.8
	12H	21.0	21.9	21.4	22.3	22.7	21.0	21.9	21.4	22.3	22.7
4H	2H	20.7	21.8	21.1	22.2	22.6	20.7	21.8	21.1	22.2	22.6
	3H	21.0	22.0	21.4	22.4	22.8	21.0	22.0	21.4	22.4	22.8
	4H	21.1	21.9	21.5	22.4	22.8	21.1	21.9	21.5	22.4	22.8
	6H	21.2	21.9	21.7	22.4	22.9	21.2	21.9	21.7	22.4	22.9
	8H	21.2	21.9	21.7	22.4	22.8	21.2	21.9	21.7	22.4	22.8
	12H	21.3	21.9	21.7	22.4	22.8	21.3	21.9	21.7	22.4	22.8
8H	4H	21.1	21.8	21.5	22.2	22.7	21.1	21.8	21.5	22.2	22.7
	6H	21.2	21.8	21.7	22.3	22.8	21.2	21.8	21.7	22.3	22.8
	8H	21.3	21.8	21.8	22.3	22.8	21.3	21.8	21.8	22.3	22.8
	12H	21.4	21.8	21.9	22.3	22.9	21.4	21.8	21.9	22.3	22.9
12H	4H	21.0	21.7	21.5	22.1	22.6	21.0	21.7	21.5	22.1	22.6
	6H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7
	8H	21.3	21.8	21.8	22.3	22.8	21.3	21.8	21.8	22.3	22.8

Maximum UGR = 22.9



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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.



## Report of Test

### LLIA002379-017

Test Distance                    9.5 m  
Ambient Temperature        25.3 °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.