

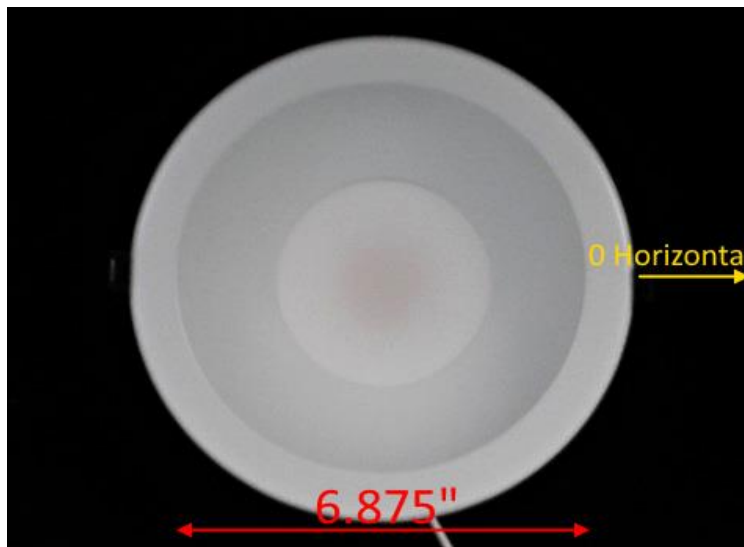


Report of Test

LLIA002379-019

Indoor Distribution Photometry Test Report

Catalog Number: CDL8S-RM-24WPCS-U - 18W 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	1623.9 Lumens
Input Current	0.1240 A	Total Efficacy	110.2 Lm/W
Input Power	14.73 W	Downward Flux	1623.9 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.990		
Current THD	10.4 %		

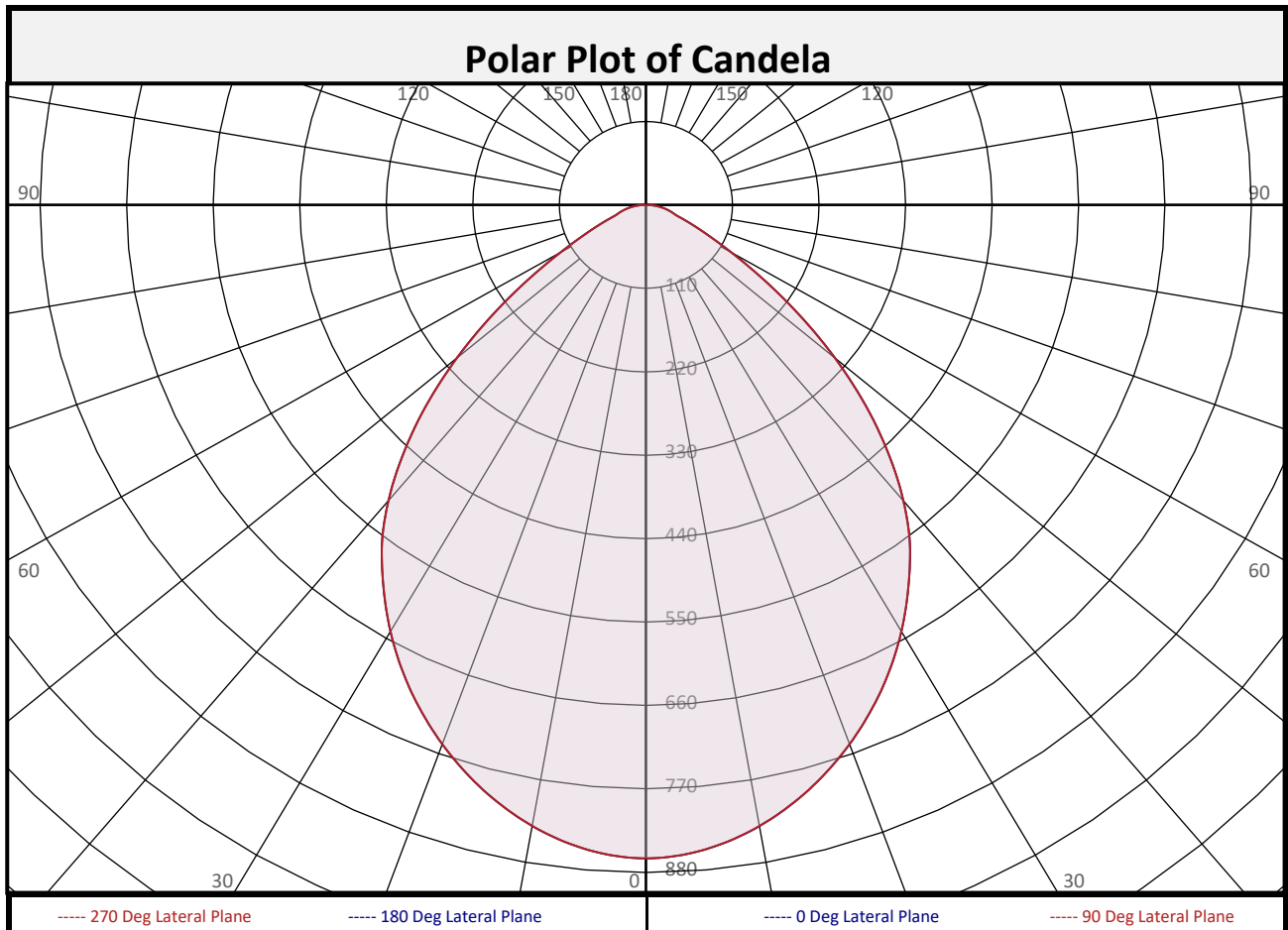
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

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

Signed: _____



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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	80.8	5.0%		90-100	0.0	0.0%		0-20	305.7	18.8%
10-20	224.8	13.8%		100-110	0.0	0.0%		0-30	630.8	38.8%
20-30	325.2	20.0%		110-120	0.0	0.0%		0-40	995.6	61.3%
30-40	364.7	22.5%		120-130	0.0	0.0%		0-60	1504	92.6%
40-50	318.9	19.6%		130-140	0.0	0.0%		0-80	1613	99.3%
50-60	189.8	11.7%		140-150	0.0	0.0%		10-90	1543	95.0%
60-70	75.4	4.6%		150-160	0.0	0.0%		20-50	1009	62.1%
70-80	33.1	2.0%		160-170	0.0	0.0%		40-90	628.3	38.7%
80-90	11.2	0.7%		170-180	0.0	0.0%		60-90	119.7	7.4%
0-90	1624	100.0%		90-180	0.0	0.0%		0-180	1624	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	862	862	862	862	862	862	862	862	862
	2.5	859	859	859	859	859	859	859	859	859
	5	854	854	854	854	854	854	854	854	854
	7.5	844	844	844	844	844	844	844	844	844
	10	832	832	832	832	832	832	832	832	832
	12.5	816	816	816	816	816	816	816	816	816
	15	799	799	799	799	799	799	799	799	799
	17.5	779	779	779	779	779	779	779	779	779
	20	757	757	757	757	757	757	757	757	757
	22.5	733	733	733	733	733	733	733	733	733
	25	707	707	707	707	707	707	707	707	707
	27.5	680	680	680	680	680	680	680	680	680
	30	650	650	650	650	650	650	650	650	650
	32.5	618	618	618	618	618	618	618	618	618
	35	585	585	585	585	585	585	585	585	585
	37.5	550	550	550	550	550	550	550	550	550
	40	509	509	509	509	509	509	509	509	509
	42.5	464	464	464	464	464	464	464	464	464
	45	416	416	416	416	416	416	416	416	416
	47.5	366	366	366	366	366	366	366	366	366
50	314	314	314	314	314	314	314	314	314	
52.5	261	261	261	261	261	261	261	261	261	
55	210	210	210	210	210	210	210	210	210	
57.5	164	164	164	164	164	164	164	164	164	
60	126	126	126	126	126	126	126	126	126	
62.5	95	95	95	95	95	95	95	95	95	
65	73	73	73	73	73	73	73	73	73	
67.5	56	56	56	56	56	56	56	56	56	
70	42	42	42	42	42	42	42	42	42	
72.5	36	36	36	36	36	36	36	36	36	
75	31	31	31	31	31	31	31	31	31	
77.5	26	26	26	26	26	26	26	26	26	
80	21	21	21	21	21	21	21	21	21	
82.5	16	16	16	16	16	16	16	16	16	
85	10	10	10	10	10	10	10	10	10	
87.5	5	5	5	5	5	5	5	5	5	
90	0	0	0	0	0	0	0	0	0	

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

North America (issuing laboratory)

Australasia & S.E. Asia



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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	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89			
2	103	96	91	86	101	95	89	85	91	87	83	88	85	81	85	82	80	78			
3	95	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68			
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	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	52	46	70	59	51	46	57	50	46	56	50	45	55	49	45	43			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36			
10	59	47	40	35	58	46	39	35	45	39	35	44	39	34	44	38	34	33			

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	23.9	6.81	6.81	
8.0	13.5	9.08	9.08	
10.0	8.6	11.35	11.35	
12.0	6.0	13.62	13.62	
14.0	4.4	15.89	15.89	
16.0	3.4	18.16	18.16	

Spacing Criterion	
SC:	1.1

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	35983	35983	35983
45	24586	24586	24586
55	15317	15317	15317
65	7204	7204	7204
75	5072	5072	5072
85	4918	4918	4918

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	88.5°
Field Angle:	126.9°
90-270 Degree Plane	
Beam Angle:	88.5°
Field Angle:	126.9°



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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

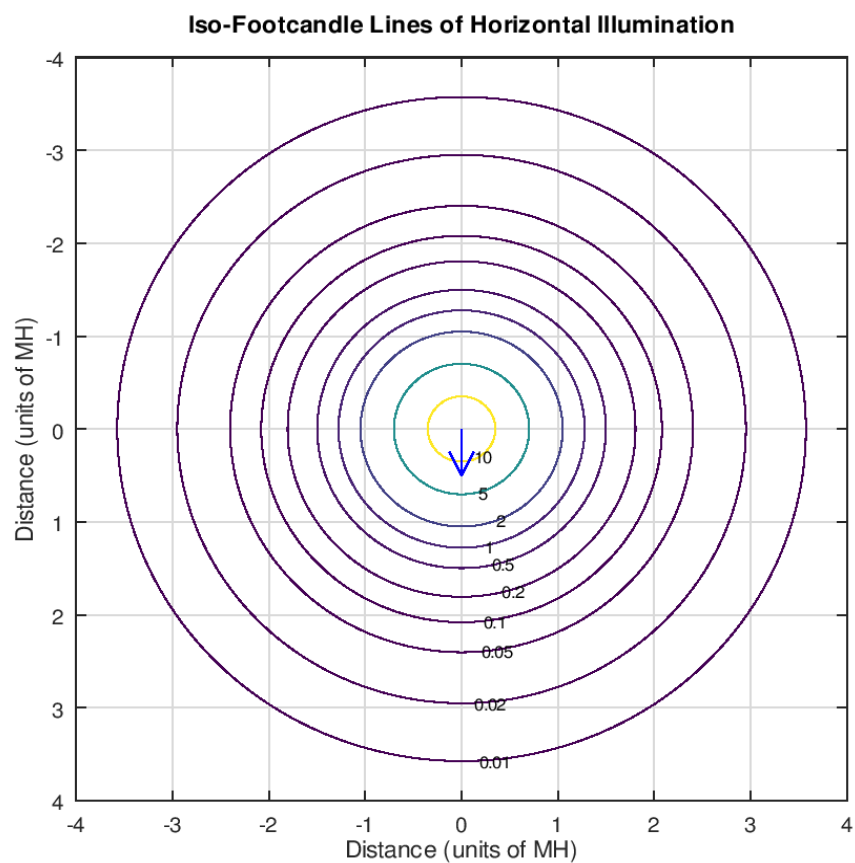
X=2H	Y=2H	18.7	20.1	19.0	20.4	20.7	18.7	20.1	19.0	20.4	20.7
		3H	19.1	20.4	19.5	20.7	21.1	19.1	20.4	19.5	20.7
	4H	19.3	20.5	19.7	20.8	21.2	19.3	20.5	19.7	20.8	21.2
	6H	19.5	20.6	19.9	21.0	21.4	19.5	20.6	19.9	21.0	21.4
	8H	19.6	20.6	20.0	21.0	21.4	19.6	20.6	20.0	21.0	21.4
	12H	19.6	20.6	20.1	21.0	21.4	19.6	20.6	20.1	21.0	21.4
4H	2H	18.8	20.0	19.2	20.3	20.7	18.8	20.0	19.2	20.3	20.7
	3H	19.4	20.3	19.8	20.8	21.2	19.4	20.3	19.8	20.8	21.2
	4H	19.7	20.5	20.1	21.0	21.4	19.7	20.5	20.1	21.0	21.4
	6H	20.0	20.7	20.5	21.2	21.7	20.0	20.7	20.5	21.2	21.7
	8H	20.1	20.8	20.6	21.3	21.7	20.1	20.8	20.6	21.3	21.7
	12H	20.2	20.8	20.7	21.3	21.8	20.2	20.8	20.7	21.3	21.8
8H	4H	19.8	20.4	20.2	20.9	21.4	19.8	20.4	20.2	20.9	21.4
	6H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7
	8H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9
	12H	20.5	21.0	21.0	21.5	22.0	20.5	21.0	21.0	21.5	22.0
12H	4H	19.7	20.4	20.2	20.8	21.3	19.7	20.4	20.2	20.8	21.3
	6H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7
	8H	20.4	20.9	20.9	21.4	21.9	20.4	20.9	20.9	21.4	21.9

Maximum UGR = 22.0



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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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Test Distance 9.5 m
Ambient Temperature 25.1 °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.