



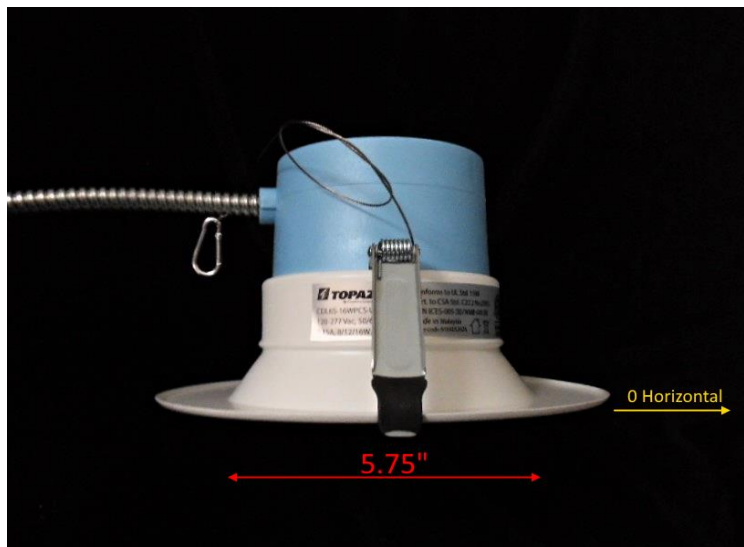
Report of Test

LLIA002379-006

Indoor Distribution Photometry Test Report

Catalog Number: CDL6S-16WPCS-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 mounted on top of fixture housing



Prepared For:

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

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1676.6 Lumens
Input Current	0.1313 A	Total Efficacy	107.6 lm/W
Input Power	15.58 W	Downward Flux	1676.6 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.988		
Current THD	8.4 %		

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

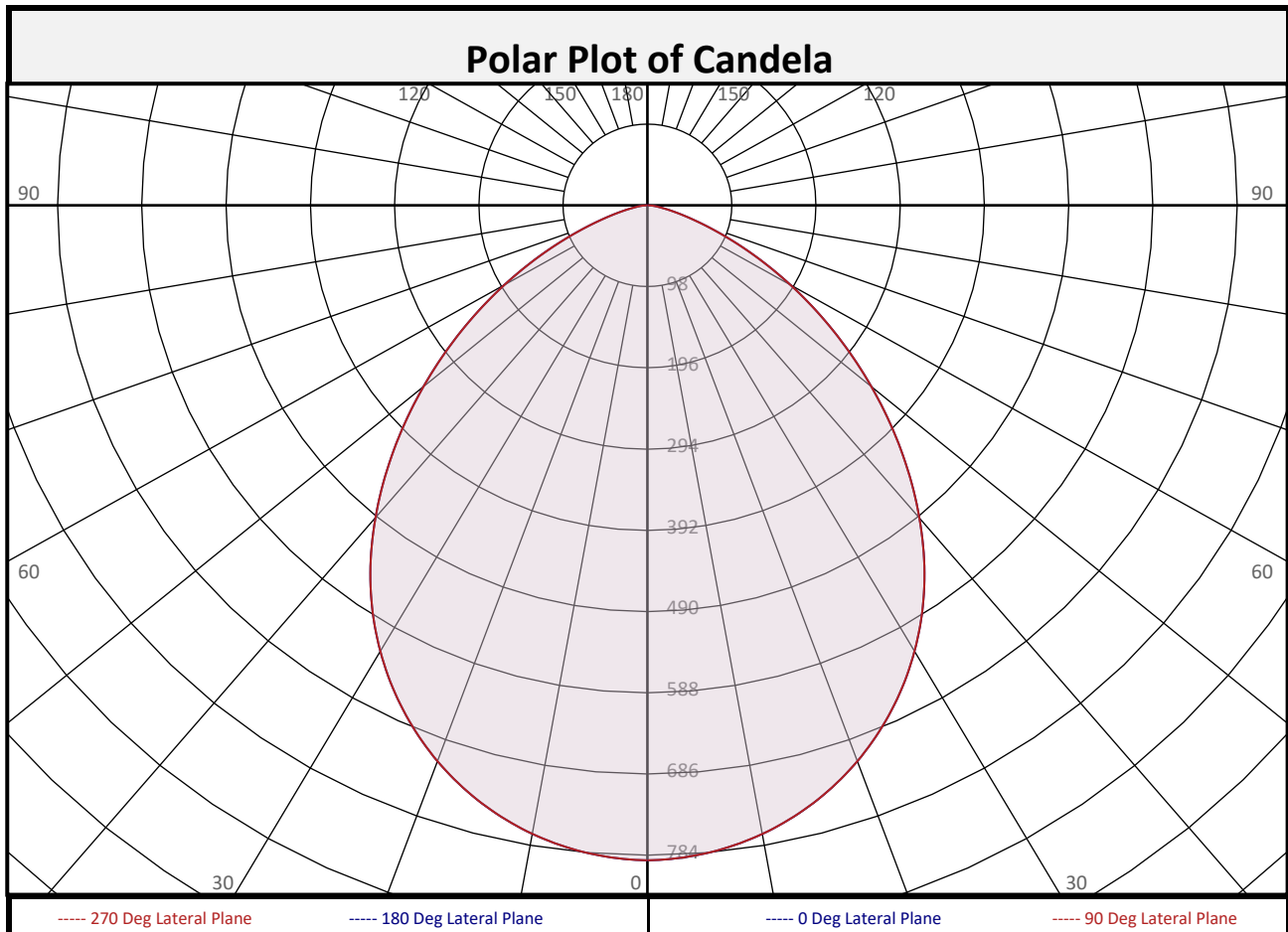
Test date: 05/02/2024
Report date: 05/16/2024

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	74.5	4.4%	90-100	0.0	0.0%	0-20	284.8	17.0%
10-20	210.3	12.5%	100-110	0.0	0.0%	0-30	593.8	35.4%
20-30	309.0	18.4%	110-120	0.0	0.0%	0-40	943.7	56.3%
30-40	350.0	20.9%	120-130	0.0	0.0%	0-60	1501	89.5%
40-50	320.9	19.1%	130-140	0.0	0.0%	0-80	1669	99.5%
50-60	236.1	14.1%	140-150	0.0	0.0%	10-90	1602	95.6%
60-70	126.9	7.6%	150-160	0.0	0.0%	20-50	979.9	58.4%
70-80	41.3	2.5%	160-170	0.0	0.0%	40-90	732.9	43.7%
80-90	7.7	0.5%	170-180	0.0	0.0%	60-90	175.9	10.5%
0-90	1677	100.0%	90-180	0.0	0.0%	0-180	1677	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	790	790	790	790	790	790	790	790	790
	2.5	788	788	788	788	788	788	788	788	788
	5	785	785	785	785	785	785	785	785	785
	7.5	778	778	778	778	778	778	778	778	778
	10	770	770	770	770	770	770	770	770	770
	12.5	759	759	759	759	759	759	759	759	759
	15	746	746	746	746	746	746	746	746	746
	17.5	731	731	731	731	731	731	731	731	731
	20	714	714	714	714	714	714	714	714	714
	22.5	694	694	694	694	694	694	694	694	694
	25	672	672	672	672	672	672	672	672	672
	27.5	648	648	648	648	648	648	648	648	648
	30	621	621	621	621	621	621	621	621	621
	32.5	593	593	593	593	593	593	593	593	593
	35	561	561	561	561	561	561	561	561	561
	37.5	528	528	528	528	528	528	528	528	528
	40	492	492	492	492	492	492	492	492	492
	42.5	455	455	455	455	455	455	455	455	455
	45	417	417	417	417	417	417	417	417	417
	47.5	378	378	378	378	378	378	378	378	378
50	340	340	340	340	340	340	340	340	340	
52.5	302	302	302	302	302	302	302	302	302	
55	264	264	264	264	264	264	264	264	264	
57.5	228	228	228	228	228	228	228	228	228	
60	192	192	192	192	192	192	192	192	192	
62.5	158	158	158	158	158	158	158	158	158	
65	127	127	127	127	127	127	127	127	127	
67.5	98	98	98	98	98	98	98	98	98	
70	73	73	73	73	73	73	73	73	73	
72.5	52	52	52	52	52	52	52	52	52	
75	37	37	37	37	37	37	37	37	37	
77.5	25	25	25	25	25	25	25	25	25	
80	16	16	16	16	16	16	16	16	16	
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	107	103	100	108	105	101	98	100	98	95	97	94	92	93	91	90	88			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66			
4	87	76	68	62	85	75	68	62	73	66	61	70	65	60	68	64	60	58			
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51			
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	40			
8	65	52	44	39	63	52	44	39	50	43	39	49	43	38	48	42	38	36			
9	61	48	40	35	59	48	40	35	47	40	35	45	39	35	45	39	35	33			
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30			

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	22.0	7.05	7.05
8.0	12.3	9.40	9.40
10.0	7.9	11.75	11.75
12.0	5.5	14.10	14.10
14.0	4.0	16.45	16.45
16.0	3.1	18.80	18.80

Spacing Criterion	
SC:	1.2

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	47169	47169	47169
45	35197	35197	35197
55	27477	27477	27477
65	17894	17894	17894
75	8458	8458	8458
85	4540	4540	4540

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	92.8°
Field Angle:	138.7°
90-270 Degree Plane	
Beam Angle:	92.8°
Field Angle:	138.7°



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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

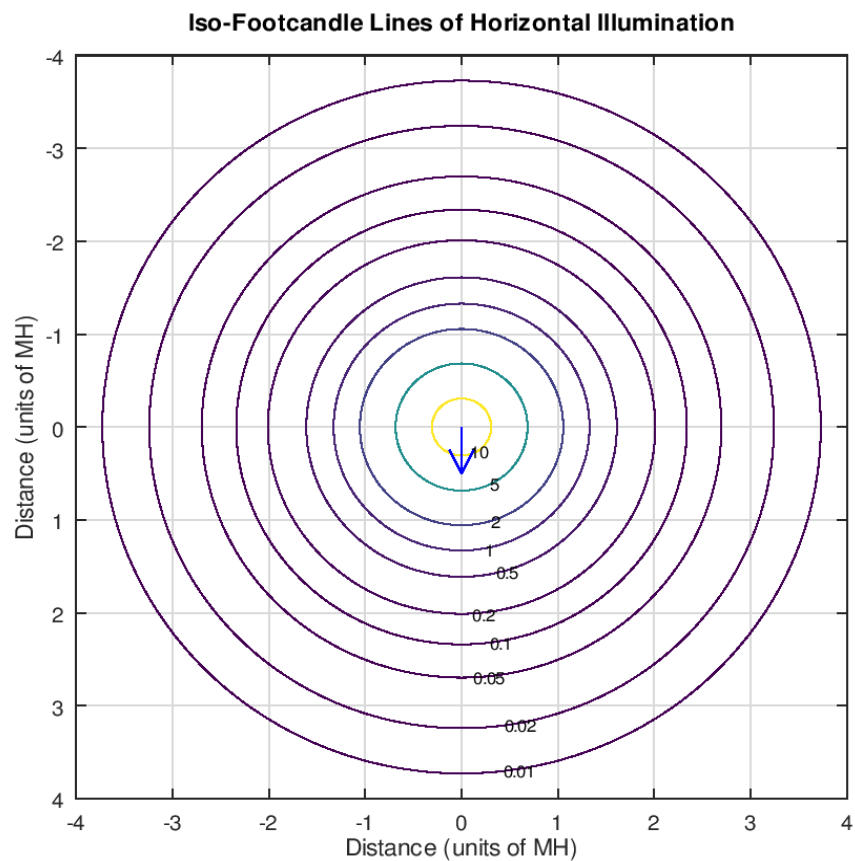
X=2H	Y=2H	22.0	23.5	22.4	23.8	24.1	22.0	23.5	22.4	23.8	24.1
	3H	22.8	24.1	23.1	24.4	24.8	22.8	24.1	23.1	24.4	24.8
	4H	22.9	24.1	23.3	24.5	24.9	22.9	24.1	23.3	24.5	24.9
	6H	22.9	24.1	23.4	24.4	24.8	22.9	24.1	23.4	24.4	24.8
	8H	22.9	24.0	23.4	24.4	24.8	22.9	24.0	23.4	24.4	24.8
	12H	22.9	24.0	23.3	24.3	24.8	22.9	24.0	23.3	24.3	24.8
4H	2H	22.3	23.6	22.7	23.9	24.3	22.3	23.6	22.7	23.9	24.3
	3H	23.2	24.2	23.6	24.6	25.0	23.2	24.2	23.6	24.6	25.0
	4H	23.4	24.3	23.8	24.7	25.1	23.4	24.3	23.8	24.7	25.1
	6H	23.5	24.2	23.9	24.7	25.2	23.5	24.2	23.9	24.7	25.2
	8H	23.5	24.2	23.9	24.6	25.1	23.5	24.2	23.9	24.6	25.1
	12H	23.4	24.1	23.9	24.6	25.1	23.4	24.1	23.9	24.6	25.1
8H	4H	23.4	24.1	23.9	24.6	25.0	23.4	24.1	23.9	24.6	25.0
	6H	23.5	24.1	24.0	24.6	25.1	23.5	24.1	24.0	24.6	25.1
	8H	23.5	24.0	24.0	24.6	25.1	23.5	24.0	24.0	24.6	25.1
	12H	23.5	24.0	24.0	24.5	25.1	23.5	24.0	24.0	24.5	25.1
12H	4H	23.4	24.0	23.8	24.5	25.0	23.4	24.0	23.8	24.5	25.0
	6H	23.5	24.0	24.0	24.5	25.0	23.5	24.0	24.0	24.5	25.0
	8H	23.5	24.0	24.0	24.5	25.0	23.5	24.0	24.0	24.5	25.0

Maximum UGR = 25.2

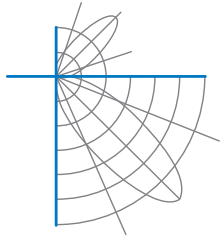


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Iso-Illuminance Plot

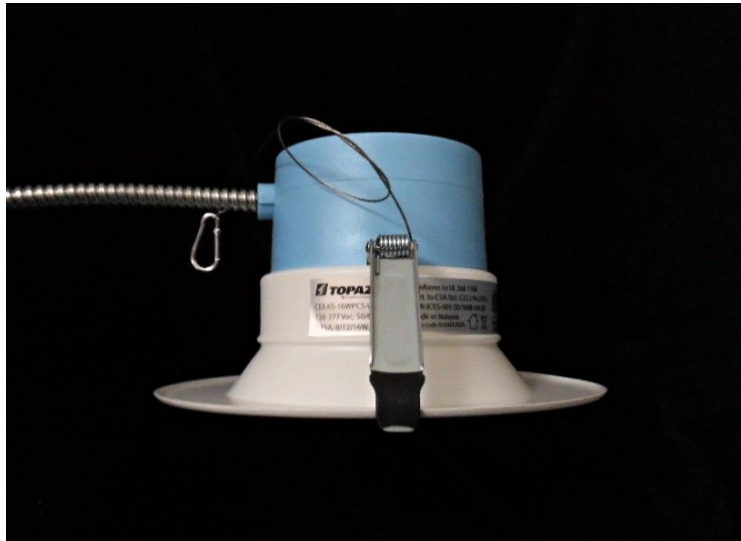


The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Additional Pictures of Test Subject





Report of Test

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Test Distance 9.5 m
Ambient Temperature 24.8 °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.