LightLab INTERNATIONAL ALLENTOWN LLC

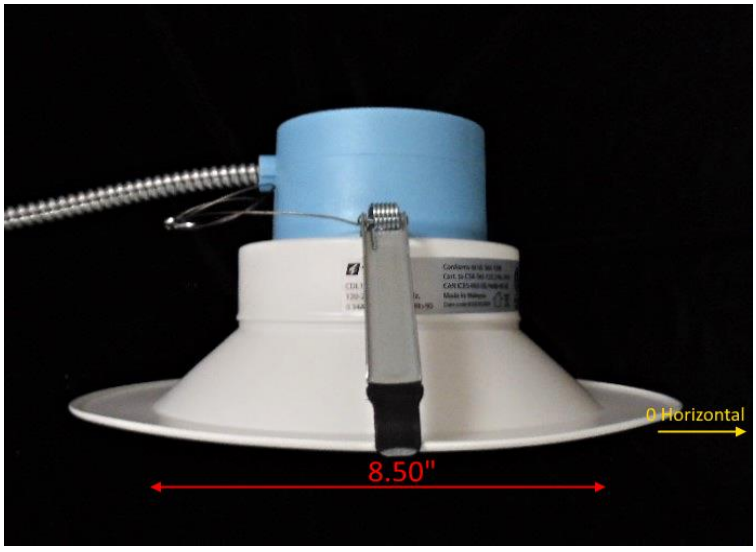
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002379-011

Indoor Distribution Photometry Test Report

Catalog Number: CDL10S-36WPCS-U - 25W 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	2647.5	Lumens
Input Current	0.1964	A	Total Efficacy	113.8	Lm/W
Input Power	23.26	W	Downward Flux	2647.5	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.987				
Current THD	9.4	%			

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

Test date: 05/03/2024
Report date: 05/16/2024

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2024.05.16 15:17:08 -04'00'

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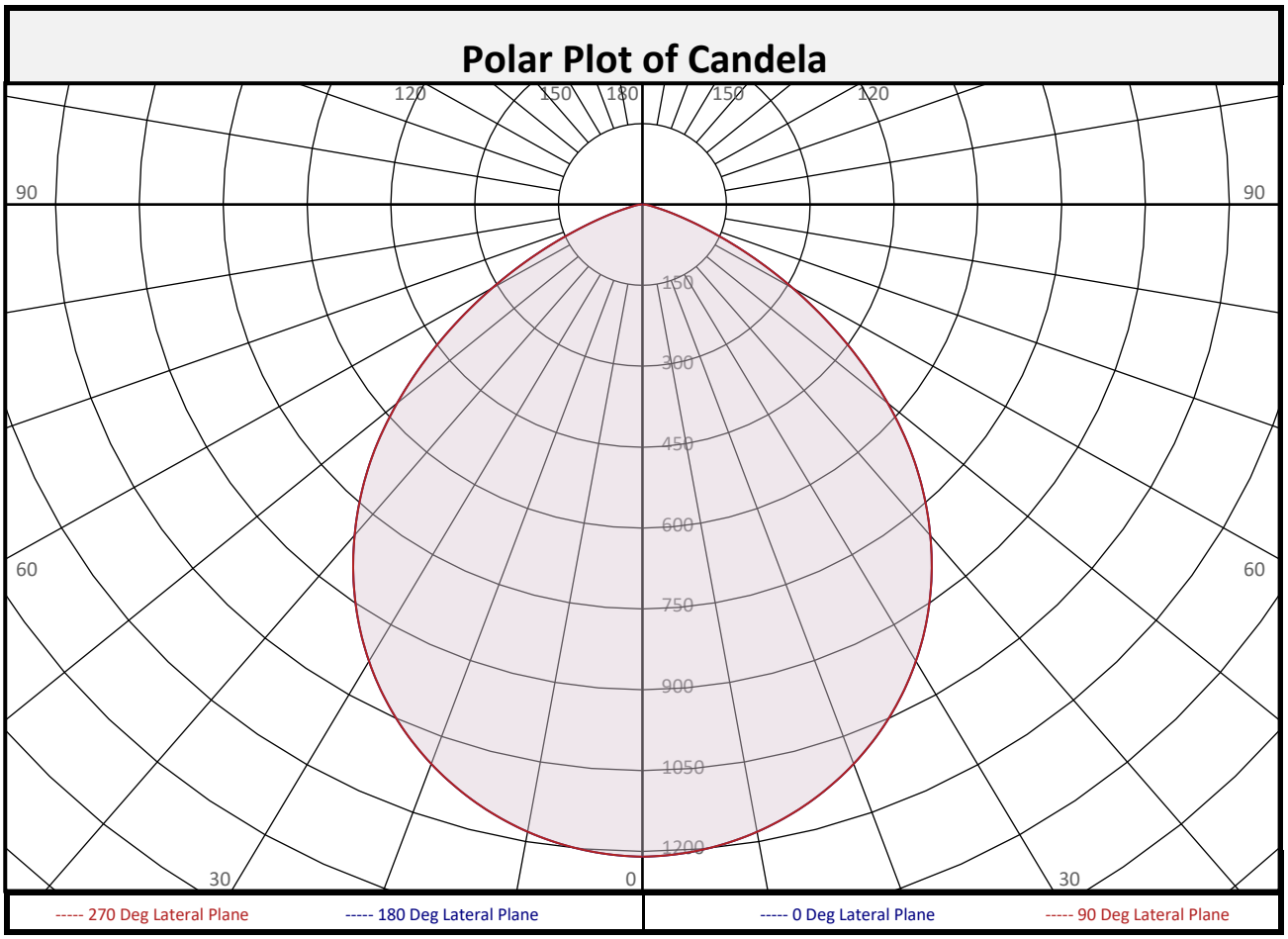

Zonal Flux Summary

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	114.2	4.3%	90-100	0.0	0.0%	0-20	438.1	16.5%
10-20	323.9	12.2%	100-110	0.0	0.0%	0-30	920.2	34.8%
20-30	482.1	18.2%	110-120	0.0	0.0%	0-40	1479	55.9%
30-40	559.2	21.1%	120-130	0.0	0.0%	0-60	2406	90.9%
40-50	533.2	20.1%	130-140	0.0	0.0%	0-80	2640	99.7%
50-60	393.6	14.9%	140-150	0.0	0.0%	10-90	2533	95.7%
60-70	190.0	7.2%	150-160	0.0	0.0%	20-50	1574	59.5%
70-80	44.1	1.7%	160-170	0.0	0.0%	40-90	1168	44.1%
80-90	7.2	0.3%	170-180	0.0	0.0%	60-90	241.3	9.1%
0-90	2648	100.0%	90-180	0.0	0.0%	0-180	2648	100.0%

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Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles									
	0	22.5	45	67.5	90	112.5	135	157.5	180
0	1210	1210	1210	1210	1210	1210	1210	1210	1210
2.5	1208	1208	1208	1208	1208	1208	1208	1208	1208
5	1202	1202	1202	1202	1202	1202	1202	1202	1202
7.5	1193	1193	1193	1193	1193	1193	1193	1193	1193
10	1182	1182	1182	1182	1182	1182	1182	1182	1182
12.5	1167	1167	1167	1167	1167	1167	1167	1167	1167
15	1149	1149	1149	1149	1149	1149	1149	1149	1149
17.5	1128	1128	1128	1128	1128	1128	1128	1128	1128
20	1104	1104	1104	1104	1104	1104	1104	1104	1104
22.5	1078	1078	1078	1078	1078	1078	1078	1078	1078
25	1048	1048	1048	1048	1048	1048	1048	1048	1048
27.5	1015	1015	1015	1015	1015	1015	1015	1015	1015
30	978	978	978	978	978	978	978	978	978
32.5	939	939	939	939	939	939	939	939	939
35	896	896	896	896	896	896	896	896	896
37.5	850	850	850	850	850	850	850	850	850
40	801	801	801	801	801	801	801	801	801
42.5	749	749	749	749	749	749	749	749	749
45	695	695	695	695	695	695	695	695	695
47.5	636	636	636	636	636	636	636	636	636
50	572	572	572	572	572	572	572	572	572
52.5	507	507	507	507	507	507	507	507	507
55	441	441	441	441	441	441	441	441	441
57.5	376	376	376	376	376	376	376	376	376
60	311	311	311	311	311	311	311	311	311
62.5	248	248	248	248	248	248	248	248	248
65	189	189	189	189	189	189	189	189	189
67.5	136	136	136	136	136	136	136	136	136
70	92	92	92	92	92	92	92	92	92
72.5	59	59	59	59	59	59	59	59	59
75	36	36	36	36	36	36	36	36	36
77.5	21	21	21	21	21	21	21	21	21
80	15	15	15	15	15	15	15	15	15
82.5	11	11	11	11	11	11	11	11	11
85	6	6	6	6	6	6	6	6	6
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

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles								
	0	22.5	45	67.5	90	112.5	135	157.5	180
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	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	100		108	105	102	99		101	98	96		97	95	93		93	92	90	88
2	102	95	90	85		100	94	88	84		90	86	82		87	83	80		84	81	78	76
3	94	85	78	73		92	84	77	72		81	75	71		78	73	69		76	72	68	66
4	87	76	69	63		85	75	68	62		73	66	61		71	65	61		68	64	60	58
5	81	69	61	55		79	68	60	55		66	59	54		64	58	53		62	57	53	51
6	75	63	54	48		73	62	54	48		60	53	48		58	52	47		57	51	47	45
7	69	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	38		49	43	38		48	42	38	36
9	61	48	40	35		59	47	40	35		46	40	35		45	39	35		44	39	35	33
10	57	44	37	32		56	44	37	32		43	36	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	33.6	7.22	7.22
8.0	18.9	9.63	9.63
10.0	12.1	12.04	12.04
12.0	8.4	14.45	14.45
14.0	6.2	16.86	16.86
16.0	4.7	19.26	19.26

Spacing Criterion

SC: 1.2

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	33049	33049	33049
45	26830	26830	26830
55	21018	21018	21018
65	12196	12196	12196
75	3821	3821	3821
85	1950	1950	1950

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 97.4°

Field Angle: 136.6°

90-270 Degree Plane

Beam Angle: 97.4°

Field Angle: 136.6°

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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	21.2	22.7	21.6	23.0	23.3	21.2	22.7	21.6	23.0	23.3
	3H	21.7	23.0	22.1	23.3	23.7	21.7	23.0	22.1	23.3	23.7
	4H	21.7	22.9	22.1	23.3	23.7	21.7	22.9	22.1	23.3	23.7
	6H	21.7	22.8	22.1	23.2	23.6	21.7	22.8	22.1	23.2	23.6
	8H	21.6	22.7	22.1	23.1	23.5	21.6	22.7	22.1	23.1	23.5
	12H	21.6	22.6	22.0	23.0	23.5	21.6	22.6	22.0	23.0	23.5
4H	2H	21.4	22.7	21.8	23.0	23.4	21.4	22.7	21.8	23.0	23.4
	3H	22.0	23.0	22.4	23.4	23.8	22.0	23.0	22.4	23.4	23.8
	4H	22.0	22.9	22.5	23.3	23.8	22.0	22.9	22.5	23.3	23.8
	6H	22.0	22.8	22.5	23.2	23.7	22.0	22.8	22.5	23.2	23.7
	8H	22.0	22.7	22.4	23.1	23.6	22.0	22.7	22.4	23.1	23.6
	12H	22.0	22.6	22.4	23.1	23.6	22.0	22.6	22.4	23.1	23.6
8H	4H	22.0	22.7	22.4	23.1	23.6	22.0	22.7	22.4	23.1	23.6
	6H	22.0	22.5	22.5	23.0	23.5	22.0	22.5	22.5	23.0	23.5
	8H	21.9	22.5	22.4	23.0	23.5	21.9	22.5	22.4	23.0	23.5
	12H	21.9	22.4	22.4	22.9	23.4	21.9	22.4	22.4	22.9	23.4
12H	4H	21.9	22.6	22.4	23.1	23.5	21.9	22.6	22.4	23.1	23.5
	6H	21.9	22.4	22.4	22.9	23.5	21.9	22.4	22.4	22.9	23.5
	8H	21.9	22.4	22.4	22.9	23.4	21.9	22.4	22.4	22.9	23.4

Maximum UGR = 23.8

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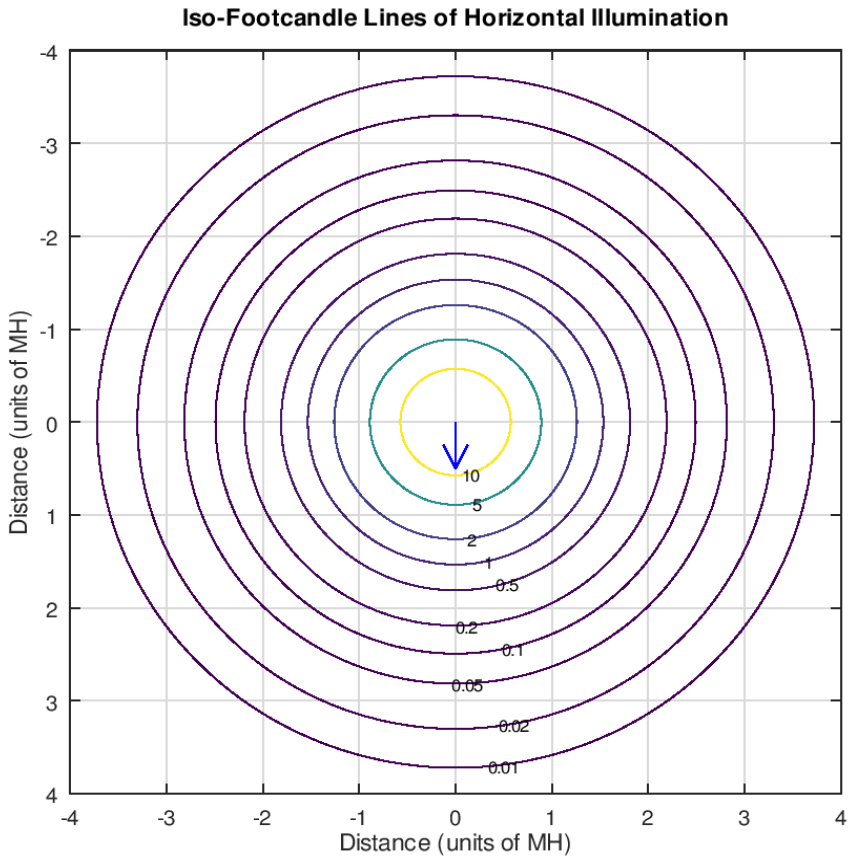
Iso-Illuminance Plot



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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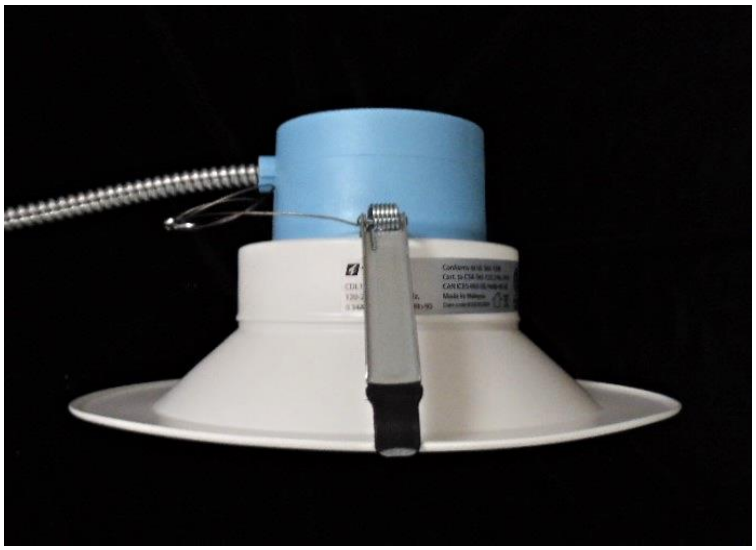
Additional Pictures of Test Subject



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Test Distance	9.5 m
Ambient Temperature	24.7 °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.