LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002761-003

Indoor Distribution Photometry Test Report

Catalog Number: CLSP-20PCS-BK 12W/4000K Setting
Pendant mounted, spun black painted aluminum housing,
formed specular plastic faceted reflector, clear glass enclosure.
One white COB LED, switch set for 4000K.
One GIFBK020W LED driver



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

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	1220.1	Lumens
Input Current	0.0958	A	Total Efficacy	107.0	Lm/W
Input Power	11.40	W	Downward Flux	1220.1	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.991				
Current THD	10.7	%			

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

Test date: 09/08/2025
Report date: 09/09/2025

Signed: Michael L. Grather — Digitally signed by Michael L. Grather Date: 2025.09.11 16:12:34 -04'00'

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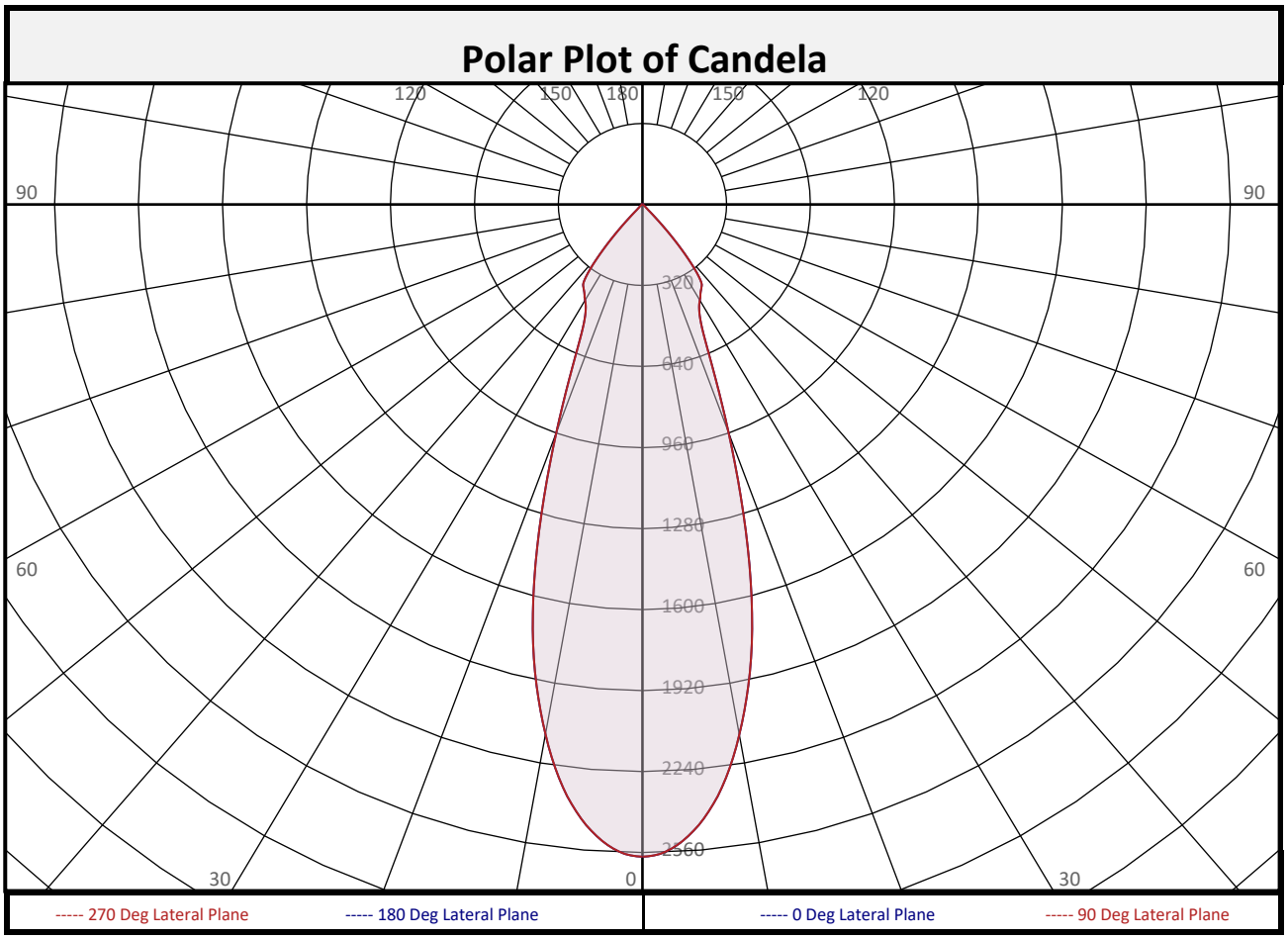

Zonal Flux Summary

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	224.4	18.4%	90-100	0.0	0.0%	0-20	654.3	53.6%
10-20	429.9	35.2%	100-110	0.0	0.0%	0-30	922.8	75.6%
20-30	268.5	22.0%	110-120	0.0	0.0%	0-40	1155	94.6%
30-40	231.7	19.0%	120-130	0.0	0.0%	0-60	1216	99.6%
40-50	52.3	4.3%	130-140	0.0	0.0%	0-80	1220	100.0%
50-60	8.8	0.7%	140-150	0.0	0.0%	10-90	995.6	81.6%
60-70	3.3	0.3%	150-160	0.0	0.0%	20-50	552.6	45.3%
70-80	0.8	0.1%	160-170	0.0	0.0%	40-90	65.5	5.4%
80-90	0.3	0.0%	170-180	0.0	0.0%	60-90	4.4	0.4%
0-90	1220	100.0%	90-180	0.0	0.0%	0-180	1220	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	2577	2577	2577	2577	2577	2577	2577	2577	2577
2.5	2547	2547	2547	2547	2547	2547	2547	2547	2547
5	2461	2461	2461	2461	2461	2461	2461	2461	2461
7.5	2322	2322	2322	2322	2322	2322	2322	2322	2322
10	2126	2126	2126	2126	2126	2126	2126	2126	2126
12.5	1892	1892	1892	1892	1892	1892	1892	1892	1892
15	1607	1607	1607	1607	1607	1607	1607	1607	1607
17.5	1278	1278	1278	1278	1278	1278	1278	1278	1278
20	960	960	960	960	960	960	960	960	960
22.5	700	700	700	700	700	700	700	700	700
25	537	537	537	537	537	537	537	537	537
27.5	468	468	468	468	468	468	468	468	468
30	437	437	437	437	437	437	437	437	437
32.5	412	412	412	412	412	412	412	412	412
35	393	393	393	393	393	393	393	393	393
37.5	341	341	341	341	341	341	341	341	341
40	232	232	232	232	232	232	232	232	232
42.5	115	115	115	115	115	115	115	115	115
45	34	34	34	34	34	34	34	34	34
47.5	19	19	19	19	19	19	19	19	19
50	14	14	14	14	14	14	14	14	14
52.5	12	12	12	12	12	12	12	12	12
55	10	10	10	10	10	10	10	10	10
57.5	8	8	8	8	8	8	8	8	8
60	6	6	6	6	6	6	6	6	6
62.5	4	4	4	4	4	4	4	4	4
65	3	3	3	3	3	3	3	3	3
67.5	2	2	2	2	2	2	2	2	2
70	1	1	1	1	1	1	1	1	1
72.5	1	1	1	1	1	1	1	1	1
75	1	1	1	1	1	1	1	1	1
77.5	1	1	1	1	1	1	1	1	1
80	0	0	0	0	0	0	0	0	0
82.5	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0	0	0
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	114	111	109	107		112	109	107	105		105	104	102		102	100	99		98	97	96	94
2	109	104	101	98		107	103	99	97		100	97	94		97	94	92		94	92	91	89
3	104	98	94	90		102	97	93	89		94	91	88		92	89	87		90	87	85	84
4	100	93	88	84		98	92	87	83		89	85	82		87	84	81		86	83	80	79
5	95	88	82	78		94	87	82	78		85	81	77		83	80	77		82	79	76	75
6	91	83	78	74		90	82	77	73		81	76	73		79	75	72		78	75	72	71
7	87	79	73	70		86	78	73	69		77	72	69		76	72	69		75	71	68	67
8	84	75	70	66		82	74	69	66		73	69	66		72	68	65		72	68	65	64
9	80	72	66	63		79	71	66	63		70	66	62		69	65	62		69	65	62	61
10	77	68	63	60		76	68	63	60		67	63	59		66	62	59		66	62	59	58

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	71.6	3.48	3.48
8.0	40.3	4.64	4.64
10.0	25.8	5.81	5.81
12.0	17.9	6.97	6.97
14.0	13.1	8.13	8.13
16.0	10.1	9.29	9.29

Spacing Criterion

SC: 0.6

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	542188	542188	542188
45	10120	10120	10120
55	3575	3575	3575
65	1587	1587	1587
75	592	592	592
85	397	397	397

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 34.9°

Field Angle: 78.9°

90-270 Degree Plane

Beam Angle: 34.9°

Field Angle: 78.9°

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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	4.6	5.6	5.0	5.9	6.2	4.6	5.6	5.0	5.9	6.2
	3H	4.8	5.7	5.2	6.0	6.4	4.8	5.7	5.2	6.0	6.4
	4H	4.8	5.6	5.3	6.0	6.4	4.8	5.6	5.3	6.0	6.4
	6H	4.8	5.6	5.3	5.9	6.3	4.8	5.6	5.3	5.9	6.3
	8H	4.8	5.5	5.2	5.9	6.3	4.8	5.5	5.2	5.9	6.3
	12H	4.7	5.4	5.2	5.8	6.2	4.7	5.4	5.2	5.8	6.2
4H	2H	4.5	5.3	5.0	5.7	6.1	4.5	5.3	5.0	5.7	6.1
	3H	4.8	5.4	5.2	5.8	6.2	4.8	5.4	5.2	5.8	6.2
	4H	4.9	5.4	5.3	5.8	6.3	4.9	5.4	5.3	5.8	6.3
	6H	4.9	5.4	5.4	5.9	6.3	4.9	5.4	5.4	5.9	6.3
	8H	4.8	5.3	5.3	5.8	6.2	4.8	5.3	5.3	5.8	6.2
	12H	4.8	5.2	5.3	5.7	6.1	4.8	5.2	5.3	5.7	6.1
8H	4H	4.8	5.2	5.3	5.7	6.2	4.8	5.2	5.3	5.7	6.2
	6H	4.8	5.2	5.3	5.7	6.2	4.8	5.2	5.3	5.7	6.2
	8H	4.8	5.1	5.3	5.6	6.1	4.8	5.1	5.3	5.6	6.1
	12H	4.7	5.0	5.2	5.5	6.1	4.7	5.0	5.2	5.5	6.1
12H	4H	4.7	5.1	5.2	5.6	6.1	4.7	5.1	5.2	5.6	6.1
	6H	4.8	5.1	5.3	5.6	6.1	4.8	5.1	5.3	5.6	6.1
	8H	4.7	5.0	5.2	5.5	6.1	4.7	5.0	5.2	5.5	6.1

Maximum UGR = 6.4

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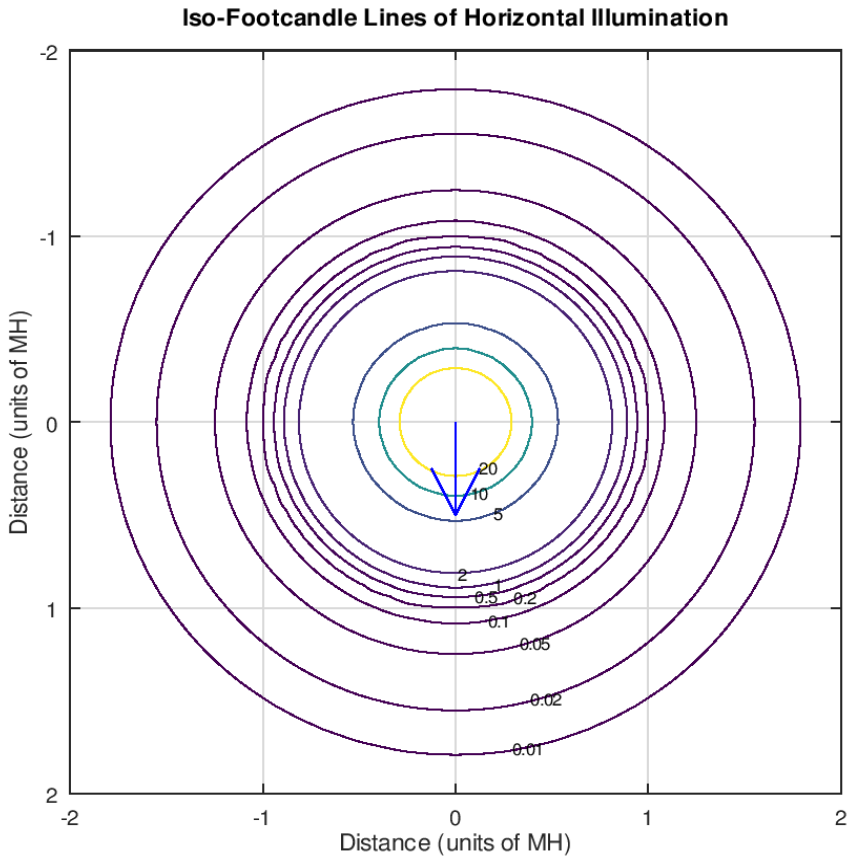
Iso-Illuminance Plot



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





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Test Distance	9.5 m
Ambient Temperature	24.9 °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-79-24. 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.