LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002761-001

Indoor Distribution Photometry Test Report

Catalog Number: CLSP-20PCS-BK 20W/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	1955.6	Lumens
Input Current	0.1773	A	Total Efficacy	95.6	Lm/W
Input Power	20.46	W	Downward Flux	1955.6	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.962				
Current THD	11.8	%			

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 16:11:29 -04'00'

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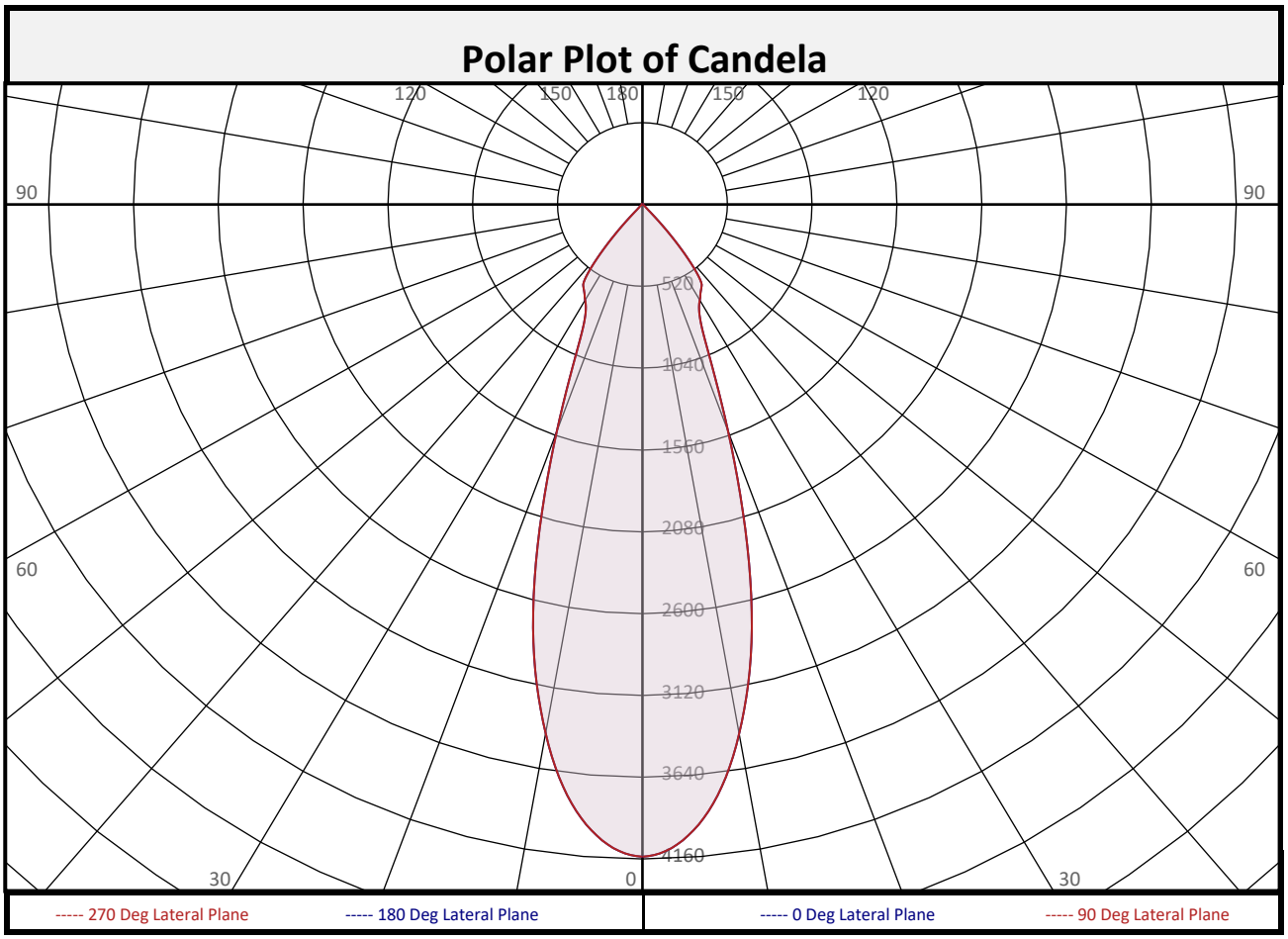

Zonal Flux Summary

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	360.6	18.4%	90-100	0.0	0.0%	0-20	1050	53.7%
10-20	689.2	35.2%	100-110	0.0	0.0%	0-30	1480	75.7%
20-30	430.2	22.0%	110-120	0.0	0.0%	0-40	1852	94.7%
30-40	371.7	19.0%	120-130	0.0	0.0%	0-60	1949	99.6%
40-50	82.8	4.2%	130-140	0.0	0.0%	0-80	1955	100.0%
50-60	14.1	0.7%	140-150	0.0	0.0%	10-90	1595	81.6%
60-70	5.3	0.3%	150-160	0.0	0.0%	20-50	884.7	45.2%
70-80	1.3	0.1%	160-170	0.0	0.0%	40-90	103.9	5.3%
80-90	0.4	0.0%	170-180	0.0	0.0%	60-90	7.0	0.4%
0-90	1956	100.0%	90-180	0.0	0.0%	0-180	1956	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	4146	4146	4146	4146	4146	4146	4146	4146	4146
	2.5	4095	4095	4095	4095	4095	4095	4095	4095	4095
	5	3956	3956	3956	3956	3956	3956	3956	3956	3956
	7.5	3731	3731	3731	3731	3731	3731	3731	3731	3731
	10	3415	3415	3415	3415	3415	3415	3415	3415	3415
	12.5	3037	3037	3037	3037	3037	3037	3037	3037	3037
	15	2577	2577	2577	2577	2577	2577	2577	2577	2577
	17.5	2046	2046	2046	2046	2046	2046	2046	2046	2046
	20	1535	1535	1535	1535	1535	1535	1535	1535	1535
	22.5	1121	1121	1121	1121	1121	1121	1121	1121	1121
	25	860	860	860	860	860	860	860	860	860
	27.5	752	752	752	752	752	752	752	752	752
	30	702	702	702	702	702	702	702	702	702
	32.5	663	663	663	663	663	663	663	663	663
	35	633	633	633	633	633	633	633	633	633
	37.5	545	545	545	545	545	545	545	545	545
	40	369	369	369	369	369	369	369	369	369
	42.5	180	180	180	180	180	180	180	180	180
	45	53	53	53	53	53	53	53	53	53
	47.5	31	31	31	31	31	31	31	31	31
	50	23	23	23	23	23	23	23	23	23
	52.5	19	19	19	19	19	19	19	19	19
	55	16	16	16	16	16	16	16	16	16
	57.5	13	13	13	13	13	13	13	13	13
	60	10	10	10	10	10	10	10	10	10
	62.5	7	7	7	7	7	7	7	7	7
	65	5	5	5	5	5	5	5	5	5
	67.5	3	3	3	3	3	3	3	3	3
	70	2	2	2	2	2	2	2	2	2
	72.5	2	2	2	2	2	2	2	2	2
	75	1	1	1	1	1	1	1	1	1
	77.5	1	1	1	1	1	1	1	1	1
	80	1	1	1	1	1	1	1	1	1
	82.5	1	1	1	1	1	1	1	1	1
	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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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	95
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		88	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	76	73		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	75	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		67	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	115.2	3.47	3.47
8.0	64.8	4.63	4.63
10.0	41.5	5.79	5.79
12.0	28.8	6.95	6.95
14.0	21.2	8.11	8.11
16.0	16.2	9.27	9.27

Spacing Criterion

SC: 0.6

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	872305	872305	872305
45	15885	15885	15885
55	5730	5730	5730
65	2537	2537	2537
75	939	939	939
85	798	798	798

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 34.8°

Field Angle: 78.8°

90-270 Degree Plane

Beam Angle: 34.8°

Field Angle: 78.8°

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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	6.5	7.5	6.9	7.8	8.1	6.5	7.5	6.9	7.8	8.1
	3H	6.7	7.5	7.1	7.9	8.2	6.7	7.5	7.1	7.9	8.2
	4H	6.6	7.4	7.0	7.8	8.2	6.6	7.4	7.0	7.8	8.2
	6H	6.6	7.3	7.0	7.7	8.1	6.6	7.3	7.0	7.7	8.1
	8H	6.6	7.3	7.1	7.7	8.1	6.6	7.3	7.1	7.7	8.1
	12H	6.6	7.3	7.1	7.6	8.1	6.6	7.3	7.1	7.6	8.1
4H	2H	6.5	7.3	6.9	7.6	8.0	6.5	7.3	6.9	7.6	8.0
	3H	6.7	7.3	7.1	7.7	8.1	6.7	7.3	7.1	7.7	8.1
	4H	6.6	7.2	7.1	7.6	8.1	6.6	7.2	7.1	7.6	8.1
	6H	6.6	7.1	7.1	7.6	8.1	6.6	7.1	7.1	7.6	8.1
	8H	6.7	7.2	7.2	7.6	8.1	6.7	7.2	7.2	7.6	8.1
	12H	6.7	7.1	7.2	7.6	8.1	6.7	7.1	7.2	7.6	8.1
8H	4H	6.5	6.9	7.0	7.4	7.9	6.5	6.9	7.0	7.4	7.9
	6H	6.6	6.9	7.1	7.4	7.9	6.6	6.9	7.1	7.4	7.9
	8H	6.7	7.0	7.2	7.5	8.0	6.7	7.0	7.2	7.5	8.0
	12H	6.8	7.1	7.3	7.6	8.1	6.8	7.1	7.3	7.6	8.1
12H	4H	6.4	6.8	6.9	7.3	7.8	6.4	6.8	6.9	7.3	7.8
	6H	6.5	6.9	7.1	7.3	7.9	6.5	6.9	7.1	7.3	7.9
	8H	6.7	7.0	7.3	7.5	8.1	6.7	7.0	7.3	7.5	8.1

Maximum UGR = 8.2

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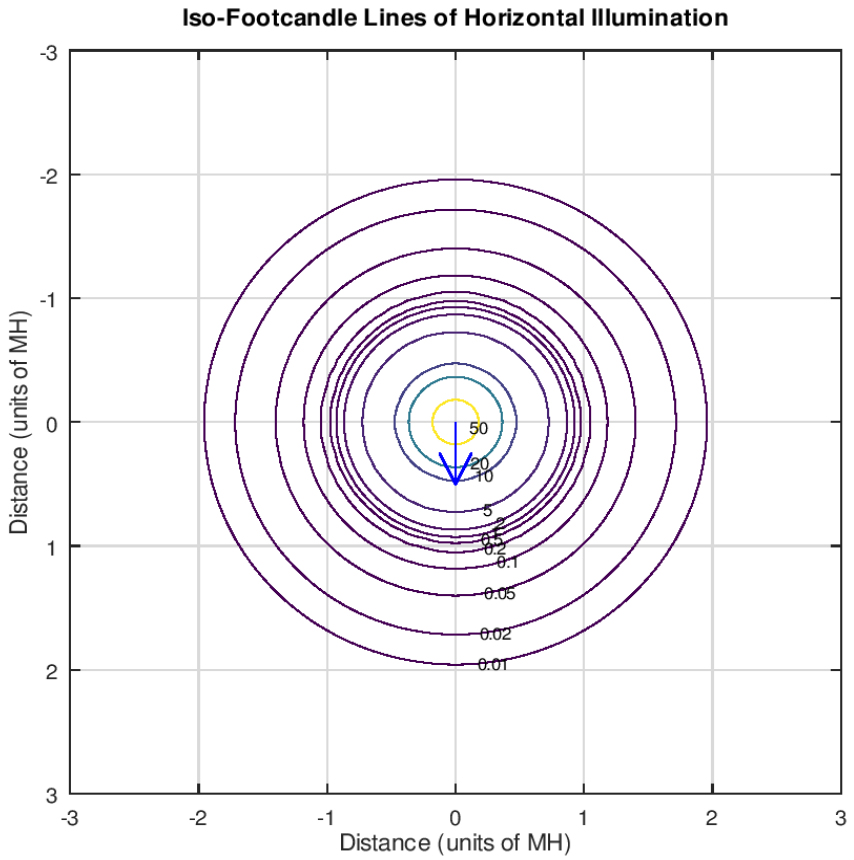
Iso-Illuminance Plot



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





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Test Distance	9.5 m
Ambient Temperature	24.6 °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.

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