LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002547-005

Indoor Distribution Photometry Test Report

Catalog Number: GCP-100PCS-WH (75W - Downlight - 4000K)
Surface or bracket mounted, cast aluminum housing, lightly frosted prismatic plastic direct enclosure, frosted plastic indirect enclosure. 128 LEDs (64CW and 64WW) on two E502083 LED boards in direct section and 24 unenergized LEDs (12CW and 12WW) on two boards in uplight section. One Moso N7L-120M260A12 LED driver

Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	10403.9	Lumens
Input Current	0.5839	A	Total Efficacy	149.5	Lm/W
Input Power	69.57	W	Downward Flux	10094.2	Lumens
Frequency	60.00	Hz	Downward Flux	97.0	% of Total
Power Factor	0.992				
Current THD	4.6	%			

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

Test date: 01/14/2025
Report date: 01/16/2025

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2025.01.17 12:17:35 -05'00'

North America (issuing laboratory)
LightLab International Allentown, LLC
905 Harrison Street, Suite 135
Allentown, PA 18103 USA
Ph: +1 484-273-0705
Fx: +1 484-209-5779
www.lightlaballentown.com

Australasia & S.E. Asia
LightLab International
50 Redcliffe Gardens Drive
Clontarf - Queensland, 4019, Australia
Ph : +61 7 3283 7862
Fx : +61 7 3283 8751
www.lightlabint.com

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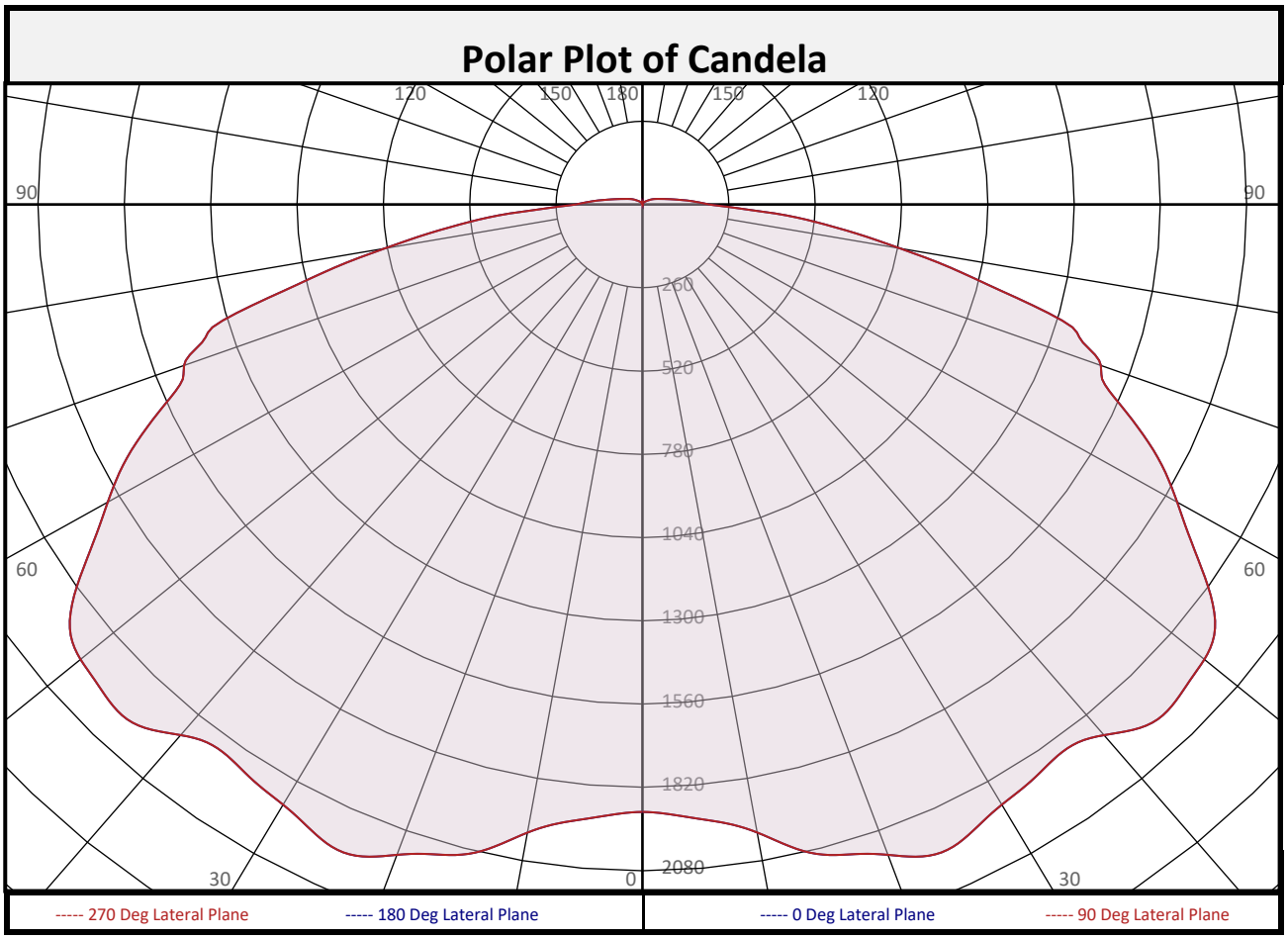

Zonal Flux Summary

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	185.8	1.8%	90-100	153.4	1.5%	0-20	780.7	7.5%
10-20	594.9	5.7%	100-110	72.4	0.7%	0-30	1796	17.3%
20-30	1015	9.8%	110-120	40.6	0.4%	0-40	3141	30.2%
30-40	1346	12.9%	120-130	21.6	0.2%	0-60	6706	64.5%
40-50	1717	16.5%	130-140	11.1	0.1%	0-80	9586	92.1%
50-60	1848	17.8%	140-150	5.8	0.1%	10-90	9908	95.2%
60-70	1632	15.7%	150-160	2.8	0.0%	20-50	4078	39.2%
70-80	1248	12.0%	160-170	1.4	0.0%	40-90	6953	66.8%
80-90	507.8	4.9%	170-180	0.4	0.0%	60-90	3388	32.6%
0-90	10094	97.0%	90-180	309.6	3.0%	0-180	10404	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	1897	1897	1897	1897	1897	1897	1897	1897	1897
2.5	1906	1906	1906	1906	1906	1906	1906	1906	1906
5	1925	1925	1925	1925	1925	1925	1925	1925	1925
7.5	1950	1950	1950	1950	1950	1950	1950	1950	1950
10	1992	1992	1992	1992	1992	1992	1992	1992	1992
12.5	2053	2053	2053	2053	2053	2053	2053	2053	2053
15	2102	2102	2102	2102	2102	2102	2102	2102	2102
17.5	2127	2127	2127	2127	2127	2127	2127	2127	2127
20	2161	2161	2161	2161	2161	2161	2161	2161	2161
22.5	2204	2204	2204	2204	2204	2204	2204	2204	2204
25	2213	2213	2213	2213	2213	2213	2213	2213	2213
27.5	2189	2189	2189	2189	2189	2189	2189	2189	2189
30	2164	2164	2164	2164	2164	2164	2164	2164	2164
32.5	2151	2151	2151	2151	2151	2151	2151	2151	2151
35	2133	2133	2133	2133	2133	2133	2133	2133	2133
37.5	2128	2128	2128	2128	2128	2128	2128	2128	2128
40	2163	2163	2163	2163	2163	2163	2163	2163	2163
42.5	2217	2217	2217	2217	2217	2217	2217	2217	2217
45	2236	2236	2236	2236	2236	2236	2236	2236	2236
47.5	2223	2223	2223	2223	2223	2223	2223	2223	2223
50	2210	2210	2210	2210	2210	2210	2210	2210	2210
52.5	2174	2174	2174	2174	2174	2174	2174	2174	2174
55	2079	2079	2079	2079	2079	2079	2079	2079	2079
57.5	1960	1960	1960	1960	1960	1960	1960	1960	1960
60	1860	1860	1860	1860	1860	1860	1860	1860	1860
62.5	1764	1764	1764	1764	1764	1764	1764	1764	1764
65	1646	1646	1646	1646	1646	1646	1646	1646	1646
67.5	1522	1522	1522	1522	1522	1522	1522	1522	1522
70	1469	1469	1469	1469	1469	1469	1469	1469	1469
72.5	1380	1380	1380	1380	1380	1380	1380	1380	1380
75	1216	1216	1216	1216	1216	1216	1216	1216	1216
77.5	986	986	986	986	986	986	986	986	986
80	787	787	787	787	787	787	787	787	787
82.5	618	618	618	618	618	618	618	618	618
85	466	466	466	466	466	466	466	466	466
87.5	297	297	297	297	297	297	297	297	297
90	201	201	201	201	201	201	201	201	201

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	201	201	201	201	201	201	201	201	201
	92.5	167	167	167	167	167	167	167	167	167
	95	138	138	138	138	138	138	138	138	138
	97.5	112	112	112	112	112	112	112	112	112
	100	93	93	93	93	93	93	93	93	93
	102.5	78	78	78	78	78	78	78	78	78
	105	67	67	67	67	67	67	67	67	67
	107.5	58	58	58	58	58	58	58	58	58
	110	51	51	51	51	51	51	51	51	51
	112.5	45	45	45	45	45	45	45	45	45
	115	41	41	41	41	41	41	41	41	41
	117.5	36	36	36	36	36	36	36	36	36
	120	32	32	32	32	32	32	32	32	32
	122.5	28	28	28	28	28	28	28	28	28
	125	23	23	23	23	23	23	23	23	23
	127.5	20	20	20	20	20	20	20	20	20
	130	18	18	18	18	18	18	18	18	18
	132.5	16	16	16	16	16	16	16	16	16
	135	14	14	14	14	14	14	14	14	14
	137.5	12	12	12	12	12	12	12	12	12
	140	11	11	11	11	11	11	11	11	11
	142.5	10	10	10	10	10	10	10	10	10
	145	9	9	9	9	9	9	9	9	9
	147.5	8	8	8	8	8	8	8	8	8
	150	7	7	7	7	7	7	7	7	7
	152.5	7	7	7	7	7	7	7	7	7
	155	6	6	6	6	6	6	6	6	6
	157.5	5	5	5	5	5	5	5	5	5
	160	5	5	5	5	5	5	5	5	5
	162.5	5	5	5	5	5	5	5	5	5
	165	5	5	5	5	5	5	5	5	5
	167.5	5	5	5	5	5	5	5	5	5
	170	5	5	5	5	5	5	5	5	5
	172.5	4	4	4	4	4	4	4	4	4
	175	4	4	4	4	4	4	4	4	4
	177.5	3	3	3	3	3	3	3	3	3
	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	118	118	118	118		115	115	115	115		109	109	109		104	104	104		99	99	99	97
1	105	99	94	89		102	97	92	87		92	88	84		87	84	81		83	80	78	76
2	94	84	76	69		91	82	75	68		78	71	66		74	69	64		70	66	62	60
3	85	72	63	55		82	70	62	55		67	59	53		64	57	52		61	55	50	48
4	77	63	53	45		74	61	52	45		58	50	44		55	48	43		53	47	42	39
5	70	55	45	38		67	54	45	38		51	43	37		49	42	36		47	40	35	33
6	64	49	39	32		62	48	39	32		46	38	31		44	36	31		42	35	30	28
7	59	44	35	28		57	43	34	28		41	33	27		40	32	27		38	31	26	24
8	55	40	31	24		53	39	30	24		37	30	24		36	29	24		34	28	23	21
9	51	36	28	22		49	36	27	21		34	27	21		33	26	21		32	25	21	19
10	48	33	25	19		46	33	25	19		31	24	19		30	23	19		29	23	18	17

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	52.7	10.33	10.33
8.0	29.6	13.78	13.78
10.0	19.0	17.22	17.22
12.0	13.2	20.66	20.66
14.0	9.7	24.11	24.11
16.0	7.4	27.55	27.55

Spacing Criterion

SC: 1.7

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	20541	20541	20541
45	31634	31634	31634
55	35118	35118	35118
65	35832	35832	35832
75	38908	38908	38908
85	29824	29824	29824

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 151.9°

Field Angle: 178.5°

90-270 Degree Plane

Beam Angle: 151.9°

Field Angle: 178.5°

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Allentown, PA 18103 USA
Ph: +1 484-273-0705
Fx: +1 484-209-5779
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Australasia & S.E. Asia
LightLab International
50 Redcliffe Gardens Drive
Clontarf - Queensland, 4019, Australia
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Fx : +61 7 3283 8751
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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	23.8	25.5	24.2	25.9	26.3	23.8	25.5	24.2	25.9	26.3
	3H	26.2	27.7	26.6	28.1	28.6	26.2	27.7	26.6	28.1	28.6
	4H	27.3	28.9	27.8	29.3	29.7	27.3	28.9	27.8	29.3	29.7
	6H	28.1	29.5	28.6	30.0	30.4	28.1	29.5	28.6	30.0	30.4
	8H	28.4	29.8	28.9	30.2	30.7	28.4	29.8	28.9	30.2	30.7
	12H	28.6	30.0	29.1	30.4	30.9	28.6	30.0	29.1	30.4	30.9
4H	2H	24.5	26.1	25.0	26.5	26.9	24.5	26.1	25.0	26.5	26.9
	3H	27.2	28.5	27.7	29.0	29.4	27.2	28.5	27.7	29.0	29.4
	4H	28.5	29.7	29.0	30.2	30.7	28.5	29.7	29.0	30.2	30.7
	6H	29.4	30.5	29.9	31.0	31.5	29.4	30.5	29.9	31.0	31.5
	8H	29.8	30.8	30.3	31.3	31.8	29.8	30.8	30.3	31.3	31.8
	12H	30.1	31.0	30.6	31.5	32.0	30.1	31.0	30.6	31.5	32.0
8H	4H	29.0	30.0	29.5	30.5	31.0	29.0	30.0	29.5	30.5	31.0
	6H	30.0	30.9	30.6	31.4	32.0	30.0	30.9	30.6	31.4	32.0
	8H	30.5	31.2	31.0	31.8	32.3	30.5	31.2	31.0	31.8	32.3
	12H	30.9	31.6	31.4	32.1	32.7	30.9	31.6	31.4	32.1	32.7
12H	4H	29.1	30.0	29.6	30.5	31.0	29.1	30.0	29.6	30.5	31.0
	6H	30.2	30.9	30.7	31.4	32.0	30.2	30.9	30.7	31.4	32.0
	8H	30.7	31.3	31.2	31.9	32.5	30.7	31.3	31.2	31.9	32.5

Maximum UGR = 32.7

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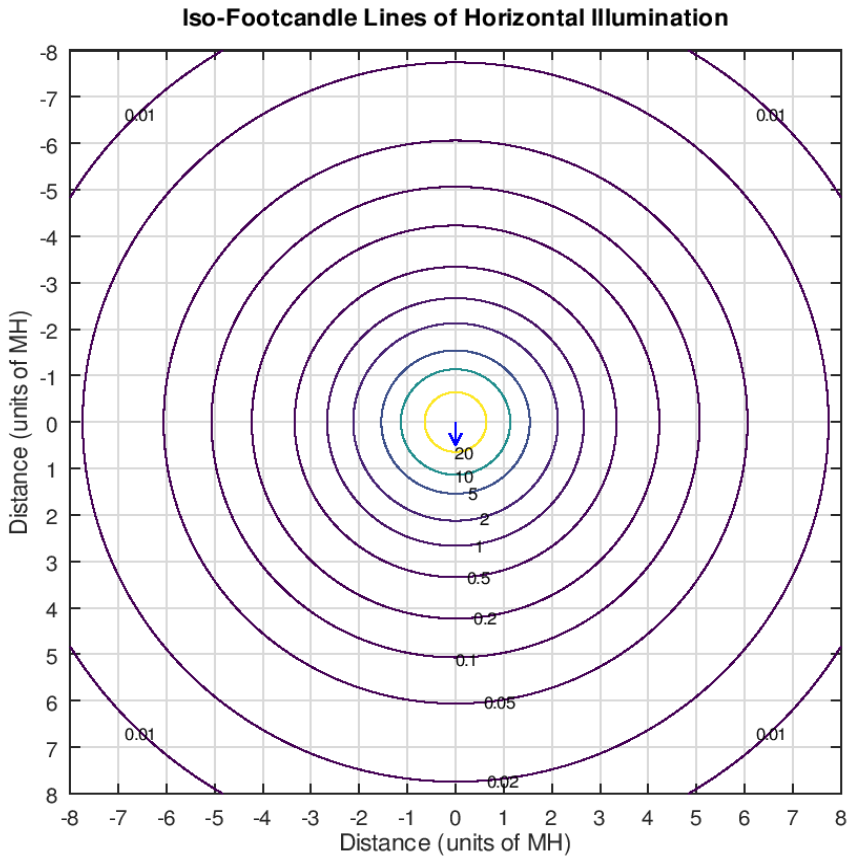
Iso-Illuminance Plot



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.