LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002547-006

Indoor Distribution Photometry Test Report

Catalog Number: GCP-100PCS-WH (75W - Uplight/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 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	10395.3	Lumens
Input Current	0.5821	A	Total Efficacy	149.9	Lm/W
Input Power	69.34	W	Downward Flux	9060.3	Lumens
Frequency	60.00	Hz	Downward Flux	87.2	% of Total
Power Factor	0.992				
Current THD	4.5	%			

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

Test date: 01/16/2025
Report date: 01/17/2025

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2025.01.17 12:18:51 -05'00'

North America (issuing laboratory)
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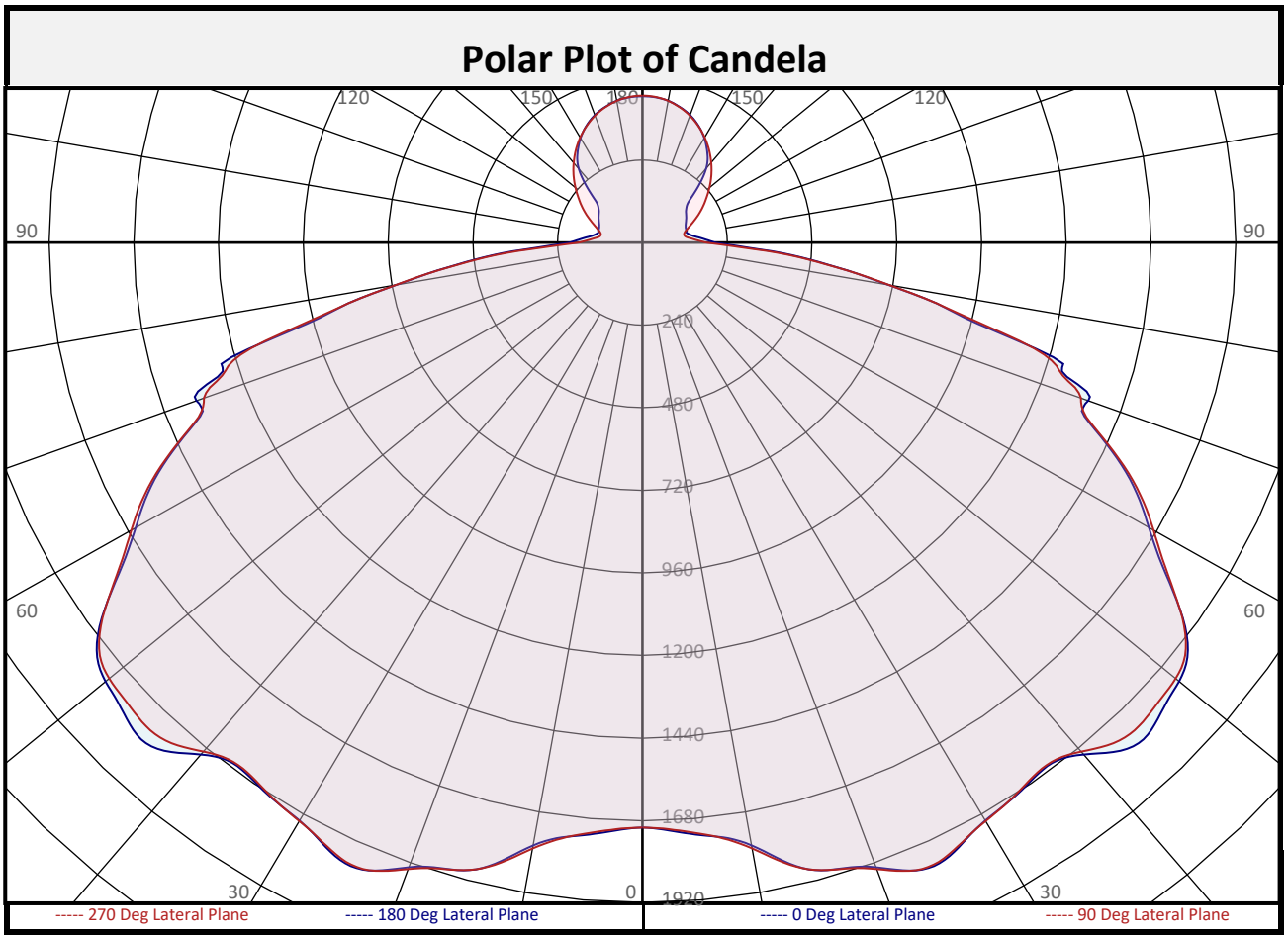

Zonal Flux Summary

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	166.5	1.6%	90-100	167.1	1.6%	0-20	699.8	6.7%
10-20	533.3	5.1%	100-110	131.2	1.3%	0-30	1610	15.5%
20-30	910.4	8.8%	110-120	142.5	1.4%	0-40	2816	27.1%
30-40	1206	11.6%	120-130	164.8	1.6%	0-60	6010	57.8%
40-50	1539	14.8%	130-140	197.5	1.9%	0-80	8597	82.7%
50-60	1655	15.9%	140-150	204.2	2.0%	10-90	8894	85.6%
60-70	1464	14.1%	150-160	172.5	1.7%	20-50	3656	35.2%
70-80	1122	10.8%	160-170	114.9	1.1%	40-90	6244	60.1%
80-90	463.3	4.5%	170-180	40.3	0.4%	60-90	3050	29.3%
0-90	9060	87.2%	90-180	1335	12.8%	0-180	10395	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	1700	1700	1700	1700	1700	1700	1700	1700	1700
2.5	1710	1710	1709	1708	1707	1708	1709	1710	1710
5	1727	1727	1726	1724	1723	1724	1726	1727	1727
7.5	1744	1745	1748	1749	1747	1749	1748	1745	1744
10	1779	1779	1785	1789	1788	1789	1785	1779	1779
12.5	1841	1837	1838	1843	1846	1843	1838	1837	1841
15	1888	1885	1881	1882	1888	1882	1881	1885	1888
17.5	1906	1911	1905	1904	1908	1904	1905	1911	1906
20	1933	1941	1937	1937	1938	1937	1937	1941	1933
22.5	1976	1979	1976	1976	1977	1976	1976	1979	1976
25	1991	1987	1984	1983	1986	1983	1984	1987	1991
27.5	1966	1965	1960	1961	1964	1961	1960	1965	1966
30	1941	1943	1937	1943	1942	1943	1937	1943	1941
32.5	1928	1929	1925	1931	1928	1931	1925	1929	1928
35	1914	1912	1912	1913	1909	1913	1912	1912	1914
37.5	1907	1906	1908	1906	1903	1906	1908	1906	1907
40	1943	1936	1940	1939	1932	1939	1940	1936	1943
42.5	2004	1985	1989	1988	1974	1988	1989	1985	2004
45	2024	2006	2007	2001	1988	2001	2007	2006	2024
47.5	2002	1999	1995	1984	1980	1984	1995	1999	2002
50	1984	1991	1982	1973	1971	1973	1982	1991	1984
52.5	1947	1957	1946	1942	1939	1942	1946	1957	1947
55	1858	1874	1861	1857	1858	1857	1861	1874	1858
57.5	1745	1769	1755	1746	1755	1746	1755	1769	1745
60	1656	1678	1665	1657	1671	1657	1665	1678	1656
62.5	1578	1588	1579	1573	1589	1573	1579	1588	1578
65	1482	1481	1476	1469	1488	1469	1476	1481	1482
67.5	1370	1370	1363	1356	1375	1356	1363	1370	1370
70	1344	1330	1312	1304	1321	1304	1312	1330	1344
72.5	1245	1251	1243	1230	1238	1230	1243	1251	1245
75	1093	1088	1098	1091	1105	1091	1098	1088	1093
77.5	879	897	876	892	884	892	876	897	879
80	703	710	708	713	706	713	708	710	703
82.5	555	560	553	562	553	562	553	560	555
85	424	430	419	431	415	431	419	430	424
87.5	280	282	272	279	260	279	272	282	280
90	204	202	194	192	178	192	194	202	204

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	204	202	194	192	178	192	194	202	204
	92.5	180	177	169	163	154	163	169	177	180
	95	162	159	151	143	137	143	151	159	162
	97.5	145	142	135	126	124	126	135	142	145
	100	135	132	125	118	120	118	125	132	135
	102.5	129	126	119	116	121	116	119	126	129
	105	127	124	117	118	126	118	117	124	127
	107.5	129	127	119	124	135	124	119	127	129
	110	130	128	121	133	144	133	121	128	130
	112.5	132	130	123	146	156	146	123	130	132
	115	136	133	127	162	168	162	127	133	136
	117.5	139	137	132	177	181	177	132	137	139
	120	143	141	140	191	194	191	140	141	143
	122.5	147	145	154	206	207	206	154	145	147
	125	151	150	176	219	220	219	176	150	151
	127.5	156	159	203	234	234	234	203	159	156
	130	164	175	228	248	248	248	228	175	164
	132.5	181	203	250	263	262	263	250	203	181
	135	215	237	269	277	276	277	269	237	215
	137.5	250	267	285	291	290	291	285	267	250
	140	281	289	301	304	303	304	301	289	281
	142.5	303	308	316	317	316	317	316	308	303
	145	320	324	330	330	329	330	330	324	320
	147.5	336	338	342	342	341	342	342	338	336
	150	350	352	354	353	352	353	354	352	350
	152.5	363	364	365	364	363	364	365	364	363
	155	375	375	375	374	374	374	375	375	375
	157.5	385	385	385	384	383	384	385	385	385
	160	394	393	393	392	392	392	393	393	394
	162.5	401	401	401	400	400	400	401	401	401
	165	408	407	407	407	407	407	407	407	408
	167.5	413	413	413	413	413	413	413	413	413
	170	418	418	418	418	418	418	418	418	418
	172.5	421	421	421	422	422	422	421	421	421
	175	423	423	424	424	424	424	424	423	423
	177.5	424	425	425	426	426	426	425	425	424
	180	426	426	426	426	426	426	426	426	426

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	116	116	116	116		112	112	112	112		104	104	104		97	97	97		90	90	90	87
1	103	98	92	88		99	94	89	85		87	84	80		81	78	75		76	73	71	68
2	92	83	75	68		88	80	73	67		74	68	63		69	64	60		64	60	56	53
3	83	71	62	55		79	69	60	53		64	57	51		59	53	48		55	50	46	43
4	75	62	52	45		72	60	51	44		56	48	42		52	45	40		48	43	38	35
5	69	55	45	38		66	53	44	37		49	41	35		46	39	34		43	37	32	30
6	63	49	39	32		60	47	38	31		44	36	30		41	34	29		38	32	28	25
7	58	44	34	28		55	42	33	27		39	32	26		37	30	25		34	29	24	22
8	54	39	30	24		51	38	30	24		36	28	23		34	27	22		31	25	21	19
9	50	36	27	21		48	35	27	21		33	25	20		31	24	19		29	23	19	17
10	47	33	25	19		45	32	24	19		30	23	18		28	22	17		27	21	17	15

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	47.2	10.37	10.29
8.0	26.6	13.83	13.72
10.0	17.0	17.29	17.15
12.0	11.8	20.75	20.58
14.0	8.7	24.20	24.00
16.0	6.6	27.66	27.43

Spacing Criterion

0 deg:	1.7
90 deg:	1.7
180 deg:	1.7
270 deg:	1.7

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	18414	18414	18414
45	28626	28394	28121
55	31378	31424	31372
65	32265	32128	32402
75	34950	35126	35345
85	27098	26815	26527

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 151.4°

Field Angle: #N/A

90-270 Degree Plane

Beam Angle: 151.8°

Field Angle: 178.1°

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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	22.8	24.3	23.3	24.8	25.5	22.7	24.2	23.3	24.8	25.4
	3H	25.2	26.5	25.7	27.1	27.7	25.1	26.5	25.7	27.0	27.7
	4H	26.3	27.6	26.9	28.2	28.9	26.3	27.6	26.9	28.2	28.8
	6H	27.1	28.3	27.7	28.9	29.6	27.1	28.3	27.7	28.9	29.6
	8H	27.4	28.5	28.0	29.2	29.9	27.3	28.5	27.9	29.1	29.8
	12H	27.6	28.7	28.2	29.3	30.1	27.6	28.7	28.2	29.3	30.0
4H	2H	23.5	24.8	24.1	25.4	26.1	23.5	24.8	24.1	25.4	26.0
	3H	26.2	27.3	26.8	27.9	28.6	26.1	27.2	26.7	27.9	28.6
	4H	27.5	28.5	28.1	29.1	29.9	27.4	28.5	28.0	29.1	29.8
	6H	28.4	29.3	29.0	29.9	30.7	28.4	29.3	29.0	29.9	30.6
	8H	28.7	29.6	29.4	30.2	31.0	28.7	29.5	29.3	30.2	30.9
	12H	29.0	29.8	29.7	30.5	31.2	29.0	29.7	29.6	30.4	31.2
8H	4H	27.9	28.8	28.6	29.4	30.2	27.9	28.7	28.5	29.4	30.1
	6H	29.0	29.7	29.6	30.4	31.1	28.9	29.7	29.6	30.3	31.1
	8H	29.4	30.0	30.1	30.7	31.5	29.4	30.0	30.1	30.7	31.5
	12H	29.8	30.4	30.5	31.1	31.9	29.8	30.3	30.5	31.0	31.9
12H	4H	28.0	28.8	28.6	29.4	30.2	27.9	28.7	28.6	29.4	30.1
	6H	29.1	29.7	29.8	30.4	31.2	29.1	29.7	29.7	30.4	31.2
	8H	29.6	30.1	30.2	30.8	31.6	29.5	30.1	30.2	30.8	31.6

Maximum UGR = 31.9

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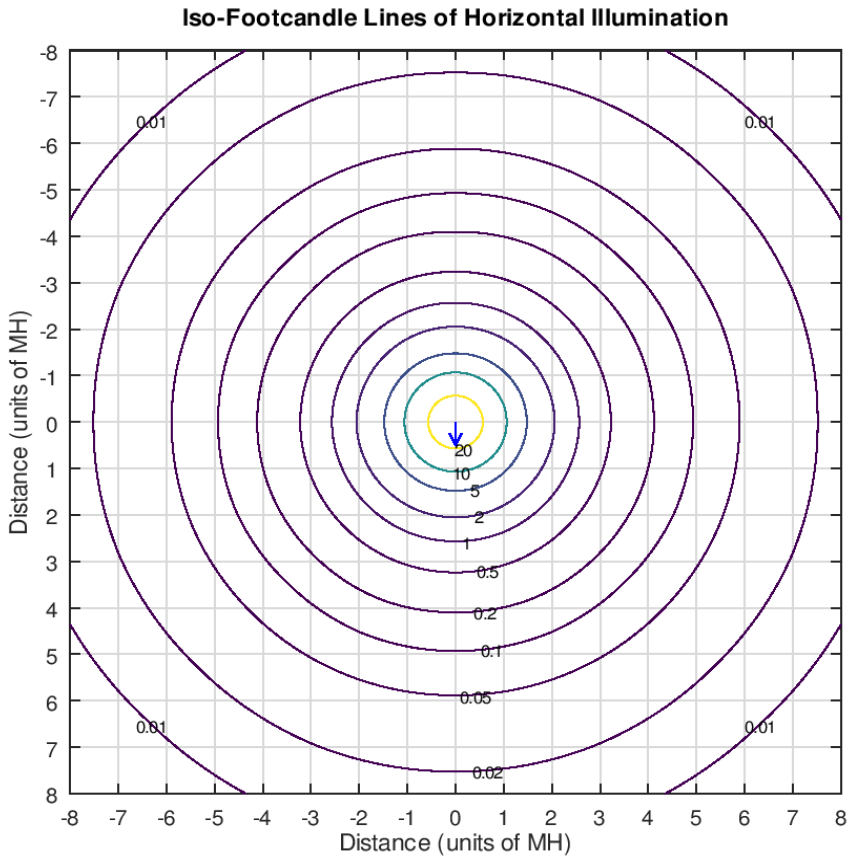
Iso-Illuminance Plot

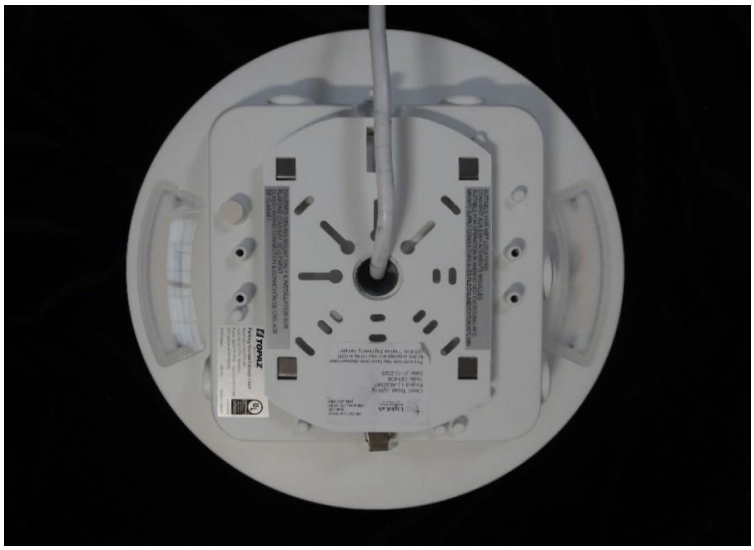


The isofootcandle values shown in the plot above are based on a mounting height of h = 8.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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

Report of Test

LLIA002547-002

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-79-19. 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.