LightLab INTERNATIONAL ALLENTOWN LLC

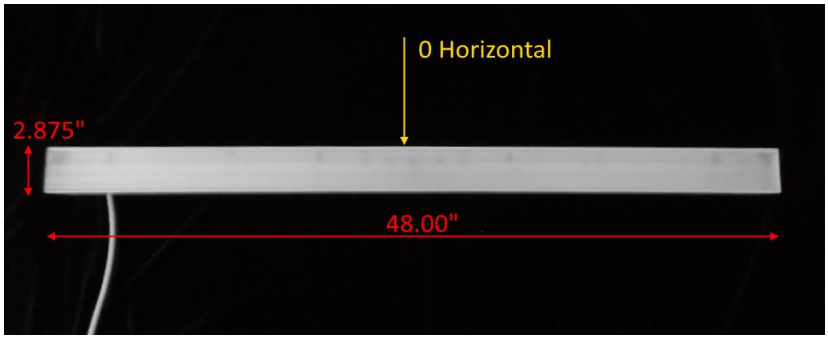
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA002428-001-R01*

Indoor Distribution Photometry Test Report

Catalog Number: MLD3-AS-M-48-500-35K-1%-U
Pendant mounted, white painted extruded aluminum housing, white aluminum reflector, frosted linear prismatic asymmetric lens.
112 white LEDs, 2 LED boards with 56 LEDs each.
One Advance XI020C056V054BST3 LED driver measured at 308mA



Prepared For:
Mercury Lighting Products Company, Inc.
20 Audrey Place
Fairfield, NJ 07004, USA

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	1929.2	Lumens
Input Current	0.1129	A	Total Efficacy	143.5	Lm/W
Input Power	13.44	W	Downward Flux	1929.2	Lumens
Frequency	60.01	Hz	Downward Flux	100.0	% of Total
Power Factor	0.991				
Current THD	6.3	%			

*This test report supersedes previous versions - see the end of this report for a list of revisions

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

Test date: 06/28/2024
Report date: 11/11/2024

Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2024.11.11 12:35:27 -05'00'

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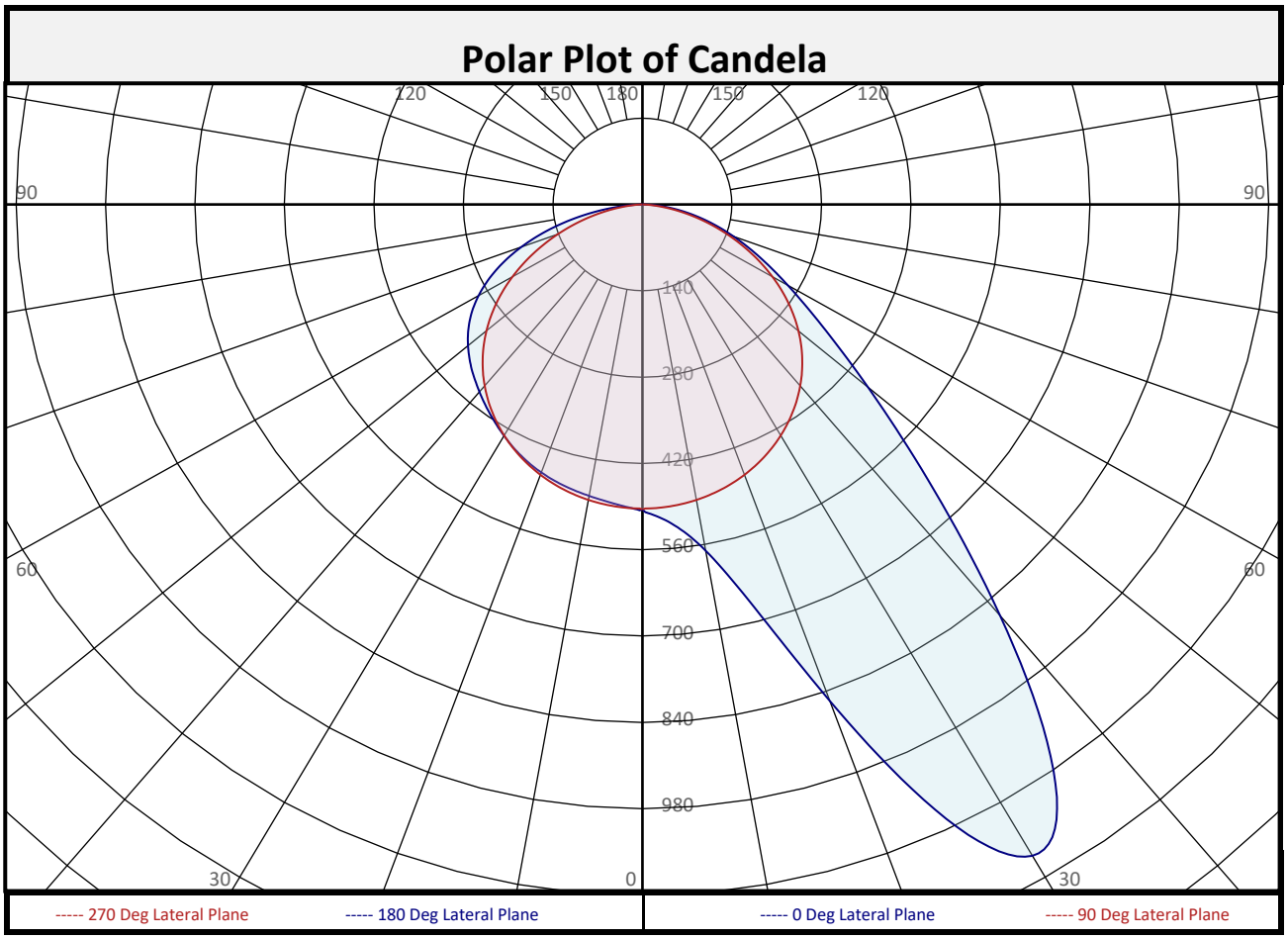

Zonal Flux Summary

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	47.7	2.5%	90-100	0.0	0.0%	0-20	197.2	10.2%
10-20	149.5	7.7%	100-110	0.0	0.0%	0-30	473.5	24.5%
20-30	276.3	14.3%	110-120	0.0	0.0%	0-40	857.6	44.5%
30-40	384.1	19.9%	120-130	0.0	0.0%	0-60	1554	80.6%
40-50	382.0	19.8%	130-140	0.0	0.0%	0-80	1900	98.5%
50-60	314.5	16.3%	140-150	0.0	0.0%	10-90	1882	97.5%
60-70	223.6	11.6%	150-160	0.0	0.0%	20-50	1042	54.0%
70-80	121.9	6.3%	160-170	0.0	0.0%	40-90	1072	55.5%
80-90	29.6	1.5%	170-180	0.0	0.0%	60-90	375.1	19.4%
0-90	1929	100.0%	90-180	0.0	0.0%	0-180	1929	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	495	495	495	495	495	495	495	495	495
	2.5	506	504	499	495	493	490	490	491	492
	5	519	515	507	498	492	487	486	487	488
	7.5	540	532	516	500	490	484	482	483	484
	10	571	557	529	502	487	480	478	480	480
	12.5	615	593	546	504	483	475	474	476	477
	15	677	642	568	507	478	469	469	471	472
	17.5	757	706	597	510	473	463	463	467	468
	20	857	785	632	513	467	456	456	461	463
	22.5	969	878	675	518	460	447	449	455	457
	25	1083	977	725	523	452	438	441	447	449
	27.5	1175	1069	778	529	443	428	432	439	442
	30	1220	1135	831	535	433	417	421	430	433
	32.5	1201	1159	876	542	422	405	410	420	424
	35	1122	1130	908	547	410	392	398	409	415
	37.5	1003	1055	918	551	398	378	384	398	406
	40	871	951	904	552	384	362	370	387	397
	42.5	744	837	868	547	369	346	355	375	387
	45	632	725	814	536	354	329	339	363	378
	47.5	538	625	749	518	337	311	322	351	367
	50	460	537	679	494	319	293	305	337	356
	52.5	396	461	607	463	299	274	287	322	344
	55	343	397	539	428	279	254	269	307	330
	57.5	300	342	473	390	258	234	249	290	315
	60	263	297	412	351	235	213	229	271	296
	62.5	231	257	355	311	212	193	208	251	276
	65	203	222	304	272	188	172	187	230	253
	67.5	176	190	257	235	165	151	166	207	229
	70	152	162	214	198	141	130	144	182	202
	72.5	129	135	175	163	118	109	122	157	174
	75	106	110	139	130	95	88	101	130	144
	77.5	85	87	106	100	73	69	79	104	114
	80	65	65	77	72	52	50	58	77	85
	82.5	46	46	51	47	34	32	39	52	57
	85	28	27	29	26	18	17	21	29	31
	87.5	13	12	11	9	6	6	7	9	10
	90	2	1	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	2	1	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	109	104	100	96		106	102	98	95		98	94	92		94	91	89		90	88	86	84
2	99	91	84	78		96	89	83	77		85	80	75		82	78	74		79	75	72	70
3	90	80	71	65		88	78	70	64		75	68	63		72	67	62		70	65	61	59
4	82	70	61	55		80	69	61	54		66	59	53		64	58	53		62	56	52	50
5	76	63	53	47		73	61	53	46		59	52	46		57	51	45		55	50	45	43
6	70	56	47	40		68	55	47	40		53	46	40		52	45	40		50	44	39	37
7	64	51	42	35		63	50	41	35		48	41	35		47	40	35		45	39	35	33
8	60	46	37	31		58	45	37	31		44	36	31		43	36	31		41	35	31	29
9	56	42	34	28		54	41	33	28		40	33	28		39	32	28		38	32	27	26
10	52	39	30	25		51	38	30	25		37	30	25		36	29	25		35	29	25	23

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	13.7	9.74	7.80
8.0	7.7	12.99	10.40
10.0	4.9	16.24	13.00
12.0	3.4	19.49	15.60
14.0	2.5	22.74	18.20
16.0	1.9	25.98	20.80

Spacing Criterion

0 deg:	1.9
90 deg:	1.3
180 deg:	1.3
270 deg:	1.3

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	5557	5557	5557
45	10041	12937	5616
55	6716	10548	5460
65	5386	8070	5005
75	4621	6024	4113
85	3636	3718	2268

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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	19.1	20.7	19.4	21.0	21.3	18.5	20.2	18.9	20.5	20.8
	3H	20.4	21.9	20.8	22.2	22.6	20.0	21.5	20.4	21.8	22.2
	4H	20.9	22.3	21.3	22.7	23.0	20.5	21.9	20.9	22.3	22.6
	6H	21.3	22.6	21.7	23.0	23.3	20.8	22.1	21.3	22.5	22.9
	8H	21.4	22.7	21.9	23.1	23.5	20.9	22.2	21.4	22.5	22.9
	12H	21.5	22.7	21.9	23.1	23.5	21.0	22.1	21.4	22.5	22.9
4H	2H	20.1	21.5	20.5	21.8	22.2	19.3	20.7	19.7	21.1	21.5
	3H	21.6	22.7	22.0	23.1	23.5	21.0	22.2	21.4	22.6	23.0
	4H	22.1	23.2	22.6	23.6	24.0	21.6	22.7	22.1	23.1	23.6
	6H	22.6	23.5	23.1	24.0	24.4	22.1	23.0	22.6	23.4	23.9
	8H	22.8	23.6	23.2	24.1	24.5	22.2	23.1	22.7	23.5	24.0
	12H	22.9	23.7	23.4	24.1	24.6	22.3	23.0	22.7	23.5	24.0
8H	4H	22.5	23.4	23.0	23.8	24.3	22.0	22.8	22.5	23.3	23.8
	6H	23.1	23.8	23.6	24.3	24.8	22.5	23.2	23.0	23.7	24.2
	8H	23.3	23.9	23.8	24.4	24.9	22.7	23.3	23.2	23.8	24.3
	12H	23.5	24.0	24.0	24.5	25.1	22.8	23.4	23.3	23.9	24.4
12H	4H	22.5	23.3	23.0	23.8	24.3	22.0	22.8	22.5	23.3	23.7
	6H	23.1	23.8	23.7	24.2	24.8	22.6	23.2	23.1	23.7	24.2
	8H	23.4	24.0	23.9	24.5	25.0	22.8	23.4	23.3	23.9	24.4

Maximum UGR = 25.1

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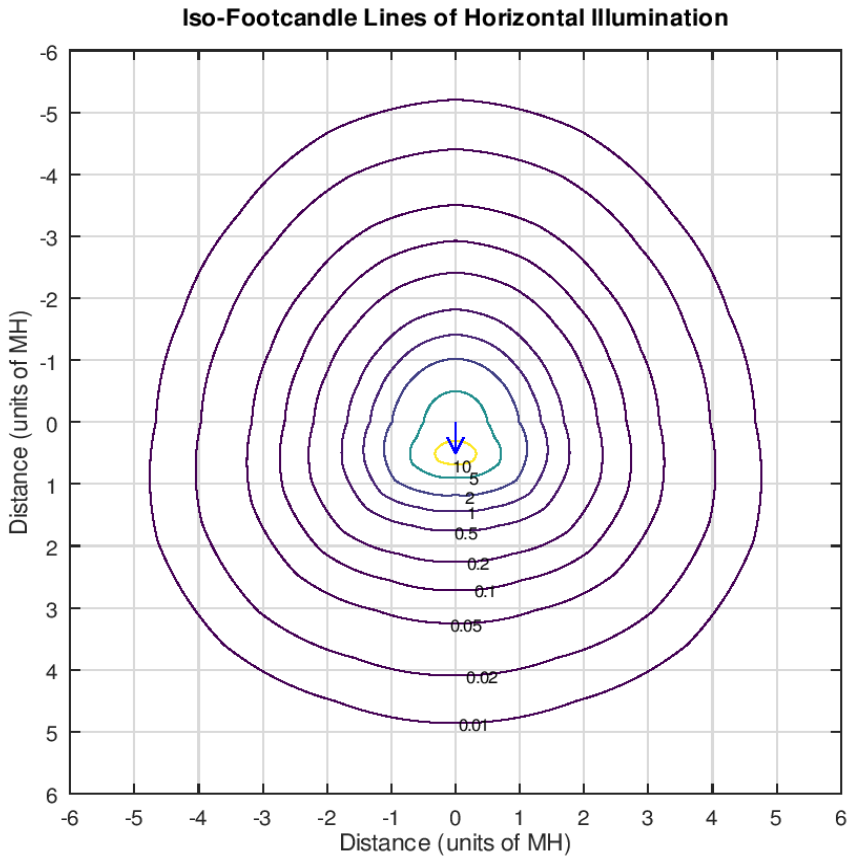
Iso-Illuminance Plot



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	25.0 °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.

Revision History: R01 - 11/11/2024 - Revised catalog number