

Report of Test

LLIA002622-003-R01*

Indoor Distribution Photometry Test Report

Catalog Number: MLS2-CTR-DM-48-480-35K-ASO-1%-U

Surface/pendant mounted, extruded aluminum housing, white painted aluminum reflector tray, translucent white plastic enclosure.

112 white LEDs, two Advance Fortimo Strip PR 23.7in 2200lm 835 LV6 LED boards with 56 LEDs each.

One Advance XI040C110V054BST2 LED driver measured at 509mA



Prepared For:

Mercury Lighting Products Company, Inc.

20 Audrey Place

Fairfield, NJ 07004, USA

Performance Summary

Input Voltage	120.0 Vac	Luminous Flux	1935.4 Lumens
Input Current	0.1866 A	Total Efficacy	88.1 lm/W
Input Power	21.98 W	Downward Flux	1935.4 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.981		
Current THD	11.3 %		

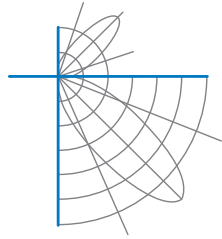
*This test report supersedes previous versions - see the end of this report for a list of revisions

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

Test date: 03/19/2025

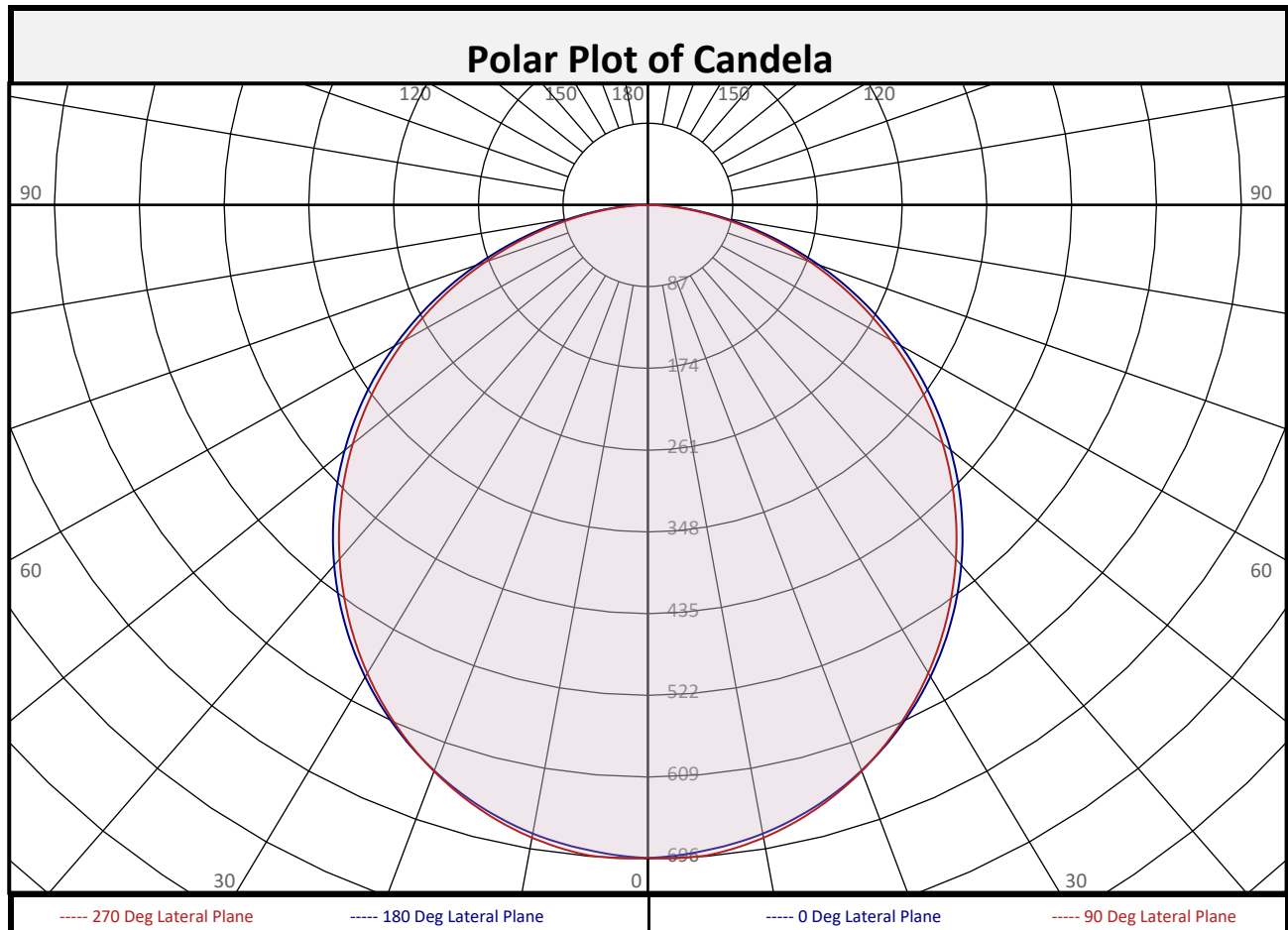
Report date: 05/22/2025

Signed: _____

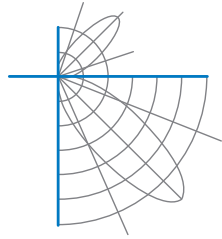


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	65.7	3.4%		90-100	0.0	0.0%		0-20	253.0	13.1%
10-20	187.3	9.7%		100-110	0.0	0.0%		0-30	534.8	27.6%
20-30	281.8	14.6%		110-120	0.0	0.0%		0-40	871.8	45.0%
30-40	336.9	17.4%		120-130	0.0	0.0%		0-60	1530	79.1%
40-50	346.9	17.9%		130-140	0.0	0.0%		0-80	1900	98.2%
50-60	311.4	16.1%		140-150	0.0	0.0%		10-90	1870	96.6%
60-70	235.7	12.2%		150-160	0.0	0.0%		20-50	965.7	49.9%
70-80	134.4	6.9%		160-170	0.0	0.0%		40-90	1064	55.0%
80-90	35.2	1.8%		170-180	0.0	0.0%		60-90	405.4	20.9%
0-90	1935	100.0%		90-180	0.0	0.0%		0-180	1935	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	695	695	695	695	695	695	695	695	695
	2.5	693	693	694	695	696	695	694	693	693
	5	690	689	691	694	695	694	691	689	690
	7.5	685	685	687	689	690	689	687	685	685
	10	680	679	681	683	684	683	681	679	680
	12.5	672	671	673	675	676	675	673	671	672
	15	663	662	664	666	666	666	664	662	663
	17.5	653	652	653	654	654	654	653	652	653
	20	641	640	640	642	642	642	640	640	641
	22.5	628	626	626	627	627	627	626	626	628
	25	613	612	611	612	611	612	611	612	613
	27.5	597	596	595	595	594	595	595	596	597
	30	580	578	577	577	576	577	577	578	580
	32.5	562	560	558	557	556	557	558	560	562
	35	542	540	538	537	536	537	538	540	542
	37.5	522	520	517	516	514	516	517	520	522
	40	501	498	495	494	492	494	495	498	501
	42.5	478	476	473	471	469	471	473	476	478
	45	455	453	449	447	445	447	449	453	455
	47.5	431	429	425	423	420	423	425	429	431
	50	406	404	400	398	395	398	400	404	406
	52.5	380	378	375	372	369	372	375	378	380
	55	354	352	348	345	343	345	348	352	354
	57.5	327	325	321	318	316	318	321	325	327
	60	300	298	294	291	288	291	294	298	300
	62.5	272	270	266	263	261	263	266	270	272
	65	243	242	238	235	233	235	238	242	243
	67.5	215	213	210	207	205	207	210	213	215
	70	187	185	182	179	177	179	182	185	187
	72.5	158	157	154	151	150	151	154	157	158
	75	131	130	127	124	123	124	127	130	131
	77.5	104	103	101	98	97	98	101	103	104
	80	79	78	75	73	72	73	75	78	79
	82.5	55	54	52	50	49	50	52	54	55
	85	33	32	30	29	28	29	30	32	33
87.5	13	13	11	10	10	10	11	13	13	
90	0	0	0	0	0	0	0	0	0	
16 lateral half-planes of data were acquired, 22.5 degree increments shown.										

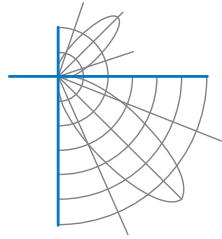
16 lateral half-planes of data were acquired, 22.5 degree increments shown.

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Luminous Intensity (Candela) Table

Lateral (C-Plane) Angles										
	0	22.5	45	67.5	90	112.5	135	157.5	180	
Vertical (Gamma) Angles - Data was acquired in 0.5° increments shown.	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.

North America (issuing laboratory)

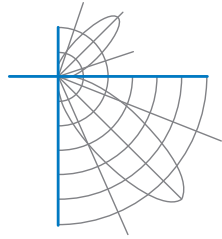
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Coefficients of Utilization/Room Utilization - Zonal Cavity Method

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	94		97	94	91		94	91	88		90	88	86	84			
2	99	91	84	78		96	89	82	77		85	80	75		82	77	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	62	55		80	69	61	55		67	59	54		64	58	53		62	57	52	50			
5	76	63	54	47		74	62	53	47		60	52	46		58	51	46		56	50	45	43			
6	70	57	48	41		68	56	47	41		54	46	41		52	45	40		51	45	40	38			
7	65	51	43	36		63	51	42	36		49	42	36		48	41	36		46	40	35	33			
8	60	47	38	33		59	46	38	32		45	37	32		44	37	32		42	36	32	30			
9	56	43	35	29		55	42	35	29		41	34	29		40	34	29		39	33	29	27			
10	53	40	32	27		52	39	32	26		38	31	26		37	31	26		36	30	26	24			

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	19.3	7.45	7.39
8.0	10.9	9.93	9.86
10.0	7.0	12.42	12.32
12.0	4.8	14.90	14.78
14.0	3.5	17.39	17.25
16.0	2.7	19.87	19.71

Spacing Criterion

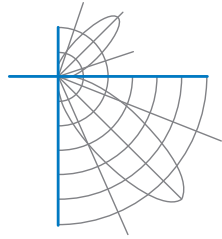
0 deg:	1.2
90 deg:	1.2
180 deg:	1.2
270 deg:	1.2

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	13814	13814	13814
45	12785	12627	12503
55	12266	12062	11877
65	11445	11198	10947
75	10034	9739	9432
85	7514	6845	6395

Beam and Field Angle

0-180 Degree Plane	
Beam Angle:	111.1°
Field Angle:	161.9°
90-270 Degree Plane	
Beam Angle:	109.0°
Field Angle:	160.6°



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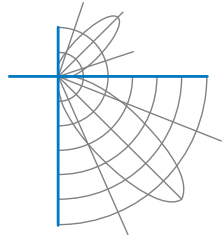
UGR Table - Corrected

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	20.9	22.5	21.3	22.8	23.2	20.7	22.4	21.1	22.7	23.0
	3H	22.7	24.2	23.1	24.5	24.9	22.5	24.0	22.9	24.3	24.7
	4H	23.4	24.8	23.8	25.1	25.5	23.1	24.5	23.5	24.9	25.3
	6H	23.9	25.2	24.3	25.5	25.9	23.6	24.9	24.0	25.3	25.7
	8H	24.0	25.3	24.5	25.7	26.1	23.7	25.0	24.2	25.4	25.8
	12H	24.1	25.3	24.6	25.7	26.1	23.8	25.0	24.3	25.4	25.8
4H	2H	21.5	22.9	21.9	23.2	23.6	21.4	22.8	21.8	23.1	23.5
	3H	23.6	24.7	24.0	25.1	25.5	23.4	24.5	23.8	24.9	25.3
	4H	24.4	25.4	24.8	25.8	26.3	24.1	25.2	24.6	25.6	26.0
	6H	25.0	25.9	25.4	26.3	26.8	24.7	25.6	25.2	26.1	26.5
	8H	25.2	26.1	25.6	26.5	27.0	24.9	25.8	25.4	26.2	26.7
	12H	25.3	26.1	25.8	26.6	27.1	25.0	25.8	25.5	26.3	26.7
8H	4H	24.6	25.5	25.1	26.0	26.4	24.4	25.3	24.9	25.8	26.2
	6H	25.4	26.1	25.9	26.6	27.1	25.2	25.9	25.6	26.4	26.8
	8H	25.7	26.3	26.2	26.8	27.3	25.4	26.1	25.9	26.6	27.0
	12H	25.9	26.5	26.4	27.0	27.5	25.6	26.2	26.1	26.7	27.2
12H	4H	24.7	25.5	25.1	25.9	26.4	24.5	25.3	25.0	25.7	26.2
	6H	25.5	26.1	26.0	26.6	27.1	25.2	25.9	25.8	26.3	26.9
	8H	25.8	26.3	26.3	26.8	27.4	25.5	26.1	26.0	26.6	27.1

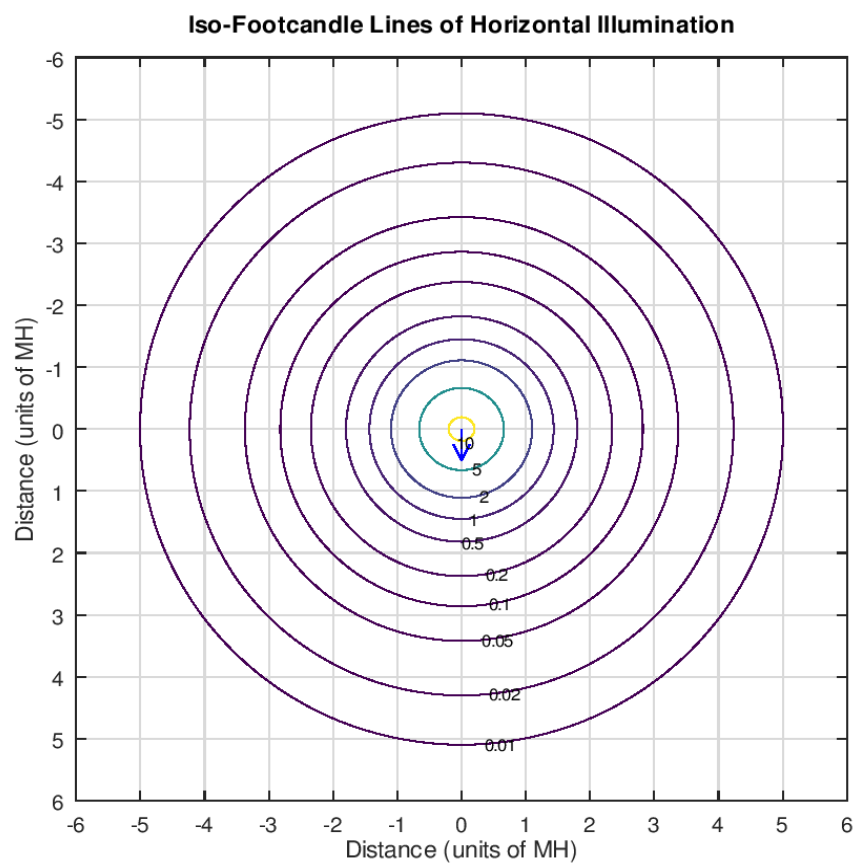
Maximum UGR = 27.5



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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 24.8 °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 - 05/22/2025 - Revised catalog number