

Report of Test

LLIA002622-002-R01*

Indoor Distribution Photometry Test Report

Catalog Number: MLS2-CTR-DM-48-470-35K-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

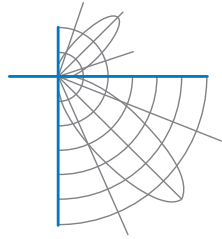
Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1909.9 Lumens
Input Current	0.1859 A	Total Efficacy	86.7 lm/W
Input Power	22.04 W	Downward Flux	1909.9 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.988		
Current THD	7.7 %		

*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.

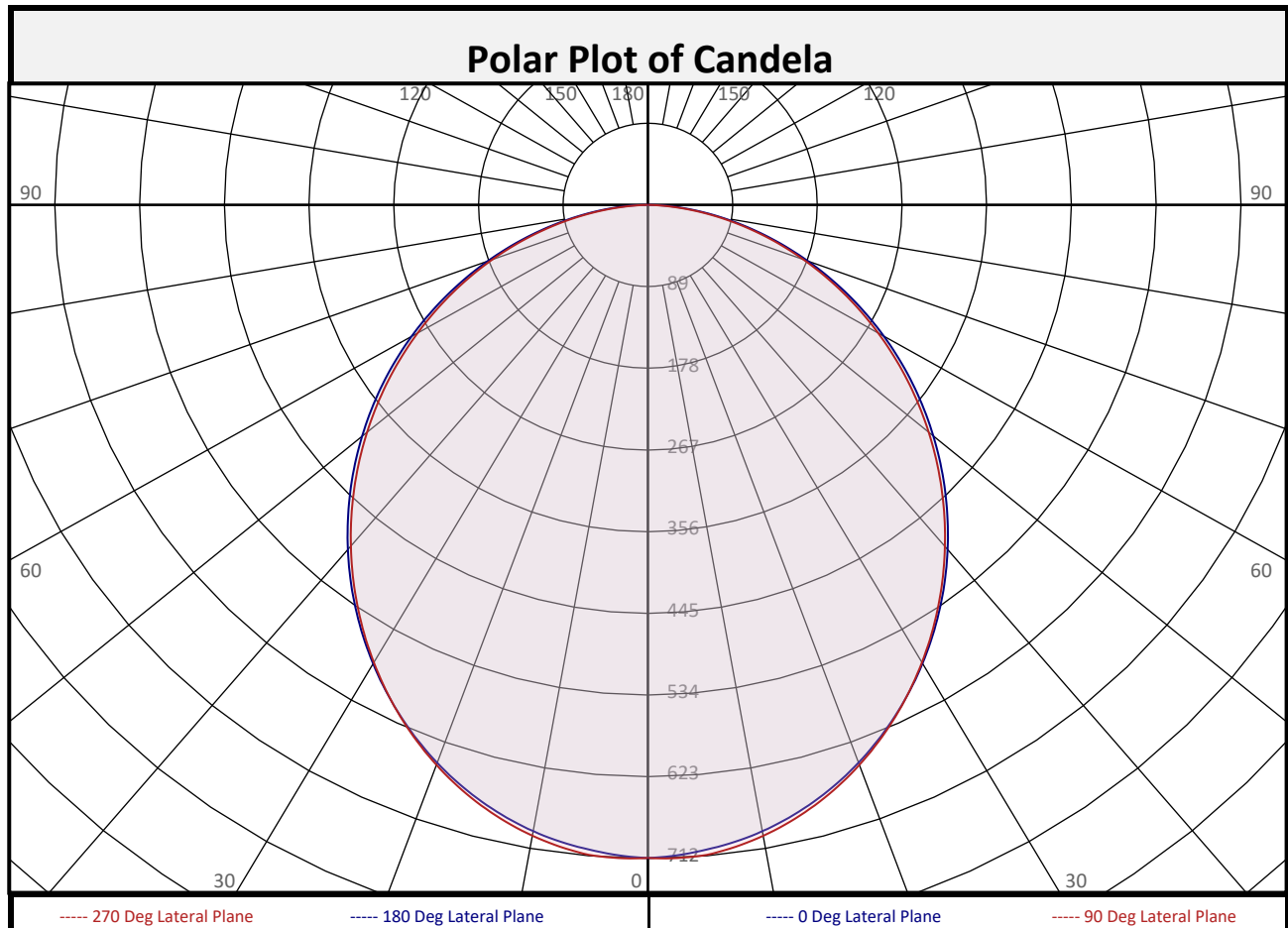
Test date: 03/19/2025
Report date: 05/22/2025

Signed: _____

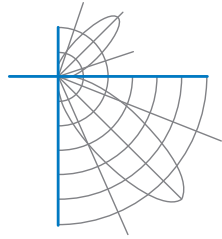


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	67.2	3.5%		90-100	0.0	0.0%		0-20	257.4	13.5%
10-20	190.2	10.0%		100-110	0.0	0.0%		0-30	540.4	28.3%
20-30	283.0	14.8%		110-120	0.0	0.0%		0-40	874.1	45.8%
30-40	333.7	17.5%		120-130	0.0	0.0%		0-60	1514	79.3%
40-50	338.8	17.7%		130-140	0.0	0.0%		0-80	1874	98.1%
50-60	300.8	15.7%		140-150	0.0	0.0%		10-90	1843	96.5%
60-70	227.5	11.9%		150-160	0.0	0.0%		20-50	955.5	50.0%
70-80	132.5	6.9%		160-170	0.0	0.0%		40-90	1036	54.2%
80-90	36.2	1.9%		170-180	0.0	0.0%		60-90	396.2	20.7%
0-90	1910	100.0%		90-180	0.0	0.0%		0-180	1910	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	712	712	712	712	712	712	712	712	712
	2.5	709	709	710	712	712	712	710	709	709
	5	705	705	707	710	711	710	707	705	705
	7.5	700	699	702	704	706	704	702	699	700
	10	693	692	694	697	698	697	694	692	693
	12.5	684	683	685	688	689	688	685	683	684
	15	673	673	674	677	677	677	674	673	673
	17.5	661	660	662	664	664	664	662	660	661
	20	647	646	647	649	649	649	647	646	647
	22.5	631	631	632	633	633	633	632	631	631
	25	615	614	614	616	615	616	614	614	615
	27.5	596	595	596	597	596	597	596	595	596
	30	577	576	576	577	576	577	576	576	577
	32.5	557	555	555	555	554	555	555	555	557
	35	535	534	533	533	532	533	533	534	535
	37.5	513	512	511	511	509	511	511	512	513
	40	490	489	487	487	485	487	487	489	490
	42.5	466	465	463	463	461	463	463	465	466
	45	442	441	439	438	436	438	439	441	442
	47.5	417	416	414	413	411	413	414	416	417
	50	392	391	389	387	385	387	389	391	392
	52.5	366	365	363	361	359	361	363	365	366
	55	340	339	336	335	333	335	336	339	340
	57.5	313	312	310	308	306	308	310	312	313
	60	286	286	283	282	279	282	283	286	286
	62.5	259	259	257	255	253	255	257	259	259
	65	232	232	230	228	226	228	230	232	232
	67.5	206	205	203	202	200	202	203	205	206
	70	179	178	177	175	174	175	177	178	179
	72.5	152	152	151	149	148	149	151	152	152
	75	127	127	126	124	123	124	126	127	127
	77.5	102	102	101	99	98	99	101	102	102
	80	78	78	77	75	74	75	77	78	78
	82.5	56	55	54	52	51	52	54	55	56
	85	34	33	32	30	29	30	32	33	34
87.5	15	14	11	10	10	10	11	14	15	
90	0	0	0	0	0	0	0	0	0	
16 lateral half-planes of data were acquired, 22.5 degree increments shown.										

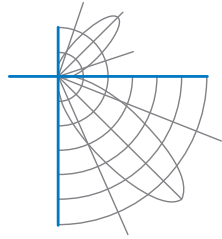
16 lateral half-planes of data were acquired, 22.5 degree increments shown.

North America (issuing laboratory)

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Luminous Intensity (Candela) Table

Lateral (C-Plane) Angles										
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.		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.

North America (issuing laboratory)

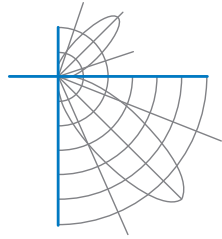
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Coefficients of Utilization/Room Utilization - Zonal Cavity Method

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	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	72	65		88	78	71	64		75	69	63		72	67	62		70	65	61	59
4	83	71	62	55		80	69	61	55		67	60	54		65	58	53		62	57	53	50
5	76	63	54	48		74	62	54	47		60	53	47		58	51	46		56	50	46	44
6	70	57	48	42		68	56	48	41		54	47	41		53	46	41		51	45	40	38
7	65	52	43	37		63	51	43	37		49	42	36		48	41	36		47	41	36	34
8	61	47	39	33		59	47	38	33		45	38	33		44	37	32		43	37	32	30
9	57	43	35	30		55	43	35	30		42	34	29		41	34	29		40	34	29	27
10	53	40	32	27		52	40	32	27		39	32	27		38	31	27		37	31	26	25

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	19.8	7.26	7.24
8.0	11.1	9.67	9.65
10.0	7.1	12.09	12.06
12.0	4.9	14.51	14.47
14.0	3.6	16.93	16.88
16.0	2.8	19.35	19.29

Spacing Criterion

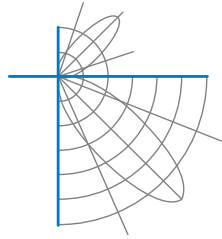
0 deg:	1.2
90 deg:	1.2
180 deg:	1.2
270 deg:	1.2

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	14142	14142	14142
45	12419	12334	12257
55	11765	11655	11521
65	10931	10814	10635
75	9730	9637	9406
85	7844	7192	6567

Beam and Field Angle

0-180 Degree Plane	
Beam Angle:	106.8°
Field Angle:	161.5°
90-270 Degree Plane	
Beam Angle:	105.5°
Field Angle:	160.5°



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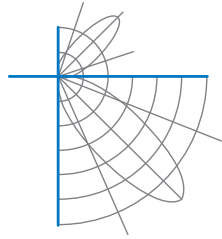
UGR Table - Corrected

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	20.7	22.3	21.1	22.6	23.0	20.6	22.2	21.0	22.5	22.9
	3H	22.5	24.0	22.9	24.3	24.7	22.4	23.9	22.8	24.2	24.6
	4H	23.2	24.6	23.6	24.9	25.3	23.1	24.5	23.5	24.8	25.2
	6H	23.7	25.0	24.1	25.4	25.8	23.6	24.9	24.0	25.2	25.6
	8H	23.9	25.1	24.3	25.5	25.9	23.7	25.0	24.2	25.3	25.7
	12H	24.0	25.2	24.4	25.6	26.0	23.8	25.0	24.2	25.4	25.8
4H	2H	21.3	22.7	21.7	23.1	23.4	21.2	22.6	21.6	23.0	23.4
	3H	23.4	24.5	23.8	24.9	25.3	23.3	24.4	23.7	24.8	25.2
	4H	24.2	25.2	24.6	25.7	26.1	24.1	25.1	24.5	25.5	26.0
	6H	24.8	25.8	25.3	26.2	26.7	24.7	25.6	25.2	26.1	26.5
	8H	25.1	25.9	25.5	26.4	26.8	24.9	25.8	25.4	26.2	26.7
	12H	25.3	26.0	25.7	26.5	27.0	25.0	25.8	25.5	26.3	26.8
8H	4H	24.5	25.4	25.0	25.8	26.3	24.4	25.3	24.8	25.7	26.2
	6H	25.3	26.0	25.8	26.5	27.0	25.2	25.9	25.6	26.4	26.8
	8H	25.6	26.2	26.1	26.8	27.2	25.4	26.1	25.9	26.6	27.1
	12H	25.8	26.4	26.3	26.9	27.5	25.6	26.2	26.1	26.7	27.3
12H	4H	24.6	25.3	25.0	25.8	26.3	24.4	25.2	24.9	25.7	26.2
	6H	25.4	26.0	25.9	26.5	27.0	25.2	25.9	25.8	26.3	26.9
	8H	25.7	26.3	26.2	26.8	27.3	25.5	26.1	26.0	26.6	27.2

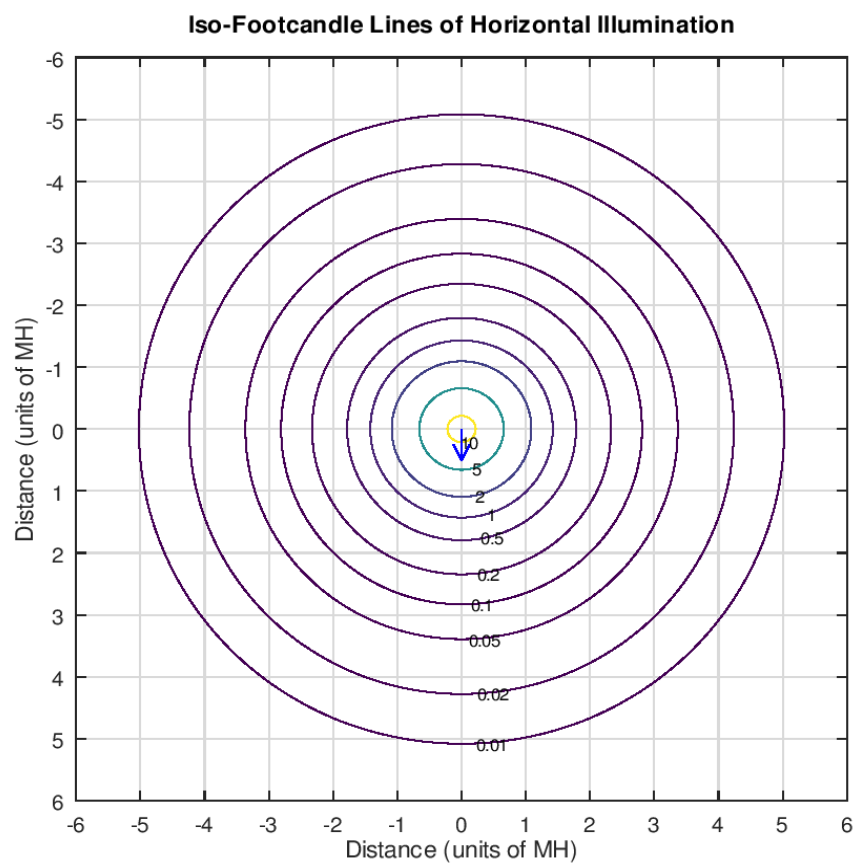
Maximum UGR = 27.5



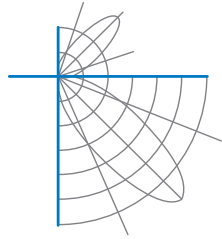
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Iso-Illuminance Plot



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 24.6 °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-79-19. 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