



Report of Test

LLIA002095-002-R01*

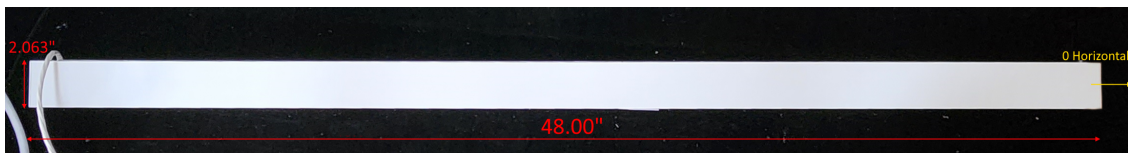
Indoor Distribution Photometry Test Report

Catalog Number: MLS1-(DI)-48-525-875-35K-ASO-BW-1%

Pendant mounted, extruded aluminum housing, translucent white plastic bottom enclosure, frosted plastic upper enclosure.

224 white LEDs, 2 Advance LED boards with 56 LEDs each in top and bottom sections.

Two Advance Xitanium XI040C110V054BST2 LED drivers labeled as 650mA



Prepared For:

Mercury Lighting Products Company, Inc.

20 Audrey Place

Fairfield, NJ 07004, USA

Performance Summary

Input Voltage	120.0 Vac	Luminous Flux	5646.8 Lumens
Input Current	0.5002 A	Total Efficacy	95.2 Lm/W
Input Power	59.29 W	Downward Flux	2127.5 Lumens
Frequency	60.00 Hz	Downward Flux	37.7 % of Total
Power Factor	0.988		
Current THD	8.6 %		

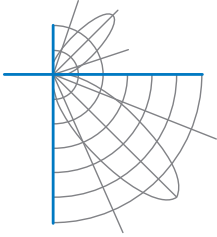
*This test report supersedes previous versions - see the end of this report for a list of revisions

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

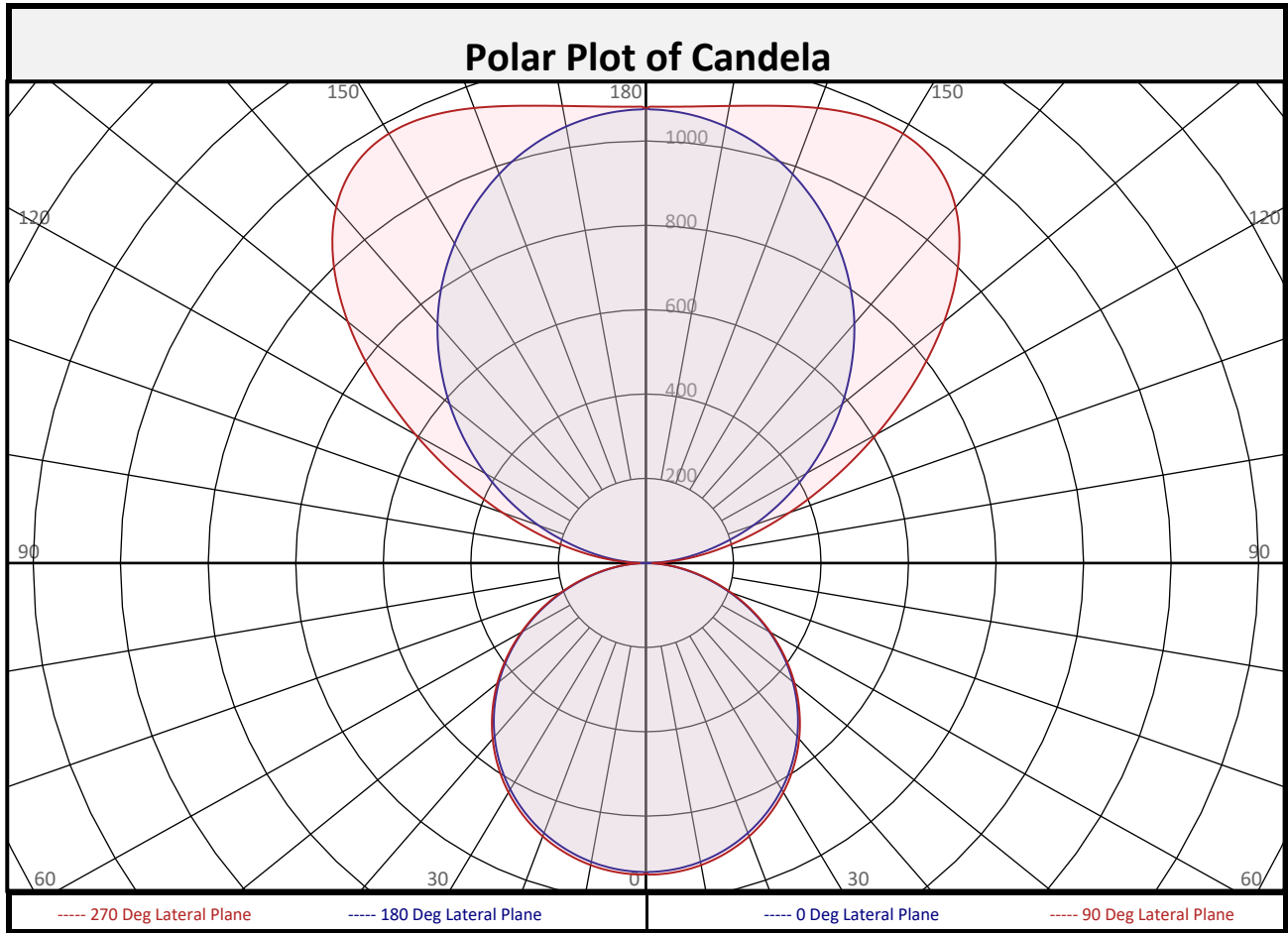
Test date: 04/26/2023

Report date: 05/01/2023

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	69.5	1.2%		90-100	79.2	1.4%		0-20	268.7	4.8%
10-20	199.1	3.5%		100-110	245.3	4.3%		0-30	570.8	10.1%
20-30	302.1	5.4%		110-120	431.6	7.6%		0-40	935.7	16.6%
30-40	364.9	6.5%		120-130	589.5	10.4%		0-60	1658	29.4%
40-50	379.2	6.7%		130-140	662.7	11.7%		0-80	2079	36.8%
50-60	343.5	6.1%		140-150	619.9	11.0%		10-90	2058	36.4%
60-70	263.9	4.7%		150-160	485.2	8.6%		20-50	1046	18.5%
70-80	156.5	2.8%		160-170	303.2	5.4%		40-90	1192	21.1%
80-90	48.6	0.9%		170-180	102.8	1.8%		60-90	469.1	8.3%
0-90	2128	37.7%		90-180	3519	62.3%		0-180	5647	100.0%



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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, 2.5° increments shown.	0	734	734	734	734	734	734	734	734	734
	2.5	731	731	733	736	738	736	733	731	731
	5	729	728	731	734	736	734	731	728	729
	7.5	724	724	727	730	732	730	727	724	724
	10	719	719	721	724	727	724	721	719	719
	12.5	711	711	714	717	720	717	714	711	711
	15	703	703	705	708	711	708	705	703	703
	17.5	692	692	695	698	701	698	695	692	692
	20	681	680	683	686	689	686	683	680	681
	22.5	667	667	670	672	676	672	670	667	667
	25	653	653	655	658	661	658	655	653	653
	27.5	637	637	639	642	645	642	639	637	637
	30	619	619	622	624	628	624	622	619	619
	32.5	601	601	603	605	609	605	603	601	601
	35	581	581	583	585	589	585	583	581	581
	37.5	560	560	562	564	567	564	562	560	560
	40	537	537	540	541	545	541	540	537	537
	42.5	514	514	516	518	521	518	516	514	514
	45	490	490	491	493	496	493	491	490	490
	47.5	464	465	466	467	470	467	466	465	464
50	438	439	440	441	443	441	440	439	438	
52.5	411	411	412	413	416	413	412	411	411	
55	383	383	384	385	387	385	384	383	383	
57.5	354	355	356	357	358	357	356	355	354	
60	325	326	326	327	329	327	326	326	325	
62.5	295	296	296	298	299	298	296	296	295	
65	265	266	267	268	269	268	267	266	265	
67.5	234	235	237	238	239	238	237	235	234	
70	204	205	207	208	209	208	207	205	204	
72.5	174	175	177	179	179	179	177	175	174	
75	145	146	148	150	150	150	148	146	145	
77.5	117	118	120	121	122	121	120	118	117	
80	90	91	93	94	95	94	93	91	90	
82.5	65	66	67	68	69	68	67	66	65	
85	42	42	43	44	44	44	43	42	42	
87.5	20	20	20	21	21	21	20	20	20	
90	1	7	15	18	18	18	15	7	1	

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

North America (issuing laboratory)

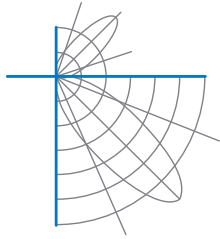
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	1	7	15	18	18	18	15	7	1
	92.5	25	33	42	43	41	43	42	33	25
	95	53	65	78	76	74	76	78	65	53
	97.5	83	98	116	114	111	114	116	98	83
	100	114	134	157	155	151	155	157	134	114
	102.5	148	173	201	200	195	200	201	173	148
	105	184	214	248	247	242	247	248	214	184
	107.5	222	255	299	300	293	300	299	255	222
	110	261	298	354	356	348	356	354	298	261
	112.5	300	343	410	417	408	417	410	343	300
	115	341	389	467	481	471	481	467	389	341
	117.5	381	434	524	546	538	546	524	434	381
	120	422	480	582	613	608	613	582	480	422
	122.5	463	525	639	681	678	681	639	525	463
	125	504	570	695	749	750	749	695	570	504
	127.5	544	613	749	815	821	815	749	613	544
	130	585	656	799	878	889	878	799	656	585
	132.5	625	697	845	935	953	935	845	697	625
	135	664	735	886	987	1010	987	886	735	664
	137.5	703	772	922	1031	1060	1031	922	772	703
140	740	805	953	1068	1101	1068	953	805	740	
142.5	776	837	979	1097	1132	1097	979	837	776	
145	810	866	1001	1118	1155	1118	1001	866	810	
147.5	843	894	1018	1131	1169	1131	1018	894	843	
150	874	919	1032	1138	1175	1138	1032	919	874	
152.5	903	943	1043	1140	1174	1140	1043	943	903	
155	931	965	1052	1138	1168	1138	1052	965	931	
157.5	956	985	1058	1132	1159	1132	1058	985	956	
160	980	1003	1063	1125	1147	1125	1063	1003	980	
162.5	1002	1019	1067	1117	1134	1117	1067	1019	1002	
165	1020	1033	1070	1109	1122	1109	1070	1033	1020	
167.5	1036	1045	1072	1101	1110	1101	1072	1045	1036	
170	1050	1055	1074	1094	1100	1094	1074	1055	1050	
172.5	1061	1063	1075	1089	1092	1089	1075	1063	1061	
175	1068	1069	1076	1085	1086	1085	1076	1069	1068	
177.5	1073	1072	1076	1082	1082	1082	1076	1072	1073	
180	1077	1077	1077	1077	1077	1077	1077	1077	1077	

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

North America (issuing laboratory)

Australasia & S.E. Asia



Report of Test

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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	50	30	10	0
RCR																					
0	104	104	104	104	95	95	95	95	76	76	76	60	60	60	45	45	45	38			
1	95	90	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31			
2	86	79	73	68	78	72	66	62	58	54	51	46	43	41	34	33	31	26			
3	78	69	62	56	71	63	57	52	51	47	43	40	37	34	30	28	26	22			
4	72	61	53	47	65	56	49	43	45	40	36	36	32	29	27	25	23	19			
5	66	54	46	40	59	49	42	37	40	35	31	32	28	25	24	22	20	16			
6	60	48	40	35	55	44	37	32	36	31	27	29	25	22	22	19	17	14			
7	56	44	36	30	50	40	33	28	33	27	24	26	22	19	20	17	15	12			
8	52	39	32	27	47	36	29	25	30	25	21	24	20	17	18	16	14	11			
9	48	36	29	24	43	33	26	22	27	22	19	22	18	15	17	14	12	10			
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	16	13	11	9			

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	20.4	7.53	7.61
8.0	11.5	10.03	10.15
10.0	7.3	12.54	12.69
12.0	5.1	15.05	15.22
14.0	3.7	17.56	17.76
16.0	2.9	20.07	20.30

Spacing Criterion	
0 deg:	1.3
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	18971	18971	18971
45	17885	17956	18114
55	17243	17305	17443
65	16197	16297	16443
75	14446	14767	14998
85	12405	12727	12957

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	68.3°
Field Angle:	154.8°
90-270 Degree Plane	
Beam Angle:	70.2°
Field Angle:	155.8°



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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

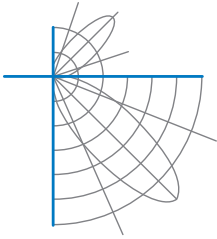
Room Size

UGR Viewed Crosswise

UGR Viewed Endwise

X=2H	Y=2H	17.0	17.8	18.0	18.8	20.3	17.0	17.8	18.1	18.9	20.3	
		3H	18.8	19.5	19.8	20.5	22.0	18.9	19.6	19.9	20.6	22.1
		4H	19.4	20.1	20.5	21.2	22.6	19.5	20.2	20.6	21.3	22.7
		6H	19.9	20.5	21.0	21.6	23.1	20.1	20.7	21.1	21.7	23.2
		8H	20.1	20.7	21.2	21.8	23.2	20.2	20.8	21.3	21.9	23.4
		12H	20.2	20.7	21.3	21.8	23.3	20.3	20.9	21.4	22.0	23.5
4H	2H	17.5	18.2	18.6	19.3	20.7	17.6	18.2	18.7	19.3	20.8	
	3H	19.5	20.1	20.6	21.2	22.7	19.6	20.2	20.7	21.3	22.7	
	4H	20.3	20.8	21.4	21.9	23.4	20.4	20.9	21.5	22.0	23.5	
	6H	21.0	21.4	22.1	22.5	24.0	21.1	21.5	22.2	22.6	24.1	
	8H	21.2	21.6	22.3	22.7	24.2	21.3	21.7	22.4	22.8	24.3	
	12H	21.3	21.7	22.4	22.8	24.3	21.5	21.9	22.6	23.0	24.5	
8H	4H	20.6	21.0	21.7	22.1	23.6	20.7	21.1	21.8	22.2	23.7	
	6H	21.4	21.7	22.5	22.9	24.4	21.5	21.8	22.6	23.0	24.5	
	8H	21.7	22.0	22.8	23.1	24.6	21.8	22.1	23.0	23.3	24.8	
	12H	21.9	22.2	23.1	23.3	24.9	22.1	22.3	23.2	23.5	25.0	
12H	4H	20.6	21.0	21.7	22.1	23.6	20.7	21.1	21.8	22.2	23.7	
	6H	21.4	21.7	22.6	22.9	24.4	21.5	21.9	22.7	23.0	24.5	
	8H	21.8	22.1	22.9	23.2	24.7	21.9	22.2	23.1	23.3	24.9	

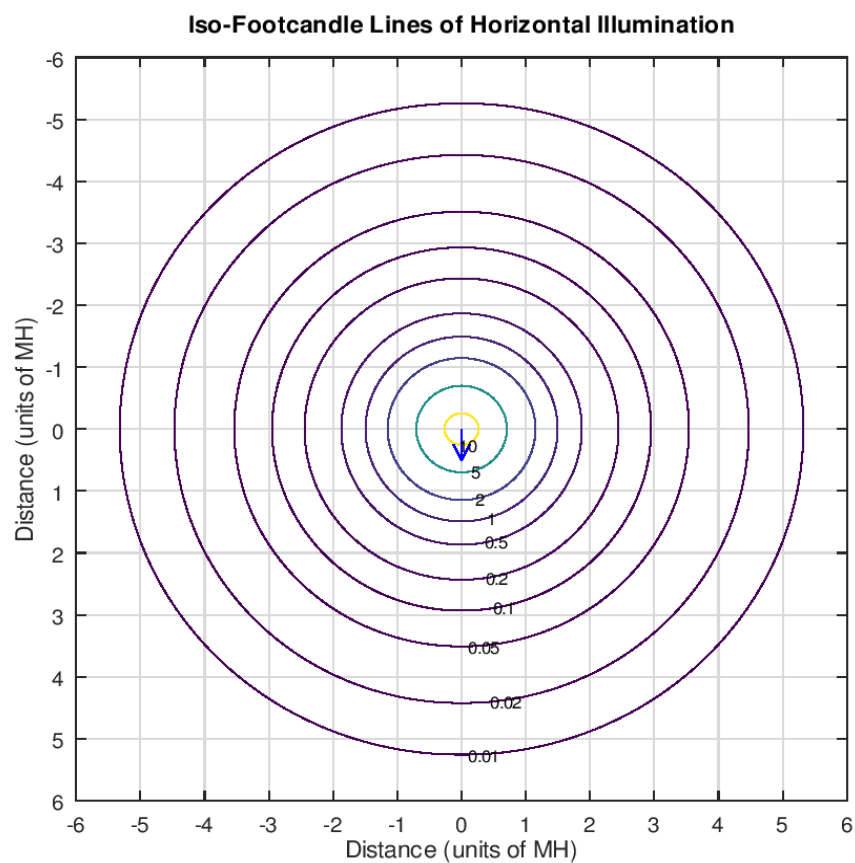
Maximum UGR = 25.0



Report of Test

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Iso-Illuminance Plot

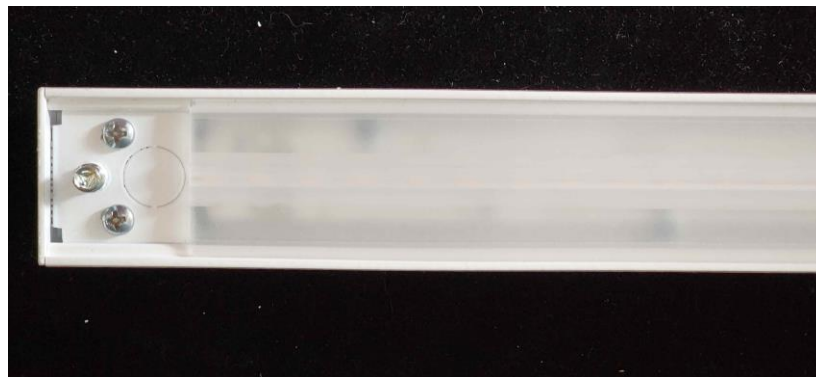


The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





Report of Test

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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.

Revision History: R01 - 05/01/2023 - Revised dimensions on photo