

Report of Test

LLIA001503-009

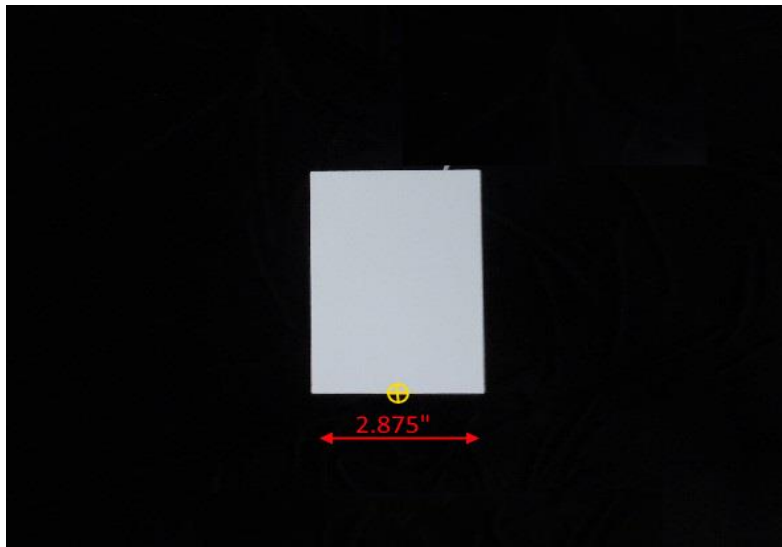
Indoor Distribution Photometry Test Report

Catalog Number: MLR3-M-48-600-35K-HTA-1%-U

Pendant/surface mounted, extruded aluminum housing, frosted plastic enclosure.

112 white LEDs, two Advance FO Strip PR 23.7 in 2200lm 835 LV5 LED boards with 56 LEDs each.

One Advance XI040C110V054BST2 LED driver labeled as 525mA



Prepared For:

Mercury Lighting Products Company, Inc.

20 Audrey Place

Fairfield, NJ 07004, USA

Performance Summary

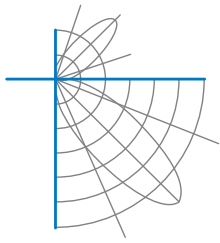
Input Voltage	120.0 V	Luminous Flux	2390.8 Lumens
Input Current	0.2013 A	Total Efficacy	100.4 Lm/W
Input Power	23.82 W	Downward Flux	2390.8 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.986		
Current THD	10.1 %		

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

Test date: 08/03/2021

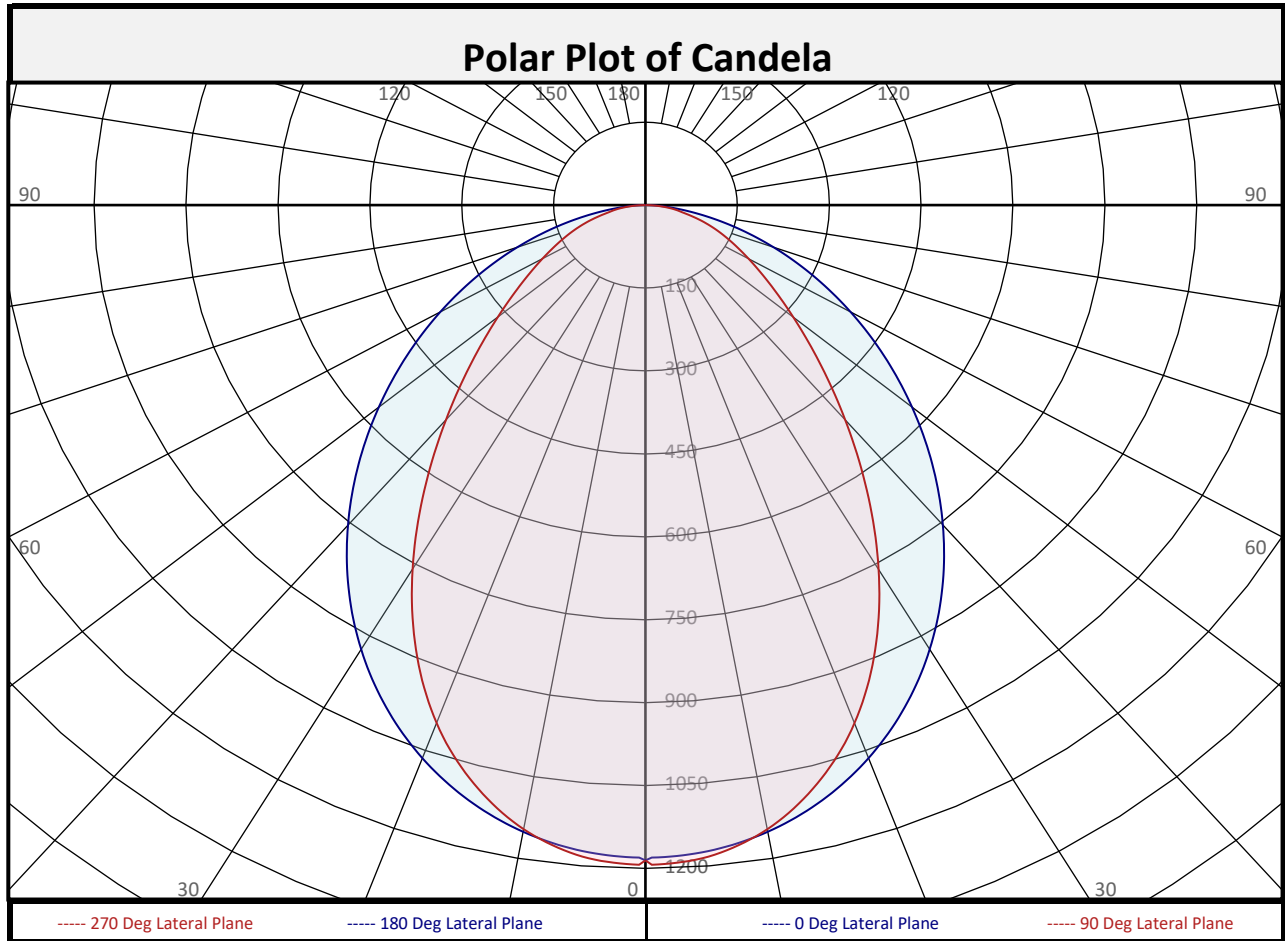
Report date: 08/05/2021

Signed: _____

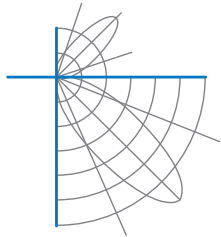


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Zonal Flux Summary																				
Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total									
0-10	111.5	4.7%	90-100	0.0	0.0%	0-20	420.6	17.6%	10-20	309.1	12.9%	100-110	0.0	0.0%	0-30	855.6	35.8%			
20-30	435.0	18.2%	110-120	0.0	0.0%	0-40	1319	55.2%	30-40	463.3	19.4%	120-130	0.0	0.0%	0-60	2043	85.5%	40-50	409.6	17.1%
50-60	314.2	13.1%	130-140	0.0	0.0%	0-80	2361	98.8%	60-70	209.2	8.8%	140-150	0.0	0.0%	0-90	2279	95.3%	70-80	109.2	4.6%
80-90	29.7	1.2%	150-160	0.0	0.0%	10-90	2279	95.3%	80-90	29.7	1.2%	160-170	0.0	0.0%	20-50	1308	54.7%	90-90	2391	100.0%
0-90	2391	100.0%	170-180	0.0	0.0%	40-90	1072	44.8%	90-180	0.0	0.0%	60-90	348.1	14.6%	0-180	2391	100.0%			

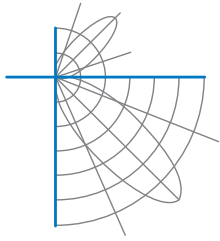


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	1185	1185	1185	1185	1185	1185	1185	1185	1185
	2.5	1179	1179	1182	1187	1191	1187	1182	1179	1179
	5	1173	1173	1176	1181	1183	1181	1176	1173	1173
	7.5	1164	1163	1165	1167	1168	1167	1165	1163	1164
	10	1151	1150	1148	1147	1146	1147	1148	1150	1151
	12.5	1135	1133	1127	1121	1118	1121	1127	1133	1135
	15	1115	1112	1100	1089	1083	1089	1100	1112	1115
	17.5	1091	1086	1069	1051	1043	1051	1069	1086	1091
	20	1065	1057	1033	1009	997	1009	1033	1057	1065
	22.5	1035	1025	994	961	945	961	994	1025	1035
	25	1002	990	951	908	887	908	951	990	1002
	27.5	966	951	904	850	826	850	904	951	966
	30	928	910	853	789	761	789	853	910	928
	32.5	888	866	800	727	695	727	800	866	888
	35	845	821	746	664	630	664	746	821	845
	37.5	801	775	691	602	567	602	691	775	801
	40	755	727	635	542	507	542	635	727	755
	42.5	709	679	580	486	452	486	580	679	709
	45	662	630	526	433	401	433	526	630	662
	47.5	615	582	475	385	355	385	475	582	615
50	568	534	425	341	315	341	425	534	568	
52.5	521	486	378	301	279	301	378	486	521	
55	476	440	334	265	247	265	334	440	476	
57.5	431	394	293	234	219	234	293	394	431	
60	387	351	255	206	195	206	255	351	387	
62.5	344	308	220	181	172	181	220	308	344	
65	302	267	188	158	152	158	188	267	302	
67.5	261	228	159	138	134	138	159	228	261	
70	222	191	134	119	116	119	134	191	222	
72.5	184	156	111	101	98	101	111	156	184	
75	148	123	91	82	79	82	91	123	148	
77.5	114	93	72	64	63	64	72	93	114	
80	83	67	53	51	52	51	53	67	83	
82.5	55	45	39	39	39	39	39	45	55	
85	32	26	26	25	25	25	26	26	32	
87.5	14	12	12	11	11	11	12	12	14	
90	0	0	0	0	0	0	0	0	0	

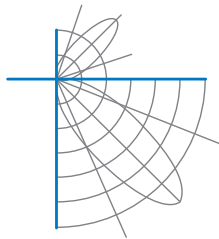


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	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	



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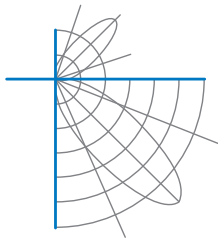
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	110	106	102	99		107	104	100	97		99	96	94		95	93	91		92	90	88	86
2	101	94	88	82		99	92	86	81		88	84	80		85	81	78		82	79	76	74
3	93	84	76	70		91	82	75	70		79	73	68		76	71	67		74	70	66	64
4	86	75	67	61		84	74	66	60		71	65	60		69	63	59		67	62	58	56
5	80	68	59	53		78	67	59	53		65	58	52		63	57	52		61	56	51	49
6	74	62	53	47		72	61	53	47		59	52	47		57	51	46		56	50	46	44
7	69	56	48	42		67	56	48	42		54	47	42		53	46	42		51	46	41	40
8	64	52	44	38		63	51	43	38		50	43	38		49	42	38		47	42	38	36
9	60	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34	33
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	35	31	30

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	32.9	7.03	6.12	
8.0	18.5	9.37	8.15	
10.0	11.9	11.71	10.19	
12.0	8.2	14.05	12.23	
14.0	6.0	16.40	14.27	
16.0	4.6	18.74	16.31	

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	13315	13315	13315
45	10516	8360	6367
55	9313	6547	4838
65	8023	4999	4051
75	6432	3936	3441
85	4103	3303	3183

Spacing Criterion	
0 degree plane:	1.2
90 degree plane:	1.0
180 degree plane:	1.2
270 degree plane:	1.0



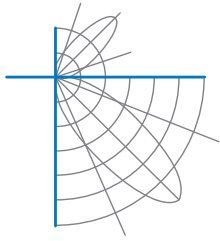
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UGR TABLE - CORRECTED

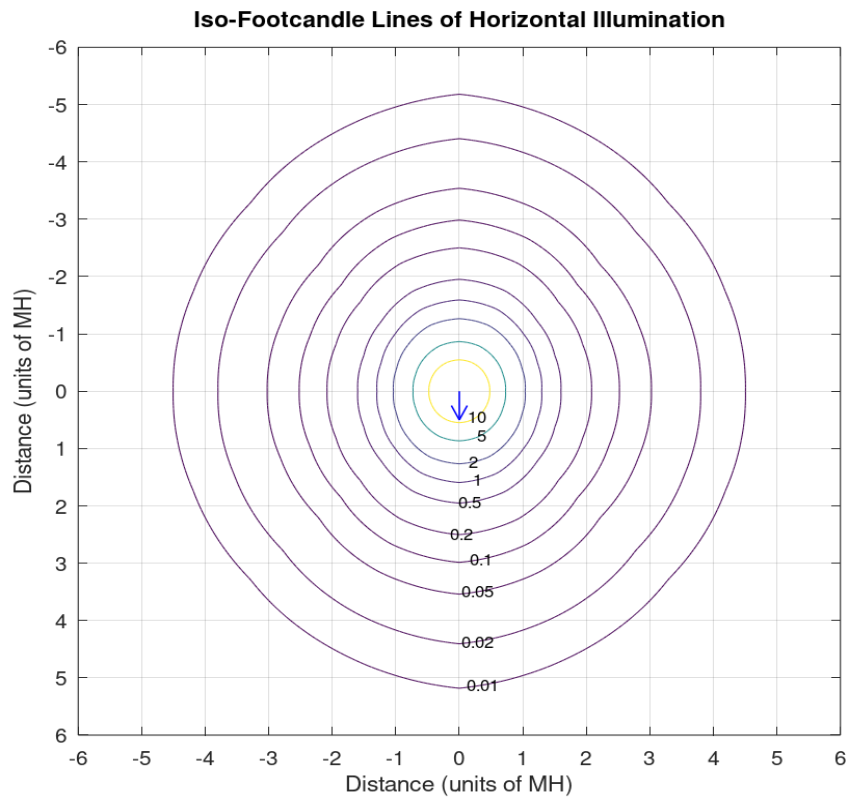
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H Y=2H		19.7	21.2	20.1	21.5	21.8	15.9	17.4	16.2	17.7	18.0
	3H	21.3	22.6	21.7	23.0	23.3	17.4	18.7	17.8	19.1	19.4
	4H	21.9	23.1	22.3	23.5	23.8	18.0	19.2	18.4	19.6	19.9
	6H	22.2	23.4	22.6	23.8	24.1	18.4	19.5	18.8	19.9	20.3
	8H	22.3	23.4	22.8	23.8	24.2	18.6	19.7	19.0	20.1	20.5
	12H	22.4	23.4	22.8	23.8	24.3	18.7	19.7	19.1	20.1	20.6
4H	2H	19.9	21.1	20.3	21.5	21.9	16.7	17.9	17.1	18.3	18.7
	3H	21.7	22.7	22.1	23.1	23.5	18.3	19.4	18.7	19.8	20.2
	4H	22.3	23.3	22.8	23.7	24.1	19.0	19.9	19.4	20.4	20.8
	6H	22.8	23.7	23.3	24.1	24.6	19.5	20.4	20.0	20.8	21.3
	8H	23.0	23.8	23.4	24.2	24.7	19.7	20.5	20.2	21.0	21.4
	12H	23.1	23.8	23.6	24.3	24.7	19.9	20.6	20.4	21.1	21.6
8H	4H	22.4	23.2	22.9	23.6	24.1	19.4	20.1	19.8	20.6	21.1
	6H	23.0	23.6	23.5	24.1	24.6	20.0	20.7	20.5	21.1	21.6
	8H	23.2	23.8	23.7	24.3	24.8	20.3	20.9	20.8	21.4	21.9
	12H	23.3	23.8	23.8	24.3	24.9	20.6	21.1	21.1	21.6	22.1
12H	4H	22.4	23.1	22.9	23.6	24.0	19.4	20.1	19.9	20.6	21.1
	6H	23.0	23.6	23.5	24.0	24.6	20.1	20.7	20.6	21.1	21.7
	8H	23.2	23.7	23.7	24.2	24.8	20.4	20.9	20.9	21.4	22.0

Maximum UGR = 24.9

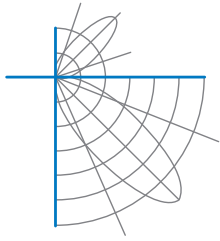


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Iso-Illuminance Plot

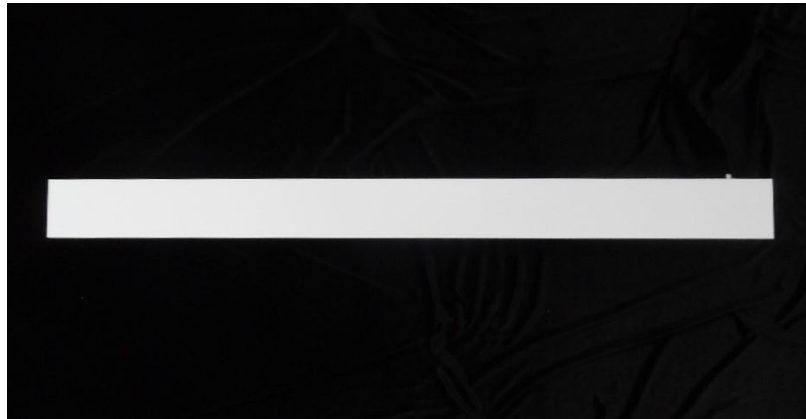


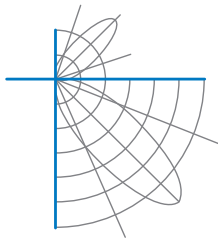
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





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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-41-14 and LM-46-04.

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.