

Report of Test

LLIA001129-002-R01*

Indoor Distribution Photometry Test Report

Catalog Number: P54214

Pendant mounted, formed white enamel steel frame with white "lumenate" diffuser, translucent white top and bottom enclosures.

Three white LED modules with clear patterned hemispherical lenses over each.
One ERP ESP050W-1200-42 LED driver and one ERP ESS030W-0620-42 LED driver



Prepared For:
Lumetta, Inc
33 Minnesota Avenue
Warwick, RI 02888, USA

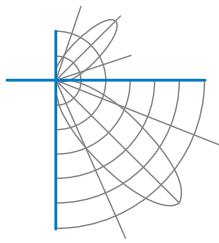
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	5463.6 Lumens
Input Current	0.6100 A	Total Efficacy	75.7 Lm/W
Input Power	72.22 W	Downward Flux	2809.0 Lumens
Frequency	60.00 Hz	Downward Flux	51.4 % of Total
Power Factor	0.987		
Current THD	11.1 %		

*This test report supersedes test report LLIA001129-002

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

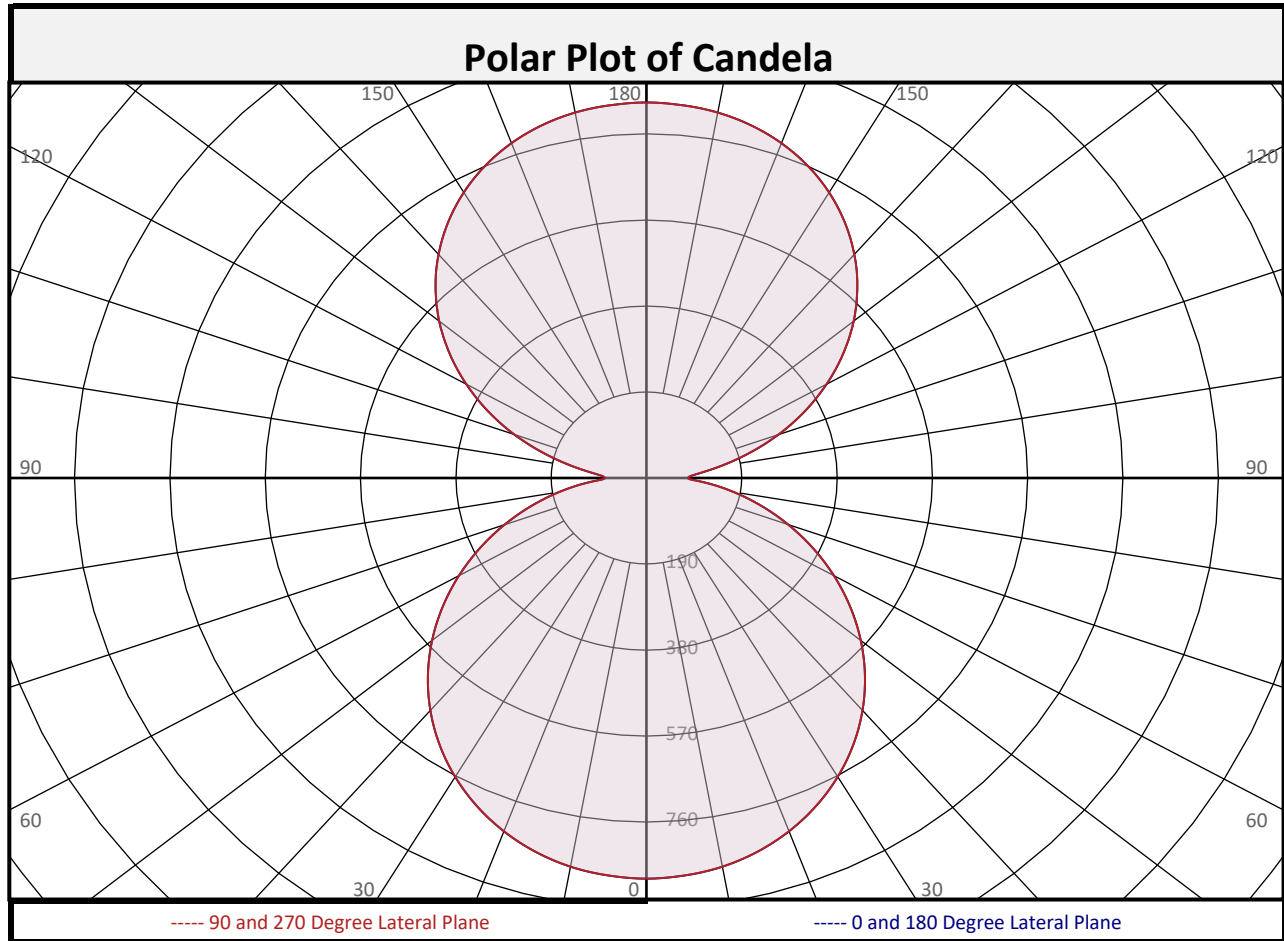
Test date: 06/25/2019
Report date: 06/27/2019

Signed: _____

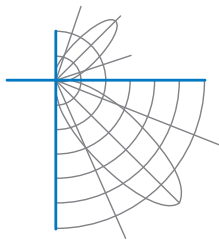


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	83.8	1.5%		90-100	114.1	2.1%		0-20	325.0	5.9%
10-20	241.2	4.4%		100-110	222.6	4.1%		0-30	693.5	12.7%
20-30	368.4	6.7%		110-120	343.2	6.3%		0-40	1143	20.9%
30-40	449.6	8.2%		120-130	427.3	7.8%		0-60	2061	37.7%
40-50	475.0	8.7%		130-140	458.4	8.4%		0-80	2676	49.0%
50-60	443.3	8.1%		140-150	431.3	7.9%		10-90	2725	49.9%
60-70	362.8	6.6%		150-160	350.9	6.4%		20-50	1293	23.7%
70-80	251.4	4.6%		160-170	227.9	4.2%		40-90	1666	30.5%
80-90	133.4	2.4%		170-180	78.8	1.4%		60-90	747.6	13.7%
0-90	2809	51.4%		90-180	2655	48.6%		0-180	5464	100.0%

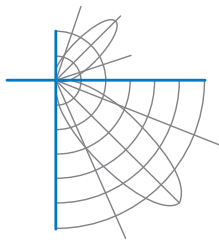


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	885	885	885	885	885	885	885	885	885
	2.5	883	883	883	883	883	883	883	883	883
	5	881	881	881	881	881	881	881	881	881
	7.5	877	877	877	877	877	877	877	877	877
	10	871	871	871	871	871	871	871	871	871
	12.5	864	864	864	864	864	864	864	864	864
	15	854	854	854	854	854	854	854	854	854
	17.5	843	843	843	843	843	843	843	843	843
	20	830	830	830	830	830	830	830	830	830
	22.5	815	815	815	815	815	815	815	815	815
	25	799	799	799	799	799	799	799	799	799
	27.5	781	781	781	781	781	781	781	781	781
	30	762	762	762	762	762	762	762	762	762
	32.5	741	741	741	741	741	741	741	741	741
	35	719	719	719	719	719	719	719	719	719
	37.5	695	695	695	695	695	695	695	695	695
	40	670	670	670	670	670	670	670	670	670
	42.5	643	643	643	643	643	643	643	643	643
	45	616	616	616	616	616	616	616	616	616
	47.5	587	587	587	587	587	587	587	587	587
50	558	558	558	558	558	558	558	558	558	
52.5	527	527	527	527	527	527	527	527	527	
55	496	496	496	496	496	496	496	496	496	
57.5	464	464	464	464	464	464	464	464	464	
60	432	432	432	432	432	432	432	432	432	
62.5	399	399	399	399	399	399	399	399	399	
65	366	366	366	366	366	366	366	366	366	
67.5	334	334	334	334	334	334	334	334	334	
70	301	301	301	301	301	301	301	301	301	
72.5	269	269	269	269	269	269	269	269	269	
75	238	238	238	238	238	238	238	238	238	
77.5	207	207	207	207	207	207	207	207	207	
80	177	177	177	177	177	177	177	177	177	
82.5	148	148	148	148	148	148	148	148	148	
85	120	120	120	120	120	120	120	120	120	
87.5	94	94	94	94	94	94	94	94	94	
90	83	83	83	83	83	83	83	83	83	

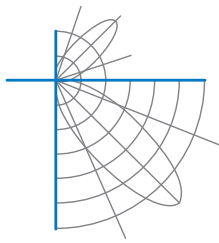


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	90	83	83	83	83	83	83	83	83	83
	92.5	86	86	86	86	86	86	86	86	86
	95	99	99	99	99	99	99	99	99	99
	97.5	120	120	120	120	120	120	120	120	120
	100	147	147	147	147	147	147	147	147	147
	102.5	178	178	178	178	178	178	178	178	178
	105	210	210	210	210	210	210	210	210	210
	107.5	244	244	244	244	244	244	244	244	244
	110	279	279	279	279	279	279	279	279	279
	112.5	313	313	313	313	313	313	313	313	313
	115	347	347	347	347	347	347	347	347	347
	117.5	381	381	381	381	381	381	381	381	381
	120	414	414	414	414	414	414	414	414	414
	122.5	447	447	447	447	447	447	447	447	447
	125	478	478	478	478	478	478	478	478	478
	127.5	509	509	509	509	509	509	509	509	509
	130	539	539	539	539	539	539	539	539	539
	132.5	568	568	568	568	568	568	568	568	568
	135	594	594	594	594	594	594	594	594	594
	137.5	620	620	620	620	620	620	620	620	620
140	644	644	644	644	644	644	644	644	644	
142.5	668	668	668	668	668	668	668	668	668	
145	689	689	689	689	689	689	689	689	689	
147.5	710	710	710	710	710	710	710	710	710	
150	728	728	728	728	728	728	728	728	728	
152.5	746	746	746	746	746	746	746	746	746	
155	761	761	761	761	761	761	761	761	761	
157.5	775	775	775	775	775	775	775	775	775	
160	787	787	787	787	787	787	787	787	787	
162.5	798	798	798	798	798	798	798	798	798	
165	807	807	807	807	807	807	807	807	807	
167.5	814	814	814	814	814	814	814	814	814	
170	820	820	820	820	820	820	820	820	820	
172.5	824	824	824	824	824	824	824	824	824	
175	827	827	827	827	827	827	827	827	827	
177.5	829	829	829	829	829	829	829	829	829	
180	830	830	830	830	830	830	830	830	830	



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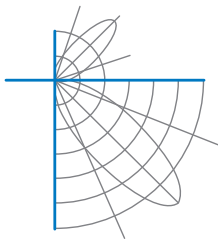
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	107	107	107	107		99	99	99	99		84	84	84		70	70	70		57	57	57	51
1	97	92	88	84		90	85	82	78		72	70	67		60	58	57		49	48	47	41
2	88	80	74	68		81	74	68	64		63	59	55		52	49	46		43	40	38	34
3	80	70	62	56		74	65	58	53		55	50	46		46	42	39		38	35	32	28
4	73	62	54	47		67	57	50	44		49	43	39		41	36	33		33	30	28	24
5	67	55	46	40		61	51	43	38		43	38	33		36	32	28		30	26	24	20
6	62	49	41	35		57	46	38	33		39	33	29		33	28	25		27	24	21	18
7	57	44	36	30		52	41	34	29		35	29	25		30	25	22		25	21	18	16
8	53	40	32	27		49	37	30	25		32	26	22		27	23	19		23	19	16	14
9	49	37	29	24		45	34	27	22		29	24	20		25	20	17		21	17	15	13
10	46	33	26	21		42	31	25	20		27	22	18		23	19	16		19	16	13	11

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	24.6	7.68	7.68
8.0	13.8	10.24	10.24
10.0	8.8	12.80	12.80
12.0	6.1	15.36	15.36
14.0	4.5	17.92	17.92
16.0	3.5	20.48	20.48

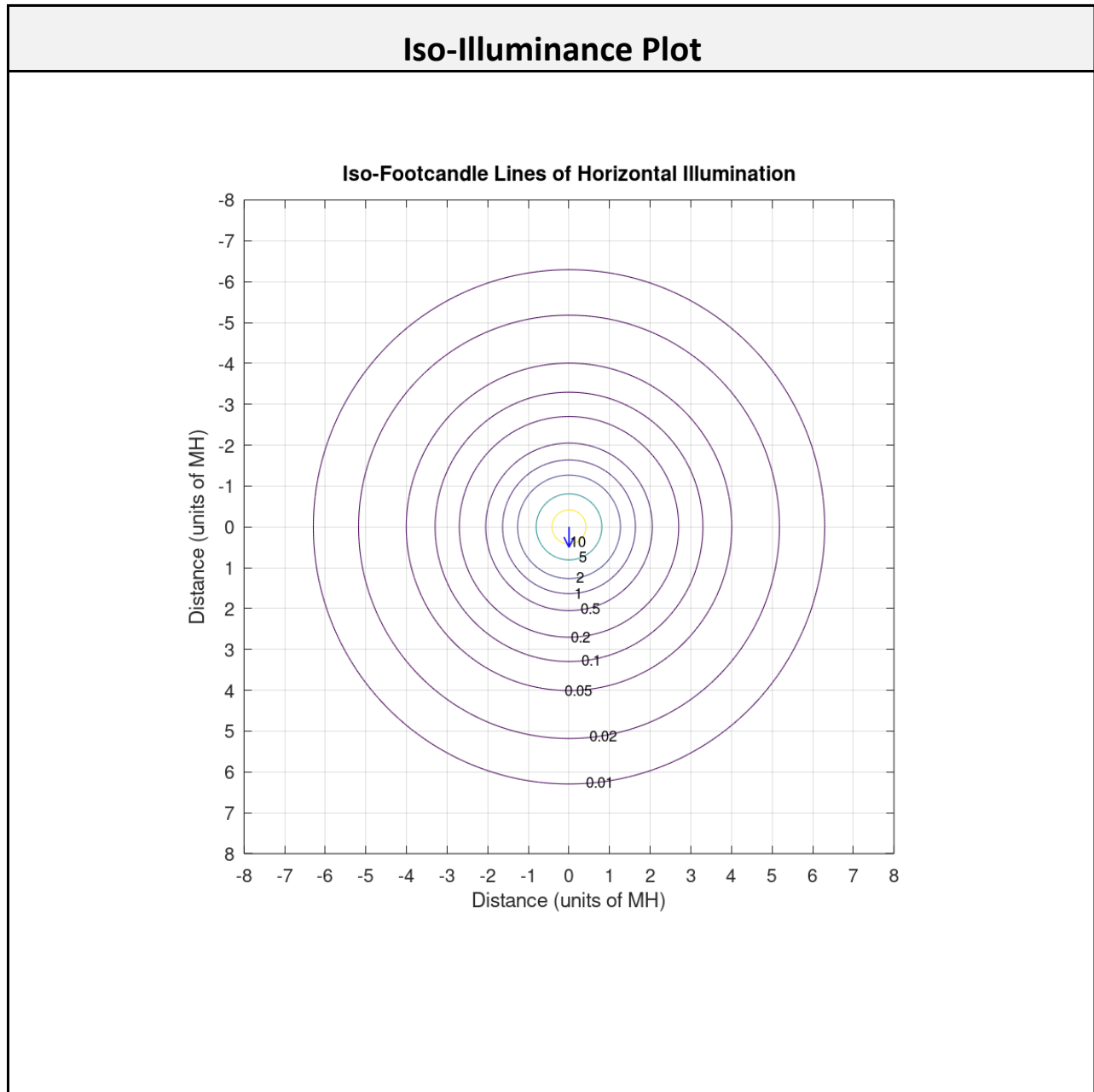
Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	990	990	990
45	684	684	684
55	602	602	602
65	508	508	508
75	397	397	397
85	263	263	263

Spacing Criterion	
Spacing Criterion:	1.3

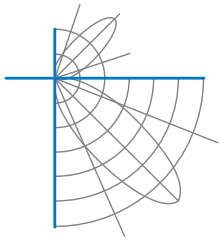


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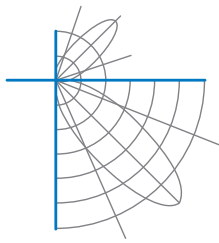
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





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Test Distance 9.5 m
Ambient Temperature 25.3 °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 publications: IES LM-79-08 and ANSI C82.77-10:2014. 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.

Revision Log:

R01-6/27/2019- Catalog number was changed