

## Report of Test

**LLIA001208-003**

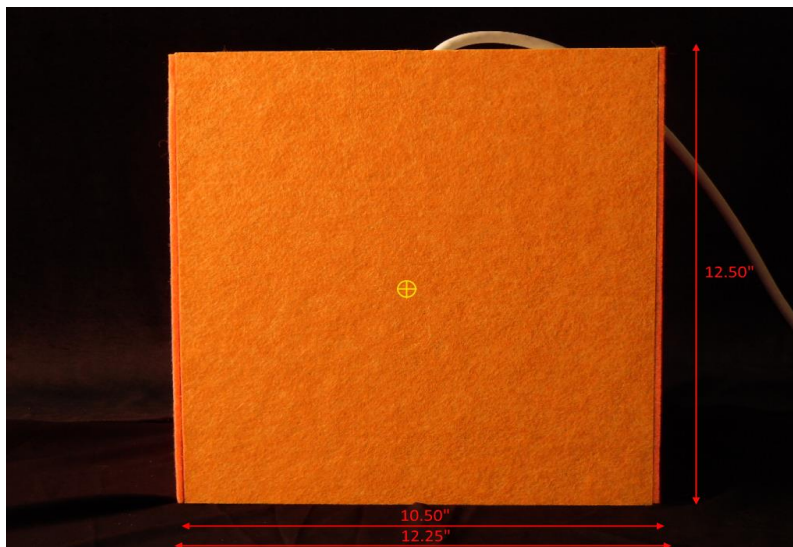
Indoor Distribution Photometry Test Report

Catalog Number: P1112A

Pendant mounted, formed steel and aluminum housing, solid fabric outer enclosures with white plastic inner lining, translucent white plastic top and bottom enclosures.

One white LED module with clear patterned hemispherical lens below.

One ERP ESS030W-0620-42 LED driver.



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

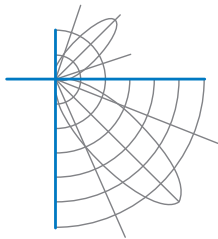
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	779.3 Lumens
Input Current	0.2085 A	Total Efficacy	31.7 Lm/W
Input Power	24.61 W	Downward Flux	559.2 Lumens
Frequency	60.00 Hz	Downward Flux	71.8 % of Total
Power Factor	0.983		
Current THD	11.7 %		

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

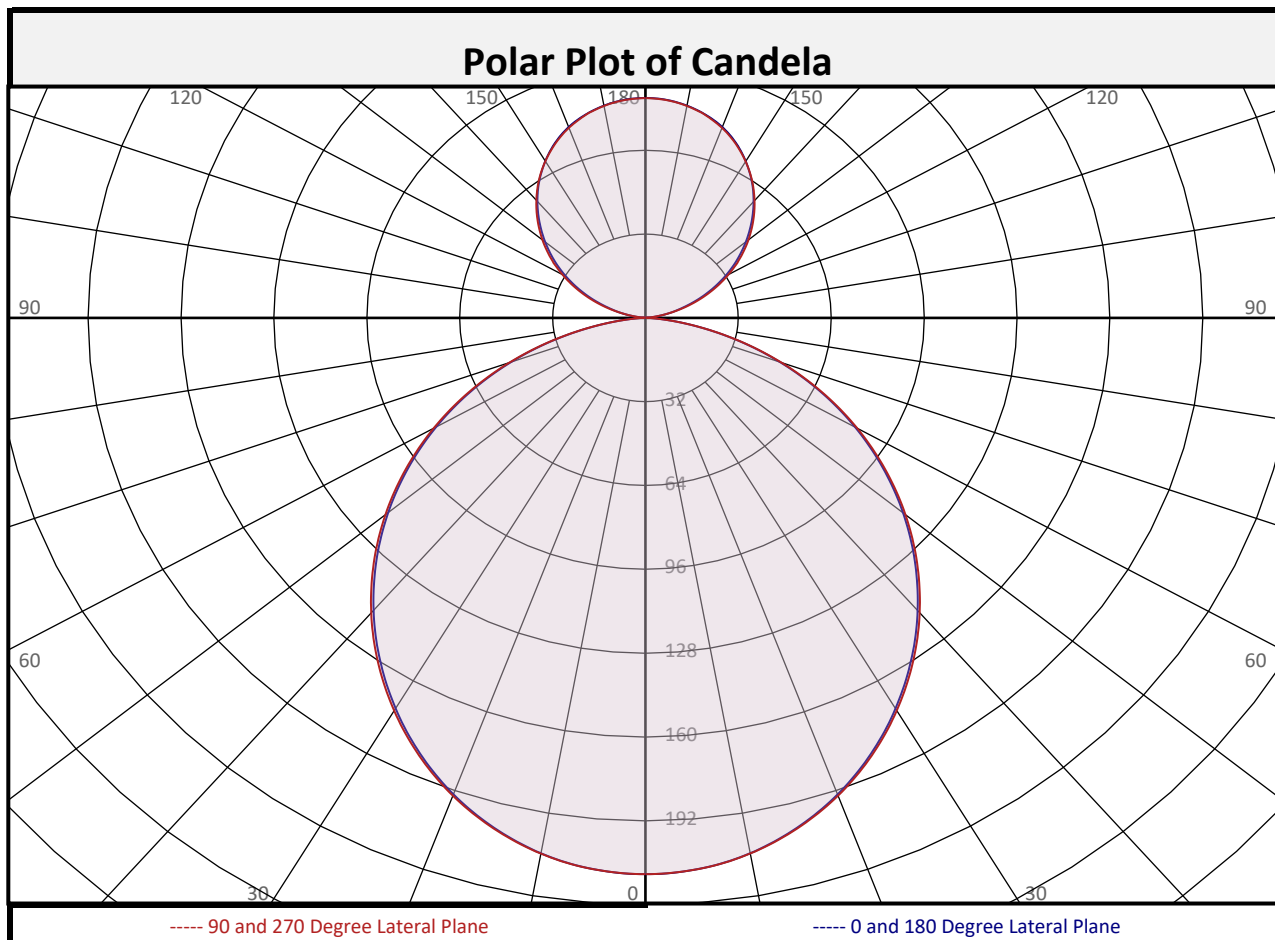
Test date: 01/07/2020

Report date: 01/09/2020

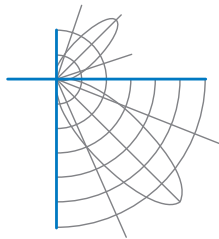
Signed: \_\_\_\_\_



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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	20.1	2.6%		90-100	2.4	0.3%		0-20	77.0	9.9%
10-20	56.9	7.3%		100-110	12.6	1.6%		0-30	161.7	20.7%
20-30	84.8	10.9%		110-120	25.3	3.2%		0-40	261.8	33.6%
30-40	100.1	12.8%		120-130	35.1	4.5%		0-60	453.0	58.1%
40-50	101.6	13.0%		130-140	40.4	5.2%		0-80	553.0	71.0%
50-60	89.6	11.5%		140-150	40.0	5.1%		10-90	539.1	69.2%
60-70	65.8	8.4%		150-160	33.9	4.3%		20-50	286.5	36.8%
70-80	34.2	4.4%		160-170	22.6	2.9%		40-90	297.3	38.1%
80-90	6.2	0.8%		170-180	7.9	1.0%		60-90	106.2	13.6%
0-90	559.2	71.8%		90-180	220.1	28.2%		0-180	779.3	100.0%

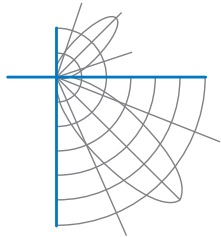


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	212	212	212	212	212	212	212	212	212
	2.5	212	212	212	212	212	212	212	212	212
	5	211	211	211	211	211	211	211	211	211
	7.5	210	210	210	210	210	210	210	210	210
	10	208	208	208	208	208	208	208	208	208
	12.5	205	205	205	205	205	205	205	205	205
	15	202	202	202	202	202	202	202	202	202
	17.5	198	198	198	198	198	198	198	198	198
	20	194	194	194	194	194	194	194	194	194
	22.5	189	189	189	189	189	189	189	189	189
	25	184	184	184	184	184	184	184	184	184
	27.5	178	178	179	179	179	179	179	178	178
	30	172	172	173	173	173	173	173	172	172
	32.5	166	166	167	167	167	167	167	166	166
	35	159	160	160	161	161	161	160	160	159
	37.5	153	153	153	154	154	154	153	153	153
	40	146	146	146	147	147	147	146	146	146
	42.5	139	139	139	140	140	140	139	139	139
	45	131	131	132	132	132	132	132	131	131
	47.5	124	124	124	125	125	125	124	124	124
50	116	116	116	117	117	117	116	116	116	
52.5	108	108	108	109	109	109	108	108	108	
55	100	100	100	101	101	101	100	100	100	
57.5	91	92	92	92	93	92	92	92	91	
60	83	83	84	84	84	84	84	83	83	
62.5	75	75	75	75	76	75	75	75	75	
65	66	66	67	67	67	67	67	66	66	
67.5	58	58	58	58	58	58	58	58	58	
70	49	49	49	50	50	50	49	49	49	
72.5	41	41	41	41	41	41	41	41	41	
75	32	32	32	32	33	32	32	32	32	
77.5	24	24	24	24	24	24	24	24	24	
80	16	16	16	17	17	17	16	16	16	
82.5	10	10	10	10	10	10	10	10	10	
85	4	4	4	4	4	4	4	4	4	
87.5	1	1	1	1	1	1	1	1	1	
90	0	0	0	0	0	0	0	0	0	



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		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	1	1	1	1	0	1	1	1	1
	95	2	2	2	1	2	1	2	2	2
	97.5	4	4	3	3	4	3	3	4	4
	100	6	6	6	6	6	6	6	6	6
	102.5	9	9	9	9	9	9	9	9	9
	105	11	12	12	12	12	12	12	12	11
	107.5	14	15	15	16	16	16	15	15	14
	110	18	18	19	19	19	19	19	18	18
	112.5	21	22	22	23	23	23	22	22	21
	115	25	25	26	26	26	26	26	25	25
	117.5	28	28	29	30	30	30	29	28	28
	120	32	32	33	33	33	33	33	32	32
	122.5	35	35	36	37	37	37	36	35	35
	125	38	39	39	40	40	40	39	39	38
	127.5	42	42	43	43	43	43	43	42	42
	130	45	45	49	46	46	46	49	45	45
	132.5	48	49	49	50	49	50	49	49	48
	135	52	52	52	53	53	53	52	52	52
	137.5	55	55	55	56	56	56	55	55	55
140	58	58	58	59	58	59	58	58	58	
142.5	61	61	61	61	61	61	61	61	61	
145	64	64	64	64	64	64	64	64	64	
147.5	66	67	67	67	67	67	67	67	66	
150	69	69	69	69	69	69	69	69	69	
152.5	71	71	71	71	71	71	71	71	71	
155	74	74	74	74	73	74	74	74	74	
157.5	76	76	76	75	75	75	76	76	76	
160	77	77	77	77	77	77	77	77	77	
162.5	79	79	79	79	79	79	79	79	79	
165	80	80	80	80	80	80	80	80	80	
167.5	81	81	81	81	81	81	81	81	81	
170	82	82	82	82	82	82	82	82	82	
172.5	83	83	83	83	83	83	83	83	83	
175	83	83	83	83	83	83	83	83	83	
177.5	84	84	84	84	84	84	84	84	84	
180	84	84	84	84	84	84	84	84	84	



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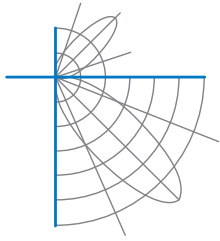
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	112	112	112	112		106	106	106	106		95	95	95		85	85	85		76	76	76	72
1	103	98	94	91		97	93	90	87		84	81	79		76	73	72		68	66	65	61
2	94	86	80	74		89	82	76	71		74	69	65		66	63	60		60	57	54	51
3	85	76	68	62		81	72	65	60		65	60	55		59	54	51		53	49	46	43
4	78	67	59	53		74	64	56	51		58	52	47		52	47	43		47	43	40	37
5	72	60	51	45		68	57	49	44		52	45	41		47	42	38		42	38	35	32
6	66	54	45	39		63	51	44	38		47	40	35		42	37	33		38	34	31	28
7	61	49	40	35		58	47	39	33		42	36	31		39	33	29		35	31	27	25
8	57	44	36	31		54	42	35	30		39	32	28		35	30	26		32	28	24	22
9	53	41	33	27		50	39	32	27		36	29	25		33	27	24		30	25	22	20
10	50	37	30	25		47	36	29	24		33	27	23		30	25	21		28	23	20	18

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	5.9	7.25	7.29	
8.0	3.3	9.67	9.72	
10.0	2.1	12.08	12.15	
12.0	1.5	14.50	14.58	
14.0	1.1	16.92	17.01	
16.0	0.8	19.33	19.44	

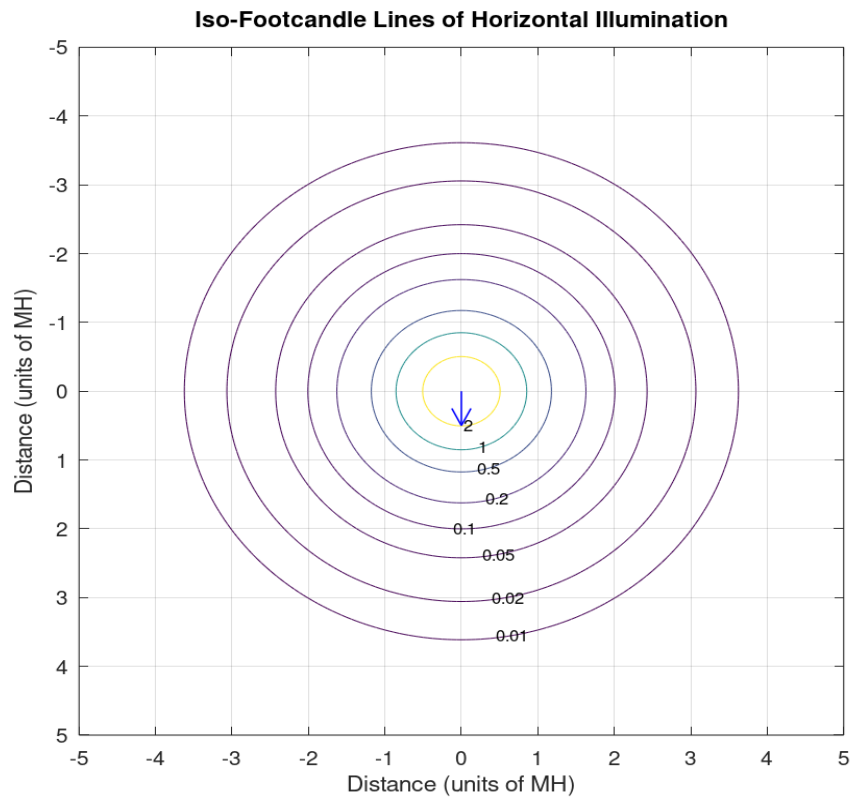
Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	2986	2986	2986
45	2607	2619	2632
55	2443	2457	2471
65	2203	2214	2231
75	1744	1748	1767
85	692	698	710

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

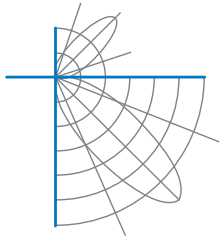


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**Iso-Illuminance Plot**



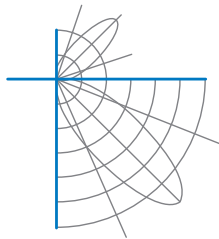
The isofootcandle values shown in the plot above are based on a mounting height of  $h = 8.0$  feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the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



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**Additional Pictures of Test Subject**





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Test Distance                    9.5 m  
Ambient Temperature        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 publications: IES LM-79-19 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.