



## Report of Test

LLIA001254-005

Indoor Distribution Photometry Test Report

Catalog Number: F-LHB300W/50K/F-96

Pendant mounted, formed white enamel steel housing and LED trays, clear patterned plastic enclosures below each LED tray.

960 white LEDs, two 300W-2835-15C32B-A1 LED boards with 480 LEDs each.

Two Sosen SS-150VA-56B LED drivers



Prepared For:

Topaz Lighting Corp

925 Waverly Avenue

Holtsville, NY 11742, USA

### Performance Summary

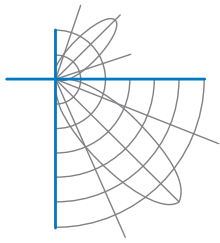
Input Voltage	120.0 V	Luminous Flux	44237.2 Lumens
Input Current	2.492 A	Total Efficacy	148.2 Lm/W
Input Power	298.4 W	Downward Flux	44237.1 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.998		
Current THD	3.6 %		

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

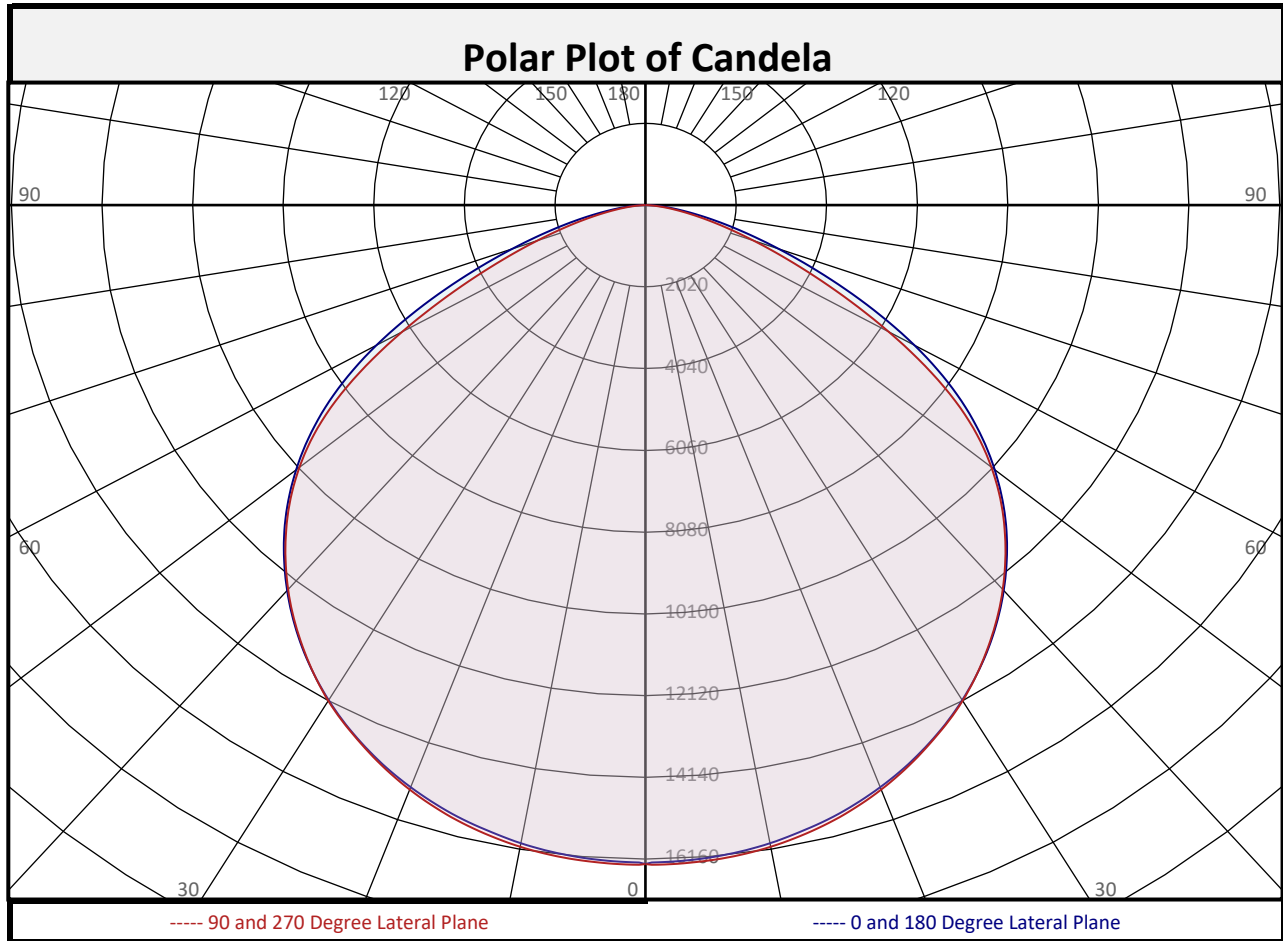
Test date: 07/22/2020

Report date: 07/23/2020

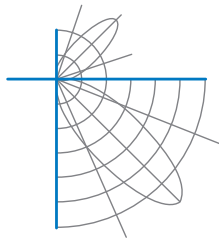
Signed: \_\_\_\_\_



Report of Test  
LLIA001254-005



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	1545	3.5%		90-100	0.0	0.0%		0-20	5999	13.6%
10-20	4454	10.1%		100-110	0.0	0.0%		0-30	12827	29.0%
20-30	6829	15.4%		110-120	0.0	0.0%		0-40	21177	47.9%
30-40	8350	18.9%		120-130	0.0	0.0%		0-60	37520	84.8%
40-50	8746	19.8%		130-140	0.0	0.0%		0-80	43879	99.2%
50-60	7596	17.2%		140-150	0.0	0.0%		10-90	42692	96.5%
60-70	4552	10.3%		150-160	0.0	0.0%		20-50	23925	54.1%
70-80	1808	4.1%		160-170	0.0	0.0%		40-90	23060	52.1%
80-90	357.7	0.8%		170-180	0.0	0.0%		60-90	6717	15.2%
0-90	44237	100.0%		90-180	0.0	0.0%		0-180	44237	100.0%

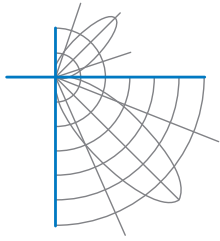


## Report of Test

LLIA001254-005

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	16284	16284	16284	16284	16284	16284	16284	16284	16284
	2.5	16231	16251	16271	16295	16294	16295	16271	16251	16231
	5	16190	16211	16232	16258	16258	16258	16232	16211	16190
	7.5	16116	16141	16165	16190	16197	16190	16165	16141	16116
	10	16012	16041	16070	16089	16101	16089	16070	16041	16012
	12.5	15871	15910	15936	15955	15968	15955	15936	15910	15871
	15	15718	15756	15778	15791	15806	15791	15778	15756	15718
	17.5	15527	15569	15582	15596	15606	15596	15582	15569	15527
	20	15308	15348	15358	15370	15371	15370	15358	15348	15308
	22.5	15060	15099	15105	15107	15104	15107	15105	15099	15060
	25	14778	14820	14824	14809	14805	14809	14824	14820	14778
	27.5	14470	14509	14507	14483	14490	14483	14507	14509	14470
	30	14125	14165	14153	14133	14146	14133	14153	14165	14125
	32.5	13749	13792	13767	13751	13753	13751	13767	13792	13749
	35	13343	13376	13351	13333	13328	13333	13351	13376	13343
	37.5	12902	12933	12906	12882	12880	12882	12906	12933	12902
	40	12427	12458	12420	12397	12398	12397	12420	12458	12427
	42.5	11922	11950	11899	11882	11881	11882	11899	11950	11922
	45	11384	11398	11343	11330	11330	11330	11343	11398	11384
	47.5	10798	10803	10745	10735	10735	10735	10745	10803	10798
50	10162	10161	10098	10083	10072	10083	10098	10161	10162	
52.5	9470	9454	9387	9344	9321	9344	9387	9454	9470	
55	8711	8676	8585	8484	8432	8484	8585	8676	8711	
57.5	7862	7803	7661	7481	7391	7481	7661	7803	7862	
60	6922	6830	6631	6387	6270	6387	6631	6830	6922	
62.5	5914	5800	5563	5289	5166	5289	5563	5800	5914	
65	4917	4798	4555	4285	4164	4285	4555	4798	4917	
67.5	3985	3872	3648	3403	3295	3403	3648	3872	3985	
70	3157	3064	2871	2660	2565	2660	2871	3064	3157	
72.5	2448	2374	2215	2038	1958	2038	2215	2374	2448	
75	1845	1792	1663	1517	1450	1517	1663	1792	1845	
77.5	1341	1304	1203	1087	1031	1087	1203	1304	1341	
80	926	903	832	742	698	742	832	903	926	
82.5	600	591	541	468	435	468	541	591	600	
85	346	346	298	240	219	240	298	346	346	
87.5	142	137	92	85	85	85	92	137	142	
90	1	2	2	2	1	2	2	2	1	



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LLIA001254-005

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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	1	2	2	2	1	2	2	2	1
	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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LLIA001254-005

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	105	102	98		107	103	100	96		99	96	93		95	93	91		92	90	88	86
2	100	93	86	81		98	91	85	80		87	82	78		84	80	76		81	78	75	73
3	92	82	74	68		89	80	73	67		77	71	66		75	69	65		72	68	64	62
4	84	73	64	58		82	71	63	57		69	62	57		67	61	56		64	59	55	53
5	77	65	56	50		75	64	56	50		62	55	49		60	54	49		58	52	48	46
6	72	59	50	44		70	58	49	43		56	48	43		54	48	43		53	47	42	40
7	66	53	45	38		65	52	44	38		51	43	38		49	43	38		48	42	38	36
8	62	48	40	34		60	48	40	34		46	39	34		45	39	34		44	38	34	32
9	58	44	36	31		56	44	36	31		43	36	31		42	35	30		41	35	30	28
10	54	41	33	28		53	40	33	28		39	33	28		39	32	28		38	32	28	26

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	
10.0	162.8	12.88	12.88	
14.0	83.1	18.04	18.04	
18.0	50.3	23.19	23.19	
22.0	33.6	28.34	28.35	
26.0	24.1	33.50	33.50	
30.0	18.1	38.65	38.65	

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	51010	51010	51010
45	50434	50252	50191
55	47572	46886	46049
65	36447	33762	30865
75	22331	20126	17550
85	12448	10714	7856

Spacing Criterion	
0 degree plane:	1.3
90 degree plane:	1.3
180 degree plane:	1.3
270 degree plane:	1.3



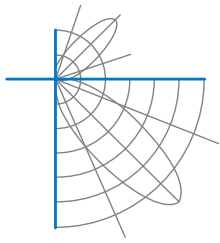
## Report of Test

### LLIA001254-005

#### 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	25.7	27.3	26.1	27.6	28.0	25.4	27.0	25.8	27.3	27.6
	3H	26.8	28.2	27.2	28.6	28.9	26.3	27.7	26.7	28.0	28.4
	4H	27.1	28.4	27.5	28.8	29.2	26.5	27.8	26.9	28.2	28.5
	6H	27.3	28.5	27.7	28.9	29.3	26.6	27.8	27.0	28.2	28.6
	8H	27.3	28.5	27.7	28.9	29.3	26.6	27.8	27.0	28.2	28.6
	12H	27.3	28.4	27.7	28.8	29.2	26.6	27.7	27.0	28.1	28.5
4H	2H	26.1	27.4	26.5	27.8	28.2	25.8	27.2	26.2	27.5	27.9
	3H	27.3	28.4	27.7	28.8	29.2	26.8	27.9	27.2	28.3	28.7
	4H	27.7	28.7	28.1	29.1	29.6	27.1	28.1	27.6	28.5	29.0
	6H	27.9	28.8	28.4	29.3	29.7	27.3	28.2	27.7	28.6	29.1
	8H	28.0	28.8	28.5	29.3	29.7	27.3	28.1	27.8	28.6	29.0
	12H	28.0	28.8	28.5	29.2	29.7	27.3	28.0	27.8	28.5	29.0
8H	4H	27.8	28.6	28.3	29.0	29.5	27.2	28.1	27.7	28.5	29.0
	6H	28.1	28.8	28.6	29.2	29.7	27.5	28.1	28.0	28.6	29.1
	8H	28.2	28.8	28.7	29.3	29.8	27.5	28.1	28.0	28.6	29.1
	12H	28.2	28.8	28.7	29.3	29.8	27.5	28.1	28.0	28.6	29.1
12H	4H	27.8	28.5	28.3	29.0	29.5	27.2	28.0	27.7	28.4	28.9
	6H	28.1	28.7	28.6	29.1	29.7	27.5	28.1	28.0	28.5	29.1
	8H	28.2	28.7	28.7	29.2	29.8	27.5	28.1	28.0	28.6	29.1

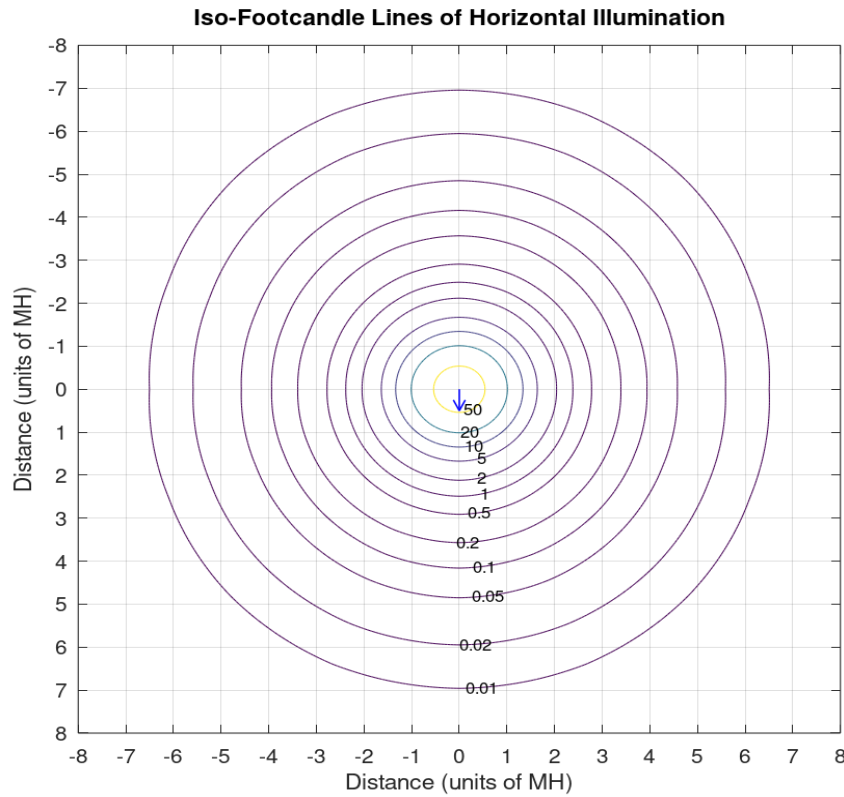
Maximum UGR = 29.8



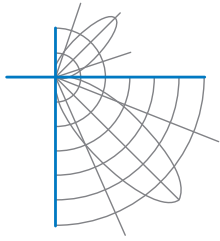
## Report of Test

LLIA001254-005

### Iso-Illuminance Plot



The isofootcandle values shown in the plot above are based on a mounting height of  $h = 14.0$  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.

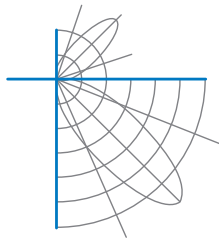


Report of Test  
LLIA001254-005

**Additional Pictures of Test Subject**







## Report of Test

### LLIA001254-005

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 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.