



## Report of Test

LLIA001979-005

Indoor Distribution Photometry Test Report

Catalog Number: LVT4-50PCS tested at 4000K and 50W settings  
Surface/pendant mounted, formed white plastic housing, formed white painted steel  
LED tray/reflector, translucent white drop plastic lens with internal linear prisms.  
896 white LEDs on two L3905(1157XX16XX1.0)448LED(14C16BX2)-CCT LED boards.  
One Fosen FS-TMG041B1100TWCP LED driver, set for 4000K and 50W



Prepared For:  
Topaz Lighting, A Southwire Company  
925 Waverly Avenue  
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	6517.7 Lumens
Input Current	0.3774 A	Total Efficacy	145.3 Lm/W
Input Power	44.87 W	Downward Flux	6037.1 Lumens
Frequency	60.00 Hz	Downward Flux	92.6 % of Total
Power Factor	0.991		
Current THD	8.3 %		

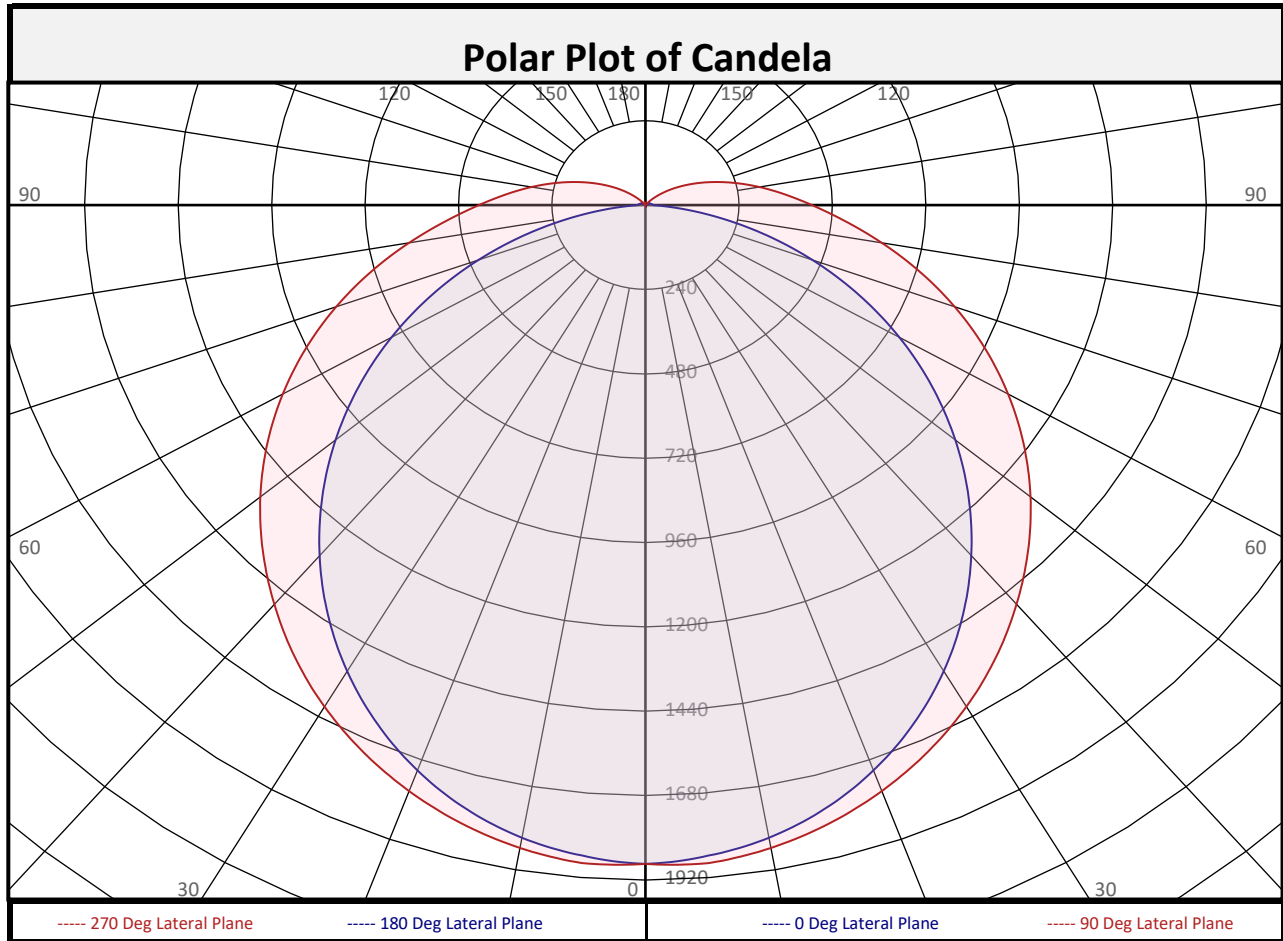
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 01/09/2023  
Report date: 01/10/2023

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	177.4	2.7%	90-100	227.3	3.5%	0-20	684.6	10.5%
10-20	507.3	7.8%	100-110	136.8	2.1%	0-30	1454	22.3%
20-30	769.6	11.8%	110-120	71.9	1.1%	0-40	2388	36.6%
30-40	934.1	14.3%	120-130	30.6	0.5%	0-60	4308	66.1%
40-50	987.2	15.1%	130-140	8.8	0.1%	0-80	5671	87.0%
50-60	932.6	14.3%	140-150	2.8	0.0%	10-90	5860	89.9%
60-70	785.5	12.1%	150-160	1.4	0.0%	20-50	2691	41.3%
70-80	577.7	8.9%	160-170	0.7	0.0%	40-90	3649	56.0%
80-90	365.8	5.6%	170-180	0.2	0.0%	60-90	1729	26.5%
0-90	6037	92.6%	90-180	480.6	7.4%	0-180	6518	100.0%



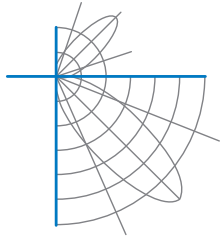
## Report of Test

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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	1875	1875	1875	1875	1875	1875	1875	1875	1875
	2.5	1869	1869	1871	1875	1879	1875	1871	1869	1869
	5	1858	1858	1863	1872	1879	1872	1863	1858	1858
	7.5	1845	1846	1853	1862	1870	1862	1853	1846	1845
	10	1828	1829	1837	1849	1857	1849	1837	1829	1828
	12.5	1805	1808	1818	1833	1841	1833	1818	1808	1805
	15	1778	1782	1795	1812	1822	1812	1795	1782	1778
	17.5	1747	1752	1769	1789	1799	1789	1769	1752	1747
	20	1712	1718	1738	1762	1774	1762	1738	1718	1712
	22.5	1672	1680	1704	1733	1746	1733	1704	1680	1672
	25	1629	1638	1667	1701	1716	1701	1667	1638	1629
	27.5	1582	1593	1626	1666	1683	1666	1626	1593	1582
	30	1532	1544	1583	1628	1648	1628	1583	1544	1532
	32.5	1478	1493	1538	1589	1610	1589	1538	1493	1478
	35	1422	1439	1490	1546	1569	1546	1490	1439	1422
	37.5	1363	1382	1440	1502	1527	1502	1440	1382	1363
	40	1301	1324	1387	1455	1482	1455	1387	1324	1301
	42.5	1238	1263	1333	1406	1436	1406	1333	1263	1238
	45	1173	1201	1277	1357	1389	1357	1277	1201	1173
	47.5	1107	1137	1219	1306	1340	1306	1219	1137	1107
50	1038	1073	1161	1254	1290	1254	1161	1073	1038	
52.5	968	1006	1102	1201	1238	1201	1102	1006	968	
55	898	940	1043	1146	1185	1146	1043	940	898	
57.5	826	872	983	1091	1130	1091	983	872	826	
60	753	805	923	1034	1075	1034	923	805	753	
62.5	679	736	862	977	1018	977	862	736	679	
65	605	668	802	919	961	919	802	668	605	
67.5	531	601	742	860	903	860	742	601	531	
70	456	536	683	802	845	802	683	536	456	
72.5	383	472	624	744	786	744	624	472	383	
75	311	411	566	686	728	686	566	411	311	
77.5	241	352	511	630	671	630	511	352	241	
80	176	296	457	575	616	575	457	296	176	
82.5	117	246	406	523	563	523	406	246	117	
85	68	200	359	474	514	474	359	200	68	
87.5	33	162	318	430	469	430	318	162	33	
90	20	132	282	391	428	391	282	132	20	

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



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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	20	132	282	391	428	391	282	132	20
	92.5	19	110	252	356	392	356	252	110	19
	95	18	91	225	324	359	324	225	91	18
	97.5	17	74	200	294	327	294	200	74	17
	100	16	60	176	266	298	266	176	60	16
	102.5	15	47	154	239	270	239	154	47	15
	105	14	37	133	214	243	214	133	37	14
	107.5	13	28	114	190	217	190	114	28	13
	110	13	21	97	167	194	167	97	21	13
	112.5	12	15	81	146	171	146	81	15	12
	115	11	12	67	126	150	126	67	12	11
	117.5	10	11	54	108	130	108	54	11	10
	120	9	10	41	90	111	90	41	10	9
	122.5	9	10	31	74	93	74	31	10	9
	125	8	9	22	60	77	60	22	9	8
	127.5	7	8	14	46	62	46	14	8	7
	130	6	7	9	34	48	34	9	7	6
	132.5	6	6	7	24	35	24	7	6	6
	135	5	5	6	15	25	15	6	5	5
	137.5	4	5	6	9	15	9	6	5	4
140	4	4	5	7	9	7	5	4	4	
142.5	3	3	5	6	7	6	5	3	3	
145	3	3	4	6	6	6	4	3	3	
147.5	2	2	4	5	6	5	4	2	2	
150	2	2	4	5	5	5	4	2	2	
152.5	2	2	3	4	5	4	3	2	2	
155	2	2	3	4	4	4	3	2	2	
157.5	2	2	3	4	4	4	3	2	2	
160	2	2	3	3	3	3	3	2	2	
162.5	2	2	2	3	3	3	2	2	2	
165	2	2	2	3	3	3	2	2	2	
167.5	2	2	2	3	3	3	2	2	2	
170	2	2	2	3	3	3	2	2	2	
172.5	2	2	2	2	3	2	2	2	2	
175	2	2	2	2	2	2	2	2	2	
177.5	2	2	2	2	2	2	2	2	2	
180	0	0	0	0	0	0	0	0	0	

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



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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	117	117	117	117		114	114	114	114		107	107	107		101	101	101		95	95	95	93
1	105	99	94	90		101	96	92	88		91	87	84		86	83	80		81	78	76	73
2	95	86	78	72		91	83	76	70		78	73	68		74	69	65		70	66	62	60
3	86	75	66	59		83	73	64	58		68	62	56		65	59	54		61	56	52	50
4	79	66	57	49		76	64	55	49		61	53	47		57	51	46		54	49	44	42
5	72	59	49	42		69	57	48	42		54	46	41		51	45	39		49	43	38	36
6	66	53	43	37		64	51	43	36		49	41	35		46	40	34		44	38	34	31
7	62	48	39	32		59	46	38	32		44	37	31		42	35	30		40	34	30	28
8	57	43	35	29		55	42	34	28		40	33	28		39	32	27		37	31	27	24
9	53	40	31	26		52	39	31	25		37	30	25		36	29	24		34	28	24	22
10	50	37	29	23		48	36	28	23		34	27	23		33	27	22		32	26	22	20

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	52.1	7.30	7.85	
8.0	29.3	9.74	10.46	
10.0	18.7	12.17	13.08	
12.0	13.0	14.61	15.69	
14.0	9.6	17.04	18.31	
16.0	7.3	19.48	20.93	

Spacing Criterion	
0 deg:	1.2
90 deg:	1.3
180 deg:	1.2
270 deg:	1.3

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	15414	15414	15414
45	13257	11750	12020
55	12354	10860	11396
65	11076	9971	10762
75	8898	9070	10135
85	4776	8446	9832

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	107.0°
Field Angle:	159.0°
90-270 Degree Plane	
Beam Angle:	131.8°
Field Angle:	221.2°



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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

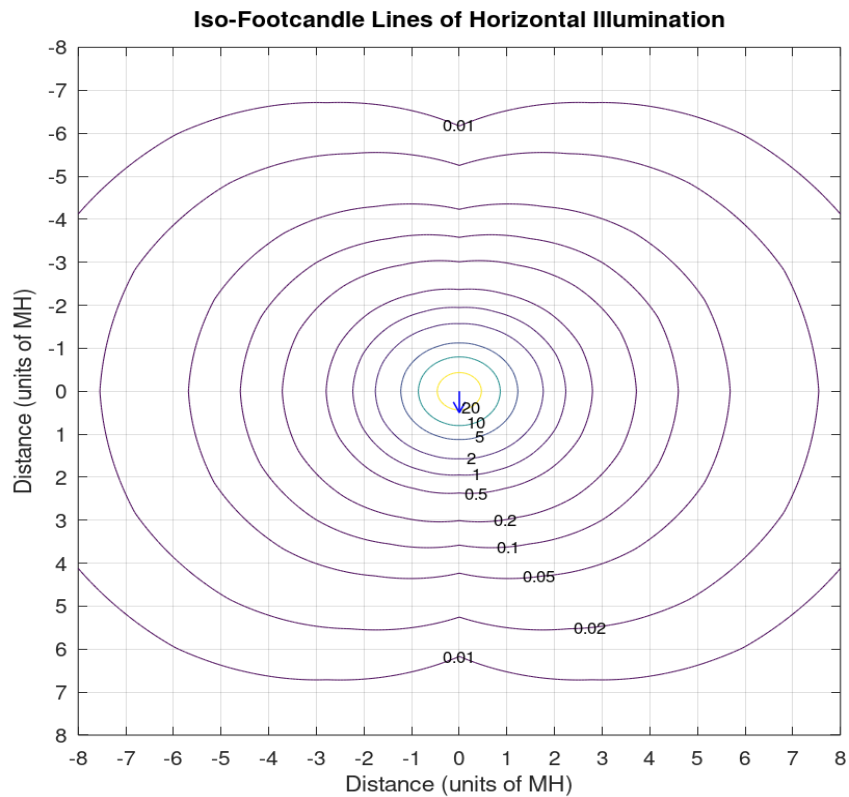
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	18.5	20.1	19.0	20.6	21.0	21.0	22.6	21.5	23.0	23.5
	3H	20.1	21.5	20.5	22.0	22.5	23.5	25.0	24.0	25.4	26.0
	4H	20.6	21.9	21.1	22.4	22.9	24.8	26.1	25.3	26.6	27.1
	6H	20.9	22.1	21.4	22.6	23.2	26.0	27.3	26.5	27.8	28.3
	8H	20.9	22.1	21.4	22.6	23.2	26.6	27.8	27.2	28.4	28.9
	12H	20.9	22.1	21.5	22.6	23.2	27.3	28.5	27.8	29.0	29.6
4H	2H	19.5	20.9	20.0	21.3	21.9	21.4	22.8	21.9	23.3	23.8
	3H	21.3	22.4	21.8	23.0	23.5	24.2	25.4	24.7	25.9	26.4
	4H	21.9	23.0	22.4	23.5	24.1	25.6	26.6	26.1	27.2	27.8
	6H	22.3	23.3	22.9	23.8	24.4	27.0	28.0	27.6	28.5	29.1
	8H	22.4	23.3	23.0	23.9	24.5	27.8	28.6	28.3	29.2	29.8
	12H	22.5	23.3	23.1	23.9	24.5	28.6	29.4	29.2	30.0	30.6
8H	4H	22.7	23.5	23.2	24.1	24.7	25.8	26.7	26.4	27.2	27.9
	6H	23.3	24.0	23.9	24.6	25.3	27.4	28.1	28.0	28.8	29.4
	8H	23.5	24.2	24.1	24.8	25.4	28.3	29.0	28.9	29.6	30.2
	12H	23.6	24.2	24.2	24.8	25.5	29.3	29.9	29.9	30.5	31.2
12H	4H	22.9	23.7	23.5	24.3	24.9	25.8	26.6	26.4	27.2	27.8
	6H	23.6	24.3	24.2	24.9	25.6	27.5	28.1	28.1	28.7	29.4
	8H	23.9	24.5	24.5	25.1	25.8	28.4	29.0	29.0	29.6	30.3

Maximum UGR = 31.2



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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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Test Distance                    9.5 m  
Ambient Temperature        24.7 °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.