

Report of Test

LLIA001979-004

Indoor Distribution Photometry Test Report

Catalog Number: LVT4-50PCS tested at 4000K and 40W 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 40W



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

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	5295.1 Lumens
Input Current	0.2994 A	Total Efficacy	148.1 Lm/W
Input Power	35.75 W	Downward Flux	4904.1 Lumens
Frequency	60.00 Hz	Downward Flux	92.6 % of Total
Power Factor	0.995		
Current THD	5.7 %		

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

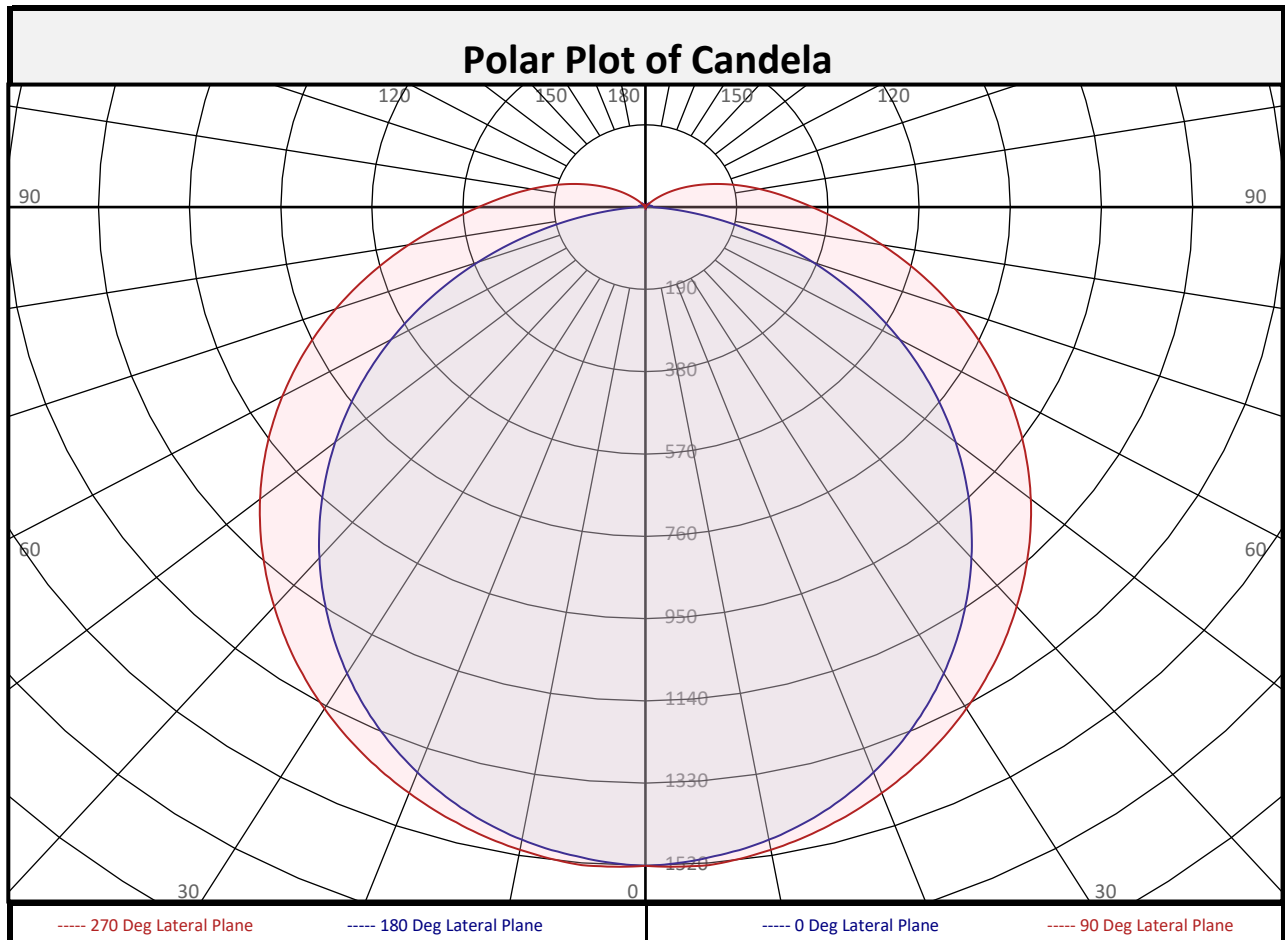
Test date: 01/09/2023
Report date: 01/10/2023

Signed: _____



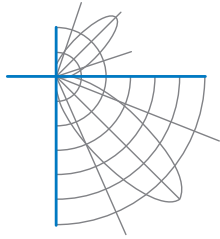
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Zonal Flux Summary

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	143.9	2.7%	90-100	184.9	3.5%	0-20	555.6	10.5%
10-20	411.7	7.8%	100-110	111.3	2.1%	0-30	1180	22.3%
20-30	624.7	11.8%	110-120	58.5	1.1%	0-40	1939	36.6%
30-40	758.4	14.3%	120-130	24.9	0.5%	0-60	3498	66.1%
40-50	801.8	15.1%	130-140	7.2	0.1%	0-80	4607	87.0%
50-60	757.7	14.3%	140-150	2.3	0.0%	10-90	4760	89.9%
60-70	638.5	12.1%	150-160	1.1	0.0%	20-50	2185	41.3%
70-80	469.8	8.9%	160-170	0.6	0.0%	40-90	2965	56.0%
80-90	297.5	5.6%	170-180	0.2	0.0%	60-90	1406	26.6%
0-90	4904	92.6%	90-180	391.0	7.4%	0-180	5295	100.0%



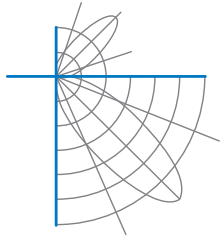
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	1521	1521	1521	1521	1521	1521	1521	1521	1521
	2.5	1516	1517	1518	1522	1524	1522	1518	1517	1516
	5	1508	1508	1512	1519	1525	1519	1512	1508	1508
	7.5	1498	1498	1503	1512	1518	1512	1503	1498	1498
	10	1483	1485	1491	1501	1507	1501	1491	1485	1483
	12.5	1465	1468	1476	1487	1494	1487	1476	1468	1465
	15	1443	1446	1457	1471	1478	1471	1457	1446	1443
	17.5	1418	1422	1435	1452	1460	1452	1435	1422	1418
	20	1389	1394	1411	1431	1439	1431	1411	1394	1389
	22.5	1357	1363	1383	1407	1418	1407	1383	1363	1357
	25	1322	1330	1353	1381	1393	1381	1353	1330	1322
	27.5	1284	1293	1320	1353	1366	1353	1320	1293	1284
	30	1243	1254	1285	1323	1337	1323	1285	1254	1243
	32.5	1200	1212	1248	1290	1307	1290	1248	1212	1200
	35	1154	1168	1209	1256	1274	1256	1209	1168	1154
	37.5	1107	1123	1169	1220	1239	1220	1169	1123	1107
	40	1057	1075	1126	1182	1203	1182	1126	1075	1057
	42.5	1006	1026	1082	1142	1166	1142	1082	1026	1006
	45	953	975	1037	1102	1128	1102	1037	975	953
	47.5	899	924	990	1061	1088	1061	990	924	899
50	844	871	943	1019	1048	1019	943	871	844	
52.5	787	818	895	975	1006	975	895	818	787	
55	730	764	847	931	963	931	847	764	730	
57.5	671	709	799	886	918	886	799	709	671	
60	612	654	750	840	873	840	750	654	612	
62.5	552	598	701	794	827	794	701	598	552	
65	492	543	652	747	781	747	652	543	492	
67.5	431	489	603	699	734	699	603	489	431	
70	371	436	555	652	687	652	555	436	371	
72.5	312	384	507	605	639	605	507	384	312	
75	253	334	461	558	592	558	461	334	253	
77.5	197	286	415	512	546	512	415	286	197	
80	144	241	372	467	501	467	372	241	144	
82.5	95	200	330	425	458	425	330	200	95	
85	55	163	292	385	418	385	292	163	55	
87.5	27	132	259	350	381	350	259	132	27	
90	16	108	230	317	348	317	230	108	16	

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	16	108	230	317	348	317	230	108	16
	92.5	15	89	205	289	318	289	205	89	15
	95	15	74	183	263	291	263	183	74	15
	97.5	14	60	163	239	266	239	163	60	14
	100	13	48	143	216	242	216	143	48	13
	102.5	12	39	125	195	219	195	125	39	12
	105	12	30	109	174	198	174	109	30	12
	107.5	11	23	93	154	177	154	93	23	11
	110	10	17	79	136	157	136	79	17	10
	112.5	10	13	66	118	139	118	66	13	10
	115	9	10	54	102	122	102	54	10	9
	117.5	8	9	44	87	105	87	44	9	8
	120	8	8	34	73	90	73	34	8	8
	122.5	7	8	25	61	76	61	25	8	7
	125	7	7	18	49	63	49	18	7	7
	127.5	6	6	12	37	50	37	12	6	6
	130	5	6	7	28	39	28	7	6	5
	132.5	5	5	6	20	29	20	6	5	5
	135	4	4	5	13	20	13	5	4	4
	137.5	3	4	5	7	13	7	5	4	3
140	3	3	4	6	7	6	4	3	3	
142.5	3	3	4	5	6	5	4	3	3	
145	2	2	4	5	5	5	4	2	2	
147.5	2	2	3	4	5	4	3	2	2	
150	1	2	3	4	4	4	3	2	1	
152.5	1	2	3	4	4	4	3	2	1	
155	1	2	2	3	3	3	2	2	1	
157.5	1	2	2	3	3	3	2	2	1	
160	2	2	2	3	3	3	2	2	2	
162.5	2	2	2	2	3	2	2	2	2	
165	2	2	2	2	2	2	2	2	2	
167.5	2	2	2	2	2	2	2	2	2	
170	2	2	2	2	2	2	2	2	2	
172.5	2	2	2	2	2	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

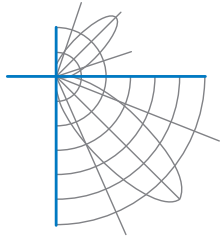
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	42.3	7.31	7.85	
8.0	23.8	9.74	10.47	
10.0	15.2	12.18	13.08	
12.0	10.6	14.61	15.70	
14.0	7.8	17.05	18.31	
16.0	5.9	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 ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	12507	12507	12507
45	10769	9546	9760
55	10040	8825	9256
65	9003	8106	8745
75	7245	7378	8241
85	3910	6867	7994

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	107.1°
Field Angle:	159.1°
90-270 Degree Plane	
Beam Angle:	131.9°
Field Angle:	221.3°



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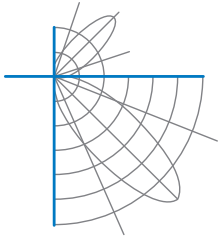
UGR Table - Corrected

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

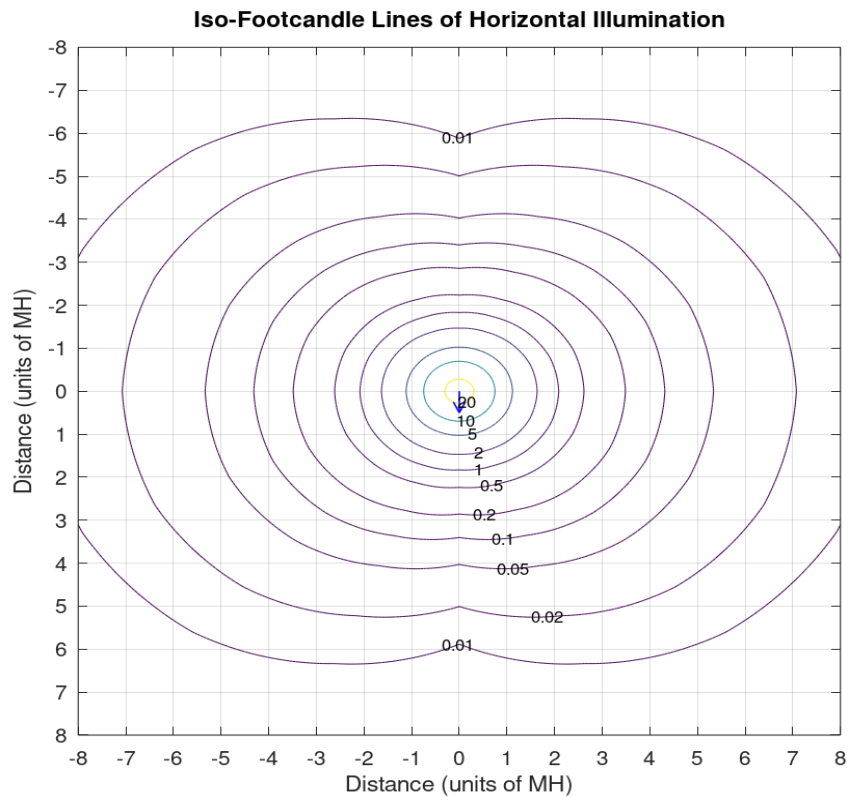
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	17.8	19.4	18.3	19.9	20.3	20.3	21.9	20.8	22.3	22.8
	3H	19.4	20.8	19.8	21.3	21.8	22.8	24.3	23.3	24.7	25.3
	4H	19.9	21.2	20.4	21.7	22.2	24.1	25.4	24.6	25.9	26.4
	6H	20.2	21.4	20.7	21.9	22.5	25.3	26.6	25.8	27.1	27.6
	8H	20.2	21.4	20.8	21.9	22.5	25.9	27.1	26.5	27.7	28.2
	12H	20.2	21.4	20.8	21.9	22.5	26.6	27.8	27.2	28.3	28.9
4H	2H	18.8	20.2	19.3	20.7	21.2	20.7	22.1	21.2	22.6	23.1
	3H	20.6	21.7	21.1	22.3	22.8	23.5	24.7	24.0	25.2	25.7
	4H	21.2	22.3	21.7	22.8	23.4	24.9	25.9	25.4	26.5	27.1
	6H	21.6	22.6	22.2	23.1	23.7	26.3	27.3	26.9	27.8	28.4
	8H	21.8	22.6	22.3	23.2	23.8	27.1	27.9	27.6	28.5	29.1
	12H	21.8	22.6	22.4	23.2	23.8	27.9	28.7	28.5	29.3	29.9
8H	4H	22.0	22.8	22.5	23.4	24.0	25.1	26.0	25.7	26.5	27.2
	6H	22.6	23.3	23.2	23.9	24.6	26.7	27.5	27.3	28.1	28.7
	8H	22.8	23.5	23.4	24.1	24.7	27.6	28.3	28.2	28.9	29.5
	12H	22.9	23.5	23.5	24.1	24.8	28.6	29.2	29.2	29.8	30.5
12H	4H	22.2	23.0	22.8	23.6	24.2	25.1	25.9	25.7	26.5	27.1
	6H	22.9	23.6	23.5	24.2	24.9	26.8	27.4	27.4	28.0	28.7
	8H	23.2	23.8	23.8	24.4	25.1	27.7	28.3	28.3	28.9	29.6

Maximum UGR = 30.5

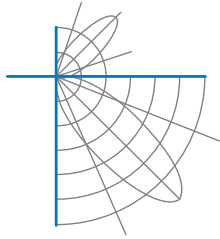


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Iso-Illuminance Plot



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 24.9 °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.

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