

Report of Test

LLIA001394-001

Indoor Distribution Photometry Test Report

Catalog Number: 17100LEDP3

Portable pendant mounted, formed plastic housing, extruded aluminum LED trays with clear plastic enclosures, formed white enamel outer steel cage. 170 white LEDs, eight T20-100W-B-V1.0 1S18P 2835 LED boards with 18 LEDs each and one T20-100W-A-V1.0 26S1P LED board with 26 LEDs. One internal LED driver



Prepared For:

Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary

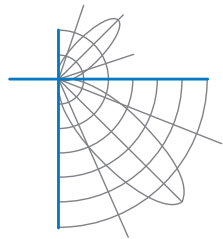
Input Voltage	120.0 V	Luminous Flux	12023.3 Lumens
Input Current	0.8222 A	Total Efficacy	123.4 Lm/W
Input Power	97.43 W	Downward Flux	6152.5 Lumens
Frequency	60.00 Hz	Downward Flux	51.2 % of Total
Power Factor	0.987		
Current THD	12.3 %		

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

Test date: 01/21/2020

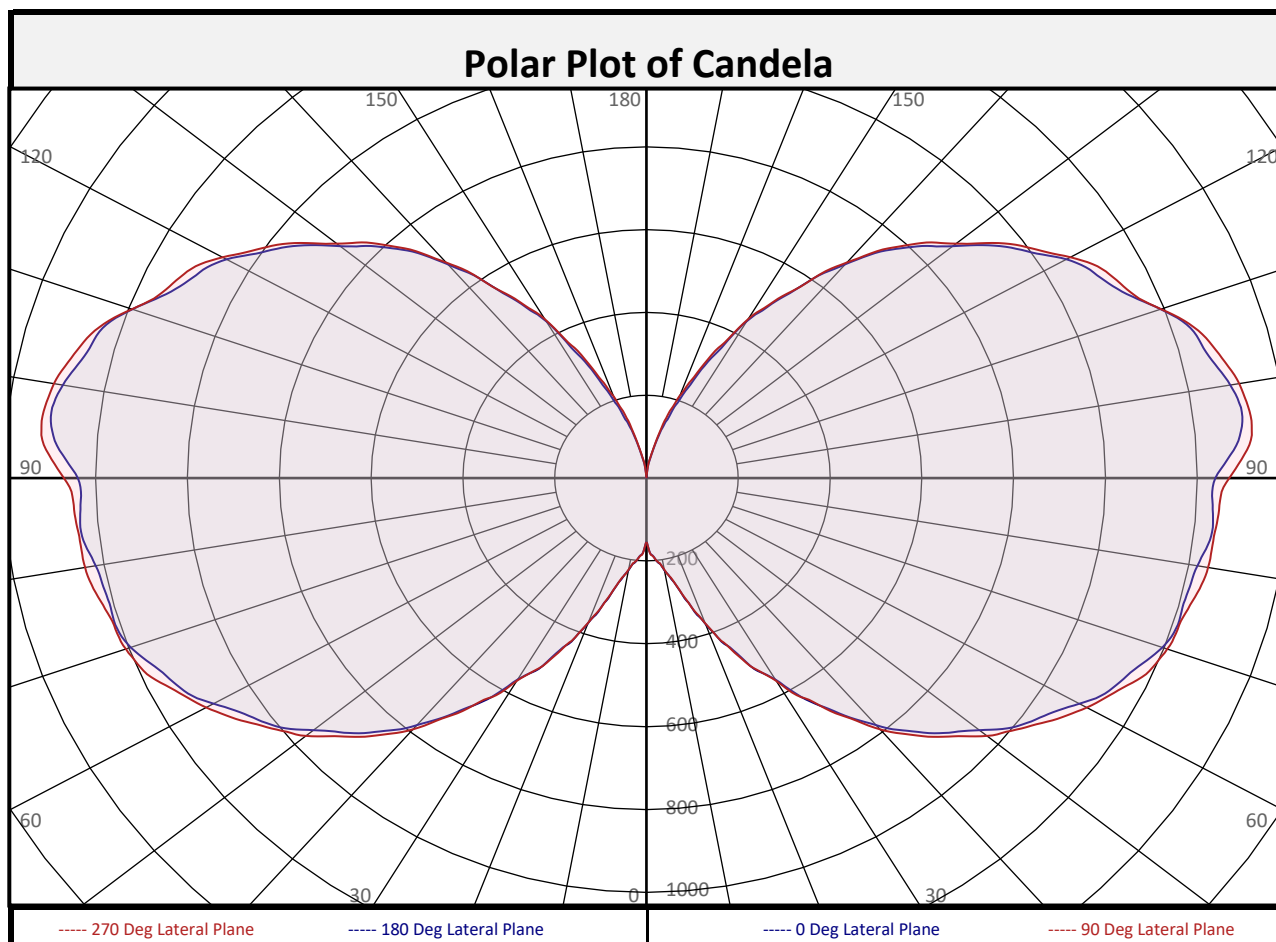
Report date: 01/21/2021

Signed: _____

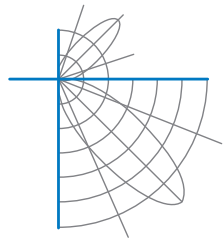


Report of Test

LLIA001394-001



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	19.1	0.2%		90-100	1409	11.7%		0-20	102.2	0.9%	
10-20	83.1	0.7%		100-110	1320	11.0%		0-30	324.3	2.7%	
20-30	222.1	1.8%		110-120	1117	9.3%		0-40	754.6	6.3%	
30-40	430.2	3.6%		120-130	871.7	7.3%		0-60	2374	19.7%	
40-50	685.4	5.7%		130-140	612.8	5.1%		0-80	4805	40.0%	
50-60	934.5	7.8%		140-150	353.0	2.9%		10-90	6133	51.0%	
60-70	1145	9.5%		150-160	148.1	1.2%		20-50	1338	11.1%	
70-80	1285	10.7%		160-170	36.1	0.3%		40-90	5398	44.9%	
80-90	1348	11.2%		170-180	2.8	0.0%		60-90	3778	31.4%	
0-90	6153	51.2%		90-180	5871	48.8%		0-180	12023	100.0%	

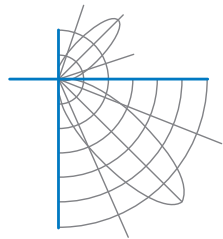


Report of Test

LLIA001394-001

Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	0	154	154	154	154	154	154	154	154	154
	2.5	181	180	181	181	182	181	181	180	181
	5	192	187	191	188	193	188	191	187	192
	7.5	207	201	206	200	206	200	206	201	207
	10	226	219	227	219	225	219	227	219	226
	12.5	249	240	252	240	246	240	252	240	249
	15	281	271	288	269	281	269	288	271	281
	17.5	326	314	339	314	327	314	339	314	326
	20	373	365	385	367	372	367	385	365	373
	22.5	427	416	437	419	425	419	437	416	427
	25	467	472	482	477	473	477	482	472	467
	27.5	525	519	530	522	522	522	530	519	525
	30	561	575	570	582	565	582	570	575	561
	32.5	625	626	630	627	627	627	630	626	625
	35	675	674	683	680	679	680	683	674	675
	37.5	728	728	740	743	731	743	740	728	728
	40	778	784	795	793	792	793	795	784	778
	42.5	826	836	839	847	838	847	839	836	826
	45	870	887	881	897	883	897	881	887	870
	47.5	908	928	918	941	922	941	918	928	908
	50	947	974	962	983	968	983	962	974	947
	52.5	992	1011	1001	1019	1002	1019	1001	1011	992
	55	1024	1043	1034	1058	1036	1058	1034	1043	1024
	57.5	1051	1080	1065	1089	1074	1089	1065	1080	1051
	60	1089	1108	1098	1113	1108	1113	1098	1108	1089
	62.5	1126	1128	1120	1140	1137	1140	1120	1128	1126
	65	1147	1152	1139	1167	1168	1167	1139	1152	1147
	67.5	1169	1177	1164	1188	1194	1188	1164	1177	1169
	70	1196	1201	1181	1208	1207	1208	1181	1201	1196
	72.5	1209	1218	1193	1222	1213	1222	1193	1218	1209
	75	1209	1222	1196	1228	1221	1228	1196	1222	1209
	77.5	1212	1219	1204	1229	1234	1229	1204	1219	1212
	80	1219	1222	1214	1237	1242	1237	1214	1222	1219
	82.5	1234	1234	1220	1242	1244	1242	1220	1234	1234
	85	1239	1239	1221	1244	1247	1244	1221	1239	1239
	87.5	1234	1237	1215	1246	1251	1246	1215	1237	1234
90	1239	1247	1223	1266	1270	1266	1223	1247	1239	

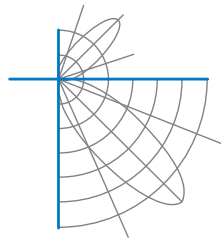


Report of Test

LLIA001394-001

Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	90	1239	1247	1223	1266	1270	1266	1223	1247	1239
	92.5	1273	1277	1260	1297	1304	1297	1260	1277	1273
	95	1300	1304	1286	1320	1324	1320	1286	1304	1300
	97.5	1306	1306	1288	1318	1322	1318	1288	1306	1306
	100	1292	1292	1270	1305	1311	1305	1270	1292	1292
	102.5	1269	1274	1247	1286	1291	1286	1247	1274	1269
	105	1251	1252	1235	1260	1270	1260	1235	1252	1251
	107.5	1234	1221	1219	1225	1239	1225	1219	1221	1234
	110	1192	1189	1182	1192	1193	1192	1182	1189	1192
	112.5	1145	1163	1139	1170	1152	1170	1139	1163	1145
	115	1111	1129	1103	1141	1130	1141	1103	1129	1111
	117.5	1089	1093	1080	1108	1108	1108	1080	1093	1089
	120	1056	1058	1040	1069	1067	1069	1040	1058	1056
	122.5	1008	1014	994	1017	1021	1017	994	1014	1008
	125	970	967	954	976	982	976	954	967	970
	127.5	924	937	911	945	932	945	911	937	924
	130	871	894	865	902	881	902	865	894	871
	132.5	830	841	828	850	842	850	828	841	830
	135	785	791	781	800	794	800	781	791	785
	137.5	737	738	737	748	743	748	737	738	737
	140	674	681	676	689	680	689	676	681	674
	142.5	616	614	619	627	619	627	619	614	616
	145	545	558	548	569	550	569	548	558	545
	147.5	489	486	497	496	495	496	497	486	489
	150	437	424	454	440	443	440	454	424	437
	152.5	355	366	369	375	369	375	369	366	355
	155	299	299	320	313	315	313	320	299	299
	157.5	235	246	254	255	255	255	254	246	235
	160	189	194	209	205	212	205	209	194	189
	162.5	145	147	167	154	170	154	167	147	145
	165	111	109	121	114	123	114	121	109	111
	167.5	75	76	79	79	80	79	79	76	75
	170	50	56	53	58	53	58	53	56	50
	172.5	34	36	34	39	38	39	34	36	34
	175	10	12	12	13	13	13	12	12	10
	177.5	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	



Report of Test

LLIA001394-001

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	92	85	79	74		84	78	73	68		65	61	57		53	49	47		41	39	37	31
2	82	71	63	56		74	65	58	51		54	48	43		43	38	34		33	30	27	22
3	73	61	51	44		66	55	47	40		45	39	33		36	31	27		27	24	20	16
4	66	53	43	35		60	48	39	32		39	32	27		31	26	21		23	19	16	12
5	60	46	36	29		54	42	33	27		34	27	22		27	22	17		20	16	13	9
6	55	41	31	24		50	37	29	22		30	23	18		24	19	14		18	14	10	7
7	50	36	27	21		46	33	25	19		27	20	16		22	16	12		16	12	9	6
8	47	33	24	18		42	30	22	16		24	18	13		19	14	10		15	11	8	5
9	43	30	21	15		39	27	19	14		22	16	12		18	13	9		13	9	6	4
10	40	27	19	14		37	25	17	12		20	14	10		16	11	8		12	8	6	4

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

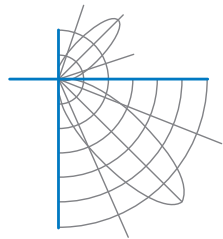
Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
10.0	1.5	45.08	45.54
14.0	0.8	63.11	63.76
18.0	0.5	81.14	81.97
22.0	0.3	99.17	100.19
26.0	0.2	117.21	118.41
30.0	0.2	135.24	136.62

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	16831	16831	16831
45	53046	53688	53827
55	61079	61697	61829
65	69069	68597	70371
75	75815	75024	76607
85	83730	82534	84306

Spacing Criterion

0 degree plane:	4.5
90 degree plane:	4.6
180 degree plane:	4.5
270 degree plane:	4.6



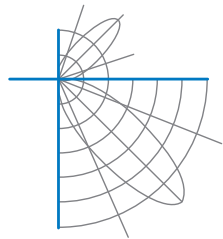
Report of Test

LLIA001394-001

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	22.1	23.2	23.0	24.1	25.4	22.2	23.2	23.1	24.2	25.4
	3H	25.4	26.4	26.3	27.3	28.6	25.5	26.4	26.4	27.4	28.7
	4H	27.0	27.9	27.9	28.9	30.1	27.0	28.0	27.9	28.9	30.2
	6H	28.5	29.4	29.4	30.3	31.6	28.6	29.4	29.5	30.4	31.7
	8H	29.2	30.1	30.2	31.1	32.3	29.3	30.2	30.3	31.1	32.4
	12H	30.0	30.8	30.9	31.8	33.1	30.0	30.8	31.0	31.8	33.1
4H	2H	23.0	23.9	23.9	24.9	26.1	23.0	23.9	23.9	24.9	26.2
	3H	26.4	27.2	27.4	28.2	29.5	26.5	27.3	27.4	28.3	29.6
	4H	28.1	28.9	29.1	29.9	31.2	28.2	28.9	29.1	29.9	31.2
	6H	29.8	30.5	30.8	31.5	32.8	29.9	30.6	30.9	31.6	32.9
	8H	30.7	31.3	31.6	32.3	33.6	30.7	31.4	31.7	32.4	33.7
	12H	31.5	32.1	32.5	33.1	34.4	31.6	32.1	32.5	33.2	34.5
8H	4H	28.7	29.3	29.7	30.3	31.7	28.7	29.4	29.7	30.4	31.7
	6H	30.6	31.1	31.6	32.2	33.5	30.6	31.2	31.6	32.2	33.6
	8H	31.6	32.1	32.6	33.1	34.4	31.6	32.1	32.6	33.2	34.5
	12H	32.6	33.0	33.6	34.1	35.4	32.6	33.1	33.6	34.1	35.5
12H	4H	28.8	29.4	29.8	30.4	31.8	28.9	29.4	29.8	30.5	31.8
	6H	30.8	31.3	31.8	32.3	33.7	30.8	31.3	31.8	32.4	33.7
	8H	31.8	32.3	32.9	33.3	34.7	31.9	32.4	32.9	33.4	34.8

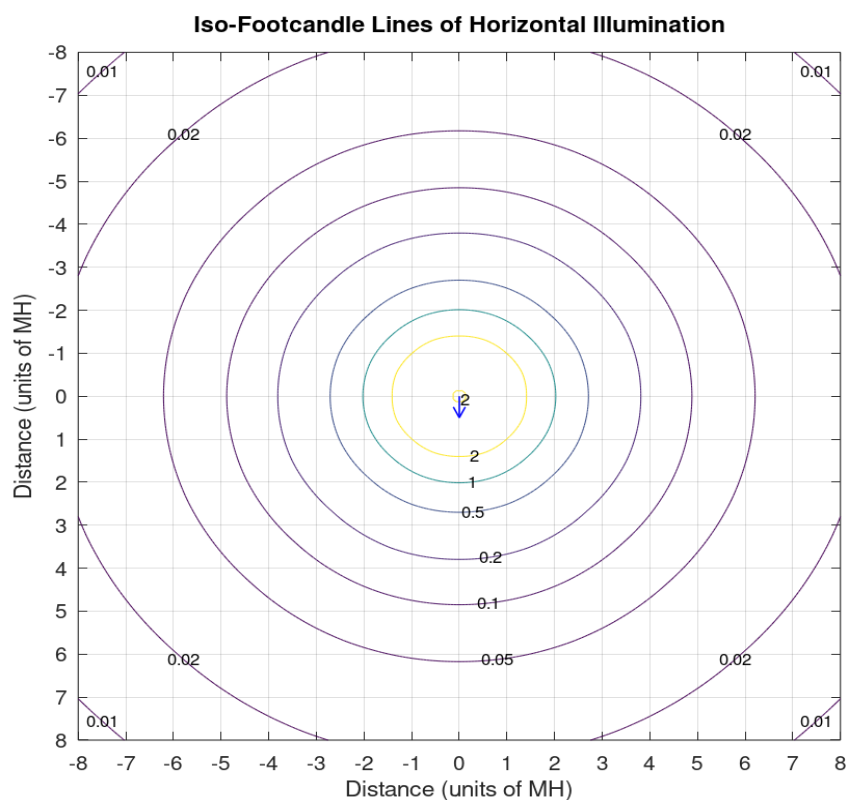
Maximum UGR = 35.5



Report of Test

LLIA001394-001

Iso-Illuminance Plot



The isofootcandle values shown in the plot above are based on a mounting height of $h = 10.0$ 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

LLIA001394-001

Test Distance 9.5 m
Ambient Temperature 25.0 °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.