

Report of Test

LLIA001394-002

Indoor Distribution Photometry Test Report

Catalog Number: 17150LEDP3

Portable pendant mounted, formed plastic housing, extruded aluminum LED trays with clear plastic enclosures, formed white enamel outer steel cage. 234 white LEDs, eight T20-150W-B-V1.0 1S26P 2835 LED boards with 26 LEDs each and one T20-50W-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

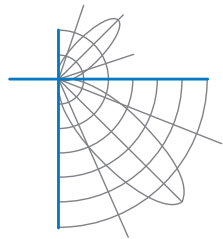
Input Voltage	120.0 V	Luminous Flux	17605.5 Lumens
Input Current	1.190 A	Total Efficacy	124.4 Lm/W
Input Power	141.5 W	Downward Flux	9007.6 Lumens
Frequency	60.00 Hz	Downward Flux	51.2 % of Total
Power Factor	0.991		
Current THD	7.6 %		

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

Test date: 01/21/2021

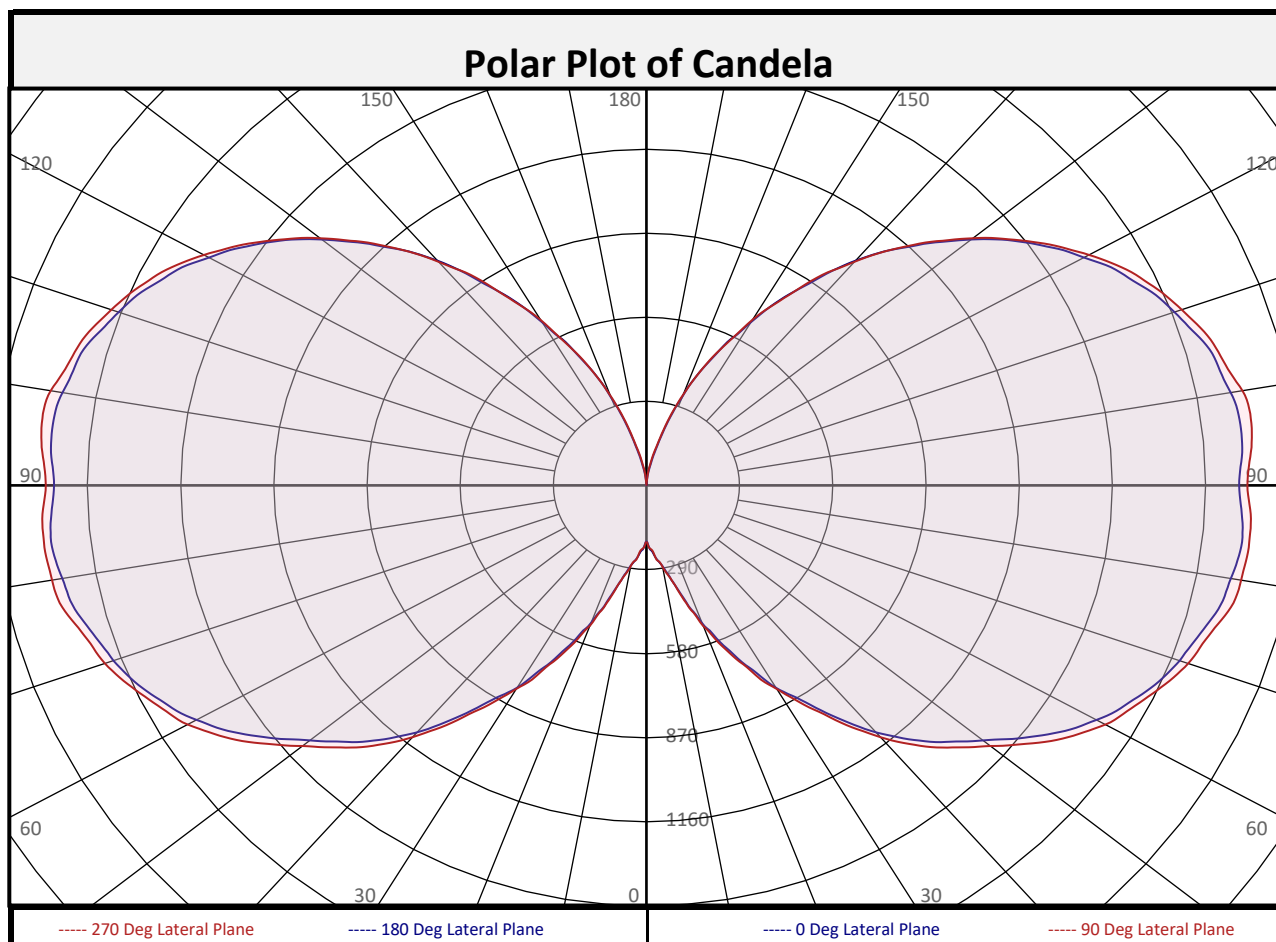
Report date: 01/21/2021

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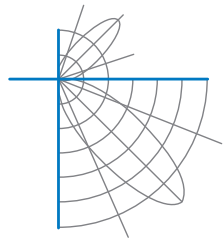


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Zonal Flux Summary											
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total	
0-10	23.7	0.1%		90-100	2019	11.5%		0-20	132.0	0.7%	
10-20	108.4	0.6%		100-110	1903	10.8%		0-30	438.2	2.5%	
20-30	306.1	1.7%		110-120	1651	9.4%		0-40	1044	5.9%	
30-40	606.3	3.4%		120-130	1303	7.4%		0-60	3382	19.2%	
40-50	975.2	5.5%		130-140	904.1	5.1%		0-80	6989	39.7%	
50-60	1363	7.7%		140-150	527.8	3.0%		10-90	8984	51.0%	
60-70	1692	9.6%		150-160	230.3	1.3%		20-50	1888	10.7%	
70-80	1915	10.9%		160-170	55.9	0.3%		40-90	7963	45.2%	
80-90	2019	11.5%		170-180	4.2	0.0%		60-90	5625	32.0%	
0-90	9008	51.2%		90-180	8598	48.8%		0-180	17606	100.0%	

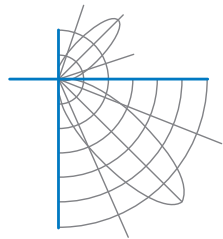


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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	0	194	194	194	194	194	194	194	194	194
	2.5	216	216	216	218	216	218	216	216	216
	5	233	225	230	226	228	226	230	225	233
	7.5	259	250	261	253	261	253	261	250	259
	10	280	276	287	278	282	278	287	276	280
	12.5	315	306	325	307	319	307	325	306	315
	15	366	345	374	349	370	349	374	345	366
	17.5	436	407	441	409	442	409	441	407	436
	20	504	479	512	486	515	486	512	479	504
	22.5	572	562	585	569	587	569	585	562	572
	25	644	644	658	651	660	651	658	644	644
	27.5	718	725	731	734	739	734	731	725	718
	30	805	801	805	808	810	808	805	801	805
	32.5	867	877	874	892	886	892	874	877	867
	35	946	958	953	968	963	968	953	958	946
	37.5	1030	1028	1036	1042	1052	1042	1036	1028	1030
	40	1112	1106	1113	1117	1133	1117	1113	1106	1112
	42.5	1183	1183	1182	1198	1209	1198	1182	1183	1183
	45	1250	1253	1243	1270	1278	1270	1243	1253	1250
	47.5	1307	1322	1305	1339	1337	1339	1305	1322	1307
	50	1368	1386	1369	1411	1398	1411	1369	1386	1368
	52.5	1436	1453	1437	1477	1467	1477	1437	1453	1436
	55	1503	1514	1506	1538	1537	1538	1506	1514	1503
	57.5	1566	1576	1570	1594	1595	1594	1570	1576	1566
	60	1617	1627	1617	1648	1649	1648	1617	1627	1617
	62.5	1664	1673	1648	1692	1686	1692	1648	1673	1664
	65	1703	1705	1680	1726	1723	1726	1680	1705	1703
	67.5	1738	1732	1712	1750	1762	1750	1712	1732	1738
	70	1766	1756	1740	1775	1794	1775	1740	1756	1766
	72.5	1788	1781	1764	1799	1815	1799	1764	1781	1788
	75	1814	1804	1788	1825	1842	1825	1788	1804	1814
	77.5	1837	1826	1812	1849	1871	1849	1812	1826	1837
	80	1847	1840	1820	1866	1879	1866	1820	1840	1847
	82.5	1860	1847	1830	1864	1885	1864	1830	1847	1860
	85	1862	1849	1831	1867	1886	1867	1831	1849	1862
	87.5	1853	1843	1819	1862	1881	1862	1819	1843	1853
90	1845	1838	1806	1855	1870	1855	1806	1838	1845	

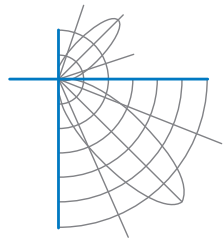


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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	90	1845	1838	1806	1855	1870	1855	1806	1838	1845
	92.5	1853	1842	1819	1860	1878	1860	1819	1842	1853
	95	1860	1848	1830	1868	1891	1868	1830	1848	1860
	97.5	1859	1850	1828	1875	1895	1875	1828	1850	1859
	100	1846	1835	1815	1858	1883	1858	1815	1835	1846
	102.5	1828	1818	1791	1837	1854	1837	1791	1818	1828
	105	1814	1798	1774	1815	1835	1815	1774	1798	1814
	107.5	1780	1772	1743	1791	1808	1791	1743	1772	1780
	110	1749	1737	1707	1756	1773	1756	1707	1737	1749
	112.5	1716	1701	1676	1719	1737	1719	1676	1701	1716
	115	1671	1655	1639	1676	1696	1676	1639	1655	1671
	117.5	1630	1618	1595	1637	1648	1637	1595	1618	1630
	120	1572	1571	1540	1590	1591	1590	1540	1571	1572
	122.5	1519	1515	1490	1533	1530	1533	1490	1515	1519
	125	1458	1450	1433	1468	1465	1468	1433	1450	1458
	127.5	1393	1383	1366	1401	1398	1401	1366	1383	1393
	130	1320	1316	1293	1330	1327	1330	1293	1316	1320
	132.5	1244	1244	1220	1255	1249	1255	1220	1244	1244
	135	1167	1162	1143	1175	1173	1175	1143	1162	1167
	137.5	1095	1083	1069	1098	1094	1098	1069	1083	1095
	140	1012	999	994	1017	1007	1017	994	999	1012
	142.5	921	911	924	925	927	925	924	911	921
	145	828	826	836	852	831	852	836	826	828
	147.5	745	735	745	753	741	753	745	735	745
	150	650	645	660	667	660	667	660	645	650
	152.5	570	555	568	580	565	580	568	555	570
	155	484	478	489	494	491	494	489	478	484
	157.5	410	395	409	408	411	408	409	395	410
	160	324	311	329	323	332	323	329	311	324
	162.5	249	229	253	239	259	239	253	229	249
	165	172	162	179	171	186	171	179	162	172
	167.5	114	113	125	123	128	123	125	113	114
	170	72	77	85	90	88	90	85	77	72
	172.5	46	51	55	59	58	59	55	51	46
	175	18	20	21	22	23	22	21	20	18
	177.5	1	1	1	1	1	1	1	1	1
180	0	0	0	0	0	0	0	0	0	



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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	107	107	107	107		99	99	99	99		84	84	84		70	70	70		57	57	57	51
1	92	85	79	73		84	78	73	68		65	60	57		52	49	46		41	39	36	31
2	81	71	63	55		74	65	57	51		53	47	42		43	38	34		33	29	26	21
3	73	61	51	43		66	55	47	40		45	38	33		36	31	26		27	23	20	15
4	66	52	42	35		60	48	39	32		39	32	26		31	25	21		23	19	15	11
5	60	46	36	29		54	42	33	26		34	27	22		27	21	17		20	16	12	9
6	55	40	31	24		50	37	28	22		30	23	18		24	18	14		18	14	10	7
7	50	36	27	20		46	33	25	19		27	20	15		21	16	12		16	12	9	6
8	46	32	24	18		42	30	22	16		24	18	13		19	14	10		15	10	7	5
9	43	29	21	15		39	27	19	14		22	16	11		18	12	9		13	9	6	4
10	40	27	19	13		36	24	17	12		20	14	10		16	11	8		12	8	5	3

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.

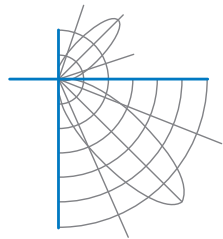
Circle of Light Plot

Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
10.0	1.9	48.39	48.67
14.0	1.0	67.75	68.14
18.0	0.6	87.10	87.60
22.0	0.4	106.46	107.07
26.0	0.3	125.82	126.54
30.0	0.2	145.17	146.01

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	21173	21173	21173
45	65553	65152	66998
55	75709	75877	77423
65	85042	83919	86055
75	92622	91313	94072
85	100368	98716	101650

Spacing Criterion

0 degree plane:	4.8
90 degree plane:	4.9
180 degree plane:	4.8
270 degree plane:	4.9



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UGR TABLE - CORRECTED

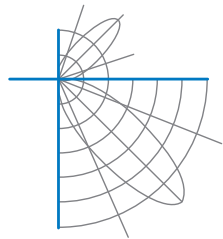
Reflectances

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

X=2H	Y=2H	22.9	24.0	23.8	24.9	26.2	UGR Viewed Endwise				
	3H	26.2	27.1	27.1	28.1	29.4	23.0	24.0	23.9	25.0	26.2
	4H	27.7	28.7	28.7	29.7	30.9	26.3	27.2	27.2	28.2	29.5
	6H	29.3	30.2	30.3	31.2	32.5	27.8	28.8	28.8	29.7	31.0
	8H	30.1	30.9	31.0	31.9	33.2	29.4	30.3	30.4	31.3	32.6
	12H	30.8	31.6	31.8	32.6	33.9	30.2	31.0	31.1	32.0	33.3
							30.9	31.7	31.8	32.7	34.0
4H	2H	23.7	24.7	24.7	25.7	26.9	23.8	24.8	24.7	25.7	27.0
	3H	27.2	28.0	28.1	29.0	30.3	27.2	28.1	28.2	29.1	30.3
	4H	28.9	29.7	29.8	30.7	32.0	29.0	29.7	29.9	30.7	32.0
	6H	30.6	31.3	31.6	32.3	33.6	30.7	31.4	31.7	32.4	33.7
	8H	31.5	32.1	32.4	33.1	34.4	30.2	31.0	31.1	32.0	33.3
	12H	32.3	32.9	33.3	33.9	35.2	31.6	32.2	32.5	33.2	34.5
							32.4	33.0	33.4	34.0	35.3
8H	4H	29.5	30.1	30.4	31.1	32.4	29.5	30.2	30.5	31.2	32.5
	6H	31.4	32.0	32.4	33.0	34.3	31.5	32.0	32.5	33.1	34.4
	8H	32.4	32.9	33.4	33.9	35.2	32.5	33.0	33.4	34.0	35.3
	12H	33.4	33.8	34.4	34.9	36.2	32.5	33.0	33.4	34.0	35.3
							33.5	33.9	34.5	35.0	36.3
12H	4H	29.6	30.2	30.6	31.2	32.5	29.6	30.2	30.6	31.3	32.6
	6H	31.6	32.1	32.6	33.1	34.5	31.7	32.2	32.7	33.2	34.6
	8H	32.7	33.1	33.7	34.1	35.5	32.7	33.2	33.7	34.2	35.6

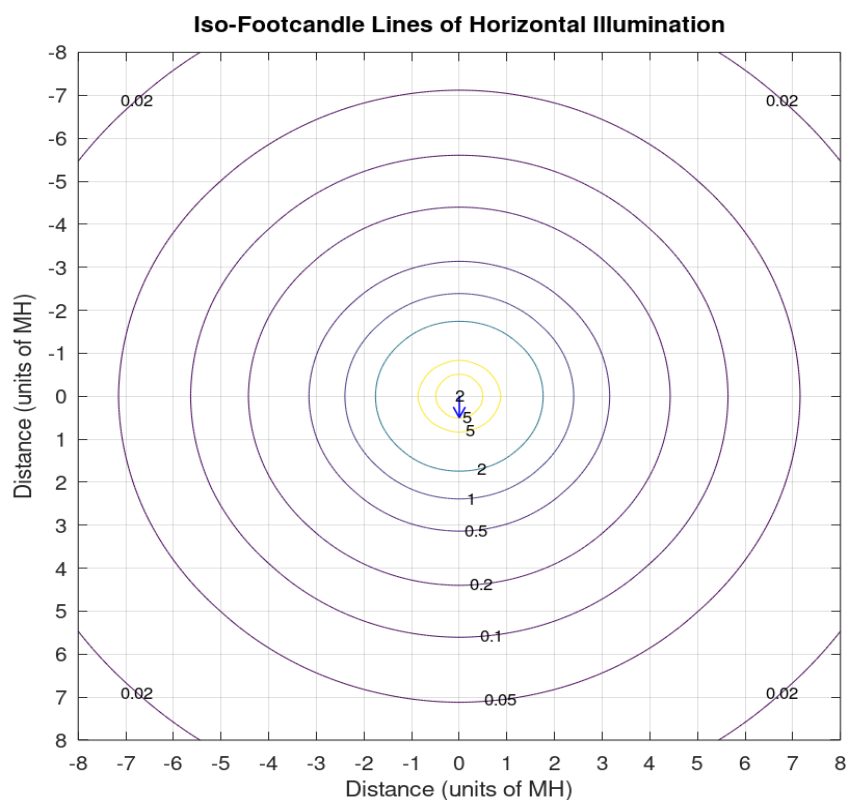
Maximum UGR = 36.3



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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.

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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.