



Report of Test

LLIA001457-005

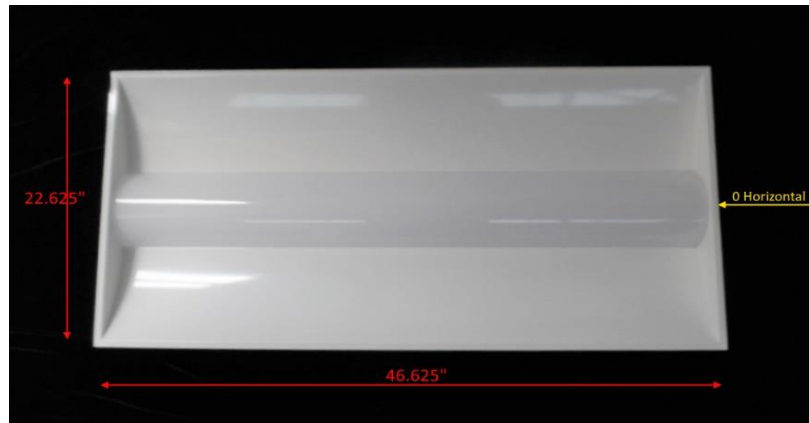
Indoor Distribution Photometry Test Report

Catalog Number: F-VTC24/50PCTS/D-86 - 40W/4000K Setting

Recessed mounted, formed steel housing, translucent white linear ribbed plastic enclosure.

336 LEDs, 4 LED boards with 42 cool white and 42 warm white LEDs each.

One WSP-Z45AD-0421070 LED driver



Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

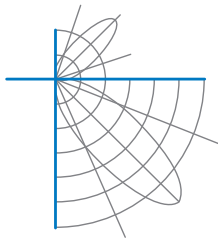
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	5511.8 Lumens
Input Current	0.3232 A	Total Efficacy	146.7 Lm/W
Input Power	37.56 W	Downward Flux	5511.8 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.968		
Current THD	10.6 %		

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

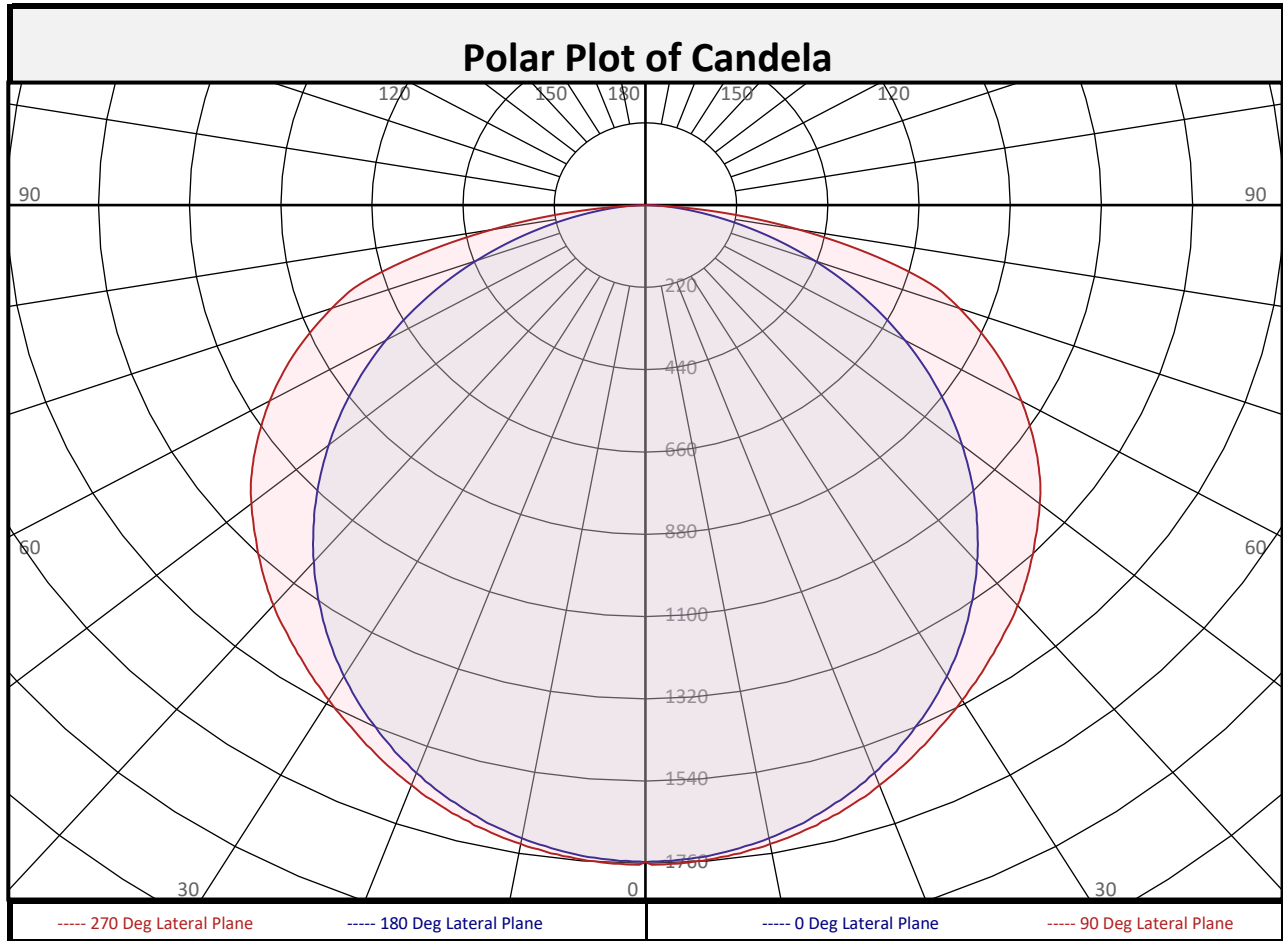
Test date: 05/05/2021

Report date: 05/05/2021

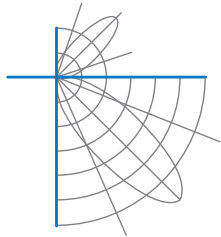
Signed: _____



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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	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	166.3	3.0%	90-100	0.0	0.0%	0-20	642.1	11.6%	0-10	166.3	3.0%
10-20	475.8	8.6%	100-110	0.0	0.0%	0-30	1364	24.7%	10-20	475.8	8.6%
20-30	721.7	13.1%	110-120	0.0	0.0%	0-40	2242	40.7%	20-30	721.7	13.1%
30-40	878.6	15.9%	120-130	0.0	0.0%	0-60	4081	74.0%	30-40	878.6	15.9%
40-50	938.5	17.0%	130-140	0.0	0.0%	0-80	5369	97.4%	40-50	938.5	17.0%
50-60	899.9	16.3%	140-150	0.0	0.0%	10-90	5345	97.0%	50-60	899.9	16.3%
60-70	765.1	13.9%	150-160	0.0	0.0%	20-50	2539	46.1%	60-70	765.1	13.9%
70-80	523.1	9.5%	160-170	0.0	0.0%	40-90	3269	59.3%	70-80	523.1	9.5%
80-90	142.6	2.6%	170-180	0.0	0.0%	60-90	1431	26.0%	80-90	142.6	2.6%
0-90	5512	100.0%	90-180	0.0	0.0%	0-180	5512	100.0%	0-90	5512	100.0%

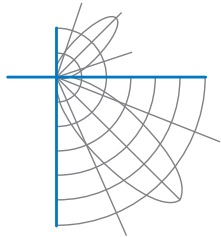


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	1757	1757	1757	1757	1757	1757	1757	1757	1757
	2.5	1753	1753	1752	1758	1763	1758	1752	1753	1753
	5	1747	1745	1746	1753	1757	1753	1746	1745	1747
	7.5	1735	1734	1736	1742	1748	1742	1736	1734	1735
	10	1719	1720	1722	1732	1734	1732	1722	1720	1719
	12.5	1699	1701	1706	1715	1719	1715	1706	1701	1699
	15	1675	1678	1684	1695	1700	1695	1684	1678	1675
	17.5	1647	1650	1659	1673	1676	1673	1659	1650	1647
	20	1616	1620	1631	1646	1651	1646	1631	1620	1616
	22.5	1582	1584	1599	1618	1623	1618	1599	1584	1582
	25	1540	1547	1563	1585	1593	1585	1563	1547	1540
	27.5	1500	1506	1525	1551	1560	1551	1525	1506	1500
	30	1455	1462	1483	1516	1528	1516	1483	1462	1455
	32.5	1406	1414	1439	1481	1496	1481	1439	1414	1406
	35	1356	1365	1394	1444	1464	1444	1394	1365	1356
	37.5	1301	1312	1349	1409	1430	1409	1349	1312	1301
	40	1244	1256	1302	1372	1397	1372	1302	1256	1244
	42.5	1186	1199	1255	1334	1360	1334	1255	1199	1186
	45	1125	1140	1207	1293	1322	1293	1207	1140	1125
	47.5	1062	1079	1160	1249	1282	1249	1160	1079	1062
50	997	1016	1113	1205	1242	1205	1113	1016	997	
52.5	931	953	1063	1163	1200	1163	1063	953	931	
55	863	891	1010	1117	1151	1117	1010	891	863	
57.5	794	830	960	1064	1099	1064	960	830	794	
60	723	769	911	1009	1047	1009	911	769	723	
62.5	651	709	856	952	991	952	856	709	651	
65	579	651	796	893	933	893	796	651	579	
67.5	506	592	734	829	870	829	734	592	506	
70	434	532	669	762	806	762	669	532	434	
72.5	362	475	601	695	737	695	601	475	362	
75	293	415	529	609	628	609	529	415	293	
77.5	226	347	455	493	503	493	455	347	226	
80	165	276	355	369	374	369	355	276	165	
82.5	111	203	244	248	250	248	244	203	111	
85	66	124	134	131	130	131	134	124	66	
87.5	29	42	36	26	21	26	36	42	29	
90	0	0	0	0	0	0	0	0	0	



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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	0	0	0	0	0	0	0	0	0
	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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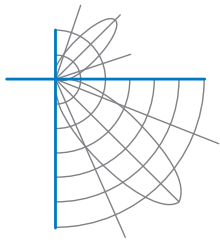
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	108	103	98	94		105	100	96	92		96	92	89		92	89	87		88	86	84	82
2	97	88	81	75		95	87	80	74		83	77	72		80	75	71		77	73	69	67
3	88	77	68	62		86	75	67	61		72	66	60		70	64	59		67	62	58	55
4	81	68	59	52		78	67	58	51		64	56	51		62	55	50		59	54	49	47
5	74	60	51	44		72	59	50	44		57	49	43		55	48	43		53	47	42	40
6	68	54	45	38		66	53	45	38		51	44	38		50	43	37		48	42	37	35
7	63	49	40	34		61	48	40	34		47	39	33		45	38	33		44	38	33	31
8	59	45	36	30		57	44	36	30		43	35	30		41	34	29		40	34	29	27
9	55	41	33	27		53	40	32	27		39	32	27		38	31	26		37	31	26	24
10	51	38	30	24		50	37	29	24		36	29	24		35	29	24		34	28	24	22

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	48.8	7.40	7.80	
8.0	27.5	9.86	10.40	
10.0	17.6	12.33	13.00	
12.0	12.2	14.79	15.60	
14.0	9.0	17.26	18.19	
16.0	6.9	19.72	20.79	

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	2581	2581	2581
45	2337	2508	2746
55	2211	2589	2948
65	2013	2768	3243
75	1661	3001	3567
85	1111	2263	2191

Spacing Criterion	
0 degree plane:	1.2
90 degree plane:	1.3
180 degree plane:	1.2
270 degree plane:	1.3



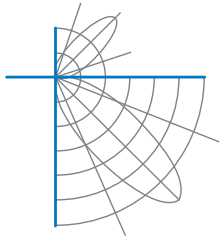
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UGR TABLE - CORRECTED

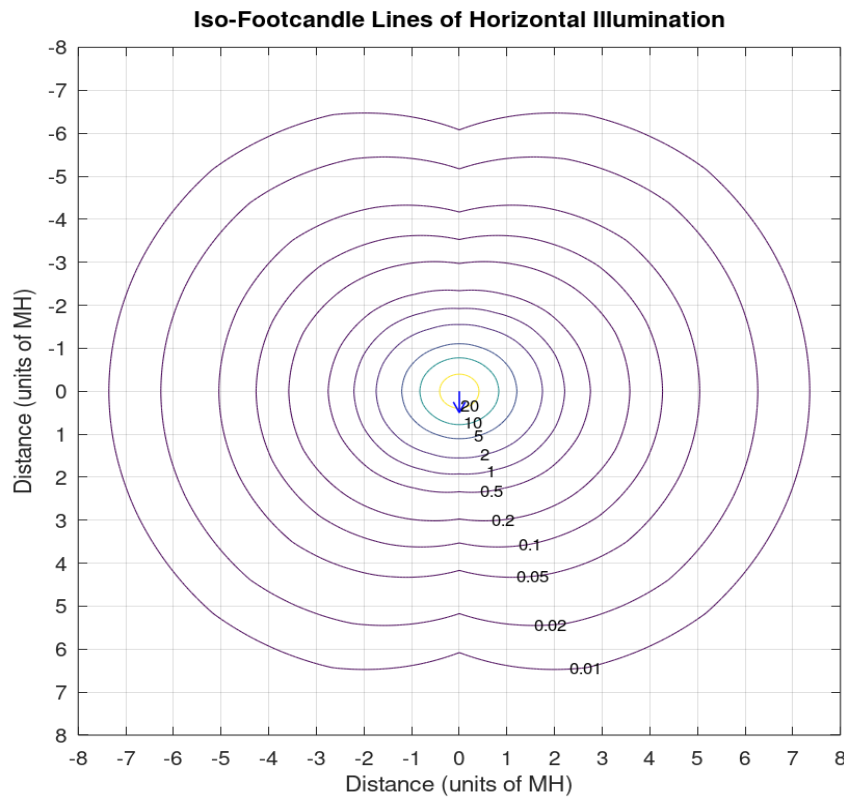
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size	UGR Viewed Crosswise	UGR Viewed Endwise									
X=2H	Y=2H	14.5	16.2	14.9	16.5	16.9	16.4	18.1	16.7	18.4	18.7
	3H	16.4	18.0	16.8	18.3	18.6	18.9	20.4	19.3	20.8	21.1
	4H	17.1	18.6	17.5	18.9	19.3	20.0	21.5	20.4	21.8	22.2
	6H	17.6	18.9	18.0	19.3	19.7	20.8	22.1	21.2	22.5	22.9
	8H	17.7	19.0	18.1	19.4	19.8	21.0	22.3	21.4	22.7	23.1
	12H	17.8	19.0	18.2	19.4	19.8	21.1	22.3	21.5	22.7	23.2
4H	2H	15.6	17.1	16.0	17.4	17.8	17.0	18.5	17.4	18.8	19.2
	3H	17.8	19.0	18.2	19.4	19.8	19.8	21.0	20.2	21.4	21.8
	4H	18.6	19.8	19.1	20.2	20.6	21.0	22.2	21.5	22.6	23.0
	6H	19.3	20.3	19.7	20.7	21.2	22.0	23.0	22.4	23.4	23.9
	8H	19.5	20.4	19.9	20.8	21.3	22.2	23.2	22.7	23.6	24.1
	12H	19.6	20.4	20.1	20.9	21.4	22.4	23.3	22.9	23.7	24.2
8H	4H	19.4	20.3	19.8	20.8	21.2	21.4	22.3	21.8	22.8	23.2
	6H	20.2	21.0	20.7	21.5	22.0	22.5	23.3	23.0	23.7	24.2
	8H	20.5	21.2	21.0	21.7	22.2	22.8	23.5	23.3	24.0	24.5
	12H	20.7	21.3	21.2	21.8	22.4	23.1	23.7	23.6	24.2	24.7
12H	4H	19.5	20.4	20.0	20.8	21.3	21.4	22.3	21.9	22.7	23.2
	6H	20.4	21.1	20.9	21.6	22.1	22.5	23.3	23.1	23.7	24.2
	8H	20.8	21.4	21.3	21.9	22.5	22.9	23.6	23.5	24.1	24.6

Maximum UGR = 24.7

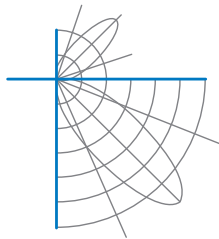


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Iso-Illuminance Plot



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 24.8 °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.