

Report of Test

LLIA001282-003

Indoor Distribution Photometry Test Report

Catalog Number: F-CPS/40W/50K/BZ-87

Surface mounted, cast aluminum housing, white enamel
steel reflector, lightly frosted plastic enclosure.

136 White LEDs, one L2034(129x115x1.5)136 LED 3V 17C8B LED board

One WeledPower WP-CHA-042U LED driver



Prepared For:

Topaz Lighting Corp

925 Waverly Avenue

Holtsville, NY 11742, USA

Performance Summary

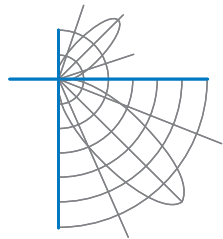
Input Voltage	120.0 V	Luminous Flux	5456.5 Lumens
Input Current	0.3373 A	Total Efficacy	135.5 Lm/W
Input Power	40.28 W	Downward Flux	5134.4 Lumens
Frequency	60.00 Hz	Downward Flux	94.1 % of Total
Power Factor	0.995		
Current THD	3.8 %		

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

Test date: 07/15/2020

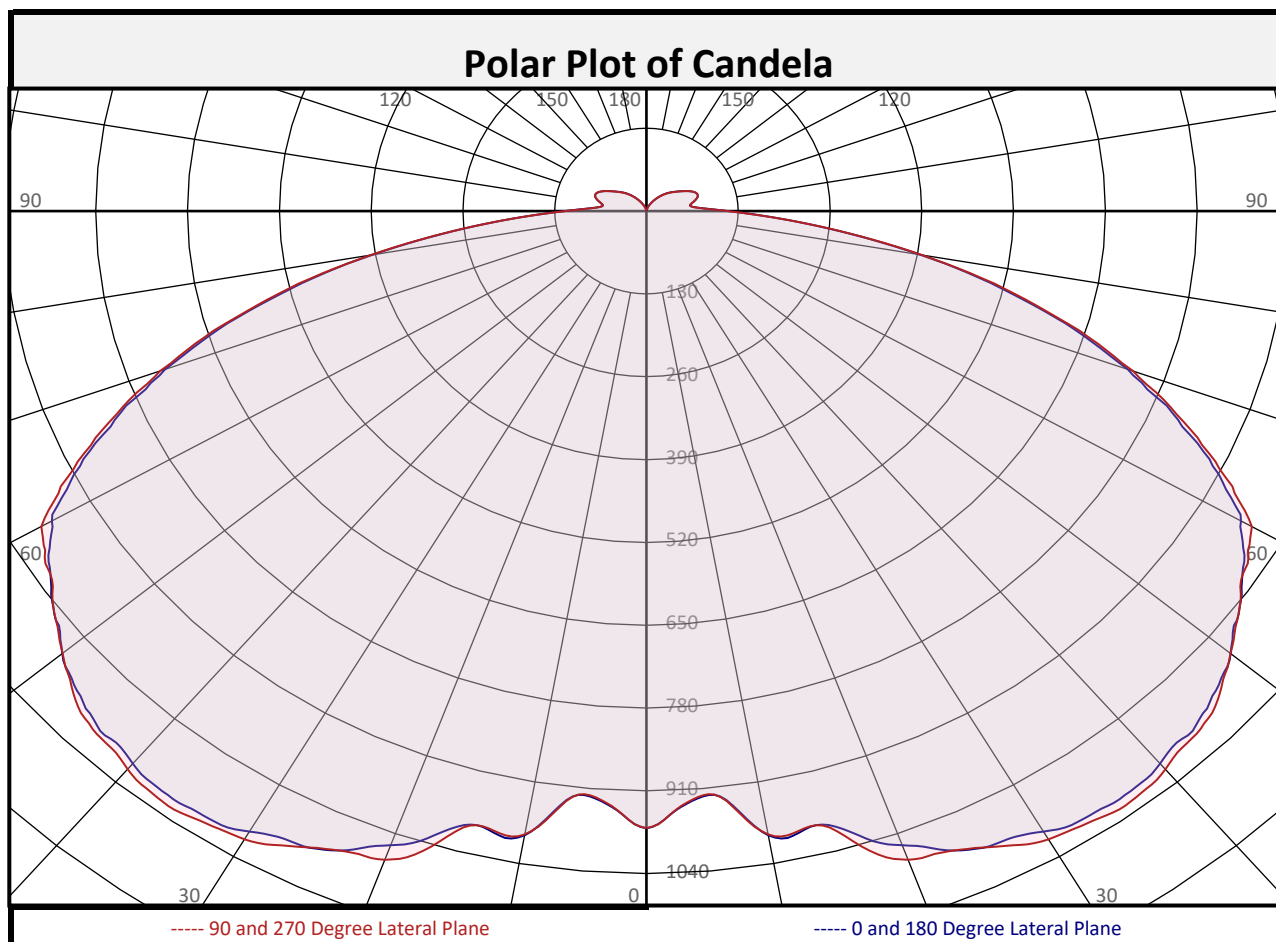
Report date: 07/17/2020

Signed: _____

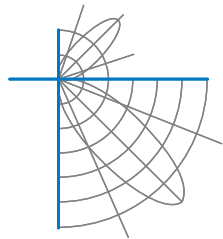


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	91.1	1.7%		90-100	84.4	1.5%		0-20	380.9	7.0%
10-20	289.7	5.3%		100-110	73.5	1.3%		0-30	892.4	16.4%
20-30	511.5	9.4%		110-120	66.8	1.2%		0-40	1611	29.5%
30-40	719.0	13.2%		120-130	46.4	0.9%		0-60	3405	62.4%
40-50	865.3	15.9%		130-140	29.4	0.5%		0-80	4876	89.4%
50-60	928.6	17.0%		140-150	15.0	0.3%		10-90	5043	92.4%
60-70	868.3	15.9%		150-160	5.5	0.1%		20-50	2096	38.4%
70-80	602.2	11.0%		160-170	1.1	0.0%		40-90	3523	64.6%
80-90	258.6	4.7%		170-180	0.0	0.0%		60-90	1729	31.7%
0-90	5134	94.1%		90-180	322.1	5.9%		0-180	5457	100.0%

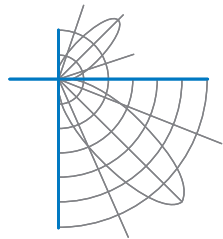


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LLIA001282-003

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	968	968	968	968	968	968	968	968	968
	2.5	942	943	944	942	941	942	944	943	942
	5	922	931	937	929	920	929	937	931	922
	7.5	941	955	969	957	944	957	969	955	941
	10	995	985	978	985	993	985	978	985	995
	12.5	999	995	993	995	996	995	993	995	999
	15	997	1005	1013	1008	1001	1008	1013	1005	997
	17.5	1032	1031	1036	1047	1053	1047	1036	1031	1032
	20	1059	1062	1076	1080	1083	1080	1076	1062	1059
	22.5	1084	1086	1092	1090	1090	1090	1092	1086	1084
	25	1104	1101	1099	1101	1103	1101	1099	1101	1104
	27.5	1111	1116	1121	1125	1122	1125	1121	1116	1111
	30	1124	1129	1132	1138	1139	1138	1132	1129	1124
	32.5	1137	1145	1143	1150	1145	1150	1143	1145	1137
	35	1139	1147	1152	1155	1152	1155	1152	1147	1139
	37.5	1139	1139	1150	1147	1151	1147	1150	1139	1139
	40	1132	1134	1143	1143	1144	1143	1143	1134	1132
	42.5	1123	1132	1137	1136	1133	1136	1137	1132	1123
	45	1115	1120	1128	1125	1126	1125	1128	1120	1115
	47.5	1100	1102	1103	1106	1105	1106	1103	1102	1100
	50	1080	1084	1084	1083	1080	1083	1084	1084	1080
	52.5	1054	1064	1072	1062	1055	1062	1072	1064	1054
	55	1029	1040	1043	1036	1027	1036	1043	1040	1029
	57.5	1005	1010	1006	1014	1011	1014	1006	1010	1005
	60	973	984	983	993	990	993	983	984	973
	62.5	920	934	946	947	936	947	946	934	920
	65	861	884	893	893	868	893	893	884	861
	67.5	798	813	835	820	803	820	835	813	798
	70	726	742	759	745	733	745	759	742	726
	72.5	649	662	667	666	656	666	667	662	649
	75	566	578	569	582	572	582	569	578	566
	77.5	483	483	466	486	487	486	466	483	483
	80	394	394	369	395	397	395	369	394	394
	82.5	307	311	290	310	309	310	290	311	307
	85	229	234	219	233	230	233	219	234	229
	87.5	165	169	160	169	165	169	160	169	165
90	117	121	115	121	117	121	115	121	117	

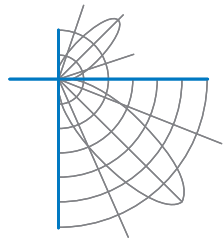


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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
Vertical (Gamma) Angles		0	22.5	45	67.5	90	112.5	135	157.5	180
	90	117	121	115	121	117	121	115	121	117
	92.5	87	90	86	89	86	89	86	90	87
	95	69	72	69	72	69	72	69	72	69
	97.5	63	65	61	65	63	65	61	65	63
	100	64	65	60	65	64	65	60	65	64
	102.5	68	68	62	68	68	68	62	68	68
	105	73	72	64	72	73	72	64	72	73
	107.5	76	74	66	74	76	74	66	74	76
	110	77	75	65	74	77	74	65	75	77
	112.5	76	72	64	72	76	72	64	72	76
	115	72	69	61	69	73	69	61	69	72
	117.5	68	65	57	65	68	65	57	65	68
	120	63	60	54	60	63	60	54	60	63
	122.5	58	56	50	56	58	56	50	56	58
	125	54	52	47	52	54	52	47	52	54
	127.5	50	49	45	48	49	48	45	49	50
	130	46	45	42	45	46	45	42	45	46
	132.5	43	42	40	41	42	41	40	42	43
	135	39	38	37	38	39	38	37	38	39
	137.5	35	34	33	34	35	34	33	34	35
	140	31	31	30	30	31	30	30	31	31
	142.5	28	27	27	27	27	27	27	27	28
	145	24	23	24	23	24	23	24	23	24
	147.5	20	20	20	20	21	20	20	20	20
	150	17	17	17	17	17	17	17	17	17
	152.5	14	14	14	14	15	14	14	14	14
	155	12	11	11	11	12	11	11	11	12
	157.5	10	9	9	9	10	9	9	9	10
	160	8	7	7	7	8	7	7	7	8
	162.5	6	5	4	5	6	5	4	5	6
	165	4	3	3	4	4	4	3	3	4
	167.5	3	2	1	2	3	2	1	2	3
	170	1	1	0	1	2	1	0	1	1
	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	118	118	118	118		114	114	114	114		108	108	108		102	102	102		97	97	97	94
1	105	99	94	89		101	96	91	87		91	87	83		86	82	79		81	78	76	73
2	94	84	76	69		90	81	74	68		77	71	65		73	67	63		69	64	61	58
3	84	72	63	55		81	70	61	54		66	59	53		62	56	51		59	54	49	47
4	76	63	53	45		73	61	52	45		58	50	43		54	48	42		51	46	41	38
5	69	55	45	38		67	54	44	37		51	43	36		48	41	35		46	39	34	32
6	64	49	39	32		61	48	39	32		45	37	31		43	36	30		41	34	29	27
7	59	44	34	28		56	43	34	27		41	33	27		39	32	26		37	30	26	23
8	54	40	31	24		52	39	30	24		37	29	23		35	28	23		33	27	22	20
9	51	36	27	21		49	35	27	21		34	26	21		32	25	20		31	24	20	18
10	47	33	25	19		46	32	24	19		31	24	19		30	23	18		28	22	18	16

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.

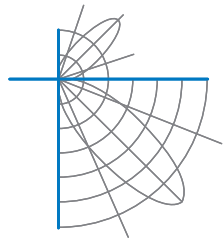
Circle of Light Plot

Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
6.0	26.9	10.43	10.50
8.0	15.1	13.91	14.00
10.0	9.7	17.38	17.50
12.0	6.7	20.86	21.00
14.0	4.9	24.34	24.50
16.0	3.8	27.81	28.01

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	15011	15011	15011
45	20155	19016	20348
55	21338	19721	21287
65	21703	19924	21876
75	18915	16060	19091
85	11901	8800	11948

Spacing Criterion

0 degree plane:	1.7
90 degree plane:	1.8
180 degree plane:	1.7
270 degree plane:	1.8



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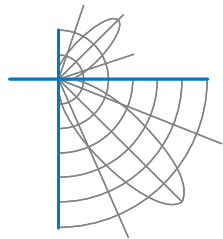
UGR TABLE - CORRECTED

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	22.7	24.3	23.1	24.8	25.2	22.7	24.4	23.1	24.8	25.3
	3H	24.9	26.4	25.4	26.9	27.4	25.0	26.5	25.4	26.9	27.4
	4H	25.8	27.2	26.3	27.7	28.2	25.8	27.3	26.3	27.7	28.3
	6H	26.4	27.8	26.9	28.3	28.8	26.5	27.8	27.0	28.3	28.8
	8H	26.7	28.0	27.2	28.5	29.0	26.7	28.0	27.2	28.5	29.0
	12H	26.8	28.1	27.3	28.6	29.1	26.9	28.1	27.4	28.6	29.2
4H	2H	23.5	24.9	23.9	25.4	25.9	23.5	24.9	24.0	25.4	25.9
	3H	25.9	27.1	26.4	27.6	28.2	25.9	27.2	26.4	27.7	28.2
	4H	26.9	28.0	27.4	28.5	29.1	26.9	28.0	27.4	28.6	29.1
	6H	27.6	28.6	28.2	29.2	29.8	27.7	28.7	28.2	29.2	29.8
	8H	27.9	28.9	28.5	29.4	30.0	28.0	28.9	28.5	29.4	30.0
	12H	28.1	29.0	28.7	29.6	30.2	28.2	29.0	28.7	29.6	30.2
8H	4H	27.2	28.2	27.8	28.7	29.3	27.3	28.2	27.8	28.7	29.3
	6H	28.1	28.9	28.7	29.5	30.1	28.1	28.9	28.7	29.5	30.1
	8H	28.5	29.2	29.0	29.8	30.4	28.5	29.2	29.1	29.8	30.4
	12H	28.8	29.4	29.4	30.0	30.7	28.8	29.4	29.4	30.0	30.7
12H	4H	27.3	28.1	27.8	28.7	29.3	27.3	28.2	27.9	28.7	29.3
	6H	28.2	28.9	28.8	29.5	30.1	28.2	28.9	28.8	29.5	30.2
	8H	28.6	29.2	29.2	29.8	30.5	28.6	29.3	29.2	29.8	30.5

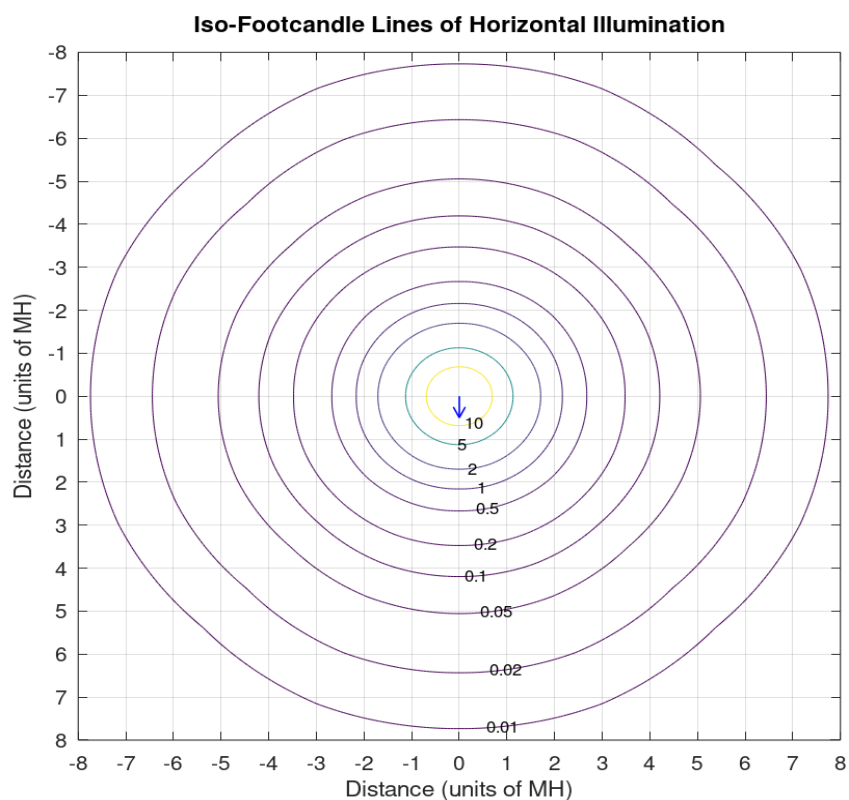
Maximum UGR = 30.7



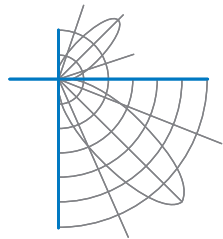
Report of Test

LLIA001282-003

Iso-Illuminance Plot

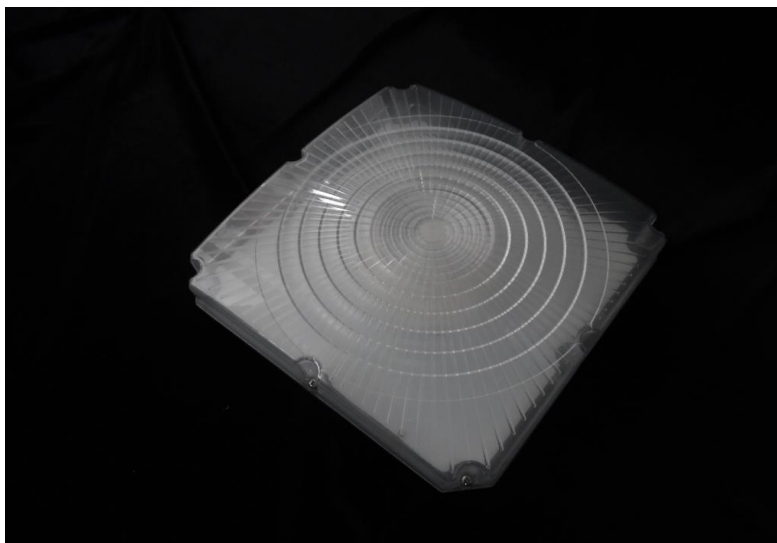
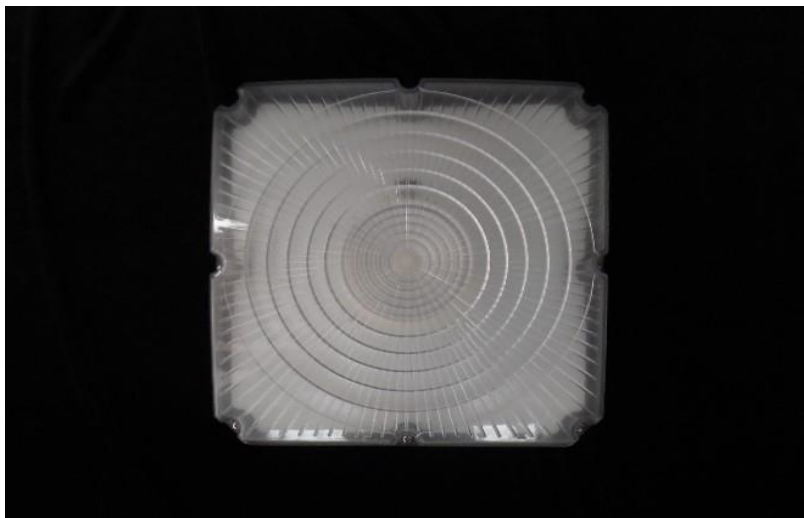


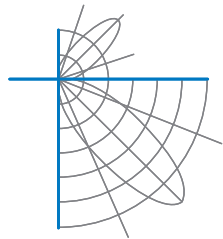
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Additional Pictures of Test Subject





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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-41-14 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.