

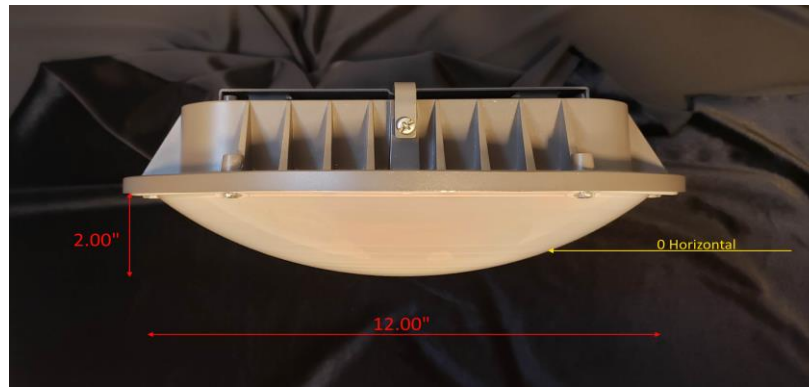


Report of Test

LLIA001499-002

Indoor Distribution Photometry Test Report

Catalog Number: CPR-60WPCTS-BZ - 5000K - 40W Setting
Surface mounted downlight, cast aluminum housing,
white plastic reflector, frosted plastic enclosure.
240 LEDs, 120 cool white and 120 warm white LEDs
One Fahold FT-58E-054B LED driver



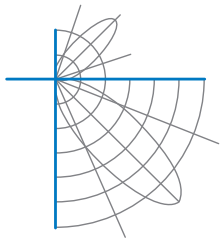
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	6008.8 Lumens
Input Current	0.3363 A	Total Efficacy	149.5 Lm/W
Input Power	40.18 W	Downward Flux	5851.2 Lumens
Frequency	60.00 Hz	Downward Flux	97.4 % of Total
Power Factor	0.996		
Current THD	5.3 %		

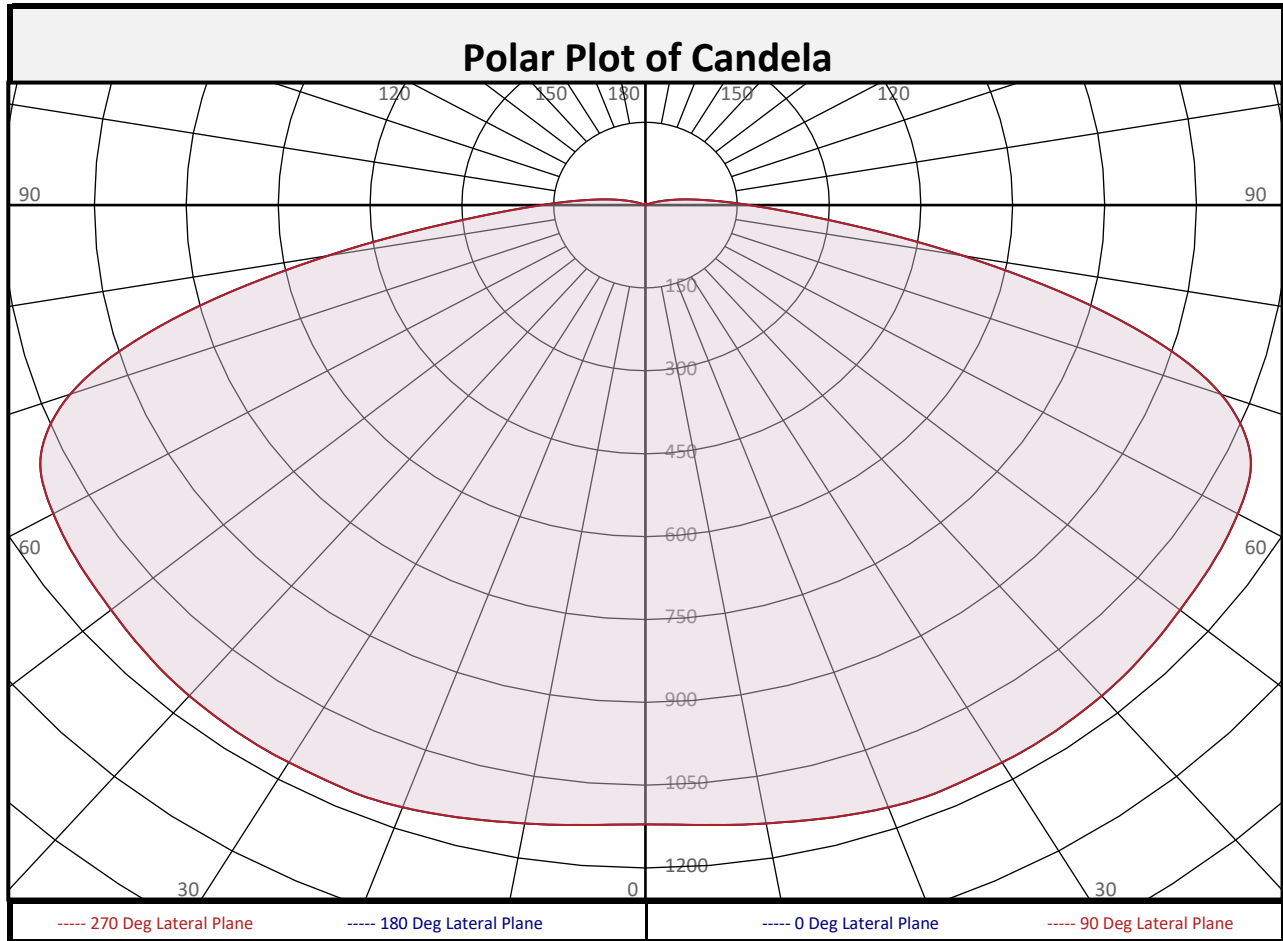
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 07/26/2021
Report date: 07/27/2021

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	107.9	1.8%	90-100	115.5	1.9%	0-20	433.8	7.2%	10-20	325.9	5.4%	100-110	34.0	0.6%	0-30	972.7	16.2%	20-30	538.9	9.0%	110-120	4.2	0.1%	0-40	1703	28.3%	30-40	730.7	12.2%	120-130	1.6	0.0%	0-60	3608	60.0%	40-50	890.8	14.8%	130-140	1.4	0.0%	0-80	5509	91.7%	50-60	1013	16.9%	140-150	0.8	0.0%	10-90	5743	95.6%	60-70	1071	17.8%	150-160	0.3	0.0%	20-50	2160	35.9%	70-80	830.8	13.8%	160-170	0.0	0.0%	40-90	4148	69.0%	80-90	342.2	5.7%	170-180	0.0	0.0%	60-90	2244	37.3%	0-90	5851	97.4%	90-180	157.7	2.6%	0-180	6009	100.0%

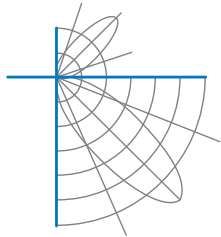


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	1121	1121	1121	1121	1121	1121	1121	1121	1121
	2.5	1122	1122	1122	1122	1122	1122	1122	1122	1122
	5	1126	1126	1126	1126	1126	1126	1126	1126	1126
	7.5	1131	1131	1131	1131	1131	1131	1131	1131	1131
	10	1136	1136	1136	1136	1136	1136	1136	1136	1136
	12.5	1142	1142	1142	1142	1142	1142	1142	1142	1142
	15	1149	1149	1149	1149	1149	1149	1149	1149	1149
	17.5	1155	1155	1155	1155	1155	1155	1155	1155	1155
	20	1160	1160	1160	1160	1160	1160	1160	1160	1160
	22.5	1164	1164	1164	1164	1164	1164	1164	1164	1164
	25	1165	1165	1165	1165	1165	1165	1165	1165	1165
	27.5	1165	1165	1165	1165	1165	1165	1165	1165	1165
	30	1165	1165	1165	1165	1165	1165	1165	1165	1165
	32.5	1165	1165	1165	1165	1165	1165	1165	1165	1165
	35	1164	1164	1164	1164	1164	1164	1164	1164	1164
	37.5	1162	1162	1162	1162	1162	1162	1162	1162	1162
	40	1160	1160	1160	1160	1160	1160	1160	1160	1160
	42.5	1156	1156	1156	1156	1156	1156	1156	1156	1156
	45	1151	1151	1151	1151	1151	1151	1151	1151	1151
	47.5	1146	1146	1146	1146	1146	1146	1146	1146	1146
50	1140	1140	1140	1140	1140	1140	1140	1140	1140	
52.5	1135	1135	1135	1135	1135	1135	1135	1135	1135	
55	1130	1130	1130	1130	1130	1130	1130	1130	1130	
57.5	1125	1125	1125	1125	1125	1125	1125	1125	1125	
60	1117	1117	1117	1117	1117	1117	1117	1117	1117	
62.5	1108	1108	1108	1108	1108	1108	1108	1108	1108	
65	1091	1091	1091	1091	1091	1091	1091	1091	1091	
67.5	1056	1056	1056	1056	1056	1056	1056	1056	1056	
70	1000	1000	1000	1000	1000	1000	1000	1000	1000	
72.5	915	915	915	915	915	915	915	915	915	
75	801	801	801	801	801	801	801	801	801	
77.5	665	665	665	665	665	665	665	665	665	
80	526	526	526	526	526	526	526	526	526	
82.5	399	399	399	399	399	399	399	399	399	
85	295	295	295	295	295	295	295	295	295	
87.5	222	222	222	222	222	222	222	222	222	
90	170	170	170	170	170	170	170	170	170	



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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	90	170	170	170	170	170	170	170	170	170
	92.5	132	132	132	132	132	132	132	132	132
	95	101	101	101	101	101	101	101	101	101
	97.5	78	78	78	78	78	78	78	78	78
	100	59	59	59	59	59	59	59	59	59
	102.5	43	43	43	43	43	43	43	43	43
	105	30	30	30	30	30	30	30	30	30
	107.5	20	20	20	20	20	20	20	20	20
	110	12	12	12	12	12	12	12	12	12
	112.5	6	6	6	6	6	6	6	6	6
	115	3	3	3	3	3	3	3	3	3
	117.5	1	1	1	1	1	1	1	1	1
	120	2	2	2	2	2	2	2	2	2
	122.5	2	2	2	2	2	2	2	2	2
	125	2	2	2	2	2	2	2	2	2
	127.5	2	2	2	2	2	2	2	2	2
	130	2	2	2	2	2	2	2	2	2
	132.5	2	2	2	2	2	2	2	2	2
	135	2	2	2	2	2	2	2	2	2
	137.5	2	2	2	2	2	2	2	2	2
	140	2	2	2	2	2	2	2	2	2
	142.5	1	1	1	1	1	1	1	1	1
	145	1	1	1	1	1	1	1	1	1
	147.5	1	1	1	1	1	1	1	1	1
	150	1	1	1	1	1	1	1	1	1
	152.5	1	1	1	1	1	1	1	1	1
	155	1	1	1	1	1	1	1	1	1
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	118	118	118	118		115	115	115	115		110	110	110		104	104	104		100	100	100		97
1	105	98	93	88		101	96	91	86		91	87	83		86	83	80		82	79	77		74
2	93	83	74	67		90	80	73	66		76	70	64		72	67	62		69	64	60		58
3	83	71	61	53		80	69	60	52		65	57	51		62	55	50		59	53	48		46
4	75	61	51	43		73	60	50	43		57	48	42		54	47	41		51	45	40		37
5	69	54	44	36		66	52	43	36		50	41	35		48	40	34		45	39	34		31
6	63	48	38	31		61	47	37	30		44	36	30		42	35	29		41	34	29		26
7	58	43	33	26		56	42	33	26		40	32	26		38	31	25		37	30	25		23
8	54	39	29	23		52	38	29	23		36	28	23		35	28	22		33	27	22		20
9	50	35	26	20		48	35	26	20		33	25	20		32	25	20		31	24	19		17
10	47	32	24	18		45	32	24	18		31	23	18		29	23	18		28	22	17		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	31.1	9.49	9.49	
8.0	17.5	12.65	12.65	
10.0	11.2	15.81	15.81	
12.0	7.8	18.97	18.97	
14.0	5.7	22.13	22.13	
16.0	4.4	25.30	25.30	

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	15364	15364	15364
45	18400	18400	18400
55	20725	20725	20725
65	24310	24310	24310
75	23666	23666	23666
85	13539	13539	13539

Spacing Criterion	
Spacing Criterion:	1.6



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UGR TABLE - CORRECTED

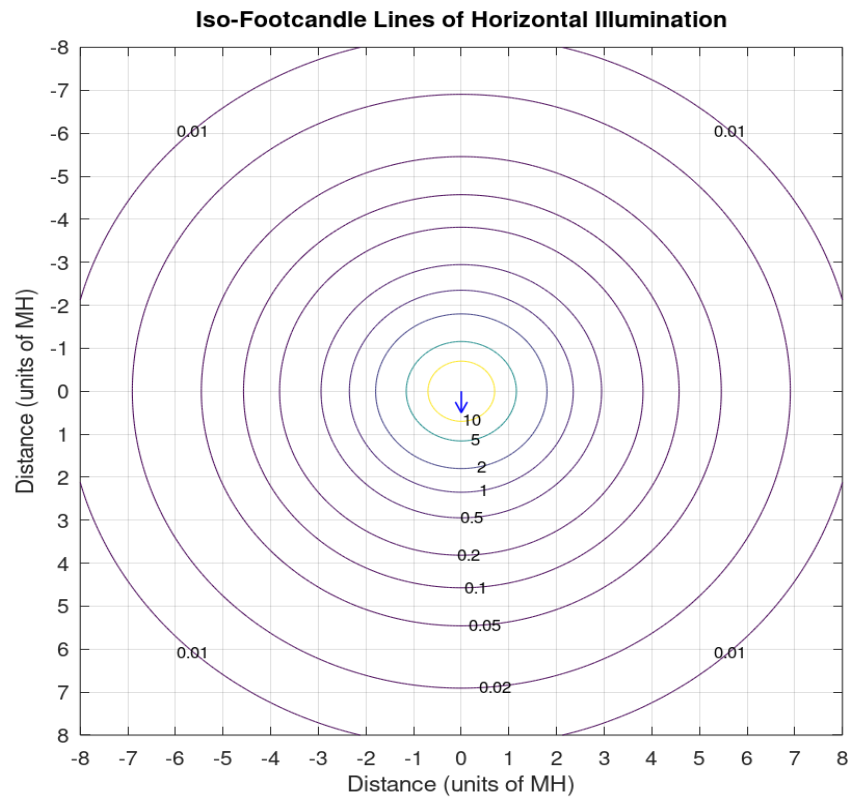
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	22.1	23.8	22.5	24.2	24.6	22.1	23.8	22.5	24.2	24.6
	3H	25.1	26.7	25.5	27.1	27.5	25.1	26.7	25.5	27.1	27.5
	4H	26.2	27.7	26.6	28.1	28.6	26.2	27.7	26.6	28.1	28.6
	6H	26.9	28.4	27.4	28.8	29.3	26.9	28.4	27.4	28.8	29.3
	8H	27.2	28.6	27.6	29.0	29.5	27.2	28.6	27.6	29.0	29.5
	12H	27.4	28.7	27.8	29.1	29.6	27.4	28.7	27.8	29.1	29.6
4H	2H	23.0	24.6	23.5	25.0	25.4	23.0	24.6	23.5	25.0	25.4
	3H	26.1	27.5	26.6	27.9	28.4	26.1	27.5	26.6	27.9	28.4
	4H	27.4	28.6	27.8	29.1	29.6	27.4	28.6	27.8	29.1	29.6
	6H	28.3	29.3	28.8	29.8	30.4	28.3	29.3	28.8	29.8	30.4
	8H	28.6	29.6	29.1	30.1	30.6	28.6	29.6	29.1	30.1	30.6
8H	12H	28.8	29.7	29.3	30.2	30.8	28.8	29.7	29.3	30.2	30.8
	4H	27.8	28.8	28.3	29.3	29.9	27.8	28.8	28.3	29.3	29.9
	6H	28.8	29.7	29.4	30.2	30.8	28.8	29.7	29.4	30.2	30.8
	8H	29.2	30.0	29.7	30.5	31.1	29.2	30.0	29.7	30.5	31.1
12H	12H	29.5	30.2	30.1	30.7	31.3	29.5	30.2	30.1	30.7	31.3
	4H	27.9	28.8	28.4	29.3	29.9	27.9	28.8	28.4	29.3	29.9
	6H	28.9	29.7	29.5	30.2	30.8	28.9	29.7	29.5	30.2	30.8
	8H	29.3	30.0	29.9	30.6	31.2	29.3	30.0	29.9	30.6	31.2

Maximum UGR = 31.3

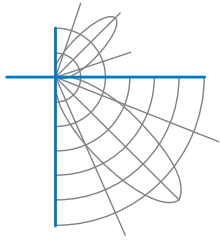


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Iso-Illuminance Plot

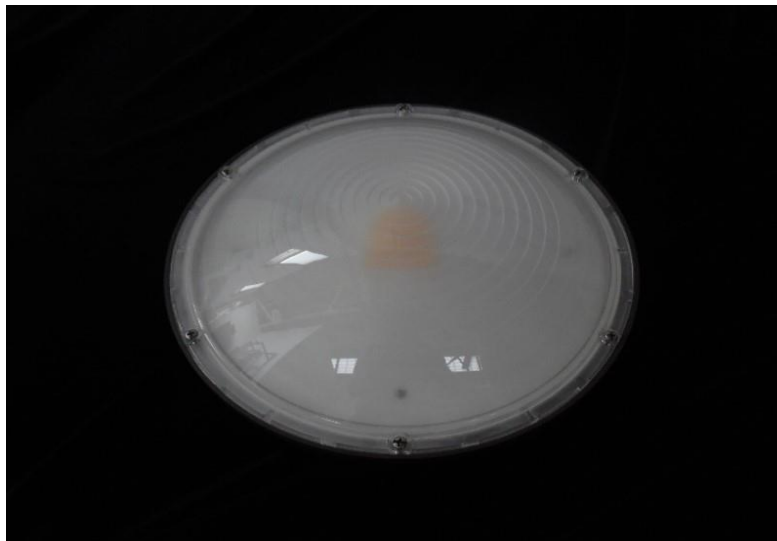
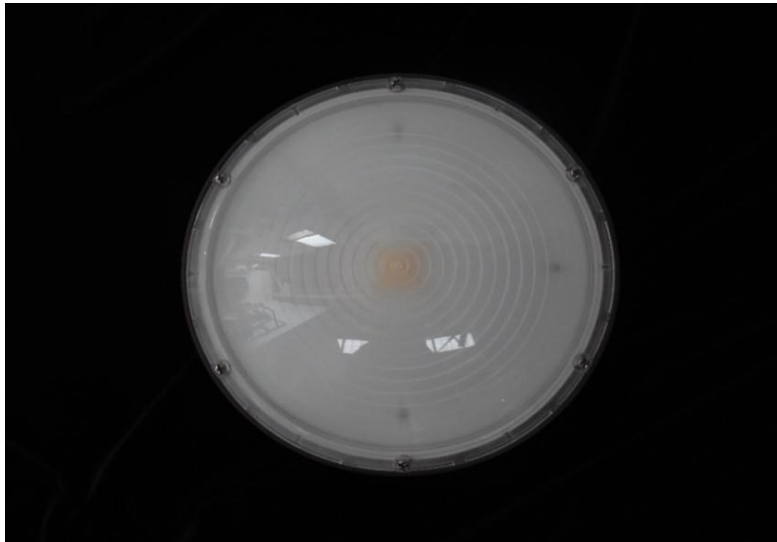


The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





Report of Test

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Test Distance 9.5 m
Ambient Temperature 25.2 °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.