

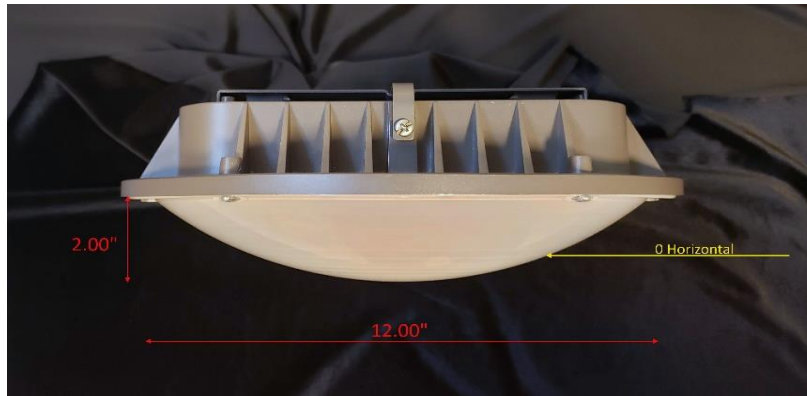


Report of Test

LLIA001499-001

Indoor Distribution Photometry Test Report

Catalog Number: CPR-60WPCTS-BZ - 5000K - 30W 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



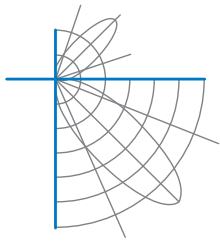
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	4670.8 Lumens
Input Current	0.2537 A	Total Efficacy	154.4 Lm/W
Input Power	30.26 W	Downward Flux	4548.0 Lumens
Frequency	60.00 Hz	Downward Flux	97.4 % of Total
Power Factor	0.994		
Current THD	6.5 %		

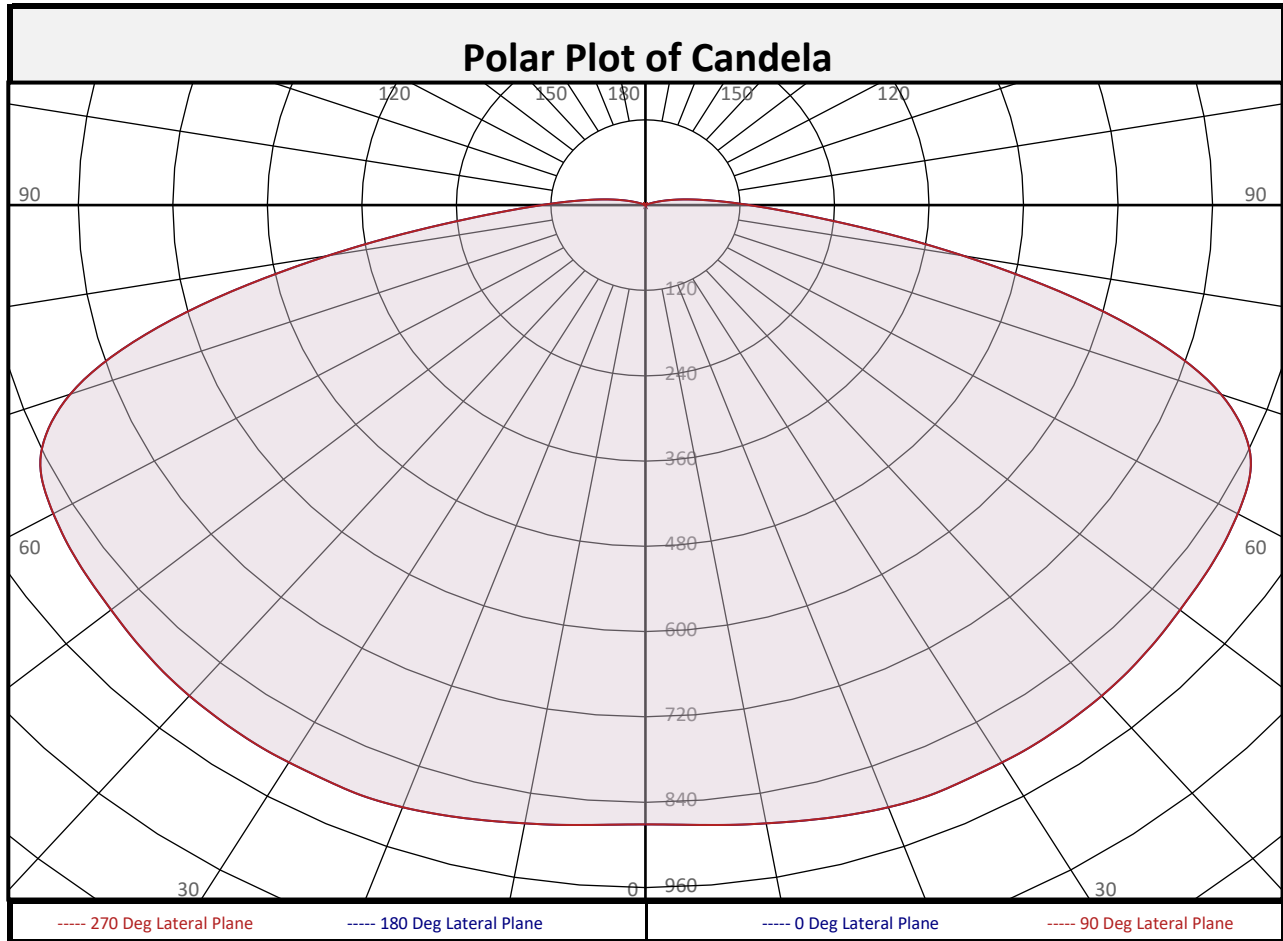
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

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

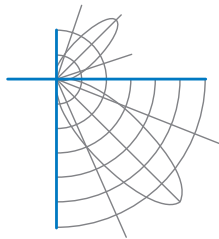
Signed: _____



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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	83.9	1.8%	90-100	89.8	1.9%	0-20	337.2	7.2%	10-20	253.3	5.4%	100-110	26.4	0.6%	0-30	756.0	16.2%	20-30	418.8	9.0%	110-120	3.2	0.1%	0-40	1324	28.3%	30-40	567.9	12.2%	120-130	1.3	0.0%	0-60	2804	60.0%	40-50	692.4	14.8%	130-140	1.1	0.0%	0-80	4282	91.7%	50-60	787.5	16.9%	140-150	0.6	0.0%	10-90	4464	95.6%	60-70	832.1	17.8%	150-160	0.2	0.0%	20-50	1679	35.9%	70-80	645.9	13.8%	160-170	0.0	0.0%	40-90	3224	69.0%	80-90	266.3	5.7%	170-180	0.0	0.0%	60-90	1744	37.3%	0-90	4548	97.4%	90-180	122.7	2.6%	0-180	4671	100.0%

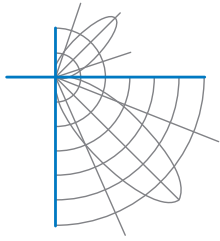


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	871	871	871	871	871	871	871	871	871
	2.5	872	872	872	872	872	872	872	872	872
	5	875	875	875	875	875	875	875	875	875
	7.5	879	879	879	879	879	879	879	879	879
	10	883	883	883	883	883	883	883	883	883
	12.5	888	888	888	888	888	888	888	888	888
	15	893	893	893	893	893	893	893	893	893
	17.5	897	897	897	897	897	897	897	897	897
	20	902	902	902	902	902	902	902	902	902
	22.5	905	905	905	905	905	905	905	905	905
	25	906	906	906	906	906	906	906	906	906
	27.5	905	905	905	905	905	905	905	905	905
	30	905	905	905	905	905	905	905	905	905
	32.5	906	906	906	906	906	906	906	906	906
	35	905	905	905	905	905	905	905	905	905
	37.5	903	903	903	903	903	903	903	903	903
	40	901	901	901	901	901	901	901	901	901
	42.5	898	898	898	898	898	898	898	898	898
	45	895	895	895	895	895	895	895	895	895
	47.5	890	890	890	890	890	890	890	890	890
50	886	886	886	886	886	886	886	886	886	
52.5	882	882	882	882	882	882	882	882	882	
55	879	879	879	879	879	879	879	879	879	
57.5	874	874	874	874	874	874	874	874	874	
60	868	868	868	868	868	868	868	868	868	
62.5	861	861	861	861	861	861	861	861	861	
65	848	848	848	848	848	848	848	848	848	
67.5	820	820	820	820	820	820	820	820	820	
70	777	777	777	777	777	777	777	777	777	
72.5	712	712	712	712	712	712	712	712	712	
75	623	623	623	623	623	623	623	623	623	
77.5	517	517	517	517	517	517	517	517	517	
80	409	409	409	409	409	409	409	409	409	
82.5	310	310	310	310	310	310	310	310	310	
85	230	230	230	230	230	230	230	230	230	
87.5	173	173	173	173	173	173	173	173	173	
90	132	132	132	132	132	132	132	132	132	



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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	132	132	132	132	132	132	132	132	132
	92.5	102	102	102	102	102	102	102	102	102
	95	79	79	79	79	79	79	79	79	79
	97.5	60	60	60	60	60	60	60	60	60
	100	46	46	46	46	46	46	46	46	46
	102.5	34	34	34	34	34	34	34	34	34
	105	24	24	24	24	24	24	24	24	24
	107.5	15	15	15	15	15	15	15	15	15
	110	9	9	9	9	9	9	9	9	9
	112.5	5	5	5	5	5	5	5	5	5
	115	2	2	2	2	2	2	2	2	2
	117.5	1	1	1	1	1	1	1	1	1
	120	1	1	1	1	1	1	1	1	1
	122.5	1	1	1	1	1	1	1	1	1
	125	1	1	1	1	1	1	1	1	1
	127.5	2	2	2	2	2	2	2	2	2
	130	2	2	2	2	2	2	2	2	2
	132.5	1	1	1	1	1	1	1	1	1
	135	1	1	1	1	1	1	1	1	1
	137.5	1	1	1	1	1	1	1	1	1
140	1	1	1	1	1	1	1	1	1	
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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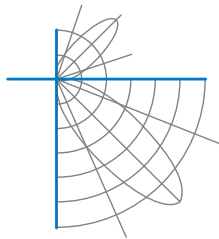
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	118	118	118	118		115	115	115	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	24.2	9.49	9.49	
8.0	13.6	12.65	12.65	
10.0	8.7	15.81	15.81	
12.0	6.1	18.97	18.97	
14.0	4.4	22.13	22.13	
16.0	3.4	25.30	25.30	

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	11941	11941	11941
45	14302	14302	14302
55	16109	16109	16109
65	18894	18894	18894
75	18395	18395	18395
85	10536	10536	10536

Spacing Criterion	
Spacing Criterion:	1.6



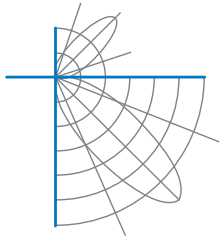
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UGR TABLE - CORRECTED

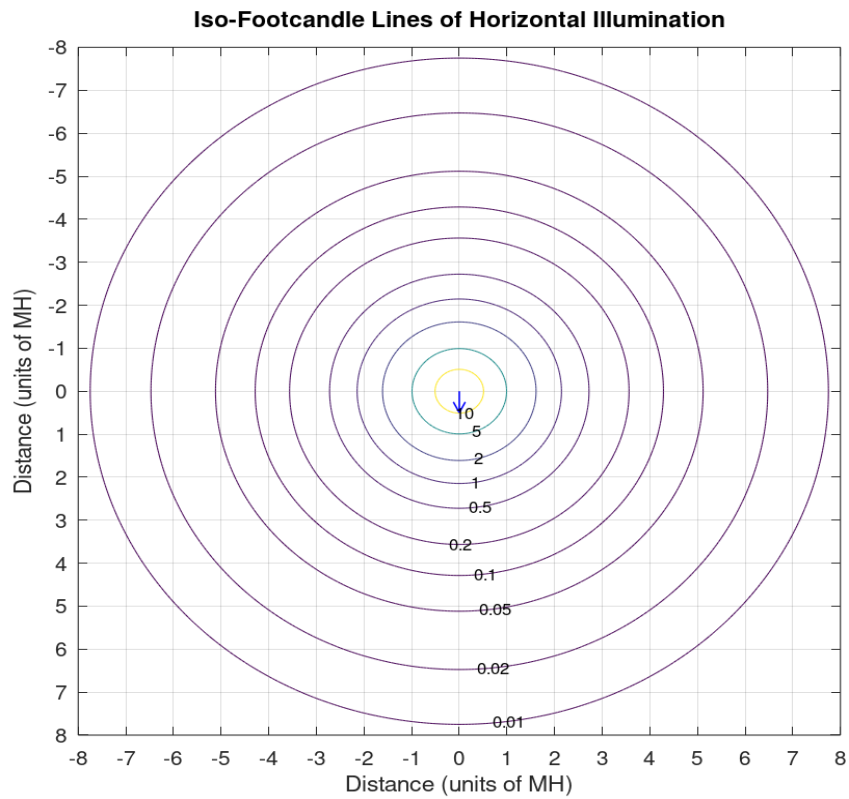
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	21.3	23.0	21.7	23.4	23.8	21.3	23.0	21.7	23.4	23.8
	3H	24.3	25.9	24.7	26.3	26.7	24.3	25.9	24.7	26.3	26.7
	4H	25.4	26.9	25.8	27.3	27.8	25.4	26.9	25.8	27.3	27.8
	6H	26.1	27.6	26.6	28.0	28.5	26.1	27.6	26.6	28.0	28.5
	8H	26.4	27.8	26.8	28.2	28.7	26.4	27.8	26.8	28.2	28.7
	12H	26.6	27.9	27.0	28.3	28.8	26.6	27.9	27.0	28.3	28.8
4H	2H	22.2	23.8	22.7	24.2	24.6	22.2	23.8	22.7	24.2	24.6
	3H	25.3	26.7	25.8	27.1	27.6	25.3	26.7	25.8	27.1	27.6
	4H	26.6	27.8	27.0	28.3	28.8	26.6	27.8	27.0	28.3	28.8
	6H	27.5	28.5	28.0	29.0	29.6	27.5	28.5	28.0	29.0	29.6
	8H	27.8	28.8	28.3	29.3	29.8	27.8	28.8	28.3	29.3	29.8
	12H	28.0	28.9	28.5	29.4	30.0	28.0	28.9	28.5	29.4	30.0
8H	4H	27.0	28.0	27.5	28.5	29.1	27.0	28.0	27.5	28.5	29.1
	6H	28.0	28.9	28.6	29.4	30.0	28.0	28.9	28.6	29.4	30.0
	8H	28.4	29.2	28.9	29.7	30.3	28.4	29.2	28.9	29.7	30.3
	12H	28.7	29.4	29.3	29.9	30.5	28.7	29.4	29.3	29.9	30.5
12H	4H	27.1	28.0	27.6	28.5	29.1	27.1	28.0	27.6	28.5	29.1
	6H	28.1	28.9	28.7	29.4	30.0	28.1	28.9	28.7	29.4	30.0
	8H	28.5	29.2	29.1	29.8	30.4	28.5	29.2	29.1	29.8	30.4

Maximum UGR = 30.5

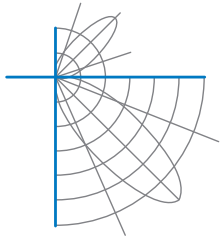


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Iso-Illuminance Plot

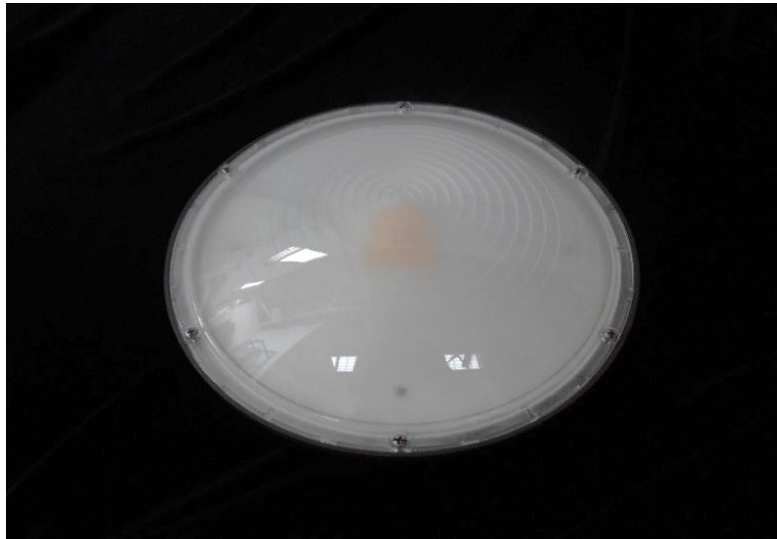
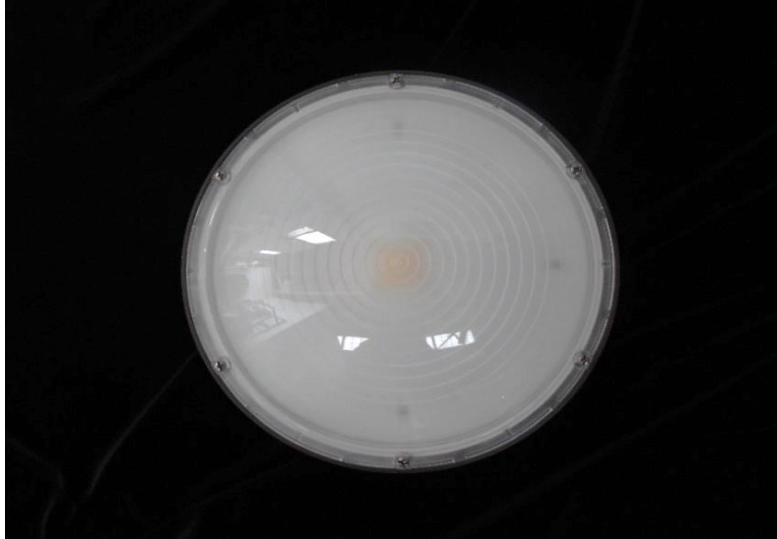


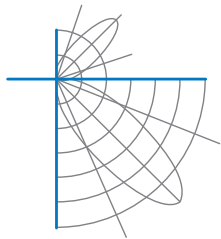
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





Report of Test

LLIA001499-001

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.