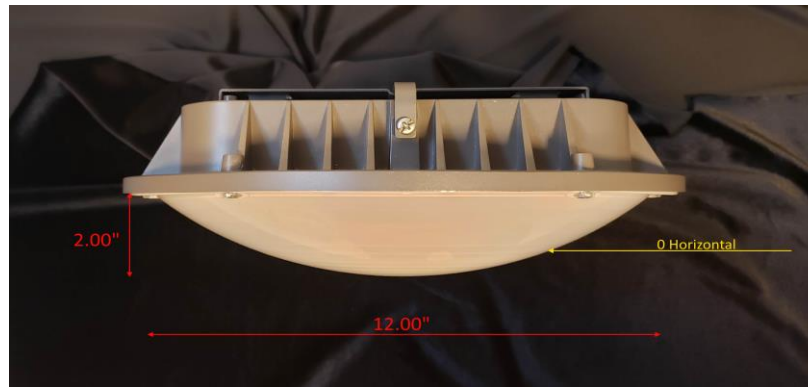


Report of Test

LLIA001499-003

Indoor Distribution Photometry Test Report

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



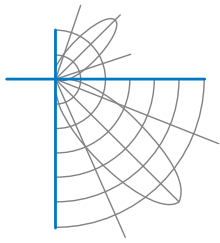
Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 V	Luminous Flux	8387.3 Lumens
Input Current	0.5101 A	Total Efficacy	137.4 Lm/W
Input Power	61.06 W	Downward Flux	8167.7 Lumens
Frequency	60.00 Hz	Downward Flux	97.4 % of Total
Power Factor	0.997		
Current THD	4.2 %		

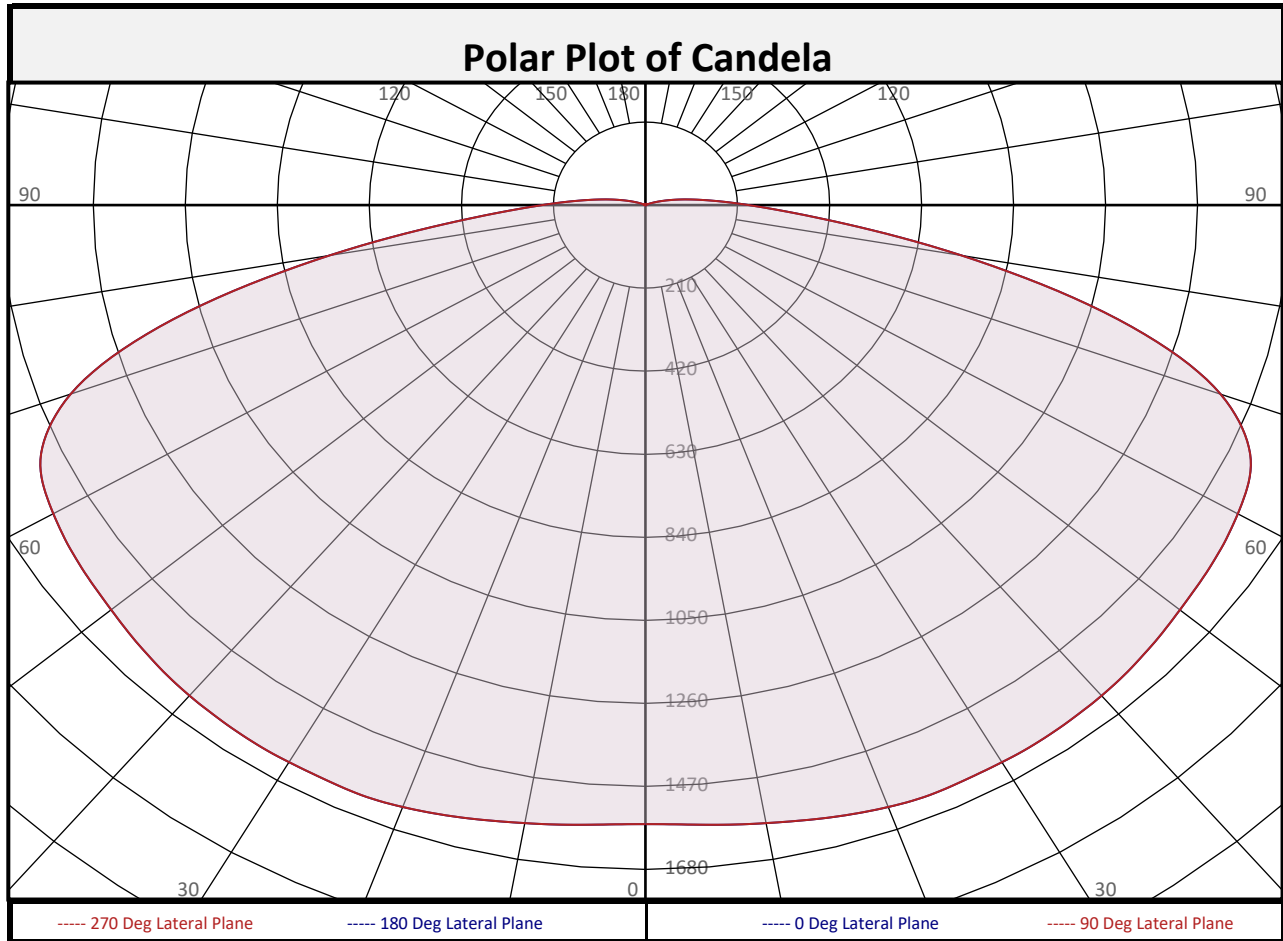
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

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

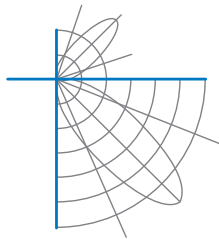
Signed: _____



Report of Test
LLIA001499-003



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	150.7	1.8%	90-100	160.6	1.9%	0-20	605.8	7.2%	10-20	455.1	5.4%	100-110	47.4	0.6%	0-30	1358	16.2%			
20-30	752.5	9.0%	110-120	5.8	0.1%	0-40	2379	28.4%	30-40	1020	12.2%	120-130	2.2	0.0%	0-60	5038	60.1%	40-50	1244	14.8%
50-60	1415	16.9%	130-140	1.9	0.0%	0-80	7692	91.7%	60-70	1495	17.8%	140-150	1.1	0.0%	0-90	8168	97.4%	70-80	1158	13.8%
80-90	475.8	5.7%	150-160	0.4	0.0%	10-90	8017	95.6%	90-180	219.6	2.6%	160-170	0.0	0.0%	20-50	3017	36.0%			
												40-90	5789	69.0%						
												60-90	3129	37.3%						
												0-180	8387	100.0%						

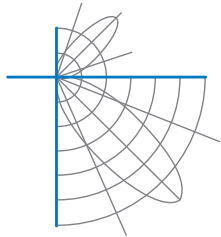


Report of Test

LLIA001499-003

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	1565	1565	1565	1565	1565	1565	1565	1565	1565
	2.5	1567	1567	1567	1567	1567	1567	1567	1567	1567
	5	1573	1573	1573	1573	1573	1573	1573	1573	1573
	7.5	1580	1580	1580	1580	1580	1580	1580	1580	1580
	10	1587	1587	1587	1587	1587	1587	1587	1587	1587
	12.5	1595	1595	1595	1595	1595	1595	1595	1595	1595
	15	1604	1604	1604	1604	1604	1604	1604	1604	1604
	17.5	1612	1612	1612	1612	1612	1612	1612	1612	1612
	20	1620	1620	1620	1620	1620	1620	1620	1620	1620
	22.5	1625	1625	1625	1625	1625	1625	1625	1625	1625
	25	1627	1627	1627	1627	1627	1627	1627	1627	1627
	27.5	1626	1626	1626	1626	1626	1626	1626	1626	1626
	30	1627	1627	1627	1627	1627	1627	1627	1627	1627
	32.5	1627	1627	1627	1627	1627	1627	1627	1627	1627
	35	1625	1625	1625	1625	1625	1625	1625	1625	1625
	37.5	1622	1622	1622	1622	1622	1622	1622	1622	1622
	40	1619	1619	1619	1619	1619	1619	1619	1619	1619
	42.5	1614	1614	1614	1614	1614	1614	1614	1614	1614
	45	1607	1607	1607	1607	1607	1607	1607	1607	1607
	47.5	1600	1600	1600	1600	1600	1600	1600	1600	1600
50	1592	1592	1592	1592	1592	1592	1592	1592	1592	
52.5	1585	1585	1585	1585	1585	1585	1585	1585	1585	
55	1579	1579	1579	1579	1579	1579	1579	1579	1579	
57.5	1571	1571	1571	1571	1571	1571	1571	1571	1571	
60	1561	1561	1561	1561	1561	1561	1561	1561	1561	
62.5	1548	1548	1548	1548	1548	1548	1548	1548	1548	
65	1524	1524	1524	1524	1524	1524	1524	1524	1524	
67.5	1474	1474	1474	1474	1474	1474	1474	1474	1474	
70	1396	1396	1396	1396	1396	1396	1396	1396	1396	
72.5	1277	1277	1277	1277	1277	1277	1277	1277	1277	
75	1116	1116	1116	1116	1116	1116	1116	1116	1116	
77.5	926	926	926	926	926	926	926	926	926	
80	732	732	732	732	732	732	732	732	732	
82.5	555	555	555	555	555	555	555	555	555	
85	410	410	410	410	410	410	410	410	410	
87.5	308	308	308	308	308	308	308	308	308	
90	236	236	236	236	236	236	236	236	236	

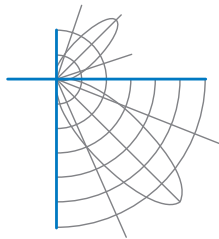


Report of Test

LLIA001499-003

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	236	236	236	236	236	236	236	236	236
	92.5	183	183	183	183	183	183	183	183	183
	95	141	141	141	141	141	141	141	141	141
	97.5	108	108	108	108	108	108	108	108	108
	100	82	82	82	82	82	82	82	82	82
	102.5	60	60	60	60	60	60	60	60	60
	105	42	42	42	42	42	42	42	42	42
	107.5	28	28	28	28	28	28	28	28	28
	110	17	17	17	17	17	17	17	17	17
	112.5	9	9	9	9	9	9	9	9	9
	115	4	4	4	4	4	4	4	4	4
	117.5	2	2	2	2	2	2	2	2	2
	120	2	2	2	2	2	2	2	2	2
	122.5	2	2	2	2	2	2	2	2	2
	125	3	3	3	3	3	3	3	3	3
	127.5	3	3	3	3	3	3	3	3	3
	130	3	3	3	3	3	3	3	3	3
	132.5	3	3	3	3	3	3	3	3	3
	135	3	3	3	3	3	3	3	3	3
	137.5	2	2	2	2	2	2	2	2	2
	140	2	2	2	2	2	2	2	2	2
	142.5	2	2	2	2	2	2	2	2	2
	145	2	2	2	2	2	2	2	2	2
	147.5	2	2	2	2	2	2	2	2	2
150	2	2	2	2	2	2	2	2	2	
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	



Report of Test

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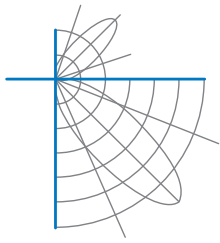
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																						
Effective Floor Cavity Reflectance 0.20																						
RC	80					70					50				30				10			0
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10	0
RCR																						
0	118	118	118	118		115	115	115	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		45	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	43.5	9.49	9.49	
8.0	24.5	12.65	12.65	
10.0	15.7	15.81	15.81	
12.0	10.9	18.97	18.97	
14.0	8.0	22.14	22.14	
16.0	6.1	25.30	25.30	

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	21454	21454	21454
45	25700	25700	25700
55	28953	28953	28953
65	33960	33960	33960
75	32988	32988	32988
85	18818	18818	18818

Spacing Criterion	
Spacing Criterion:	1.6



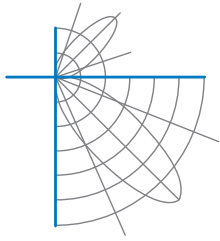
Report of Test

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UGR TABLE - CORRECTED

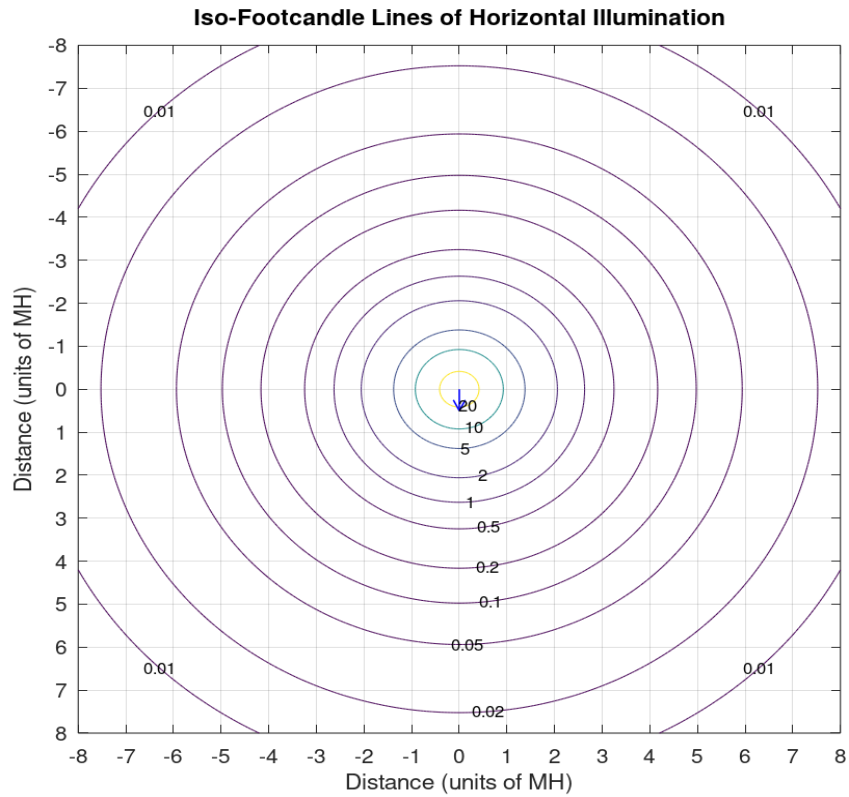
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	23.3	25.0	23.7	25.4	25.8	23.3	25.0	23.7	25.4	25.8
	3H	26.3	27.9	26.7	28.3	28.7	26.3	27.9	26.7	28.3	28.7
	4H	27.4	28.9	27.8	29.3	29.8	27.4	28.9	27.8	29.3	29.8
	6H	28.1	29.6	28.6	30.0	30.5	28.1	29.6	28.6	30.0	30.5
	8H	28.4	29.8	28.8	30.2	30.7	28.4	29.8	28.8	30.2	30.7
	12H	28.6	29.9	29.0	30.3	30.8	28.6	29.9	29.0	30.3	30.8
4H	2H	24.2	25.8	24.7	26.2	26.6	24.2	25.8	24.7	26.2	26.6
	3H	27.3	28.7	27.8	29.1	29.6	27.3	28.7	27.8	29.1	29.6
	4H	28.6	29.8	29.0	30.3	30.8	28.6	29.8	29.0	30.3	30.8
	6H	29.5	30.5	29.9	31.0	31.5	29.5	30.5	29.9	31.0	31.5
	8H	29.8	30.8	30.2	31.3	31.8	29.8	30.8	30.2	31.3	31.8
	12H	30.0	30.9	30.5	31.4	32.0	30.0	30.9	30.5	31.4	32.0
8H	4H	29.0	30.0	29.5	30.5	31.1	29.0	30.0	29.5	30.5	31.1
	6H	30.0	30.9	30.5	31.4	32.0	30.0	30.9	30.5	31.4	32.0
	8H	30.4	31.2	30.9	31.7	32.3	30.4	31.2	30.9	31.7	32.3
	12H	30.7	31.4	31.2	31.9	32.5	30.7	31.4	31.2	31.9	32.5
12H	4H	29.1	30.0	29.6	30.5	31.1	29.1	30.0	29.6	30.5	31.1
	6H	30.1	30.9	30.7	31.4	32.0	30.1	30.9	30.7	31.4	32.0
	8H	30.5	31.2	31.1	31.8	32.4	30.5	31.2	31.1	31.8	32.4

Maximum UGR = 32.5

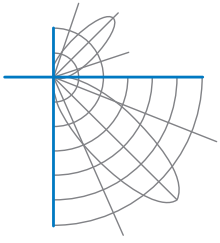


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Iso-Illuminance Plot

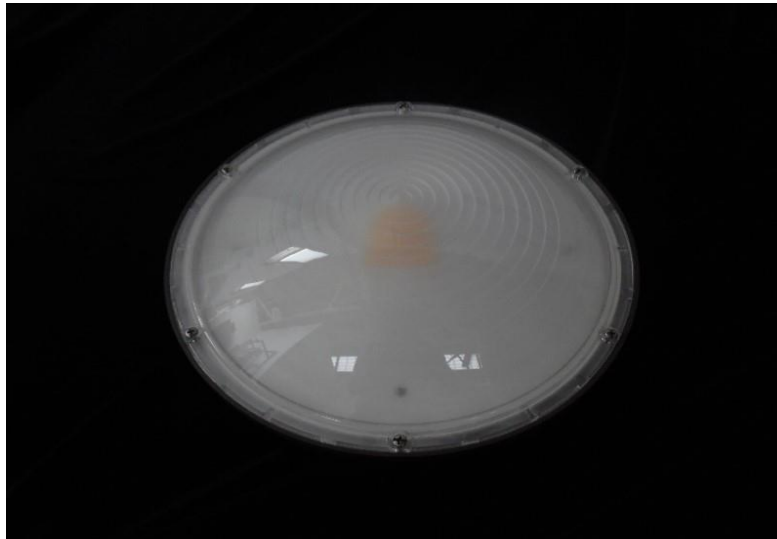


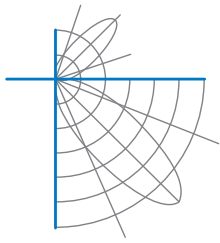
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





Report of Test

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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.