

Report of Test

LLIA002581-003

Indoor Distribution Photometry Test Report

Catalog Number: RDL6-10W-CS 4000K Setting
Recessed mounted, formed white painted aluminum housing,
white interior reflector, diffuse white plastic enclosure.
64 white LEDs, switch set for 4000K.
One Topaz RDL6-10W-CS LED driver in formed steel box.



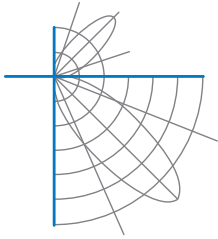
Prepared For:
Topaz Lighting, A Southwire Company
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	781.0 Lumens
Input Current	0.0777 A	Total Efficacy	86.4 Lm/W
Input Power	9.04 W	Downward Flux	781.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.970		
Current THD	14.2 %		

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

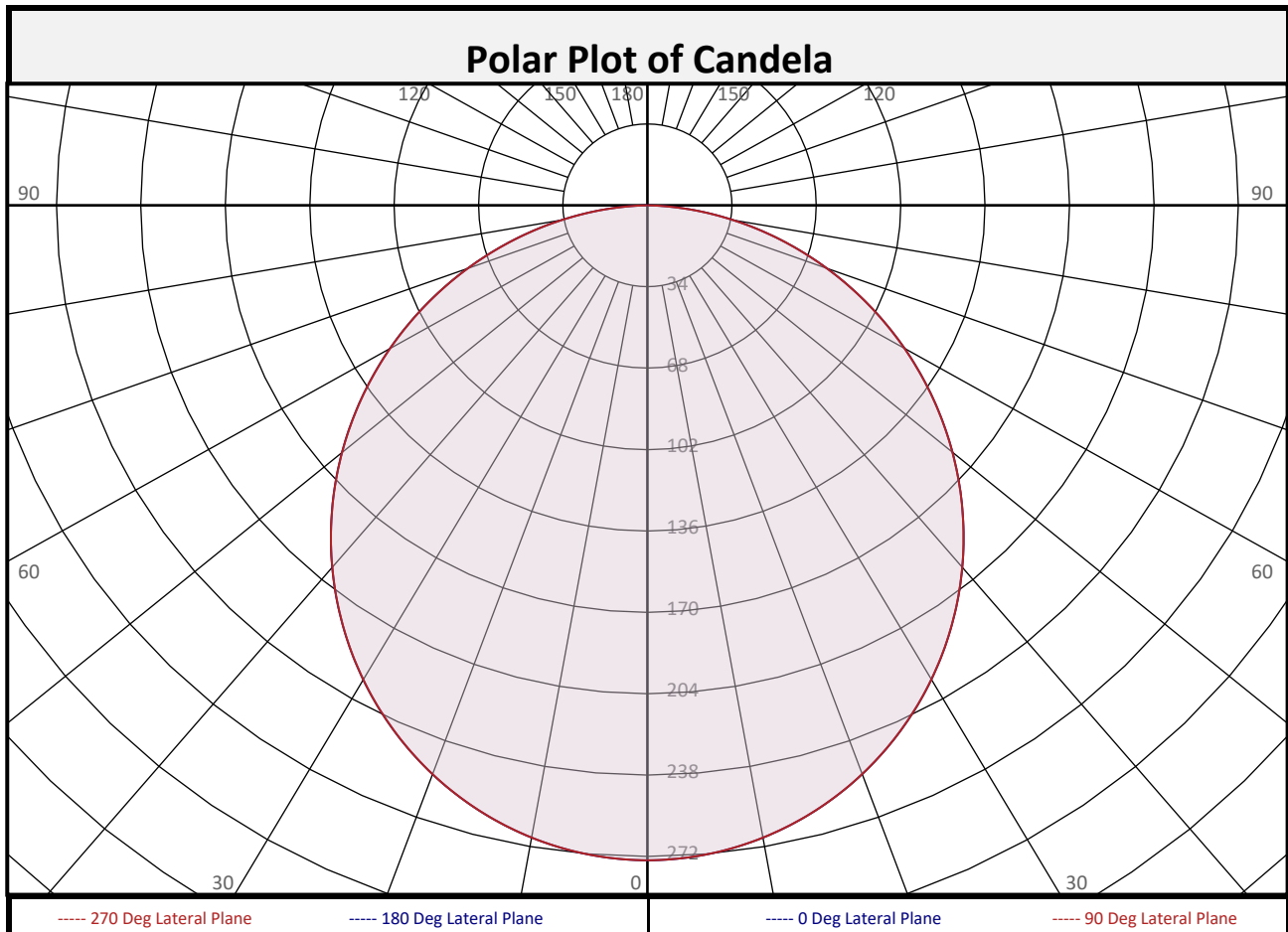
Test date: 01/23/2025
Report date: 01/24/2025

Signed: _____



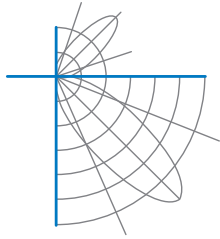
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Zonal Flux Summary

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	25.9	3.3%	90-100	0.0	0.0%	0-20	99.7	12.8%
10-20	73.8	9.5%	100-110	0.0	0.0%	0-30	211.2	27.0%
20-30	111.4	14.3%	110-120	0.0	0.0%	0-40	344.9	44.2%
30-40	133.8	17.1%	120-130	0.0	0.0%	0-60	608.8	78.0%
40-50	138.4	17.7%	130-140	0.0	0.0%	0-80	764.7	97.9%
50-60	125.5	16.1%	140-150	0.0	0.0%	10-90	755.1	96.7%
60-70	97.3	12.5%	150-160	0.0	0.0%	20-50	383.6	49.1%
70-80	58.6	7.5%	160-170	0.0	0.0%	40-90	436.0	55.8%
80-90	16.2	2.1%	170-180	0.0	0.0%	60-90	172.1	22.0%
0-90	781.0	100.0%	90-180	0.0	0.0%	0-180	781.0	100.0%



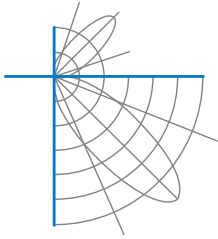
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	274	274	274	274	274	274	274	274	274
	2.5	273	273	273	273	273	273	273	273	273
	5	272	272	272	272	272	272	272	272	272
	7.5	271	271	271	271	271	271	271	271	271
	10	268	268	268	268	268	268	268	268	268
	12.5	265	265	265	265	265	265	265	265	265
	15	262	262	262	262	262	262	262	262	262
	17.5	258	258	258	258	258	258	258	258	258
	20	253	253	253	253	253	253	253	253	253
	22.5	248	248	248	248	248	248	248	248	248
	25	242	242	242	242	242	242	242	242	242
	27.5	236	236	236	236	236	236	236	236	236
	30	229	229	229	229	229	229	229	229	229
	32.5	222	222	222	222	222	222	222	222	222
	35	214	214	214	214	214	214	214	214	214
	37.5	206	206	206	206	206	206	206	206	206
	40	197	197	197	197	197	197	197	197	197
	42.5	189	189	189	189	189	189	189	189	189
	45	179	179	179	179	179	179	179	179	179
	47.5	170	170	170	170	170	170	170	170	170
50	160	160	160	160	160	160	160	160	160	
52.5	150	150	150	150	150	150	150	150	150	
55	140	140	140	140	140	140	140	140	140	
57.5	130	130	130	130	130	130	130	130	130	
60	120	120	120	120	120	120	120	120	120	
62.5	109	109	109	109	109	109	109	109	109	
65	98	98	98	98	98	98	98	98	98	
67.5	88	88	88	88	88	88	88	88	88	
70	77	77	77	77	77	77	77	77	77	
72.5	66	66	66	66	66	66	66	66	66	
75	55	55	55	55	55	55	55	55	55	
77.5	45	45	45	45	45	45	45	45	45	
80	34	34	34	34	34	34	34	34	34	
82.5	24	24	24	24	24	24	24	24	24	
85	14	14	14	14	14	14	14	14	14	
87.5	5	5	5	5	5	5	5	5	5	
90	0	0	0	0	0	0	0	0	0	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



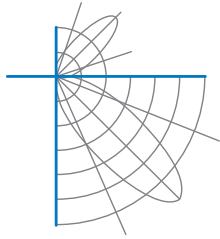
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	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	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



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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	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	109	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69			
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58			
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	49	45	43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37			
7	65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	40	35	33			
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29			
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24			

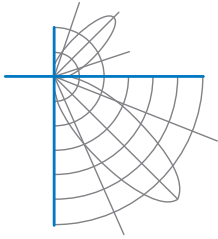
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	7.6	7.46	7.46
8.0	4.3	9.95	9.95
10.0	2.7	12.44	12.44
12.0	1.9	14.92	14.92
14.0	1.4	17.41	17.41
16.0	1.1	19.90	19.90

Spacing Criterion	
SC:	1.2

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	21600	21600	21600
45	20034	20034	20034
55	19323	19323	19323
65	18373	18373	18373
75	16919	16919	16919
85	12950	12950	12950

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	111.7°
Field Angle:	163.5°
90-270 Degree Plane	
Beam Angle:	111.7°
Field Angle:	163.5°



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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

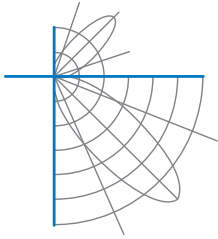
Room Size

UGR Viewed Crosswise

UGR Viewed Endwise

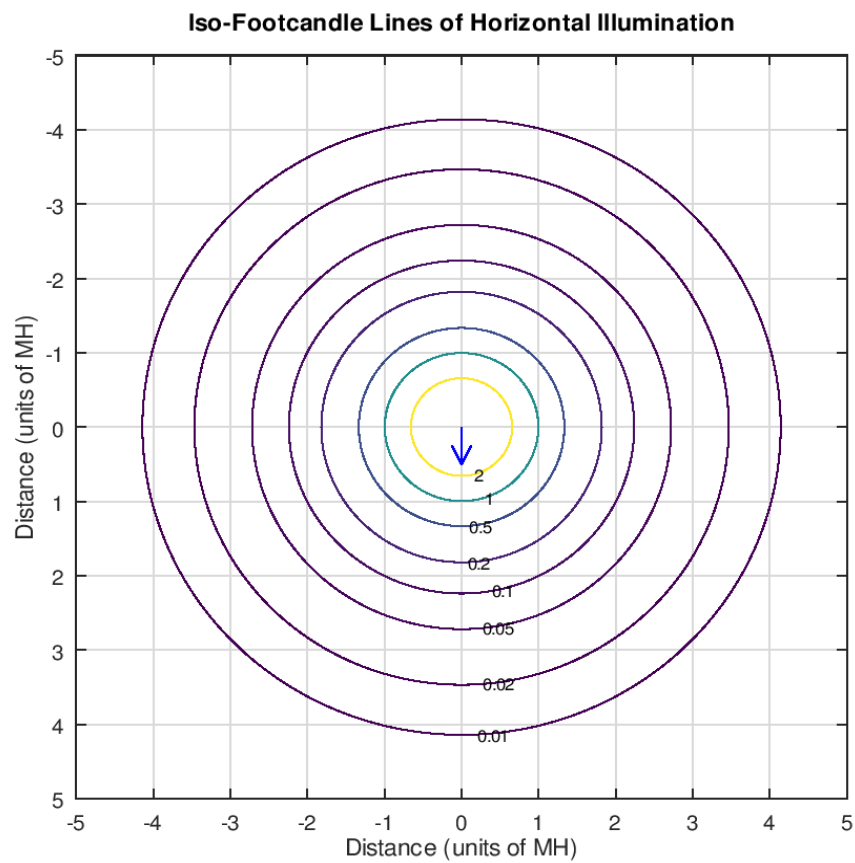
X=2H	Y=2H	21.5	23.2	21.9	23.5	23.8	21.5	23.2	21.9	23.5	23.8
		3H	23.5	24.9	23.8	25.3	25.6	23.5	24.9	23.8	25.3
	4H	24.2	25.6	24.6	25.9	26.3	24.2	25.6	24.6	25.9	26.3
	6H	24.8	26.1	25.2	26.4	26.8	24.8	26.1	25.2	26.4	26.8
	8H	24.9	26.2	25.4	26.6	27.0	24.9	26.2	25.4	26.6	27.0
	12H	25.1	26.3	25.5	26.6	27.1	25.1	26.3	25.5	26.6	27.1
4H	2H	22.2	23.6	22.6	24.0	24.3	22.2	23.6	22.6	24.0	24.3
	3H	24.3	25.5	24.7	25.9	26.3	24.3	25.5	24.7	25.9	26.3
	4H	25.2	26.3	25.6	26.7	27.1	25.2	26.3	25.6	26.7	27.1
	6H	25.9	26.9	26.4	27.3	27.8	25.9	26.9	26.4	27.3	27.8
	8H	26.2	27.0	26.6	27.5	27.9	26.2	27.0	26.6	27.5	27.9
	12H	26.3	27.1	26.8	27.6	28.1	26.3	27.1	26.8	27.6	28.1
8H	4H	25.6	26.4	26.0	26.9	27.3	25.6	26.4	26.0	26.9	27.3
	6H	26.4	27.1	26.9	27.6	28.1	26.4	27.1	26.9	27.6	28.1
	8H	26.7	27.4	27.2	27.9	28.4	26.7	27.4	27.2	27.9	28.4
	12H	27.0	27.5	27.5	28.0	28.6	27.0	27.5	27.5	28.0	28.6
12H	4H	25.6	26.4	26.1	26.9	27.3	25.6	26.4	26.1	26.9	27.3
	6H	26.5	27.1	27.0	27.6	28.1	26.5	27.1	27.0	27.6	28.1
	8H	26.8	27.4	27.4	27.9	28.5	26.8	27.4	27.4	27.9	28.5

Maximum UGR = 28.6

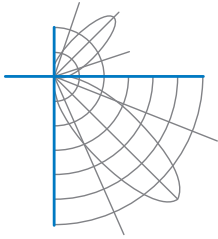


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Iso-Illuminance Plot



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-41-20 and LM-46-20.

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.