



Report of Test

LLIA002581-009

Indoor Distribution Photometry Test Report

Catalog Number: RDL4-ADJ-10W-CS 4000K Setting
Recessed mounted, formed white painted aluminum housing,
white interior reflector, diffuse white plastic enclosure.
22 white LEDs, switch set for 4000K.
One Topaz RDL4-ADJ-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	861.6 Lumens
Input Current	0.0757 A	Total Efficacy	97.9 Lm/W
Input Power	8.80 W	Downward Flux	861.6 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.968		
Current THD	15.0 %		

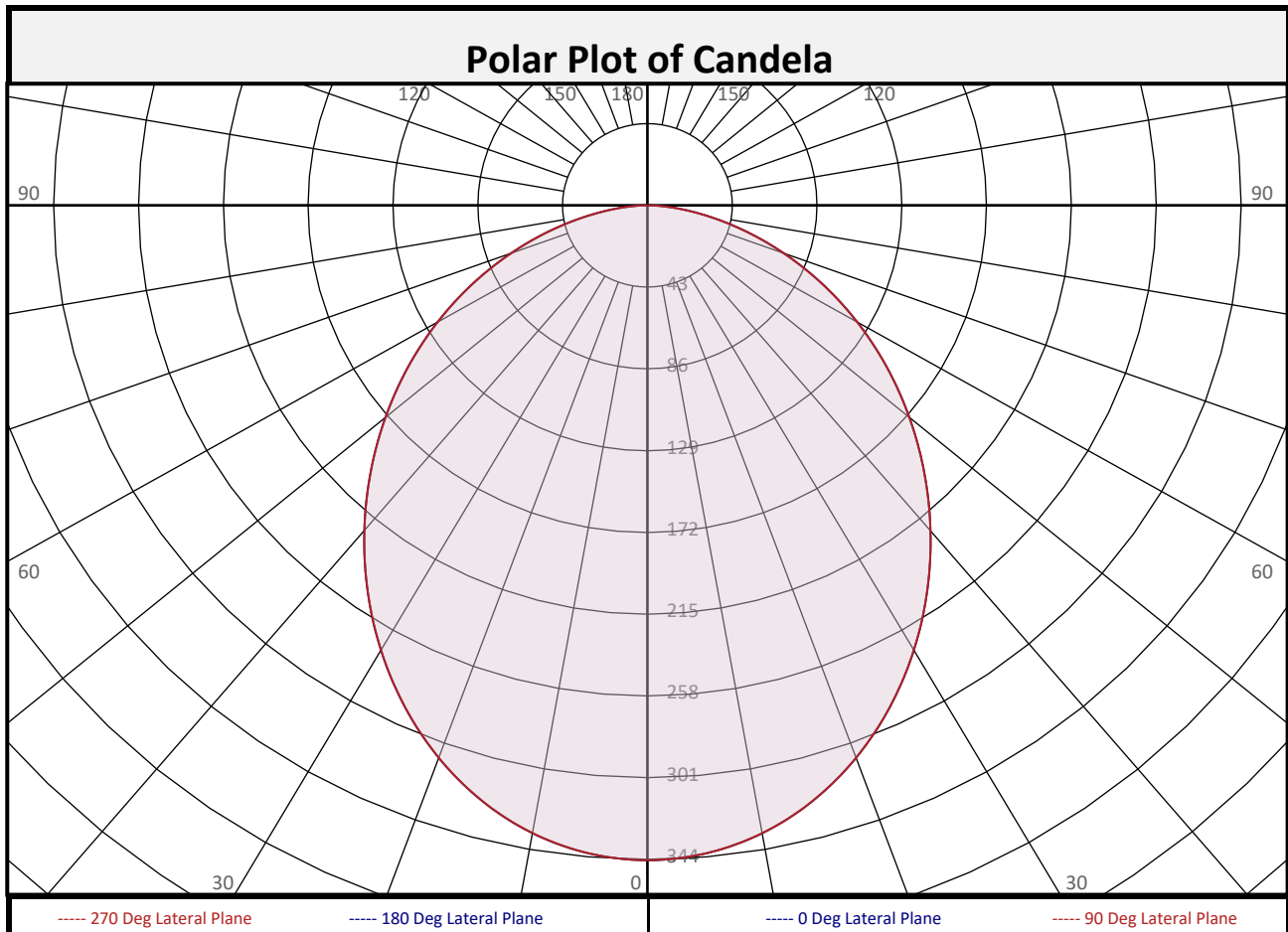
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 01/29/2025
Report date: 02/05/2025

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	32.5	3.8%		90-100	0.0	0.0%		0-20	123.8	14.4%
10-20	91.3	10.6%		100-110	0.0	0.0%		0-30	257.7	29.9%
20-30	133.9	15.5%		110-120	0.0	0.0%		0-40	412.3	47.9%
30-40	154.6	17.9%		120-130	0.0	0.0%		0-60	697.7	81.0%
40-50	153.1	17.8%		130-140	0.0	0.0%		0-80	847.8	98.4%
50-60	132.3	15.4%		140-150	0.0	0.0%		10-90	829.1	96.2%
60-70	96.8	11.2%		150-160	0.0	0.0%		20-50	441.6	51.3%
70-80	53.3	6.2%		160-170	0.0	0.0%		40-90	449.3	52.1%
80-90	13.7	1.6%		170-180	0.0	0.0%		60-90	163.9	19.0%
0-90	861.6	100.0%		90-180	0.0	0.0%		0-180	861.6	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	344	344	344	344	344	344	344	344	344
	2.5	344	344	344	344	344	344	344	344	344
	5	342	342	342	342	342	342	342	342	342
	7.5	339	339	339	339	339	339	339	339	339
	10	335	335	335	335	335	335	335	335	335
	12.5	330	330	330	330	330	330	330	330	330
	15	324	324	324	324	324	324	324	324	324
	17.5	317	317	317	317	317	317	317	317	317
	20	309	309	309	309	309	309	309	309	309
	22.5	300	300	300	300	300	300	300	300	300
	25	291	291	291	291	291	291	291	291	291
	27.5	281	281	281	281	281	281	281	281	281
	30	270	270	270	270	270	270	270	270	270
	32.5	259	259	259	259	259	259	259	259	259
	35	247	247	247	247	247	247	247	247	247
	37.5	235	235	235	235	235	235	235	235	235
	40	223	223	223	223	223	223	223	223	223
	42.5	211	211	211	211	211	211	211	211	211
	45	198	198	198	198	198	198	198	198	198
	47.5	186	186	186	186	186	186	186	186	186
50	173	173	173	173	173	173	173	173	173	
52.5	161	161	161	161	161	161	161	161	161	
55	148	148	148	148	148	148	148	148	148	
57.5	135	135	135	135	135	135	135	135	135	
60	123	123	123	123	123	123	123	123	123	
62.5	110	110	110	110	110	110	110	110	110	
65	98	98	98	98	98	98	98	98	98	
67.5	85	85	85	85	85	85	85	85	85	
70	73	73	73	73	73	73	73	73	73	
72.5	62	62	62	62	62	62	62	62	62	
75	50	50	50	50	50	50	50	50	50	
77.5	39	39	39	39	39	39	39	39	39	
80	29	29	29	29	29	29	29	29	29	
82.5	20	20	20	20	20	20	20	20	20	
85	12	12	12	12	12	12	12	12	12	
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	105	100	97	106	102	98	95	98	95	92	94	92	89	91	89	87	85			
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71			
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60			
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52			
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45			
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40			
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35			
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	32			
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	28			
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26			

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	9.6	7.04	7.04
8.0	5.4	9.39	9.39
10.0	3.4	11.73	11.73
12.0	2.4	14.08	14.08
14.0	1.8	16.42	16.42
16.0	1.3	18.77	18.77

Spacing Criterion	
SC:	1.2

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	75542	75542	75542
45	61529	61529	61529
55	56589	56589	56589
65	50742	50742	50742
75	42497	42497	42497
85	29697	29697	29697

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	100.4°
Field Angle:	157.4°
90-270 Degree Plane	
Beam Angle:	100.4°
Field Angle:	157.4°



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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

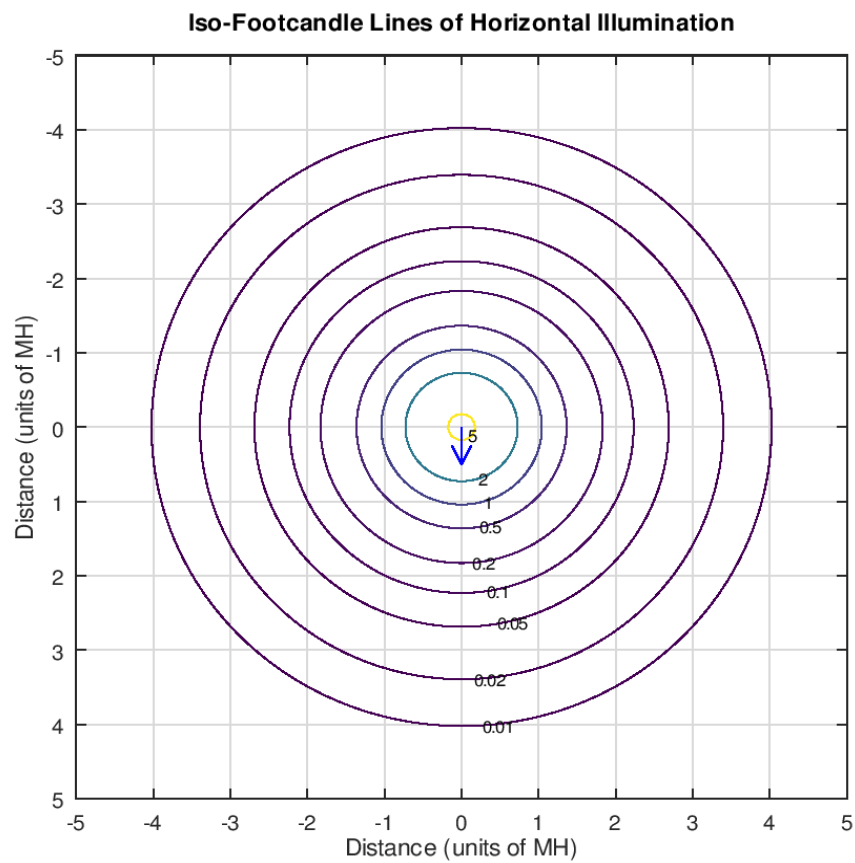
X=2H	Y=2H	25.1	26.7	25.5	27.1	27.4	25.1	26.7	25.5	27.1	27.4
		3H	26.8	28.3	27.2	28.6	29.0	26.8	28.3	27.2	28.6
	4H	27.5	28.8	27.9	29.2	29.5	27.5	28.8	27.9	29.2	29.5
	6H	27.9	29.1	28.3	29.5	29.9	27.9	29.1	28.3	29.5	29.9
	8H	28.0	29.2	28.4	29.6	30.0	28.0	29.2	28.4	29.6	30.0
	12H	28.1	29.2	28.5	29.6	30.0	28.1	29.2	28.5	29.6	30.0
4H	2H	25.7	27.1	26.1	27.4	27.8	25.7	27.1	26.1	27.4	27.8
	3H	27.7	28.8	28.1	29.2	29.6	27.7	28.8	28.1	29.2	29.6
	4H	28.4	29.4	28.8	29.8	30.3	28.4	29.4	28.8	29.8	30.3
	6H	28.9	29.8	29.4	30.3	30.7	28.9	29.8	29.4	30.3	30.7
	8H	29.1	29.9	29.6	30.4	30.8	29.1	29.9	29.6	30.4	30.8
	12H	29.2	30.0	29.7	30.4	30.9	29.2	30.0	29.7	30.4	30.9
8H	4H	28.7	29.5	29.1	29.9	30.4	28.7	29.5	29.1	29.9	30.4
	6H	29.3	30.0	29.8	30.5	31.0	29.3	30.0	29.8	30.5	31.0
	8H	29.6	30.2	30.1	30.7	31.2	29.6	30.2	30.1	30.7	31.2
	12H	29.7	30.3	30.2	30.8	31.3	29.7	30.3	30.2	30.8	31.3
12H	4H	28.7	29.4	29.2	29.9	30.4	28.7	29.4	29.2	29.9	30.4
	6H	29.4	30.0	29.9	30.5	31.0	29.4	30.0	29.9	30.5	31.0
	8H	29.6	30.2	30.1	30.7	31.2	29.6	30.2	30.1	30.7	31.2

Maximum UGR = 31.3

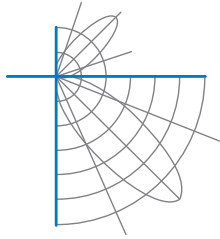


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Iso-Illuminance Plot



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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Test Distance 9.5 m
Ambient Temperature 25.0 °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.