

Report of Test

LLIA002581-004

Indoor Distribution Photometry Test Report

Catalog Number: RDL6-12W-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 RDL6-12W-CS LED driver in formed steel box.



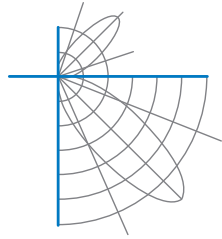
Prepared For:
Topaz Lighting, A Southwire Company
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1065.0 Lumens
Input Current	0.0969 A	Total Efficacy	94.1 lm/W
Input Power	11.32 W	Downward Flux	1065.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.974		
Current THD	12.8 %		

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

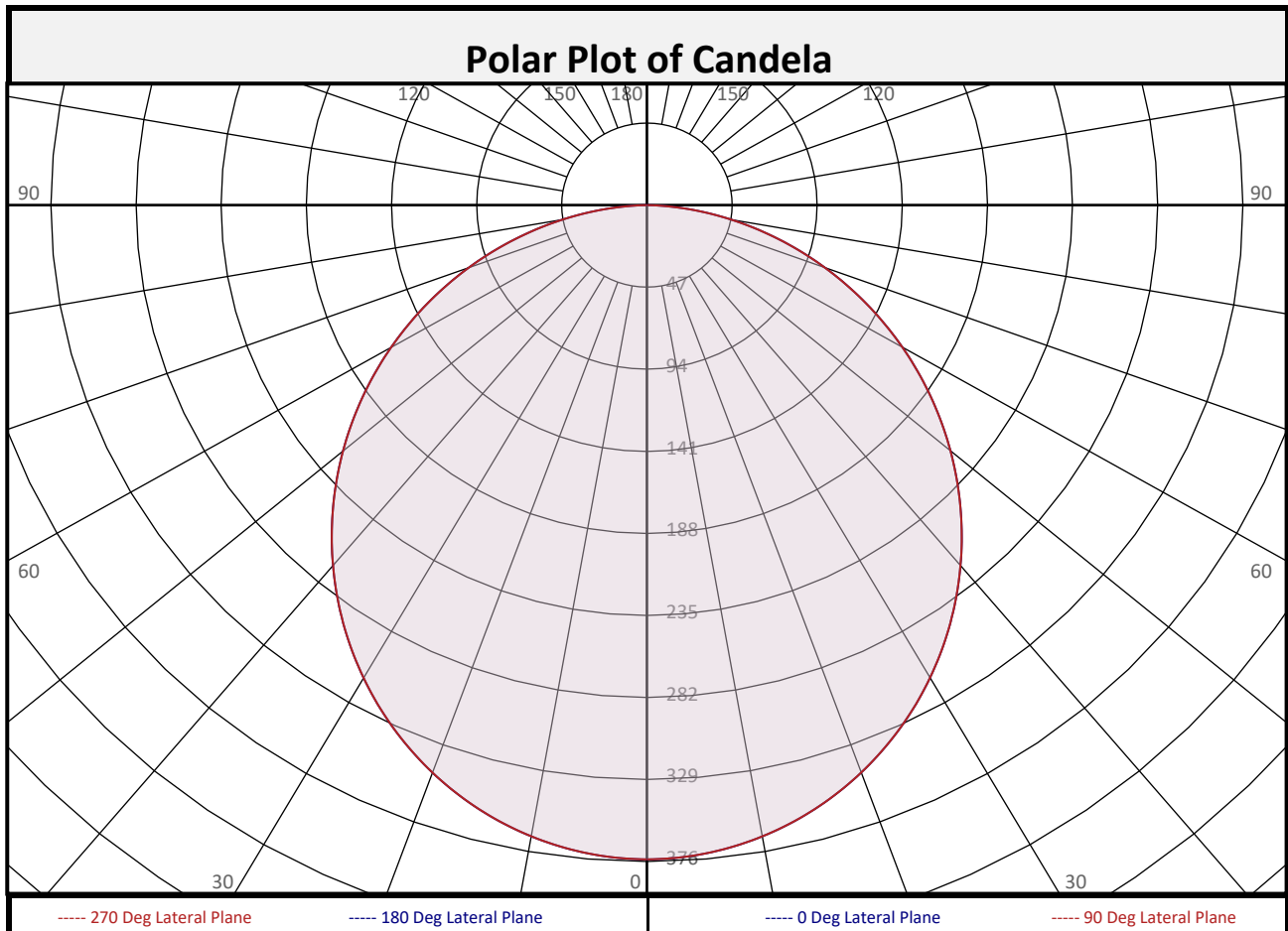
Test date: 01/28/2025
Report date: 02/03/2025

Signed: _____

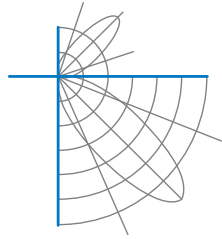


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	35.4	3.3%		90-100	0.0	0.0%		0-20	136.5	12.8%
10-20	101.0	9.5%		100-110	0.0	0.0%		0-30	288.8	27.1%
20-30	152.4	14.3%		110-120	0.0	0.0%		0-40	471.5	44.3%
30-40	182.7	17.2%		120-130	0.0	0.0%		0-60	831.4	78.1%
40-50	188.8	17.7%		130-140	0.0	0.0%		0-80	1043	98.0%
50-60	171.0	16.1%		140-150	0.0	0.0%		10-90	1030	96.7%
60-70	132.3	12.4%		150-160	0.0	0.0%		20-50	523.9	49.2%
70-80	79.4	7.5%		160-170	0.0	0.0%		40-90	593.4	55.7%
80-90	21.8	2.0%		170-180	0.0	0.0%		60-90	233.6	21.9%
0-90	1065	100.0%		90-180	0.0	0.0%		0-180	1065	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	375	375	375	375	375	375	375	375	375
	2.5	374	374	374	374	374	374	374	374	374
	5	373	373	373	373	373	373	373	373	373
	7.5	370	370	370	370	370	370	370	370	370
	10	367	367	367	367	367	367	367	367	367
	12.5	363	363	363	363	363	363	363	363	363
	15	358	358	358	358	358	358	358	358	358
	17.5	352	352	352	352	352	352	352	352	352
	20	346	346	346	346	346	346	346	346	346
	22.5	339	339	339	339	339	339	339	339	339
	25	331	331	331	331	331	331	331	331	331
	27.5	322	322	322	322	322	322	322	322	322
	30	313	313	313	313	313	313	313	313	313
	32.5	303	303	303	303	303	303	303	303	303
	35	292	292	292	292	292	292	292	292	292
	37.5	281	281	281	281	281	281	281	281	281
	40	269	269	269	269	269	269	269	269	269
	42.5	257	257	257	257	257	257	257	257	257
	45	245	245	245	245	245	245	245	245	245
	47.5	232	232	232	232	232	232	232	232	232
	50	219	219	219	219	219	219	219	219	219
	52.5	205	205	205	205	205	205	205	205	205
	55	191	191	191	191	191	191	191	191	191
	57.5	177	177	177	177	177	177	177	177	177
	60	163	163	163	163	163	163	163	163	163
	62.5	148	148	148	148	148	148	148	148	148
	65	134	134	134	134	134	134	134	134	134
	67.5	119	119	119	119	119	119	119	119	119
	70	104	104	104	104	104	104	104	104	104
	72.5	90	90	90	90	90	90	90	90	90
	75	75	75	75	75	75	75	75	75	75
	77.5	61	61	61	61	61	61	61	61	61
	80	47	47	47	47	47	47	47	47	47
	82.5	33	33	33	33	33	33	33	33	33
	85	19	19	19	19	19	19	19	19	19
	87.5	6	6	6	6	6	6	6	6	6
	90	0	0	0	0	0	0	0	0	0

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

North America (issuing laboratory)

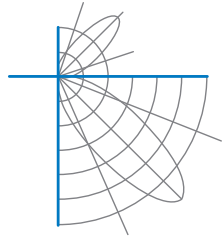
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Luminous Intensity (Candela) Table

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 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.

North America (issuing laboratory)

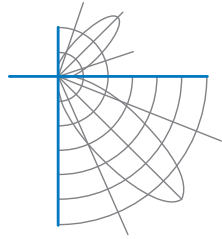
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Coefficients of Utilization/Room Utilization - Zonal Cavity Method

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	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	91	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	50	45			43
6	70	56	47	41		68	55	47	41		53	46	40			52	45	40			50	44	39			37
7	65	51	42	36		63	50	42	36		49	41	36			47	40	35			46	40	35			33
8	60	47	38	32		59	46	38	32		44	37	32			43	36	32			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	10.4	7.45	7.45
8.0	5.9	9.93	9.93
10.0	3.7	12.41	12.41
12.0	2.6	14.89	14.89
14.0	1.9	17.38	17.38
16.0	1.5	19.86	19.86

Spacing Criterion

SC: 1.2

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	29585	29585	29585
45	27335	27335	27335
55	26333	26333	26333
65	24985	24985	24985
75	22922	22922	22922
85	17350	17350	17350

Beam and Field Angle

0-180 Degree Plane

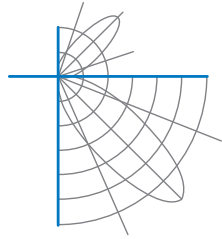
Beam Angle: 111.4°

Field Angle: 163.3°

90-270 Degree Plane

Beam Angle: 111.4°

Field Angle: 163.3°



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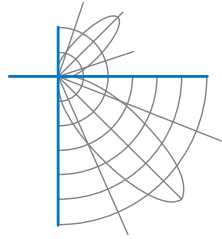
UGR Table - Corrected

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

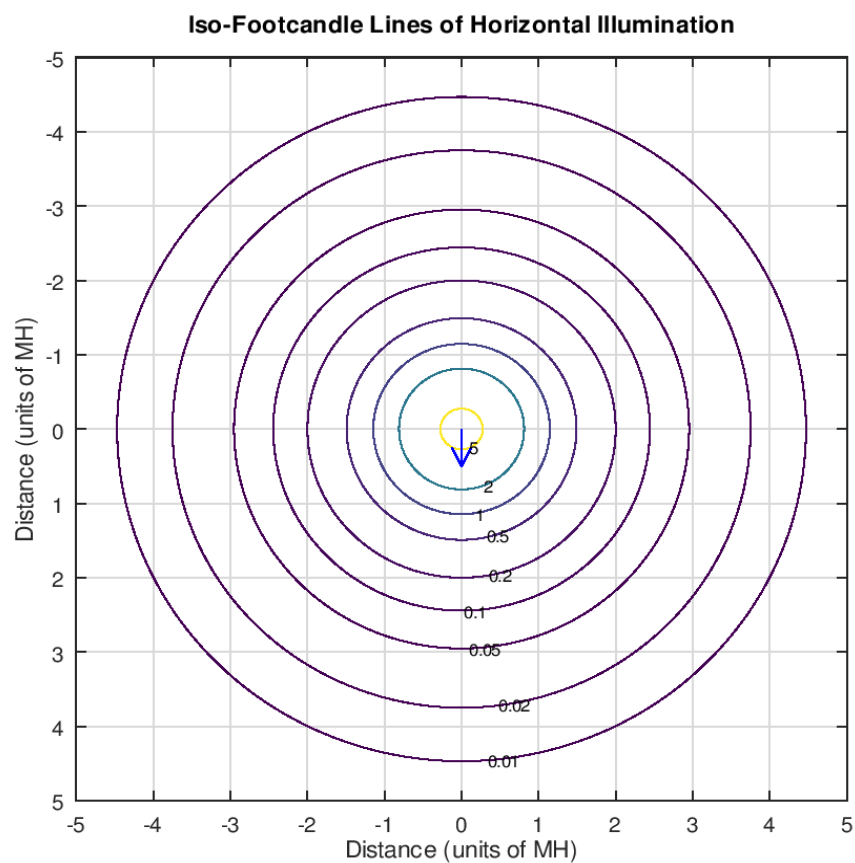
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	22.6	24.3	23.0	24.6	24.9	22.6	24.3	23.0	24.6	24.9
	3H	24.5	26.0	24.9	26.4	26.7	24.5	26.0	24.9	26.4	26.7
	4H	25.3	26.7	25.7	27.0	27.4	25.3	26.7	25.7	27.0	27.4
	6H	25.8	27.1	26.2	27.5	27.9	25.8	27.1	26.2	27.5	27.9
	8H	26.0	27.3	26.4	27.6	28.0	26.0	27.3	26.4	27.6	28.0
	12H	26.1	27.3	26.5	27.7	28.1	26.1	27.3	26.5	27.7	28.1
4H	2H	23.3	24.7	23.7	25.0	25.4	23.3	24.7	23.7	25.0	25.4
	3H	25.4	26.6	25.8	27.0	27.4	25.4	26.6	25.8	27.0	27.4
	4H	26.3	27.4	26.7	27.8	28.2	26.3	27.4	26.7	27.8	28.2
	6H	27.0	27.9	27.4	28.4	28.8	27.0	27.9	27.4	28.4	28.8
	8H	27.2	28.1	27.7	28.5	29.0	27.2	28.1	27.7	28.5	29.0
	12H	27.4	28.2	27.9	28.7	29.1	27.4	28.2	27.9	28.7	29.1
8H	4H	26.6	27.5	27.1	28.0	28.4	26.6	27.5	27.1	28.0	28.4
	6H	27.5	28.2	28.0	28.7	29.2	27.5	28.2	28.0	28.7	29.2
	8H	27.8	28.4	28.3	28.9	29.4	27.8	28.4	28.3	28.9	29.4
	12H	28.0	28.6	28.5	29.1	29.6	28.0	28.6	28.5	29.1	29.6
12H	4H	26.7	27.5	27.2	27.9	28.4	26.7	27.5	27.2	27.9	28.4
	6H	27.5	28.2	28.1	28.7	29.2	27.5	28.2	28.1	28.7	29.2
	8H	27.9	28.5	28.4	29.0	29.5	27.9	28.5	28.4	29.0	29.5

Maximum UGR = 29.6

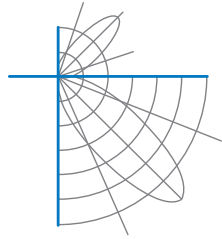


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Iso-Illuminance Plot



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 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-41-20 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.