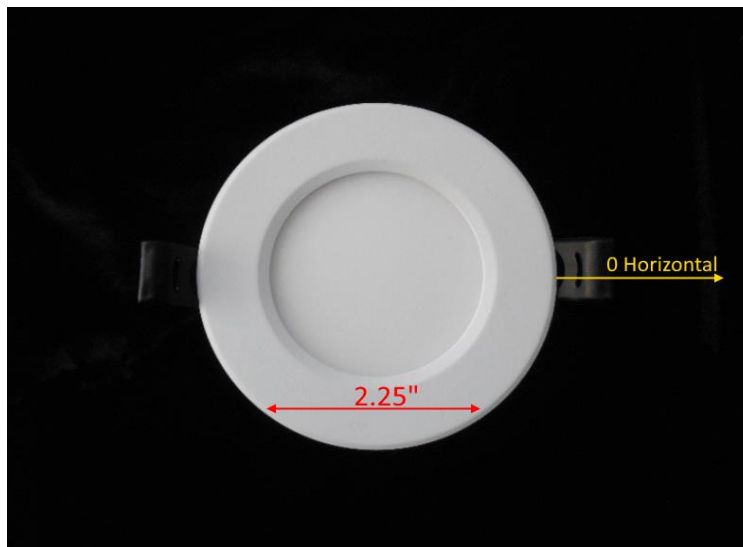


Report of Test

LLIA002581-001

Indoor Distribution Photometry Test Report

Catalog Number: RDL3-7W-CS 4000K Setting
Recessed mounted, formed white painted aluminum housing,
white interior reflector, diffuse white plastic enclosure.
40 white LEDs, switch set for 4000K.
One Topaz RDL3-7W-CS LED driver in formed steel box.



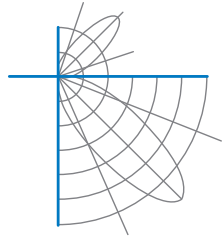
Prepared For:
Topaz Lighting, A Southwire Company
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	581.0 Lumens
Input Current	0.0577 A	Total Efficacy	88.0 Lm/W
Input Power	6.60 W	Downward Flux	581.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.954		
Current THD	18.0 %		

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

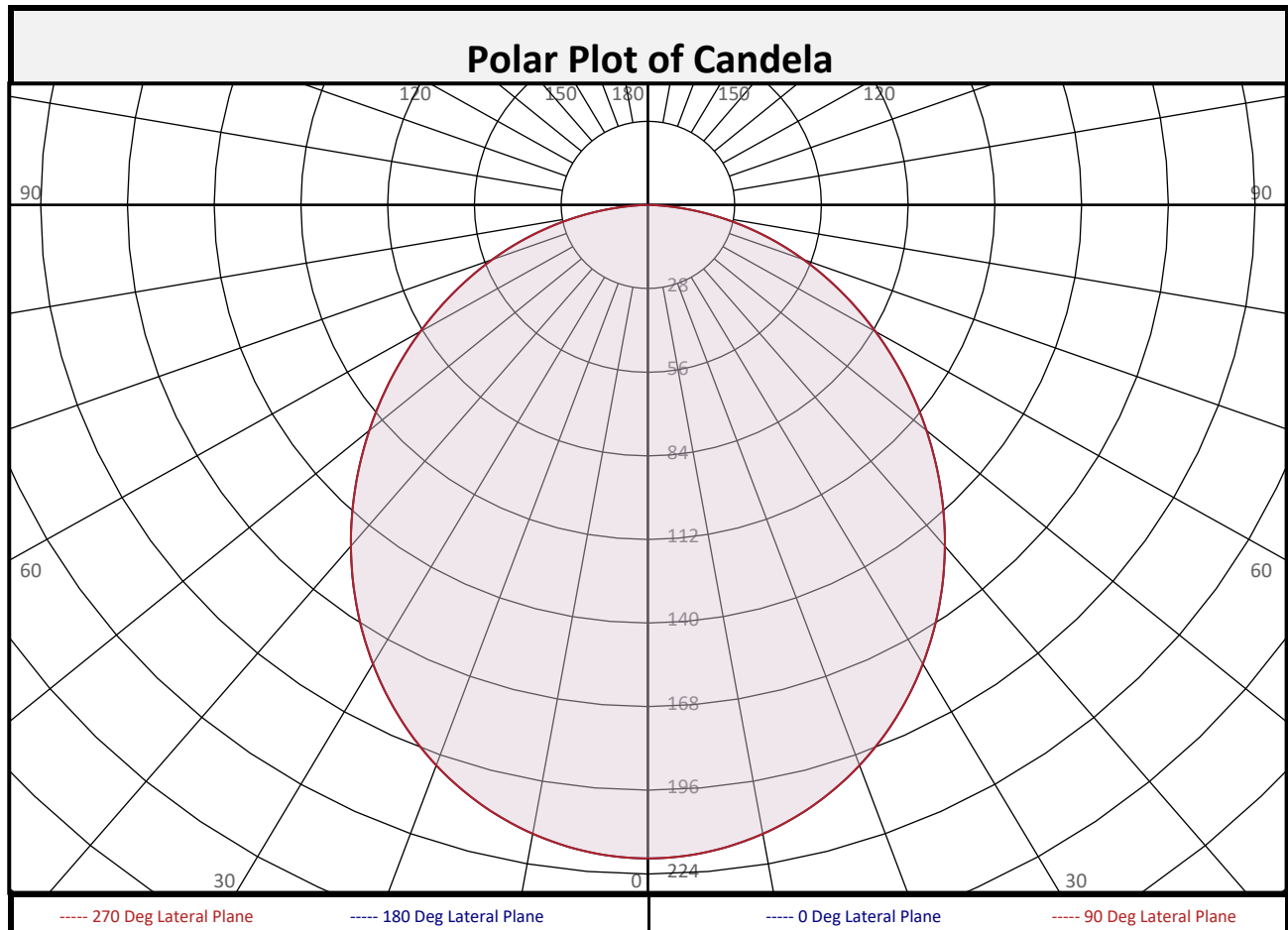
Test date: 01/22/2024
Report date: 01/24/2025

Signed: _____

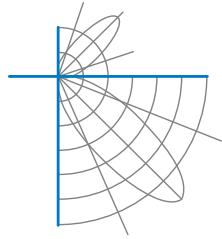


Report of Test

LLIA002581-001



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	20.7	3.6%		90-100	0.0	0.0%		0-20	79.3	13.6%
10-20	58.6	10.1%		100-110	0.0	0.0%		0-30	166.5	28.7%
20-30	87.3	15.0%		110-120	0.0	0.0%		0-40	269.0	46.3%
30-40	102.5	17.6%		120-130	0.0	0.0%		0-60	462.3	79.6%
40-50	103.0	17.7%		130-140	0.0	0.0%		0-80	570.8	98.2%
50-60	90.4	15.6%		140-150	0.0	0.0%		10-90	560.3	96.4%
60-70	68.2	11.7%		150-160	0.0	0.0%		20-50	292.7	50.4%
70-80	40.2	6.9%		160-170	0.0	0.0%		40-90	312.0	53.7%
80-90	10.2	1.8%		170-180	0.0	0.0%		60-90	118.7	20.4%
0-90	581.0	100.0%		90-180	0.0	0.0%		0-180	581.0	100.0%



Report of Test

LLIA002581-001

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	219	219	219	219	219	219	219	219	219
	2.5	219	219	219	219	219	219	219	219	219
	5	218	218	218	218	218	218	218	218	218
	7.5	216	216	216	216	216	216	216	216	216
	10	214	214	214	214	214	214	214	214	214
	12.5	211	211	211	211	211	211	211	211	211
	15	208	208	208	208	208	208	208	208	208
	17.5	204	204	204	204	204	204	204	204	204
	20	200	200	200	200	200	200	200	200	200
	22.5	195	195	195	195	195	195	195	195	195
	25	190	190	190	190	190	190	190	190	190
	27.5	184	184	184	184	184	184	184	184	184
	30	177	177	177	177	177	177	177	177	177
	32.5	171	171	171	171	171	171	171	171	171
	35	164	164	164	164	164	164	164	164	164
	37.5	157	157	157	157	157	157	157	157	157
	40	149	149	149	149	149	149	149	149	149
	42.5	141	141	141	141	141	141	141	141	141
	45	133	133	133	133	133	133	133	133	133
	47.5	125	125	125	125	125	125	125	125	125
	50	117	117	117	117	117	117	117	117	117
	52.5	109	109	109	109	109	109	109	109	109
	55	101	101	101	101	101	101	101	101	101
	57.5	93	93	93	93	93	93	93	93	93
	60	85	85	85	85	85	85	85	85	85
	62.5	77	77	77	77	77	77	77	77	77
	65	69	69	69	69	69	69	69	69	69
	67.5	61	61	61	61	61	61	61	61	61
	70	53	53	53	53	53	53	53	53	53
	72.5	46	46	46	46	46	46	46	46	46
	75	38	38	38	38	38	38	38	38	38
	77.5	31	31	31	31	31	31	31	31	31
	80	23	23	23	23	23	23	23	23	23
	82.5	16	16	16	16	16	16	16	16	16
	85	9	9	9	9	9	9	9	9	9
	87.5	2	2	2	2	2	2	2	2	2
	90	0	0	0	0	0	0	0	0	0

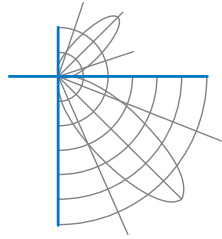
16 lateral half-planes of data were acquired, 22.5 degree increments shown.

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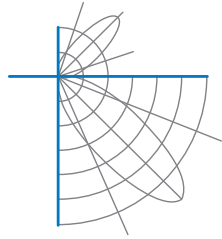
Report of Test

LLIA002581-001

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.



Report of Test

LLIA002581-001

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	100	96		106	102	98	94		98	94	92		94	91	89		90	88	86	84			
2	99	91	84	78		96	89	83	77		85	80	76		82	78	74		79	76	72	70			
3	90	80	72	65		88	78	71	65		75	69	64		73	67	63		70	65	61	59			
4	83	71	62	56		81	70	61	55		67	60	54		65	59	54		63	57	53	51			
5	76	63	55	48		74	62	54	48		60	53	47		58	52	47		56	51	46	44			
6	70	57	48	42		69	56	48	42		54	47	41		53	46	41		51	45	41	39			
7	65	52	43	37		64	51	43	37		50	42	37		48	41	36		47	41	36	34			
8	61	47	39	33		59	47	39	33		45	38	33		44	38	33		43	37	32	31			
9	57	44	35	30		56	43	35	30		42	35	30		41	34	30		40	34	29	28			
10	53	40	32	27		52	40	32	27		39	32	27		38	31	27		37	31	27	25			

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	6.1	7.25	7.25
8.0	3.4	9.67	9.67
10.0	2.2	12.08	12.08
12.0	1.5	14.50	14.50
14.0	1.1	16.92	16.92
16.0	0.9	19.33	19.33

Spacing Criterion

SC: 1.2

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	85313	85313	85313
45	73599	73599	73599
55	68673	68673	68673
65	63518	63518	63518
75	57381	57381	57381
85	38919	38919	38919

Beam and Field Angle

0-180 Degree Plane

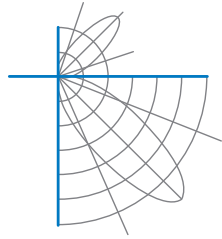
Beam Angle: 104.9°

Field Angle: 160.8°

90-270 Degree Plane

Beam Angle: 104.9°

Field Angle: 160.8°



Report of Test

LLIA002581-001

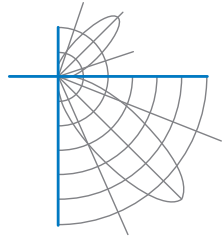
UGR Table - Corrected

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

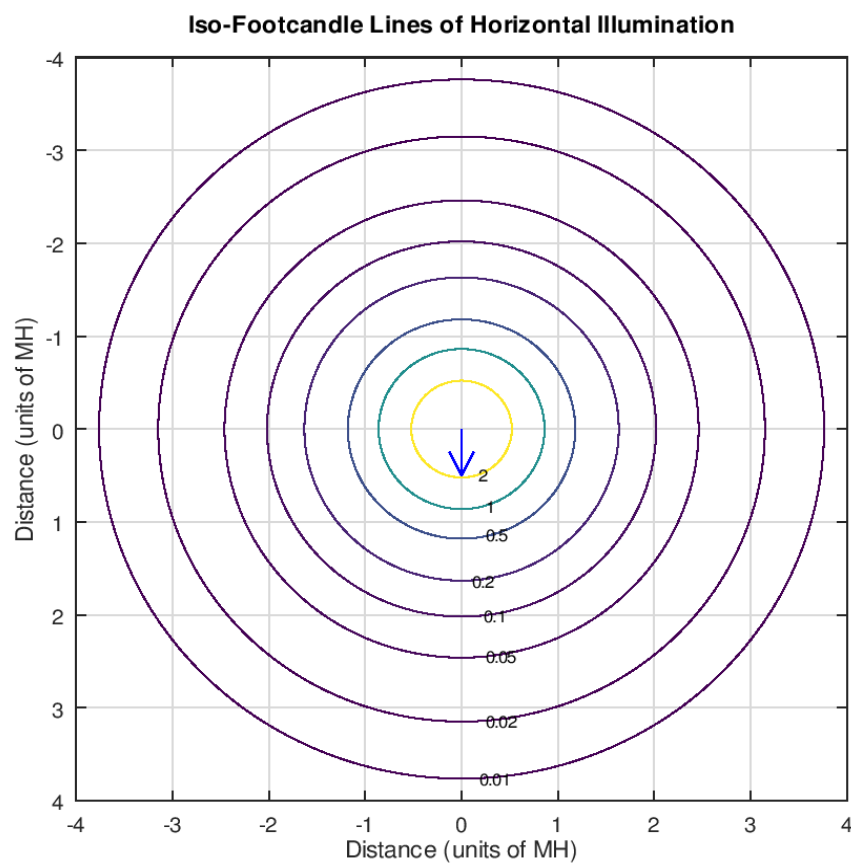
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	25.8	27.4	26.2	27.8	28.1	25.8	27.4	26.2	27.8	28.1
	3H	27.6	29.1	28.0	29.4	29.8	27.6	29.1	28.0	29.4	29.8
	4H	28.3	29.7	28.7	30.1	30.5	28.3	29.7	28.7	30.1	30.5
	6H	28.9	30.2	29.3	30.5	30.9	28.9	30.2	29.3	30.5	30.9
	8H	29.0	30.3	29.5	30.7	31.1	29.0	30.3	29.5	30.7	31.1
	12H	29.1	30.3	29.6	30.7	31.1	29.1	30.3	29.6	30.7	31.1
4H	2H	26.4	27.8	26.8	28.2	28.6	26.4	27.8	26.8	28.2	28.6
	3H	28.5	29.7	28.9	30.1	30.5	28.5	29.7	28.9	30.1	30.5
	4H	29.3	30.4	29.8	30.8	31.2	29.3	30.4	29.8	30.8	31.2
	6H	30.0	30.9	30.5	31.4	31.8	30.0	30.9	30.5	31.4	31.8
	8H	30.2	31.1	30.7	31.5	32.0	30.2	31.1	30.7	31.5	32.0
	12H	30.4	31.1	30.8	31.6	32.1	30.4	31.1	30.8	31.6	32.1
8H	4H	29.7	30.5	30.1	31.0	31.4	29.7	30.5	30.1	31.0	31.4
	6H	30.4	31.2	30.9	31.7	32.1	30.4	31.2	30.9	31.7	32.1
	8H	30.7	31.4	31.2	31.9	32.4	30.7	31.4	31.2	31.9	32.4
	12H	30.9	31.5	31.4	32.0	32.6	30.9	31.5	31.4	32.0	32.6
12H	4H	29.7	30.5	30.2	31.0	31.4	29.7	30.5	30.2	31.0	31.4
	6H	30.5	31.2	31.1	31.6	32.2	30.5	31.2	31.1	31.6	32.2
	8H	30.9	31.4	31.4	31.9	32.5	30.9	31.4	31.4	31.9	32.5

Maximum UGR = 32.6

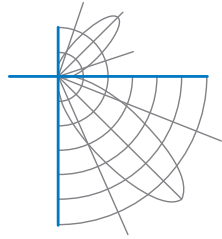


Report of Test LLIA002581-001

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.



Report of Test

LLIA002581-001

Test Distance 9.5 m
Ambient Temperature 24.9 °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.