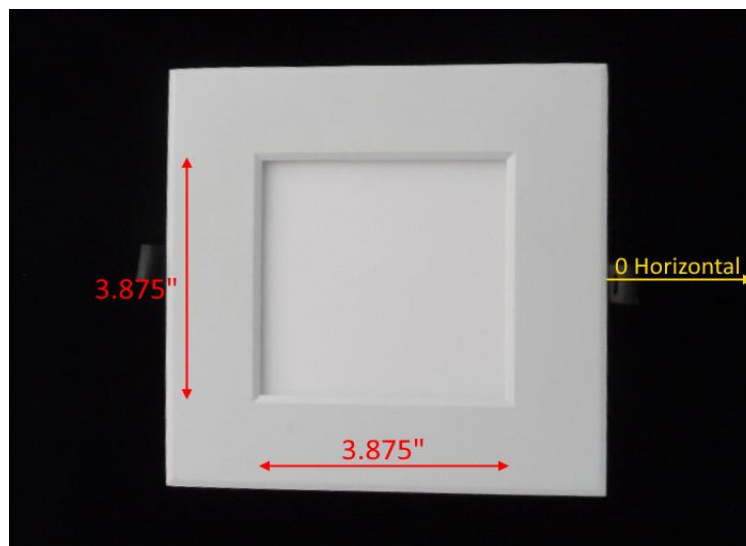


Report of Test

LLIA002581-007

Indoor Distribution Photometry Test Report

Catalog Number: RDL6-SQ-12W-CS 4000K Setting
Recessed mounted, formed white painted aluminum housing,
white interior reflector, diffuse white plastic enclosure.
60 white LEDs, switch set for 4000K.
One Topaz RDL6-SQ-12W-CS LED driver in formed steel box.



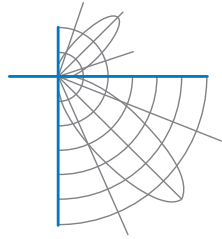
Prepared For:
Topaz Lighting, A Southwire Company
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1087.0 Lumens
Input Current	0.0987 A	Total Efficacy	93.9 lm/W
Input Power	11.57 W	Downward Flux	1087.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.977		
Current THD	12.2 %		

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

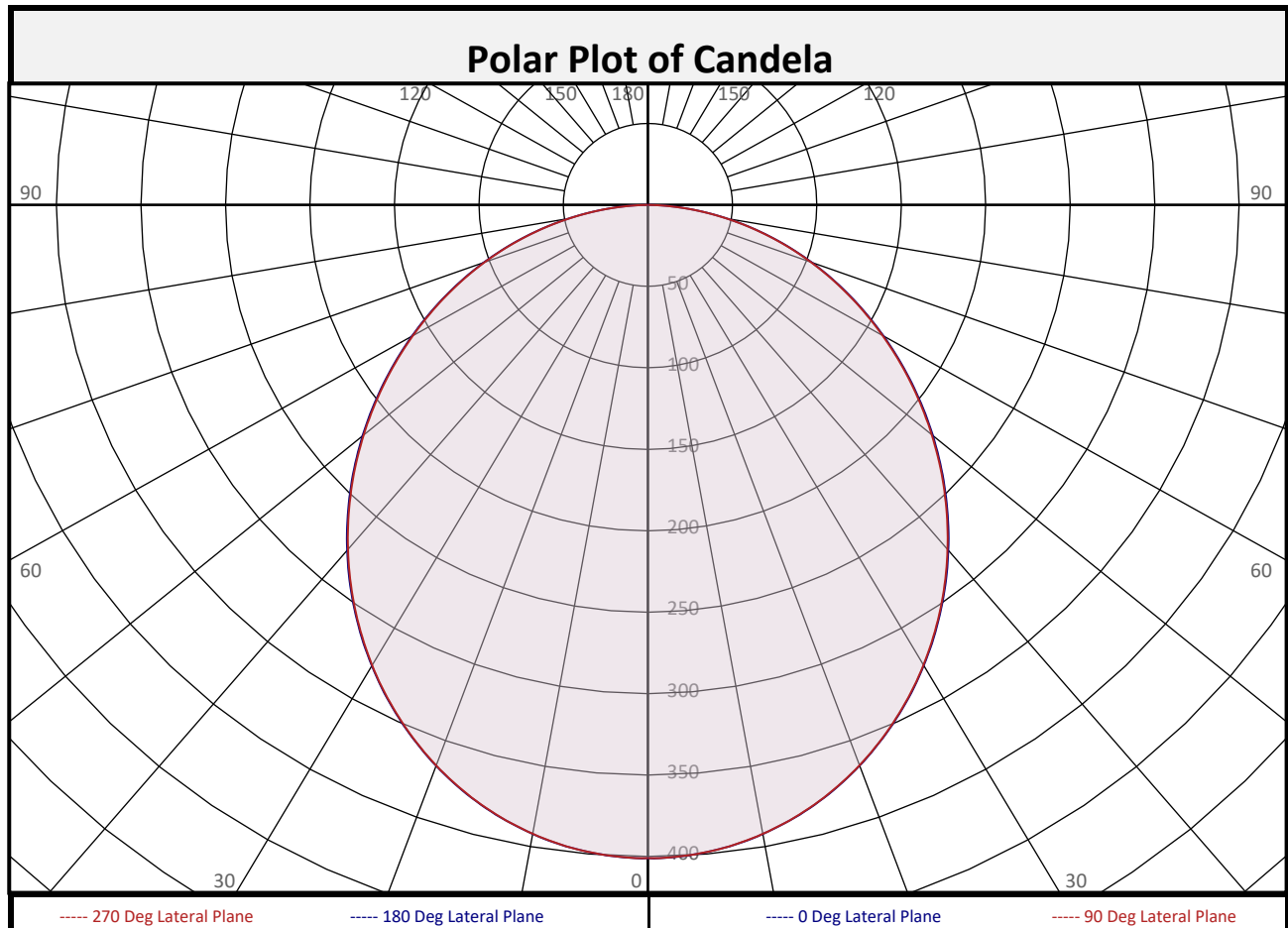
Test date: 01/29/2025
Report date: 02/05/2025

Signed: _____

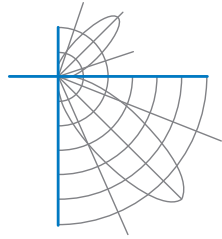


Report of Test

LLIA002581-007



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	37.9	3.5%		90-100	0.0	0.0%		0-20	145.3	13.4%
10-20	107.4	9.9%		100-110	0.0	0.0%		0-30	305.5	28.1%
20-30	160.2	14.7%		110-120	0.0	0.0%		0-40	494.5	45.5%
30-40	189.0	17.4%		120-130	0.0	0.0%		0-60	856.2	78.8%
40-50	191.6	17.6%		130-140	0.0	0.0%		0-80	1065	98.0%
50-60	170.1	15.6%		140-150	0.0	0.0%		10-90	1049	96.5%
60-70	130.1	12.0%		150-160	0.0	0.0%		20-50	540.8	49.8%
70-80	78.4	7.2%		160-170	0.0	0.0%		40-90	592.4	54.5%
80-90	22.3	2.0%		170-180	0.0	0.0%		60-90	230.8	21.2%
0-90	1087	100.0%		90-180	0.0	0.0%		0-180	1087	100.0%



Report of Test

LLIA002581-007

Luminous Intensity (Candela) Table

Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	Lateral (C-Plane) Angles									
		0	22.5	45	67.5	90	112.5	135	157.5	180
	0	401	401	401	401	401	401	401	401	401
	2.5	401	400	400	400	400	400	400	400	401
	5	399	399	399	399	399	399	399	399	399
	7.5	396	396	396	396	396	396	396	396	396
	10	392	392	392	392	392	392	392	392	392
	12.5	387	387	387	387	387	387	387	387	387
	15	381	381	381	381	381	381	381	381	381
	17.5	374	374	374	374	374	374	374	374	374
	20	366	366	366	366	366	366	366	366	366
	22.5	358	358	357	357	357	357	357	358	358
	25	348	348	348	348	348	348	348	348	348
	27.5	338	338	338	337	337	337	338	338	338
	30	327	327	326	326	326	326	326	327	327
	32.5	315	315	314	314	314	314	314	315	315
	35	303	303	302	302	302	302	302	303	303
	37.5	290	290	289	289	289	289	289	290	290
	40	277	276	276	276	276	276	276	276	277
	42.5	263	263	262	262	262	262	262	263	263
	45	249	249	248	248	248	248	248	249	249
	47.5	235	234	234	234	234	234	234	234	235
	50	220	220	220	219	219	219	220	220	220
	52.5	205	205	205	205	205	205	205	205	205
	55	191	190	190	190	190	190	190	190	191
	57.5	176	176	175	175	175	175	175	176	176
	60	161	161	161	160	160	160	161	161	161
	62.5	146	146	146	146	146	146	146	146	146
	65	132	132	131	131	131	131	131	132	132
	67.5	118	117	117	117	117	117	117	117	118
	70	103	103	102	102	103	102	102	103	103
	72.5	89	89	88	88	88	88	88	89	89
	75	75	74	74	74	74	74	74	74	75
	77.5	61	60	60	60	60	60	60	60	61
	80	47	47	46	46	46	46	46	47	47
	82.5	33	33	33	33	33	33	33	33	33
	85	20	20	19	20	20	20	19	20	20
87.5	8	7	7	7	7	7	7	7	8	
90	0	0	0	0	0	0	0	0	0	
16 lateral half-planes of data were acquired, 22.5 degree increments shown.										

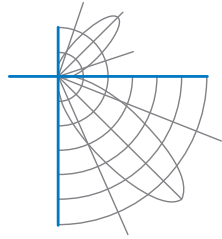
16 lateral half-planes of data were acquired, 22.5 degree increments shown.

North America (issuing laboratory)

LightLab International Allentown, LLC
905 Harrison Street, Suite 135
Allentown, PA 18103 USA
Ph: +1 484-273-0705
Fx: +1 484-209-5779
www.lightlaballentown.com

Australasia & S.E. Asia

LightLab International
50 Redcliffe Gardens Drive
Clontarf - Queensland, 4019, Australia
Ph: +61 7 3283 7862
Fx: +61 7 3283 8751
www.lightlabint.com

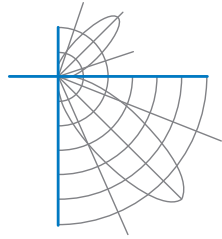


Report of Test

LLIA002581-007

Luminous Intensity (Candela) Table

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

LLIA002581-007

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		97	94	91			93	91	88			90	88	86			84
2	99	91	84	78		96	89	82	77		85	80	75			82	77	73			79	75	72			70
3	90	80	71	65		88	78	70	64		75	68	63			72	67	62			70	65	61			59
4	83	70	62	55		80	69	61	55		67	59	54			64	58	53			62	57	52			50
5	76	63	54	47		74	62	53	47		60	52	47			58	51	46			56	50	46			43
6	70	57	48	41		68	56	47	41		54	46	41			52	46	40			51	45	40			38
7	65	52	43	37		63	51	42	36		49	42	36			48	41	36			46	40	36			34
8	61	47	39	33		59	46	38	33		45	38	32			44	37	32			43	37	32			30
9	57	43	35	29		55	43	35	29		42	34	29			40	34	29			39	33	29			27
10	53	40	32	27		52	39	32	27		38	31	27			37	31	26			37	31	26			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	11.1	7.28	7.27
8.0	6.3	9.71	9.70
10.0	4.0	12.13	12.12
12.0	2.8	14.56	14.54
14.0	2.0	16.99	16.97
16.0	1.6	19.42	19.39

Spacing Criterion

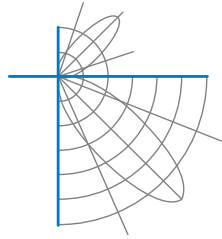
0 deg:	1.2
90 deg:	1.2
180 deg:	1.2
270 deg:	1.2

Average Luminance (cd/m²)

	0 deg Plane	45 deg Plane	90 deg Plane
0	41397	41397	41397
45	36346	36241	36247
55	34330	34203	34169
65	32211	32057	32057
75	29726	29639	29575
85	23856	22899	23621

Beam and Field Angle

0-180 Degree Plane	
Beam Angle:	106.6°
Field Angle:	162.4°
90-270 Degree Plane	
Beam Angle:	106.4°
Field Angle:	162.3°



Report of Test

LLIA002581-007

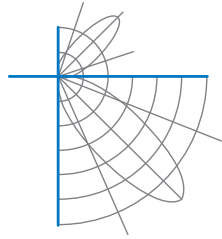
UGR Table - Corrected

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

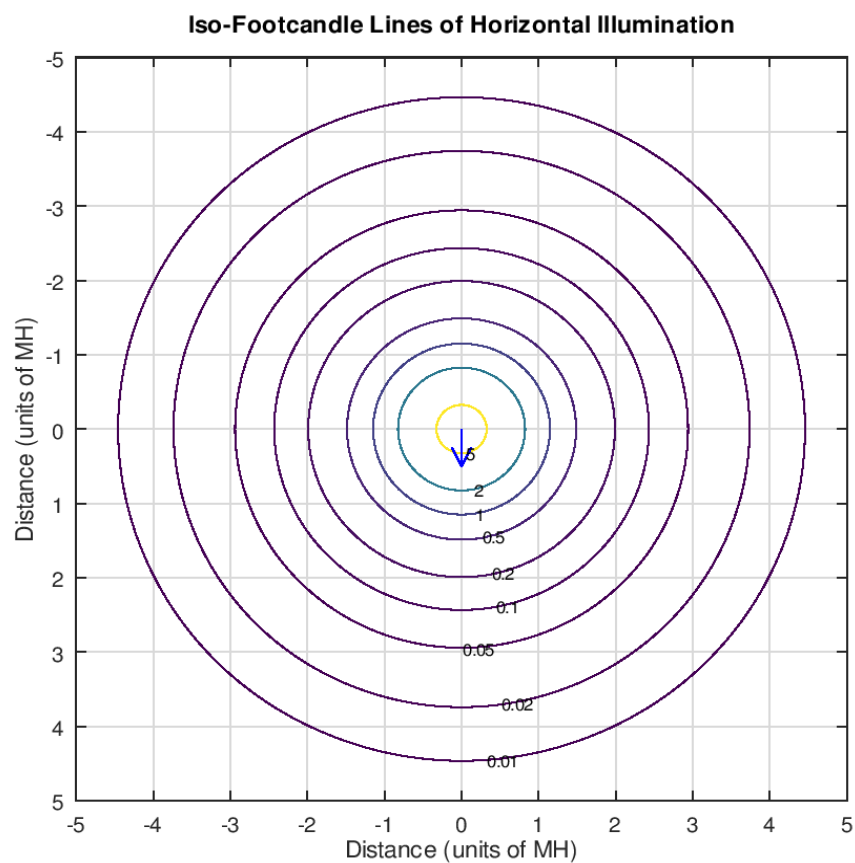
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	24.3	26.0	24.7	26.3	26.6	24.3	25.9	24.7	26.2	26.6
	3H	26.2	27.7	26.6	28.0	28.4	26.2	27.7	26.5	28.0	28.3
	4H	26.9	28.3	27.3	28.7	29.1	26.9	28.3	27.3	28.7	29.0
	6H	27.5	28.8	27.9	29.2	29.6	27.5	28.8	27.9	29.1	29.5
	8H	27.7	28.9	28.1	29.3	29.7	27.7	28.9	28.1	29.3	29.7
	12H	27.8	29.0	28.3	29.4	29.8	27.8	29.0	28.2	29.4	29.8
4H	2H	25.0	26.4	25.4	26.7	27.1	24.9	26.3	25.3	26.7	27.1
	3H	27.1	28.3	27.5	28.6	29.0	27.1	28.2	27.5	28.6	29.0
	4H	28.0	29.0	28.4	29.4	29.9	27.9	29.0	28.4	29.4	29.8
	6H	28.7	29.6	29.1	30.0	30.5	28.6	29.6	29.1	30.0	30.5
	8H	28.9	29.8	29.4	30.2	30.7	28.9	29.7	29.3	30.2	30.6
	12H	29.1	29.9	29.6	30.3	30.8	29.0	29.8	29.5	30.3	30.8
8H	4H	28.3	29.2	28.7	29.6	30.1	28.3	29.1	28.7	29.6	30.0
	6H	29.1	29.9	29.6	30.3	30.8	29.1	29.8	29.6	30.3	30.8
	8H	29.4	30.1	30.0	30.6	31.1	29.4	30.1	29.9	30.6	31.1
	12H	29.7	30.3	30.2	30.8	31.3	29.7	30.3	30.2	30.7	31.3
12H	4H	28.3	29.1	28.8	29.6	30.1	28.3	29.1	28.8	29.6	30.0
	6H	29.2	29.9	29.7	30.3	30.9	29.2	29.8	29.7	30.3	30.8
	8H	29.6	30.2	30.1	30.7	31.2	29.6	30.1	30.1	30.6	31.2

Maximum UGR = 31.3

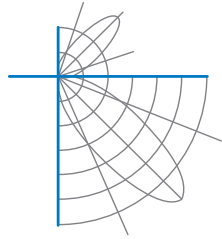


Report of Test LLIA002581-007

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

LLIA002581-007

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.