LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001675-001

Indoor Distribution Photometry Test Report

Catalog Number: RTL6-8W-30K-WH-S
Recessed mounted, formed white plastic housing/lower reflector, white circuit board, white interior reflector, translucent white plastic enclosure.
12 white LEDs on 21116B circuit board
LED21111B LED driver circuit board

Prepared For:
Topaz Lighting Corp
925 Waverly Avenue
Holtsville, NY 11742, USA

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	737.7	Lumens
Input Current	0.0667	A	Total Efficacy	98.2	Lm/W
Input Power	7.51	W	Downward Flux	737.7	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.939				
Current THD	21.9	%			

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

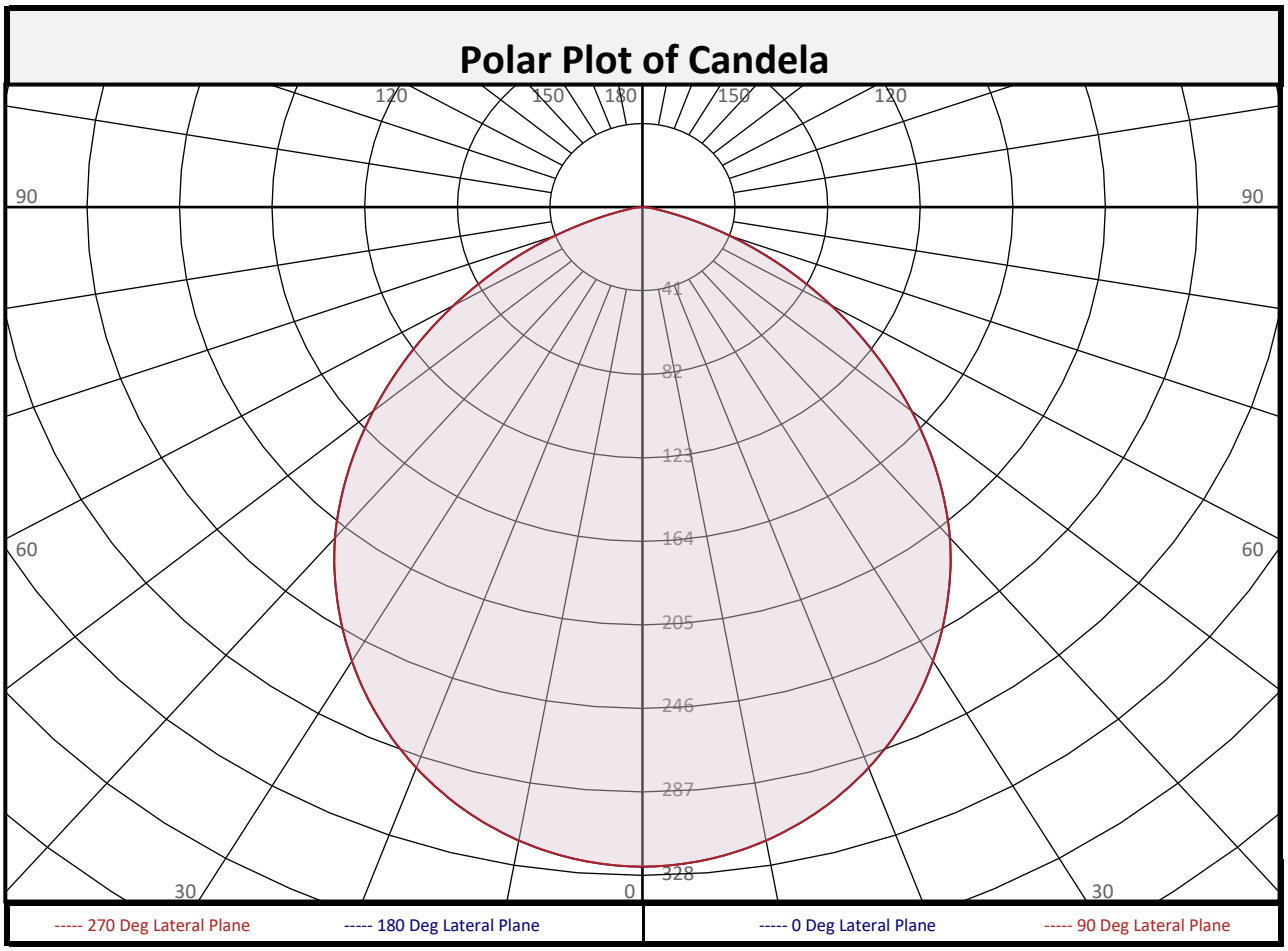
Test date: 02/25/2022
Report date: 02/28/2022

Signed: Michael L. Grather

USA west coast LightLab International, LLC, 24825 N. 16th Avenue, Suite 125, Phoenix, AZ, 85085, Ph : +1 623-434-1499, Fx : +1 623-434-1492, www.lightlabint.com
USA east coast LightLab Int'l Allentown LLC, 905 Harrison Street, Suite 135, Allentown, PA 18103, Ph: +1 484-273-0705, www.lightlaballentown.com (issuing laboratory)
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

LLIA001675-001



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	30.5	4.1%	90-100	0.0	0.0%	0-20	116.7	15.8%
10-20	86.2	11.7%	100-110	0.0	0.0%	0-30	244.0	33.1%
20-30	127.2	17.2%	110-120	0.0	0.0%	0-40	391.2	53.0%
30-40	147.2	20.0%	120-130	0.0	0.0%	0-60	645.8	87.5%
40-50	142.1	19.3%	130-140	0.0	0.0%	0-80	734.6	99.6%
50-60	112.5	15.3%	140-150	0.0	0.0%	10-90	707.1	95.9%
60-70	67.4	9.1%	150-160	0.0	0.0%	20-50	416.6	56.5%
70-80	21.5	2.9%	160-170	0.0	0.0%	40-90	346.5	47.0%
80-90	3.0	0.4%	170-180	0.0	0.0%	60-90	91.9	12.5%
0-90	737.7	100.0%	90-180	0.0	0.0%	0-180	737.7	100.0%

Report of Test

LLIA001675-001

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	324	324	324	324	324	324	324	324	324
2.5	323	323	323	323	323	323	323	323	323
5	322	322	322	322	322	322	322	322	322
7.5	319	319	319	319	319	319	319	319	319
10	316	316	316	316	316	316	316	316	316
12.5	311	311	311	311	311	311	311	311	311
15	306	306	306	306	306	306	306	306	306
17.5	300	300	300	300	300	300	300	300	300
20	293	293	293	293	293	293	293	293	293
22.5	285	285	285	285	285	285	285	285	285
25	276	276	276	276	276	276	276	276	276
27.5	267	267	267	267	267	267	267	267	267
30	257	257	257	257	257	257	257	257	257
32.5	247	247	247	247	247	247	247	247	247
35	236	236	236	236	236	236	236	236	236
37.5	224	224	224	224	224	224	224	224	224
40	212	212	212	212	212	212	212	212	212
42.5	198	198	198	198	198	198	198	198	198
45	185	185	185	185	185	185	185	185	185
47.5	170	170	170	170	170	170	170	170	170
50	156	156	156	156	156	156	156	156	156
52.5	141	141	141	141	141	141	141	141	141
55	126	126	126	126	126	126	126	126	126
57.5	111	111	111	111	111	111	111	111	111
60	97	97	97	97	97	97	97	97	97
62.5	82	82	82	82	82	82	82	82	82
65	68	68	68	68	68	68	68	68	68
67.5	54	54	54	54	54	54	54	54	54
70	41	41	41	41	41	41	41	41	41
72.5	29	29	29	29	29	29	29	29	29
75	19	19	19	19	19	19	19	19	19
77.5	11	11	11	11	11	11	11	11	11
80	6	6	6	6	6	6	6	6	6
82.5	4	4	4	4	4	4	4	4	4
85	3	3	3	3	3	3	3	3	3
87.5	1	1	1	1	1	1	1	1	1
90	0	0	0	0	0	0	0	0	0

Report of Test

LLIA001675-001

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
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

LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA001675-001

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	110	106	103	99		108	104	101	98		100	97	95		96	94	92		93	91	89	87
2	102	94	88	83		99	92	87	82		89	84	80		86	82	79		83	80	77	75
3	93	84	76	71		91	82	75	70		79	74	69		77	72	68		74	70	66	64
4	86	75	67	61		84	74	66	60		71	65	59		69	63	59		67	62	58	56
5	79	67	59	53		77	66	58	53		64	57	52		62	56	51		61	55	51	49
6	73	61	53	47		72	60	52	46		58	51	46		57	50	46		55	50	45	43
7	68	56	47	41		67	55	47	41		53	46	41		52	45	41		51	45	40	39
8	64	51	43	37		62	50	42	37		49	42	37		48	41	37		47	41	36	35
9	60	47	39	34		58	46	39	34		45	38	33		44	38	33		43	37	33	31
10	56	43	36	31		55	43	35	31		42	35	30		41	35	30		40	34	30	28

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	9.0	7.12	7.12
8.0	5.1	9.49	9.49
10.0	3.2	11.86	11.86
12.0	2.2	14.24	14.24
14.0	1.7	16.61	16.61
16.0	1.3	18.98	18.98

Spacing Criterion

SC: 1.2

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	28316	28316	28316
45	22833	22833	22833
55	19202	19202	19202
65	14067	14067	14067
75	6350	6350	6350
85	2665	2665	2665

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 97.9°

Field Angle: 143.6°

90-270 Degree Plane

Beam Angle: 97.9°

Field Angle: 143.6°

Report of Test

LLIA001675-001

UGR Table - Corrected

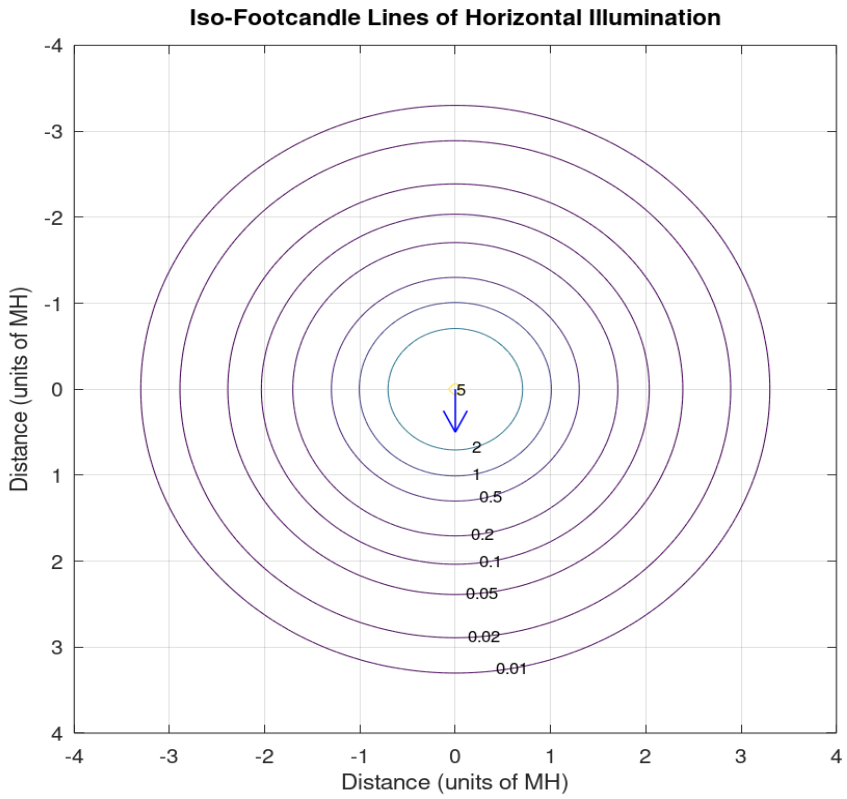
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	21.1	22.7	21.5	23.0	23.3	21.1	22.7	21.5	23.0	23.3
	3H	22.1	23.5	22.5	23.8	24.2	22.1	23.5	22.5	23.8	24.2
	4H	22.3	23.6	22.7	23.9	24.3	22.3	23.6	22.7	23.9	24.3
	6H	22.3	23.5	22.7	23.8	24.2	22.3	23.5	22.7	23.8	24.2
	8H	22.3	23.4	22.7	23.8	24.2	22.3	23.4	22.7	23.8	24.2
	12H	22.2	23.3	22.7	23.7	24.1	22.2	23.3	22.7	23.7	24.1
4H	2H	21.5	22.8	21.9	23.2	23.5	21.5	22.8	21.9	23.2	23.5
	3H	22.7	23.7	23.1	24.1	24.5	22.7	23.7	23.1	24.1	24.5
	4H	22.8	23.8	23.3	24.2	24.6	22.8	23.8	23.3	24.2	24.6
	6H	22.9	23.7	23.4	24.1	24.6	22.9	23.7	23.4	24.1	24.6
	8H	22.9	23.6	23.3	24.1	24.5	22.9	23.6	23.3	24.1	24.5
	12H	22.8	23.5	23.3	24.0	24.5	22.8	23.5	23.3	24.0	24.5
8H	4H	22.9	23.6	23.3	24.1	24.5	22.9	23.6	23.3	24.1	24.5
	6H	22.9	23.5	23.4	24.0	24.5	22.9	23.5	23.4	24.0	24.5
	8H	22.9	23.5	23.4	24.0	24.5	22.9	23.5	23.4	24.0	24.5
	12H	22.9	23.4	23.4	23.9	24.5	22.9	23.4	23.4	23.9	24.5
12H	4H	22.8	23.5	23.3	24.0	24.5	22.8	23.5	23.3	24.0	24.5
	6H	22.9	23.4	23.4	23.9	24.4	22.9	23.4	23.4	23.9	24.4
	8H	22.9	23.4	23.4	23.9	24.4	22.9	23.4	23.4	23.9	24.4

Maximum UGR = 24.6

Report of Test

LLIA001675-001

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

LLIA001675-001

Test Distance	9.5 m
Ambient Temperature	24.7 °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.