LightLab INTERNATIONAL ALLENTOWN LLC

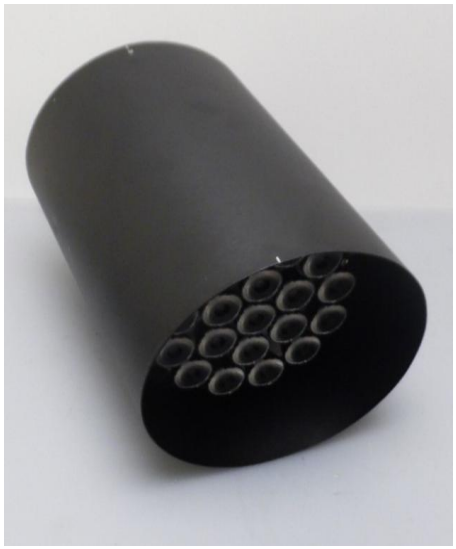
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA003089-007

Indoor Distribution Photometry Test Report

Catalog Number: RH-140-34-D-B-M-4-515-R-H (Green Setting)
Pendant/highbay mounted, spun black aluminum outer housing,
extruded aluminum heatsink and formed aluminum frame, no enclosure.
19 RGBW LED clusters with clear prismatic plastic optics below each.
One MeanWell XLG-200-24-A LED driver



Prepared For:
Aquarii
6805 Newbrook Avenue
East Syracuse, NY 13057, USA

Performance Summary					
Input Voltage	120.0	Vac	Luminous Flux	3510.6	Lumens
Input Current	0.4945	A	Total Efficacy	60.8	Lm/W
Input Power	57.72	W	Downward Flux	3510.6	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.972				
Current THD	5.2	%			

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

Test date: 09/18/2026
Report date: 09/22/2026

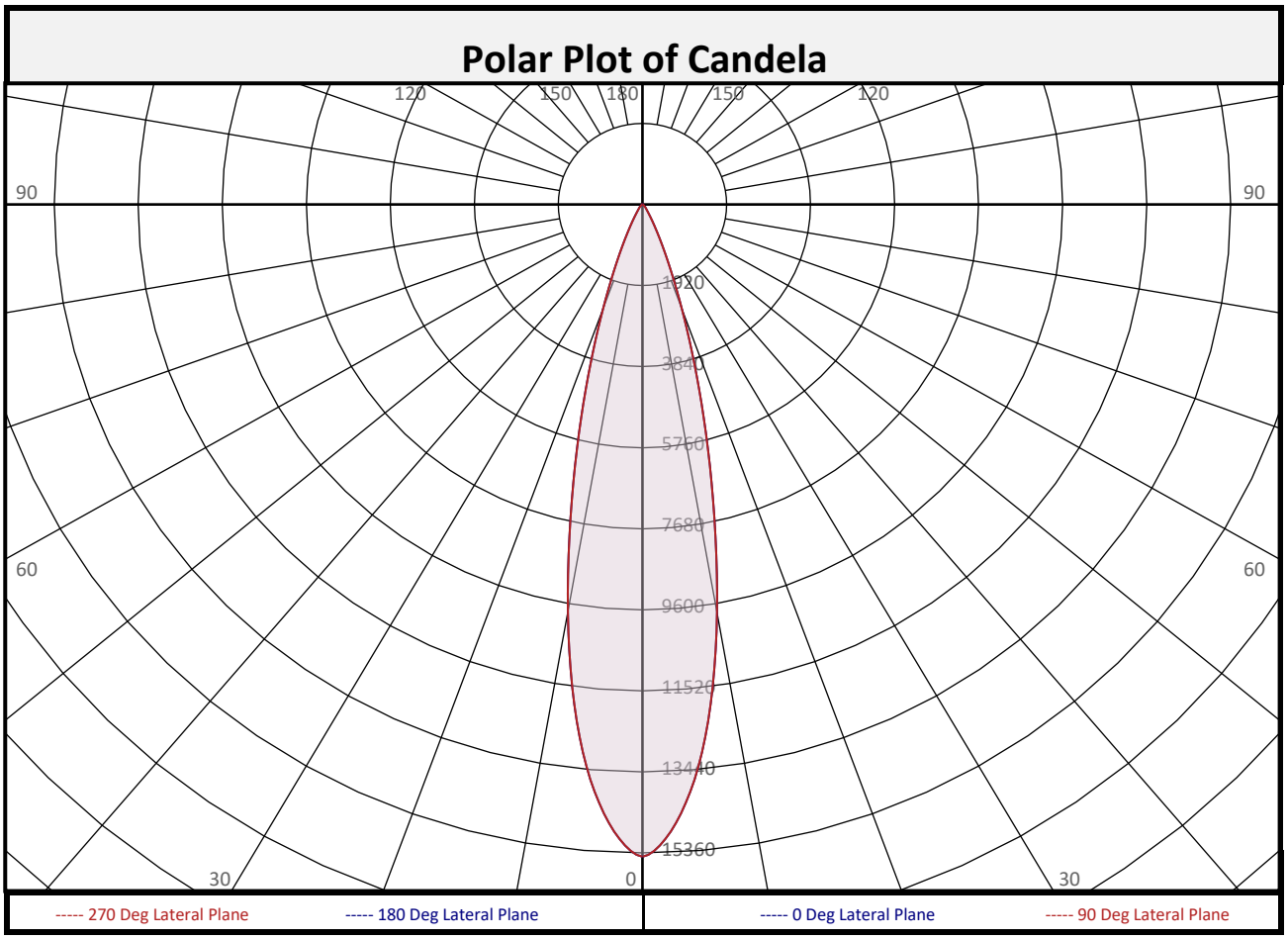
Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2026.09.22 16:31:13 -04'00'

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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	1181	33.6%	90-100	0.0	0.0%	0-20	2719	77.4%
10-20	1538	43.8%	100-110	0.0	0.0%	0-30	3259	92.8%
20-30	540.5	15.4%	110-120	0.0	0.0%	0-40	3402	96.9%
30-40	143.2	4.1%	120-130	0.0	0.0%	0-60	3500	99.7%
40-50	67.6	1.9%	130-140	0.0	0.0%	0-80	3510	100.0%
50-60	30.1	0.9%	140-150	0.0	0.0%	10-90	2330	66.4%
60-70	9.7	0.3%	150-160	0.0	0.0%	20-50	751.3	21.4%
70-80	0.8	0.0%	160-170	0.0	0.0%	40-90	108.3	3.1%
80-90	0.1	0.0%	170-180	0.0	0.0%	60-90	10.7	0.3%
0-90	3511	100.0%	90-180	0.0	0.0%	0-180	3511	100.0%

Report of Test

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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	15451	15451	15451	15451	15451	15451	15451	15451	15451
2.5	14868	14868	14868	14868	14868	14868	14868	14868	14868
5	13677	13677	13677	13677	13677	13677	13677	13677	13677
7.5	11943	11943	11943	11943	11943	11943	11943	11943	11943
10	9817	9817	9817	9817	9817	9817	9817	9817	9817
12.5	7601	7601	7601	7601	7601	7601	7601	7601	7601
15	5613	5613	5613	5613	5613	5613	5613	5613	5613
17.5	3934	3934	3934	3934	3934	3934	3934	3934	3934
20	2640	2640	2640	2640	2640	2640	2640	2640	2640
22.5	1706	1706	1706	1706	1706	1706	1706	1706	1706
25	1081	1081	1081	1081	1081	1081	1081	1081	1081
27.5	684	684	684	684	684	684	684	684	684
30	440	440	440	440	440	440	440	440	440
32.5	294	294	294	294	294	294	294	294	294
35	209	209	209	209	209	209	209	209	209
37.5	161	161	161	161	161	161	161	161	161
40	129	129	129	129	129	129	129	129	129
42.5	107	107	107	107	107	107	107	107	107
45	87	87	87	87	87	87	87	87	87
47.5	69	69	69	69	69	69	69	69	69
50	54	54	54	54	54	54	54	54	54
52.5	42	42	42	42	42	42	42	42	42
55	33	33	33	33	33	33	33	33	33
57.5	25	25	25	25	25	25	25	25	25
60	19	19	19	19	19	19	19	19	19
62.5	14	14	14	14	14	14	14	14	14
65	10	10	10	10	10	10	10	10	10
67.5	6	6	6	6	6	6	6	6	6
70	3	3	3	3	3	3	3	3	3
72.5	1	1	1	1	1	1	1	1	1
75	0	0	0	0	0	0	0	0	0
77.5	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0
82.5	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0	0	0
90	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

LLIA003089-007

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
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	0
RCR																						
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102	100
1	115	113	111	109		113	111	109	107		107	105	104		103	102	101		100	99	98	96
2	111	107	104	102		109	106	103	100		102	100	98		100	98	96		97	95	94	93
3	107	102	99	96		105	101	98	95		99	96	93		96	94	92		94	92	91	89
4	104	98	94	91		102	97	93	90		95	92	89		93	91	88		92	89	87	86
5	100	94	90	87		99	94	90	87		92	89	86		90	87	85		89	86	84	83
6	97	91	87	84		96	90	86	83		89	85	83		88	85	82		87	84	82	81
7	95	88	84	81		93	87	83	80		86	83	80		85	82	80		84	81	79	78
8	92	85	81	78		91	85	81	78		84	80	77		83	79	77		82	79	77	76
9	89	82	78	75		88	82	78	75		81	78	75		80	77	75		80	77	75	74
10	87	80	76	73		86	80	76	73		79	75	73		78	75	73		78	75	73	72

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	429.2	2.50	2.50
8.0	241.4	3.33	3.33
10.0	154.5	4.17	4.17
12.0	107.3	5.00	5.00
14.0	78.8	5.83	5.83
16.0	60.4	6.67	6.67

Spacing Criterion

SC: 0.4

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	337874	337874	337874
45	2689	2689	2689
55	1247	1247	1247
65	497	497	497
75	41	41	41
85	22	22	22

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 24.7°

Field Angle: 46.1°

90-270 Degree Plane

Beam Angle: 24.7°

Field Angle: 46.1°

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UGR Table - Corrected

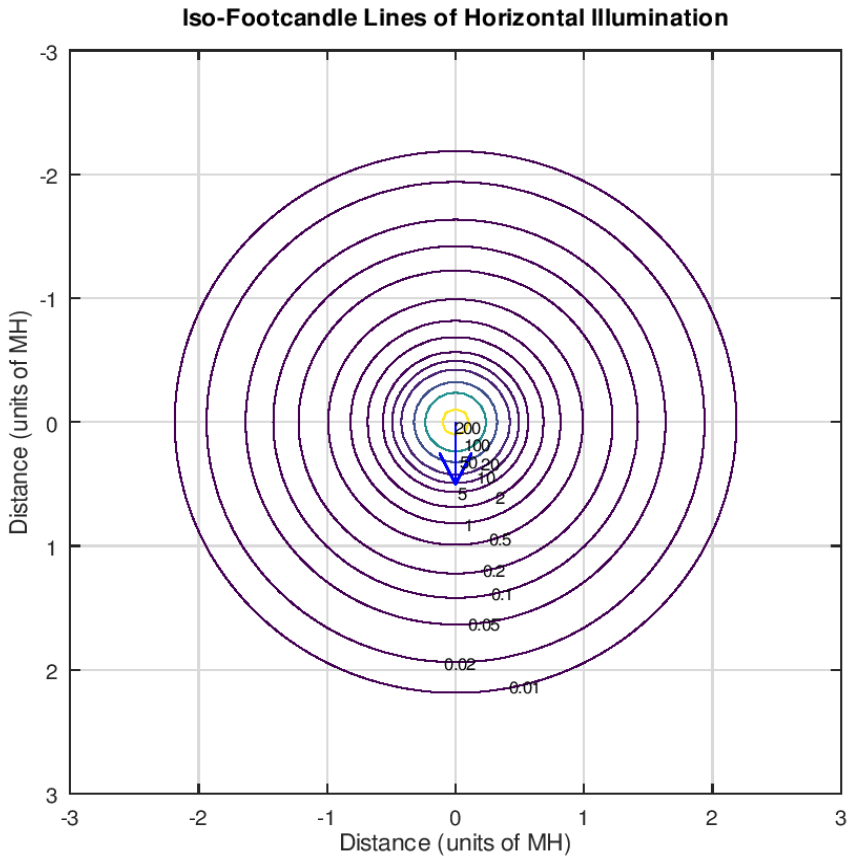
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	3H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	4H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	6H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	12H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4H	2H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	3H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	4H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	6H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	12H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
8H	4H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	6H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	12H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
12H	4H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	6H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	8H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Maximum UGR = <10

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Iso-Illuminance Plot

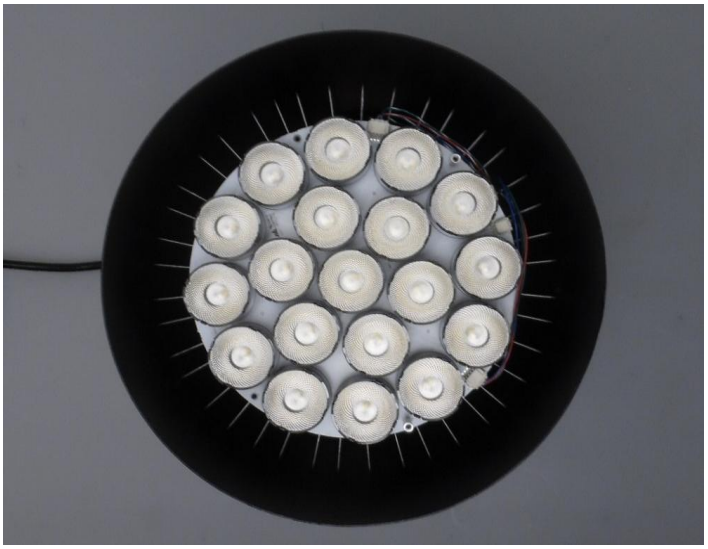


The isofootcandle values shown in the plot above are based on a mounting height of h = 8.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.

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Additional Pictures of Test Subject





Report of Test

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Test Distance	9.5 m
Ambient Temperature	25.2 °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-79-24. 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.