LightLab INTERNATIONAL ALLENTOWN LLC

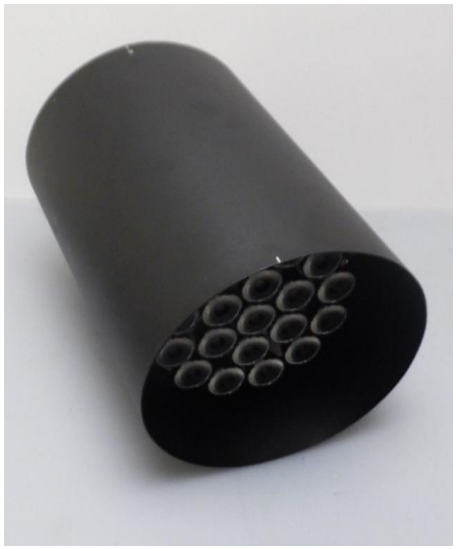
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA003089-009

Indoor Distribution Photometry Test Report

Catalog Number: RH-140-34-D-B-M-4-515-R-H (White 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	3294.0	Lumens
Input Current	0.5484	A	Total Efficacy	51.2	Lm/W
Input Power	64.32	W	Downward Flux	3294.0	Lumens
Frequency	60.00	Hz	Downward Flux	100.0	% of Total
Power Factor	0.977				
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

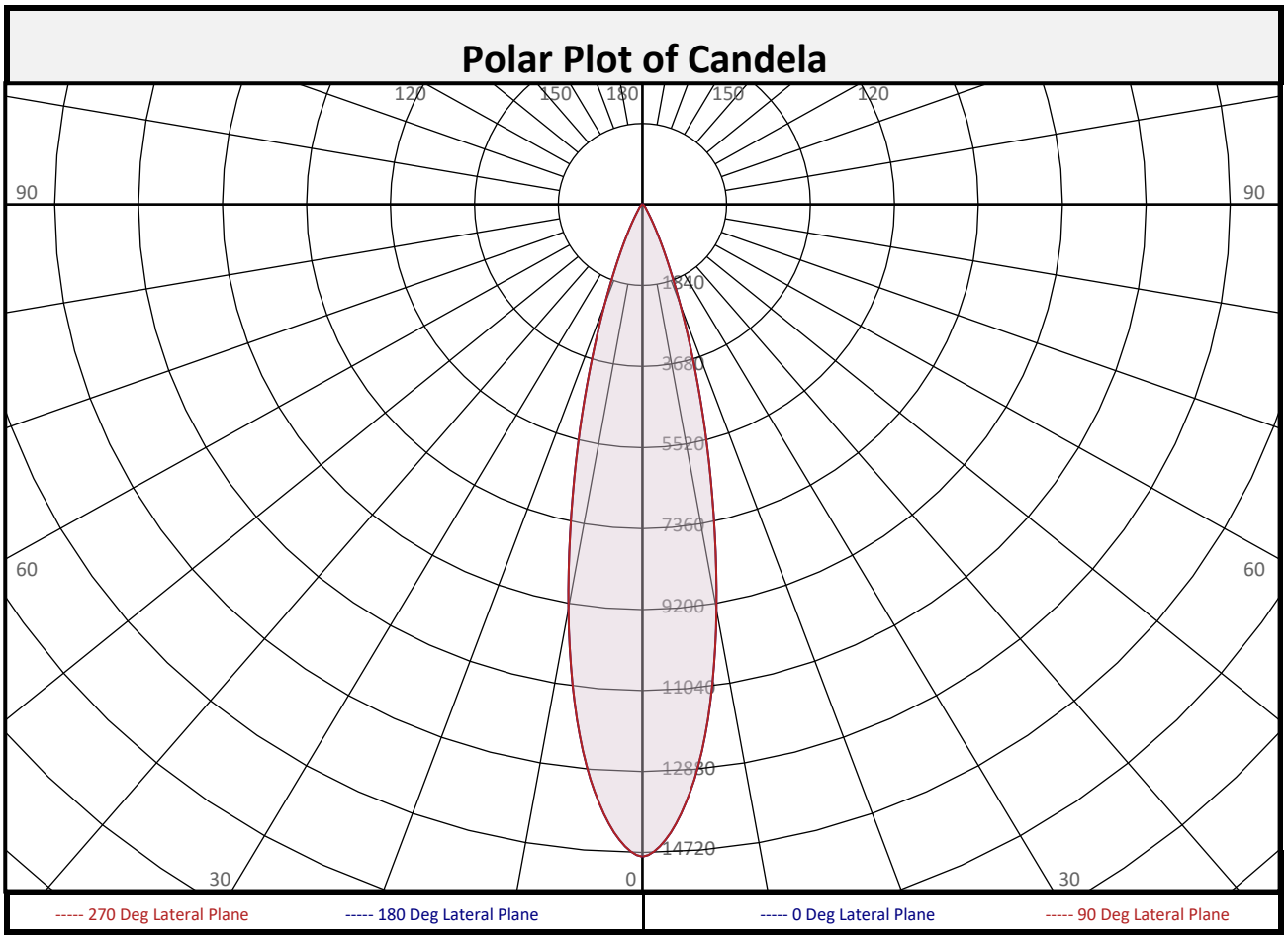
Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2026.09.22 16:32:32 -04'00'

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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	1129	34.3%	90-100	0.0	0.0%	0-20	2578	78.3%
10-20	1449	44.0%	100-110	0.0	0.0%	0-30	3063	93.0%
20-30	485.5	14.7%	110-120	0.0	0.0%	0-40	3190	96.8%
30-40	126.6	3.8%	120-130	0.0	0.0%	0-60	3284	99.7%
40-50	64.5	2.0%	130-140	0.0	0.0%	0-80	3294	100.0%
50-60	29.4	0.9%	140-150	0.0	0.0%	10-90	2165	65.7%
60-70	9.4	0.3%	150-160	0.0	0.0%	20-50	676.6	20.5%
70-80	0.8	0.0%	160-170	0.0	0.0%	40-90	104.3	3.2%
80-90	0.1	0.0%	170-180	0.0	0.0%	60-90	10.3	0.3%
0-90	3294	100.0%	90-180	0.0	0.0%	0-180	3294	100.0%

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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	14817	14817	14817	14817	14817	14817	14817	14817	14817
2.5	14279	14279	14279	14279	14279	14279	14279	14279	14279
5	13102	13102	13102	13102	13102	13102	13102	13102	13102
7.5	11400	11400	11400	11400	11400	11400	11400	11400	11400
10	9341	9341	9341	9341	9341	9341	9341	9341	9341
12.5	7209	7209	7209	7209	7209	7209	7209	7209	7209
15	5295	5295	5295	5295	5295	5295	5295	5295	5295
17.5	3673	3673	3673	3673	3673	3673	3673	3673	3673
20	2433	2433	2433	2433	2433	2433	2433	2433	2433
22.5	1545	1545	1545	1545	1545	1545	1545	1545	1545
25	962	962	962	962	962	962	962	962	962
27.5	600	600	600	600	600	600	600	600	600
30	382	382	382	382	382	382	382	382	382
32.5	256	256	256	256	256	256	256	256	256
35	185	185	185	185	185	185	185	185	185
37.5	145	145	145	145	145	145	145	145	145
40	121	121	121	121	121	121	121	121	121
42.5	101	101	101	101	101	101	101	101	101
45	83	83	83	83	83	83	83	83	83
47.5	67	67	67	67	67	67	67	67	67
50	52	52	52	52	52	52	52	52	52
52.5	41	41	41	41	41	41	41	41	41
55	32	32	32	32	32	32	32	32	32
57.5	25	25	25	25	25	25	25	25	25
60	18	18	18	18	18	18	18	18	18
62.5	13	13	13	13	13	13	13	13	13
65	9	9	9	9	9	9	9	9	9
67.5	5	5	5	5	5	5	5	5	5
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.

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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
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	96	94	93
3	107	103	99	96		105	101	98	95		99	96	94		96	94	92		94	92	91	90
4	104	98	94	91		102	97	94	91		95	92	90		93	91	89		92	89	88	86
5	101	95	90	87		99	94	90	87		92	89	86		91	88	85		89	87	85	84
6	98	91	87	84		96	90	86	84		89	86	83		88	85	83		87	84	82	81
7	95	88	84	81		94	88	84	81		86	83	80		85	82	80		84	82	79	78
8	92	85	81	78		91	85	81	78		84	80	78		83	80	77		82	79	77	76
9	90	83	79	76		89	82	78	76		82	78	75		81	78	75		80	77	75	74
10	87	80	76	74		86	80	76	73		79	76	73		79	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	411.6	2.48	2.48
8.0	231.5	3.31	3.31
10.0	148.2	4.14	4.14
12.0	102.9	4.96	4.96
14.0	75.6	5.79	5.79
16.0	57.9	6.62	6.62

Spacing Criterion

SC: 0.4

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	324018	324018	324018
45	2582	2582	2582
55	1227	1227	1227
65	490	490	490
75	42	42	42
85	30	30	30

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 24.5°

Field Angle: 45.5°

90-270 Degree Plane

Beam Angle: 24.5°

Field Angle: 45.5°

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UGR Table - Corrected

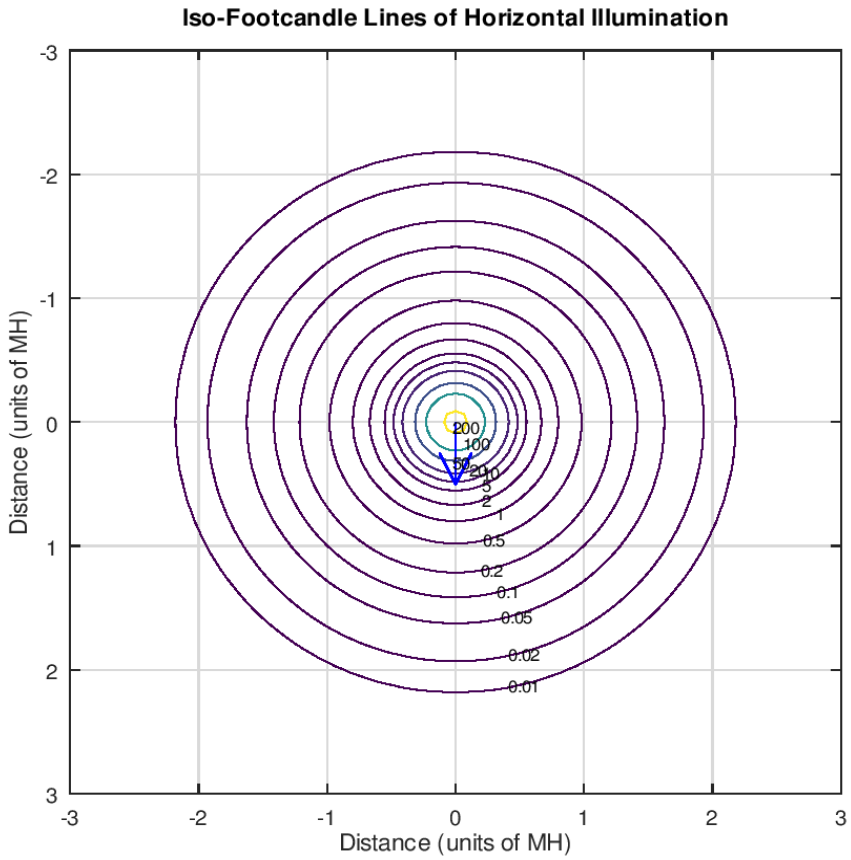
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
	3H	<10	<10	<10	<10	<10	<10	<10	<10	<10	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

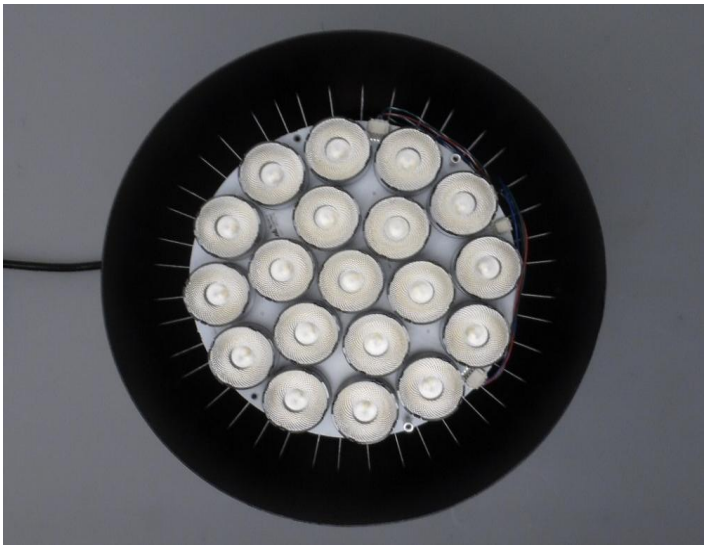


The isofootcandle values shown in the plot above are based on a mounting height of h = 8.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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

Report of Test

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Additional Pictures of Test Subject





Report of Test

LLIA003089-009

Test Distance	9.5 m
Ambient Temperature	25.5 °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.