LightLab INTERNATIONAL ALLENTOWN LLC

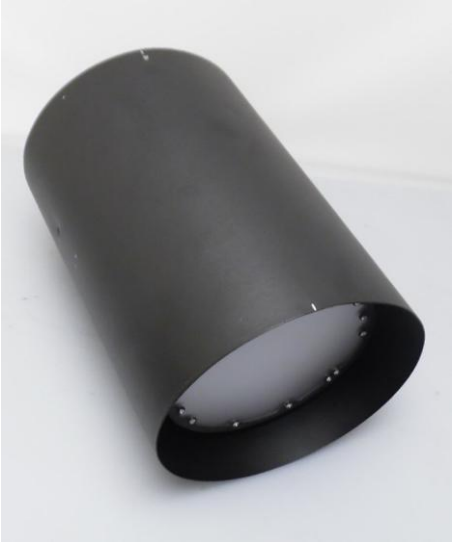
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA003089-002

Indoor Distribution Photometry Test Report

Catalog Number: RH-140-60-D-B-M-4-515-R-H (Green Setting)
Pendant/highbay mounted, spun black aluminum outer housing, extruded aluminum heatsink and formed aluminum frame, frosted plastic enclosure below LEDs.
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	1947.5	Lumens
Input Current	0.4942	A	Total Efficacy	33.8	Lm/W
Input Power	57.68	W	Downward Flux	1947.5	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

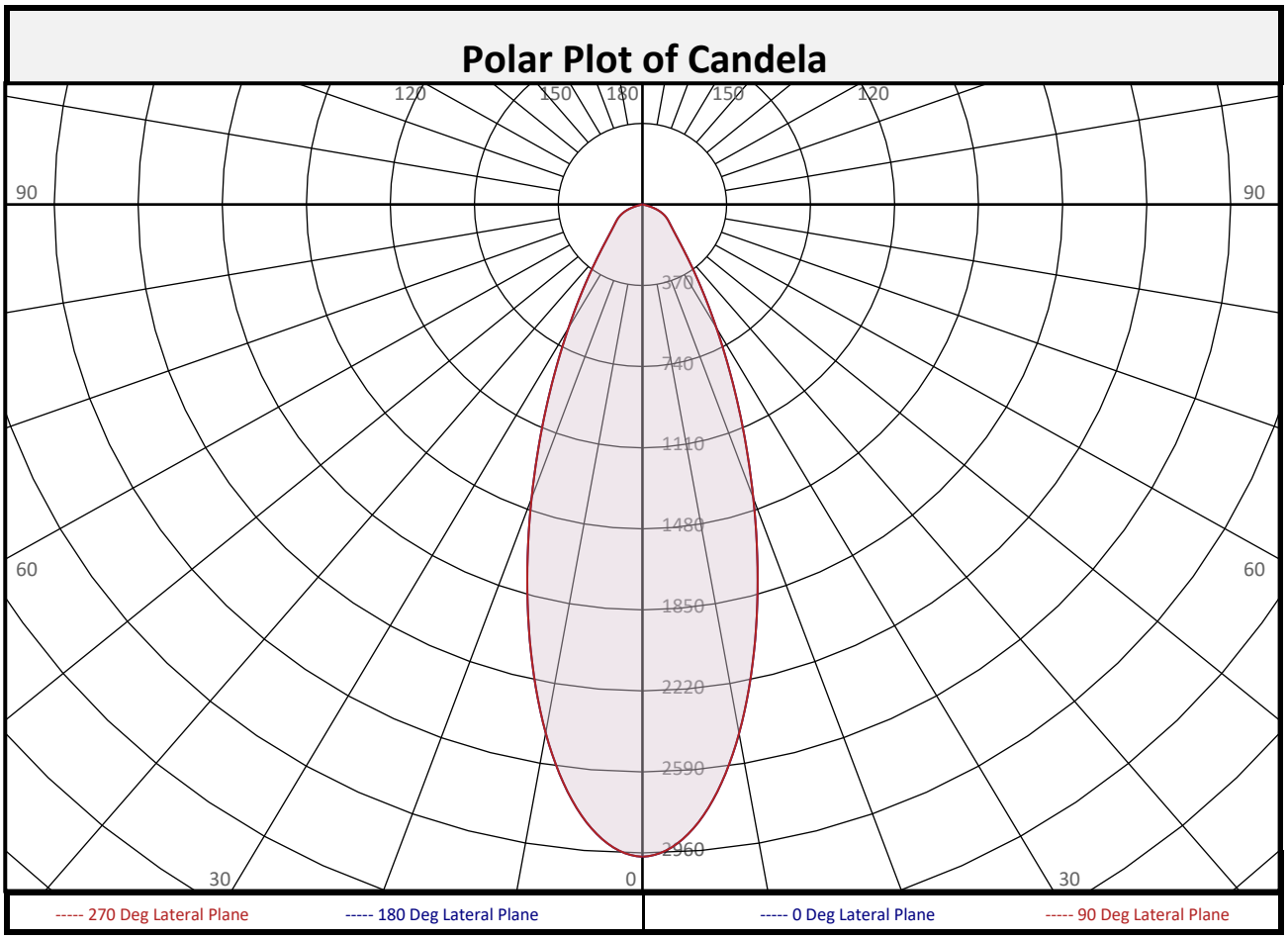
Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2026.09.22 16:28:10 -04'00'

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Report of Test

LLIA003089-002



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	258.0	13.2%	90-100	0.0	0.0%	0-20	792.5	40.7%
10-20	534.5	27.4%	100-110	0.0	0.0%	0-30	1245	63.9%
20-30	452.4	23.2%	110-120	0.0	0.0%	0-40	1520	78.1%
30-40	275.2	14.1%	120-130	0.0	0.0%	0-60	1822	93.6%
40-50	171.9	8.8%	130-140	0.0	0.0%	0-80	1946	100.0%
50-60	130.2	6.7%	140-150	0.0	0.0%	10-90	1689	86.8%
60-70	95.5	4.9%	150-160	0.0	0.0%	20-50	899.5	46.2%
70-80	28.8	1.5%	160-170	0.0	0.0%	40-90	427.4	21.9%
80-90	1.0	0.0%	170-180	0.0	0.0%	60-90	125.3	6.4%
0-90	1947	100.0%	90-180	0.0	0.0%	0-180	1947	100.0%

Report of Test

LLIA003089-002

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	2977	2977	2977	2977	2977	2977	2977	2977	2977
2.5	2938	2938	2938	2938	2938	2938	2938	2938	2938
5	2831	2831	2831	2831	2831	2831	2831	2831	2831
7.5	2664	2664	2664	2664	2664	2664	2664	2664	2664
10	2450	2450	2450	2450	2450	2450	2450	2450	2450
12.5	2205	2205	2205	2205	2205	2205	2205	2205	2205
15	1944	1944	1944	1944	1944	1944	1944	1944	1944
17.5	1679	1679	1679	1679	1679	1679	1679	1679	1679
20	1426	1426	1426	1426	1426	1426	1426	1426	1426
22.5	1192	1192	1192	1192	1192	1192	1192	1192	1192
25	983	983	983	983	983	983	983	983	983
27.5	802	802	802	802	802	802	802	802	802
30	651	651	651	651	651	651	651	651	651
32.5	528	528	528	528	528	528	528	528	528
35	431	431	431	431	431	431	431	431	431
37.5	355	355	355	355	355	355	355	355	355
40	297	297	297	297	297	297	297	297	297
42.5	252	252	252	252	252	252	252	252	252
45	218	218	218	218	218	218	218	218	218
47.5	193	193	193	193	193	193	193	193	193
50	173	173	173	173	173	173	173	173	173
52.5	157	157	157	157	157	157	157	157	157
55	145	145	145	145	145	145	145	145	145
57.5	133	133	133	133	133	133	133	133	133
60	123	123	123	123	123	123	123	123	123
62.5	111	111	111	111	111	111	111	111	111
65	98	98	98	98	98	98	98	98	98
67.5	83	83	83	83	83	83	83	83	83
70	66	66	66	66	66	66	66	66	66
72.5	46	46	46	46	46	46	46	46	46
75	25	25	25	25	25	25	25	25	25
77.5	6	6	6	6	6	6	6	6	6
80	2	2	2	2	2	2	2	2	2
82.5	1	1	1	1	1	1	1	1	1
85	1	1	1	1	1	1	1	1	1
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

LLIA003089-002

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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NVLAP TESTING Lab Code: 201079-0

Report of Test

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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	113	109	107	104		110	107	105	102		103	101	99		99	98	96		96	95	93	92
2	106	100	96	92		104	99	95	91		95	92	89		92	90	87		90	87	85	83
3	100	93	87	83		98	91	86	82		89	84	81		86	82	79		84	81	78	76
4	94	86	80	75		92	85	79	75		83	78	74		80	76	73		79	75	72	70
5	89	80	74	69		88	79	73	69		77	72	68		76	71	67		74	70	67	65
6	85	75	68	64		83	74	68	64		73	67	63		71	66	63		70	65	62	61
7	80	70	64	59		79	70	64	59		68	63	59		67	62	59		66	62	58	57
8	76	66	60	56		75	66	60	56		65	59	55		64	59	55		63	58	55	53
9	73	63	57	52		72	62	56	52		61	56	52		60	55	52		60	55	52	50
10	70	60	54	50		69	59	53	49		58	53	49		58	53	49		57	52	49	48

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	82.7	3.72	3.72
8.0	46.5	4.96	4.96
10.0	29.8	6.20	6.20
12.0	20.7	7.44	7.44
14.0	15.2	8.68	8.68
16.0	11.6	9.92	9.92

Spacing Criterion

SC: 0.6

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	65108	65108	65108
45	6750	6750	6750
55	5513	5513	5513
65	5056	5056	5056
75	2108	2108	2108
85	207	207	207

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 38.8°

Field Angle: 79.9°

90-270 Degree Plane

Beam Angle: 38.8°

Field Angle: 79.9°

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Report of Test

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UGR Table - Corrected

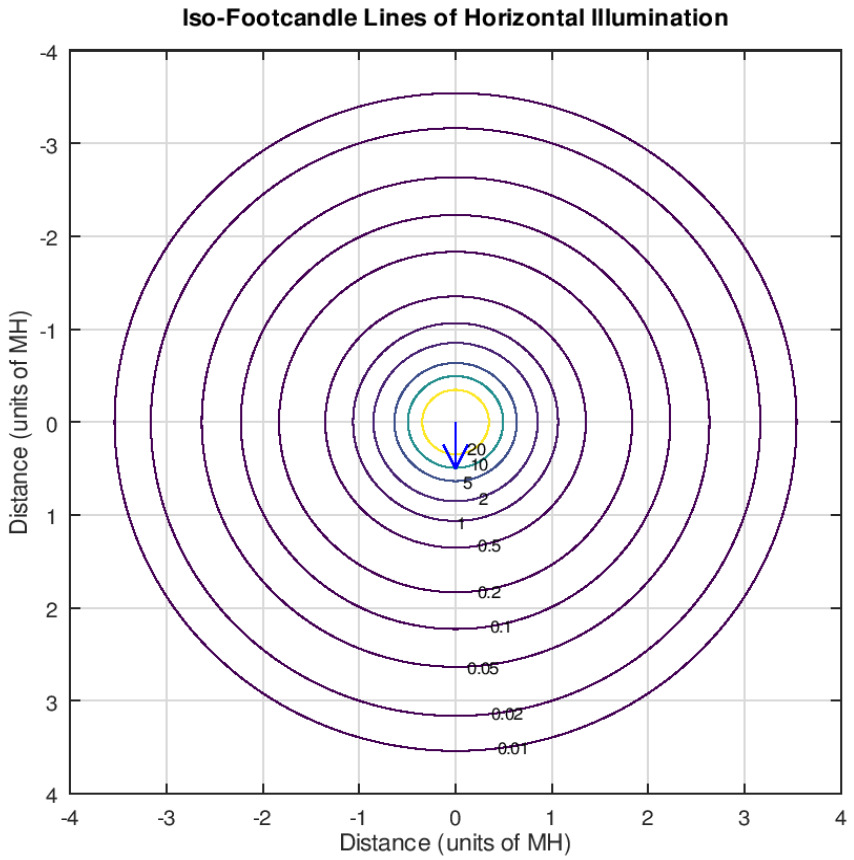
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.7	15.9	15.1	16.2	16.6	14.7	15.9	15.1	16.2	16.6
	3H	16.3	17.4	16.7	17.7	18.1	16.3	17.4	16.7	17.7	18.1
	4H	16.5	17.5	16.9	17.8	18.2	16.5	17.5	16.9	17.8	18.2
	6H	16.4	17.3	16.8	17.7	18.1	16.4	17.3	16.8	17.7	18.1
	8H	16.3	17.2	16.8	17.6	18.0	16.3	17.2	16.8	17.6	18.0
	12H	16.3	17.1	16.7	17.5	17.9	16.3	17.1	16.7	17.5	17.9
4H	2H	15.3	16.3	15.7	16.6	17.0	15.3	16.3	15.7	16.6	17.0
	3H	17.0	17.8	17.4	18.2	18.6	17.0	17.8	17.4	18.2	18.6
	4H	17.1	17.8	17.6	18.3	18.7	17.1	17.8	17.6	18.3	18.7
	6H	17.0	17.7	17.5	18.1	18.6	17.0	17.7	17.5	18.1	18.6
	8H	17.0	17.6	17.5	18.0	18.5	17.0	17.6	17.5	18.0	18.5
	12H	16.9	17.4	17.4	17.9	18.4	16.9	17.4	17.4	17.9	18.4
8H	4H	17.1	17.7	17.6	18.1	18.6	17.1	17.7	17.6	18.1	18.6
	6H	17.0	17.5	17.5	18.0	18.4	17.0	17.5	17.5	18.0	18.4
	8H	16.9	17.3	17.5	17.9	18.4	16.9	17.3	17.5	17.9	18.4
	12H	16.9	17.3	17.4	17.8	18.3	16.9	17.3	17.4	17.8	18.3
12H	4H	17.0	17.5	17.5	18.0	18.5	17.0	17.5	17.5	18.0	18.5
	6H	16.9	17.4	17.5	17.8	18.4	16.9	17.4	17.5	17.8	18.4
	8H	16.9	17.3	17.4	17.8	18.3	16.9	17.3	17.4	17.8	18.3

Maximum UGR = 18.7

Report of Test

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Iso-Illuminance Plot

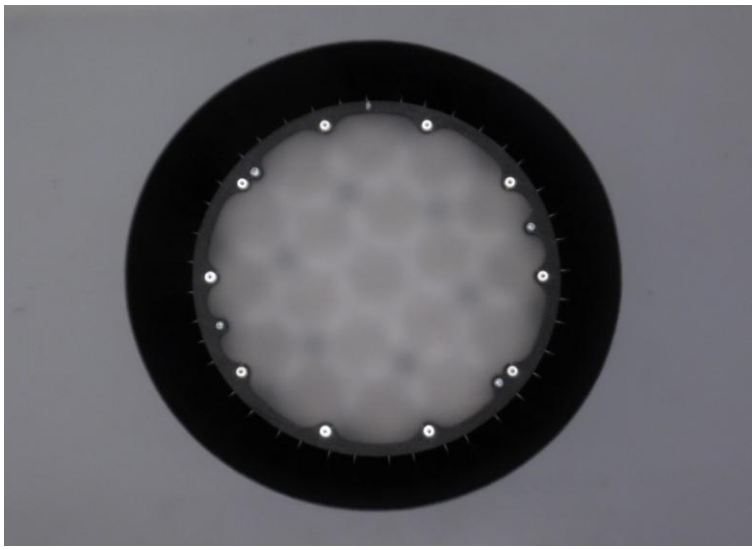


The isofootcandle values shown in the plot above are based on a mounting height of h = 8.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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

Report of Test

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Additional Pictures of Test Subject





Report of Test

LLIA003089-002

Test Distance	9.5 m
Ambient Temperature	25.1 °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.