LightLab INTERNATIONAL ALLENTOWN LLC

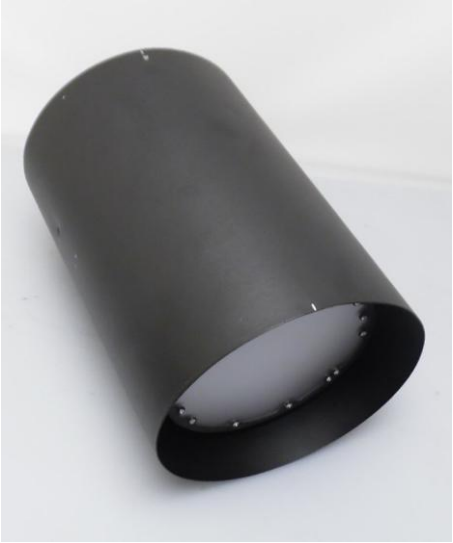
NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA003089-005

Indoor Distribution Photometry Test Report

Catalog Number: RH-140-60-D-B-M-4-515-R-H (All On 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	3067.0 Lumens
Input Current	1.096 A	Total Efficacy	23.5 Lm/W
Input Power	130.7 W	Downward Flux	3067.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.995		
Current THD	4.8 %		

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

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

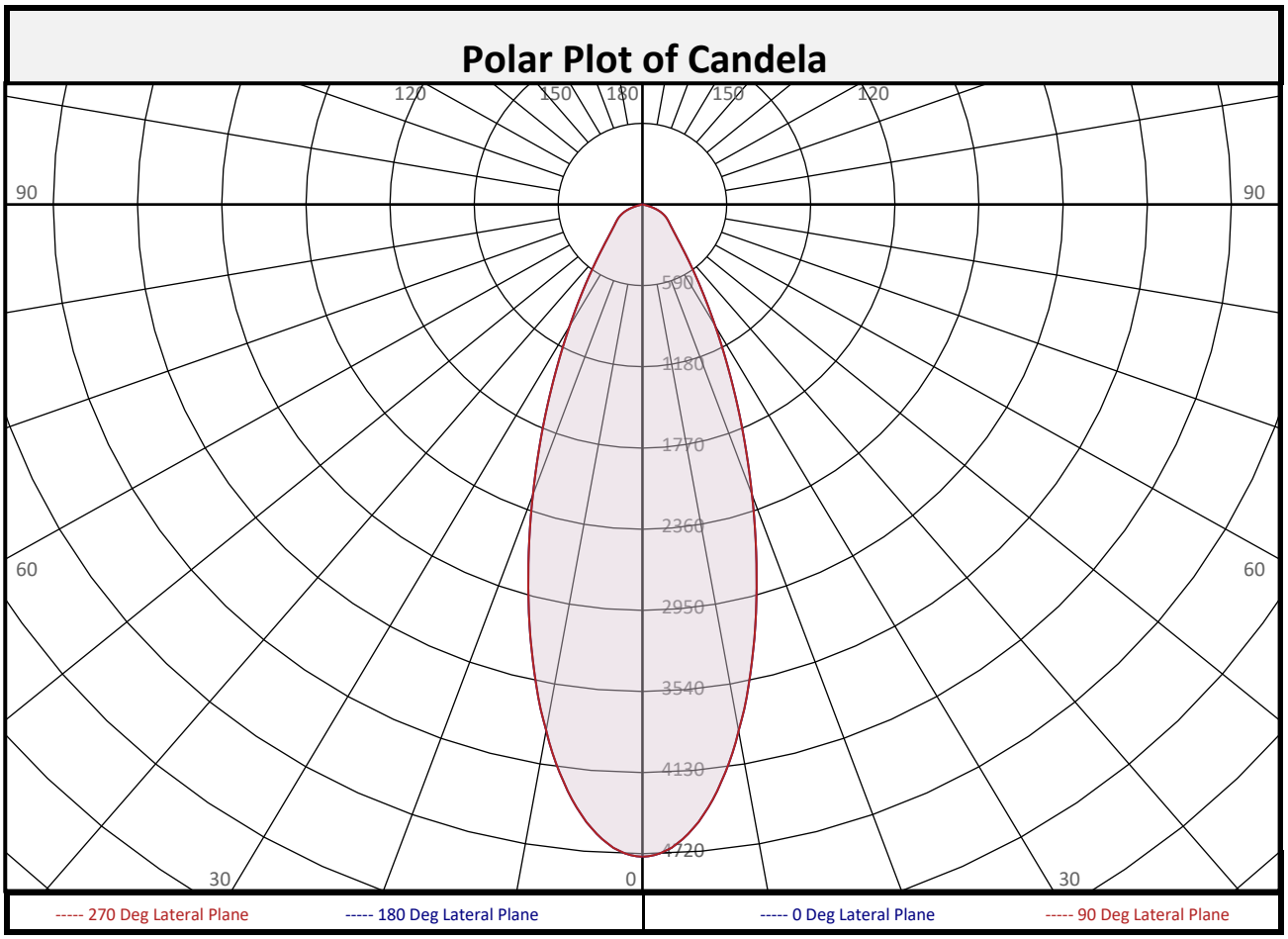
Signed: Michael L. Grather Digitally signed by Michael L. Grather Date: 2026.09.22 16:30:00 -04'00'

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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	410.3	13.4%	90-100	0.0	0.0%	0-20	1255	40.9%
10-20	844.8	27.5%	100-110	0.0	0.0%	0-30	1965	64.1%
20-30	709.8	23.1%	110-120	0.0	0.0%	0-40	2395	78.1%
30-40	430.4	14.0%	120-130	0.0	0.0%	0-60	2869	93.6%
40-50	269.3	8.8%	130-140	0.0	0.0%	0-80	3065	100.0%
50-60	204.8	6.7%	140-150	0.0	0.0%	10-90	2657	86.6%
60-70	150.7	4.9%	150-160	0.0	0.0%	20-50	1410	46.0%
70-80	45.3	1.5%	160-170	0.0	0.0%	40-90	671.7	21.9%
80-90	1.5	0.0%	170-180	0.0	0.0%	60-90	197.6	6.4%
0-90	3067	100.0%	90-180	0.0	0.0%	0-180	3067	100.0%

Report of Test

LLIA003089-005

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	4742	4742	4742	4742	4742	4742	4742	4742	4742
2.5	4682	4682	4682	4682	4682	4682	4682	4682	4682
5	4507	4507	4507	4507	4507	4507	4507	4507	4507
7.5	4232	4232	4232	4232	4232	4232	4232	4232	4232
10	3883	3883	3883	3883	3883	3883	3883	3883	3883
12.5	3494	3494	3494	3494	3494	3494	3494	3494	3494
15	3075	3075	3075	3075	3075	3075	3075	3075	3075
17.5	2649	2649	2649	2649	2649	2649	2649	2649	2649
20	2243	2243	2243	2243	2243	2243	2243	2243	2243
22.5	1873	1873	1873	1873	1873	1873	1873	1873	1873
25	1542	1542	1542	1542	1542	1542	1542	1542	1542
27.5	1256	1256	1256	1256	1256	1256	1256	1256	1256
30	1019	1019	1019	1019	1019	1019	1019	1019	1019
32.5	826	826	826	826	826	826	826	826	826
35	674	674	674	674	674	674	674	674	674
37.5	555	555	555	555	555	555	555	555	555
40	464	464	464	464	464	464	464	464	464
42.5	394	394	394	394	394	394	394	394	394
45	342	342	342	342	342	342	342	342	342
47.5	302	302	302	302	302	302	302	302	302
50	271	271	271	271	271	271	271	271	271
52.5	247	247	247	247	247	247	247	247	247
55	227	227	227	227	227	227	227	227	227
57.5	210	210	210	210	210	210	210	210	210
60	194	194	194	194	194	194	194	194	194
62.5	175	175	175	175	175	175	175	175	175
65	154	154	154	154	154	154	154	154	154
67.5	131	131	131	131	131	131	131	131	131
70	104	104	104	104	104	104	104	104	104
72.5	73	73	73	73	73	73	73	73	73
75	39	39	39	39	39	39	39	39	39
77.5	9	9	9	9	9	9	9	9	9
80	3	3	3	3	3	3	3	3	3
82.5	2	2	2	2	2	2	2	2	2
85	1	1	1	1	1	1	1	1	1
87.5	1	1	1	1	1	1	1	1	1
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

LLIA003089-005

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.

LightLab INTERNATIONAL ALLENTOWN LLC

NVLAP TESTING Lab Code: 201079-0

Report of Test

LLIA003089-005

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	101	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		81	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	69	64		83	74	68	64		73	67	63		71	66	63		70	66	62	61
7	80	70	64	60		79	70	64	59		68	63	59		67	62	59		66	62	58	57
8	77	66	60	56		75	66	60	56		65	59	55		64	59	55		63	58	55	53
9	73	63	57	53		72	62	56	52		61	56	52		61	56	52		60	55	52	50
10	70	60	54	50		69	59	53	50		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	131.7	3.69	3.69
8.0	74.1	4.92	4.92
10.0	47.4	6.15	6.15
12.0	32.9	7.38	7.38
14.0	24.2	8.61	8.61
16.0	18.5	9.85	9.85

Spacing Criterion

SC: 0.6

Average Luminance (cd/m^2)

	0 deg Plane	45 deg Plane	90 deg Plane
0	103699	103699	103699
45	10570	10570	10570
55	8671	8671	8671
65	7980	7980	7980
75	3321	3321	3321
85	321	321	321

Beam and Field Angle

0-180 Degree Plane

Beam Angle: 38.4°

Field Angle: 79.4°

90-270 Degree Plane

Beam Angle: 38.4°

Field Angle: 79.4°

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Report of Test

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UGR Table - Corrected

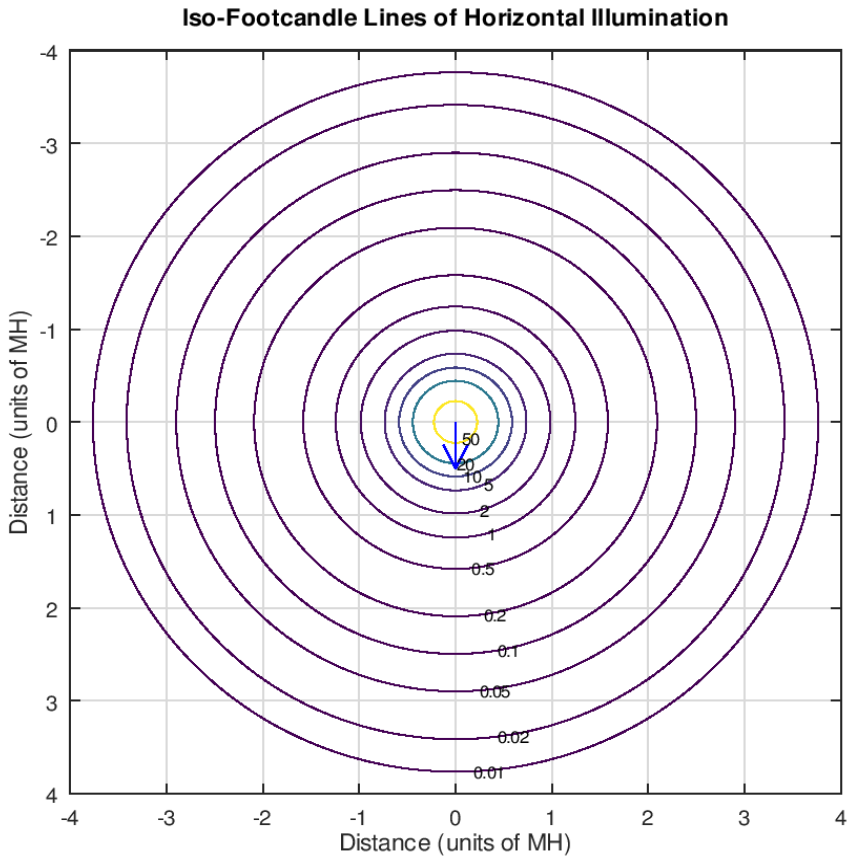
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.3	17.5	16.6	17.8	18.1	16.3	17.5	16.6	17.8	18.1
	3H	17.8	18.9	18.2	19.2	19.6	17.8	18.9	18.2	19.2	19.6
	4H	18.0	19.0	18.4	19.3	19.7	18.0	19.0	18.4	19.3	19.7
	6H	17.9	18.8	18.3	19.2	19.6	17.9	18.8	18.3	19.2	19.6
	8H	17.9	18.7	18.3	19.1	19.5	17.9	18.7	18.3	19.1	19.5
	12H	17.8	18.6	18.2	19.0	19.4	17.8	18.6	18.2	19.0	19.4
4H	2H	16.8	17.8	17.2	18.1	18.5	16.8	17.8	17.2	18.1	18.5
	3H	18.5	19.3	18.9	19.7	20.1	18.5	19.3	18.9	19.7	20.1
	4H	18.6	19.4	19.1	19.8	20.2	18.6	19.4	19.1	19.8	20.2
	6H	18.5	19.2	19.0	19.6	20.1	18.5	19.2	19.0	19.6	20.1
	8H	18.5	19.1	19.0	19.5	20.0	18.5	19.1	19.0	19.5	20.0
	12H	18.4	18.9	18.9	19.4	19.9	18.4	18.9	18.9	19.4	19.9
8H	4H	18.6	19.2	19.1	19.6	20.1	18.6	19.2	19.1	19.6	20.1
	6H	18.5	19.0	19.0	19.5	20.0	18.5	19.0	19.0	19.5	20.0
	8H	18.4	18.9	19.0	19.4	19.9	18.4	18.9	19.0	19.4	19.9
	12H	18.4	18.8	18.9	19.3	19.8	18.4	18.8	18.9	19.3	19.8
12H	4H	18.6	19.1	19.0	19.5	20.0	18.6	19.1	19.0	19.5	20.0
	6H	18.4	18.9	19.0	19.3	19.9	18.4	18.9	19.0	19.3	19.9
	8H	18.4	18.8	18.9	19.3	19.8	18.4	18.8	18.9	19.3	19.8

Maximum UGR = 20.2

Report of Test

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Iso-Illuminance Plot

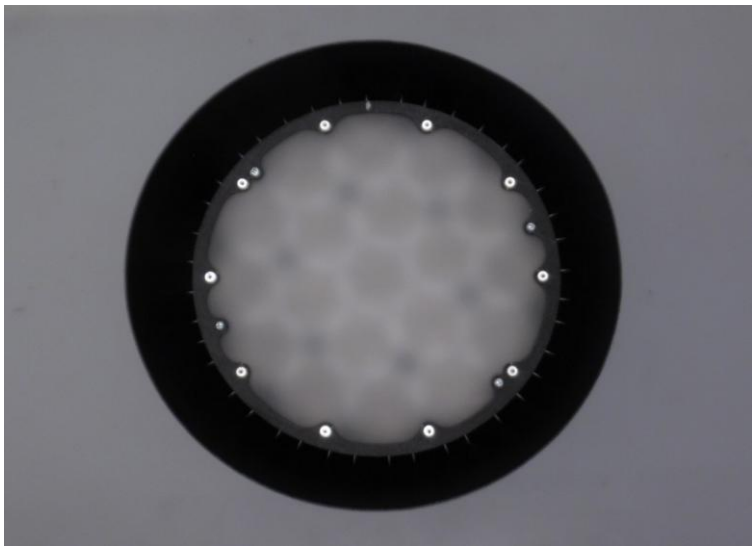


The isofootcandle values shown in the plot above are based on a mounting height of h = 8.0 feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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

Report of Test

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Additional Pictures of Test Subject





Report of Test

LLIA003089-005

Test Distance	9.5 m
Ambient Temperature	25.4 °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.