

Report of Test

LLIA002642-001A

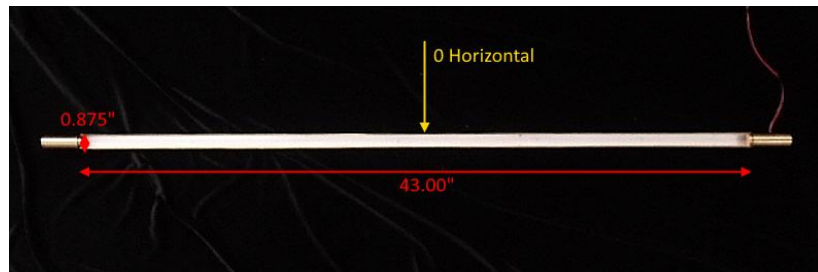
Indoor Distribution Photometry Test Report

Catalog Number: Lucia Art Light 48"

Surface wall mounted, machined bronze housing, white satin plastic reflector, clear linear prismatic lens above clear linear prismatic lower lens. Luminaire aimed at nadir.

112 white LEDs

One Swin Technology Co., Ltd. SMT-M-060CT LED driver



Prepared For:

Boyd Lighting

1455 Vapor Trail

Colorado Springs, CO 80916, USA

Performance Summary

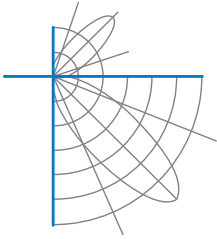
Input Voltage	120.0 Vac	Luminous Flux	1479.9 Lumens
Input Current	0.1895 A	Total Efficacy	66.3 lm/W
Input Power	22.31 W	Downward Flux	1479.9 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.981		
Current THD	14.3 %		

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

Test date: 04/17/2025

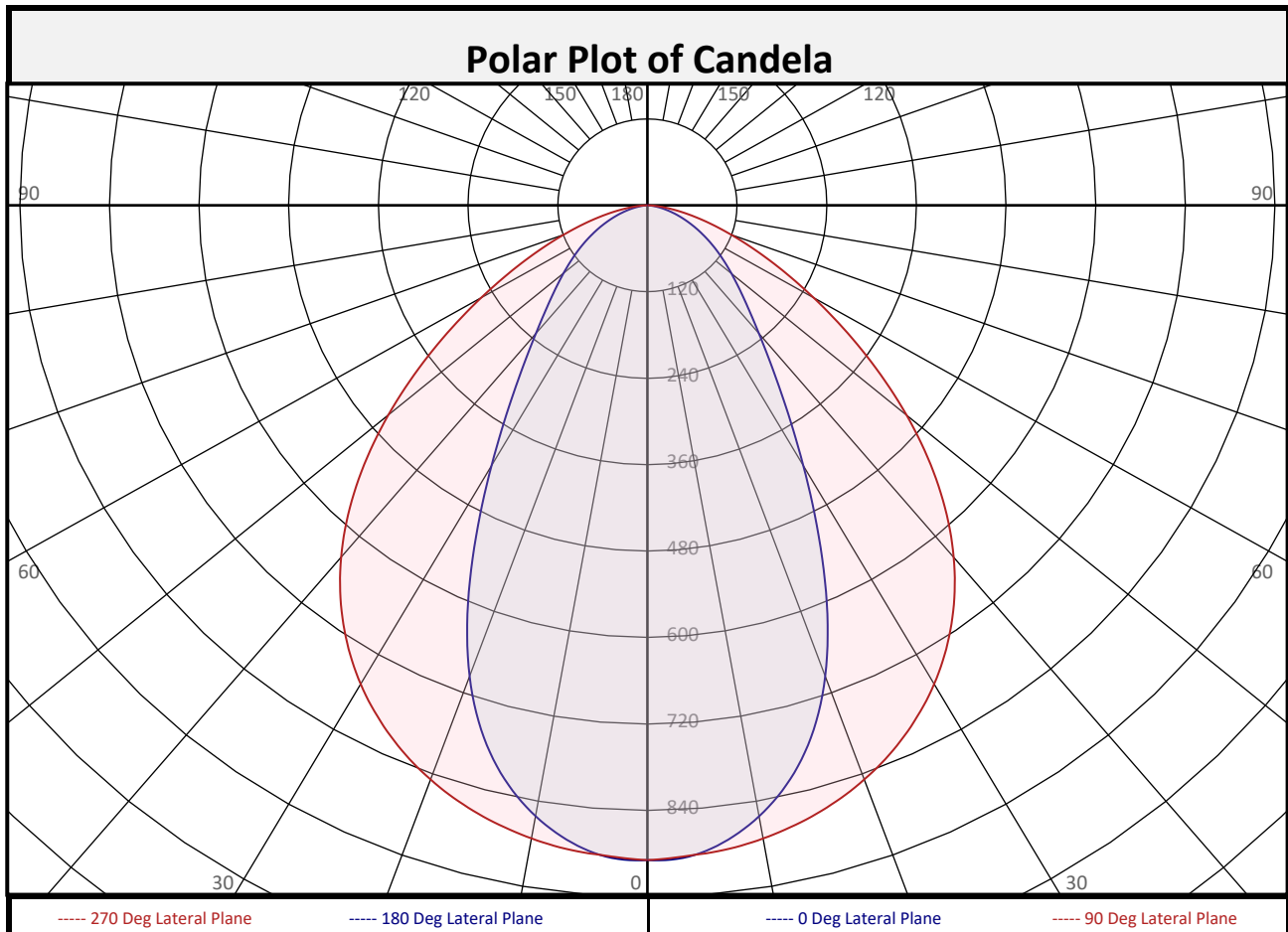
Report date: 04/22/2025

Signed: _____

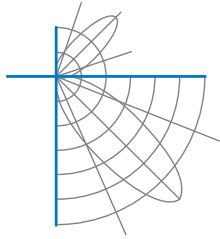


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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	85.2	5.8%		90-100	0.0	0.0%		0-20	318.8	21.5%
10-20	233.6	15.8%		100-110	0.0	0.0%		0-30	630.1	42.6%
20-30	311.4	21.0%		110-120	0.0	0.0%		0-40	926.4	62.6%
30-40	296.3	20.0%		120-130	0.0	0.0%		0-60	1326	89.6%
40-50	235.2	15.9%		130-140	0.0	0.0%		0-80	1471	99.4%
50-60	164.6	11.1%		140-150	0.0	0.0%		10-90	1395	94.2%
60-70	99.3	6.7%		150-160	0.0	0.0%		20-50	842.9	57.0%
70-80	45.9	3.1%		160-170	0.0	0.0%		40-90	553.5	37.4%
80-90	8.6	0.6%		170-180	0.0	0.0%		60-90	153.7	10.4%
0-90	1480	100.0%		90-180	0.0	0.0%		0-180	1480	100.0%



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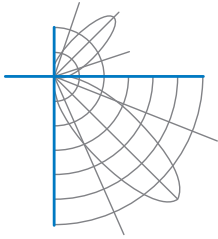
Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	909	909	909	909	909	909	909	909	909
	2.5	908	908	906	905	906	905	906	908	908
	5	900	899	899	900	903	900	899	899	900
	7.5	884	885	889	894	899	894	889	885	884
	10	861	865	874	885	893	885	874	865	861
	12.5	833	840	855	873	884	873	855	840	833
	15	797	808	832	859	875	859	832	808	797
	17.5	751	767	803	841	863	841	803	767	751
	20	696	718	769	821	848	821	769	718	696
	22.5	630	660	727	796	832	796	727	660	630
	25	558	594	679	768	813	768	679	594	558
	27.5	485	524	624	735	792	735	624	524	485
	30	417	455	564	697	768	697	564	455	417
	32.5	357	392	502	655	740	655	502	392	357
	35	307	337	441	608	710	608	441	337	307
	37.5	266	291	385	558	676	558	385	291	266
	40	232	253	334	505	638	505	334	253	232
	42.5	205	222	290	452	596	452	290	222	205
	45	182	195	252	400	551	400	252	195	182
	47.5	163	174	220	351	503	351	220	174	163
50	146	155	192	306	453	306	192	155	146	
52.5	131	138	167	265	401	265	167	138	131	
55	117	123	147	228	351	228	147	123	117	
57.5	104	109	128	196	303	196	128	109	104	
60	91	95	112	168	258	168	112	95	91	
62.5	79	83	97	142	217	142	97	83	79	
65	68	71	83	120	180	120	83	71	68	
67.5	57	60	70	100	148	100	70	60	57	
70	47	49	58	83	119	83	58	49	47	
72.5	38	40	47	67	95	67	47	40	38	
75	29	31	37	52	73	52	37	31	29	
77.5	22	23	27	39	54	39	27	23	22	
80	15	16	19	28	38	28	19	16	15	
82.5	9	10	12	17	24	17	12	10	9	
85	3	4	5	9	13	9	5	4	3	
87.5	0	0	0	2	4	2	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.

North America (issuing laboratory)

Australasia & S.E. Asia



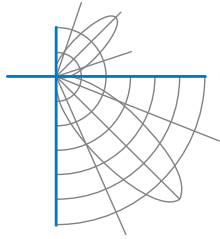
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77			
3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68			
4	89	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60			
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	49			
7	72	60	52	47	70	59	52	47	58	51	46	56	51	46	55	50	46	44			
8	68	55	48	43	66	55	48	43	54	47	42	52	46	42	51	46	42	40			
9	64	51	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37			
10	60	48	41	36	59	47	41	36	47	40	36	46	40	36	45	39	36	34			

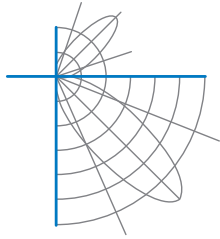
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	25.3	5.29	7.50
8.0	14.2	7.06	10.01
10.0	9.1	8.82	12.51
12.0	6.3	10.58	15.01
14.0	4.6	12.35	17.51
16.0	3.6	14.11	20.01

Spacing Criterion	
0 deg:	0.9
90 deg:	1.3
180 deg:	0.9
270 deg:	1.3

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	37448	37448	37448
45	10621	14690	32117
55	8399	10527	25200
65	6596	8064	17557
75	4687	5823	11604
85	1433	2553	5963

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	57.2°
Field Angle:	120.0°
90-270 Degree Plane	
Beam Angle:	99.8°
Field Angle:	145.8°



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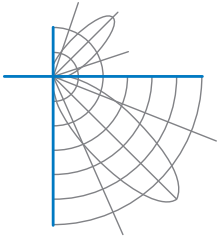
UGR Table - Corrected

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

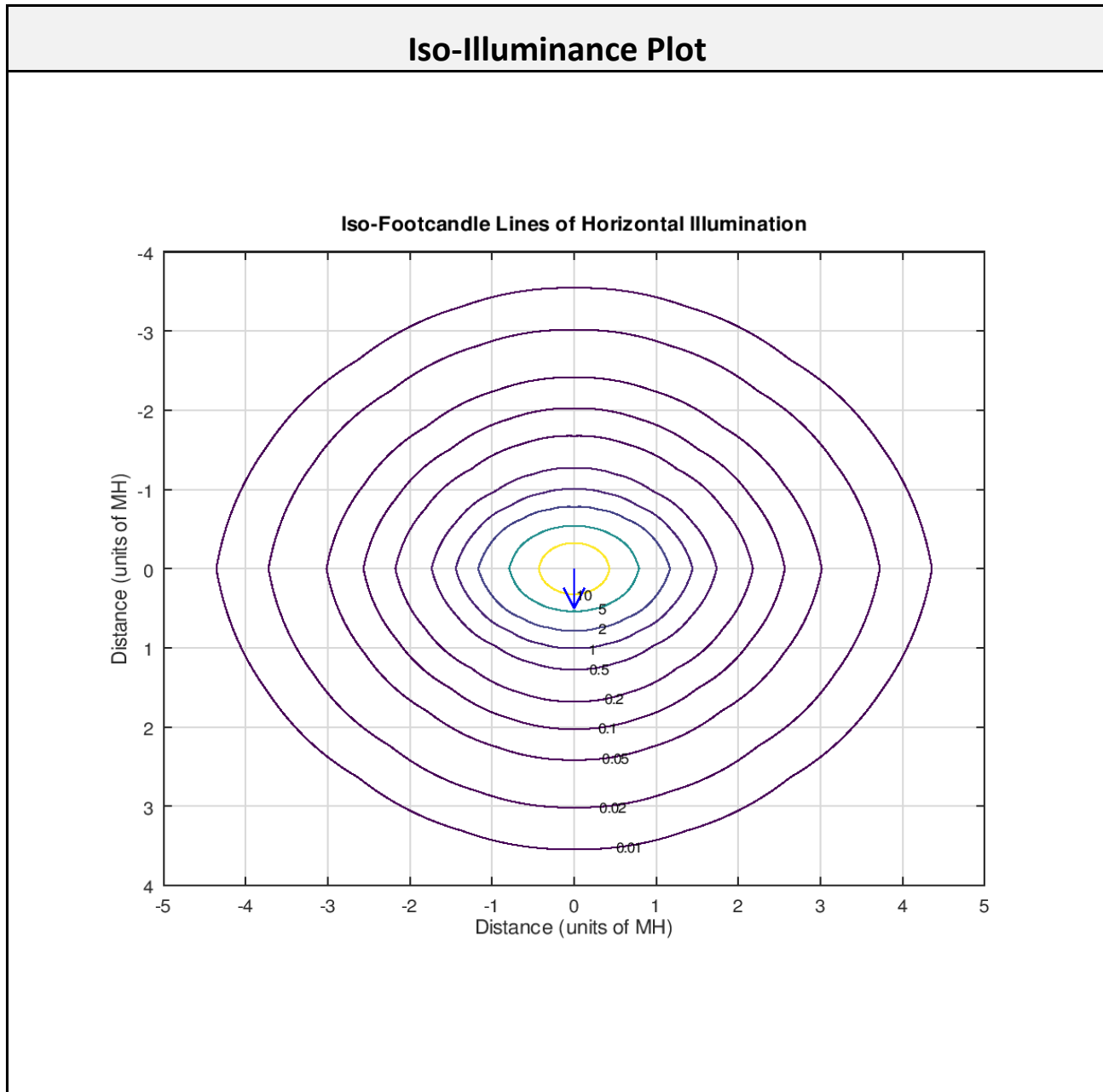
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.3	17.3	18.6	19.0	21.7	23.1	22.1	23.4	23.8
	3H	18.2	19.4	18.6	19.8	20.1	23.1	24.4	23.5	24.7	25.1
	4H	18.6	19.7	19.0	20.1	20.5	23.6	24.7	24.0	25.1	25.5
	6H	18.8	19.9	19.2	20.2	20.6	23.8	24.9	24.3	25.3	25.7
	8H	18.8	19.8	19.2	20.2	20.6	23.9	24.9	24.3	25.3	25.7
	12H	18.8	19.8	19.2	20.2	20.6	23.9	24.9	24.4	25.3	25.7
4H	2H	17.6	18.8	18.0	19.1	19.5	21.7	22.9	22.1	23.3	23.7
	3H	19.0	20.0	19.4	20.4	20.8	23.3	24.3	23.7	24.7	25.1
	4H	19.5	20.3	19.9	20.8	21.2	23.8	24.7	24.3	25.1	25.6
	6H	19.8	20.5	20.2	21.0	21.4	24.2	25.0	24.7	25.4	25.9
	8H	19.8	20.5	20.3	21.0	21.4	24.3	25.0	24.8	25.5	25.9
	12H	19.8	20.4	20.3	20.9	21.4	24.4	25.0	24.9	25.5	26.0
8H	4H	19.8	20.5	20.3	20.9	21.4	23.8	24.5	24.3	25.0	25.5
	6H	20.1	20.7	20.6	21.2	21.7	24.3	24.9	24.8	25.3	25.8
	8H	20.2	20.7	20.7	21.2	21.7	24.4	24.9	24.9	25.4	25.9
	12H	20.2	20.7	20.7	21.2	21.7	24.5	24.9	25.0	25.4	26.0
12H	4H	19.8	20.4	20.3	20.9	21.4	23.8	24.4	24.3	24.9	25.4
	6H	20.2	20.7	20.7	21.2	21.7	24.2	24.8	24.8	25.2	25.8
	8H	20.3	20.7	20.8	21.2	21.8	24.4	24.8	24.9	25.3	25.9

Maximum UGR = 26.0

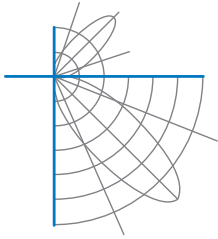


Report of Test LLIA002642-001A

Iso-Illuminance Plot

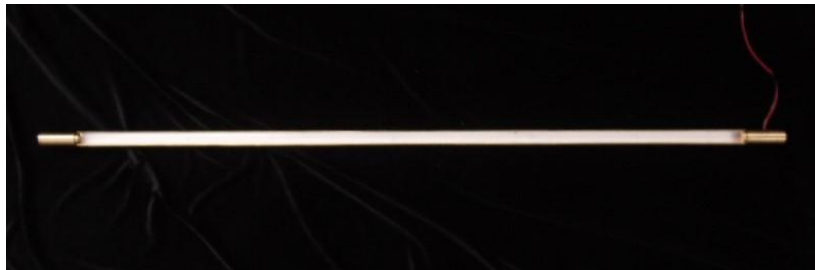


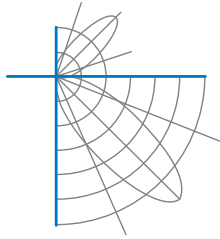
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution 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 25.1 °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-79-19. 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.

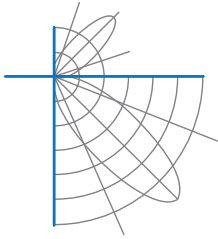
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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.



Report of Test

LLIA002642-001B

Integrating Sphere Report

Catalog Number: Lucia Art Light 48"

Surface wall mounted, machined bronze housing, white satin plastic reflector,
clear linear prismatic lens above clear linear prismatic lower lens. Luminaire aimed at nadir.

112 white LEDs

One Swin Technology Co., Ltd. SMT-M-060CT LED driver



Performance Summary

Voltage	120.0 Vac
Current	0.1890 A
Power	22.38 W
Frequency	59.99 Hz
Power Factor	0.987
Current THD	13.8 %
Total Luminous Flux	1438.9 lm
Efficacy	64.3 lm/W
Chromaticity (x,y)	(0.4386, 0.4035)
(u',v')	(0.2519, 0.5214)
Duv	-0.0005
CCT	2968 K
CRI (Ra)	97
R9	88
TM-30: Rf	95
TM-30: Rg	103
TM-30: Rcs,h1	-1

Prepared For:

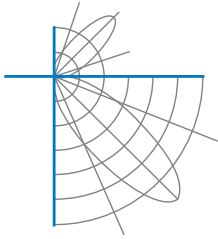
Boyd Lighting

1455 Vapor Trail

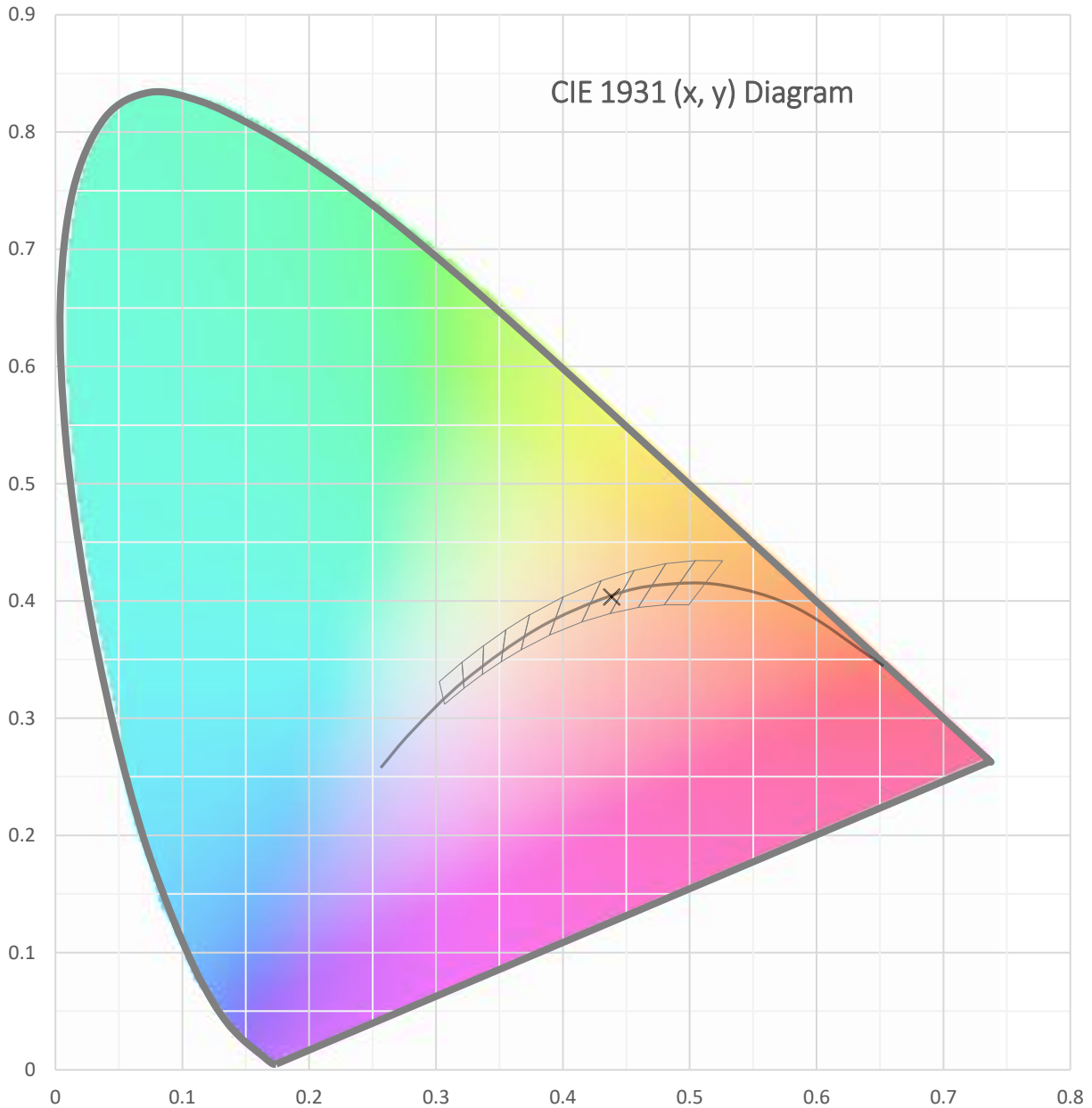
Colorado Springs, CO 80916, USA

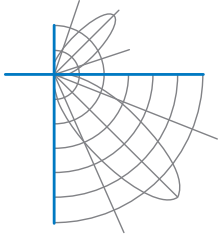
Test date: 04/22/2025

Report date: 04/23/2025

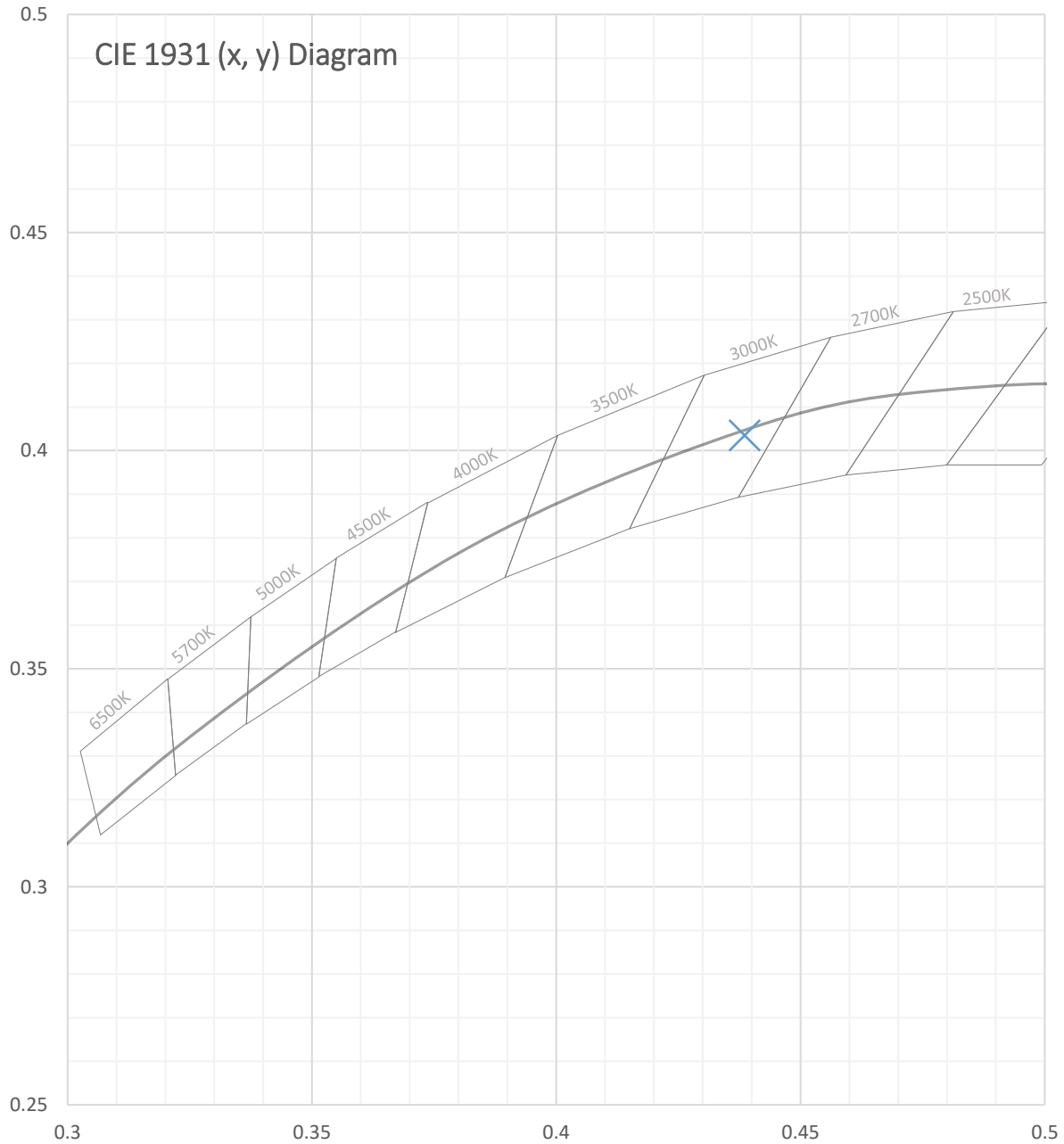


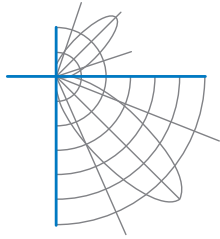
Test Report Number: LLIA002642-001B





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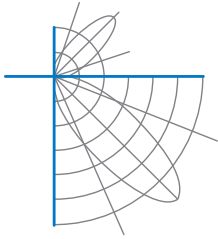


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Total Radiant Flux	5.370 W
Total Luminous Flux	1438.9 Lm
Chromaticity CIE 1931 (x, y)	(0.4386, 0.4035)
Chromaticity CIE 1976 (u', v')	(0.2519, 0.5214)
Correlated Color Temperature (CCT)	2968 K
Color Rendering Index (Ra)	97
R1	98
R2	98
R3	97
R4	97
R5	98
R6	98
R7	97
R8	95
R9	88
R10	96
R11	95
R12	94
R13	98
R14	98
TM-30: Rf	95
TM-30: Rg	103
TM-30: Rcs,h1	-1
Distance from Planckian Locus (Duv)	-0.0005
Scotopic/Photopic Ratio ‡	1.435

Electrical Data

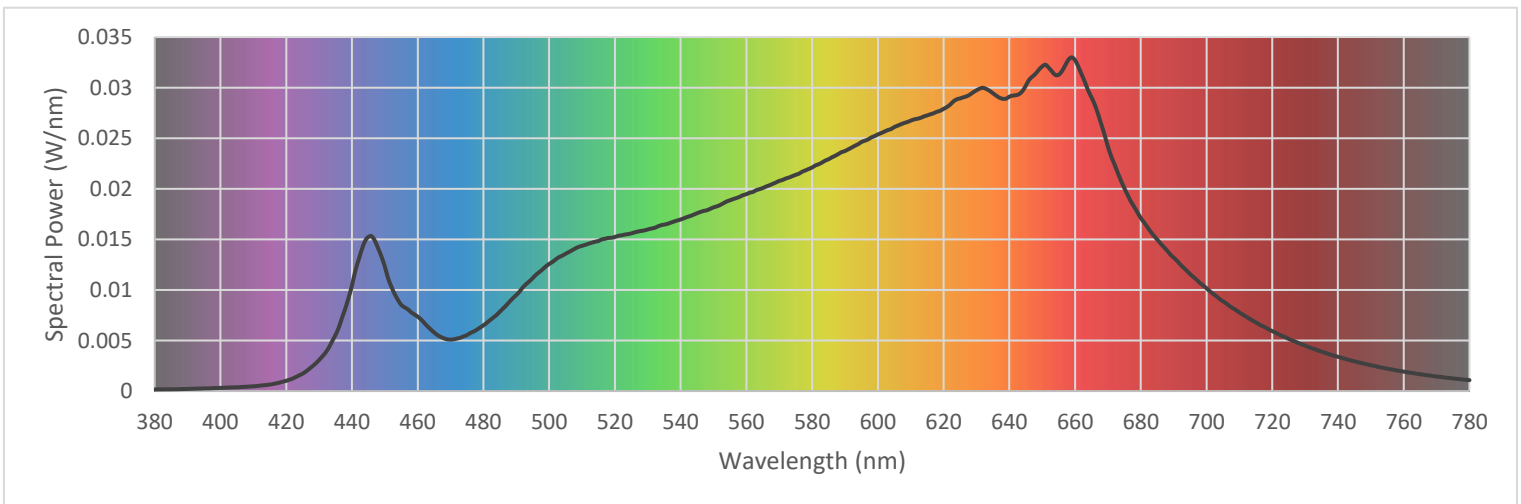
Voltage	120.0 Vac
Current	0.1890 A
Power	22.38 W
Frequency	59.99 Hz
Power Factor	0.987
Current THD	13.8 %

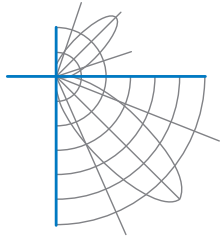


Test Report Number: LLIA002642-001B

Summary Spectral Power Distribution (wavelength - nm, spectral power - W/nm)

380	0.000165	480	0.006498	580	0.022102	680	0.017102
385	0.000177	485	0.007851	585	0.022917	685	0.014982
390	0.000209	490	0.009496	590	0.023728	690	0.013190
395	0.000266	495	0.011169	595	0.024621	695	0.011564
400	0.000313	500	0.012567	600	0.025375	700	0.010156
405	0.000374	505	0.013577	605	0.026100	705	0.008877
410	0.000470	510	0.014358	610	0.026733	710	0.007770
415	0.000642	515	0.014837	615	0.027254	715	0.006800
420	0.001013	520	0.015234	620	0.027902	720	0.005927
425	0.001726	525	0.015590	625	0.028931	725	0.005155
430	0.003071	530	0.015979	630	0.029733	730	0.004492
435	0.005546	535	0.016458	635	0.029451	735	0.003898
440	0.010436	540	0.016962	640	0.029105	740	0.003385
445	0.015243	545	0.017582	645	0.030178	745	0.002945
450	0.012308	550	0.018159	650	0.032095	750	0.002555
455	0.008514	555	0.018860	655	0.031267	755	0.002213
460	0.007357	560	0.019466	660	0.032717	760	0.001921
465	0.005795	565	0.020073	665	0.029036	765	0.001665
470	0.005090	570	0.020776	670	0.024175	770	0.001436
475	0.005536	575	0.021378	675	0.020063	775	0.001249
						780	0.001081

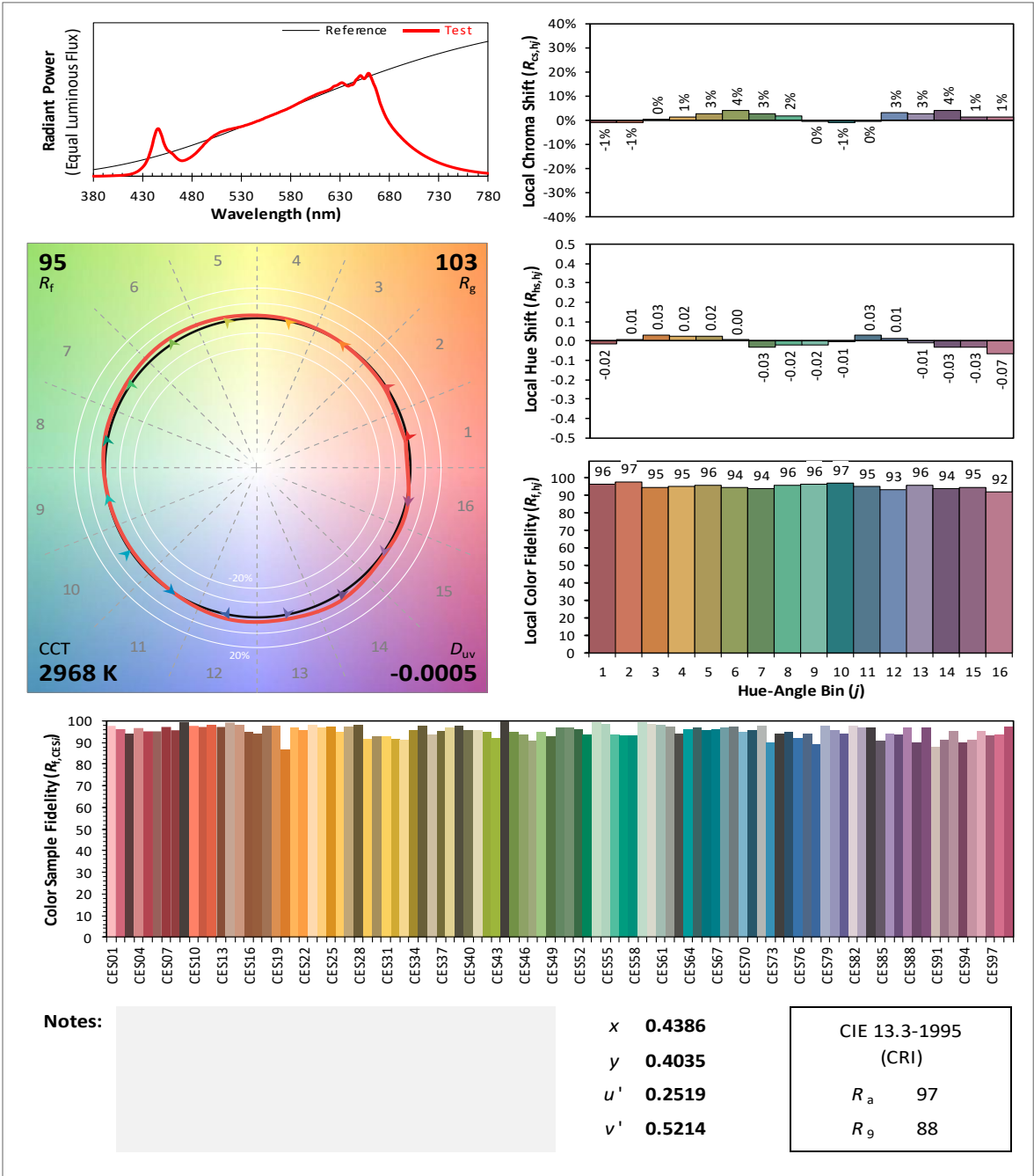


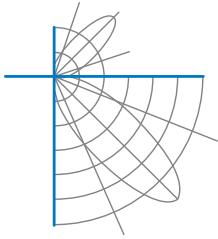


Test Report Number: LLIA002642-001B

IES TM-30 Details

Source: LLIA002642-001B	Manufacturer: Boyd Lighting
Date: 4/23/2025	Model: Lucia Art Light 48"





Test Report Number: LLIA002642-001B

Test Equipment Configuration: LightLab International Allentown 2m Integrating Sphere
Measurements acquired using a Labsphere CDS 2600 spectroradiometer
Testing was performed using 4π geometry

Test Temperature: 24.6 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-19, LM-78-20, LM-58-20, ANSI_ANSLG C78.377-2017, TM-30-20

Significance: 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.

Notes: The measurements 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

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

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