

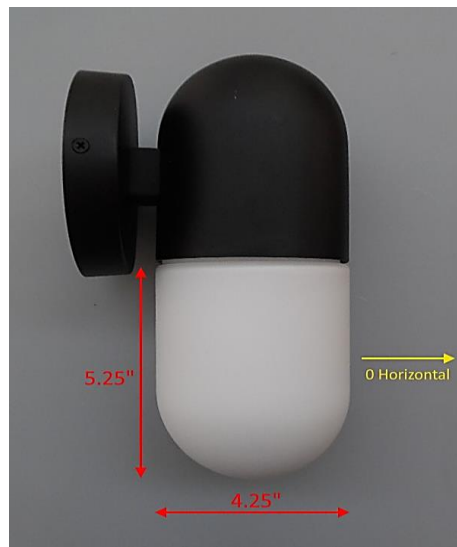


## Report of Test

LLIA001626-011A

Indoor Distribution Photometry Test Report

Catalog Number: Corpus 3-758-xx  
Wall mounted, aluminum housing, translucent white  
glass bell jar enclosure.  
14 white LEDs, mounted on one white circuit board.  
Integral LED driver



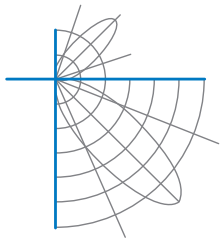
Prepared For:  
Oxygen Lighting  
201 Railhead Road  
Fort Worth, TX 76106, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	446.1 Lumens
Input Current	0.0761 A	Total Efficacy	51.2 Lm/W
Input Power	8.71 W	Downward Flux	279.5 Lumens
Frequency	60.00 Hz	Downward Flux	62.7 % of Total
Power Factor	0.955		
Current THD	30.1 %		

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

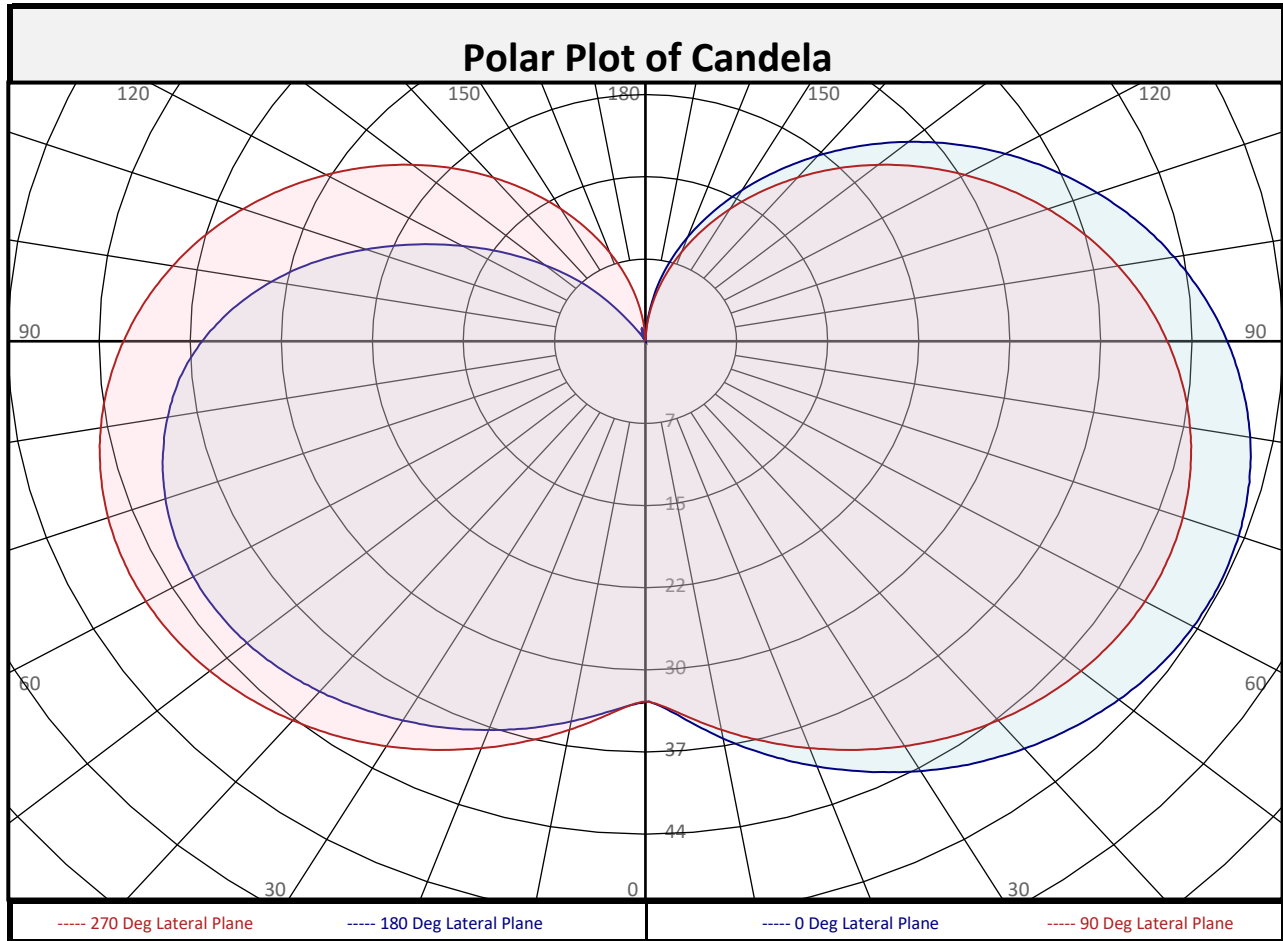
Test date: 01/11/2022  
Report date: 01/13/2022

Signed: \_\_\_\_\_



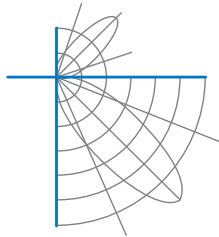
## Report of Test

### LLIA001626-011A



### 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	3.3	0.7%	90-100	44.0	9.9%	0-20	13.9	3.1%
10-20	10.6	2.4%	100-110	38.2	8.6%	0-30	32.7	7.3%
20-30	18.8	4.2%	110-120	30.9	6.9%	0-40	60.0	13.5%
30-40	27.3	6.1%	120-130	23.0	5.2%	0-60	137.1	30.7%
40-50	35.2	7.9%	130-140	15.5	3.5%	0-80	231.9	52.0%
50-60	41.9	9.4%	140-150	9.0	2.0%	10-90	276.2	61.9%
60-70	46.4	10.4%	150-160	4.3	1.0%	20-50	81.3	18.2%
70-80	48.4	10.9%	160-170	1.5	0.3%	40-90	219.4	49.2%
80-90	47.6	10.7%	170-180	0.2	0.0%	60-90	142.3	31.9%
0-90	279.5	62.7%	90-180	166.6	37.3%	0-180	446.1	100.0%

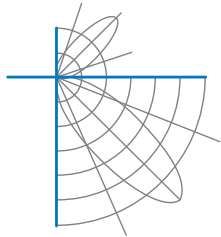


## Report of Test

### LLIA001626-011A

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	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
	2.5	33.0	33.0	33.0	32.9	32.9	32.9	32.9	32.9	32.9
	5	34.0	34.0	33.9	33.8	33.7	33.7	33.5	33.5	33.5
	7.5	35.2	35.1	35.0	34.8	34.6	34.4	34.3	34.2	34.1
	10	36.3	36.3	36.1	35.8	35.5	35.3	35.0	34.8	34.8
	12.5	37.5	37.4	37.1	36.8	36.5	36.1	35.7	35.5	35.4
	15	38.6	38.5	38.2	37.8	37.3	36.9	36.4	36.1	36.1
	17.5	39.7	39.6	39.2	38.7	38.2	37.6	37.1	36.8	36.6
	20	40.7	40.6	40.2	39.7	39.0	38.4	37.8	37.4	37.2
	22.5	41.7	41.6	41.2	40.5	39.8	39.1	38.5	38.0	37.8
	25	42.8	42.6	42.1	41.4	40.6	39.8	39.1	38.6	38.4
	27.5	43.7	43.6	43.0	42.2	41.4	40.5	39.7	39.1	38.9
	30	44.7	44.5	43.9	43.1	42.1	41.1	40.2	39.6	39.4
	32.5	45.6	45.4	44.7	43.8	42.8	41.7	40.8	40.1	39.9
	35	46.4	46.2	45.5	44.6	43.5	42.3	41.3	40.6	40.3
	37.5	47.2	46.9	46.2	45.2	44.0	42.9	41.8	41.0	40.8
	40	47.9	47.7	46.9	45.8	44.6	43.3	42.2	41.4	41.2
	42.5	48.5	48.3	47.5	46.4	45.1	43.8	42.6	41.8	41.5
	45	49.2	48.9	48.1	46.9	45.5	44.1	42.9	42.1	41.8
	47.5	49.7	49.4	48.6	47.3	45.9	44.4	43.2	42.4	42.1
50	50.2	49.9	49.0	47.7	46.2	44.7	43.5	42.6	42.3	
52.5	50.6	50.3	49.4	48.0	46.5	44.9	43.6	42.7	42.4	
55	51.0	50.7	49.7	48.3	46.7	45.1	43.7	42.8	42.5	
57.5	51.2	50.9	49.9	48.5	46.8	45.2	43.8	42.8	42.5	
60	51.4	51.0	50.0	48.6	46.9	45.2	43.7	42.8	42.4	
62.5	51.5	51.1	50.1	48.6	46.9	45.1	43.6	42.6	42.3	
65	51.5	51.1	50.1	48.6	46.8	45.0	43.5	42.5	42.1	
67.5	51.4	51.1	50.0	48.5	46.7	44.9	43.3	42.2	41.9	
70	51.3	50.9	49.8	48.3	46.5	44.7	43.0	41.9	41.5	
72.5	51.0	50.7	49.6	48.1	46.2	44.3	42.7	41.5	41.1	
75	50.7	50.4	49.3	47.7	45.8	44.0	42.4	41.1	40.6	
77.5	50.3	50.0	48.9	47.3	45.4	43.6	41.9	40.6	40.1	
80	49.9	49.5	48.4	46.8	44.9	43.1	41.4	40.0	39.4	
82.5	49.4	49.0	47.9	46.3	44.4	42.6	40.8	39.3	38.8	
85	48.7	48.4	47.3	45.7	43.8	41.9	40.1	38.5	38.0	
87.5	48.0	47.7	46.6	45.0	43.1	41.3	39.5	37.7	37.1	
90	47.3	46.9	45.8	44.2	42.4	40.6	38.7	36.8	36.0	



## Report of Test

### LLIA001626-011A

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	47.3	46.9	45.8	44.2	42.4	40.6	38.7	36.8	36.0
	92.5	46.5	46.1	45.0	43.5	41.6	39.9	37.8	35.7	34.9
	95	45.6	45.2	44.2	42.6	40.8	39.1	36.9	34.6	33.7
	97.5	44.6	44.3	43.3	41.7	39.9	38.2	36.0	33.4	32.3
	100	43.6	43.3	42.3	40.8	39.0	37.3	35.0	32.2	30.9
	102.5	42.6	42.3	41.2	39.8	38.0	36.3	33.9	30.9	29.4
	105	41.5	41.1	40.2	38.7	37.0	35.3	32.8	29.6	27.7
	107.5	40.3	40.0	39.0	37.6	35.9	34.2	31.6	28.2	25.9
	110	39.1	38.7	37.8	36.4	34.8	33.1	30.4	26.8	24.2
	112.5	37.8	37.5	36.6	35.2	33.6	31.9	29.1	25.3	22.4
	115	36.5	36.2	35.3	34.0	32.4	30.7	27.8	23.9	20.6
	117.5	35.1	34.9	34.0	32.7	31.2	29.5	26.5	22.4	18.9
	120	33.8	33.5	32.7	31.4	30.0	28.2	25.1	20.9	17.1
	122.5	32.4	32.1	31.3	30.1	28.7	26.9	23.7	19.4	15.5
	125	30.9	30.7	29.9	28.8	27.4	25.6	22.3	17.9	13.8
	127.5	29.4	29.2	28.5	27.4	26.0	24.3	20.9	16.4	12.2
	130	28.0	27.7	27.1	26.0	24.7	23.0	19.5	14.9	10.6
	132.5	26.5	26.2	25.6	24.6	23.4	21.6	18.0	13.3	9.1
	135	24.9	24.7	24.1	23.2	22.0	20.2	16.5	11.8	7.7
	137.5	23.4	23.2	22.7	21.8	20.6	18.9	15.1	10.4	6.1
140	21.9	21.7	21.2	20.3	19.2	17.5	13.7	8.9	4.3	
142.5	20.3	20.2	19.7	18.9	17.8	16.2	12.3	7.5	2.5	
145	18.8	18.6	18.2	17.4	16.5	14.8	11.0	6.3	1.4	
147.5	17.2	17.1	16.7	16.0	15.1	13.5	9.7	5.1	0.6	
150	15.7	15.6	15.2	14.6	13.8	12.2	8.5	4.0	0.3	
152.5	14.2	14.1	13.8	13.2	12.4	11.0	7.4	3.0	0.3	
155	12.8	12.7	12.3	11.8	11.1	9.8	6.5	2.6	0.4	
157.5	11.3	11.3	10.9	10.5	9.8	8.7	5.6	2.3	0.6	
160	10.0	9.8	9.5	9.1	8.5	7.6	4.9	2.1	0.7	
162.5	8.5	8.5	8.2	7.8	7.2	6.6	4.2	1.9	0.9	
165	7.2	7.1	6.9	6.5	6.0	5.5	3.7	1.8	1.1	
167.5	5.8	5.8	5.5	5.2	4.8	4.4	3.1	1.7	1.2	
170	4.5	4.4	4.2	4.0	3.6	3.3	2.5	1.5	0.9	
172.5	3.0	3.1	2.9	2.7	2.5	2.2	1.8	1.2	0.7	
175	1.8	1.8	1.7	1.6	1.4	1.2	1.0	0.7	0.5	
177.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



## Report of Test

### LLIA001626-011A

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	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63			
1	95	89	83	77	88	83	77	72	71	67	63	61	58	55	51	49	47	42			
2	85	74	66	59	78	69	62	55	60	53	48	51	46	42	42	39	35	31			
3	76	64	54	47	70	59	51	44	51	44	38	43	38	33	36	31	28	24			
4	69	55	46	38	63	52	43	36	44	37	31	37	32	27	31	26	23	19			
5	63	49	39	32	58	45	36	30	39	32	26	33	27	22	27	23	19	16			
6	57	43	34	27	53	40	32	25	35	27	22	29	24	19	25	20	16	13			
7	53	39	30	23	49	36	28	22	31	24	19	27	21	16	22	17	14	11			
8	49	35	26	20	45	33	25	19	28	21	17	24	18	14	20	15	12	10			
9	46	32	23	18	42	30	22	17	26	19	15	22	17	13	19	14	11	8			
10	42	29	21	16	39	27	20	15	24	17	13	20	15	11	17	13	9	7			

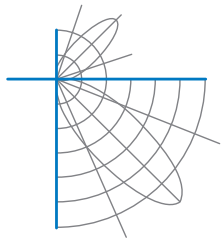
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	0.9	11.90	11.92	
8.0	0.5	15.87	15.89	
10.0	0.3	19.83	19.87	
12.0	0.2	23.80	23.84	
14.0	0.2	27.77	27.81	
16.0	0.1	31.73	31.79	

Spacing Criterion	
0 deg:	2.1
90 deg:	2.0
180 deg:	1.9
270 deg:	2.0

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	3549	3549	3549
45	2952	2887	2734
55	2990	2916	2738
65	3045	2962	2766
75	3117	3028	2816
85	3216	3122	2893

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	241.4°
Field Angle:	307.6°
90-270 Degree Plane	
Beam Angle:	256.0°
Field Angle:	333.4°



## Report of Test

### LLIA001626-011A

#### 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

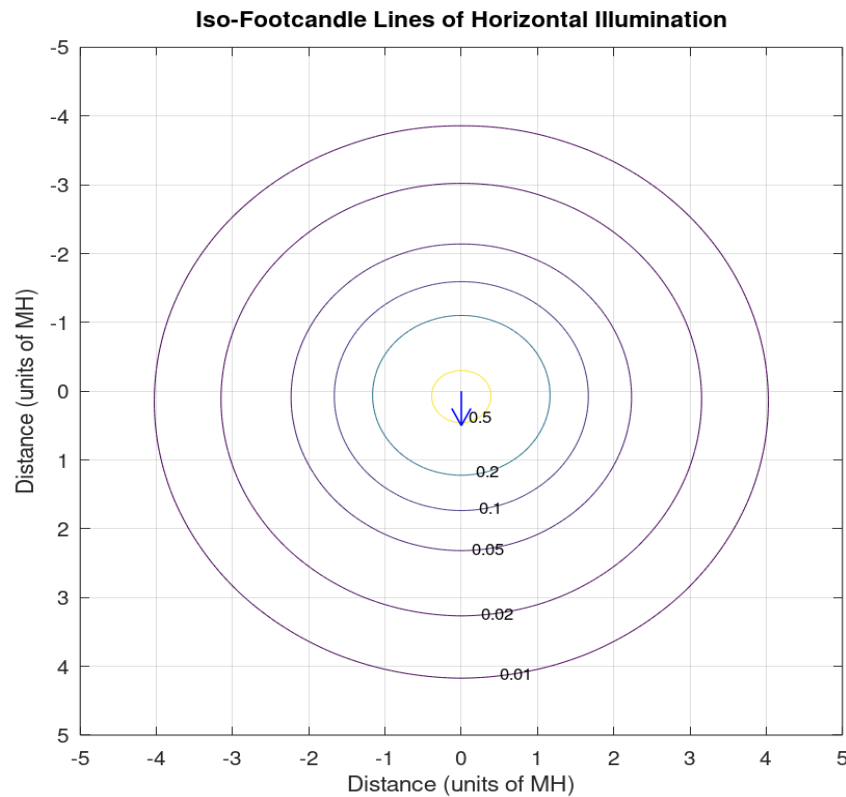
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	12.6	13.8	13.4	14.6	15.7	12.0	13.2	12.8	14.0	15.1
	3H	15.5	16.6	16.3	17.5	18.5	14.9	16.0	15.7	16.8	17.9
	4H	16.9	18.0	17.7	18.8	19.9	16.3	17.3	17.1	18.2	19.3
	6H	18.3	19.3	19.1	20.1	21.3	17.6	18.6	18.5	19.5	20.6
	8H	19.0	19.9	19.8	20.8	21.9	18.3	19.2	19.1	20.1	21.2
	12H	19.6	20.5	20.5	21.4	22.5	18.9	19.8	19.8	20.7	21.9
4H	2H	13.3	14.4	14.2	15.3	16.3	12.8	13.8	13.6	14.7	15.8
	3H	16.5	17.4	17.3	18.3	19.4	15.9	16.8	16.7	17.7	18.8
	4H	18.0	18.9	18.9	19.7	20.9	17.4	18.2	18.2	19.1	20.3
	6H	19.6	20.3	20.4	21.2	22.4	18.9	19.7	19.8	20.6	21.7
	8H	20.3	21.0	21.2	22.0	23.1	19.7	20.4	20.5	21.3	22.4
	12H	21.1	21.7	22.0	22.7	23.8	20.4	21.1	21.3	22.0	23.1
8H	4H	18.5	19.2	19.4	20.1	21.3	17.9	18.6	18.8	19.5	20.7
	6H	20.3	20.9	21.2	21.8	23.0	19.6	20.3	20.5	21.2	22.4
	8H	21.2	21.7	22.1	22.7	23.8	20.5	21.1	21.4	22.0	23.2
	12H	22.1	22.6	23.0	23.5	24.8	21.4	21.9	22.4	22.9	24.1
12H	4H	18.6	19.3	19.5	20.2	21.3	18.0	18.7	18.9	19.6	20.8
	6H	20.4	21.0	21.3	21.9	23.1	19.8	20.4	20.7	21.3	22.5
	8H	21.4	21.9	22.3	22.9	24.1	20.8	21.3	21.7	22.2	23.4

Maximum UGR = 24.8

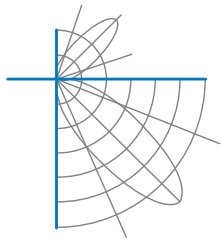


## Report of Test LLIA001626-011A

### 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

### LLIA001626-011A

Test Distance                    9.5 m  
Ambient Temperature        24.9 °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

**LLIA001626-011B**

Integrating Sphere Report

Catalog Number: Corpus 3-758-xx

Wall mounted, aluminum housing, translucent white glass bell jar enclosure.

14 white LEDs, mounted on one white circuit board.

Integral LED driver



### Performance Summary

Voltage	120.0 Vac
Current	0.0759 A
Power	8.71 W
Frequency	59.99 Hz
Power Factor	0.956
Current THD	29.8 %
Total Luminous Flux	444.9 lm
Efficacy	51.1 lm/W
Chromaticity (x,y)	(0.4363, 0.4016)
(u',v')	(0.2513, 0.5203)
Duv	-0.0009
CCT	2990 K
CRI (Ra)	93
R9	57
TM-30: Rf	91
TM-30: Rg	97
TM-30: Rcs,h1	-5

Prepared For:

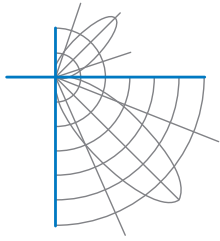
Oxygen Lighting

201 Railhead Road

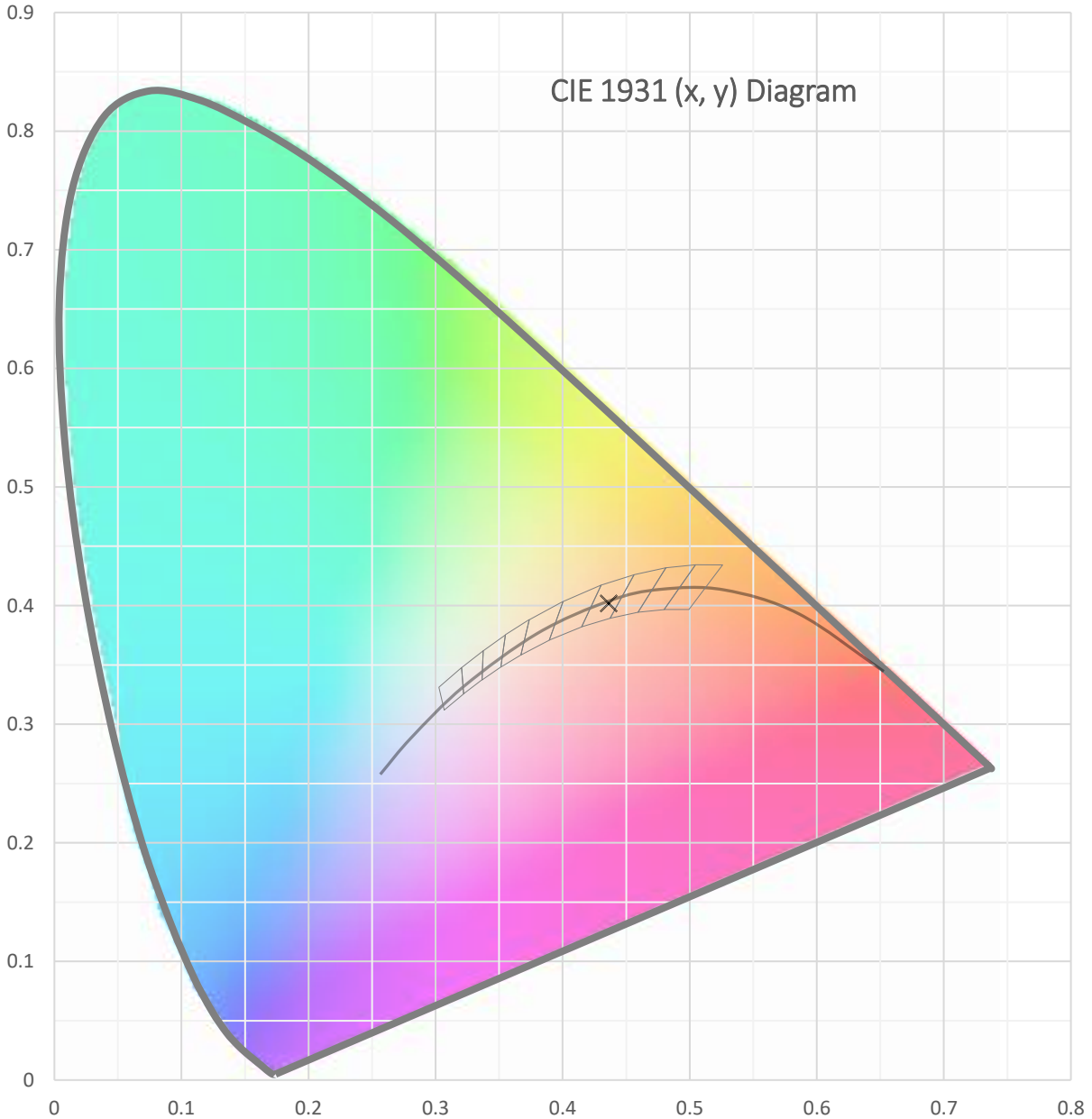
Fort Worth, TX 76106, USA

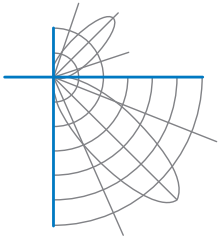
Test date: 01/11/2022

Report date: 01/13/2022

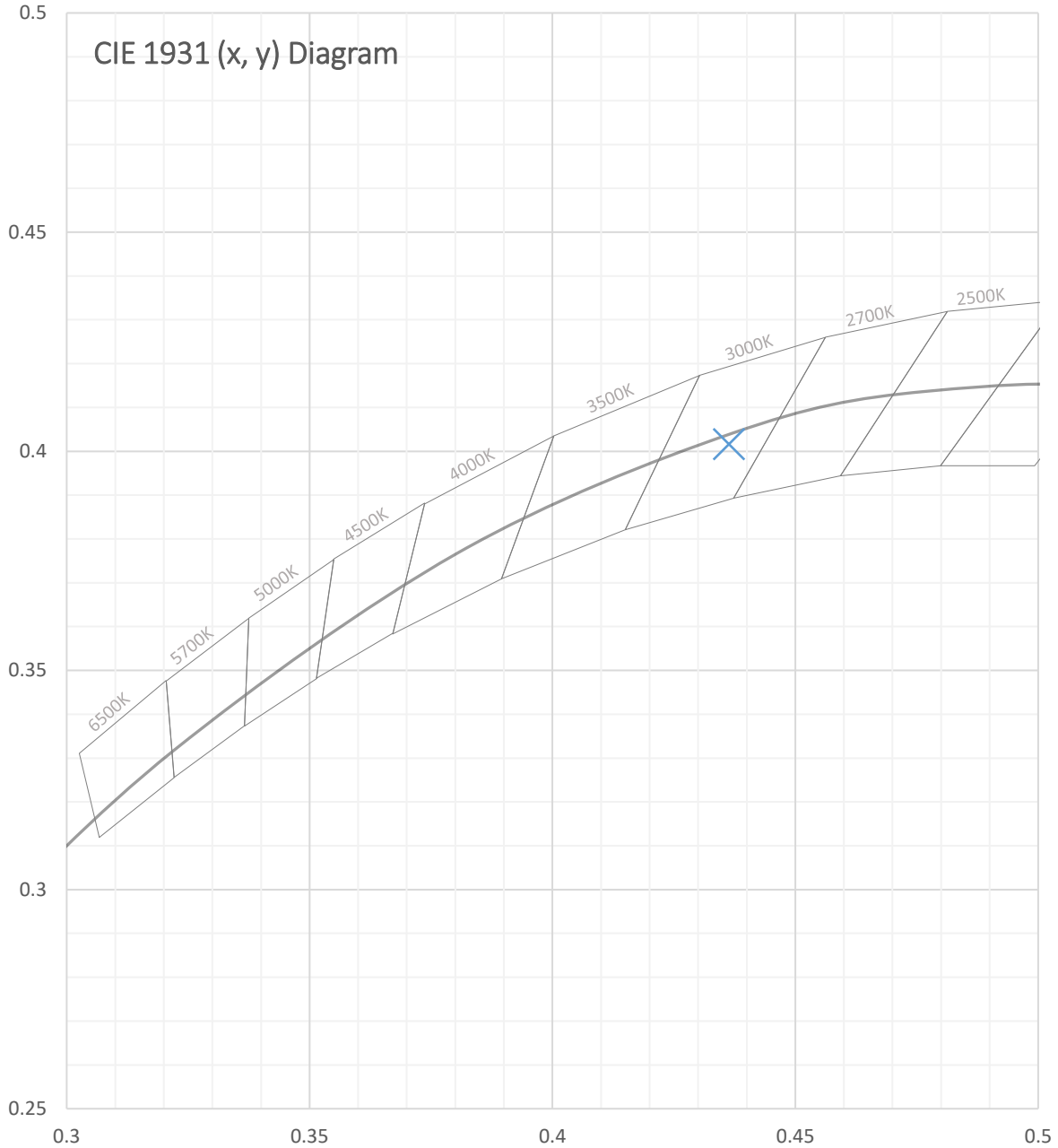


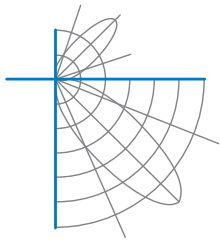
Test Report Number: LLIA001626-011B





Test Report Number: LLIA001626-011B



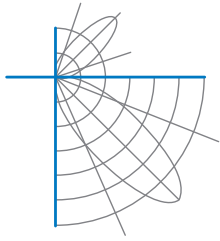


**Test Report Number: LLIA001626-011B**

Total Radiant Flux	1.518 W
Total Luminous Flux	444.9 Lm
Chromaticity CIE 1931 (x, y)	(0.4363, 0.4016)
Chromaticity CIE 1976 (u', v')	(0.2513, 0.5203)
Correlated Color Temperature (CCT)	2990 K
Color Rendering Index (Ra)	93
R1	97
R2	98
R3	94
R4	96
R5	98
R6	93
R7	89
R8	79
R9	57
R10	96
R11	99
R12	88
R13	99
R14	97
TM-30: Rf	91
TM-30: Rg	97
TM-30: Rcs,h1	-5
Distance from Planckian Locus (Duv)	-0.0009
Scotopic/Photopic Ratio ‡	1.497

**Electrical Data**

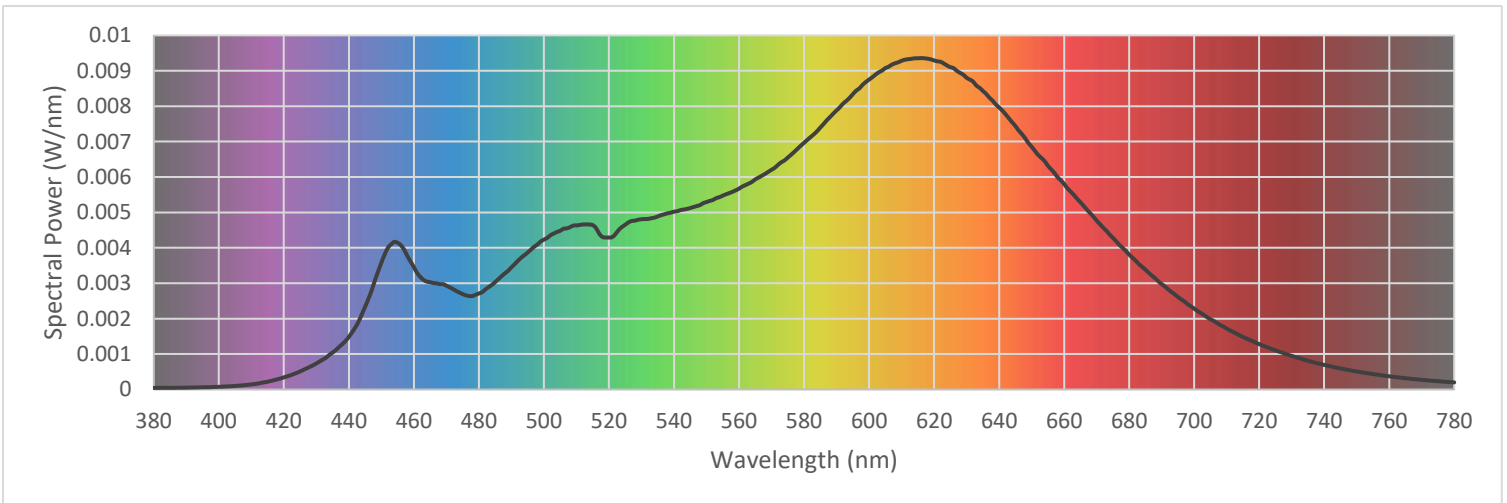
Voltage	120.0 Vac
Current	0.0759 A
Power	8.71 W
Frequency	59.99 Hz
Power Factor	0.956
Current THD	29.8 %

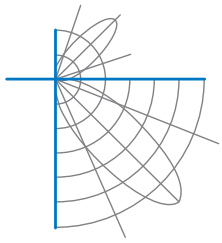


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Summary Spectral Power Distribution (wavelength - nm, spectral power - W/nm)

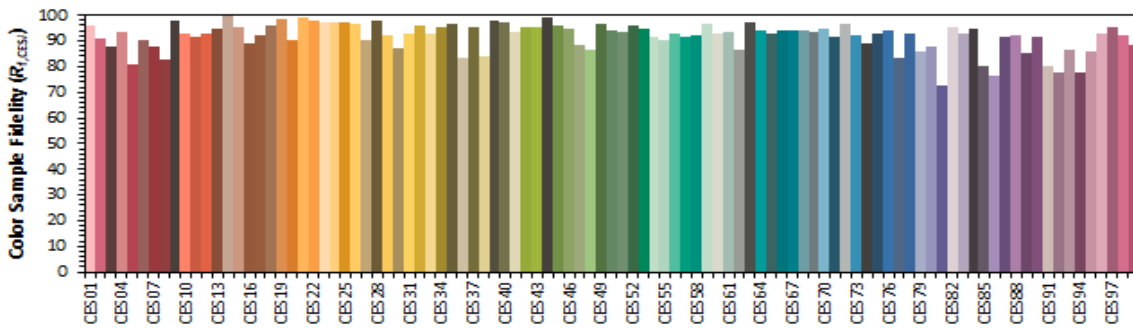
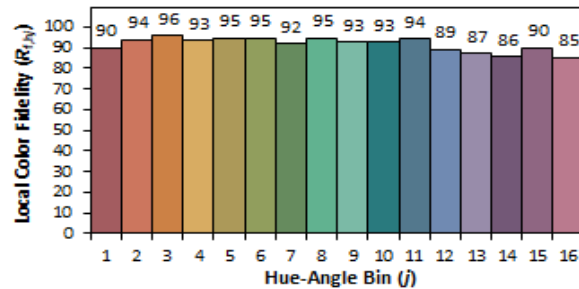
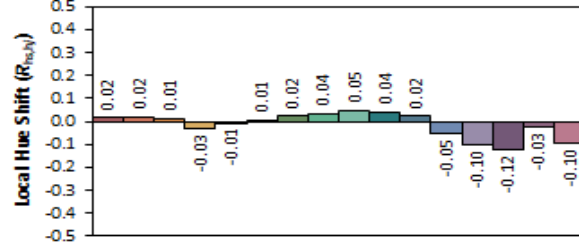
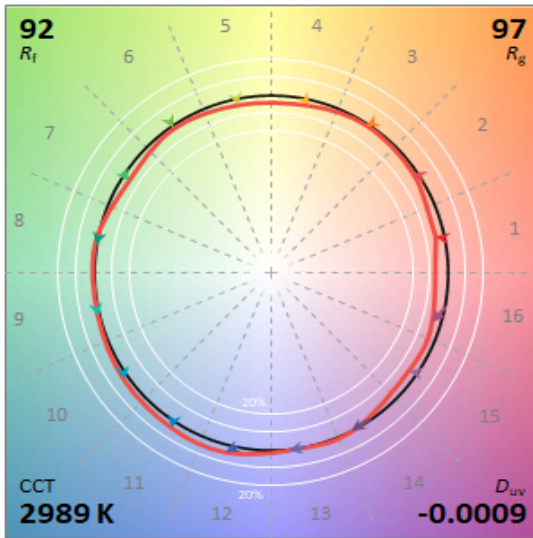
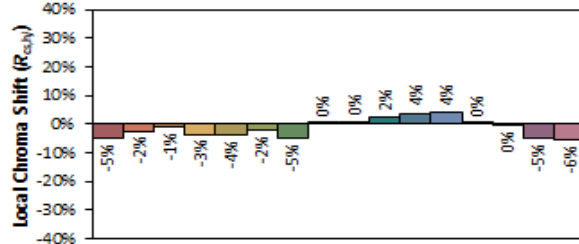
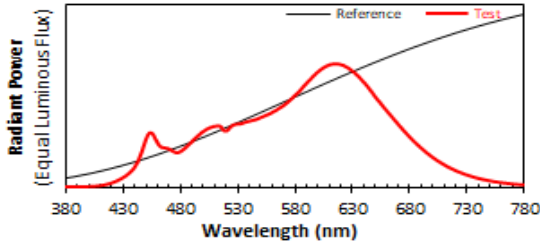
380	0.000045	480	0.002711	580	0.006965	680	0.003812
385	0.000046	485	0.003033	585	0.007396	685	0.003385
390	0.000051	490	0.003451	590	0.007880	690	0.002977
395	0.000062	495	0.003868	595	0.008337	695	0.002612
400	0.000075	500	0.004231	600	0.008751	700	0.002284
405	0.000099	505	0.004481	605	0.009076	705	0.001985
410	0.000142	510	0.004632	610	0.009282	710	0.001722
415	0.000217	515	0.004642	615	0.009353	715	0.001487
420	0.000342	520	0.004291	620	0.009293	720	0.001280
425	0.000509	525	0.004652	625	0.009103	725	0.001104
430	0.000737	530	0.004807	630	0.008804	730	0.000950
435	0.001043	535	0.004886	635	0.008432	735	0.000811
440	0.001484	540	0.005021	640	0.007965	740	0.000694
445	0.002338	545	0.005124	645	0.007442	745	0.000594
450	0.003583	550	0.005293	650	0.006856	750	0.000509
455	0.004140	555	0.005474	655	0.006321	755	0.000434
460	0.003452	560	0.005671	660	0.005803	760	0.000372
465	0.003031	565	0.005934	665	0.005288	765	0.000318
470	0.002930	570	0.006204	670	0.004770	770	0.000272
475	0.002694	575	0.006549	675	0.004283	775	0.000233
						780	0.000199



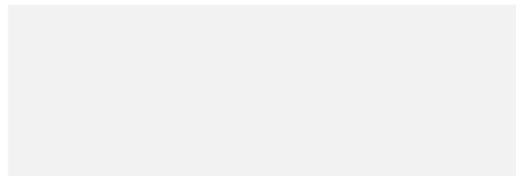


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IES TM-30 Details



Notes:



x 0.4364  
y 0.4016  
u' 0.2513  
v' 0.5203

CIE 13.3-1995 (CRI)	
R <sub>a</sub>	93
R <sub>s</sub>	57



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

**Test Temperature:** 25.1 °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.

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.