



Report of Test

LLIA001333-004A

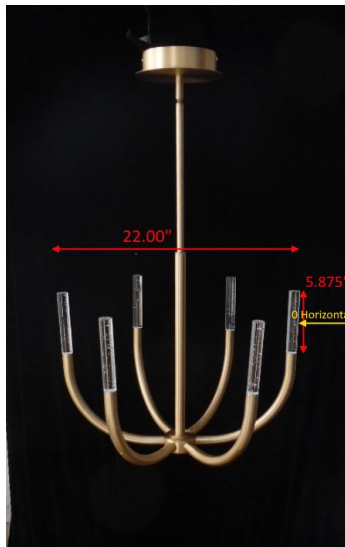
Indoor Distribution Photometry Test Report

Catalog Number: 3-657-24 Presto Pendant

Pendant mounted, steel canopy, tubular aluminum housing, clear decorative enclosures.

6 White LEDs

One Novbo NE030040090-1G LED driver



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

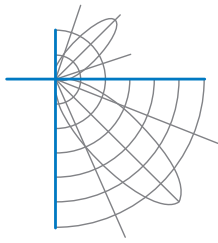
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	623.5 Lumens
Input Current	0.2683 A	Total Efficacy	19.6 lm/W
Input Power	31.82 W	Downward Flux	55.1 Lumens
Frequency	60.00 Hz	Downward Flux	8.8 % of Total
Power Factor	0.988		
Current THD	10.5 %		

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

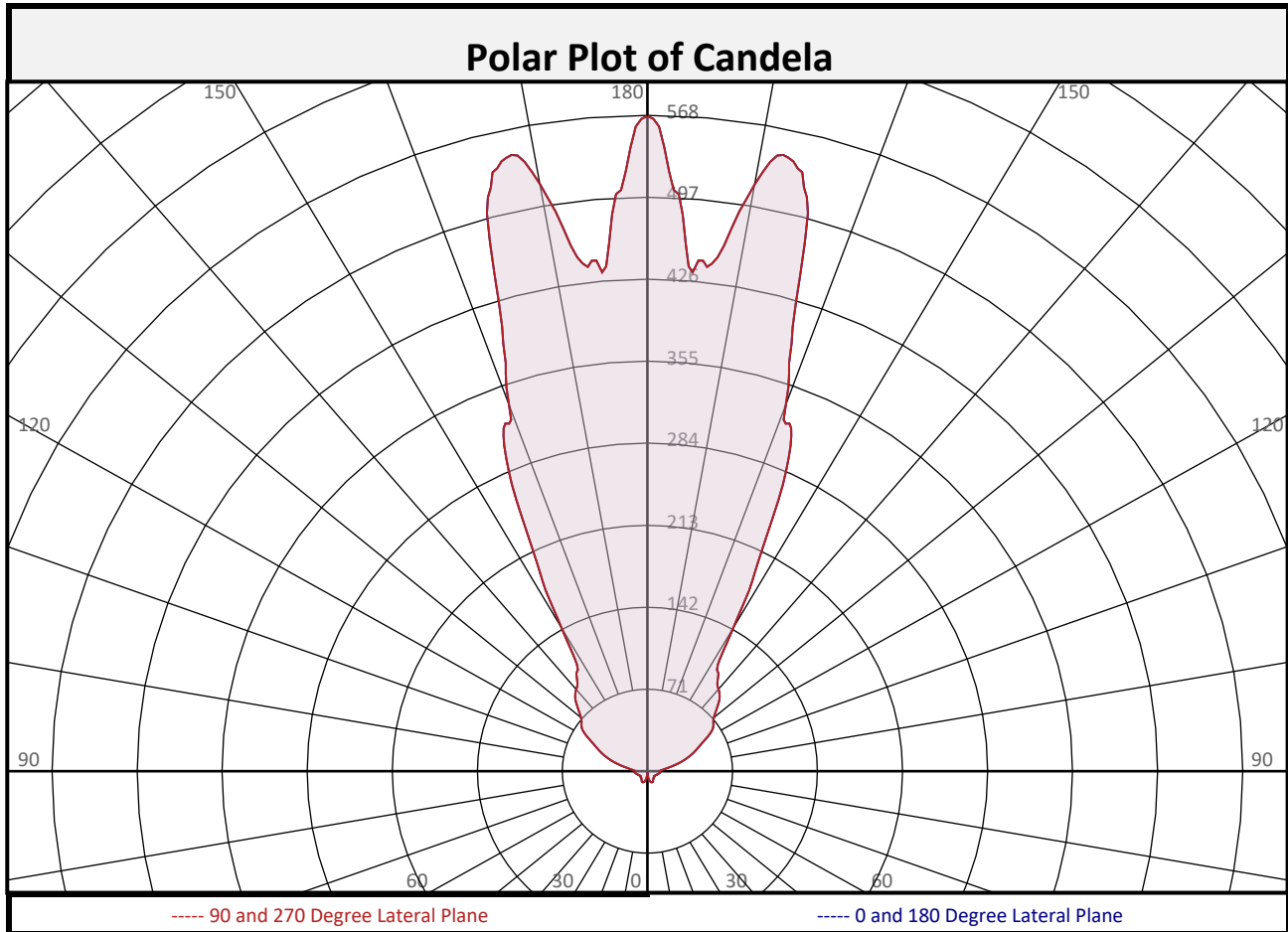
Test date: 10/19/2020

Report date: 10/19/2020

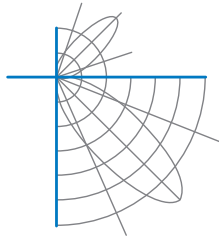
Signed: _____



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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	0.5	0.1%		90-100	14.2	2.3%		0-20	3.2	0.5%
10-20	2.7	0.4%		100-110	29.2	4.7%		0-30	7.9	1.3%
20-30	4.7	0.8%		110-120	45.8	7.3%		0-40	13.2	2.1%
30-40	5.4	0.9%		120-130	59.2	9.5%		0-60	25.7	4.1%
40-50	5.9	0.9%		130-140	64.4	10.3%		0-80	43.6	7.0%
50-60	6.6	1.1%		140-150	66.0	10.6%		10-90	54.6	8.8%
60-70	8.0	1.3%		150-160	113.4	18.2%		20-50	16.0	2.6%
70-80	9.9	1.6%		160-170	131.3	21.1%		40-90	41.9	6.7%
80-90	11.4	1.8%		170-180	44.9	7.2%		60-90	29.4	4.7%
0-90	55.1	8.8%		90-180	568.4	91.2%		0-180	623.5	100.0%

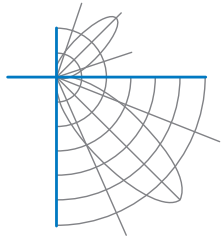


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	1	1	1	1	1	1	1	1	1
	2.5	2	2	2	2	2	2	2	2	2
	5	4	4	4	4	4	4	4	4	4
	7.5	6	6	6	6	6	6	6	6	6
	10	7	7	7	7	7	7	7	7	7
	12.5	9	9	9	9	9	9	9	9	9
	15	9	9	9	9	9	9	9	9	9
	17.5	10	10	10	10	10	10	10	10	10
	20	10	10	10	10	10	10	10	10	10
	22.5	10	10	10	10	10	10	10	10	10
	25	10	10	10	10	10	10	10	10	10
	27.5	10	10	10	10	10	10	10	10	10
	30	9	9	9	9	9	9	9	9	9
	32.5	9	9	9	9	9	9	9	9	9
	35	9	9	9	9	9	9	9	9	9
	37.5	8	8	8	8	8	8	8	8	8
	40	8	8	8	8	8	8	8	8	8
	42.5	8	8	8	8	8	8	8	8	8
	45	8	8	8	8	8	8	8	8	8
	47.5	7	7	7	7	7	7	7	7	7
50	7	7	7	7	7	7	7	7	7	
52.5	7	7	7	7	7	7	7	7	7	
55	7	7	7	7	7	7	7	7	7	
57.5	7	7	7	7	7	7	7	7	7	
60	8	8	8	8	8	8	8	8	8	
62.5	8	8	8	8	8	8	8	8	8	
65	8	8	8	8	8	8	8	8	8	
67.5	8	8	8	8	8	8	8	8	8	
70	9	9	9	9	9	9	9	9	9	
72.5	9	9	9	9	9	9	9	9	9	
75	9	9	9	9	9	9	9	9	9	
77.5	10	10	10	10	10	10	10	10	10	
80	10	10	10	10	10	10	10	10	10	
82.5	11	11	11	11	11	11	11	11	11	
85	11	11	11	11	11	11	11	11	11	
87.5	10	10	10	10	10	10	10	10	10	
90	10	10	10	10	10	10	10	10	10	

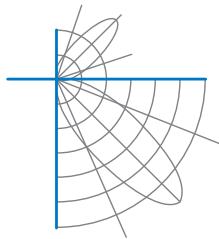


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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	90	10	10	10	10	10	10	10	10	10
	92.5	11	11	11	11	11	11	11	11	11
	95	13	13	13	13	13	13	13	13	13
	97.5	15	15	15	15	15	15	15	15	15
	100	18	18	18	18	18	18	18	18	18
	102.5	23	23	23	23	23	23	23	23	23
	105	28	28	28	28	28	28	28	28	28
	107.5	33	33	33	33	33	33	33	33	33
	110	37	37	37	37	37	37	37	37	37
	112.5	42	42	42	42	42	42	42	42	42
	115	46	46	46	46	46	46	46	46	46
	117.5	51	51	51	51	51	51	51	51	51
	120	57	57	57	57	57	57	57	57	57
	122.5	63	63	63	63	63	63	63	63	63
	125	67	67	67	67	67	67	67	67	67
	127.5	69	69	69	69	69	69	69	69	69
	130	73	73	73	73	73	73	73	73	73
	132.5	78	78	78	78	78	78	78	78	78
	135	84	84	84	84	84	84	84	84	84
	137.5	89	89	89	89	89	89	89	89	89
140	92	92	92	92	92	92	92	92	92	
142.5	96	96	96	96	96	96	96	96	96	
145	103	103	103	103	103	103	103	103	103	
147.5	110	110	110	110	110	110	110	110	110	
150	144	144	144	144	144	144	144	144	144	
152.5	195	195	195	195	195	195	195	195	195	
155	259	259	259	259	259	259	259	259	259	
157.5	314	314	314	314	314	314	314	314	314	
160	338	338	338	338	338	338	338	338	338	
162.5	403	403	403	403	403	403	403	403	403	
165	515	515	515	515	515	515	515	515	515	
167.5	544	544	544	544	544	544	544	544	544	
170	516	516	516	516	516	516	516	516	516	
172.5	449	449	449	449	449	449	449	449	449	
175	434	434	434	434	434	434	434	434	434	
177.5	504	504	504	504	504	504	504	504	504	
180	567	567	567	567	567	567	567	567	567	



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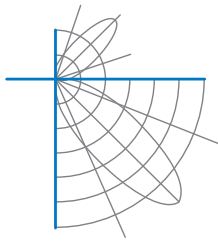
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																					
Effective Floor Cavity Reflectance 0.20																					
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	97	97	97	97	84	84	84	84	60	60	60	38	38	38	18	18	18	9			
1	88	83	79	76	76	72	69	66	51	49	47	32	31	30	15	14	14	6			
2	80	72	66	61	69	63	58	53	45	41	39	28	26	24	13	12	11	4			
3	72	63	56	50	62	55	49	44	39	35	32	24	22	20	11	10	9	3			
4	66	56	48	42	57	48	42	37	34	30	27	22	19	17	10	8	8	3			
5	60	49	41	36	52	43	36	31	31	26	23	19	17	15	9	7	6	2			
6	55	44	36	31	48	38	32	27	27	23	20	17	15	13	8	6	6	2			
7	51	39	32	26	44	34	28	23	24	20	17	15	13	11	7	6	5	2			
8	47	35	28	23	40	31	25	20	22	18	15	14	11	9	6	5	4	1			
9	43	32	25	20	37	28	22	18	20	16	13	13	10	8	6	5	4	1			
10	40	29	22	18	35	25	20	16	18	14	11	12	9	7	5	4	3	1			

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	0.0	26.54	26.54
8.0	0.0	35.39	35.39
10.0	0.0	44.24	44.24
12.0	0.0	53.09	53.09
14.0	0.0	61.94	61.94
16.0	0.0	70.79	70.79

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	373	373	373
45	416	416	416
55	359	359	359
65	368	368	368
75	410	410	410
85	471	471	471

Spacing Criterion	
Spacing Criterion:	4.2



Report of Test

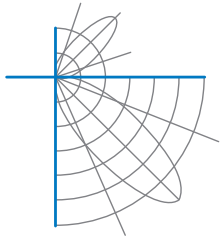
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UGR TABLE - CORRECTED

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	

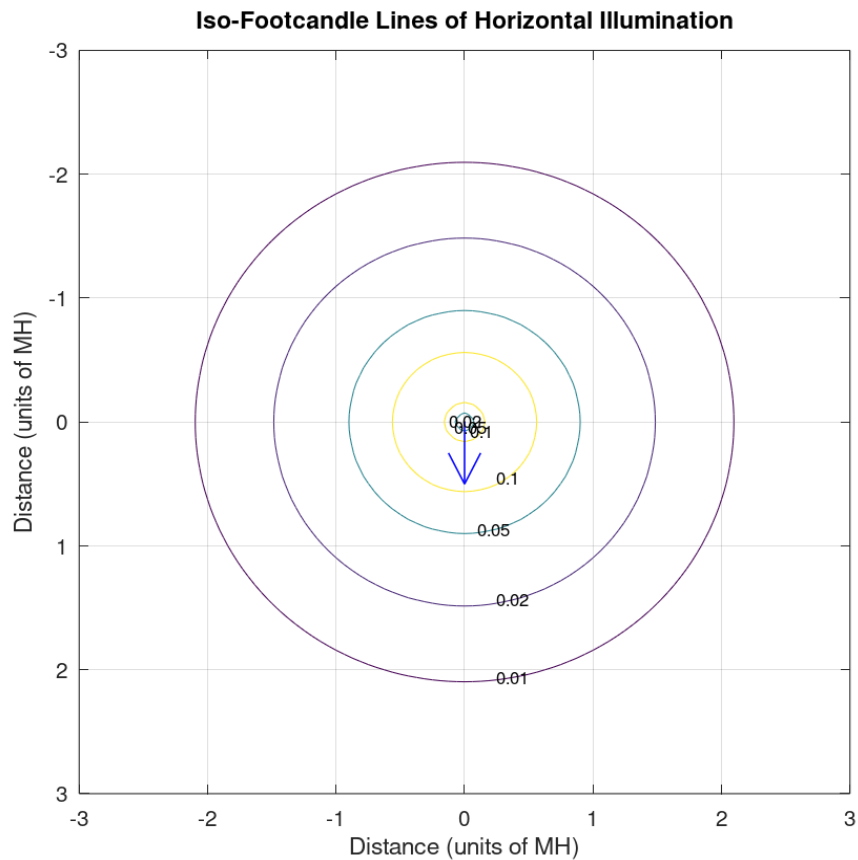
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	8H	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.9
	12H	0.0	0.0	0.0	0.1	1.9	0.0	0.0	0.0	0.1	1.9
4H	2H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	1.2
	8H	0.0	0.0	0.2	0.5	2.3	0.0	0.0	0.2	0.5	2.3
	12H	0.1	0.4	1.4	1.6	3.5	0.1	0.4	1.4	1.6	3.5
8H	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.0	0.3	2.1	0.0	0.0	0.0	0.3	2.1
	8H	0.0	0.3	1.3	1.5	3.3	0.0	0.3	1.3	1.5	3.3
	12H	1.4	1.6	2.7	2.8	4.7	1.4	1.6	2.7	2.8	4.7
12H	4H	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	6H	0.0	0.0	0.3	0.5	2.3	0.0	0.0	0.3	0.5	2.3
	8H	0.4	0.6	1.7	1.9	3.7	0.4	0.6	1.7	1.9	3.7

Maximum UGR = 4.7

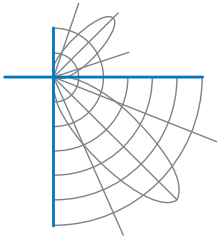


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Iso-Illuminance Plot



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.



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Additional Pictures of Test Subject





Report of Test

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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-41-14 and LM-46-04.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

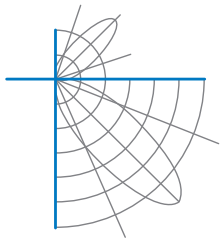
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA001333-004B

Integrating Sphere Report

Catalog Number: 3-657-24 Presto Pendant

Pendant mounted, steel canopy, tubular aluminum housing, clear decorative enclosures.

6 White LEDs

One Novbo NE030040090-1G LED driver

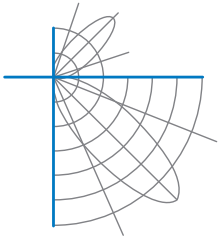


Performance Summary

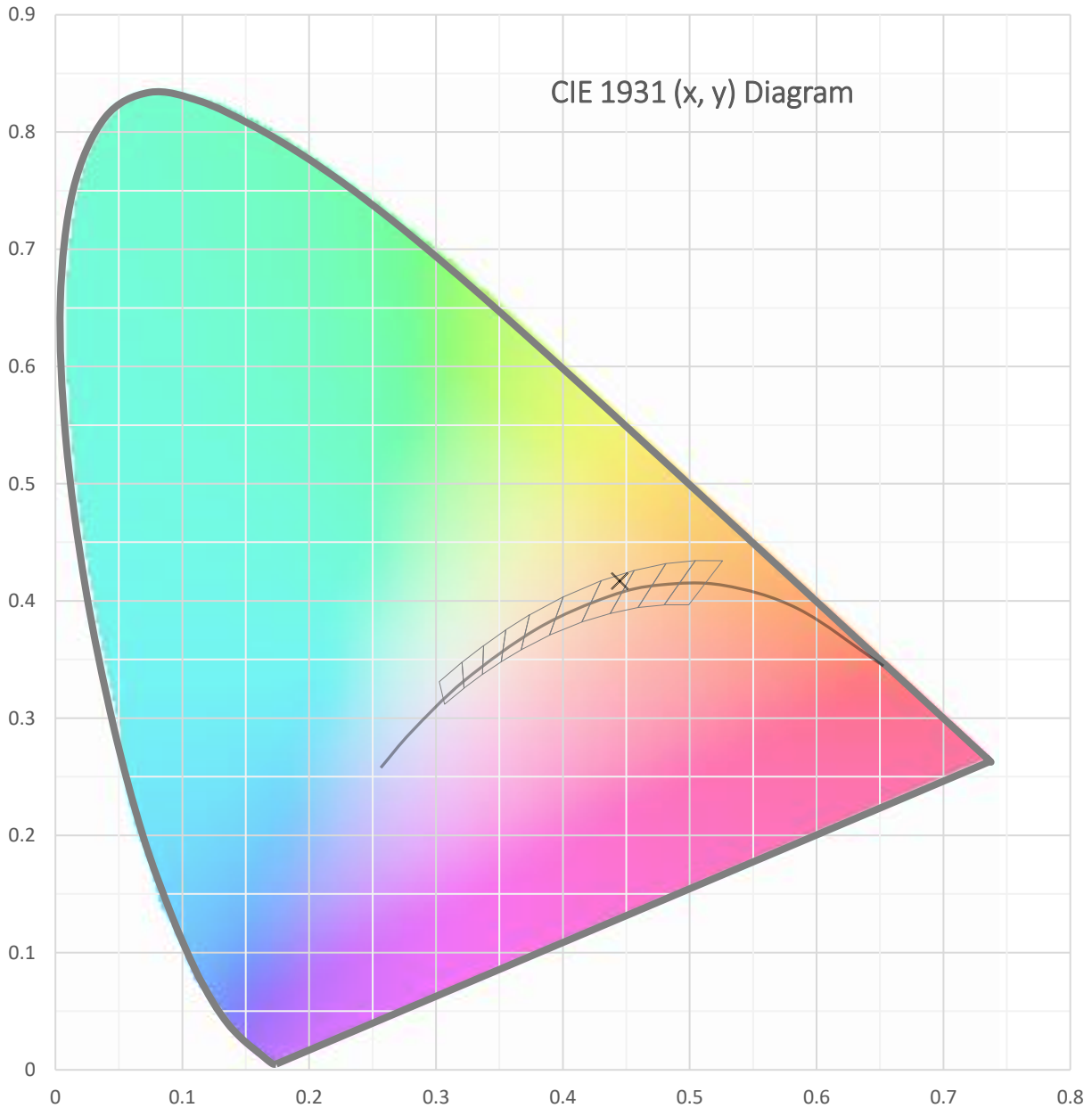
Voltage	120.0 Vac
Current	0.2679 A
Power	31.79 W
Frequency	59.99 Hz
Power Factor	0.989
Current THD	10.4 %
Total Luminous Flux	636.8 lm
Efficacy	20.0 lm/W
Chromaticity (x,y)	(0.4448, 0.4170)
(u',v')	(0.2501, 0.5275)
Duv	0.0040
CCT	2974 K
CRI (Ra)	93
R9	71
TM-30: Rf	91
TM-30: Rg	97

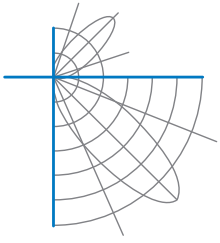
Prepared For:
Oxygen Lighting
201 Railhead Road
Fort Worth, TX 76106, USA

Test date: 10/15/2020
Report date: 10/19/2020

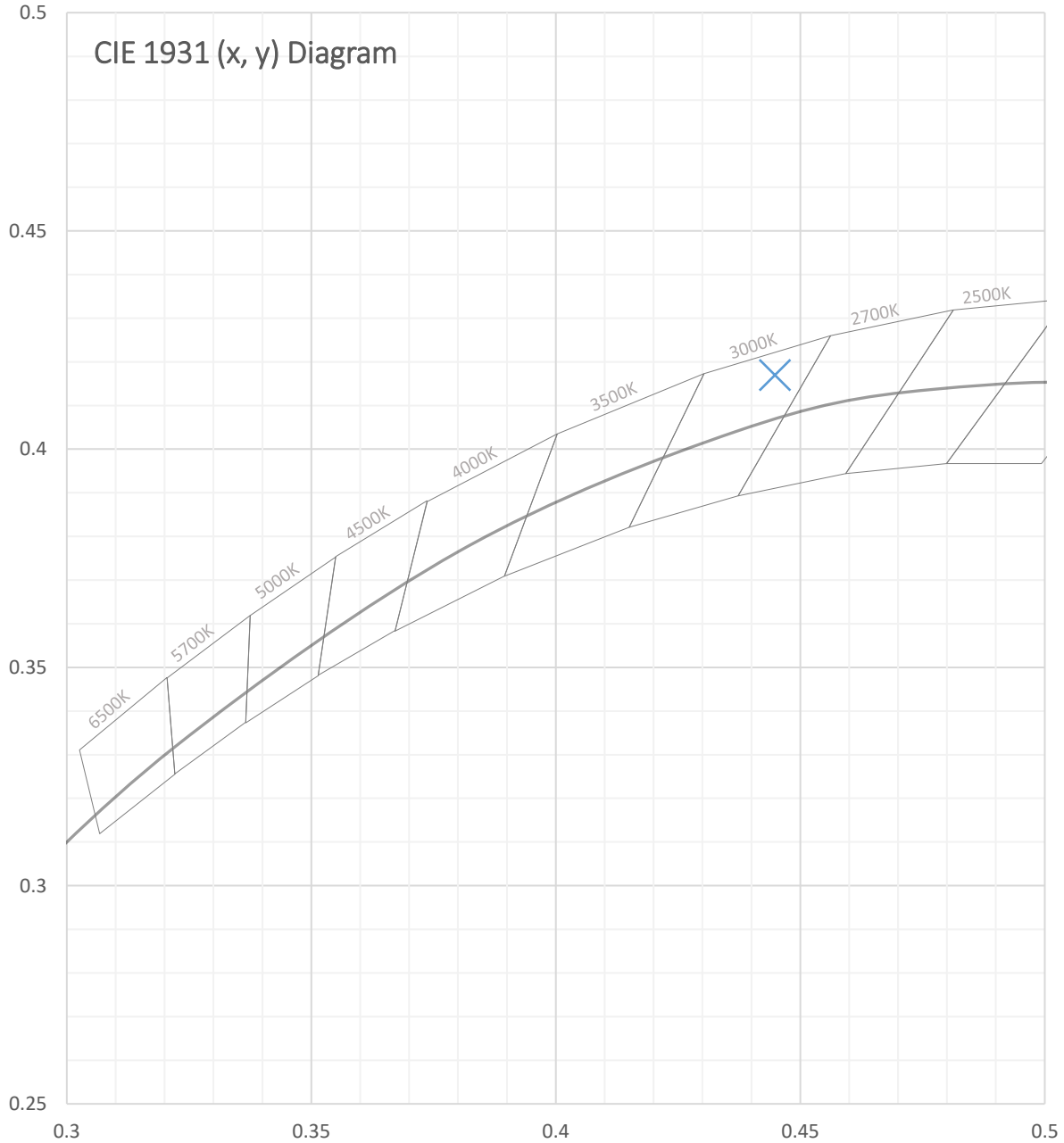


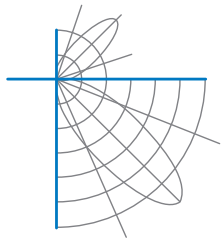
Test Report Number: LLIA001333-004B





Test Report Number: LLIA001333-004B



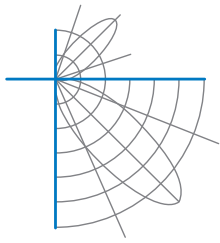


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Total Radiant Flux	2.348 W
Total Luminous Flux	636.8 Lm
Chromaticity CIE 1931 (x, y)	(0.4448, 0.4170)
Chromaticity CIE 1976 (u', v')	(0.2501, 0.5275)
Correlated Color Temperature (CCT)	2974 K
Color Rendering Index (Ra)	93
R1	93
R2	95
R3	94
R4	93
R5	91
R6	92
R7	97
R8	89
R9	71
R10	85
R11	91
R12	75
R13	93
R14	96
TM-30: Rf	91
TM-30: Rg	97
Distance from Planckian Locus (Duv)	0.0040
Scotopic/Photopic Ratio ‡	1.370

Electrical Data

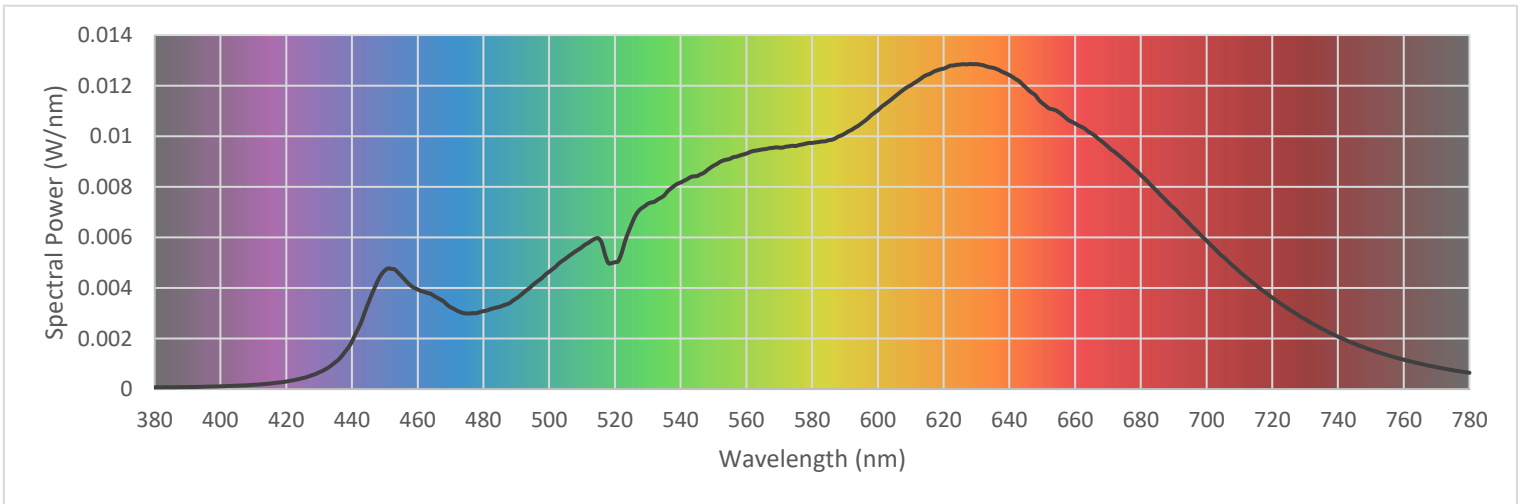
Voltage	120.0 Vac
Current	0.2679 A
Power	31.79 W
Frequency	59.99 Hz
Power Factor	0.989
Current THD	10.4 %

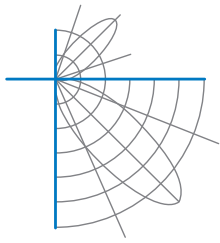


Test Report Number: LLIA001333-004B

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

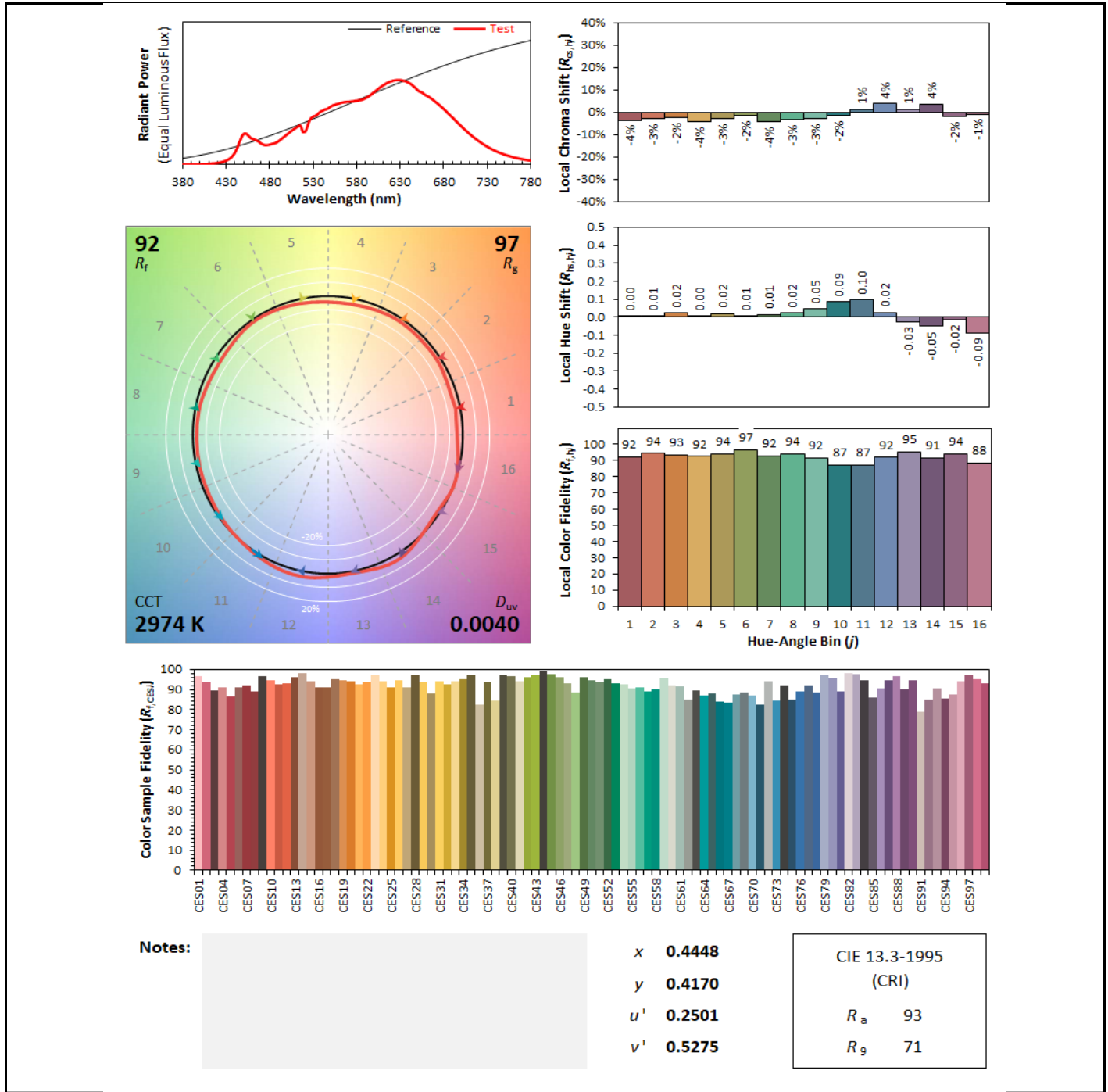
380	0.000071	480	0.003082	580	0.009734	680	0.008460
385	0.000069	485	0.003254	585	0.009840	685	0.007820
390	0.000079	490	0.003586	590	0.010106	690	0.007167
395	0.000091	495	0.004113	595	0.010506	695	0.006509
400	0.000110	500	0.004637	600	0.011023	700	0.005873
405	0.000133	505	0.005159	605	0.011551	705	0.005238
410	0.000169	510	0.005616	610	0.012014	710	0.004646
415	0.000217	515	0.005960	615	0.012426	715	0.004115
420	0.000297	520	0.005017	620	0.012671	720	0.003616
425	0.000432	525	0.006494	625	0.012832	725	0.003164
430	0.000663	530	0.007328	630	0.012849	730	0.002762
435	0.001066	535	0.007654	635	0.012705	735	0.002391
440	0.001877	540	0.008167	640	0.012417	740	0.002073
445	0.003412	545	0.008423	645	0.011933	745	0.001796
450	0.004689	550	0.008833	650	0.011310	750	0.001552
455	0.004477	555	0.009103	655	0.010956	755	0.001340
460	0.003941	560	0.009311	660	0.010505	760	0.001163
465	0.003680	565	0.009478	665	0.010111	765	0.001005
470	0.003239	570	0.009549	670	0.009590	770	0.000864
475	0.002989	575	0.009610	675	0.009057	775	0.000746
						780	0.000643

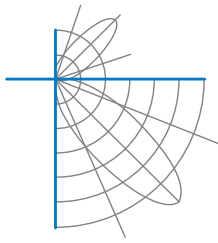




Test Report Number: LLIA001333-004B

IES TM-30 Details





Test Report Number: LLIA001333-004B

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: 24.9 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-19, LM-78-07, LM-58-13, ANSI_ANSLG C78.377-2017, TM-30-18

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.