



Report of Test

LLIA000898-008A

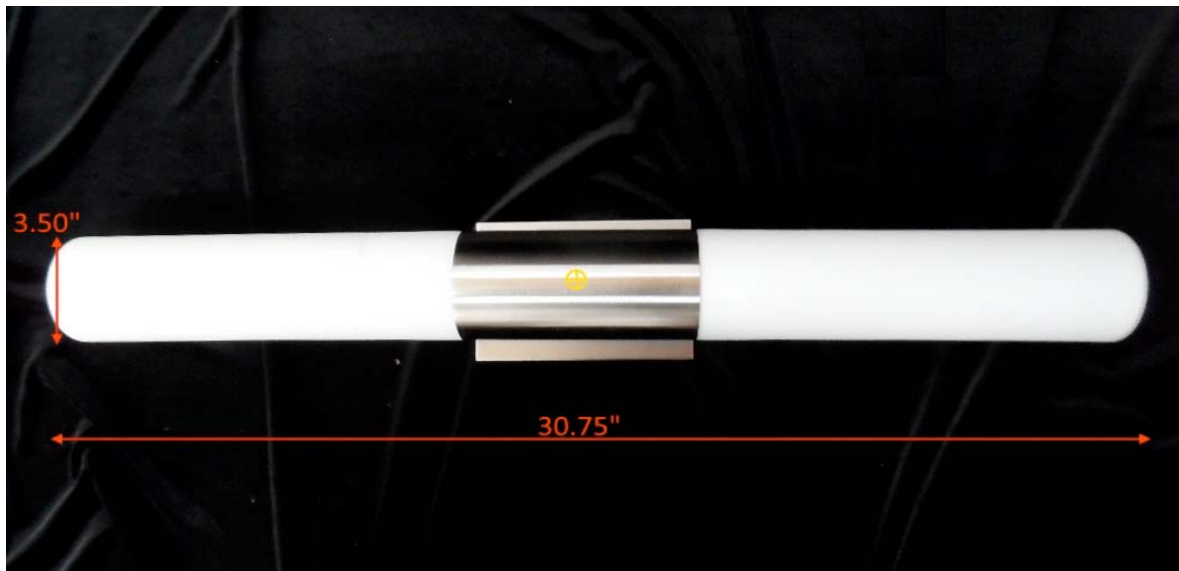
Catalog Number: 3-588-124 Magnum Vanity

Wall mounted, machined aluminum housing, formed white enamel steel LED mounting plates, translucent white glass enclosures.

72 white LEDs, two Harvard Engineering LER7-284x17-930-36S-I LED boards

Two L.T.F. DA12W350C1834D010-0014 dimming LED drivers.

120.0Vac, 60.00Hz, 0.2589A, 30.49W, 0.981PF, 9.7%THD(i)



Performance Summary

Total Light Output	2369 lm
Luminaire Power	30.5 W
Luminous Efficacy	77.7 lm/W

PREPARED FOR : Oxygen Lighting, 201 Railhead Road, Fort Worth, TX 76106, USA



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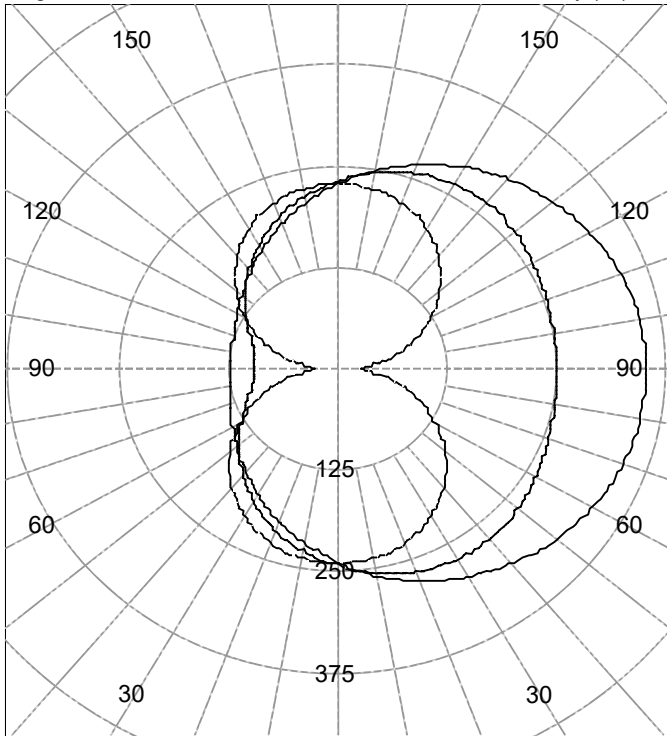
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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



C180-C270 (Symmetric about C0/C180) C0-C90

AVERAGE LUMINANCE (cd/m²)

Gamma	C0	C45	C90
45.0	4581	5163	39599
55.0	4763	5016	28157
65.0	4905	4854	19331
75.0	5002	4726	12003
85.0	5050	4653	5782

INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	239	239	239	239	239	
5.0	249	249	249	241	238	23
10.0	259	258	256	243	236	
15.0	269	266	261	244	233	67
20.0	278	274	266	243	227	107
25.0	287	282	269	241	220	
30.0	295	289	271	236	211	139
35.0	303	295	272	231	200	
40.0	311	301	271	224	188	162
45.0	319	306	270	216	174	
50.0	325	310	268	207	159	175
55.0	331	314	265	197	144	
60.0	337	317	261	186	127	180
65.0	341	320	258	174	109	
70.0	345	322	255	162	91	177
75.0	348	324	252	153	72	
80.0	350	325	250	145	54	172
85.0	351	326	249	140	36	
90.0	352	327	249	138	25	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	197	N / A	8.3
0-40	335	N / A	14.2
0-60	672	N / A	28.4
0-90	1202	N / A	50.7
40-90	866	N / A	36.6
60-90	529	N / A	22.3
90-180	1167	N / A	49.3
0-180	2369	N / A	100.0

Total Light Output = 2,369 lm

Signed:

Authorized Signatory

Date of test 10-Nov-2017

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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	239	239	239	239	239
2.5	244	244	246	239	238
5.0	249	249	249	241	238
7.5	254	253	252	242	237
10.0	259	258	256	243	236
12.5	264	262	259	244	235
15.0	269	266	261	244	233
17.5	273	270	264	244	230
20.0	278	274	266	243	227
22.5	282	278	267	242	224
25.0	287	282	269	241	220
27.5	291	285	270	239	216
30.0	295	289	271	236	211
32.5	299	292	271	234	206
35.0	303	295	272	231	200
37.5	307	298	272	227	194
40.0	311	301	271	224	188
42.5	315	303	271	220	181
45.0	319	306	270	216	174
47.5	322	308	269	211	167
50.0	325	310	268	207	159
52.5	328	312	266	202	152
55.0	331	314	265	197	144
57.5	334	316	263	191	135
60.0	337	317	261	186	127
62.5	339	319	260	180	118
65.0	341	320	258	174	109
67.5	343	321	256	168	100
70.0	345	322	255	162	91
72.5	346	323	254	157	81
75.0	348	324	252	153	72
77.5	349	325	251	148	63
80.0	350	325	250	145	54
82.5	351	326	250	142	45
85.0	351	326	249	140	36
87.5	352	326	249	138	28
90.0	352	327	249	138	25



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	352	327	249	138	25
92.5	352	326	249	138	28
95.0	351	326	249	139	35
97.5	350	325	249	141	44
100.0	349	324	249	144	52
102.5	348	323	250	147	61
105.0	346	322	251	151	70
107.5	344	321	251	155	78
110.0	342	320	252	160	87
112.5	340	318	253	165	96
115.0	338	317	255	170	104
117.5	335	315	256	175	113
120.0	332	313	257	180	121
122.5	329	311	259	185	129
125.0	326	309	260	190	137
127.5	323	307	261	195	144
130.0	319	305	262	199	152
132.5	316	302	263	204	159
135.0	312	300	264	208	166
137.5	308	297	265	211	173
140.0	304	294	265	215	179
142.5	300	291	265	218	185
145.0	295	288	264	221	190
147.5	291	284	264	224	196
150.0	286	281	263	226	201
152.5	282	277	261	228	205
155.0	277	273	260	230	209
157.5	272	269	258	231	213
160.0	267	265	256	232	216
162.5	262	261	254	233	219
165.0	257	257	251	233	222
167.5	252	252	248	232	224
170.0	247	248	245	232	225
172.5	242	243	242	230	226
175.0	237	239	238	229	226
177.5	232	234	235	227	227
180.0	228	228	228	228	228



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	239	239	239	239	239
2.5	238	235	239	236	232
5.0	238	233	235	231	228
7.5	237	230	232	226	223
10.0	236	228	228	222	218
12.5	235	225	224	217	213
15.0	233	221	220	212	208
17.5	230	217	215	207	203
20.0	227	213	211	203	199
22.5	224	209	206	198	194
25.0	220	204	201	193	189
27.5	216	199	196	189	185
30.0	211	193	191	184	180
32.5	206	187	185	179	176
35.0	200	182	180	175	172
37.5	194	175	174	170	168
40.0	188	169	169	166	164
42.5	181	163	163	162	160
45.0	174	156	158	158	157
47.5	167	149	152	154	153
50.0	159	142	147	150	150
52.5	152	135	141	146	147
55.0	144	128	136	143	144
57.5	135	121	131	140	141
60.0	127	114	126	137	138
62.5	118	107	121	134	136
65.0	109	100	117	131	134
67.5	100	94	113	129	132
70.0	91	87	110	126	130
72.5	81	81	106	124	128
75.0	72	76	103	123	127
77.5	63	71	101	121	126
80.0	54	66	99	120	125
82.5	45	62	97	119	124
85.0	36	59	96	118	123
87.5	28	56	95	118	123
90.0	25	55	94	118	122



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	25	55	94	118	122
92.5	28	55	94	118	122
95.0	35	57	95	118	122
97.5	44	60	96	118	122
100.0	52	64	97	118	123
102.5	61	68	98	119	123
105.0	70	72	100	120	124
107.5	78	77	103	121	125
110.0	87	83	105	122	126
112.5	96	89	108	124	127
115.0	104	95	112	126	129
117.5	113	102	115	128	131
120.0	121	108	119	130	133
122.5	129	115	124	133	135
125.0	137	121	128	136	137
127.5	144	128	133	139	140
130.0	152	134	138	142	143
132.5	159	141	143	145	145
135.0	166	147	148	149	149
137.5	173	154	153	152	152
140.0	179	160	158	156	155
142.5	185	166	163	160	159
145.0	190	172	168	164	163
147.5	196	178	173	168	166
150.0	201	183	178	172	171
152.5	205	189	183	177	175
155.0	209	194	188	181	179
157.5	213	198	193	186	184
160.0	216	203	198	190	188
162.5	219	207	202	195	193
165.0	222	211	207	200	198
167.5	224	214	211	205	203
170.0	225	217	215	209	208
172.5	226	220	219	214	213
175.0	226	222	223	219	218
177.5	227	225	227	224	223
180.0	228	228	228	228	228



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Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	95	89	83	79	87	82	77	73	68	65	62	56	53	51	45	43	41	36
2	85	76	68	62	77	70	63	57	58	53	49	47	44	40	38	35	32	27
3	77	65	57	50	70	60	53	46	50	44	39	41	36	33	32	29	26	22
4	70	57	48	41	63	53	45	39	44	38	33	36	31	27	28	25	22	18
5	64	51	42	35	58	47	39	32	39	33	28	32	27	23	25	21	18	15
6	58	45	36	30	53	42	34	28	35	29	24	29	24	20	23	19	16	13
7	54	41	32	26	49	37	30	24	31	25	21	26	21	17	21	17	14	11
8	50	37	28	23	46	34	26	21	29	22	18	24	19	15	19	15	12	10
9	46	33	25	20	42	31	24	19	26	20	16	22	17	13	17	14	11	9
10	43	30	23	18	40	28	21	17	24	18	14	20	15	12	16	12	10	8

For absolute test reports, CUs are expressed as a percentage of total lumen 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)	Beam Width (across 50% Nadir Illum)	
		0-180	90-270
6.0	6.6	9.12	7.84
8.0	3.7	12.16	10.46
10.0	2.4	15.20	13.07
12.0	1.7	18.24	15.69
14.0	1.2	21.28	18.30
16.0	0.9	24.33	20.92



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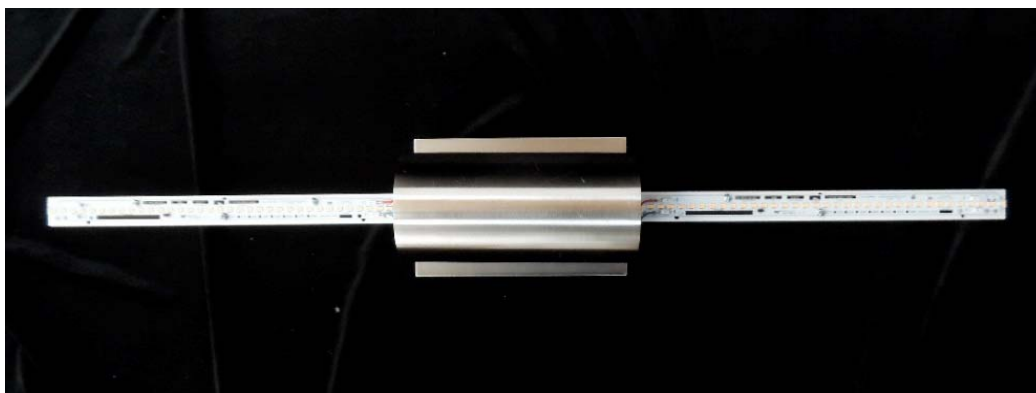
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Test Distance 9.5 m
Test Temperature 24.7 °C

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 publications: IES LM-79-08 (Sec. 12), IES LM-16-93, IES LM-58-13, CIE 13.3:1995, CIE 15:2004, ANSI C78.377:2015, ANSI C82.77-10:2014.

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 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

LLIA000898-008B

Integrating Sphere Report

Catalog Number: 3-588-124 Magnum Vanity

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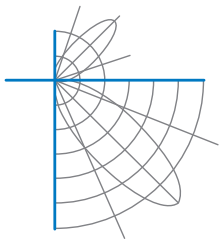
Performance Summary

Voltage	120.0 Vac
Current	0.2591 A
Power	30.51 W
Frequency	59.97 Hz
Power Factor	0.981
Current THD	9.6 %

Total Luminous Flux	2387.7 lm
Efficacy	78.3 lm/W
Chromaticity (x,y)	(0.4283, 0.3940)
(u',v')	(0.2494, 0.5161)
Duv	-0.0029
CCT	3066 K
CRI (Ra)	93
R9	63

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

Test date: 11/09/2017
Report date: 11/10/2017



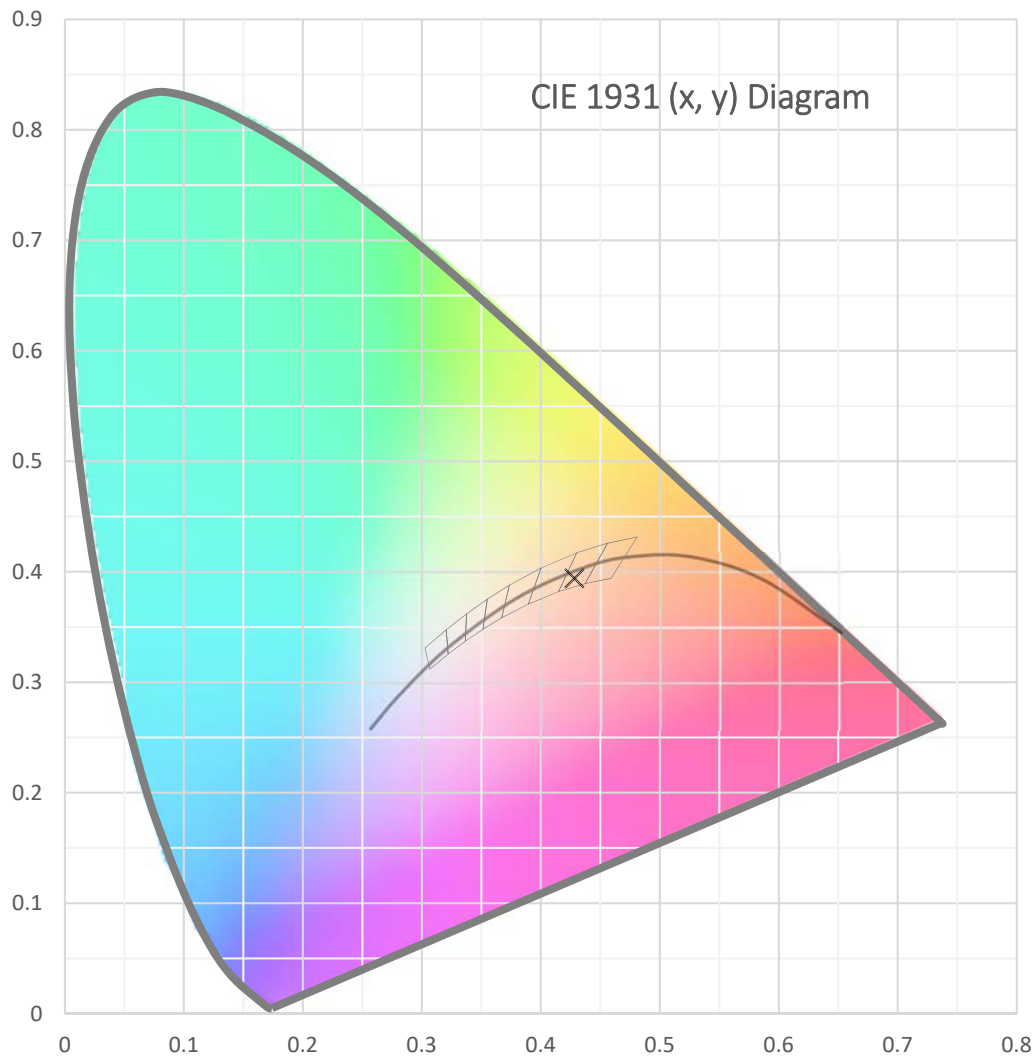
Test Report Number: LLIA000898-008B

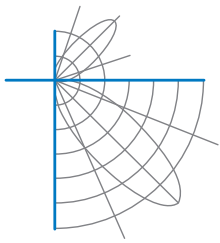
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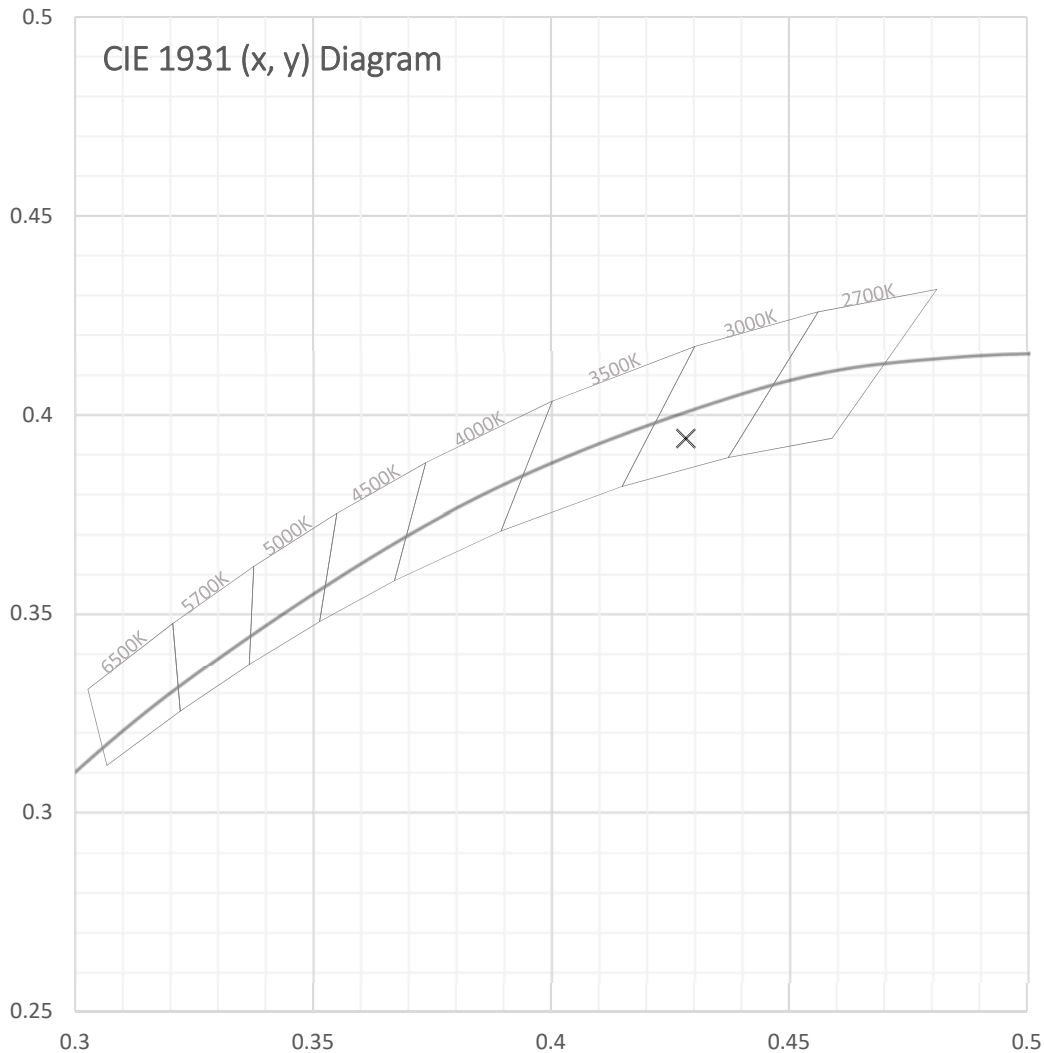
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Spectral Data

Total Radiant Flux	8.468 W
Total Luminous Flux	2387.7 Lm
Chromaticity CIE 1931 (x, y)	(0.4283, 0.3940)
Chromaticity CIE 1976 (u', v')	(0.2494, 0.5161)
Correlated Color Temperature (CCT)	3066 K
Color Rendering Index (Ra)	93
R1	94
R2	98
R3	98
R4	93
R5	94
R6	96
R7	91
R8	83
R9	63
R10	93
R11	93
R12	83
R13	95
R14	99
Distance from Planckian Locus (Duv)	-0.0029
Scotopic/Photopic Ratio *	1.467

Electrical Data

Voltage	120.0 Vac
Current	0.2591 A
Power	30.51 W
Frequency	59.97 Hz
Power Factor	0.981
Current THD	9.6 %



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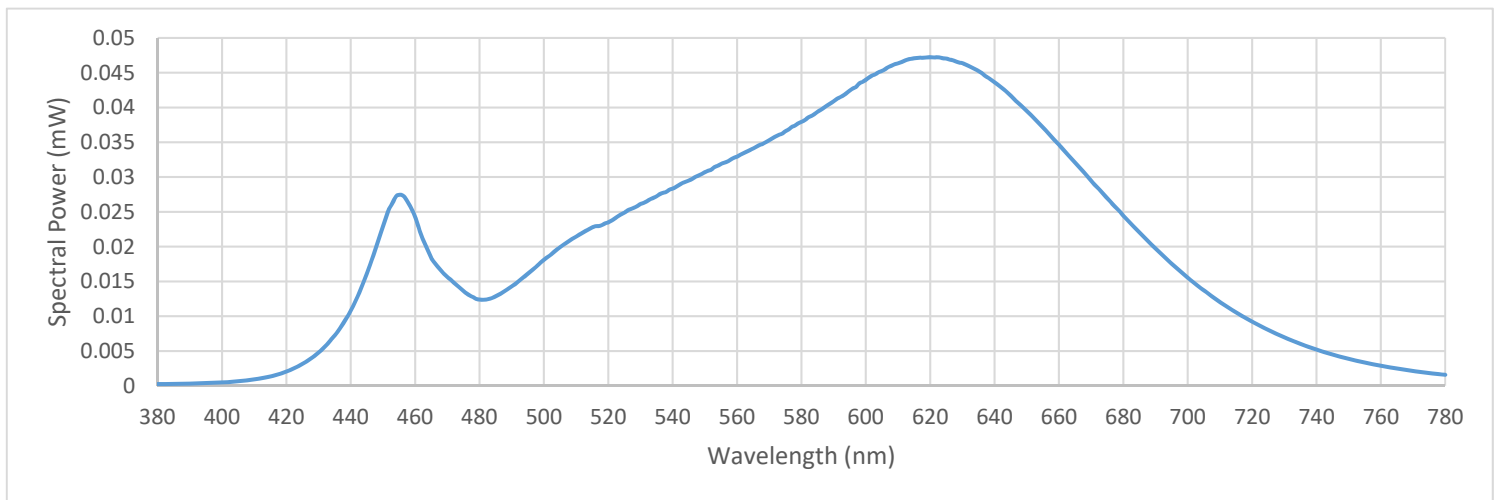
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000241	480	0.012400	580	0.037931	680	0.024444
385	0.000256	485	0.012852	585	0.039398	685	0.022054
390	0.000305	490	0.014291	590	0.040887	690	0.019719
395	0.000379	495	0.016102	595	0.042443	695	0.017522
400	0.000488	500	0.018107	600	0.043991	700	0.015573
405	0.000644	505	0.019898	605	0.045252	705	0.013724
410	0.000922	510	0.021422	610	0.046351	710	0.012022
415	0.001332	515	0.022768	615	0.047078	715	0.010559
420	0.002055	520	0.023493	620	0.047227	720	0.009219
425	0.003126	525	0.024881	625	0.047035	725	0.008008
430	0.004790	530	0.026130	630	0.046373	730	0.006977
435	0.007234	535	0.027213	635	0.045241	735	0.006024
440	0.010804	540	0.028343	640	0.043639	740	0.005194
445	0.016141	545	0.029500	645	0.041688	745	0.004484
450	0.022855	550	0.030701	650	0.039480	750	0.003867
455	0.027451	555	0.031881	655	0.037127	755	0.003335
460	0.024259	560	0.032942	660	0.034673	760	0.002884
465	0.018373	565	0.034117	665	0.032109	765	0.002475
470	0.015659	570	0.035277	670	0.029471	770	0.002127
475	0.013630	575	0.036587	675	0.026944	775	0.001833
						780	0.001578





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Two L.T.F. DA12W350C1834D010-0014 dimming LED drivers.

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

Test Temperature: 24.6 °C

Test Procedure: Tested in accordance with the applicable sections of:
LM-79-08, LM-78-07, LM-58-13, ANSI_ANSLG C78.377-2015, ANSI C82-77-10:2014

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
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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.