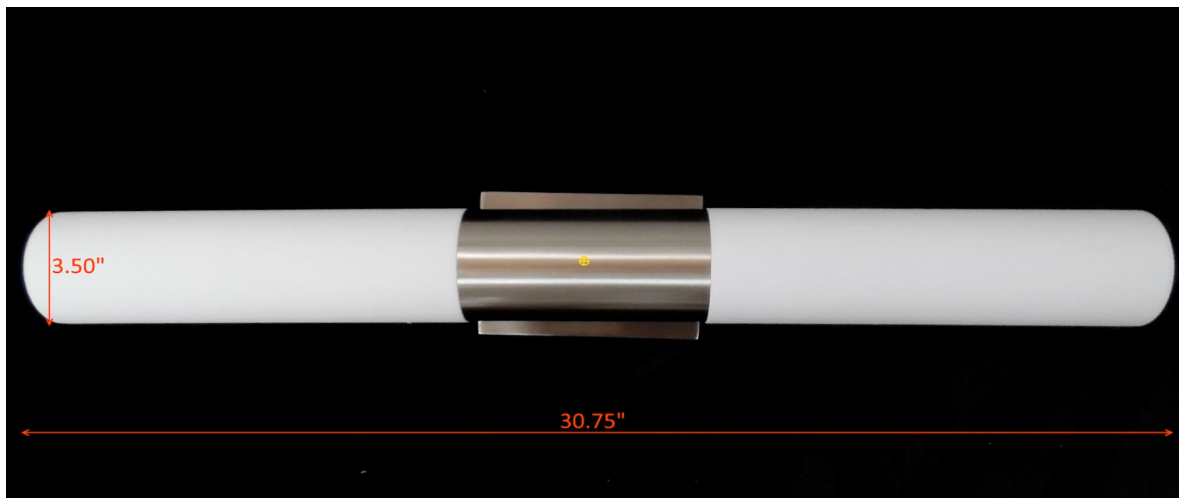




# Report of Test

## LLIA000802-032A

Catalog Number: 3-588-24 Magnum Vanity  
Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.  
72 white LEDs, two Harvard Engineering LER7-284x17-930-36S-I LED boards with 36 LEDs each  
Two LTF DA12W350C1834D010-0000 dimming LED drivers.  
120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)



### Performance Summary

Total Light Output	2256 lm
Luminaire Power	30.5 W
Luminous Efficacy	74.0 lm/W

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



**Test Report No. LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

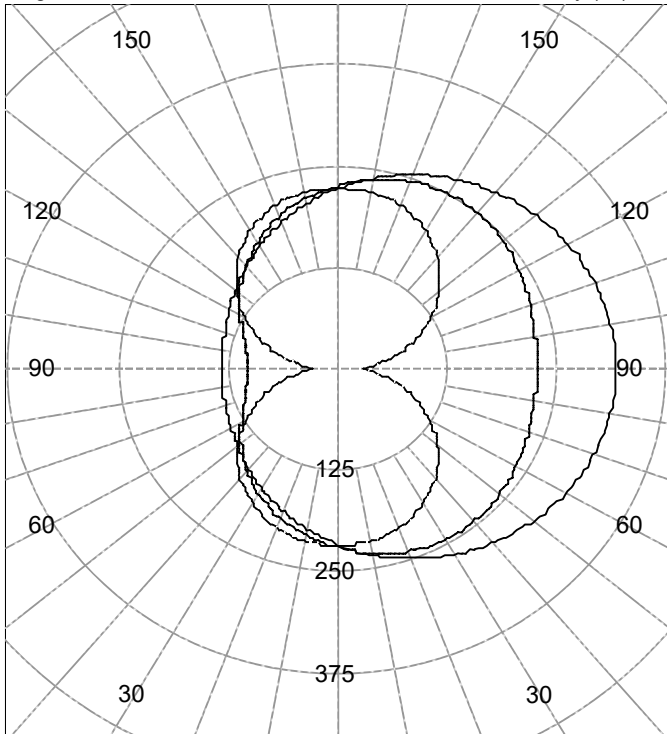
Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

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



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

**INTENSITY SUMMARY (cd)**

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	217	217	217	217	217	
5.0	225	225	225	219	216	21
10.0	233	232	231	221	215	
15.0	241	239	235	221	212	61
20.0	249	246	239	220	207	
25.0	256	252	241	218	201	97
30.0	264	258	243	214	193	
35.0	271	264	244	209	183	127
40.0	278	269	243	203	173	
45.0	285	273	242	196	161	149
50.0	291	278	240	188	148	
55.0	296	281	238	179	134	163
60.0	301	285	235	169	119	
65.0	306	288	233	159	103	169
70.0	309	290	230	149	87	
75.0	312	292	229	140	71	168
80.0	315	294	227	134	55	
85.0	316	295	226	130	40	165
90.0	317	295	226	128	28	

**ZONAL FLUX AND PERCENTAGES**

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	179	N / A	7.9
0-40	307	N / A	13.6
0-60	619	N / A	27.4
0-90	1121	N / A	49.7
40-90	814	N / A	36.1
60-90	502	N / A	22.2
90-180	1135	N / A	50.3
0-180	2256	N / A	100.0

Total Light Output = 2,256 lm

Signed:

Authorized Signatory

Date of test

8-Aug-2017

Date of report

8-Aug-2017



**Test Report No. LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.

120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	217	217	217	217	217
2.5	221	221	222	217	216
5.0	225	225	225	219	216
7.5	229	229	228	220	216
10.0	233	232	231	221	215
12.5	237	236	233	221	214
15.0	241	239	235	221	212
17.5	245	243	237	221	210
20.0	249	246	239	220	207
22.5	253	249	240	219	204
25.0	256	252	241	218	201
27.5	260	255	242	216	197
30.0	264	258	243	214	193
32.5	268	261	243	212	188
35.0	271	264	244	209	183
37.5	275	266	244	206	178
40.0	278	269	243	203	173
42.5	281	271	243	199	167
45.0	285	273	242	196	161
47.5	288	276	241	192	154
50.0	291	278	240	188	148
52.5	294	280	239	183	141
55.0	296	281	238	179	134
57.5	299	283	237	174	126
60.0	301	285	235	169	119
62.5	304	286	234	164	111
65.0	306	288	233	159	103
67.5	308	289	232	154	95
70.0	309	290	230	149	87
72.5	311	291	229	144	79
75.0	312	292	229	140	71
77.5	314	293	228	137	63
80.0	315	294	227	134	55
82.5	316	294	227	131	48
85.0	316	295	226	130	40
87.5	317	295	226	129	33
90.0	317	295	226	128	28



**Test Report No. LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	317	295	226	128	28
92.5	317	295	226	129	33
95.0	316	295	227	130	40
97.5	316	294	227	132	48
100.0	315	294	228	135	56
102.5	314	294	229	138	64
105.0	313	293	230	142	72
107.5	312	293	231	146	80
110.0	311	292	233	151	89
112.5	309	291	234	156	97
115.0	308	290	236	161	105
117.5	306	289	237	166	113
120.0	304	288	239	172	121
122.5	301	287	241	176	128
125.0	299	285	242	181	136
127.5	296	284	244	186	143
130.0	294	282	245	190	150
132.5	291	280	247	195	157
135.0	288	278	248	199	164
137.5	285	276	248	203	170
140.0	282	274	249	206	176
142.5	279	272	249	210	182
145.0	276	270	250	213	188
147.5	272	267	249	215	193
150.0	268	264	249	218	197
152.5	265	262	248	220	202
155.0	261	259	248	222	206
157.5	257	256	246	224	209
160.0	254	253	245	225	212
162.5	250	249	243	225	215
165.0	246	246	241	226	217
167.5	242	242	239	226	219
170.0	238	239	237	225	220
172.5	234	235	234	224	221
175.0	230	231	231	223	222
177.5	226	228	229	222	222
180.0	223	223	223	223	223



**Test Report No. LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.

120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	217	217	217	217	217
2.5	216	213	217	214	211
5.0	216	212	214	211	208
7.5	216	210	211	207	204
10.0	215	208	208	203	200
12.5	214	206	205	200	196
15.0	212	203	202	196	192
17.5	210	200	198	193	189
20.0	207	196	195	189	185
22.5	204	192	191	185	182
25.0	201	188	187	182	178
27.5	197	184	183	178	175
30.0	193	179	179	175	171
32.5	188	174	175	171	168
35.0	183	169	170	168	165
37.5	178	164	166	164	162
40.0	173	159	161	161	159
42.5	167	153	157	158	156
45.0	161	148	152	155	154
47.5	154	142	148	152	151
50.0	148	136	143	149	149
52.5	141	130	139	146	147
55.0	134	124	135	143	145
57.5	126	118	131	141	143
60.0	119	112	127	139	141
62.5	111	106	123	137	140
65.0	103	100	119	135	138
67.5	95	94	116	133	137
70.0	87	89	113	132	136
72.5	79	83	111	131	135
75.0	71	79	108	129	134
77.5	63	74	106	129	133
80.0	55	71	105	128	133
82.5	48	67	104	128	132
85.0	40	64	103	127	132
87.5	33	62	103	127	132
90.0	28	61	102	127	132



**Test Report No. LLIA000802-032A**

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Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	28	61	102	127	132
92.5	33	62	103	127	132
95.0	40	64	103	127	132
97.5	48	66	104	127	132
100.0	56	70	105	128	133
102.5	64	74	107	129	134
105.0	72	79	109	130	135
107.5	80	84	111	131	136
110.0	89	89	114	133	137
112.5	97	95	117	134	138
115.0	105	101	120	136	140
117.5	113	107	124	138	141
120.0	121	114	128	140	143
122.5	128	120	132	143	145
125.0	136	126	136	145	147
127.5	143	132	141	148	149
130.0	150	138	145	151	152
132.5	157	144	150	154	154
135.0	164	150	154	157	157
137.5	170	156	159	160	160
140.0	176	162	164	163	163
142.5	182	168	168	167	166
145.0	188	173	173	170	169
147.5	193	178	177	174	172
150.0	197	184	182	177	176
152.5	202	188	186	181	179
155.0	206	193	190	185	183
157.5	209	197	194	189	187
160.0	212	201	198	192	190
162.5	215	205	202	196	194
165.0	217	208	206	200	198
167.5	219	211	210	204	202
170.0	220	214	213	208	206
172.5	221	216	216	211	210
175.0	222	218	219	215	214
177.5	222	219	222	219	219
180.0	223	223	223	223	223



**Test Number: LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.

120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Coefficients Of 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	
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	94	88	83	79	86	81	77	72	68	64	61	55	53	50	44	42	40	35
2	85	75	68	62	77	69	63	57	57	52	48	47	43	40	37	34	31	27
3	76	65	57	50	70	60	52	46	50	44	39	40	36	32	32	28	25	21
4	69	57	48	41	63	52	44	38	44	37	32	35	31	27	28	24	21	17
5	63	50	41	35	58	46	38	32	39	32	27	31	26	23	25	21	18	14
6	58	45	36	30	53	41	33	28	35	28	23	28	23	19	22	18	15	12
7	54	40	32	26	49	37	29	24	31	25	20	25	21	17	20	16	13	11
8	50	36	28	22	45	34	26	21	28	22	18	23	18	15	18	15	12	9
9	46	33	25	20	42	31	23	18	26	20	16	21	17	13	17	13	11	8
10	43	30	23	18	39	28	21	16	24	18	14	20	15	12	16	12	9	7

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	6.0	9.21	7.90
8.0	3.4	12.28	10.54
10.0	2.2	15.36	13.17
12.0	1.5	18.43	15.81
14.0	1.1	21.50	18.44
16.0	0.8	24.57	21.08





**Test Report No. LLIA000802-032A**

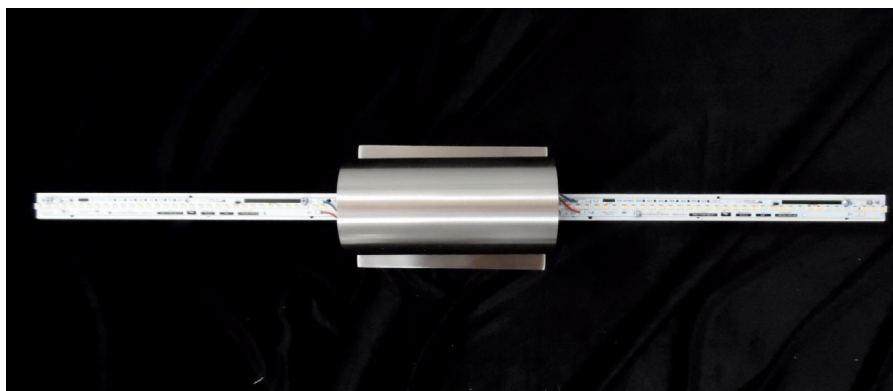
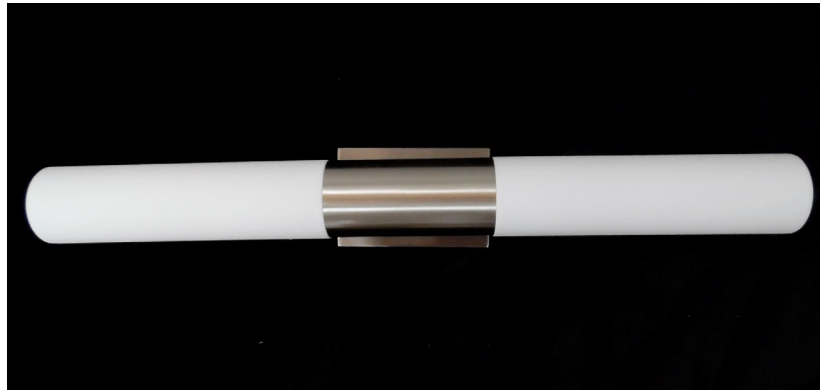
Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.

120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)







**Test Report No. LLIA000802-032A**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

72 white LEDs, two Harvard Engineering LER7-284x17-930-36S-I LED boards with 36 LEDs each  
Two LTF DA12W350C1834D010-0000 dimming LED drivers.  
120.0Vac, 60.00Hz, 0.2576A, 30.48W, 0.986PF, 8.2%THD(i)

**Test Distance** 9.5 m  
**Test Temperature** 24.8 °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

**LLIA000802-032B**

Integrating Sphere Report

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED  
mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.



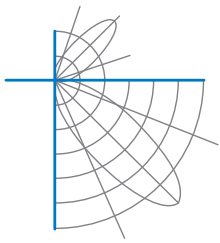
### Performance Summary

Voltage	120.0 Vac
Current	0.2575 A
Power	30.49 W
Frequency	60.00 Hz
Power Factor	0.986
Current THD	8.1 %

Total Luminous Flux	2250.5 lm
Efficacy	73.8 lm/W
Chromaticity (x,y)	(0.4422, 0.4019)
(u',v')	(0.2549, 0.5213)
Duv	-0.0015
CCT	2896 K
CRI (Ra)	93
R9	62

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

Test date: 08/03/2017  
Report date: 08/08/2017



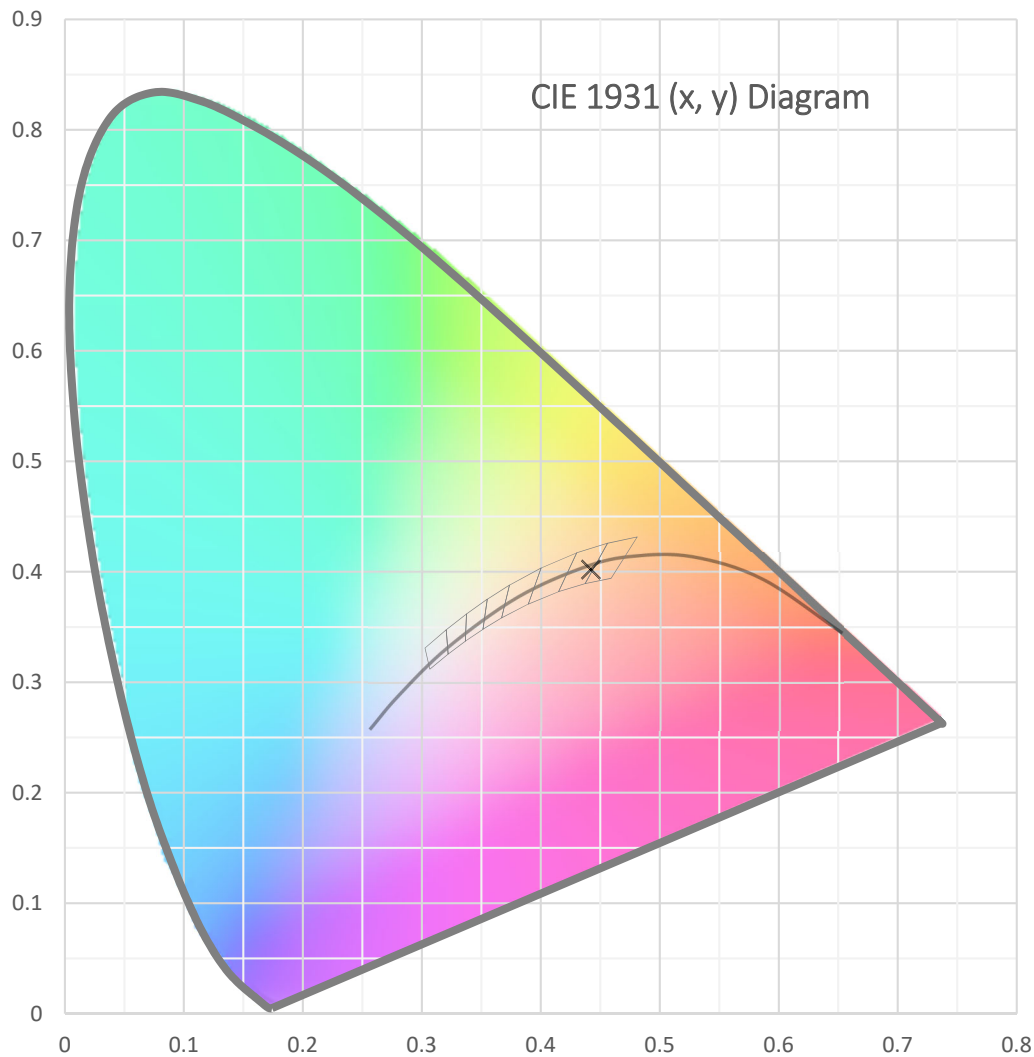
**Test Report Number: LLIA000802-032B**

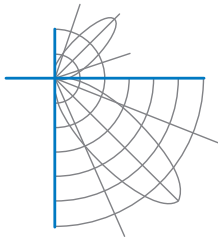
Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED  
mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.





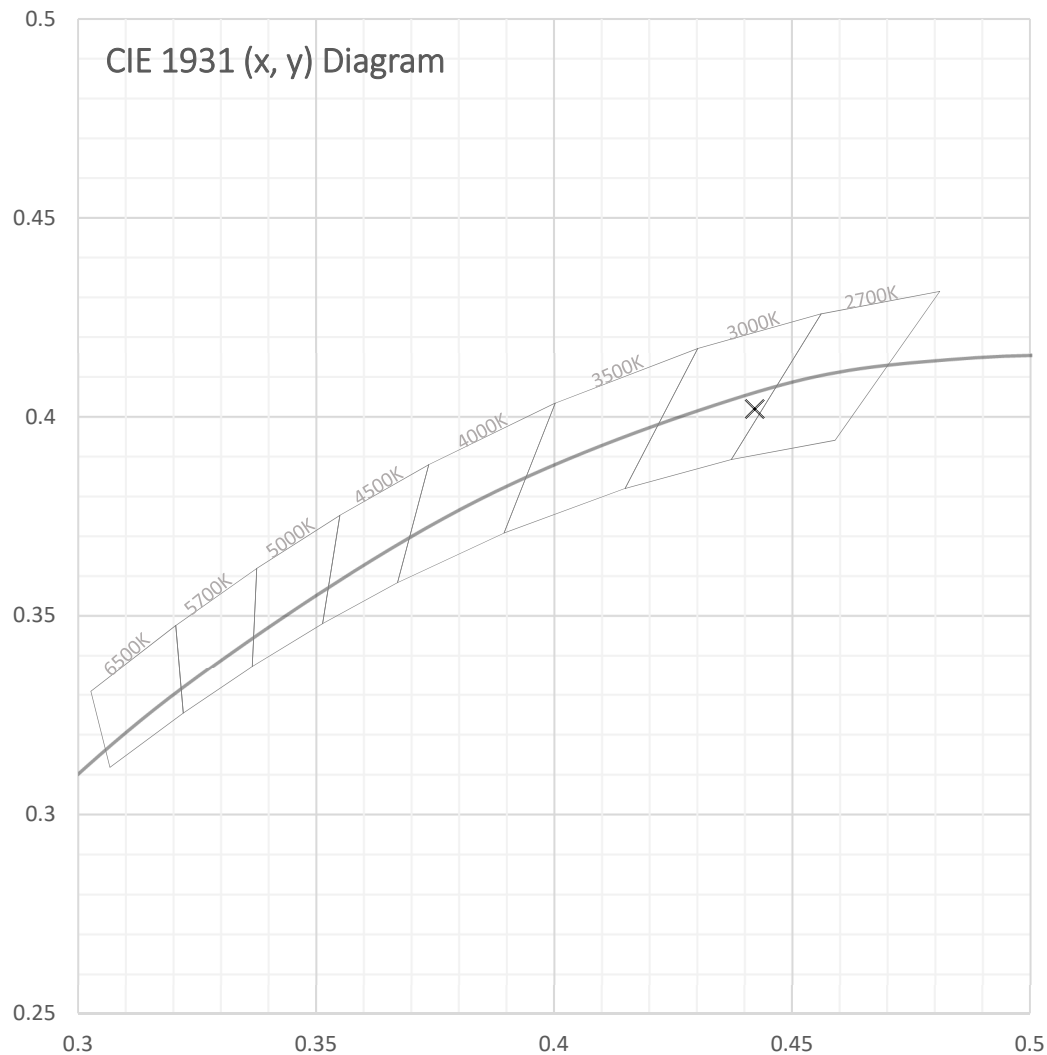
**Test Report Number: LLIA000802-032B**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED  
mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.





**Test Report Number: LLIA000802-032B**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 dimming LED drivers.

**Spectral Data**

Total Radiant Flux	8.027 W
Total Luminous Flux	2250.5 Lm
Chromaticity CIE 1931 (x, y)	(0.4422, 0.4019)
Chromaticity CIE 1976 (u', v')	(0.2549, 0.5213)
Correlated Color Temperature (CCT)	2896 K
Color Rendering Index (Ra)	93
R1	94
R2	97
R3	98
R4	93
R5	94
R6	96
R7	92
R8	83
R9	62
R10	93
R11	94
R12	84
R13	95
R14	99
Distance from Planckian Locus (Duv)	-0.0015
Scotopic/Photopic Ratio *	1.385

**Electrical Data**

Voltage	120.0 Vac
Current	0.2575 A
Power	30.49 W
Frequency	60.00 Hz
Power Factor	0.986
Current THD	8.1 %



**Test Report Number: LLIA000802-032B**

Catalog Number: 3-588-24 Magnum Vanity

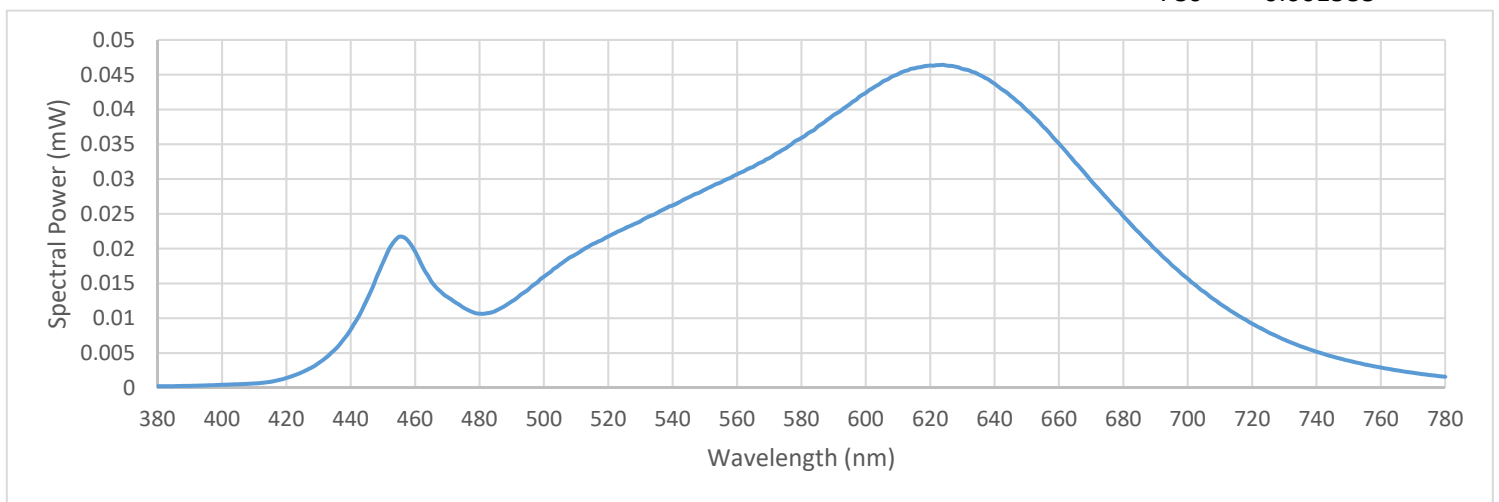
Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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Two LTF DA12W350C1834D010-0000 dimming LED drivers.

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

380	0.000220	480	0.010658	580	0.035912	680	0.024653
385	0.000239	485	0.011062	585	0.037520	685	0.022250
390	0.000285	490	0.012413	590	0.039207	690	0.019876
395	0.000343	495	0.014065	595	0.040748	695	0.017661
400	0.000429	500	0.015970	600	0.042386	700	0.015706
405	0.000508	505	0.017725	605	0.043932	705	0.013820
410	0.000616	510	0.019199	610	0.045064	710	0.012092
415	0.000854	515	0.020618	615	0.045894	715	0.010593
420	0.001413	520	0.021754	620	0.046325	720	0.009215
425	0.002265	525	0.022879	625	0.046329	725	0.007980
430	0.003559	530	0.023931	630	0.045835	730	0.006929
435	0.005461	535	0.025090	635	0.045046	735	0.005981
440	0.008366	540	0.026203	640	0.043708	740	0.005173
445	0.012641	545	0.027378	645	0.041945	745	0.004491
450	0.017986	550	0.028481	650	0.039897	750	0.003891
455	0.021700	555	0.029534	655	0.037593	755	0.003352
460	0.019589	560	0.030684	660	0.035111	760	0.002914
465	0.015303	565	0.031762	665	0.032423	765	0.002509
470	0.013056	570	0.033009	670	0.029745	770	0.002153
475	0.011515	575	0.034388	675	0.027208	775	0.001848
						780	0.001588





**Test Report Number: LLIA000802-032B**

Catalog Number: 3-588-24 Magnum Vanity

Wall mounted, formed steel housing, formed white enamel steel LED mounting plates, translucent white plastic enclosures.

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

Two LTF DA12W350C1834D010-0000 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 $\pi$  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 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.