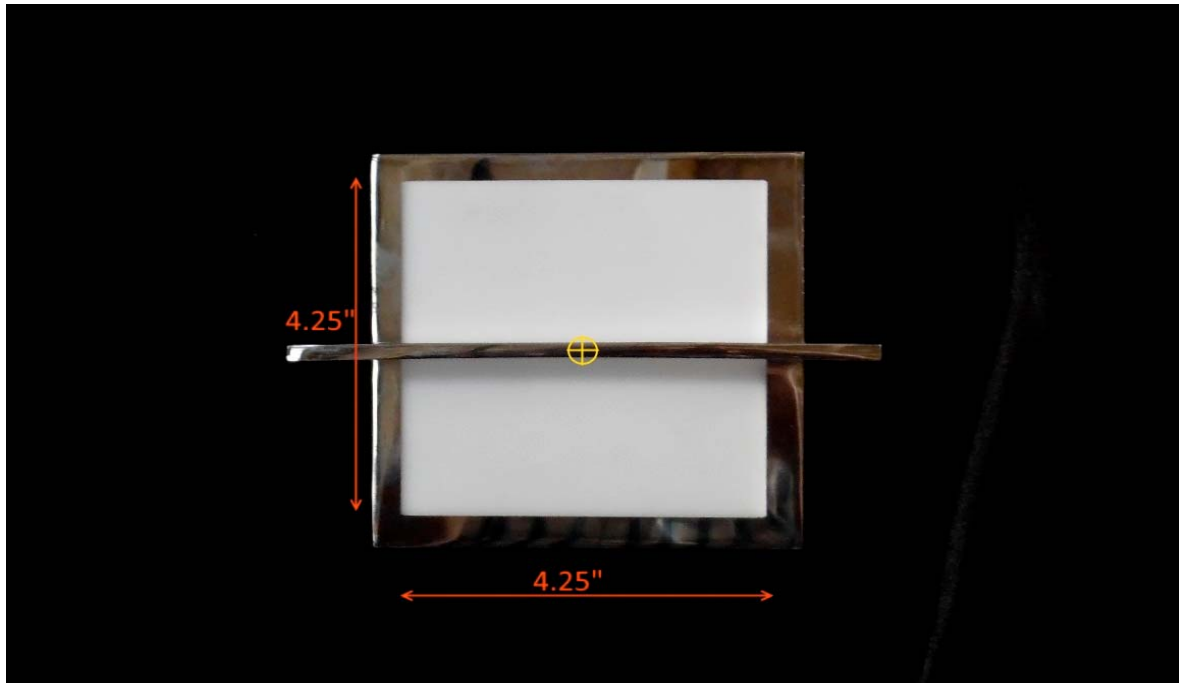


# Report of Test

## LLIA000824-035A

Catalog Number: 3-541 Metrix Sconce

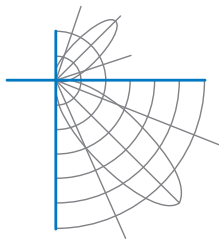
Wall mounted, formed steel housing, white enamel steel LED plate,  
translucent white plastic enclosure with formed decorative trim.  
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.  
120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)



### Performance Summary

Total Light Output	701 lm
Luminaire Power	10.5 W
Luminous Efficacy	66.8 lm/W

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



**Test Report No. LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

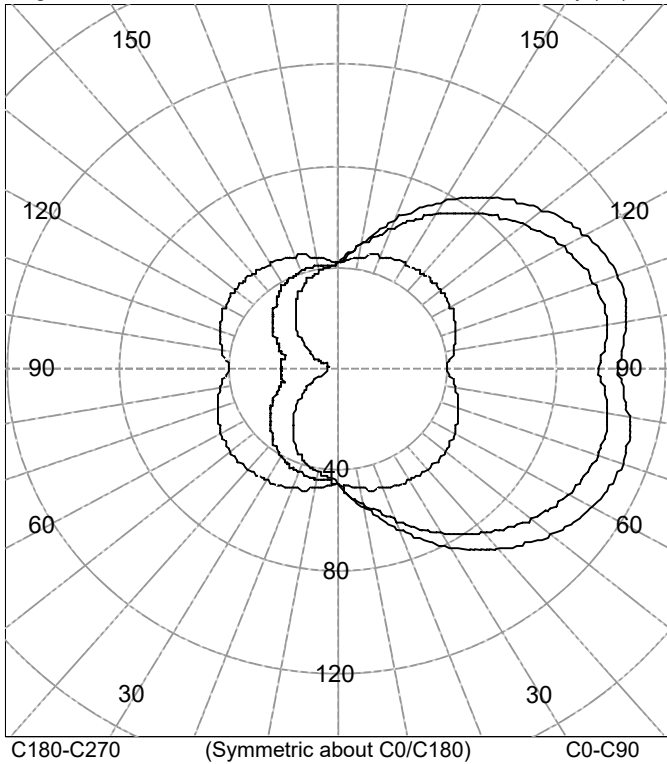
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translucent white plastic enclosure with formed decorative trim.

24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board

One LTF DA12W350C1834D010-0000 dimming LED driver.

120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

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



**INTENSITY SUMMARY (cd)**

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	45	45	45	45	45	
5.0	51	51	50	49	46	5
10.0	55	55	54	52	48	
15.0	61	61	59	55	49	14
20.0	68	68	64	57	50	
25.0	74	75	69	60	51	25
30.0	81	82	75	62	51	
35.0	87	88	80	64	51	36
40.0	92	94	84	67	51	
45.0	97	99	88	69	51	46
50.0	102	104	92	71	51	
55.0	105	108	95	73	50	53
60.0	108	111	98	74	49	
65.0	109	113	100	74	48	58
70.0	110	115	101	74	47	
75.0	110	115	101	74	45	60
80.0	107	113	100	73	44	
85.0	105	111	97	71	42	59
90.0	102	109	95	69	39	

**ZONAL FLUX AND PERCENTAGES**

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	44	N / A	6.3
0-40	80	N / A	11.4
0-60	179	N / A	25.5
0-90	356	N / A	50.8
40-90	276	N / A	39.4
60-90	177	N / A	25.3
90-180	345	N / A	49.2
0-180	701	N / A	100.0

Total Light Output = 701 lm

Signed:

Authorized Signatory

Date of test 14-Sep-2017  
Date of report 14-Sep-2017



**Test Report No. LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
translucent white plastic enclosure with formed decorative trim.  
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.  
120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	45	45	45	45	45
2.5	48	48	48	47	46
5.0	51	51	50	49	46
7.5	53	53	52	50	47
10.0	55	55	54	52	48
12.5	58	58	57	53	49
15.0	61	61	59	55	49
17.5	64	64	61	56	50
20.0	68	68	64	57	50
22.5	71	71	67	59	50
25.0	74	75	69	60	51
27.5	78	78	72	61	51
30.0	81	82	75	62	51
32.5	84	85	77	63	51
35.0	87	88	80	64	51
37.5	90	91	82	65	51
40.0	92	94	84	67	51
42.5	95	97	86	68	51
45.0	97	99	88	69	51
47.5	99	102	90	70	51
50.0	102	104	92	71	51
52.5	103	106	94	72	51
55.0	105	108	95	73	50
57.5	107	109	97	73	50
60.0	108	111	98	74	49
62.5	109	112	99	74	49
65.0	109	113	100	74	48
67.5	110	114	100	74	47
70.0	110	115	101	74	47
72.5	110	115	101	74	46
75.0	110	115	101	74	45
77.5	109	114	100	74	44
80.0	107	113	100	73	44
82.5	106	112	98	72	43
85.0	105	111	97	71	42
87.5	103	109	96	70	40
90.0	102	109	95	69	39



**Test Report No. LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
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24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.  
120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	102	109	95	69	39
92.5	103	110	96	70	40
95.0	104	111	97	71	41
97.5	106	112	99	72	42
100.0	107	113	99	73	43
102.5	108	113	100	73	43
105.0	108	114	100	73	44
107.5	109	113	100	73	45
110.0	108	113	99	73	45
112.5	108	112	98	73	46
115.0	107	111	97	73	47
117.5	106	110	96	72	47
120.0	105	108	95	71	48
122.5	103	106	94	71	48
125.0	101	104	92	70	48
127.5	100	102	90	69	48
130.0	97	100	88	68	49
132.5	95	98	86	67	49
135.0	93	95	84	66	49
137.5	90	92	82	65	49
140.0	88	89	80	63	49
142.5	85	87	78	62	48
145.0	82	83	75	60	48
147.5	79	80	73	59	48
150.0	76	77	70	58	48
152.5	73	73	67	57	48
155.0	69	70	65	56	48
157.5	66	66	62	55	47
160.0	63	63	59	54	47
162.5	59	59	56	52	47
165.0	56	56	54	51	46
167.5	52	53	52	49	45
170.0	50	51	50	48	45
172.5	48	48	48	46	44
175.0	46	46	45	44	43
177.5	43	43	43	42	42
180.0	42	42	42	42	42



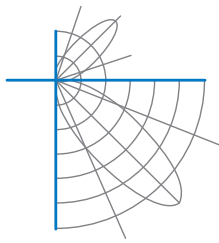
**Test Report No. LLIA000824-035A**

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120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	45	45	45	45	45
2.5	46	45	44	44	43
5.0	46	45	44	43	43
7.5	47	45	44	43	42
10.0	48	46	44	42	41
12.5	49	46	44	42	41
15.0	49	46	44	41	40
17.5	50	46	43	41	39
20.0	50	47	43	40	38
22.5	50	47	43	39	36
25.0	51	46	42	37	35
27.5	51	46	41	36	34
30.0	51	46	40	35	32
32.5	51	46	39	33	31
35.0	51	45	39	31	29
37.5	51	45	38	30	27
40.0	51	45	36	28	26
42.5	51	45	35	26	24
45.0	51	44	34	24	22
47.5	51	44	33	23	20
50.0	51	43	32	21	18
52.5	51	43	31	19	17
55.0	50	42	30	17	15
57.5	50	42	29	15	13
60.0	49	41	28	14	11
62.5	49	40	26	12	10
65.0	48	39	25	11	8
67.5	47	38	24	9	6
70.0	47	38	23	7	5
72.5	46	37	22	6	4
75.0	45	36	21	6	4
77.5	44	35	20	5	4
80.0	44	35	21	5	5
82.5	43	34	21	5	4
85.0	42	34	21	5	4
87.5	40	34	21	5	4
90.0	39	33	21	5	4



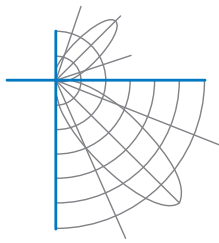
**Test Report No. LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

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One LTF DA12W350C1834D010-0000 dimming LED driver.  
120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	39	33	21	5	4
92.5	40	34	21	5	4
95.0	41	34	21	5	4
97.5	42	34	21	5	4
100.0	43	35	21	5	4
102.5	43	35	20	6	4
105.0	44	36	21	6	4
107.5	45	36	21	6	4
110.0	45	37	22	7	4
112.5	46	38	23	8	5
115.0	47	39	24	10	7
117.5	47	39	26	11	8
120.0	48	40	27	13	10
122.5	48	40	28	15	12
125.0	48	41	29	16	14
127.5	48	41	30	18	15
130.0	49	42	31	20	17
132.5	49	42	32	22	19
135.0	49	43	33	23	21
137.5	49	43	34	25	22
140.0	49	43	35	27	24
142.5	48	43	36	28	26
145.0	48	43	37	30	27
147.5	48	43	38	31	29
150.0	48	44	39	33	30
152.5	48	44	39	34	32
155.0	48	44	40	35	33
157.5	47	44	40	37	34
160.0	47	44	41	38	36
162.5	47	44	41	38	37
165.0	46	43	41	39	37
167.5	45	43	41	39	38
170.0	45	43	41	40	39
172.5	44	42	41	40	40
175.0	43	42	41	40	40
177.5	42	41	41	41	41
180.0	42	42	42	42	42



**Test Number: LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
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120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Coefficients Of Utilization - Zonal Cavity Method**

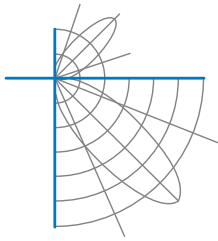
Effective Floor Cavity Reflectance 0.20

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	94	88	82	77	86	81	76	71	67	63	60	55	52	50	44	42	40	34
2	84	74	66	60	76	68	61	55	57	51	47	46	42	38	36	33	30	25
3	75	64	55	48	69	59	51	44	49	42	37	39	35	31	31	27	24	20
4	68	56	46	39	62	51	43	36	42	36	31	34	29	25	27	23	20	16
5	62	49	40	33	57	45	37	30	37	31	26	30	25	21	24	20	16	13
6	57	44	35	28	52	40	32	26	33	27	22	27	22	18	21	17	14	11
7	53	39	30	24	48	36	28	22	30	24	19	24	19	15	19	15	12	9
8	49	35	27	21	44	32	25	19	27	21	16	22	17	13	17	13	11	8
9	45	32	24	18	41	30	22	17	25	19	14	20	15	12	16	12	9	7
10	42	29	21	16	39	27	20	15	23	17	13	19	14	11	15	11	8	6

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**

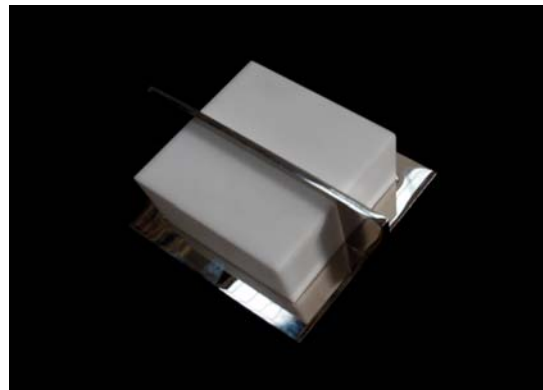
Height(ft)	Illuminance at Nadir (fc)	Beam Width (across 50% Nadir Illum)	
		0-180	90-270
6.0	1.3	11.23	10.26
8.0	0.7	14.97	13.68
10.0	0.5	18.71	17.09
12.0	0.3	22.45	20.51
14.0	0.2	26.20	23.93
16.0	0.2	29.94	27.35



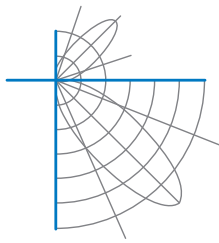
**Test Report No. LLIA000824-035A**

Catalog Number: 3-541 Metrix Sconce

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120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)







**Test Report No. LLIA000824-035A**

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One LTF DA12W350C1834D010-0000 dimming LED driver.  
120.0Vac, 60.00Hz, 0.0914A, 10.53W, 0.960PF, 10.6%THD(i)

**Test Distance** 9.5 m  
**Test 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 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.

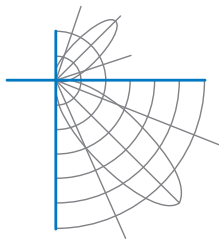
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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.



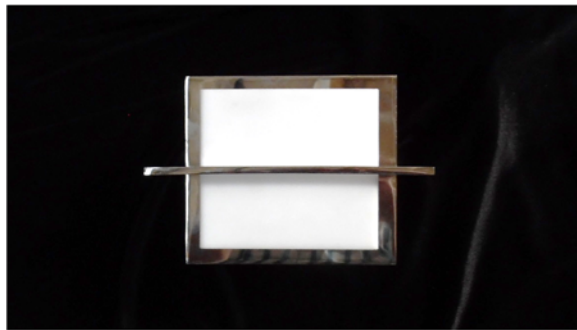
## Report of Test

**LLIA000824-035B**

Integrating Sphere Report

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
translucent white plastic enclosure with formed decorative trim.  
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.



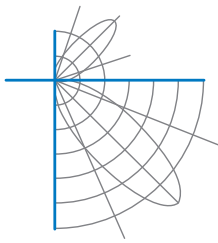
### Performance Summary

Voltage	120.0 Vac
Current	0.0916 A
Power	10.56 W
Frequency	60.00 Hz
Power Factor	0.961
Current THD	10.6 %

Total Luminous Flux	708.1 lm
Efficacy	67.1 lm/W
Chromaticity (x,y)	(0.4388, 0.4034)
(u',v')	(0.2520, 0.5214)
Duv	-0.0005
CCT	2964 K
CRI (Ra)	92
R9	61

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

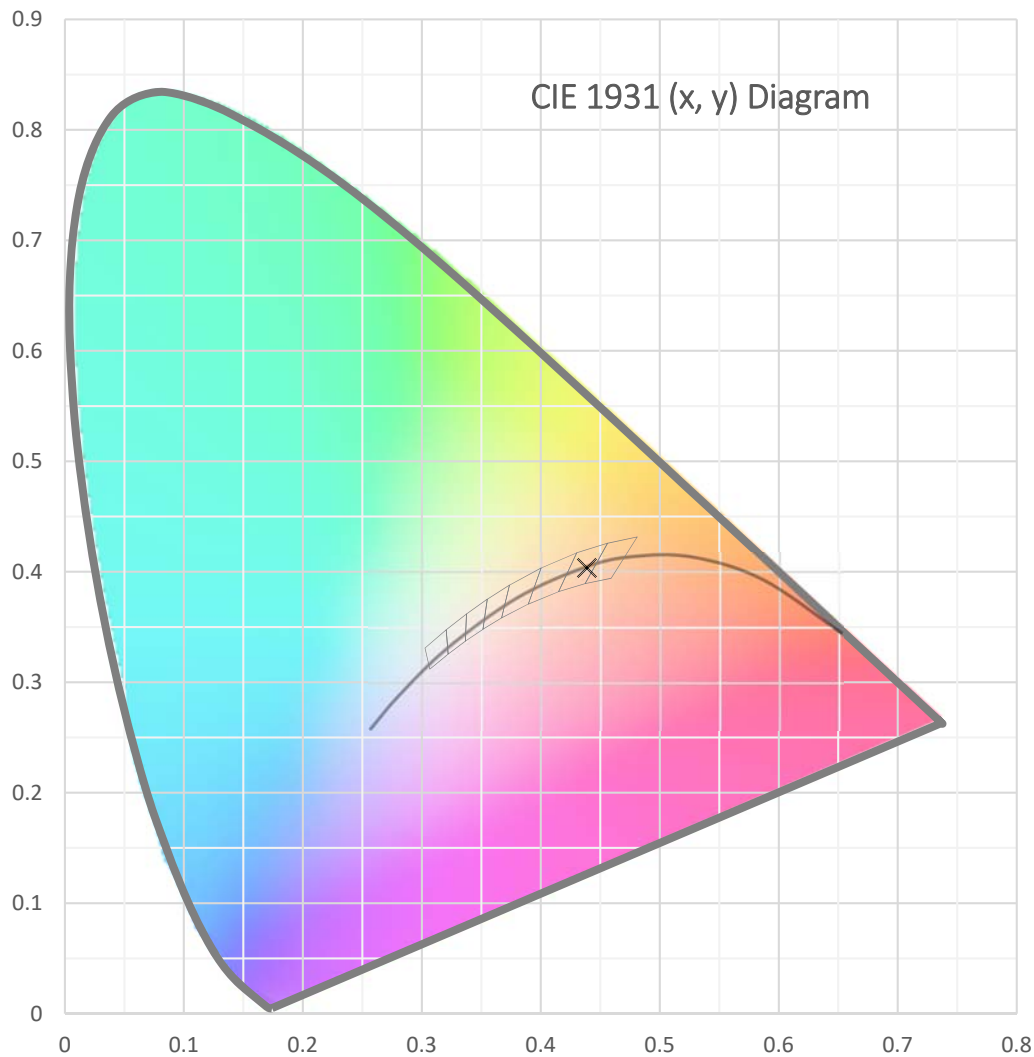
Test date: 09/11/2017  
Report date: 09/14/2017

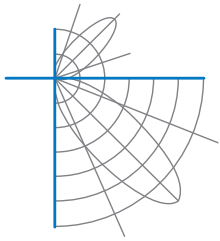


**Test Report Number: LLIA000824-035B**

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
translucent white plastic enclosure with formed decorative trim.  
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.

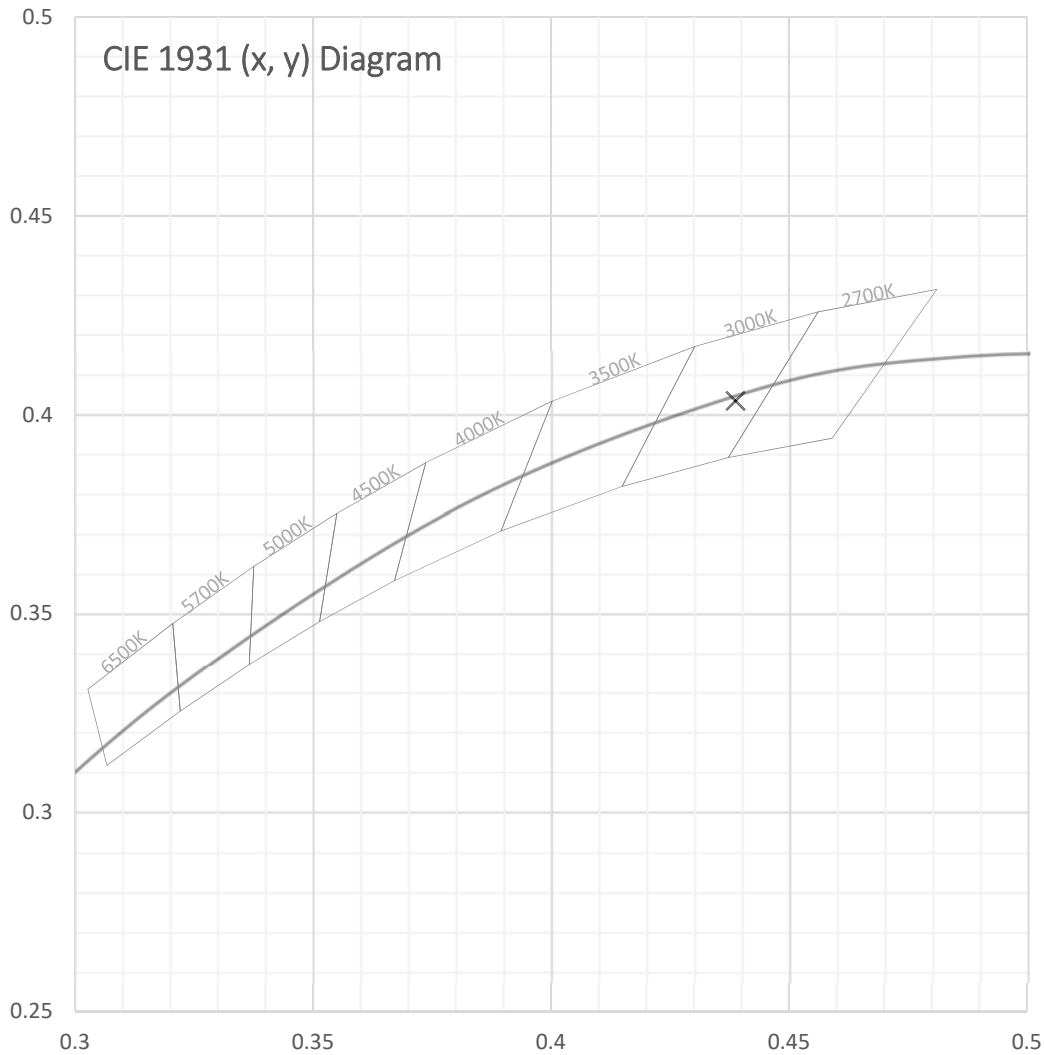




**Test Report Number: LLIA000824-035B**

Catalog Number: 3-541 Metrix Sconce

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**Test Report Number: LLIA000824-035B**

Catalog Number: 3-541 Metrix Sconce

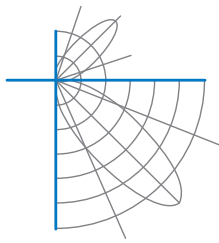
Wall mounted, formed steel housing, white enamel steel LED plate,  
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24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.

**Spectral Data**

Total Radiant Flux	2.501 W
Total Luminous Flux	708.1 Lm
Chromaticity CIE 1931 (x, y)	(0.4388, 0.4034)
Chromaticity CIE 1976 (u', v')	(0.2520, 0.5214)
Correlated Color Temperature (CCT)	2964 K
Color Rendering Index (Ra)	92
R1	92
R2	95
R3	96
R4	92
R5	92
R6	93
R7	93
R8	83
R9	61
R10	87
R11	93
R12	81
R13	93
R14	97
Distance from Planckian Locus (Duv)	-0.0005
Scotopic/Photopic Ratio *	1.378

**Electrical Data**

Voltage	120.0 Vac
Current	0.0916 A
Power	10.56 W
Frequency	60.00 Hz
Power Factor	0.961
Current THD	10.6 %



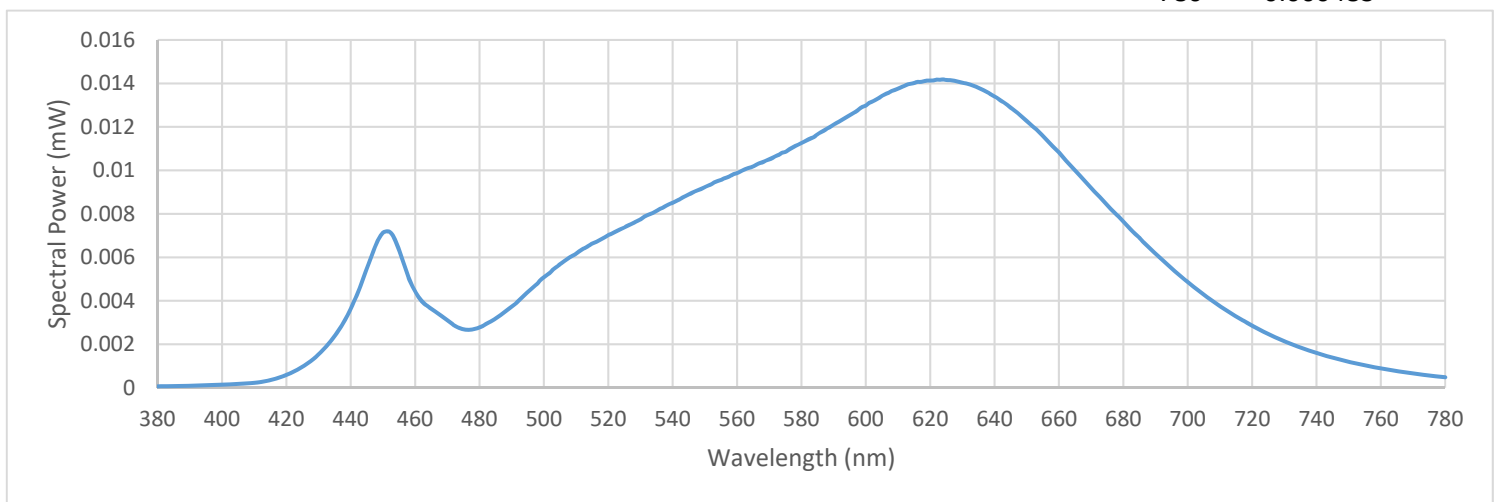
**Test Report Number: LLIA000824-035B**

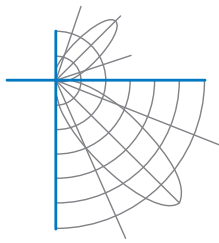
Catalog Number: 3-541 Metrix Sconce

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One LTF DA12W350C1834D010-0000 dimming LED driver.

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

380	0.000069	480	0.002776	580	0.011251	680	0.007638
385	0.000074	485	0.003184	585	0.011671	685	0.006901
390	0.000092	490	0.003738	590	0.012107	690	0.006174
395	0.000115	495	0.004389	595	0.012538	695	0.005478
400	0.000143	500	0.005083	600	0.012982	700	0.004870
405	0.000175	505	0.005684	605	0.013425	705	0.004286
410	0.000229	510	0.006164	610	0.013758	710	0.003751
415	0.000348	515	0.006634	615	0.014020	715	0.003288
420	0.000594	520	0.007024	620	0.014132	720	0.002857
425	0.000966	525	0.007370	625	0.014157	725	0.002470
430	0.001546	530	0.007746	630	0.014025	730	0.002145
435	0.002385	535	0.008136	635	0.013797	735	0.001849
440	0.003627	540	0.008504	640	0.013398	740	0.001596
445	0.005480	545	0.008893	645	0.012881	745	0.001385
450	0.007130	550	0.009235	650	0.012260	750	0.001196
455	0.006329	555	0.009559	655	0.011573	755	0.001032
460	0.004448	560	0.009874	660	0.010826	760	0.000896
465	0.003628	565	0.010177	665	0.009996	765	0.000768
470	0.003107	570	0.010506	670	0.009188	770	0.000656
475	0.002685	575	0.010849	675	0.008402	775	0.000563
						780	0.000483





**Test Report Number: LLIA000824-035B**

Catalog Number: 3-541 Metrix Sconce

Wall mounted, formed steel housing, white enamel steel LED plate,  
translucent white plastic enclosure with formed decorative trim.  
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board  
One LTF DA12W350C1834D010-0000 dimming LED driver.

**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.