

Report of Test

LLIA000802-056A

Catalog Number: 3-563-224 Siren Sconce

Wall mounted, formed white enamel steel housing, translucent matte white plastic enclosure.

30 white LEDs, One Harvard Engineering LEDENG-152-930-NL LED board

One LTF DA12W350C1834D010-0014 dimming LED driver.

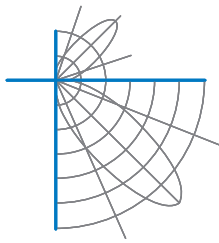
120.0Vac, 60.00Hz, 0.1129A, 13.24W, 0.977PF, 9.9%THD(i)



Performance Summary

Total Light Output	1006 lm
Luminaire Power	13.2 W
Luminous Efficacy	76.2 lm/W

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



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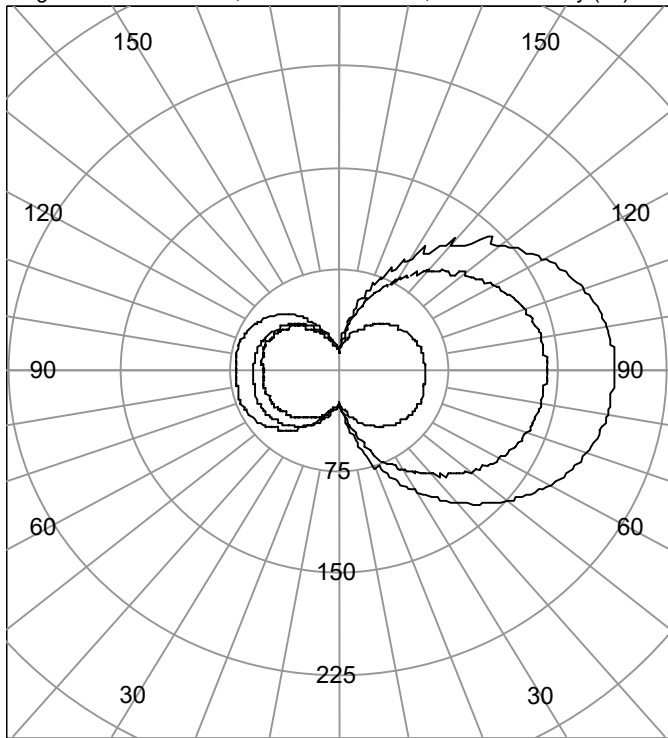
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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



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

AVERAGE LUMINANCE (cd / m²)

Gamma	C0	C45	C90
45.0	2383	1781	1505
55.0	2544	1865	1562
65.0	2684	1939	1618
75.0	2812	2011	1684
85.0	2948	2095	1791

INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	24	24	24	24	24	
5.0	34	33	31	30	29	3
10.0	46	45	41	37	33	
15.0	61	58	52	44	37	12
20.0	76	75	62	52	41	
25.0	89	87	76	59	44	26
30.0	102	99	84	64	47	
35.0	115	110	91	71	50	43
40.0	128	120	101	76	53	
45.0	139	130	109	82	55	60
50.0	150	143	118	85	57	
55.0	159	149	123	89	58	77
60.0	167	156	128	93	59	
65.0	174	162	133	95	60	90
70.0	179	167	136	97	60	
75.0	183	171	139	98	60	99
80.0	186	173	140	99	59	
85.0	187	174	141	99	59	103
90.0	188	175	141	99	59	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	41	N / A	4.1
0-40	84	N / A	8.3
0-60	221	N / A	22.0
0-90	514	N / A	51.1
40-90	430	N / A	42.8
60-90	293	N / A	29.1
90-180	491	N / A	48.9
0-180	1006	N / A	100.0

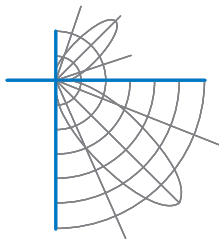
Total Light Output = 1,006 lm

Signed:

Authorized Signatory

Date of test 30-Jun-2017

Date of report 30-Jun-2017



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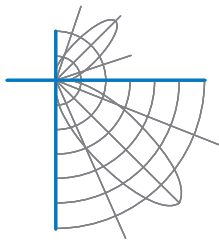
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One LTF DA12W350C1834D010-0014 dimming LED driver.

120.0Vac, 60.00Hz, 0.1129A, 13.24W, 0.977PF, 9.9%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	24	24	24	24	24
2.5	28	28	27	27	26
5.0	34	33	31	30	29
7.5	40	39	36	33	31
10.0	46	45	41	37	33
12.5	54	52	47	40	35
15.0	61	58	52	44	37
17.5	68	66	58	48	39
20.0	76	75	62	52	41
22.5	82	81	68	55	42
25.0	89	87	76	59	44
27.5	96	94	78	61	46
30.0	102	99	84	64	47
32.5	109	103	87	68	49
35.0	115	110	91	71	50
37.5	122	114	96	73	52
40.0	128	120	101	76	53
42.5	134	129	105	78	54
45.0	139	130	109	82	55
47.5	145	135	112	83	56
50.0	150	143	118	85	57
52.5	155	146	121	87	58
55.0	159	149	123	89	58
57.5	164	153	125	91	59
60.0	167	156	128	93	59
62.5	171	159	130	94	60
65.0	174	162	133	95	60
67.5	177	165	135	96	60
70.0	179	167	136	97	60
72.5	182	169	137	98	60
75.0	183	171	139	98	60
77.5	185	172	139	98	59
80.0	186	173	140	99	59
82.5	187	174	141	99	59
85.0	187	174	141	99	59
87.5	188	175	141	99	59
90.0	188	175	141	99	59



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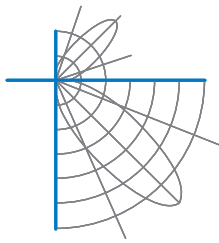
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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	188	175	141	99	59
92.5	188	175	141	99	59
95.0	187	174	141	99	59
97.5	187	174	141	98	58
100.0	185	173	140	98	58
102.5	184	171	139	97	58
105.0	182	170	137	97	58
107.5	180	167	136	96	58
110.0	177	165	134	94	57
112.5	174	162	132	93	57
115.0	171	159	129	92	56
117.5	167	155	127	90	55
120.0	163	152	124	88	54
122.5	158	147	120	86	53
125.0	153	143	117	83	52
127.5	148	138	113	81	51
130.0	143	134	113	79	50
132.5	139	135	106	78	49
135.0	134	128	102	75	47
137.5	126	117	100	72	46
140.0	120	114	94	71	44
142.5	115	110	93	67	43
145.0	106	104	83	62	41
147.5	105	97	80	59	39
150.0	93	93	73	56	37
152.5	86	83	72	51	35
155.0	84	79	66	47	34
157.5	74	72	62	43	32
160.0	69	65	58	41	30
162.5	60	58	49	38	29
165.0	53	50	44	35	26
167.5	43	42	37	30	24
170.0	37	35	31	26	22
172.5	30	29	26	23	19
175.0	24	23	21	19	17
177.5	17	17	16	16	15
180.0	13	13	13	13	13



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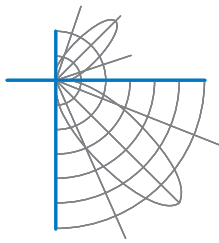
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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	24	24	24	24	24
2.5	26	26	26	26	27
5.0	29	27	27	28	28
7.5	31	29	29	29	29
10.0	33	30	30	31	30
12.5	35	31	31	32	32
15.0	37	33	33	34	34
17.5	39	34	34	36	36
20.0	41	35	36	38	39
22.5	42	36	37	40	41
25.0	44	37	38	42	44
27.5	46	38	39	44	46
30.0	47	39	40	46	49
32.5	49	40	41	48	51
35.0	50	40	42	50	53
37.5	52	40	44	52	55
40.0	53	41	45	54	57
42.5	54	41	46	55	59
45.0	55	41	47	57	61
47.5	56	41	48	59	63
50.0	57	41	49	60	64
52.5	58	41	49	61	66
55.0	58	41	50	63	67
57.5	59	41	51	64	68
60.0	59	41	51	65	69
62.5	60	41	52	65	70
65.0	60	40	52	66	70
67.5	60	40	52	67	71
70.0	60	39	52	67	71
72.5	60	39	52	67	71
75.0	60	38	52	67	71
77.5	59	37	52	67	71
80.0	59	37	52	67	71
82.5	59	36	52	67	71
85.0	59	36	52	67	71
87.5	59	35	52	67	71
90.0	59	35	52	67	70



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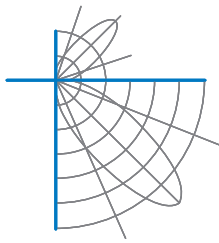
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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	59	35	52	67	70
92.5	59	35	52	67	71
95.0	59	35	53	68	71
97.5	58	35	53	68	71
100.0	58	35	53	68	71
102.5	58	35	54	68	71
105.0	58	36	54	67	71
107.5	58	36	54	67	71
110.0	57	36	53	67	70
112.5	57	36	53	66	70
115.0	56	36	53	66	69
117.5	55	36	52	65	68
120.0	54	36	52	64	67
122.5	53	36	51	63	66
125.0	52	36	50	62	65
127.5	51	35	49	60	64
130.0	50	35	48	59	62
132.5	49	35	47	57	60
135.0	47	34	45	56	59
137.5	46	34	44	54	56
140.0	44	33	42	51	54
142.5	43	32	40	49	52
145.0	41	32	38	47	49
147.5	39	31	36	44	47
150.0	37	30	34	41	44
152.5	35	29	32	38	41
155.0	34	28	30	36	38
157.5	32	27	29	33	34
160.0	30	25	27	30	31
162.5	29	24	25	27	28
165.0	26	22	23	24	25
167.5	24	21	21	22	22
170.0	22	19	19	20	20
172.5	19	18	17	18	18
175.0	17	16	16	17	17
177.5	15	14	15	15	16
180.0	13	13	13	13	13



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Test Distance 9.5 m
Test Temperature 25.2 °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.

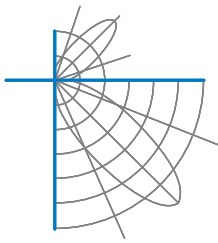
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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.



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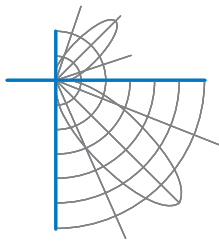
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Coefficients Of Utilization - Zonal Cavity Method

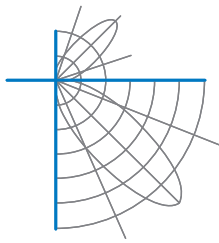
Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	93	86	80	75	85	79	74	69	66	62	58	54	51	48	42	40	38	32
2	82	72	64	57	75	66	59	53	55	49	44	44	40	36	34	31	28	23
3	74	62	53	45	67	57	48	42	47	40	35	37	32	28	29	25	22	17
4	67	54	44	37	61	49	41	34	40	34	28	32	27	23	25	21	17	13
5	61	47	38	31	55	43	35	28	35	29	23	28	23	19	22	18	14	11
6	56	42	32	26	51	38	30	24	32	25	20	25	20	16	19	15	12	9
7	51	37	28	22	47	34	26	20	28	22	17	23	17	13	17	13	10	7
8	47	34	25	19	43	31	23	18	26	19	15	20	15	12	16	12	9	6
9	44	30	22	17	40	28	20	15	23	17	13	19	14	10	14	10	8	5
10	41	28	20	15	37	26	18	13	21	15	11	17	12	9	13	9	7	5

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	0.7	22.34	16.51
8.0	0.4	29.78	22.02
10.0	0.2	37.23	27.52
12.0	0.2	44.67	33.03
14.0	0.1	52.12	38.53
16.0	0.1	59.56	44.04



Report of Test

LLIA000802-056B

Integrating Sphere Report

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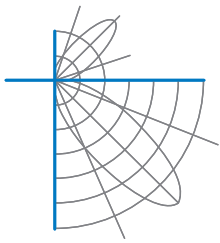


Performance Summary

Voltage	120.0 Vac
Current	0.1127 A
Power	13.22 W
Frequency	60.00 Hz
Power Factor	0.977
Current THD	9.8 %
Total Luminous Flux	1015.9 lm
Efficacy	76.8 lm/W
Chromaticity (x,y)	(0.4351, 0.4033)
(u',v')	(0.2497, 0.5208)
Duv	-0.0001
CCT	3025 K
CRI (Ra)	93
R9	63

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

Test date: 06/30/2017
Report date: 06/30/2017



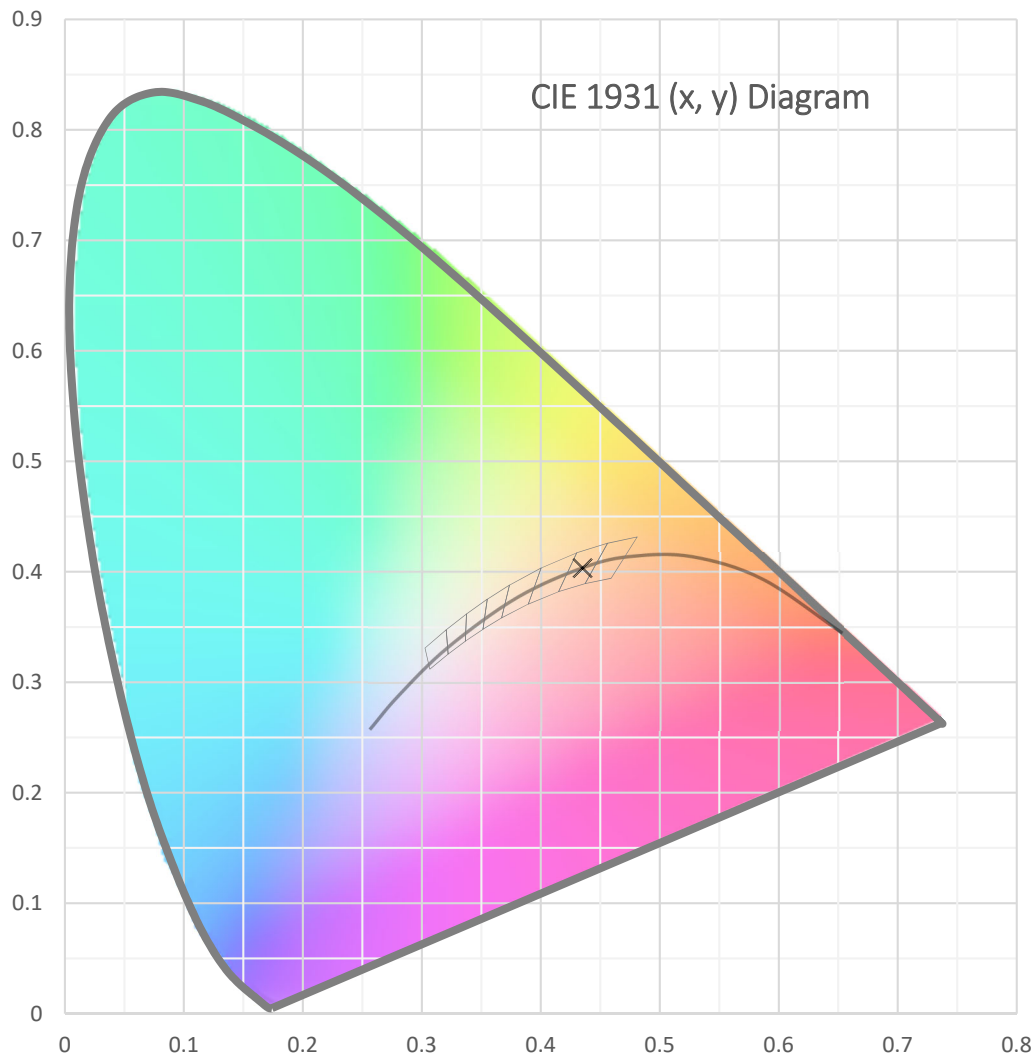
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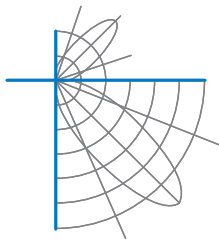
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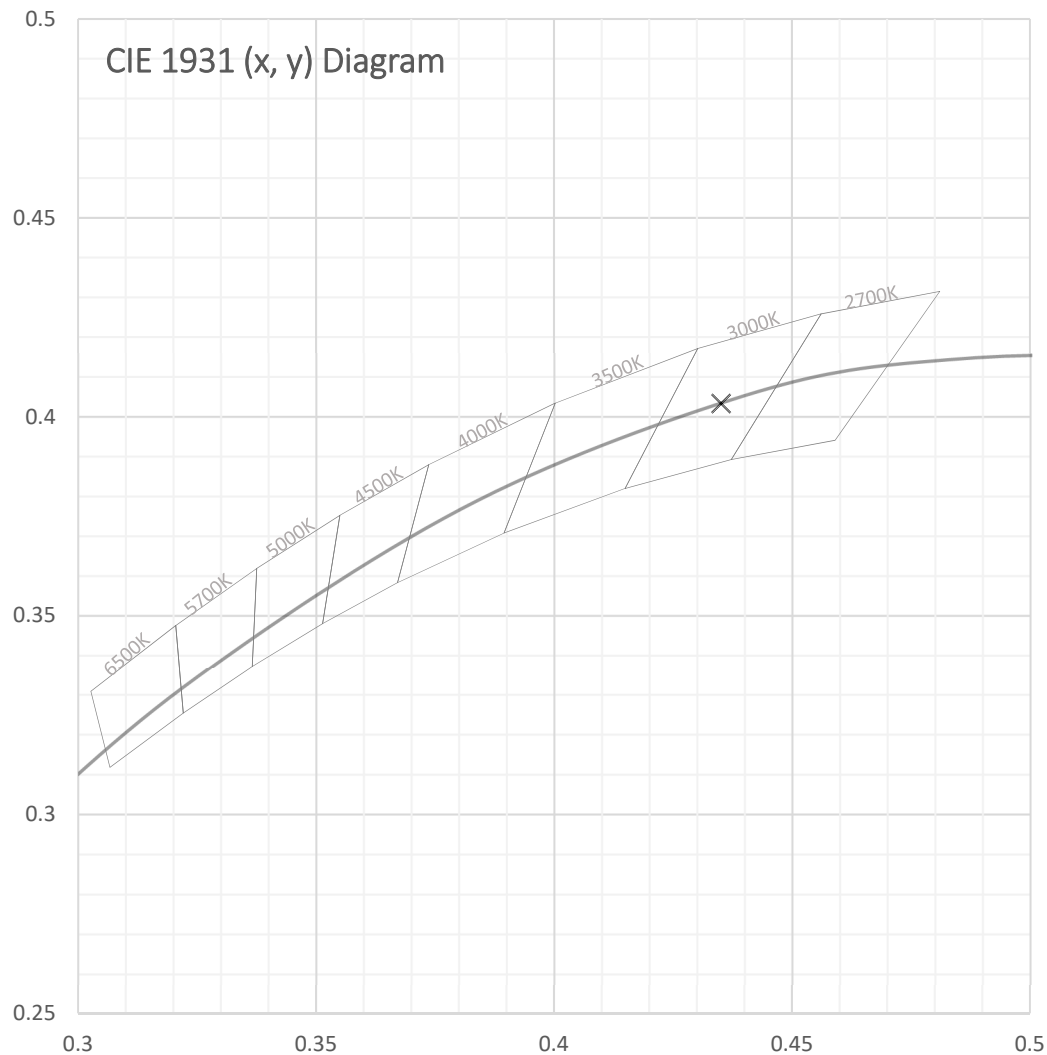
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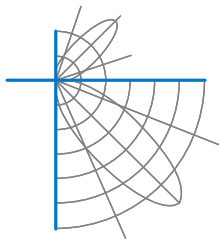
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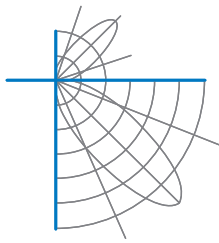
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Spectral Data

Total Radiant Flux	3.570 W
Total Luminous Flux	1015.9 Lm
Chromaticity CIE 1931 (x, y)	(0.4351, 0.4033)
Chromaticity CIE 1976 (u', v')	(0.2497, 0.5208)
Correlated Color Temperature (CCT)	3025 K
Color Rendering Index (Ra)	93
R1	93
R2	95
R3	96
R4	93
R5	92
R6	94
R7	93
R8	84
R9	63
R10	88
R11	93
R12	80
R13	93
R14	97
Distance from Planckian Locus (Duv)	-0.0001
Scotopic/Photopic Ratio *	1.409

Electrical Data

Voltage	120.0 Vac
Current	0.1127 A
Power	13.22 W
Frequency	60.00 Hz
Power Factor	0.977
Current THD	9.8 %



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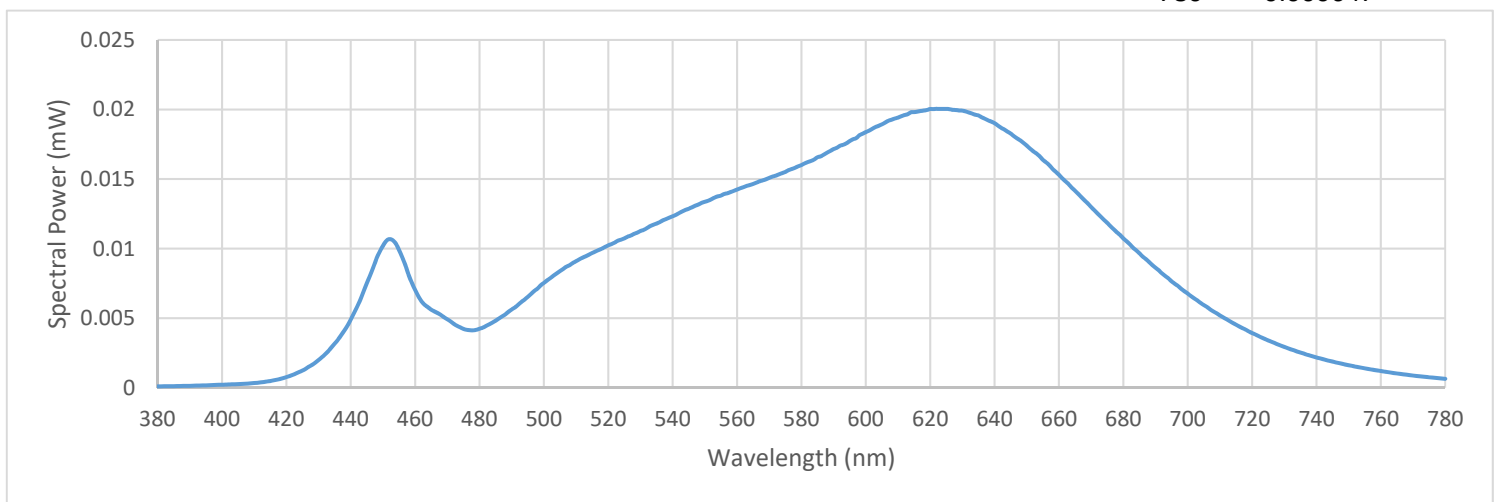
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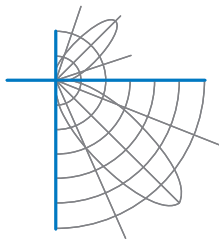
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000107	480	0.004244	580	0.016008	680	0.010733
385	0.000115	485	0.004823	585	0.016571	685	0.009669
390	0.000143	490	0.005628	590	0.017159	690	0.008631
395	0.000178	495	0.006537	595	0.017727	695	0.007648
400	0.000221	500	0.007539	600	0.018376	700	0.006773
405	0.000265	505	0.008386	605	0.018931	705	0.005944
410	0.000340	510	0.009096	610	0.019418	710	0.005201
415	0.000486	515	0.009687	615	0.019813	715	0.004538
420	0.000770	520	0.010239	620	0.020034	720	0.003935
425	0.001237	525	0.010741	625	0.020047	725	0.003402
430	0.002000	530	0.011270	630	0.019920	730	0.002939
435	0.003176	535	0.011803	635	0.019571	735	0.002532
440	0.004909	540	0.012329	640	0.019016	740	0.002177
445	0.007524	545	0.012870	645	0.018276	745	0.001884
450	0.010201	550	0.013362	650	0.017404	750	0.001623
455	0.009903	555	0.013813	655	0.016386	755	0.001395
460	0.007035	560	0.014251	660	0.015308	760	0.001207
465	0.005609	565	0.014650	665	0.014164	765	0.001030
470	0.004921	570	0.015083	670	0.012988	770	0.000880
475	0.004231	575	0.015515	675	0.011855	775	0.000753
						780	0.000647





Test Report Number: LLIA000802-056B

Catalog Number: 3-563-224 Siren Sconce

Wall mounted, formed white enamel steel housing, translucent matte white plastic enclosure.
30 white LEDs, One Harvard Engineering LEDENG-152-930-NL
One LTF DA12W350C1834D010-0014 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 π geometry

Test Temperature: 24.8 °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.