

Report of Test

LLIA000802-001A

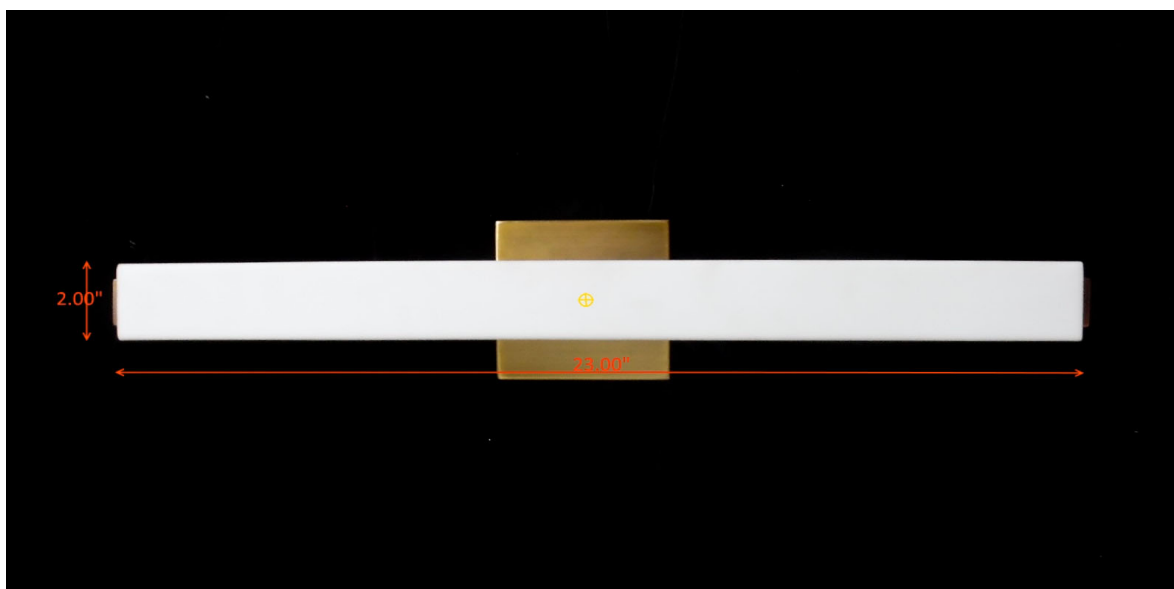
Catalog Number: 3-537 Adelphi Vanity

Formed steel housing with white enamel steel reflector, translucent white plastic enclosure.

72 white LEDs, One Harvard Engineering LER7-568x17-930-72S-I LED board.

One LTF DA12W350C1834D010-0000 dimming LED driver.

120.0Vac, 60.00Hz, 0.1275A, 15.04W, 0.983PF, 7.9%THD(i)



Performance Summary

Total Light Output	1258 lm
Luminaire Power	15.0 W
Luminous Efficacy	83.9 lm/W

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



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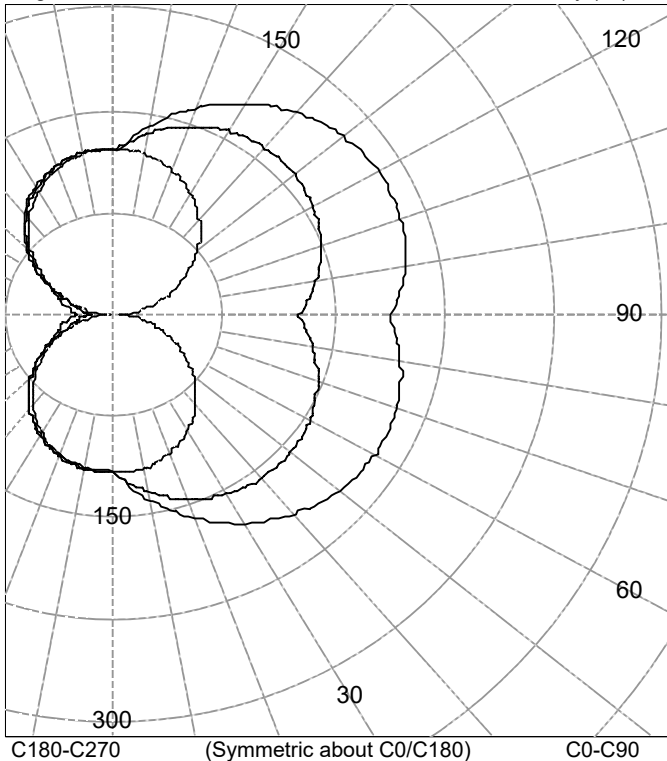
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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	117	117	117	117	117	
5.0	128	127	126	119	117	12
10.0	139	137	133	122	116	
15.0	150	147	139	124	113	35
20.0	160	156	145	125	109	
25.0	169	164	150	125	105	58
30.0	178	171	153	125	100	
35.0	185	177	156	123	93	77
40.0	192	183	158	120	87	
45.0	197	187	158	117	79	89
50.0	202	190	158	113	71	
55.0	205	192	157	108	62	95
60.0	206	192	155	103	54	
65.0	206	192	151	97	45	93
70.0	205	190	148	90	36	
75.0	202	187	143	84	27	86
80.0	198	182	138	77	18	
85.0	193	177	132	70	10	77
90.0	189	173	127	64	3	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	104	N / A	8.3
0-40	181	N / A	14.4
0-60	366	N / A	29.1
0-90	622	N / A	49.4
40-90	441	N / A	35.0
60-90	256	N / A	20.4
90-180	636	N / A	50.6
0-180	1258	N / A	100.0

Total Light Output = 1,258 lm

Signed:

Authorized Signatory

Date of test

6-Jul-2017

Date of report

8-Jul-2017



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	117	117	117	117	117
2.5	122	122	122	117	117
5.0	128	127	126	119	117
7.5	134	132	129	121	116
10.0	139	137	133	122	116
12.5	145	142	136	123	114
15.0	150	147	139	124	113
17.5	155	151	142	125	111
20.0	160	156	145	125	109
22.5	165	160	147	125	107
25.0	169	164	150	125	105
27.5	174	167	152	125	102
30.0	178	171	153	125	100
32.5	182	174	155	124	97
35.0	185	177	156	123	93
37.5	189	180	157	122	90
40.0	192	183	158	120	87
42.5	195	185	158	119	83
45.0	197	187	158	117	79
47.5	200	188	158	115	75
50.0	202	190	158	113	71
52.5	203	191	157	111	67
55.0	205	192	157	108	62
57.5	205	192	156	105	58
60.0	206	192	155	103	54
62.5	206	192	153	100	49
65.0	206	192	151	97	45
67.5	206	191	150	93	40
70.0	205	190	148	90	36
72.5	204	188	145	87	31
75.0	202	187	143	84	27
77.5	201	185	140	80	23
80.0	198	182	138	77	18
82.5	196	180	135	73	14
85.0	193	177	132	70	10
87.5	190	174	128	66	6
90.0	189	173	127	64	3



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	189	173	127	64	3
92.5	193	176	130	67	7
95.0	196	179	134	71	11
97.5	199	182	137	75	15
100.0	201	185	140	78	20
102.5	203	187	143	82	24
105.0	205	189	145	85	29
107.5	207	191	148	89	33
110.0	208	193	150	92	38
112.5	209	194	152	95	42
115.0	209	194	154	98	47
117.5	209	195	156	101	52
120.0	209	195	157	104	56
122.5	208	195	158	107	61
125.0	207	195	159	110	65
127.5	206	194	160	112	70
130.0	204	193	161	115	74
132.5	202	191	161	117	78
135.0	200	190	161	119	83
137.5	197	188	161	121	87
140.0	194	185	160	122	90
142.5	191	183	160	124	94
145.0	188	180	159	125	98
147.5	184	177	157	126	101
150.0	180	174	156	127	104
152.5	176	170	154	127	107
155.0	171	166	152	128	109
157.5	167	162	150	128	112
160.0	162	158	148	127	114
162.5	157	154	145	127	116
165.0	152	149	142	126	118
167.5	146	144	139	125	119
170.0	141	139	135	124	120
172.5	135	134	132	123	121
175.0	130	129	128	121	122
177.5	124	124	124	120	122
180.0	122	122	122	122	122



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120.0Vac, 60.00Hz, 0.1275A, 15.04W, 0.983PF, 7.9%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	117	117	117	117	117
2.5	117	115	118	116	116
5.0	117	114	117	116	115
7.5	116	114	117	116	115
10.0	116	113	116	115	115
12.5	114	112	115	114	114
15.0	113	111	114	113	113
17.5	111	109	113	112	111
20.0	109	108	111	110	110
22.5	107	106	109	109	108
25.0	105	104	107	107	106
27.5	102	101	105	104	104
30.0	100	99	102	102	102
32.5	97	96	99	100	99
35.0	93	93	97	97	97
37.5	90	90	93	94	94
40.0	87	86	90	90	90
42.5	83	83	87	86	86
45.0	79	79	83	83	83
47.5	75	76	79	79	79
50.0	71	72	74	75	75
52.5	67	68	70	70	71
55.0	62	64	66	66	66
57.5	58	60	61	61	62
60.0	54	55	57	57	57
62.5	49	51	52	52	52
65.0	45	46	47	47	47
67.5	40	42	42	42	44
70.0	36	37	37	39	42
72.5	31	33	33	37	40
75.0	27	28	30	35	38
77.5	23	24	28	34	37
80.0	18	19	26	31	34
82.5	14	16	24	29	31
85.0	10	14	21	27	30
87.5	6	11	19	25	28
90.0	3	9	17	23	26



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120.0Vac, 60.00Hz, 0.1275A, 15.04W, 0.983PF, 7.9%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	3	9	17	23	26
92.5	7	11	18	24	27
95.0	11	14	20	26	28
97.5	15	16	22	27	30
100.0	20	19	25	30	32
102.5	24	24	28	33	36
105.0	29	29	30	35	38
107.5	33	34	33	38	40
110.0	38	39	38	40	43
112.5	42	44	43	43	45
115.0	47	49	49	48	48
117.5	52	53	54	53	53
120.0	56	58	59	59	59
122.5	61	62	64	64	64
125.0	65	67	68	69	70
127.5	70	71	73	74	74
130.0	74	75	77	78	79
132.5	78	79	82	83	83
135.0	83	83	86	87	88
137.5	87	87	90	91	92
140.0	90	91	94	95	95
142.5	94	94	97	98	99
145.0	98	97	100	102	103
147.5	101	101	104	104	105
150.0	104	103	106	107	108
152.5	107	106	109	110	110
155.0	109	109	112	112	113
157.5	112	111	114	114	115
160.0	114	113	116	116	116
162.5	116	115	118	117	118
165.0	118	116	119	119	119
167.5	119	117	120	120	120
170.0	120	118	121	121	121
172.5	121	119	122	121	122
175.0	122	120	123	122	122
177.5	122	120	123	122	122
180.0	122	122	122	122	122



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Coefficients Of Utilization - Zonal Cavity Method

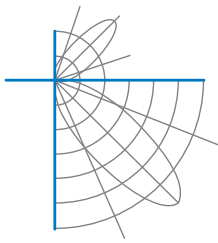
Effective Floor Cavity Reflectance 0.20

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	95	89	84	80	87	82	78	74	68	65	62	56	54	51	45	43	41	36
2	85	76	69	63	78	70	64	58	58	53	49	48	44	41	38	35	32	28
3	77	66	58	51	70	61	53	47	50	45	40	41	37	33	32	29	26	22
4	70	58	49	42	64	53	45	39	44	38	33	36	31	28	28	25	22	18
5	64	51	42	36	58	47	39	33	39	33	28	32	27	23	25	22	19	15
6	59	46	37	30	53	42	34	28	35	29	24	29	24	20	23	19	16	13
7	54	41	32	26	49	38	30	25	32	25	21	26	21	17	21	17	14	11
8	50	37	29	23	46	34	27	21	29	23	18	24	19	15	19	15	12	10
9	47	34	26	20	43	31	24	19	26	20	16	22	17	14	17	14	11	9
10	43	31	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	3.2	10.67	7.59
8.0	1.8	14.22	10.12
10.0	1.2	17.78	12.65
12.0	0.8	21.34	15.19
14.0	0.6	24.89	17.72
16.0	0.5	28.45	20.25



Test Report No. LLIA000802-001A

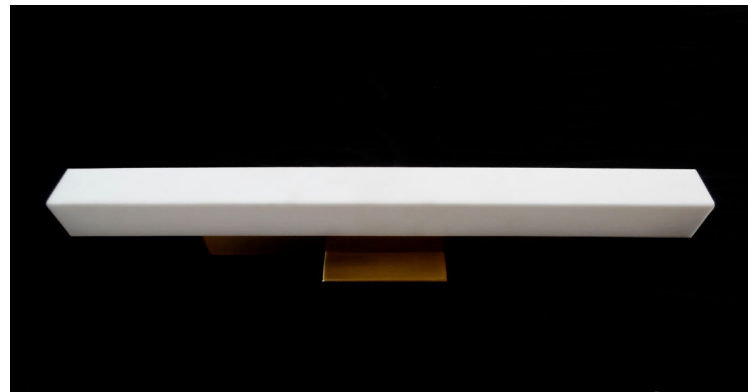
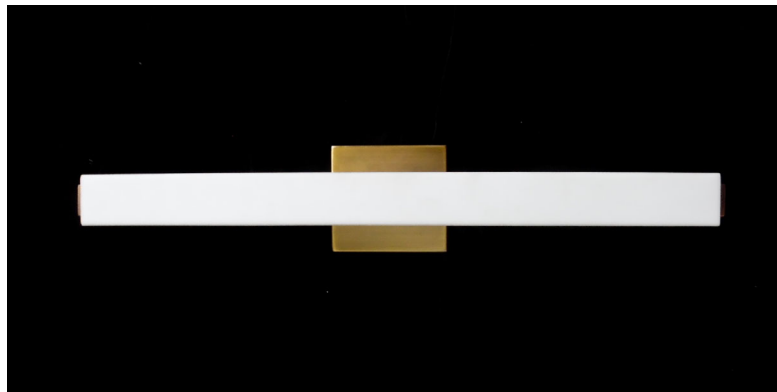
Catalog Number: 3-537 Adelphi Vanity

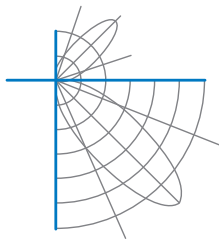
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120.0Vac, 60.00Hz, 0.1275A, 15.04W, 0.983PF, 7.9%THD(i)

Test Distance 9.5 m
Test 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 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.

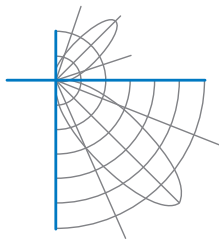
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA000802-001B

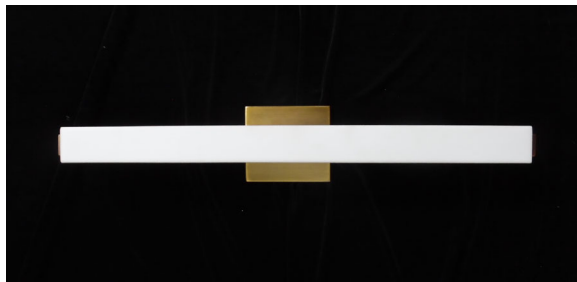
Integrating Sphere Report

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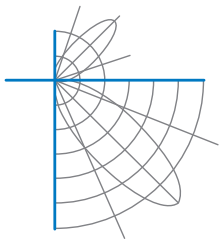
Performance Summary

Voltage	120.0 Vac
Current	0.1274 A
Power	15.04 W
Frequency	60.00 Hz
Power Factor	0.983
Current THD	7.9 %

Total Luminous Flux	1238.4 lm
Efficacy	82.3 lm/W
Chromaticity (x,y)	(0.4419, 0.4077)
(u',v')	(0.2522, 0.5235)
Duv	0.0008
CCT	2947 K
CRI (Ra)	92
R9	62

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

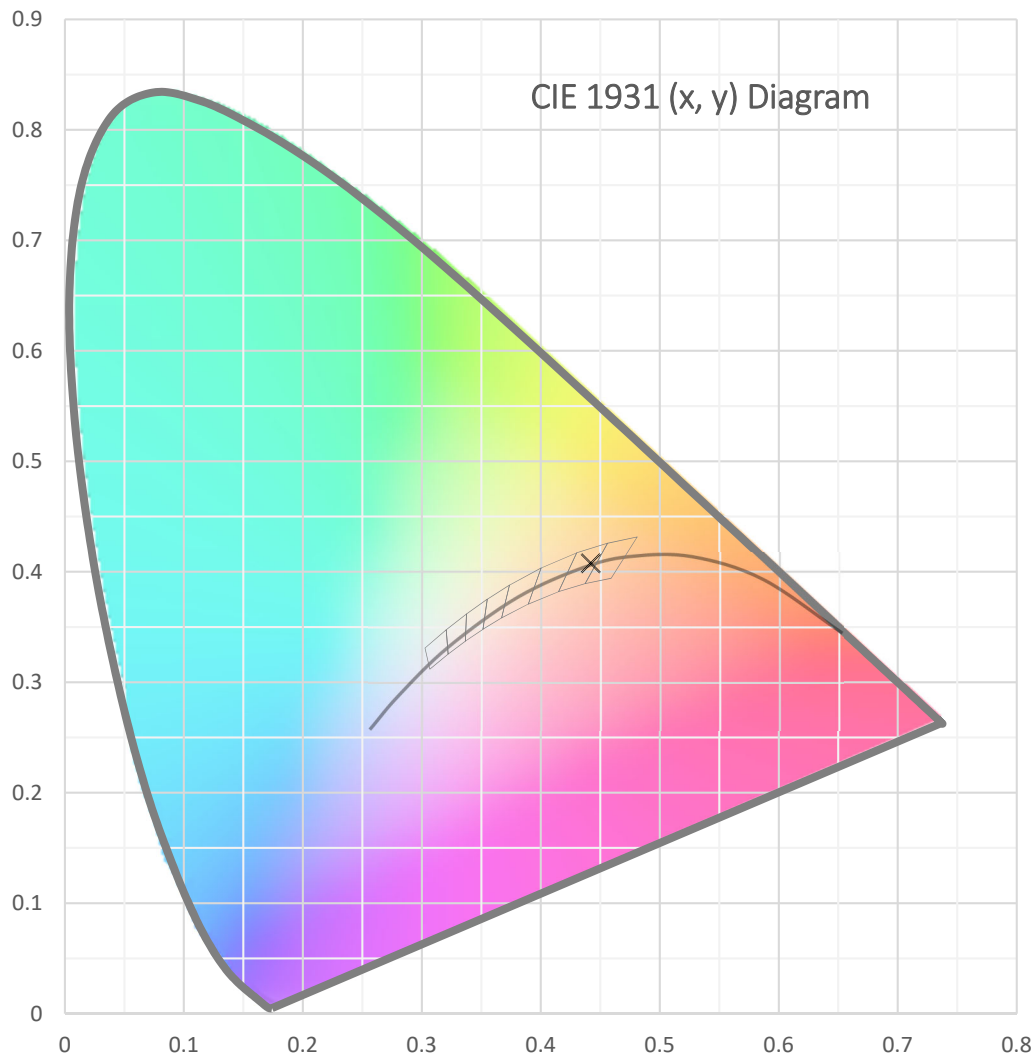
Test date: 06/28/2017
Report date: 07/08/2017

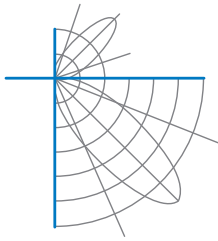


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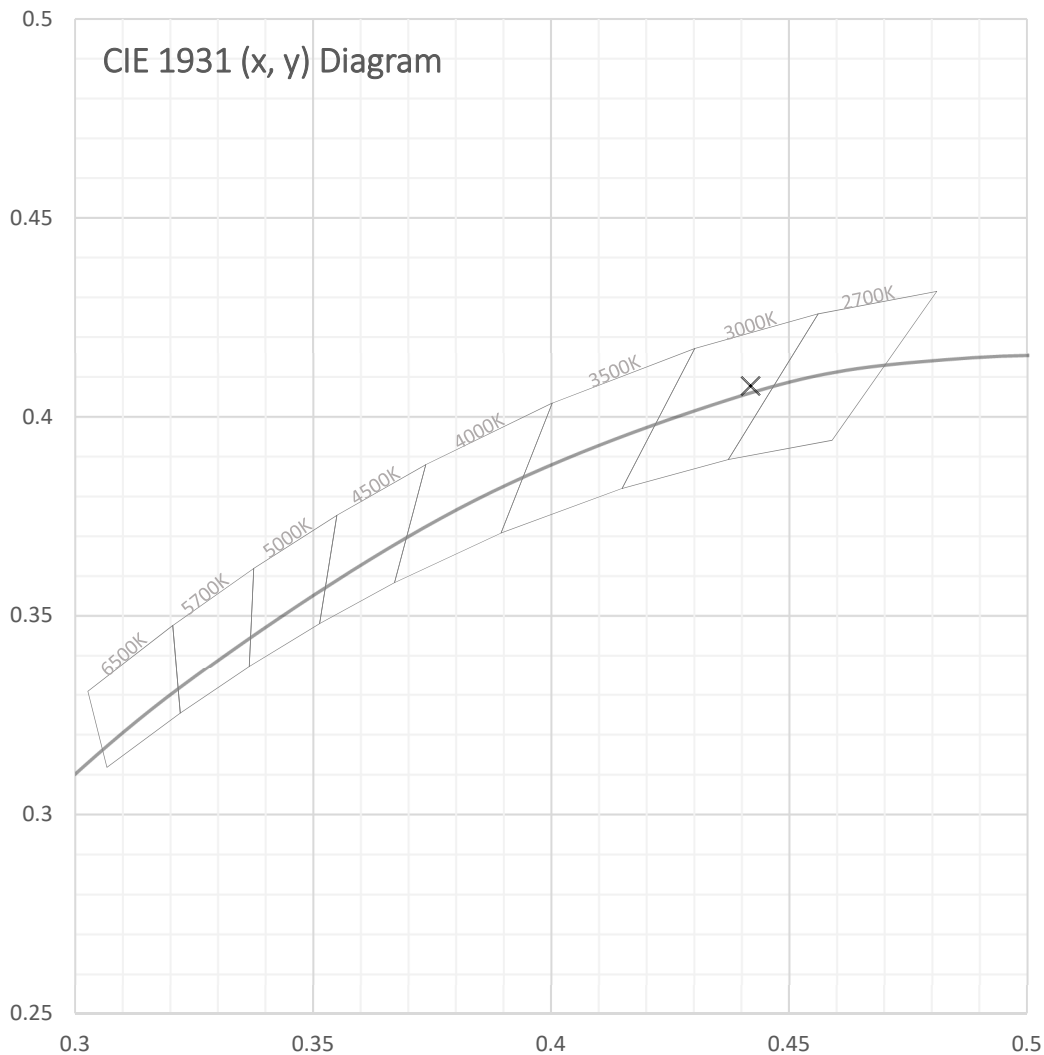




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Spectral Data

Total Radiant Flux	4.357 W
Total Luminous Flux	1238.4 Lm
Chromaticity CIE 1931 (x, y)	(0.4419, 0.4077)
Chromaticity CIE 1976 (u', v')	(0.2522, 0.5235)
Correlated Color Temperature (CCT)	2947 K
Color Rendering Index (Ra)	92
R1	92
R2	95
R3	95
R4	93
R5	92
R6	93
R7	94
R8	84
R9	62
R10	86
R11	93
R12	80
R13	93
R14	97
Distance from Planckian Locus (Duv)	0.0008
Scotopic/Photopic Ratio *	1.364

Electrical Data

Voltage	120.0 Vac
Current	0.1274 A
Power	15.04 W
Frequency	60.00 Hz
Power Factor	0.983
Current THD	7.9 %



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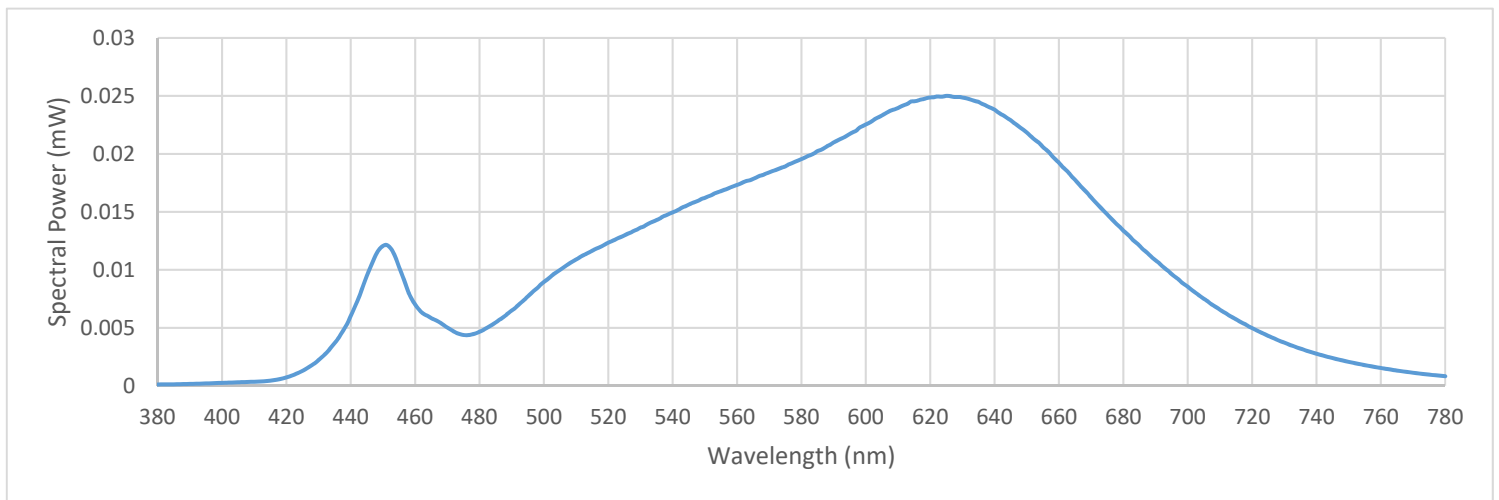
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One LTF DA12W350C1834D010-0000 dimming LED driver.

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

380	0.000116	480	0.004658	580	0.019549	680	0.013378
385	0.000127	485	0.005457	585	0.020242	685	0.012096
390	0.000161	490	0.006492	590	0.020986	690	0.010825
395	0.000200	495	0.007712	595	0.021716	695	0.009633
400	0.000249	500	0.008947	600	0.022541	700	0.008549
405	0.000300	505	0.009997	605	0.023310	705	0.007505
410	0.000350	510	0.010888	610	0.023959	710	0.006563
415	0.000440	515	0.011644	615	0.024531	715	0.005738
420	0.000727	520	0.012342	620	0.024866	720	0.004972
425	0.001289	525	0.012968	625	0.025003	725	0.004302
430	0.002216	530	0.013640	630	0.024861	730	0.003722
435	0.003694	535	0.014295	635	0.024481	735	0.003203
440	0.006021	540	0.014961	640	0.023814	740	0.002761
445	0.009487	545	0.015624	645	0.022902	745	0.002391
450	0.012060	550	0.016208	650	0.021842	750	0.002064
455	0.010247	555	0.016787	655	0.020599	755	0.001777
460	0.007006	560	0.017322	660	0.019234	760	0.001539
465	0.005837	565	0.017836	665	0.017764	765	0.001314
470	0.005026	570	0.018406	670	0.016238	770	0.001125
475	0.004383	575	0.018923	675	0.014781	775	0.000962
						780	0.000826





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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 π geometry
Test Temperature:	24.3 °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.