



# Report of Test

## LLIA000824-006A

Catalog Number: 3-547 Balance Vanity  
Wall mounted, formed steel housing, formed white enamel  
steel LED tray, translucent white plastic enclosure.  
72 white LEDs, one Harvard Engineering LEDENG-157-30-NL LED board.  
One L.T.F. DA12W350C1834D010-0000 dimmable LED driver  
120.0Vac, 60.00Hz, 0.1236A, 14.47W, 0.975PF, 9.1%THD(i)



### Performance Summary

Total Light Output	1020 lm
Luminaire Power	14.5 W
Luminous Efficacy	70.3 lm/W

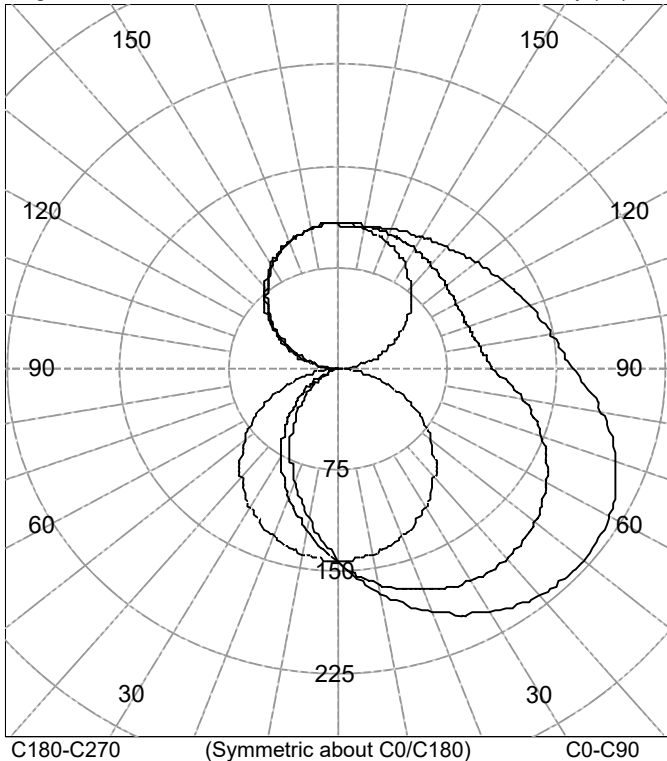
**PREPARED FOR : Oxygen Lighting, 201 Railhead Road, Fort Worth, TX 76106, USA**



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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	141	141	141	141	141	
5.0	155	155	153	144	141	13
10.0	169	166	161	148	139	
15.0	180	177	168	150	136	39
20.0	191	186	174	151	131	
25.0	200	194	178	151	126	61
30.0	207	200	181	149	119	
35.0	213	204	182	146	111	77
40.0	217	207	181	142	103	
45.0	219	208	179	137	93	86
50.0	220	208	176	130	83	
55.0	218	205	171	122	73	87
60.0	215	201	164	114	62	
65.0	209	195	157	105	51	82
70.0	202	188	148	95	39	
75.0	193	178	139	84	28	71
80.0	183	168	128	73	18	
85.0	172	157	117	62	8	59
90.0	160	146	106	51	0	

**ZONAL FLUX AND PERCENTAGES**

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	113	N / A	11.1
0-40	190	N / A	18.6
0-60	363	N / A	35.5
0-90	574	N / A	56.3
40-90	384	N / A	37.6
60-90	211	N / A	20.7
90-180	446	N / A	43.7
0-180	1020	N / A	100.0

Total Light Output = 1,020 lm

Signed:

Authorized Signatory

Date of test 22-Aug-2017  
Date of report 22-Aug-2017



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**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	141	141	141	141	141
2.5	148	148	148	142	141
5.0	155	155	153	144	141
7.5	162	161	157	146	140
10.0	169	166	161	148	139
12.5	175	172	165	149	137
15.0	180	177	168	150	136
17.5	186	182	171	151	134
20.0	191	186	174	151	131
22.5	195	190	176	151	129
25.0	200	194	178	151	126
27.5	204	197	180	150	122
30.0	207	200	181	149	119
32.5	210	202	182	148	115
35.0	213	204	182	146	111
37.5	215	206	182	144	107
40.0	217	207	181	142	103
42.5	218	208	180	139	98
45.0	219	208	179	137	93
47.5	220	208	178	133	89
50.0	220	208	176	130	83
52.5	219	207	173	126	78
55.0	218	205	171	122	73
57.5	216	203	168	118	67
60.0	215	201	164	114	62
62.5	212	198	161	109	56
65.0	209	195	157	105	51
67.5	206	191	153	100	45
70.0	202	188	148	95	39
72.5	198	183	144	89	34
75.0	193	178	139	84	28
77.5	188	173	133	79	23
80.0	183	168	128	73	18
82.5	178	163	122	68	12
85.0	172	157	117	62	8
87.5	166	151	111	56	3
90.0	160	146	106	51	0



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**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	160	146	106	51	0
92.5	157	142	103	50	3
95.0	154	139	101	49	7
97.5	151	137	99	48	10
100.0	148	135	98	49	14
102.5	146	132	96	49	18
105.0	143	130	95	50	22
107.5	141	128	95	52	26
110.0	138	126	94	54	31
112.5	136	125	94	56	35
115.0	134	123	94	58	39
117.5	132	121	94	60	43
120.0	130	120	94	63	47
122.5	128	119	94	65	51
125.0	126	118	95	68	55
127.5	124	116	95	70	59
130.0	123	116	96	73	63
132.5	121	115	97	76	67
135.0	120	114	98	78	71
137.5	119	113	99	81	74
140.0	117	112	99	83	78
142.5	116	112	100	86	81
145.0	115	111	101	88	84
147.5	114	110	102	90	87
150.0	113	110	103	92	90
152.5	112	110	104	94	93
155.0	111	109	104	96	95
157.5	110	109	105	98	97
160.0	109	108	106	99	99
162.5	109	108	106	101	101
165.0	108	108	107	102	103
167.5	107	107	107	103	104
170.0	107	107	107	104	105
172.5	107	107	108	105	106
175.0	106	107	108	105	107
177.5	106	107	108	105	107
180.0	107	107	107	107	107



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**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	141	141	141	141	141
2.5	141	136	137	134	133
5.0	141	133	132	128	126
7.5	140	130	127	121	119
10.0	139	126	121	115	112
12.5	137	122	116	108	106
15.0	136	118	110	102	100
17.5	134	114	105	96	93
20.0	131	110	99	90	87
22.5	129	105	93	84	81
25.0	126	101	88	78	75
27.5	122	96	82	73	70
30.0	119	91	77	67	64
32.5	115	86	71	62	59
35.0	111	81	66	56	53
37.5	107	76	61	51	48
40.0	103	71	55	46	44
42.5	98	66	50	41	39
45.0	93	61	45	37	34
47.5	89	56	40	33	30
50.0	83	51	36	28	26
52.5	78	46	31	24	23
55.0	73	41	27	21	19
57.5	67	36	23	17	16
60.0	62	31	19	14	13
62.5	56	26	16	11	10
65.0	51	22	13	9	8
67.5	45	18	10	6	5
70.0	39	14	7	4	4
72.5	34	11	5	2	2
75.0	28	8	3	0	0
77.5	23	5	0	0	0
80.0	18	3	0	0	0
82.5	12	0	0	0	0
85.0	8	0	0	0	0
87.5	3	0	0	0	0
90.0	0	0	0	0	0



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**Intensity data (cd)**

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	0	0	0	0	0
92.5	3	2	2	2	2
95.0	7	6	5	5	5
97.5	10	9	9	8	8
100.0	14	13	12	12	12
102.5	18	17	16	16	16
105.0	22	21	20	20	19
107.5	26	25	24	24	23
110.0	31	29	28	28	28
112.5	35	33	32	32	32
115.0	39	37	37	36	36
117.5	43	41	41	40	40
120.0	47	46	45	44	44
122.5	51	50	49	48	48
125.0	55	54	53	53	53
127.5	59	58	57	57	57
130.0	63	62	61	61	61
132.5	67	65	65	65	65
135.0	71	69	69	68	69
137.5	74	73	72	72	72
140.0	78	76	76	76	76
142.5	81	80	79	79	79
145.0	84	83	83	82	82
147.5	87	86	86	85	86
150.0	90	88	89	88	89
152.5	93	91	92	91	91
155.0	95	94	94	94	94
157.5	97	96	97	96	96
160.0	99	98	99	98	98
162.5	101	100	101	100	100
165.0	103	101	103	102	102
167.5	104	103	104	103	104
170.0	105	104	105	105	105
172.5	106	105	106	106	106
175.0	107	105	107	107	107
177.5	107	106	108	107	107
180.0	107	107	107	107	107



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**Coefficients Of Utilization - Zonal Cavity Method**

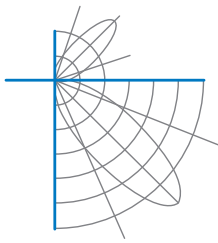
Effective Floor Cavity Reflectance 0.20

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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	97	91	86	82	89	84	80	76	72	69	66	61	58	56	51	49	47	42
2	87	78	71	65	80	72	66	61	62	57	53	52	48	45	43	40	38	33
3	79	68	59	53	72	63	55	49	54	48	43	45	41	37	37	34	31	27
4	72	60	51	44	66	55	47	41	47	41	36	40	35	31	33	29	26	22
5	66	53	44	37	60	49	41	35	42	36	31	35	30	26	29	25	22	19
6	60	47	38	32	55	44	36	30	38	31	26	32	27	23	26	22	19	16
7	56	42	34	28	51	39	32	26	34	28	23	29	24	20	24	20	17	14
8	52	38	30	24	48	36	28	23	31	25	20	26	21	18	22	18	15	13
9	48	35	27	22	44	33	25	20	28	22	18	24	19	16	20	16	13	11
10	45	32	24	19	41	30	23	18	26	20	16	22	18	14	19	15	12	10

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	3.9	8.62	7.51
8.0	2.2	11.50	10.01
10.0	1.4	14.37	12.51
12.0	1.0	17.25	15.01
14.0	0.7	20.12	17.52
16.0	0.6	22.99	20.02



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120.0Vac, 60.00Hz, 0.1236A, 14.47W, 0.975PF, 9.1%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

**LLIA000824-006B**

Integrating Sphere Report

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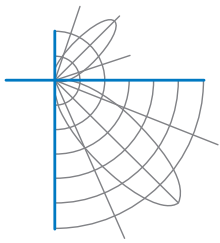
### Performance Summary

Voltage	120.0 Vac
Current	0.1236 A
Power	14.47 W
Frequency	60.00 Hz
Power Factor	0.976
Current THD	9.0 %

Total Luminous Flux	1020.5 lm
Efficacy	70.5 lm/W
Chromaticity (x,y)	(0.4393, 0.4051)
(u',v')	(0.2516, 0.5221)
Duv	0.0001
CCT	2969 K
CRI (Ra)	92
R9	61

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

Test date: 08/16/2017  
Report date: 08/22/2017



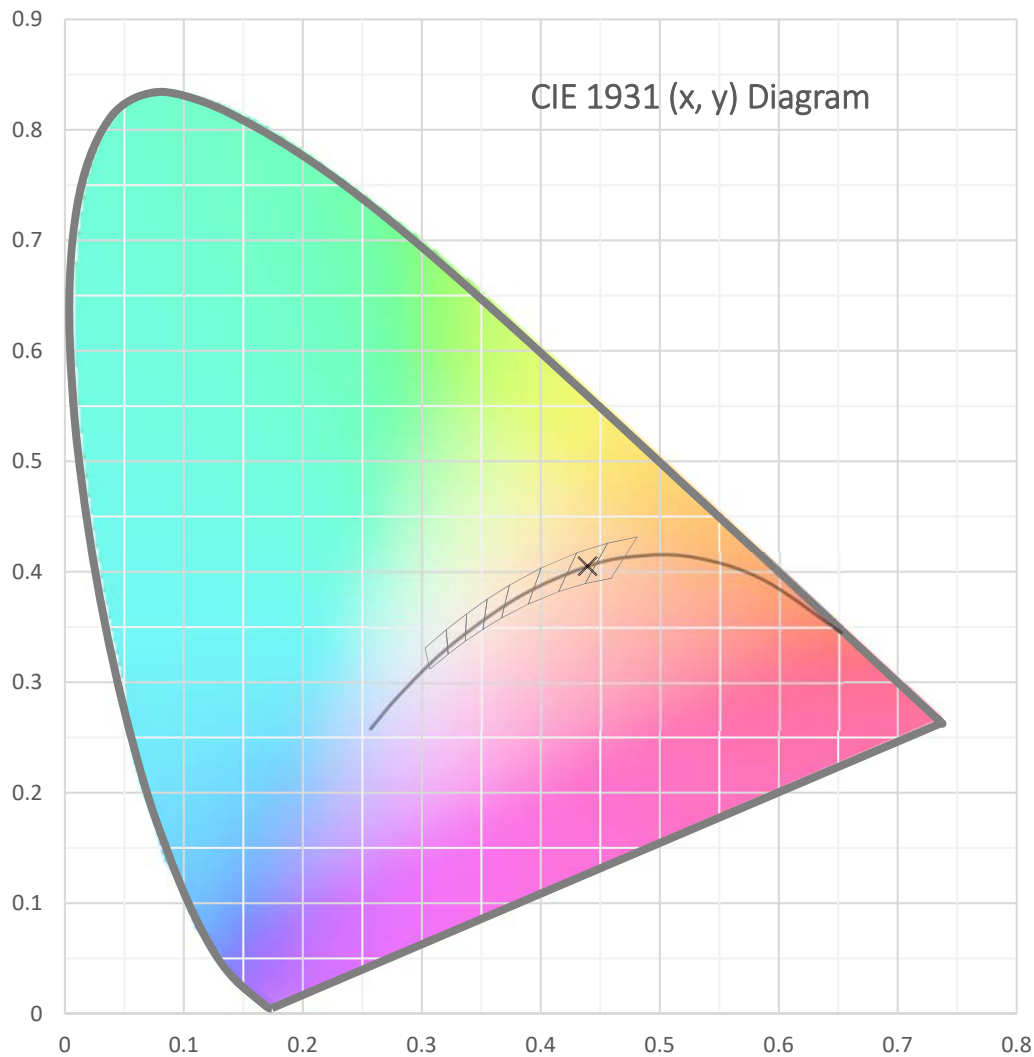
**Test Report Number: LLIA000824-006B**

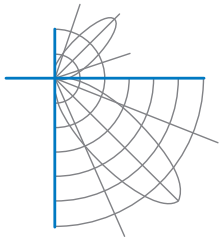
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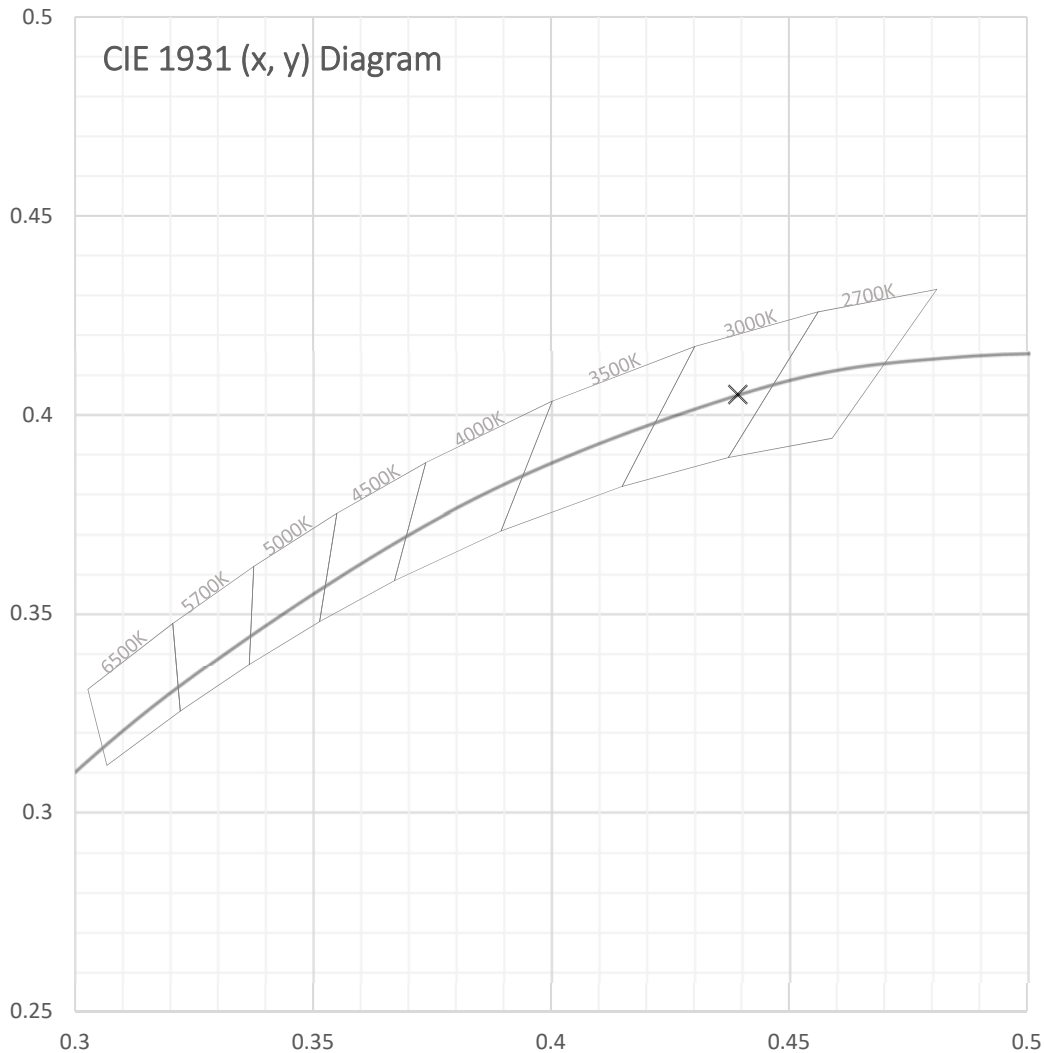
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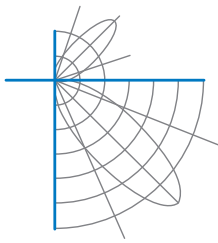
One L.T.F. DA12W350C1834D010-0000 dimmable LED driver

**Spectral Data**

Total Radiant Flux	3.587 W
Total Luminous Flux	1020.5 Lm
Chromaticity CIE 1931 (x, y)	(0.4393, 0.4051)
Chromaticity CIE 1976 (u', v')	(0.2516, 0.5221)
Correlated Color Temperature (CCT)	2969 K
Color Rendering Index (Ra)	92
R1	92
R2	95
R3	96
R4	93
R5	92
R6	93
R7	93
R8	83
R9	61
R10	87
R11	93
R12	80
R13	93
R14	97
Distance from Planckian Locus (Duv)	0.0001
Scotopic/Photopic Ratio *	1.378

**Electrical Data**

Voltage	120.0 Vac
Current	0.1236 A
Power	14.47 W
Frequency	60.00 Hz
Power Factor	0.976
Current THD	9.0 %



**Test Report Number: LLIA000824-006B**

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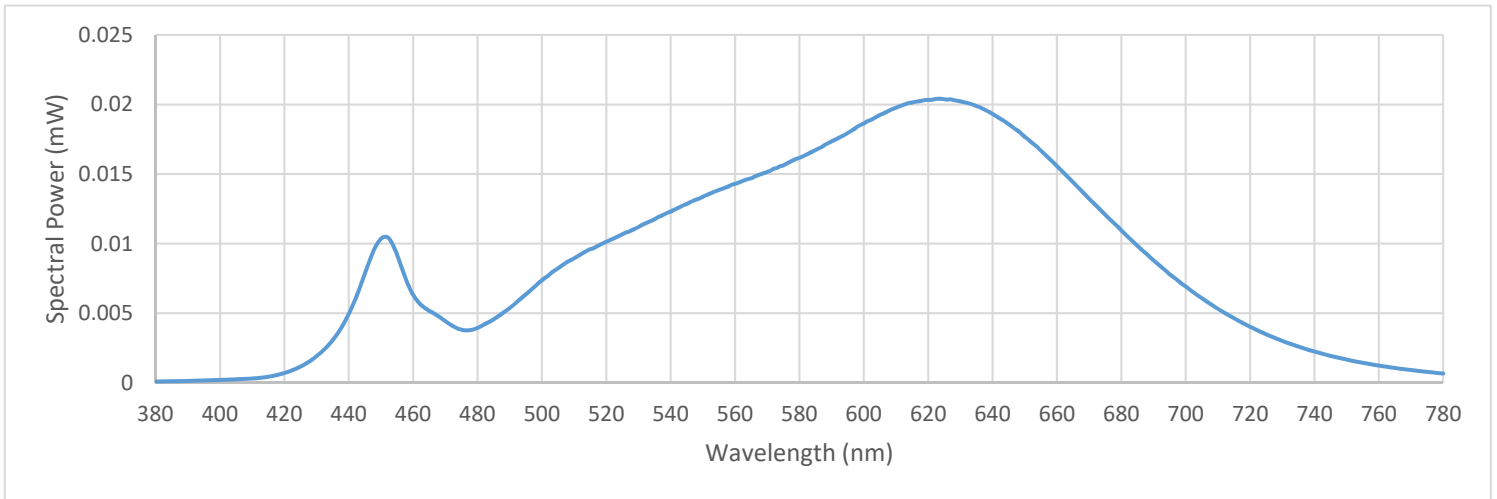
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000094	480	0.003947	580	0.016159	680	0.010945
385	0.000105	485	0.004567	585	0.016737	685	0.009863
390	0.000130	490	0.005380	590	0.017356	690	0.008806
395	0.000162	495	0.006350	595	0.017963	695	0.007795
400	0.000204	500	0.007366	600	0.018631	700	0.006920
405	0.000245	505	0.008224	605	0.019261	705	0.006080
410	0.000306	510	0.008945	610	0.019762	710	0.005306
415	0.000432	515	0.009599	615	0.020135	715	0.004641
420	0.000703	520	0.010144	620	0.020327	720	0.004027
425	0.001160	525	0.010656	625	0.020371	725	0.003482
430	0.001921	530	0.011191	630	0.020214	730	0.003016
435	0.003068	535	0.011751	635	0.019885	735	0.002596
440	0.004950	540	0.012299	640	0.019316	740	0.002236
445	0.007858	545	0.012848	645	0.018573	745	0.001932
450	0.010351	550	0.013372	650	0.017668	750	0.001666
455	0.009196	555	0.013851	655	0.016684	755	0.001431
460	0.006346	560	0.014293	660	0.015596	760	0.001237
465	0.005162	565	0.014695	665	0.014416	765	0.001063
470	0.004434	570	0.015155	670	0.013225	770	0.000907
475	0.003798	575	0.015620	675	0.012085	775	0.000779
						780	0.000666





**Test Report Number: LLIA000824-006B**

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**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:** 25.6 °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  
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