



Report of Test

LLIA000824-004A

Catalog Number: 3-575 Archer Vanity
Wall mounted, formed steel housing and LED mounting plate,
translucent white plastic enclosure.
72 white LEDs, one Harvard Engineering LEDENG-157-30-NL LED board
One L.T.F. DA12W350C1834D010-0014 dimmable LED driver
120.0Vac, 60.00Hz, 0.1247A, 14.57W, 0.974PF, 9.9%THD(i)



Performance Summary

Total Light Output	1206 lm
Luminaire Power	14.6 W
Luminous Efficacy	82.6 lm/W

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



Test Report No. LLIA000824-004A

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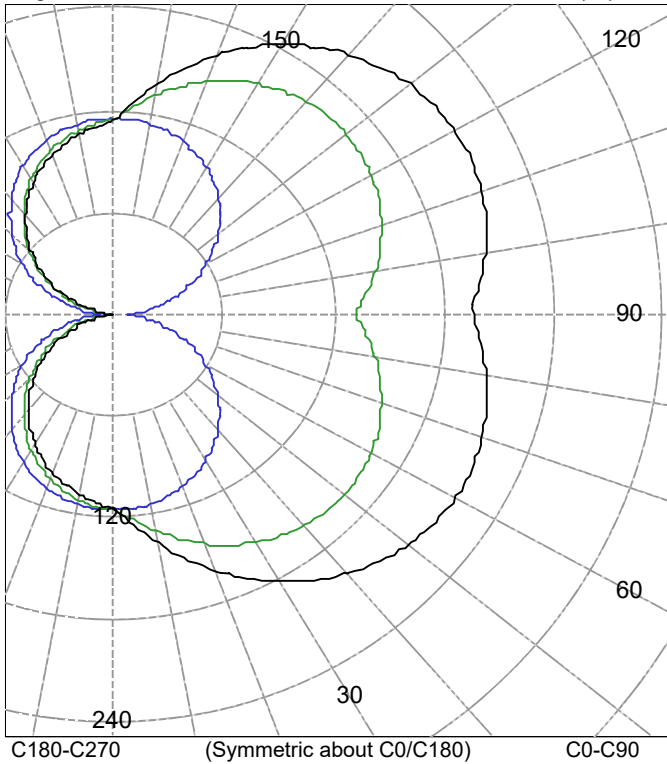
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Legend: C0/C180-Black, C45/C225-Green, C90/C270-Blue (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	115	115	115	115	115	
5.0	125	124	122	116	115	11
10.0	137	135	130	119	114	
15.0	149	146	137	121	112	34
20.0	161	156	144	123	109	
25.0	172	166	150	124	105	56
30.0	182	175	155	124	100	
35.0	192	183	159	123	94	74
40.0	199	189	162	121	88	
45.0	206	195	164	119	81	87
50.0	211	198	165	115	73	
55.0	214	201	164	111	65	93
60.0	216	202	162	106	57	
65.0	216	201	159	100	48	91
70.0	214	198	155	94	39	
75.0	211	195	150	87	30	83
80.0	206	190	145	80	22	
85.0	201	185	138	73	14	71
90.0	196	180	133	67	8	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	101	N / A	8.4
0-40	175	N / A	14.5
0-60	355	N / A	29.4
0-90	601	N / A	49.8
40-90	425	N / A	35.2
60-90	245	N / A	20.3
90-180	606	N / A	50.2
0-180	1206	N / A	100.0

Total Light Output = 1,206 lm

Signed:

Authorized Signatory

Date of test

11-Jan-2018

Date of report

12-Jan-2018



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	115	115	115	115	115
2.5	119	119	119	115	115
5.0	125	124	122	116	115
7.5	131	129	126	117	115
10.0	137	135	130	119	114
12.5	143	140	133	120	113
15.0	149	146	137	121	112
17.5	155	151	141	122	110
20.0	161	156	144	123	109
22.5	167	161	147	123	107
25.0	172	166	150	124	105
27.5	177	171	153	124	102
30.0	182	175	155	124	100
32.5	187	179	157	123	97
35.0	192	183	159	123	94
37.5	196	186	161	122	91
40.0	199	189	162	121	88
42.5	203	192	163	120	85
45.0	206	195	164	119	81
47.5	208	197	164	117	77
50.0	211	198	165	115	73
52.5	213	200	164	113	69
55.0	214	201	164	111	65
57.5	215	201	163	109	61
60.0	216	202	162	106	57
62.5	216	202	161	103	52
65.0	216	201	159	100	48
67.5	215	200	157	97	44
70.0	214	198	155	94	39
72.5	212	197	153	91	35
75.0	211	195	150	87	30
77.5	209	193	147	84	26
80.0	206	190	145	80	22
82.5	204	188	142	77	18
85.0	201	185	138	73	14
87.5	198	181	135	70	10
90.0	196	180	133	67	8



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	196	180	133	67	8
92.5	197	180	134	70	10
95.0	200	184	138	73	14
97.5	203	187	142	77	18
100.0	206	190	145	81	22
102.5	208	193	148	84	27
105.0	210	195	150	88	31
107.5	212	197	153	91	35
110.0	214	198	155	95	40
112.5	215	200	157	98	44
115.0	215	201	159	101	49
117.5	215	201	161	104	53
120.0	215	201	163	107	57
122.5	215	201	164	110	62
125.0	214	201	165	112	66
127.5	212	200	165	115	70
130.0	211	199	165	117	74
132.5	209	197	165	119	78
135.0	206	195	165	120	82
137.5	203	193	165	122	85
140.0	200	190	164	123	89
142.5	197	187	163	124	92
145.0	193	184	161	125	95
147.5	188	180	159	125	98
150.0	184	177	157	126	100
152.5	179	172	155	126	103
155.0	174	168	152	125	105
157.5	168	163	149	125	107
160.0	163	158	146	125	109
162.5	157	153	143	124	111
165.0	151	148	139	123	112
167.5	145	142	135	121	113
170.0	138	136	131	120	114
172.5	132	131	127	118	115
175.0	126	125	123	117	115
177.5	120	119	119	115	116
180.0	115	115	115	115	115



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	115	115	115	115	115
2.5	115	113	115	114	113
5.0	115	112	114	112	111
7.5	115	111	113	111	110
10.0	114	110	111	109	108
12.5	113	109	109	107	106
15.0	112	107	107	105	104
17.5	110	105	105	103	101
20.0	109	103	103	100	99
22.5	107	101	100	98	96
25.0	105	98	97	95	93
27.5	102	96	95	92	90
30.0	100	93	91	88	87
32.5	97	90	88	85	84
35.0	94	86	85	81	80
37.5	91	83	81	78	77
40.0	88	79	77	74	73
42.5	85	76	73	70	69
45.0	81	72	69	66	65
47.5	77	68	65	62	61
50.0	73	64	61	58	57
52.5	69	60	56	54	53
55.0	65	55	52	49	48
57.5	61	51	48	45	44
60.0	57	47	43	40	40
62.5	52	42	39	36	35
65.0	48	38	34	32	31
67.5	44	33	30	27	27
70.0	39	29	26	23	22
72.5	35	25	21	19	18
75.0	30	20	17	15	14
77.5	26	16	13	11	10
80.0	22	12	9	7	6
82.5	18	8	5	4	3
85.0	14	5	2	1	1
87.5	10	2	1	1	1
90.0	8	1	1	1	1



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	8	1	1	1	1
92.5	10	2	1	1	0
95.0	14	6	4	2	2
97.5	18	9	7	5	5
100.0	22	13	11	9	9
102.5	27	17	15	13	12
105.0	31	21	19	17	17
107.5	35	26	23	21	21
110.0	40	30	27	26	25
112.5	44	34	32	30	29
115.0	49	39	36	34	34
117.5	53	43	40	39	38
120.0	57	47	45	43	43
122.5	62	52	49	47	47
125.0	66	56	53	52	51
127.5	70	60	58	56	56
130.0	74	64	62	60	60
132.5	78	68	66	64	64
135.0	82	72	70	68	68
137.5	85	76	74	72	72
140.0	89	79	78	76	76
142.5	92	83	81	79	79
145.0	95	86	85	83	83
147.5	98	89	88	86	86
150.0	100	92	91	89	89
152.5	103	95	94	92	92
155.0	105	98	97	95	95
157.5	107	100	100	98	98
160.0	109	102	102	100	100
162.5	111	104	104	103	102
165.0	112	106	107	105	104
167.5	113	108	108	107	106
170.0	114	109	110	109	108
172.5	115	110	112	110	110
175.0	115	111	113	112	111
177.5	116	112	114	113	113
180.0	115	115	115	115	115



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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	
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	95	89	84	80	87	82	78	74	69	65	62	56	54	52	45	43	42	36
2	85	76	69	63	78	70	64	58	59	54	49	48	44	41	38	35	33	28
3	77	66	58	51	70	61	53	47	51	45	40	41	37	33	33	29	27	22
4	70	58	49	42	64	53	45	39	44	38	33	36	32	28	29	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	31	54	42	34	28	35	29	24	29	24	20	23	19	16	13
7	54	41	32	26	49	38	30	25	32	26	21	26	21	18	21	17	14	11
8	50	37	29	23	46	34	27	22	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	22	17	24	18	15	20	15	12	16	13	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	10.42	7.72
8.0	1.8	13.90	10.29
10.0	1.2	17.37	12.87
12.0	0.8	20.85	15.44
14.0	0.6	24.32	18.01
16.0	0.5	27.80	20.58



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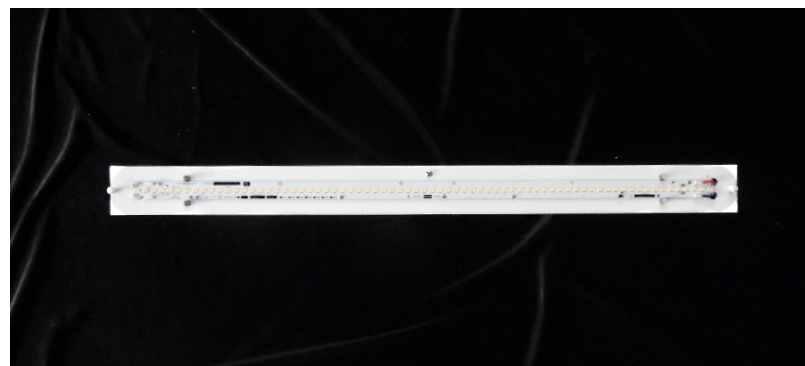
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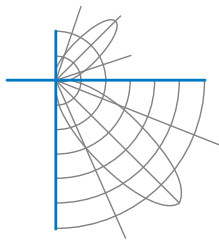
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Test Distance 9.5 m
Test Temperature 25.1 °C

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

LLIA000824-004B

Integrating Sphere Report

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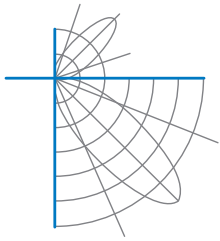
Performance Summary

Voltage	120.0 Vac
Current	0.1257 A
Power	14.71 W
Frequency	59.97 Hz
Power Factor	0.976
Current THD	9.7 %

Total Luminous Flux	1218.6 lm
Efficacy	82.8 lm/W
Chromaticity (x,y)	(0.4388, 0.4059)
(u',v')	(0.2510, 0.5224)
Duv	0.0005
CCT	2983 K
CRI (Ra)	92
R9	62

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

Test date: 12/28/2017
Report date: 01/11/2018



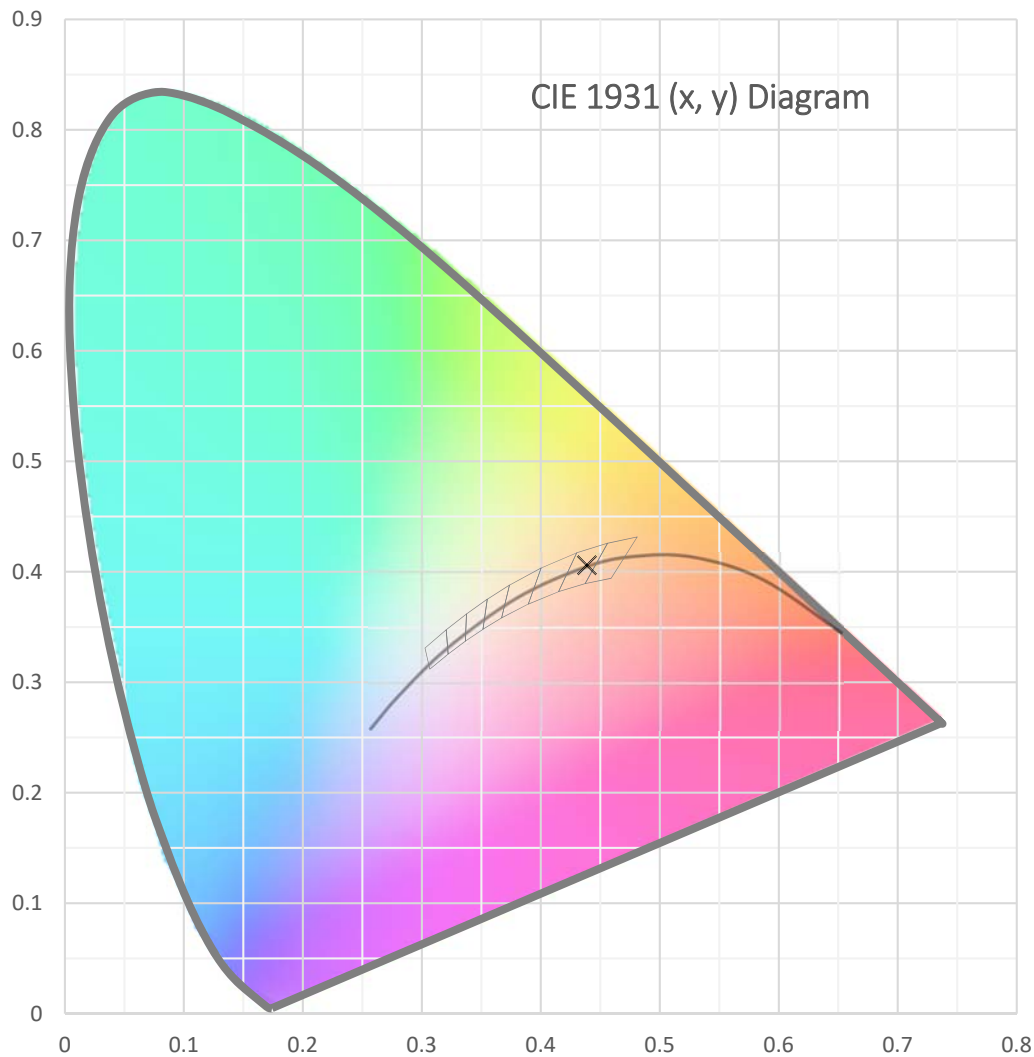
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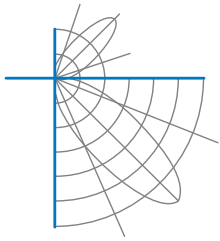
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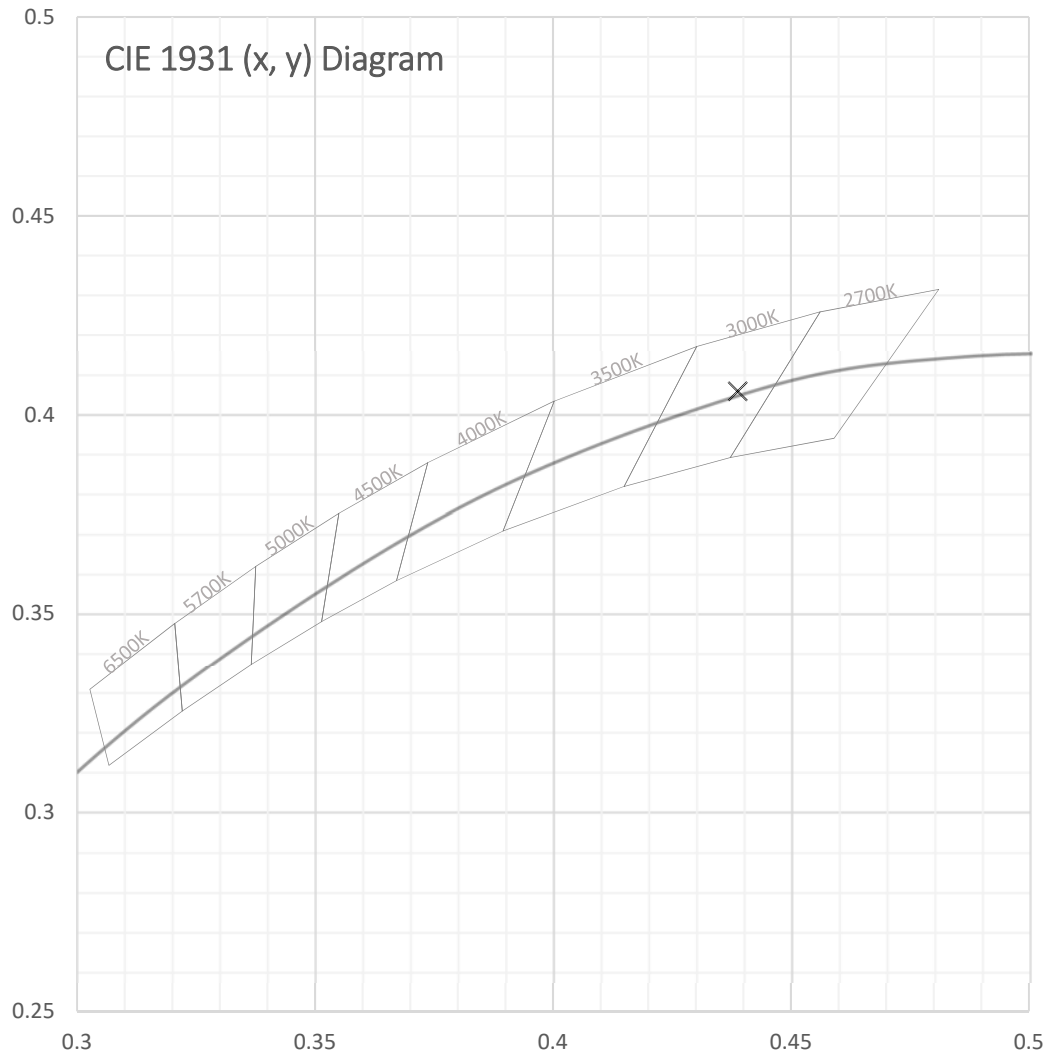
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Spectral Data

Total Radiant Flux	4.276 W
Total Luminous Flux	1218.6 Lm
Chromaticity CIE 1931 (x, y)	(0.4388, 0.4059)
Chromaticity CIE 1976 (u', v')	(0.2510, 0.5224)
Correlated Color Temperature (CCT)	2983 K
Color Rendering Index (Ra)	92
R1	92
R2	94
R3	95
R4	93
R5	92
R6	93
R7	93
R8	84
R9	62
R10	86
R11	93
R12	80
R13	93
R14	97
Distance from Planckian Locus (Duv)	0.0005
Scotopic/Photopic Ratio *	1.380

Electrical Data

Voltage	120.0 Vac
Current	0.1257 A
Power	14.71 W
Frequency	59.97 Hz
Power Factor	0.976
Current THD	9.7 %



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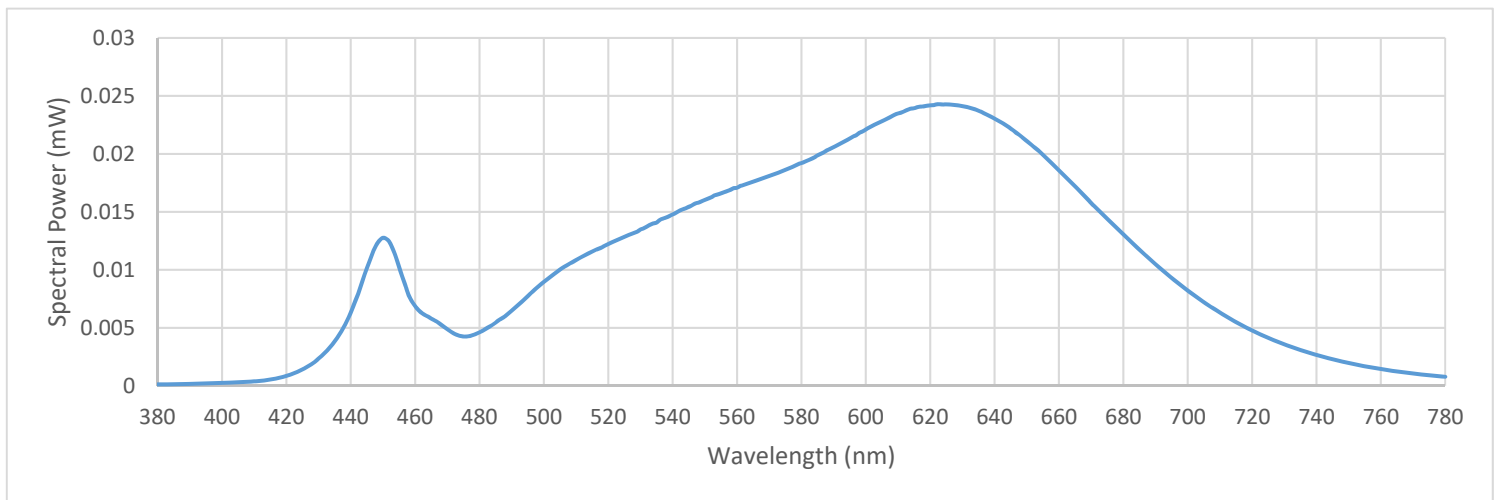
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000122	480	0.004608	580	0.019206	680	0.013036
385	0.000128	485	0.005438	585	0.019875	685	0.011753
390	0.000161	490	0.006467	590	0.020579	690	0.010475
395	0.000199	495	0.007713	595	0.021332	695	0.009287
400	0.000249	500	0.008974	600	0.022099	700	0.008222
405	0.000300	505	0.010016	605	0.022821	705	0.007218
410	0.000379	510	0.010846	610	0.023488	710	0.006301
415	0.000530	515	0.011580	615	0.023932	715	0.005506
420	0.000855	520	0.012221	620	0.024183	720	0.004780
425	0.001405	525	0.012836	625	0.024276	725	0.004136
430	0.002352	530	0.013478	630	0.024117	730	0.003571
435	0.003832	535	0.014076	635	0.023717	735	0.003077
440	0.006308	540	0.014787	640	0.023060	740	0.002641
445	0.010140	545	0.015438	645	0.022181	745	0.002281
450	0.012759	550	0.016039	650	0.021119	750	0.001962
455	0.010234	555	0.016594	655	0.019911	755	0.001687
460	0.006881	560	0.017077	660	0.018604	760	0.001455
465	0.005798	565	0.017600	665	0.017185	765	0.001247
470	0.004883	570	0.018082	670	0.015757	770	0.001063
475	0.004246	575	0.018616	675	0.014408	775	0.000910
						780	0.000778





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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 π 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.