



Report of Test

LLIA000824-036A

Catalog Number: 3-542 Metrix Vanity

Wall mounted, formed steel housing, white enamel steel LED plate,
translucent white plastic enclosure with formed decorative trim.
72 white LEDs, One Harvard Engineering LEDENG-157-30-NL LED board
One L.T.F. DA12W350C1834D010-0000 dimming LED driver.
120.0Vac, 60.00Hz, 0.1237A, 14.58W, 0.983PF, 7.8%THD(i)



Performance Summary

Total Light Output	1083 lm
Luminaire Power	14.6 W
Luminous Efficacy	74.2 lm/W

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



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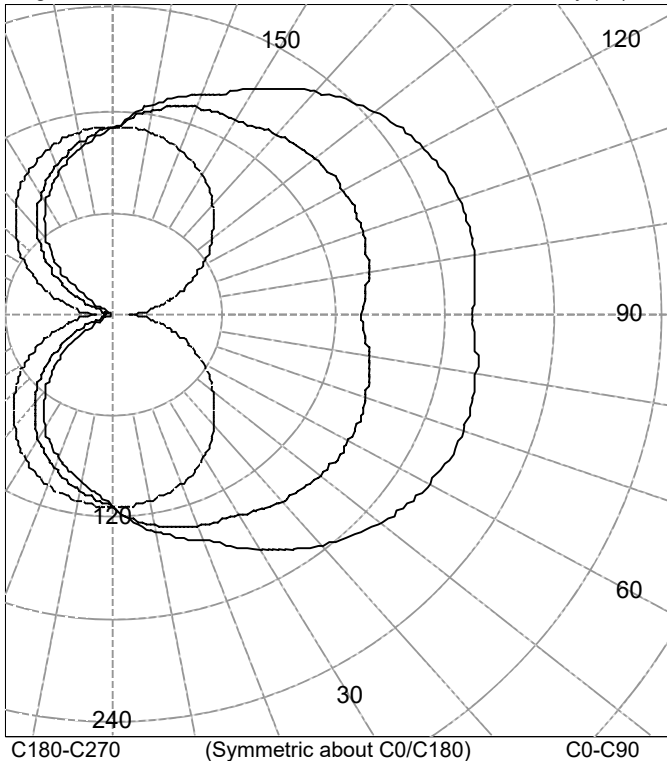
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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	113	113	113	113	113	
5.0	123	123	122	116	113	11
10.0	130	129	127	119	112	
15.0	136	135	130	120	110	32
20.0	142	139	133	120	107	
25.0	151	146	135	119	103	51
30.0	160	154	137	116	98	
35.0	169	162	140	113	92	67
40.0	178	169	144	109	85	
45.0	185	175	146	105	78	77
50.0	191	180	148	102	71	
55.0	196	184	148	99	63	81
60.0	199	186	148	96	55	
65.0	202	188	148	92	47	80
70.0	202	188	146	88	39	
75.0	202	188	144	84	31	76
80.0	201	186	141	80	23	
85.0	198	183	138	75	15	72
90.0	196	181	135	71	9	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	94	N / A	8.7
0-40	161	N / A	14.9
0-60	320	N / A	29.5
0-90	547	N / A	50.5
40-90	386	N / A	35.7
60-90	227	N / A	21.0
90-180	536	N / A	49.5
0-180	1083	N / A	100.0

Total Light Output = 1,083 lm

Signed:

Authorized Signatory

Date of test 13-Sep-2017
Date of report 13-Sep-2017



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	113	113	113	113	113
2.5	119	119	119	115	113
5.0	123	123	122	116	113
7.5	127	126	124	118	113
10.0	130	129	127	119	112
12.5	134	132	129	119	111
15.0	136	135	130	120	110
17.5	139	137	132	120	108
20.0	142	139	133	120	107
22.5	146	142	134	119	105
25.0	151	146	135	119	103
27.5	156	150	135	118	100
30.0	160	154	137	116	98
32.5	165	158	139	115	95
35.0	169	162	140	113	92
37.5	174	165	142	112	89
40.0	178	169	144	109	85
42.5	181	172	145	107	82
45.0	185	175	146	105	78
47.5	188	177	147	104	75
50.0	191	180	148	102	71
52.5	194	182	148	101	67
55.0	196	184	148	99	63
57.5	198	185	149	98	59
60.0	199	186	148	96	55
62.5	201	187	148	94	51
65.0	202	188	148	92	47
67.5	202	188	147	90	43
70.0	202	188	146	88	39
72.5	203	188	145	86	35
75.0	202	188	144	84	31
77.5	202	187	143	82	27
80.0	201	186	141	80	23
82.5	200	185	139	77	19
85.0	198	183	138	75	15
87.5	196	182	136	73	12
90.0	196	181	135	71	9



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	196	181	135	71	9
92.5	197	182	137	73	12
95.0	198	184	138	75	16
97.5	199	185	139	77	19
100.0	200	185	141	79	23
102.5	201	186	142	81	27
105.0	201	186	143	83	31
107.5	201	186	144	85	35
110.0	200	186	144	87	39
112.5	199	186	145	88	43
115.0	198	185	145	90	47
117.5	197	184	145	91	51
120.0	196	183	145	93	54
122.5	194	181	145	94	58
125.0	191	179	145	96	62
127.5	189	177	144	97	66
130.0	186	175	143	98	70
132.5	183	172	142	100	73
135.0	179	169	141	103	77
137.5	176	166	140	105	80
140.0	172	163	138	107	84
142.5	167	159	137	109	87
145.0	163	156	135	111	90
147.5	159	152	133	112	93
150.0	154	148	132	113	96
152.5	149	144	132	114	98
155.0	144	140	132	115	100
157.5	141	138	131	116	102
160.0	138	136	130	116	104
162.5	136	134	128	116	106
165.0	133	131	127	115	107
167.5	129	128	125	115	108
170.0	126	125	122	114	109
172.5	122	122	120	113	110
175.0	118	118	117	111	110
177.5	113	113	113	109	110
180.0	110	110	110	110	110



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	113	113	113	113	113
2.5	113	110	112	110	109
5.0	113	109	110	108	106
7.5	113	108	108	105	104
10.0	112	106	106	103	101
12.5	111	104	104	100	99
15.0	110	103	101	98	96
17.5	108	100	99	95	93
20.0	107	98	96	92	90
22.5	105	96	93	88	86
25.0	103	93	90	85	83
27.5	100	90	87	82	79
30.0	98	87	83	78	75
32.5	95	84	80	74	71
35.0	92	81	76	69	67
37.5	89	78	72	65	62
40.0	85	74	68	60	58
42.5	82	71	63	56	53
45.0	78	67	59	51	48
47.5	75	63	54	46	43
50.0	71	59	50	41	38
52.5	67	55	45	35	32
55.0	63	51	40	30	27
57.5	59	47	35	25	22
60.0	55	43	30	20	17
62.5	51	39	25	15	12
65.0	47	35	20	10	7
67.5	43	30	16	5	3
70.0	39	26	11	1	1
72.5	35	22	7	1	2
75.0	31	17	4	1	2
77.5	27	13	5	2	2
80.0	23	10	5	2	2
82.5	19	8	5	2	2
85.0	15	8	5	2	2
87.5	12	8	5	2	2
90.0	9	8	5	2	2



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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	9	8	5	2	2
92.5	12	8	5	2	2
95.0	16	8	5	2	2
97.5	19	8	5	2	2
100.0	23	9	5	2	2
102.5	27	13	5	2	3
105.0	31	17	4	1	2
107.5	35	21	6	1	2
110.0	39	25	10	1	2
112.5	43	29	14	4	2
115.0	47	34	19	8	5
117.5	51	38	23	13	10
120.0	54	42	28	18	15
122.5	58	46	33	23	20
125.0	62	50	38	28	25
127.5	66	54	43	34	31
130.0	70	58	47	39	36
132.5	73	62	52	44	41
135.0	77	65	57	49	47
137.5	80	69	61	54	52
140.0	84	73	65	59	57
142.5	87	76	69	63	61
145.0	90	79	73	68	66
147.5	93	83	77	72	70
150.0	96	86	80	76	74
152.5	98	89	84	80	78
155.0	100	91	87	83	82
157.5	102	94	90	87	86
160.0	104	96	93	90	89
162.5	106	98	96	93	92
165.0	107	100	99	96	95
167.5	108	102	101	98	98
170.0	109	104	103	101	100
172.5	110	105	106	103	103
175.0	110	107	107	106	105
177.5	110	108	109	108	108
180.0	110	110	110	110	110



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Coefficients Of Utilization - Zonal Cavity Method

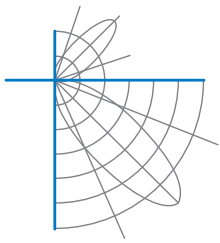
Effective Floor Cavity Reflectance 0.20

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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	95	89	84	79	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	30	27	22
4	70	58	49	42	64	53	45	39	45	38	33	36	32	28	29	25	22	19
5	64	51	42	36	58	47	39	33	39	33	28	32	27	24	26	22	19	16
6	59	46	37	30	54	42	34	28	35	29	24	29	24	20	23	19	16	13
7	54	41	32	26	50	38	30	25	32	26	21	26	21	18	21	17	14	12
8	50	37	29	23	46	34	27	22	29	23	19	24	19	16	19	15	13	10
9	47	34	26	20	43	31	24	19	26	21	16	22	17	14	18	14	11	9
10	44	31	23	18	40	29	22	17	24	19	15	20	16	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	3.1	9.70	7.67
8.0	1.8	12.93	10.22
10.0	1.1	16.17	12.78
12.0	0.8	19.40	15.33
14.0	0.6	22.64	17.89
16.0	0.4	25.87	20.45



Test Report No. LLIA000824-036A

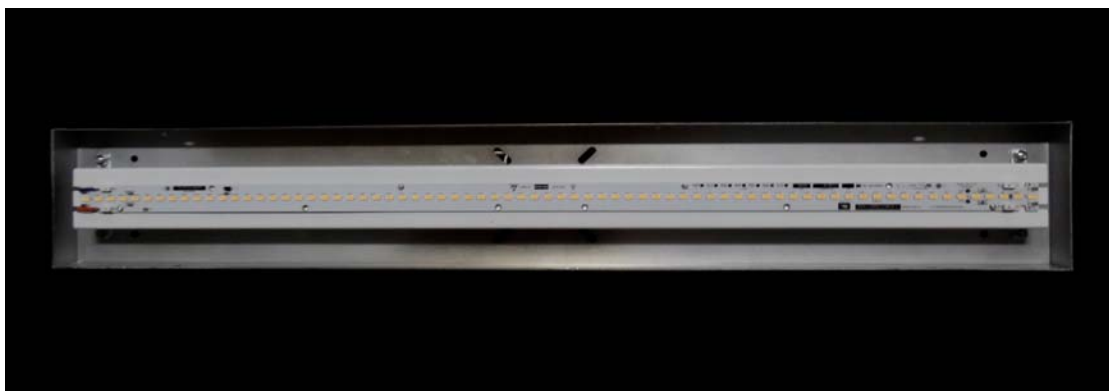
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Test Distance 9.5 m
Test Temperature 25.0 °C

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.

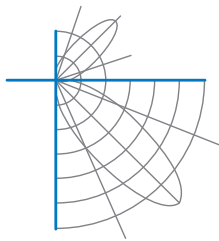
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA000824-036B

Integrating Sphere Report

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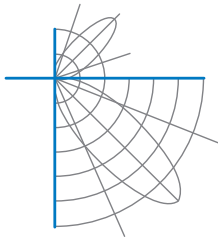
Performance Summary

Voltage	120.0 Vac
Current	0.1237 A
Power	14.59 W
Frequency	60.00 Hz
Power Factor	0.983
Current THD	7.8 %

Total Luminous Flux	1090.5 lm
Efficacy	74.7 lm/W
Chromaticity (x,y)	(0.4397, 0.4061)
(u',v')	(0.2515, 0.5226)
Duv	0.0004
CCT	2971 K
CRI (Ra)	92
R9	62

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

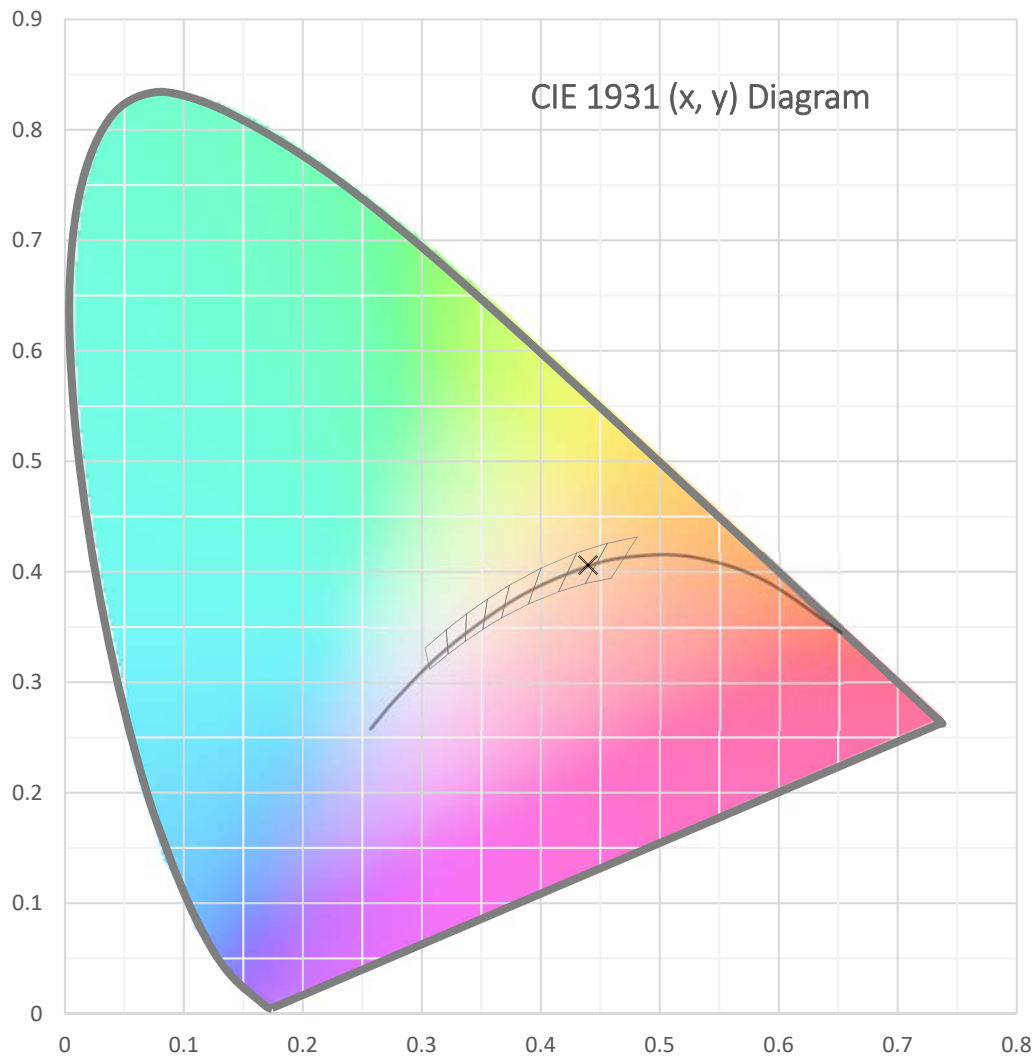
Test date: 09/10/2017
Report date: 09/13/2017

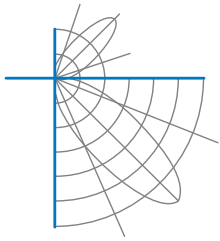


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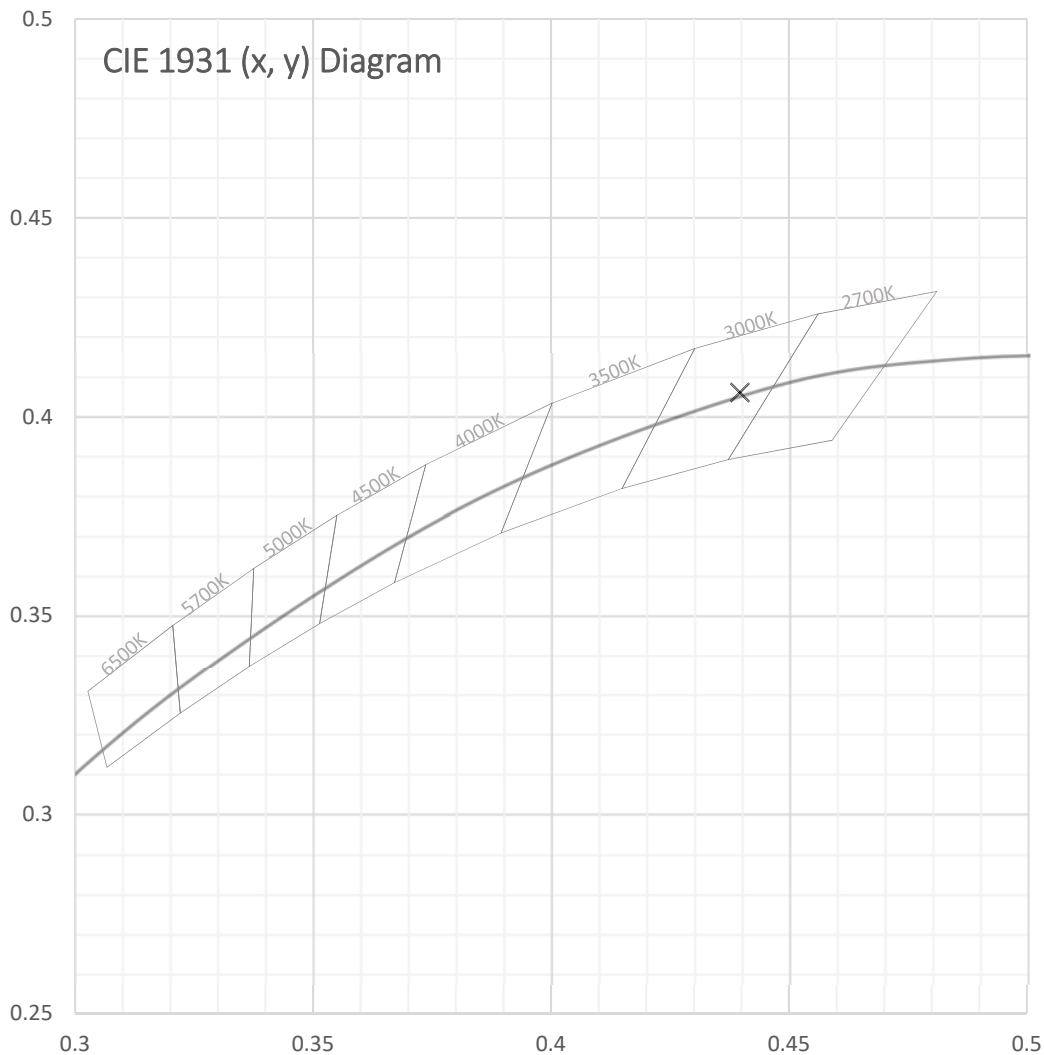




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Spectral Data

Total Radiant Flux	3.828 W
Total Luminous Flux	1090.5 Lm
Chromaticity CIE 1931 (x, y)	(0.4397, 0.4061)
Chromaticity CIE 1976 (u', v')	(0.2515, 0.5226)
Correlated Color Temperature (CCT)	2971 K
Color Rendering Index (Ra)	92
R1	92
R2	95
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)	0.0004
Scotopic/Photopic Ratio *	1.376

Electrical Data

Voltage	120.0 Vac
Current	0.1237 A
Power	14.59 W
Frequency	60.00 Hz
Power Factor	0.983
Current THD	7.8 %



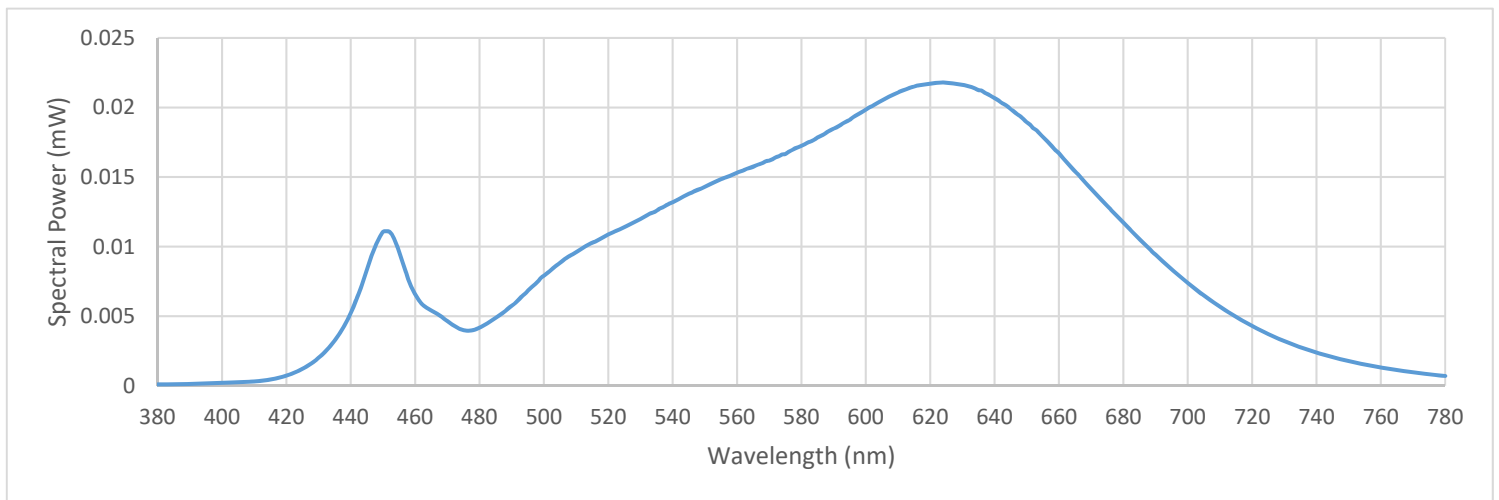
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000098	480	0.004180	580	0.017247	680	0.011731
385	0.000106	485	0.004880	585	0.017841	685	0.010560
390	0.000132	490	0.005750	590	0.018487	690	0.009428
395	0.000167	495	0.006811	595	0.019114	695	0.008352
400	0.000211	500	0.007913	600	0.019827	700	0.007402
405	0.000252	505	0.008833	605	0.020513	705	0.006505
410	0.000315	510	0.009599	610	0.021073	710	0.005677
415	0.000445	515	0.010286	615	0.021499	715	0.004957
420	0.000733	520	0.010864	620	0.021722	720	0.004297
425	0.001219	525	0.011402	625	0.021775	725	0.003717
430	0.002018	530	0.011986	630	0.021622	730	0.003217
435	0.003256	535	0.012579	635	0.021250	735	0.002764
440	0.005214	540	0.013189	640	0.020682	740	0.002382
445	0.008316	545	0.013784	645	0.019873	745	0.002060
450	0.011054	550	0.014294	650	0.018940	750	0.001775
455	0.009635	555	0.014841	655	0.017862	755	0.001525
460	0.006585	560	0.015302	660	0.016716	760	0.001320
465	0.005405	565	0.015735	665	0.015399	765	0.001129
470	0.004655	570	0.016187	670	0.014136	770	0.000965
475	0.003994	575	0.016658	675	0.012922	775	0.000827
						780	0.000707





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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: 24.9 °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
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