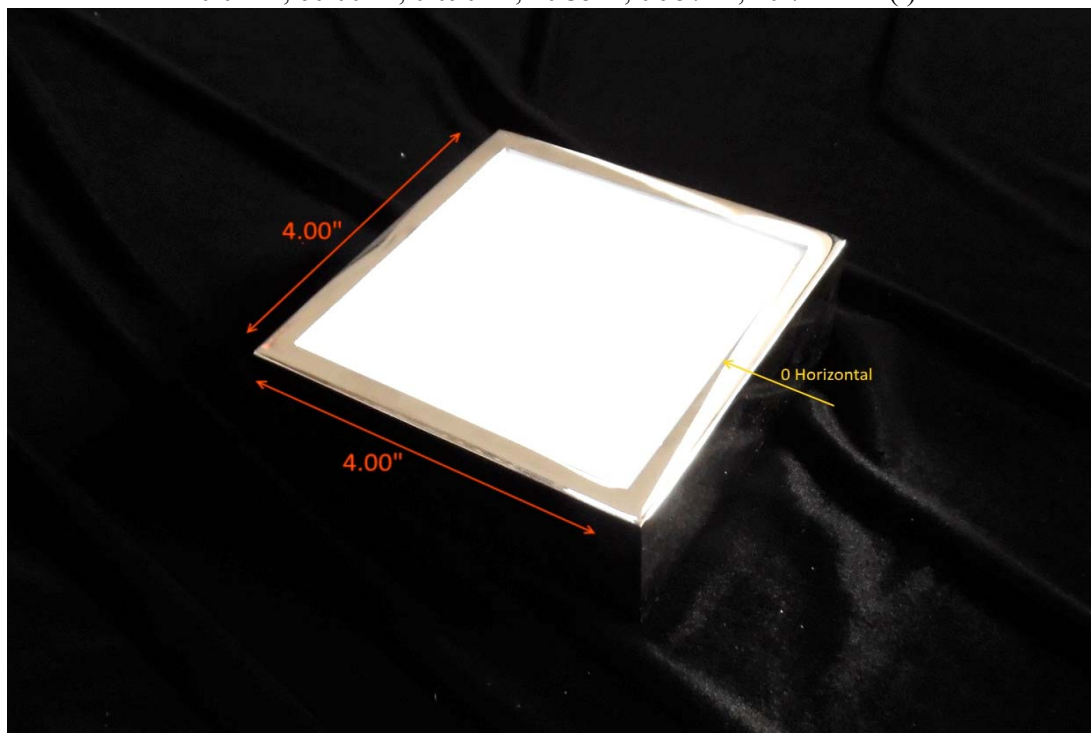


Report of Test

LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
One L.T.F. DA12W350C1834D010-0014 dimming LED driver.
120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)



Performance Summary

Total Light Output	518 lm
Luminaire Power	10.3 W
Luminous Efficacy	50.3 lm/W

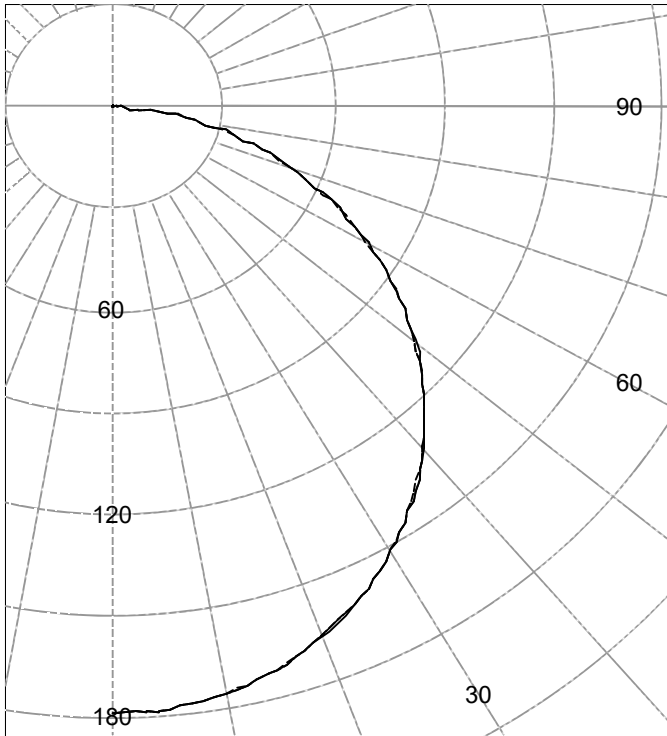
PREPARED FOR : Oxygen Lighting, 201 Railhead Road, Fort Worth, TX 76106, USA



Test Report No. LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
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120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)

Legend: C0-Solid, C45-Dashed, C90-Grey (cd)



(Two plane symmetry) C0-C90

AVERAGE LUMINANCE (cd / m²)

Gamma	C0	C45	C90
45.0	16280	16250	16273
55.0	15737	15704	15727
65.0	14899	14870	14907
75.0	13569	13545	13609
85.0	10471	10496	10461

INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	179	179	179	179	179	
5.0	178	178	178	178	178	17
10.0	176	176	176	176	176	
15.0	172	172	172	172	172	48
20.0	166	166	166	166	166	
25.0	159	159	159	159	159	73
30.0	151	151	151	151	151	
35.0	142	142	142	142	142	89
40.0	131	131	131	131	131	
45.0	120	120	120	120	120	92
50.0	107	107	107	107	107	
55.0	94	94	94	94	94	84
60.0	80	80	80	80	80	
65.0	66	65	65	65	66	65
70.0	51	51	51	51	51	
75.0	37	36	36	37	37	39
80.0	23	23	23	23	23	
85.0	9	10	10	9	9	11
90.0	0	0	0	0	0	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	139	N / A	26.8
0-40	227	N / A	44.0
0-60	404	N / A	78.0
0-90	518	N / A	100.0
40-90	290	N / A	56.0
60-90	114	N / A	22.0
90-180	0	N / A	0.0
0-180	518	N / A	100.0

Total Light Output = 518 lm

Spacing Criterion: 0-180 1.3
Spacing Criterion: 90-270 1.3

Signed:

Authorized Signatory

Date of test 10-Sep-2017
Date of report 13-Sep-2017



Test Report No. LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
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120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	179	179	179	179	179
2.5	179	179	179	179	179
5.0	178	178	178	178	178
7.5	177	177	177	177	177
10.0	176	176	176	176	176
12.5	174	174	174	174	174
15.0	172	172	172	172	172
17.5	169	169	169	169	169
20.0	166	166	166	166	166
22.5	163	163	163	163	163
25.0	159	159	159	159	159
27.5	156	155	155	155	155
30.0	151	151	151	151	151
32.5	147	147	147	147	147
35.0	142	142	142	142	142
37.5	137	137	137	137	137
40.0	131	131	131	131	131
42.5	126	126	125	126	126
45.0	120	120	120	120	120
47.5	114	113	113	113	114
50.0	107	107	107	107	107
52.5	101	101	100	101	101
55.0	94	94	94	94	94
57.5	87	87	87	87	87
60.0	80	80	80	80	80
62.5	73	73	73	73	73
65.0	66	65	65	65	66
67.5	58	58	58	58	58
70.0	51	51	51	51	51
72.5	44	44	44	44	44
75.0	37	36	36	37	37
77.5	29	29	29	29	30
80.0	23	23	23	23	23
82.5	16	16	16	16	16
85.0	9	10	10	9	9
87.5	3	3	3	3	3
90.0	0	0	0	0	0



Test Number: LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling

Ceiling mounted, formed steel housing with white enamel steel LED plate, translucent white plastic enclosure.

24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board

One L.T.F. DA12W350C1834D010-0014 dimming LED driver.

120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)

Coefficients Of Utilization - Zonal Cavity Method

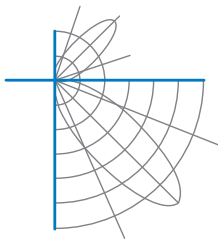
Effective Floor Cavity Reflectance 0.20

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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	81
2	98	90	83	77	95	88	81	76	84	78	74	80	76	72	77	73	70	68
3	89	79	70	64	87	77	69	63	74	67	62	71	65	60	68	63	59	57
4	82	70	61	54	79	68	60	53	65	58	52	63	56	51	60	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	45	54	48	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	40	35	45	39	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

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	5.0	7.55	7.55
8.0	2.8	10.07	10.06
10.0	1.8	12.58	12.58
12.0	1.2	15.10	15.09
14.0	0.9	17.61	17.61
16.0	0.7	20.13	20.12



Test Report No. LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
One L.T.F. DA12W350C1834D010-0014 dimming LED driver.
120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)





Test Report No. LLIA000824-045A

Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
One L.T.F. DA12W350C1834D010-0014 dimming LED driver.
120.0Vac, 60.00Hz, 0.0901A, 10.35W, 0.957PF, 10.7%THD(i)

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

LLIA000824-045B

Integrating Sphere Report

Catalog Number: 3-610 Pyxis Dim Ceiling

Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.

24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board

One L.T.F. DA12W350C1834D010-0014 dimming LED driver.



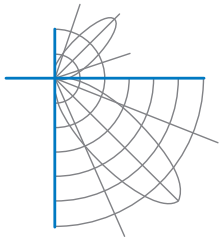
Performance Summary

Voltage	120.0 Vac
Current	0.0895 A
Power	10.32 W
Frequency	60.00 Hz
Power Factor	0.960
Current THD	10.7 %
Total Luminous Flux	510.4 lm
Efficacy	49.5 lm/W
Chromaticity (x,y)	(0.4328, 0.4014)
(u',v')	(0.2490, 0.5197)
Duv	-0.0005
CCT	3049 K
CRI (Ra)	93
R9	62

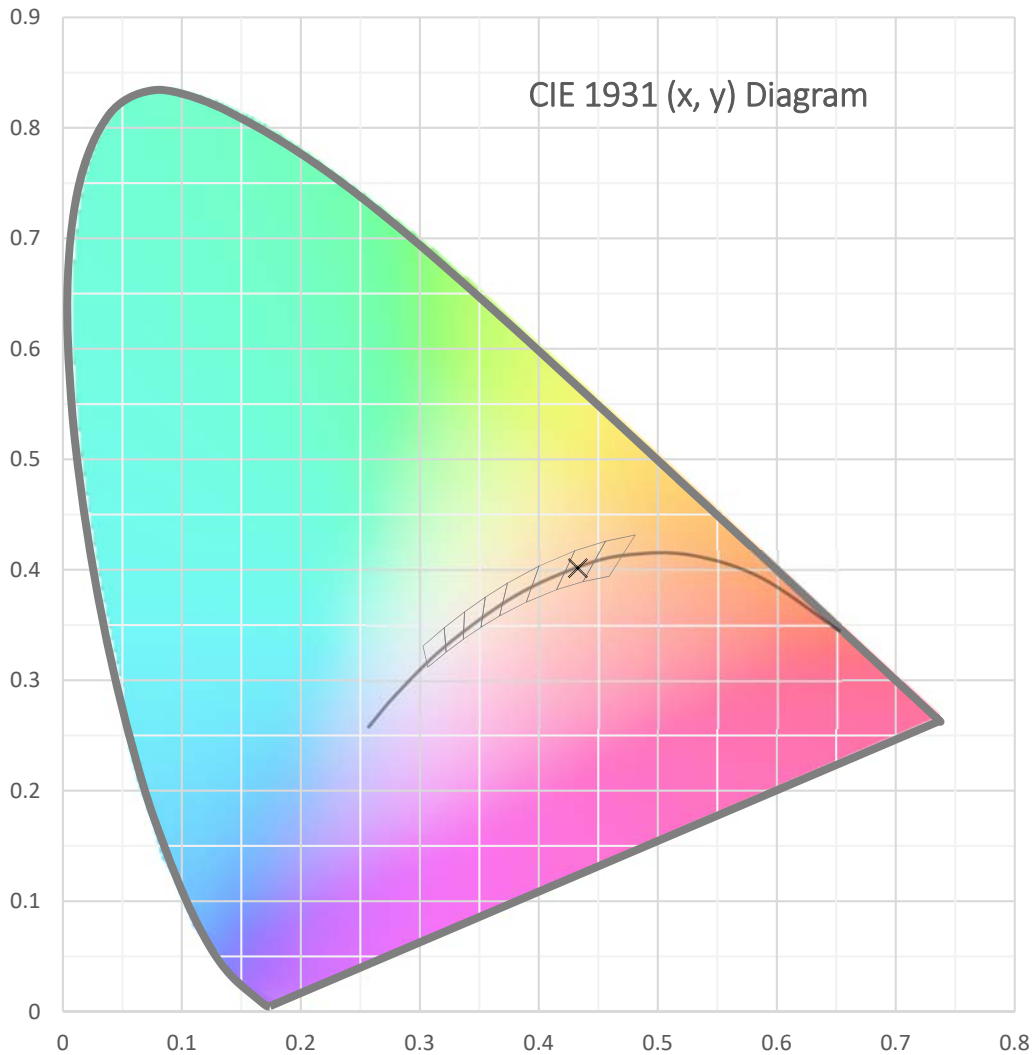
Prepared For:
Oxygen Lighting
201 Railhead Road
Fort Worth, TX 76106, USA

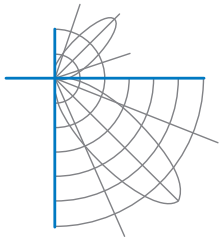
Test date: 09/08/2017

Report date: 09/12/2017

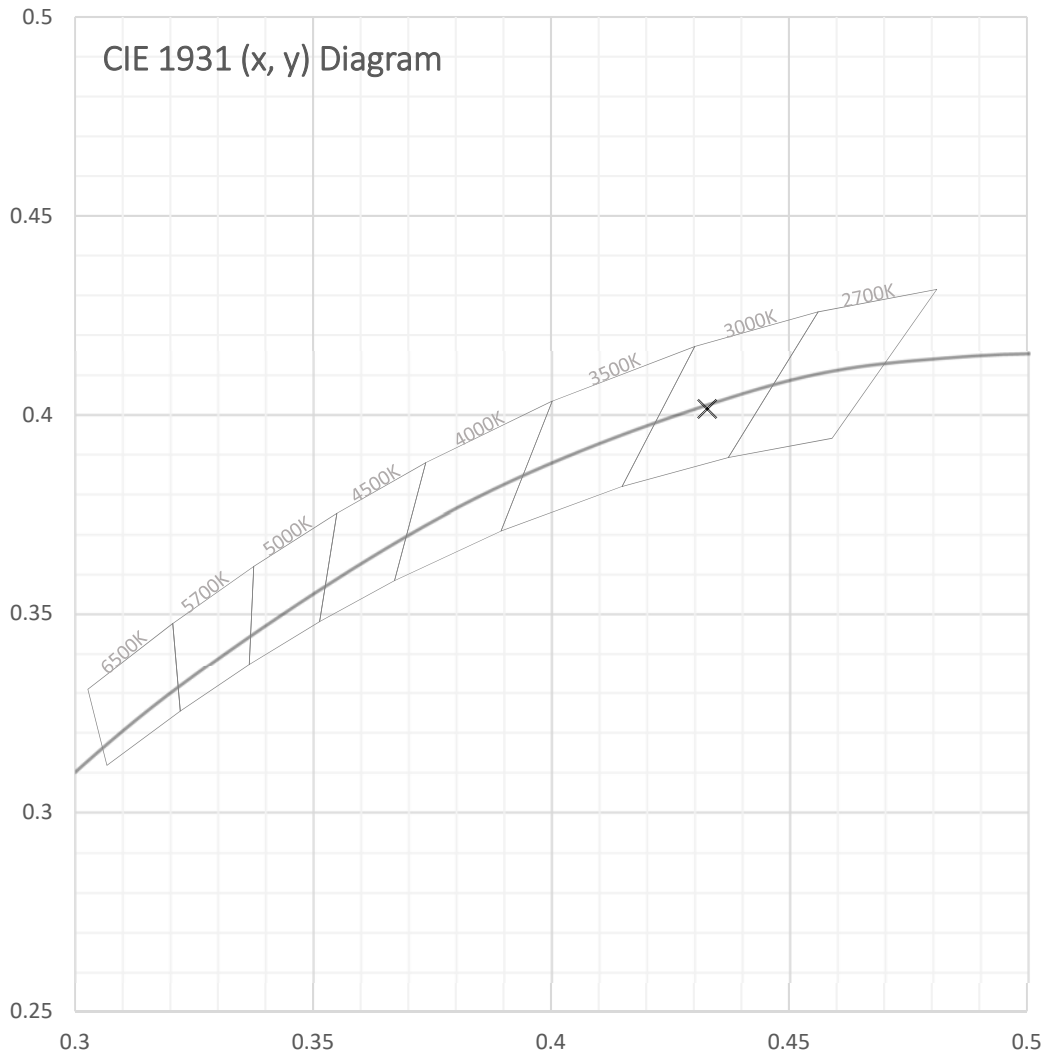


Test Report Number: LLIA000824-045B
Catalog Number: 3-610 Pyxis Dim Ceiling
Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.
24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
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Test Report Number: LLIA000824-045B
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Test Report Number: LLIA000824-045B

Catalog Number: 3-610 Pyxis Dim Ceiling

Ceiling mounted, formed steel housing with white enamel
steel LED plate, translucent white plastic enclosure.

24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board

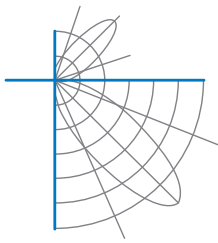
One L.T.F. DA12W350C1834D010-0014 dimming LED driver.

Spectral Data

Total Radiant Flux	1.799 W
Total Luminous Flux	510.4 Lm
Chromaticity CIE 1931 (x, y)	(0.4328, 0.4014)
Chromaticity CIE 1976 (u', v')	(0.2490, 0.5197)
Correlated Color Temperature (CCT)	3049 K
Color Rendering Index (Ra)	93
R1	93
R2	96
R3	97
R4	94
R5	93
R6	95
R7	93
R8	84
R9	62
R10	90
R11	94
R12	83
R13	94
R14	98
Distance from Planckian Locus (Duv)	-0.0005
Scotopic/Photopic Ratio *	1.432

Electrical Data

Voltage	120.0 Vac
Current	0.0895 A
Power	10.32 W
Frequency	60.00 Hz
Power Factor	0.960
Current THD	10.7 %



Test Report Number: LLIA000824-045B

Catalog Number: 3-610 Pyxis Dim Ceiling

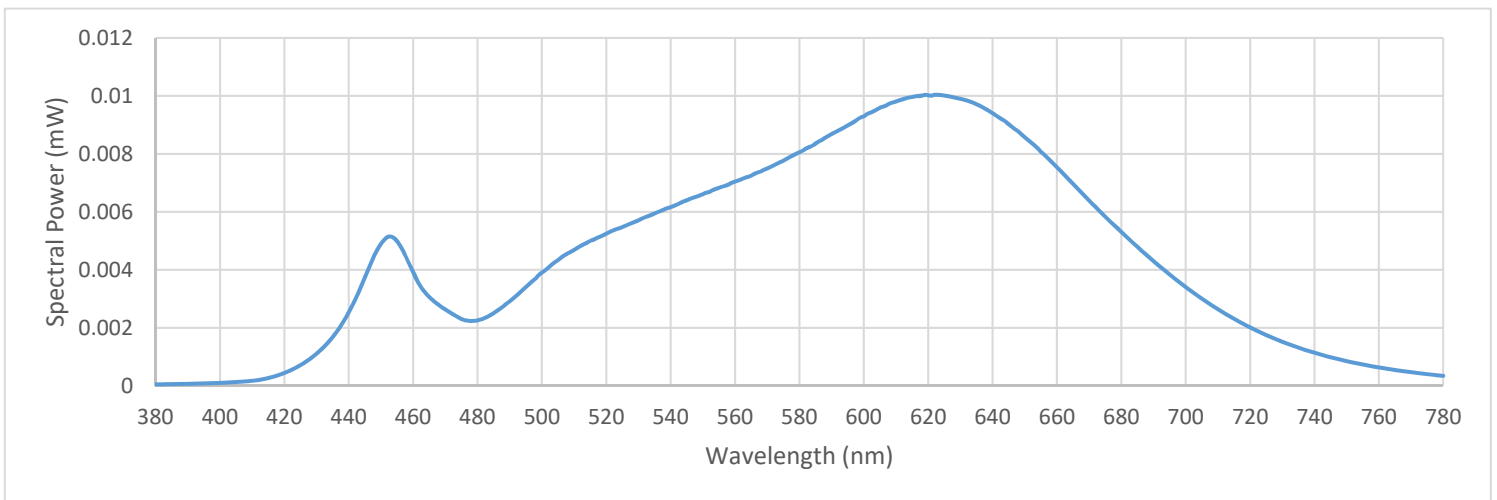
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24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board

One L.T.F. DA12W350C1834D010-0014 dimming LED driver.

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

380	0.000049	480	0.002257	580	0.008059	680	0.005303
385	0.000053	485	0.002507	585	0.008358	685	0.004800
390	0.000065	490	0.002921	590	0.008688	690	0.004302
395	0.000081	495	0.003394	595	0.008981	695	0.003831
400	0.000101	500	0.003904	600	0.009294	700	0.003410
405	0.000125	505	0.004335	605	0.009592	705	0.003009
410	0.000171	510	0.004682	610	0.009805	710	0.002635
415	0.000266	515	0.005003	615	0.009961	715	0.002314
420	0.000444	520	0.005253	620	0.010024	720	0.002016
425	0.000711	525	0.005478	625	0.010015	725	0.001750
430	0.001113	530	0.005707	630	0.009902	730	0.001519
435	0.001682	535	0.005938	635	0.009717	735	0.001314
440	0.002530	540	0.006160	640	0.009406	740	0.001134
445	0.003735	545	0.006398	645	0.009018	745	0.000983
450	0.004900	550	0.006614	650	0.008576	750	0.000850
455	0.004997	555	0.006828	655	0.008072	755	0.000733
460	0.003930	560	0.007041	660	0.007551	760	0.000634
465	0.003056	565	0.007244	665	0.006961	765	0.000545
470	0.002633	570	0.007495	670	0.006393	770	0.000467
475	0.002302	575	0.007764	675	0.005833	775	0.000401
						780	0.000344





Test Report Number: LLIA000824-045B
Catalog Number: 3-610 Pyxis Dim Ceiling
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24 white LEDs, One Harvard Engineering LEDENG-165-930 LED board
One L.T.F. 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: 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
environmental conditions than that tested, may produce erroneous results.

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