



Report of Test

LLIA000901-001A

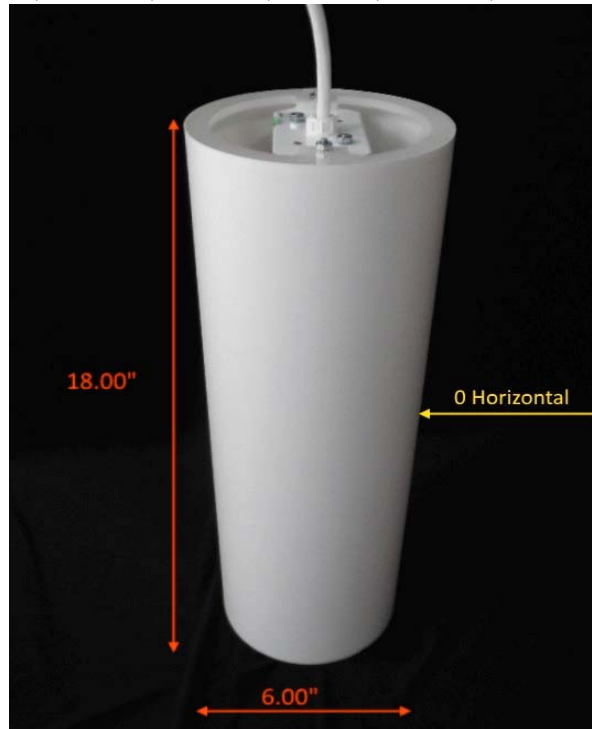
Catalog Number: AP50618/F11/D61/L411

Pendant mounted, formed steel canopy, aluminum and acrylic frame
with white "lumenate" diffuser, translucent white acrylic bottom enclosure.

One white LED module with clear patterned hemispherical lens below.

One ERP ESS030W-0620-42 LED driver

120.0Vac, 60.00Hz, 0.2152A, 25.22W, 0.976PF, 12.3%THD(i)



Performance Summary

Total Light Output	1420 lm
Luminaire Power	25.2 W
Luminous Efficacy	56.3 lm/W

PREPARED FOR : Lumetta, Inc, 33 Minnesota Avenue, Warwick, RI 02888, USA



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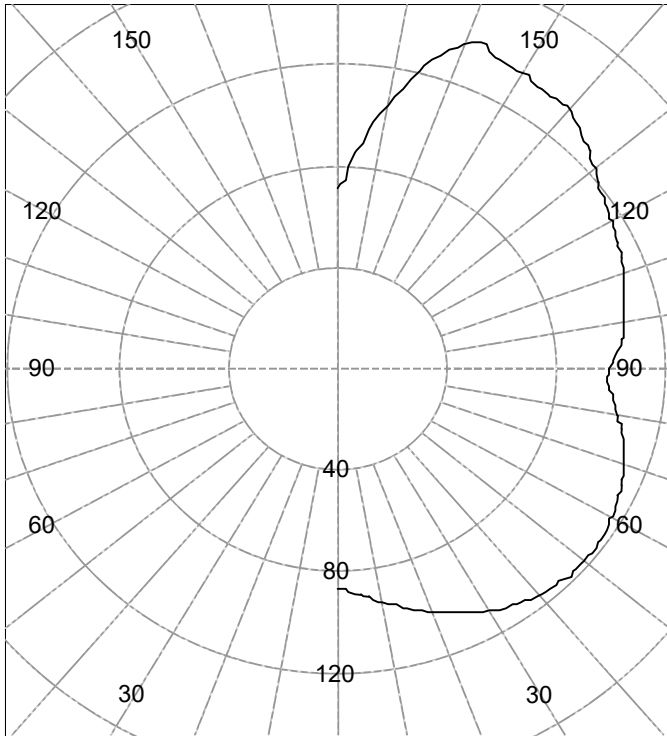
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Legend: All planes - Solid (cd)



(Rotational symmetry)

AVERAGE LUMINANCE (cd / m²)

Gamma	C0
45.0	1887
55.0	1737
65.0	1605
75.0	1496
85.0	1402

INTENSITY SUMMARY (cd)

Gamma	All Planes	Flux (lm)	Gamma	C0	Flux (lm)
0	86		90	99	
5	89	9	95	103	112
10	93		100	106	
15	98	28	105	108	114
20	102		110	111	
25	106	49	115	113	112
30	110		120	115	
35	113	71	125	118	106
40	115		130	122	
45	117	90	135	127	98
50	117		140	132	
55	117	105	145	133	83
60	116		150	134	
65	113	112	155	136	63
70	111		160	135	
75	107	113	165	124	35
80	104		170	105	
85	99	109	175	86	9
90	99		180	72	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	%Lamp	%Luminaire
0-30	86	N / A	6.0
0-40	157	N / A	11.0
0-60	352	N / A	24.8
0-90	687	N / A	48.4
40-90	530	N / A	37.3
60-90	335	N / A	23.6
90-180	734	N / A	51.6
0-180	1420	N / A	100.0

Total Light Output = 1,420 lm

Spacing Criterion: 0-180 1.9
Spacing Criterion: 90-270 1.9

Signed:

Authorized Signatory

Date of test 6-Dec-2017
Date of report 6-Dec-2017



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One white LED module with clear patterned hemispherical lens below.

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120.0Vac, 60.00Hz, 0.2152A, 25.22W, 0.976PF, 12.3%THD(i)

Intensity (cd) and Flux (lm) data

Gamma	Intensity	Flux	Gamma	Intensity	Flux
0.0	86		90.0	99	
2.5	87		92.5	101	
5.0	89	9	95.0	103	
7.5	91		97.5	105	112
10.0	93		100.0	106	
12.5	95		102.5	107	
15.0	98	28	105.0	108	
17.5	100		107.5	109	114
20.0	102		110.0	111	
22.5	104		112.5	112	
25.0	106	49	115.0	113	
27.5	108		117.5	114	112
30.0	110		120.0	115	
32.5	112		122.5	117	
35.0	113	71	125.0	118	
37.5	114		127.5	120	106
40.0	115		130.0	122	
42.5	116		132.5	125	
45.0	117	90	135.0	127	
47.5	117		137.5	130	98
50.0	117		140.0	132	
52.5	117		142.5	133	
55.0	117	105	145.0	133	
57.5	116		147.5	133	83
60.0	116		150.0	134	
62.5	115		152.5	135	
65.0	113	112	155.0	136	
67.5	112		157.5	139	63
70.0	111		160.0	135	
72.5	109		162.5	131	
75.0	107	113	165.0	124	
77.5	106		167.5	115	35
80.0	104		170.0	105	
82.5	101		172.5	96	
85.0	99	109	175.0	86	
87.5	98		177.5	76	9
90.0	99		180.0	72	



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Coefficients Of Utilization - Zonal Cavity Method

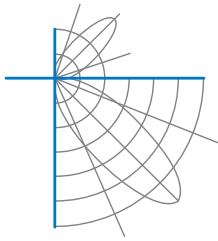
Effective Floor Cavity Reflectance 0.20

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	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	94	88	82	77	85	80	76	71	67	63	60	54	51	49	42	40	38	33
2	84	74	67	60	76	68	61	55	56	51	46	45	41	38	35	32	30	25
3	75	64	55	48	68	59	51	45	48	42	37	39	34	30	30	26	23	19
4	68	56	47	40	62	51	43	37	42	36	31	34	29	25	26	22	19	15
5	62	49	40	33	57	45	37	31	37	31	26	30	25	21	23	19	16	13
6	57	44	35	28	52	40	32	26	33	27	22	27	22	18	20	17	14	11
7	53	39	30	24	48	36	28	23	30	23	19	24	19	15	18	15	12	9
8	49	35	27	21	44	32	25	20	27	21	16	22	17	13	17	13	10	8
9	45	32	24	19	41	29	22	17	25	19	14	20	15	12	15	12	9	7
10	42	29	22	16	38	27	20	15	22	17	13	18	14	10	14	11	8	6

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	2.4	11.63	11.63
8.0	1.4	15.51	15.51
10.0	0.9	19.38	19.38
12.0	0.6	23.26	23.26
14.0	0.4	27.14	27.14
16.0	0.3	31.02	31.02



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120.0Vac, 60.00Hz, 0.2152A, 25.22W, 0.976PF, 12.3%THD(i)

Test Distance 9.5 m
Test Temperature 25.2 °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.

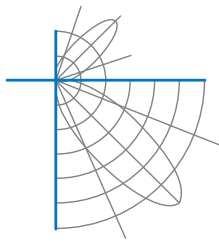
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA000901-001B

Integrating Sphere Report

Catalog Number: AP50618/F11/D61/L411

Pendant mounted, formed steel canopy, aluminum and acrylic frame
with white "lumenate" diffuser, translucent white acrylic bottom enclosure.

One white LED module with clear patterned hemispherical lens below.

One ERP ESS030W-0620-42 LED driver



Performance Summary

Voltage	120.0 Vac
Current	0.2150 A
Power	25.26 W
Frequency	59.97 Hz
Power Factor	0.979
Current THD	12.4 %
Total Luminous Flux	1371.6 lm
Efficacy	54.3 lm/W
Chromaticity (x,y)	(0.4445, 0.4045)
(u',v')	(0.2552, 0.5227)
Duv	-0.0008
CCT	2881 K
CRI (Ra)	93
R9	68
TM-30: Rf	91
TM-30: Rg	101

Prepared For:

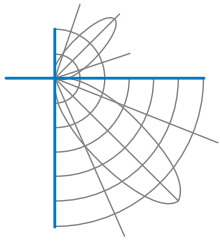
Lumetta, Inc

33 Minnesota Avenue

Warwick, RI 02888, USA

Test date: 12/01/2017

Report date: 12/13/2017



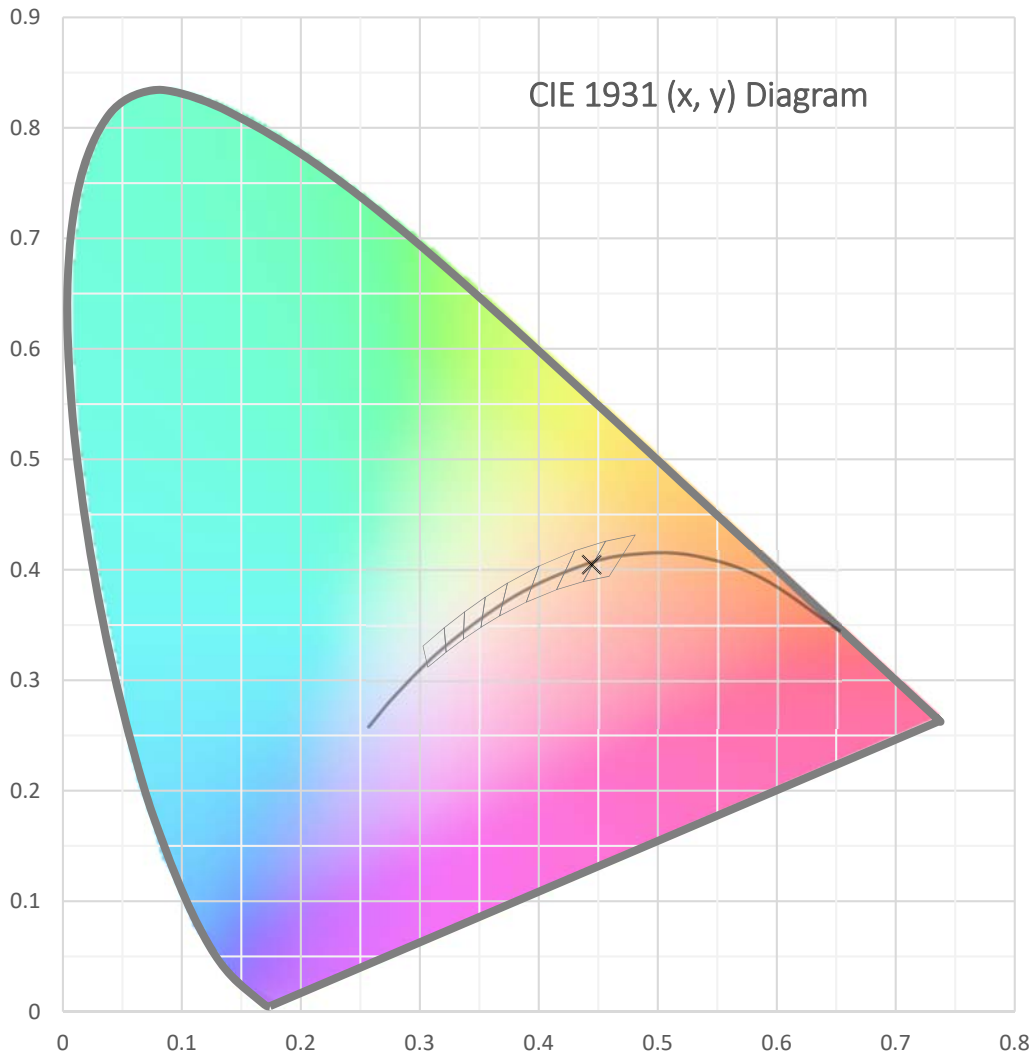
Test Report Number: LLIA000901-001B

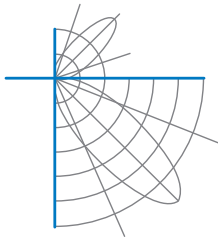
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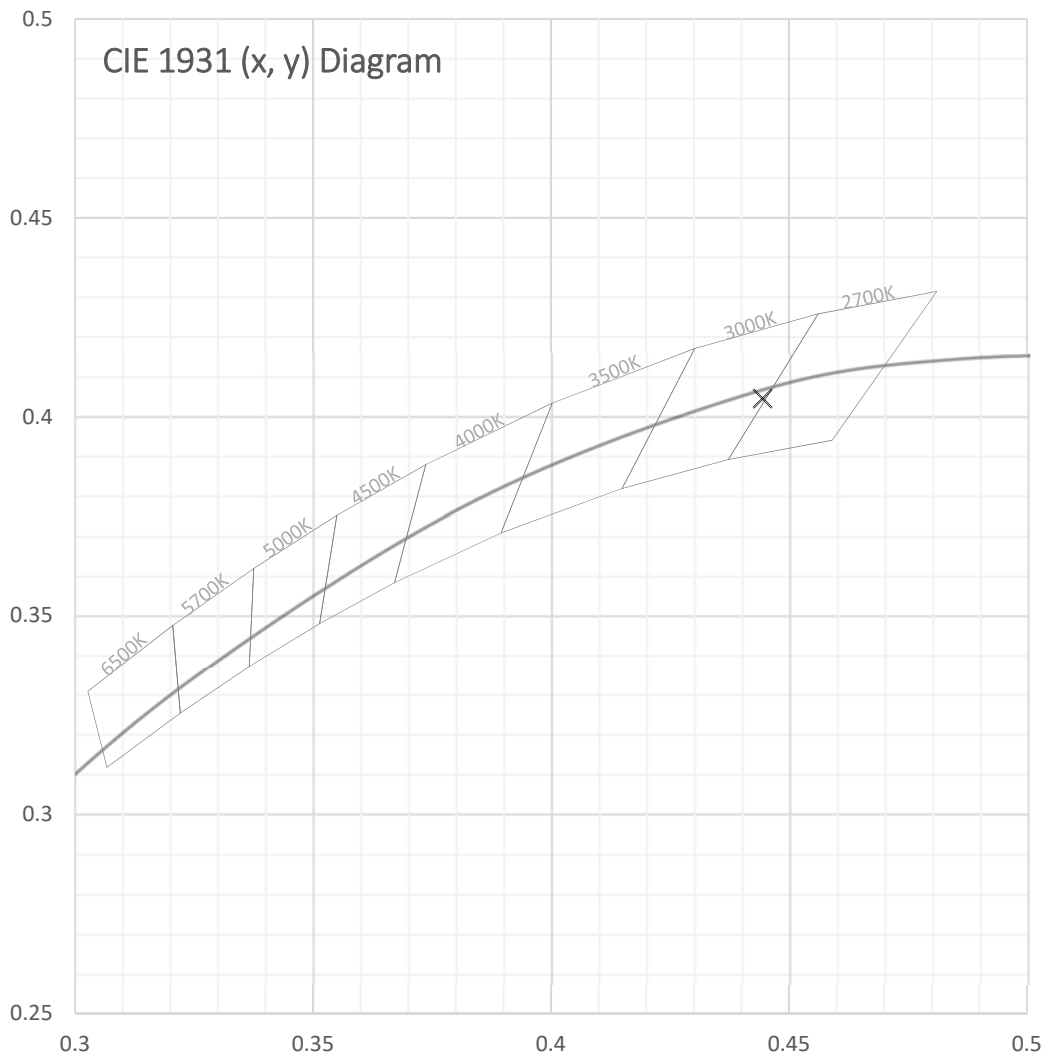
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Spectral Data

Total Radiant Flux	5.057 W
Total Luminous Flux	1371.6 Lm
Chromaticity CIE 1931 (x, y)	(0.4445, 0.4045)
Chromaticity CIE 1976 (u', v')	(0.2552, 0.5227)
Correlated Color Temperature (CCT)	2881 K
Color Rendering Index (Ra)	93
R1	94
R2	95
R3	94
R4	93
R5	92
R6	93
R7	94
R8	87
R9	68
R10	86
R11	93
R12	81
R13	94
R14	96
TM-30: Rf	91
TM-30: Rg	101
Distance from Planckian Locus (Duv)	-0.0008
Scotopic/Photopic Ratio *	1.338

Electrical Data

Voltage	120.0 Vac
Current	0.2150 A
Power	25.26 W
Frequency	59.97 Hz
Power Factor	0.979
Current THD	12.4 %



Test Report Number: LLIA000901-001B

Catalog Number: AP50618/F11/D61/L411

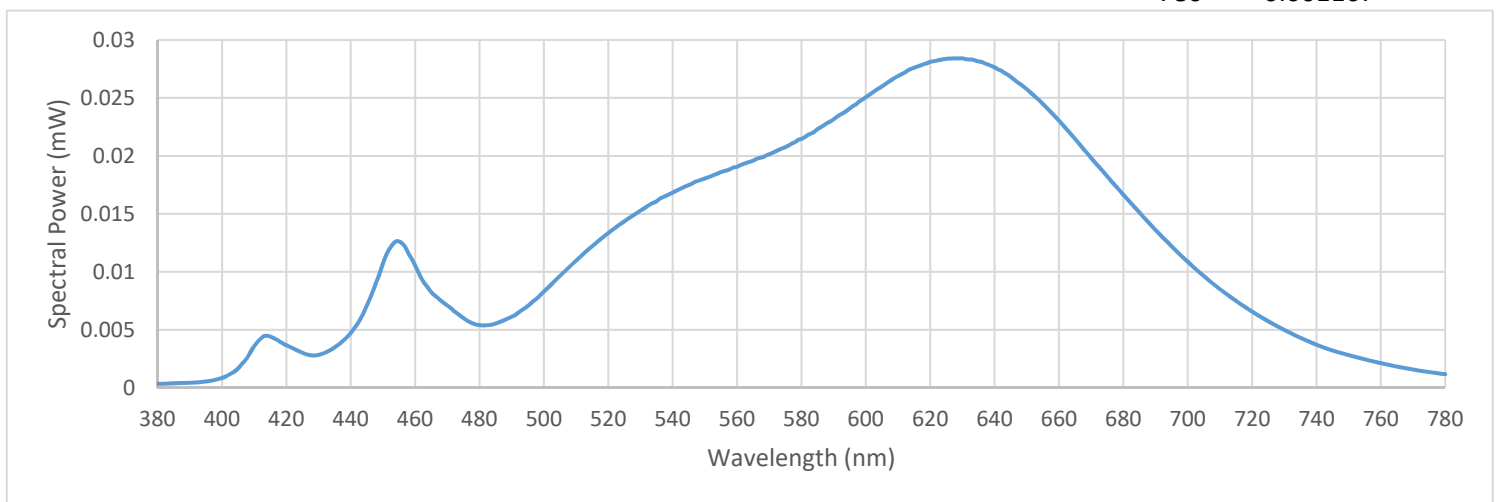
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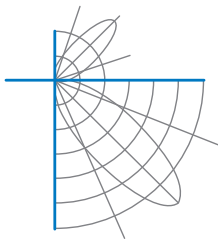
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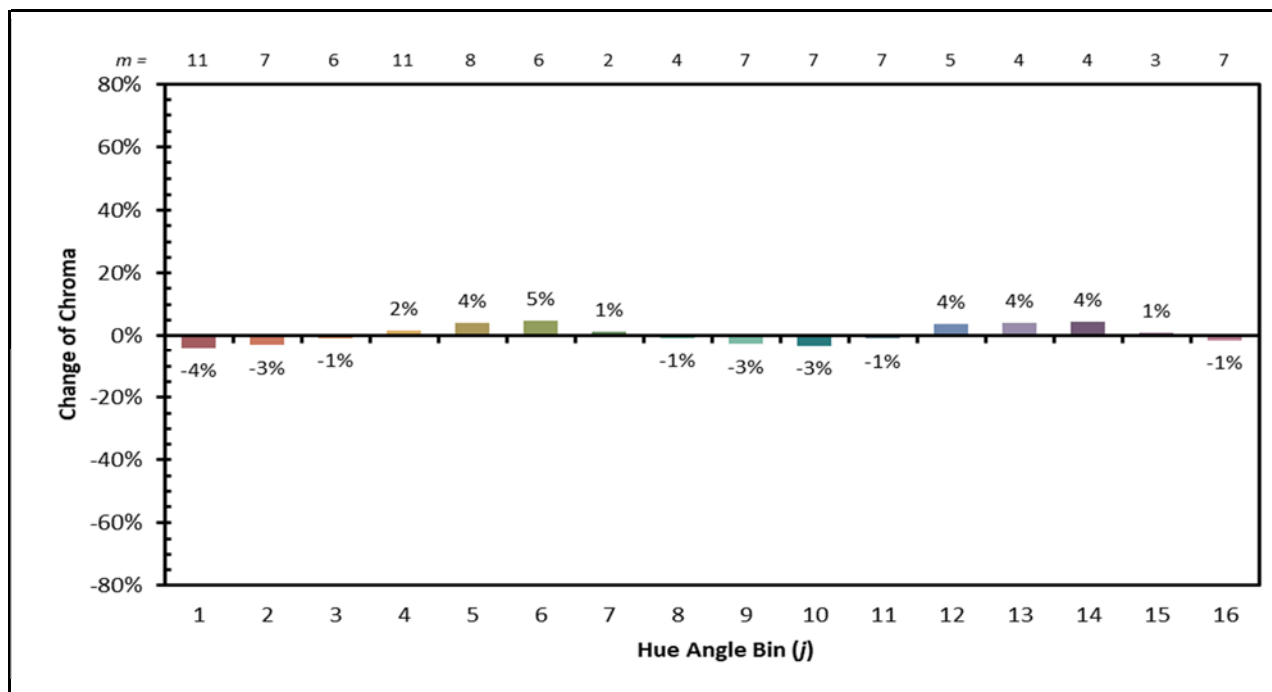
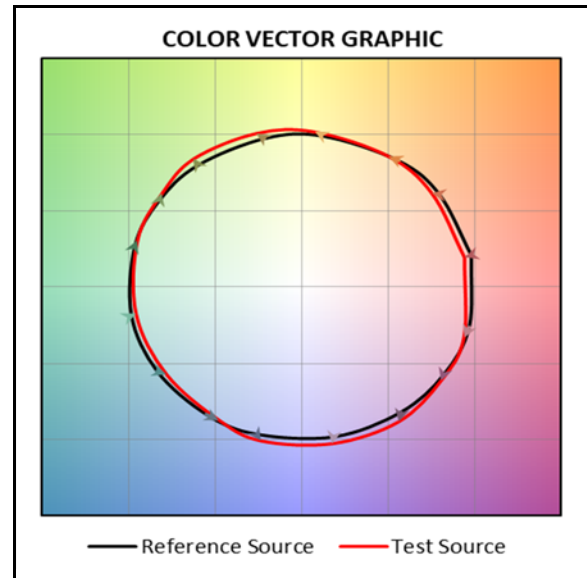
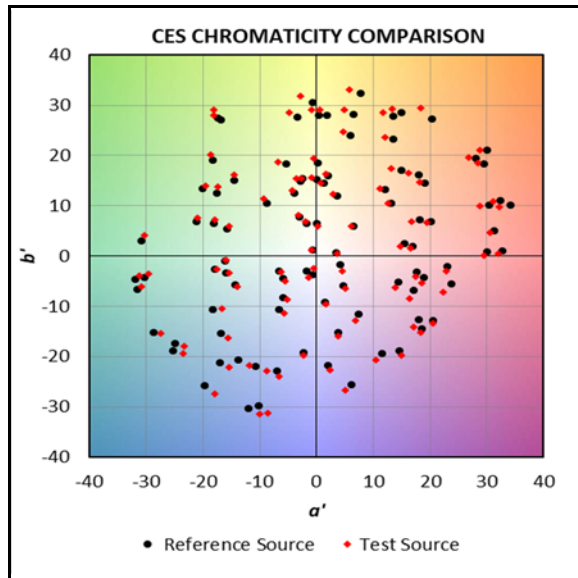
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000341	480	0.005401	580	0.021465	680	0.016638
385	0.000369	485	0.005541	585	0.022311	685	0.015135
390	0.000438	490	0.006133	590	0.023154	690	0.013616
395	0.000540	495	0.007057	595	0.024086	695	0.012185
400	0.000841	500	0.008301	600	0.025057	700	0.010889
405	0.001654	505	0.009656	605	0.025989	705	0.009629
410	0.003594	510	0.010961	610	0.026883	710	0.008489
415	0.004426	515	0.012209	615	0.027596	715	0.007508
420	0.003668	520	0.013359	620	0.028107	720	0.006573
425	0.003010	525	0.014350	625	0.028375	725	0.005730
430	0.002841	530	0.015294	630	0.028415	730	0.004996
435	0.003495	535	0.016084	635	0.028145	735	0.004310
440	0.004730	540	0.016831	640	0.027640	740	0.003707
445	0.007099	545	0.017474	645	0.026810	745	0.003210
450	0.010677	550	0.018046	650	0.025760	750	0.002824
455	0.012619	555	0.018606	655	0.024476	755	0.002449
460	0.010539	560	0.019061	660	0.023072	760	0.002121
465	0.008236	565	0.019588	665	0.021471	765	0.001830
470	0.007089	570	0.020143	670	0.019802	770	0.001573
475	0.005997	575	0.020754	675	0.018228	775	0.001357
						780	0.001167





IES TM-30 Details





Test Report Number: LLIA000901-001B

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One white LED module with clear patterned hemispherical lens below.

One ERP ESS030W-0620-42 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: 25.1 °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, TM-30-15

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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