



Report of Test

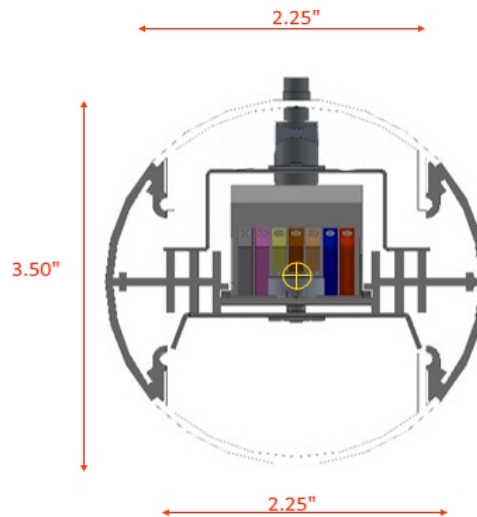
LLIA000930-009A

Catalog Number: AR300-I/D-MO/MO-K40-80--4-XX-LOH/LOH-XXXX-120

Pendant mounted, extruded aluminum housing, formed white aluminum reflector trays, frosted plastic upper and lower enclosures.

90 white upper LEDs and 96 white lower LEDs.

One Osram Optotronic OT50W/PRG1400C/UNV/DIM/L LED driver
120.0Vac, 60.00Hz, 0.3027A, 36.14W, 0.995PF, 7.7%THD(i)



Performance Summary

Total Light Output	5057 lm
Luminaire Power	36.1 W
Luminous Efficacy	140.1 lm/W

PREPARED FOR : Precision Architectural Lighting, 4830 Timber Creek Drive, Houston, TX 77017



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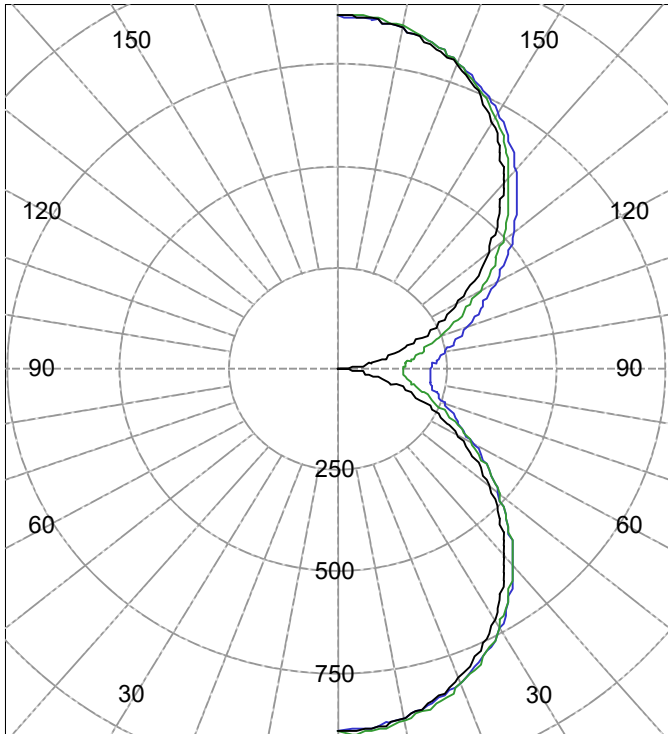
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Legend: C0-Black, C45-Green, C90-Blue (cd)



(Two plane symmetry) C0-C90

INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	889	889	889	889	889	
5.0	883	880	889	886	881	84
10.0	868	865	876	875	869	
15.0	844	842	854	855	850	240
20.0	808	809	824	826	821	
25.0	765	765	784	788	783	358
30.0	713	715	734	742	737	
35.0	655	658	678	686	681	420
40.0	589	595	616	623	619	
45.0	520	527	549	554	550	417
50.0	449	458	480	482	479	
55.0	378	389	409	412	410	359
60.0	308	322	343	349	350	
65.0	240	258	283	296	299	275
70.0	176	198	232	253	260	
75.0	116	144	191	223	232	195
80.0	65	101	163	204	216	
85.0	25	73	148	196	210	148
90.0	2	63	146	197	212	

AVERAGE LUMINANCE (cd / m²)

Gamma	C0	C45	C90
45.0	10477	9565	9108
55.0	9331	8278	7767
65.0	7997	7078	6841
75.0	6211	6520	6983
85.0	3723	8356	9610

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	682	N / A	13.5
0-40	1102	N / A	21.8
0-60	1879	N / A	37.2
0-90	2497	N / A	49.4
40-90	1395	N / A	27.6
60-90	619	N / A	12.2
90-180	2559	N / A	50.6
0-180	5057	N / A	100.0

Total Light Output = 5,057 lm

Spacing Criterion: 0-180 1.2
Spacing Criterion: 90-270 1.2

Signed:

Authorized Signatory

Date of test 24-Jan-2018
Date of report 25-Jan-2018



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	889	889	889	889	889
2.5	887	883	892	889	883
5.0	883	880	889	886	881
7.5	877	874	883	882	876
10.0	868	865	876	875	869
12.5	858	856	866	866	861
15.0	844	842	854	855	850
17.5	828	826	841	841	836
20.0	808	809	824	826	821
22.5	788	787	805	808	803
25.0	765	765	784	788	783
27.5	740	741	760	765	761
30.0	713	715	734	742	737
32.5	685	687	707	715	710
35.0	655	658	678	686	681
37.5	622	627	648	656	651
40.0	589	595	616	623	619
42.5	555	561	583	589	584
45.0	520	527	549	554	550
47.5	486	493	515	518	514
50.0	449	458	480	482	479
52.5	413	424	444	447	444
55.0	378	389	409	412	410
57.5	342	355	376	380	379
60.0	308	322	343	349	350
62.5	274	289	312	321	323
65.0	240	258	283	296	299
67.5	208	227	256	273	278
70.0	176	198	232	253	260
72.5	146	170	210	237	245
75.0	116	144	191	223	232
77.5	89	121	176	212	223
80.0	65	101	163	204	216
82.5	43	85	154	198	212
85.0	25	73	148	196	210
87.5	11	66	145	195	210
90.0	2	63	146	197	212



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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	2	63	146	197	212
92.5	11	67	150	202	217
95.0	27	75	157	209	225
97.5	47	89	167	219	235
100.0	69	106	180	231	248
102.5	95	127	196	245	262
105.0	122	150	214	261	279
107.5	152	176	235	280	297
110.0	181	204	258	300	317
112.5	212	234	282	322	339
115.0	244	265	308	346	362
117.5	277	296	336	370	387
120.0	310	328	365	396	413
122.5	344	360	395	423	439
125.0	378	393	426	450	467
127.5	412	425	457	479	494
130.0	447	458	488	508	522
132.5	481	492	519	536	550
135.0	516	524	550	565	578
137.5	550	557	580	593	605
140.0	583	588	609	621	631
142.5	615	619	638	648	657
145.0	646	648	665	674	682
147.5	675	676	692	700	706
150.0	703	702	717	723	728
152.5	728	726	740	745	749
155.0	752	749	762	766	768
157.5	774	770	782	785	786
160.0	793	789	800	801	802
162.5	810	805	816	817	816
165.0	825	820	830	830	829
167.5	838	833	842	841	839
170.0	848	843	852	851	848
172.5	856	851	860	858	855
175.0	862	856	866	863	860
177.5	865	859	869	867	862
180.0	866	866	866	866	866



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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	83	83	83	69	69	69	56	56	56	49
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	74	68	81	74	68	64	62	58	55	52	49	46	42	40	38	33
3	80	70	63	57	73	65	58	53	55	50	46	46	42	39	37	34	32	28
4	73	62	54	48	67	58	50	45	49	43	39	41	36	33	33	30	27	24
5	67	55	47	41	62	51	44	38	44	38	33	36	32	29	30	26	24	21
6	62	50	41	36	57	46	39	33	39	33	29	33	28	25	27	24	21	18
7	57	45	37	31	53	42	34	29	36	30	26	30	25	22	25	21	19	16
8	53	41	33	27	49	38	31	26	32	27	23	27	23	20	23	19	17	14
9	49	37	30	24	46	35	28	23	30	24	20	25	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	27	22	18	23	19	16	19	16	14	12

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	24.7	7.18	7.39
8.0	13.9	9.58	9.86
10.0	8.9	11.97	12.32
12.0	6.2	14.37	14.79
14.0	4.5	16.76	17.25
16.0	3.5	19.15	19.71



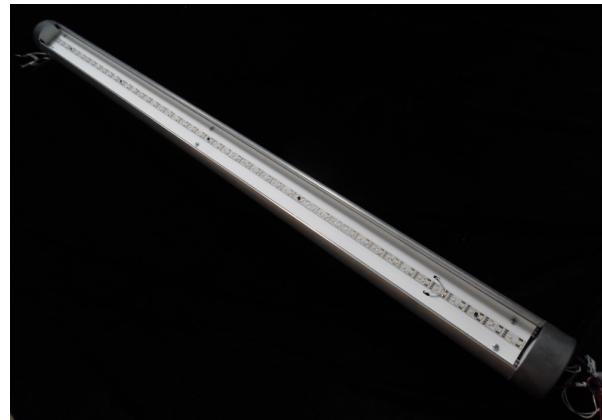
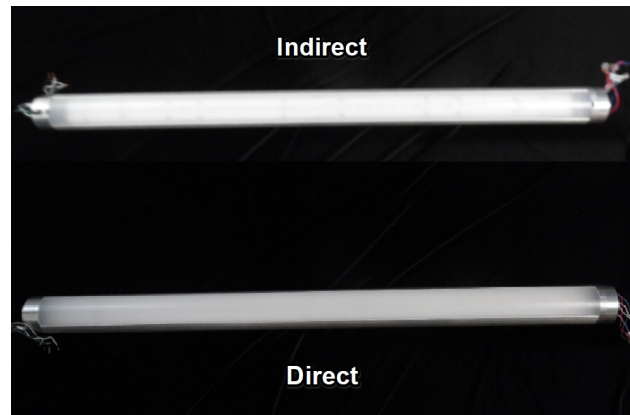
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Test Distance 9.5 m
Test Temperature 25.1 °C

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.

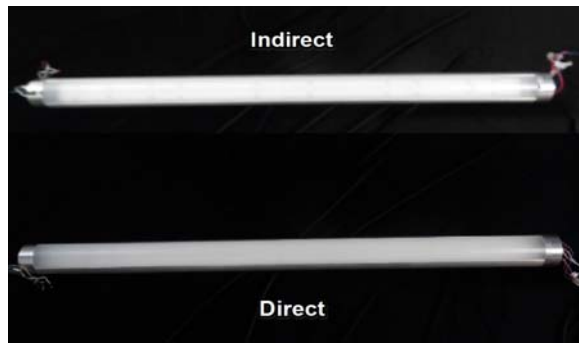


Report of Test

LLIA000930-009B

Integrating Sphere Report

Catalog Number: AR300-I/D-MO/MO-K40-80--4-XX-LOH/LOH-XXXX-120
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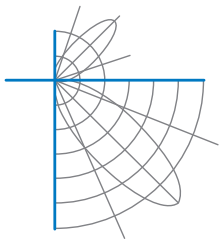
Performance Summary

Voltage	120.0 Vac
Current	0.3027 A
Power	36.15 W
Frequency	59.97 Hz
Power Factor	0.995
Current THD	7.7 %

Total Luminous Flux	5080.7 lm
Efficacy	140.5 lm/W
Chromaticity (x,y)	(0.3799, 0.3755)
(u',v')	(0.2252, 0.5010)
Duv	-0.0004
CCT	4006 K
CRI (Ra)	85
R9	19
TM-30: Rf	83
TM-30: Rg	95

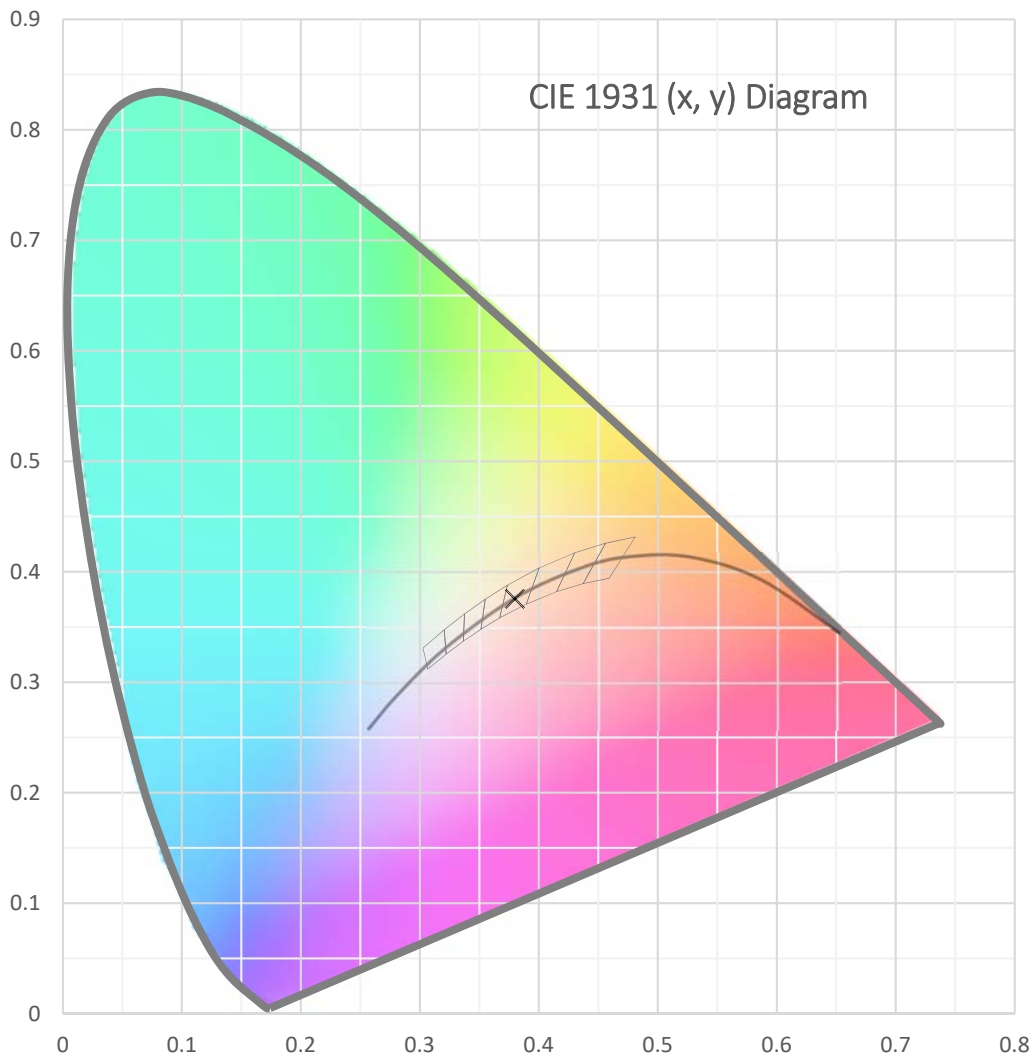
Prepared For:
Precision Architectural Lighting
4830 Timber Creek Drive
Houston, TX 77017, USA

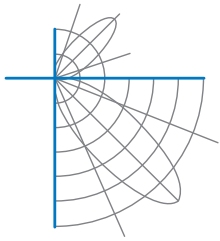
Test date: 01/19/2018
Report date: 01/24/2018



Test Report Number: LLIA000930-009B

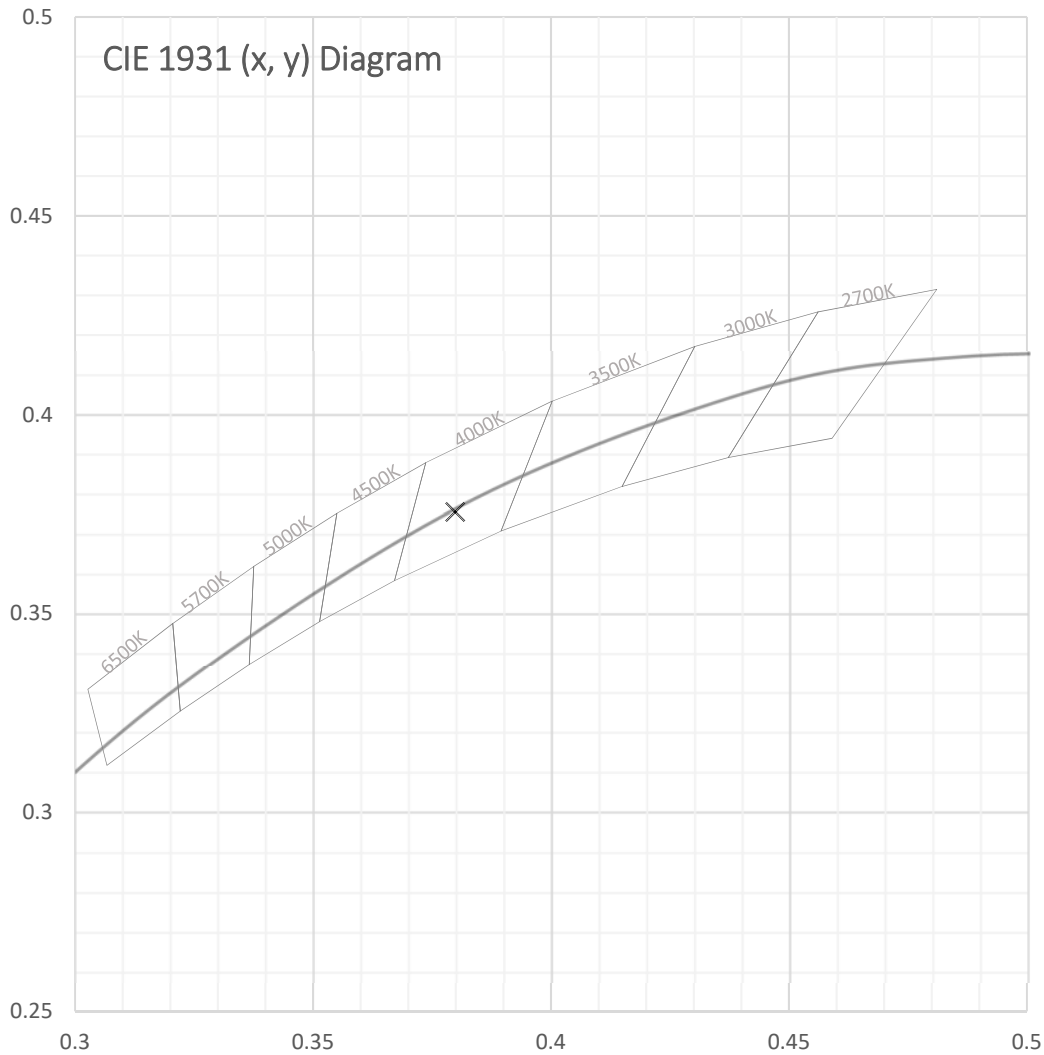
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Spectral Data

Total Radiant Flux	15.84 W
Total Luminous Flux	5080.7 Lm
Chromaticity CIE 1931 (x, y)	(0.3799, 0.3755)
Chromaticity CIE 1976 (u', v')	(0.2252, 0.5010)
Correlated Color Temperature (CCT)	4006 K
Color Rendering Index (Ra)	85
R1	83
R2	91
R3	95
R4	83
R5	83
R6	87
R7	87
R8	68
R9	19
R10	78
R11	81
R12	62
R13	85
R14	98
TM-30: Rf	83
TM-30: Rg	95
Distance from Planckian Locus (Duv)	-0.0004
Scotopic/Photopic Ratio *	1.714

Electrical Data

Voltage	120.0 Vac
Current	0.3027 A
Power	36.15 W
Frequency	59.97 Hz
Power Factor	0.995
Current THD	7.7 %

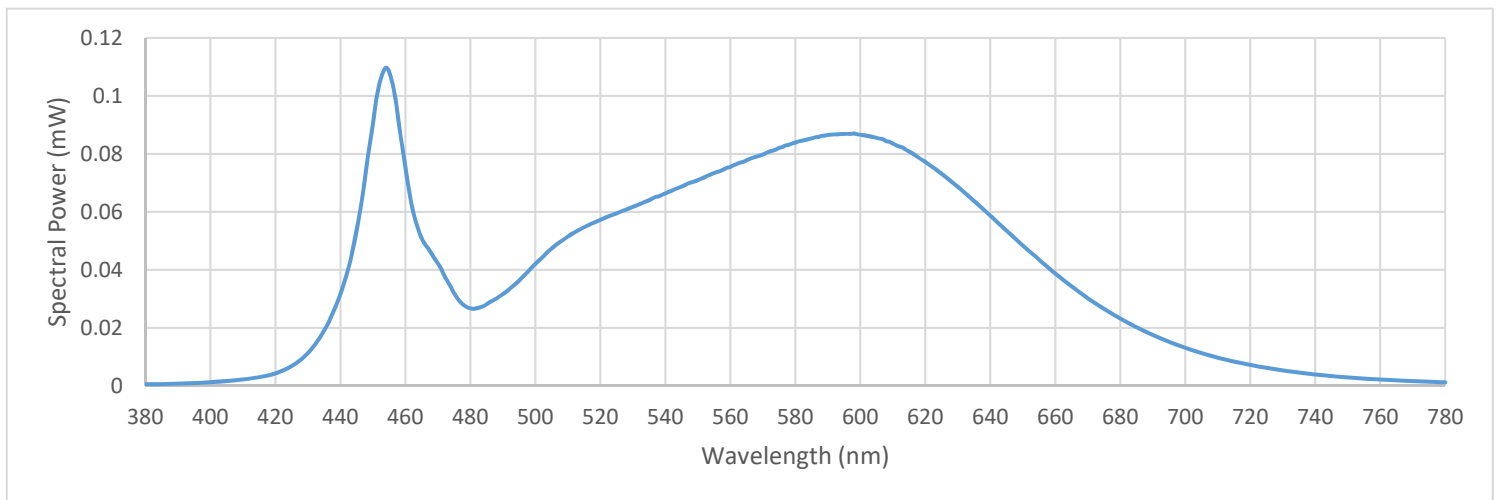


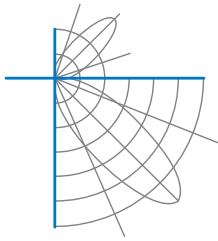
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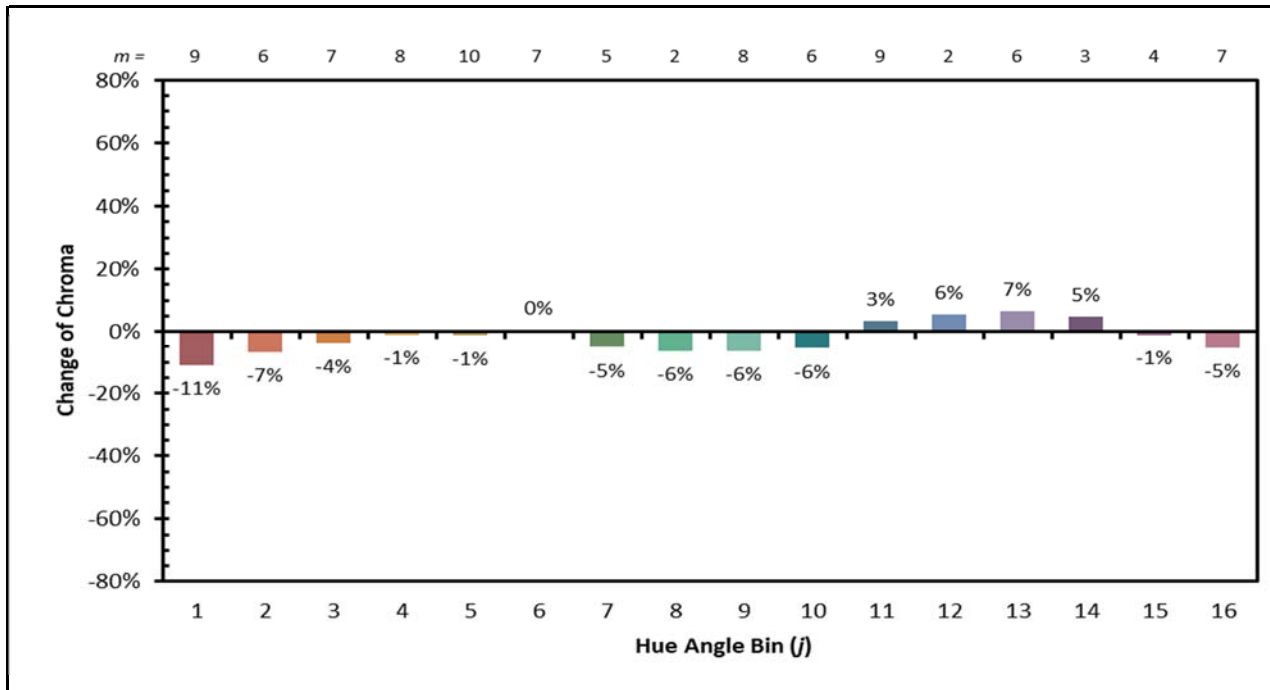
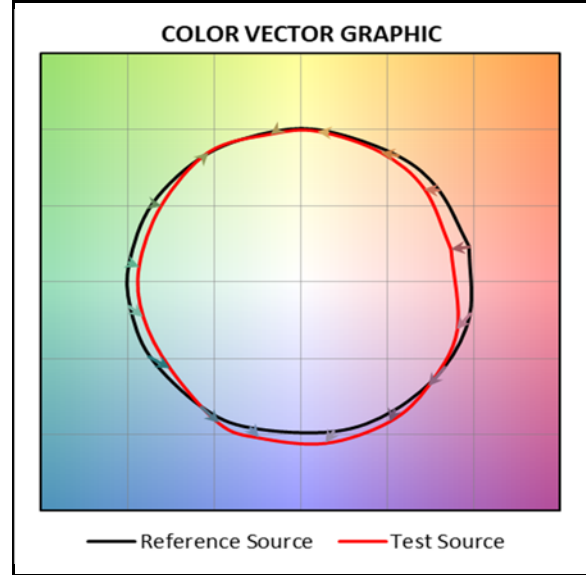
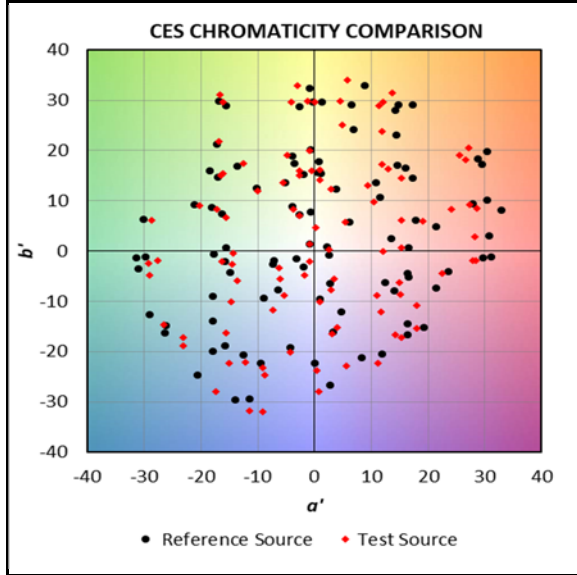
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000540	480	0.026716	580	0.083868	680	0.023183
385	0.000572	485	0.028082	585	0.085383	685	0.020193
390	0.000720	490	0.031636	590	0.086526	690	0.017514
395	0.000915	495	0.036266	595	0.086915	695	0.015172
400	0.001236	500	0.042097	600	0.086611	700	0.013102
405	0.001640	505	0.047304	605	0.085475	705	0.011290
410	0.002177	510	0.051481	610	0.083576	710	0.009683
415	0.002910	515	0.054667	615	0.080831	715	0.008359
420	0.004285	520	0.057270	620	0.077215	720	0.007185
425	0.006758	525	0.059474	625	0.073201	725	0.006169
430	0.011323	530	0.061722	630	0.068585	730	0.005307
435	0.019081	535	0.063990	635	0.063839	735	0.004546
440	0.031696	540	0.066337	640	0.058679	740	0.003887
445	0.053862	545	0.068722	645	0.053480	745	0.003350
450	0.090273	550	0.070933	650	0.048402	750	0.002873
455	0.108337	555	0.073436	655	0.043416	755	0.002478
460	0.075408	560	0.075501	660	0.038768	760	0.002148
465	0.050817	565	0.077798	665	0.034306	765	0.001853
470	0.042272	570	0.079792	670	0.030174	770	0.001587
475	0.031886	575	0.082064	675	0.026518	775	0.001374
						780	0.001186





IES TM-30 Summary





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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, 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
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