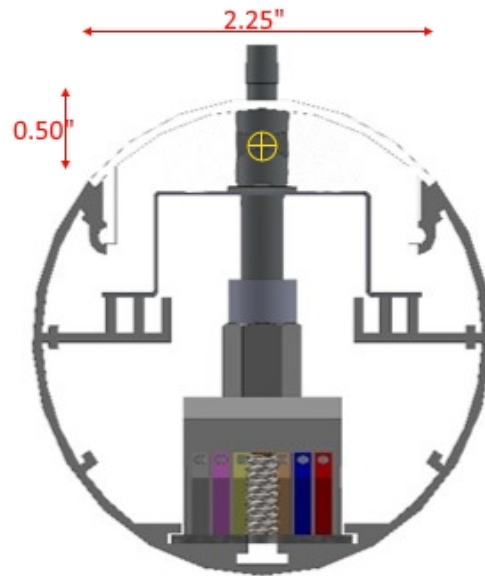




Report of Test

LLIA000930-005A

Catalog Number: AR300-I-MO-K40-80--4-XX-LOH-XXXX-120
 Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.
 90 White LEDs with clear, lightly frosted plastic optics above.
 One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
 120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)



Performance Summary

Total Light Output	2603 lm
Luminaire Power	18.6 W
Luminous Efficacy	139.9 lm/W

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



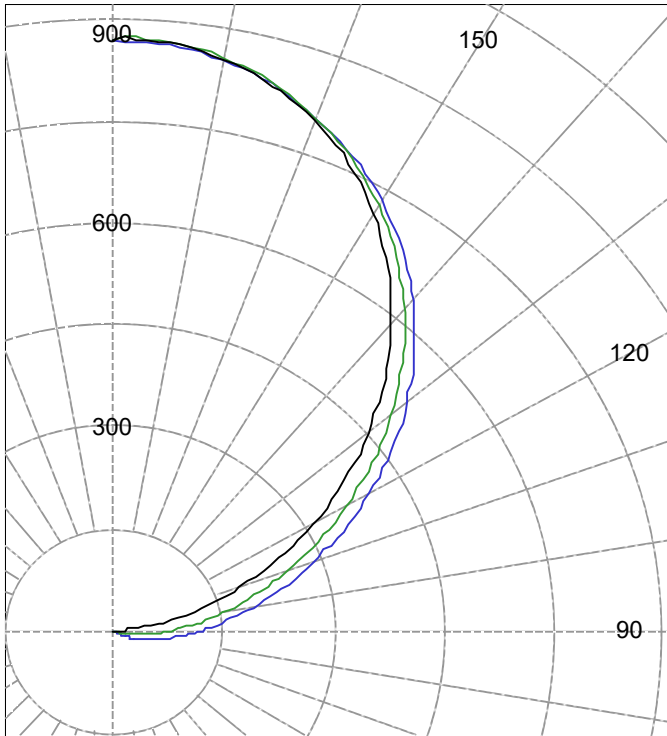
Test Report No. LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)

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	
90.0	0	33	80	111	121	
95.0	27	61	113	145	154	113
100.0	69	101	152	184	193	
105.0	123	150	197	229	238	201
110.0	184	207	249	280	289	
115.0	248	268	306	334	344	299
120.0	314	332	367	392	402	
125.0	382	396	430	453	462	381
130.0	452	462	494	513	521	
135.0	522	528	556	573	579	426
140.0	589	592	616	629	634	
145.0	652	652	672	683	685	418
150.0	709	706	723	731	731	
155.0	759	754	768	773	772	352
160.0	800	795	806	808	806	
165.0	832	826	836	836	833	235
170.0	856	849	858	857	853	
175.0	869	863	872	870	866	82
180.0	872	872	872	872	872	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
180-150	670	N / A	25.7
180-140	1088	N / A	41.8
180-120	1894	N / A	72.8
180-90	2507	N / A	96.3
140-90	1419	N / A	54.5
120-90	613	N / A	23.5
90-0	96	N / A	3.7
180-0	2603	N / A	100.0

Total Light Output = 2,603 lm

Signed:

Authorized Signatory

Date of test 19-Jan-2018
Date of report 25-Jan-2018



Test Report No. LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	0	0	0	0	0
2.5	0	0	0	0	0
5.0	0	0	0	0	0
7.5	0	0	0	0	0
10.0	0	0	0	0	0
12.5	0	0	0	0	0
15.0	0	0	0	0	0
17.5	0	0	0	0	0
20.0	0	0	0	0	0
22.5	0	0	0	0	0
25.0	0	0	0	0	0
27.5	0	0	0	0	0
30.0	0	0	0	0	0
32.5	0	0	0	0	0
35.0	0	0	0	0	3
37.5	0	0	0	0	3
40.0	0	0	0	3	3
42.5	0	0	0	3	4
45.0	0	0	0	3	5
47.5	0	0	0	4	5
50.0	0	0	0	5	7
52.5	0	0	0	6	8
55.0	0	0	3	8	10
57.5	0	0	4	10	13
60.0	0	0	5	12	16
62.5	0	0	6	16	20
65.0	0	0	8	19	25
67.5	0	0	10	24	30
70.0	0	0	13	29	36
72.5	0	0	17	36	43
75.0	0	3	22	43	51
77.5	0	4	28	52	60
80.0	0	7	35	61	70
82.5	0	10	44	72	81
85.0	0	15	55	84	93
87.5	0	23	67	97	106
90.0	0	33	80	111	121



Test Report No. LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	0	33	80	111	121
92.5	11	45	95	127	137
95.0	27	61	113	145	154
97.5	47	79	131	164	173
100.0	69	101	152	184	193
102.5	95	124	174	206	215
105.0	123	150	197	229	238
107.5	155	177	223	254	263
110.0	184	207	249	280	289
112.5	215	237	277	306	316
115.0	248	268	306	334	344
117.5	280	300	336	363	373
120.0	314	332	367	392	402
122.5	348	364	399	422	432
125.0	382	396	430	453	462
127.5	417	429	462	483	492
130.0	452	462	494	513	521
132.5	487	495	526	543	550
135.0	522	528	556	573	579
137.5	556	560	586	601	607
140.0	589	592	616	629	634
142.5	622	623	645	657	660
145.0	652	652	672	683	685
147.5	682	680	698	707	709
150.0	709	706	723	731	731
152.5	735	731	747	753	752
155.0	759	754	768	773	772
157.5	781	776	788	791	790
160.0	800	795	806	808	806
162.5	817	811	822	823	821
165.0	832	826	836	836	833
167.5	845	839	849	848	844
170.0	856	849	858	857	853
172.5	864	857	866	864	860
175.0	869	863	872	870	866
177.5	873	866	875	873	869
180.0	872	872	872	872	872



Test Number: LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.

120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)

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	10
0	96	96	96	96	83	83	83	83	58	58	58	35	35	35	14	14	14	4
1	87	82	78	75	74	70	67	64	49	47	45	29	28	27	10	10	10	1
2	78	71	65	60	67	61	56	52	42	39	37	25	23	22	9	8	8	1
3	71	62	55	50	61	54	48	43	37	33	30	22	20	18	8	7	6	0
4	65	55	47	42	55	47	41	36	33	29	26	19	17	15	7	6	5	0
5	59	49	41	35	51	42	35	31	29	25	22	17	15	13	6	5	4	0
6	55	43	36	30	47	37	31	26	26	22	19	15	13	11	5	5	4	0
7	50	39	31	26	43	33	27	23	23	19	16	14	11	10	5	4	3	0
8	46	35	28	23	40	30	24	20	21	17	14	12	10	8	4	4	3	0
9	43	31	25	20	37	27	21	17	19	15	12	11	9	7	4	3	3	0
10	40	29	22	17	34	25	19	15	17	13	11	10	8	6	4	3	2	0

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.



Test Report No. LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)





Test Report No. LLIA000930-005A

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.
120.0Vac, 60.00Hz, 0.1560A, 18.63W, 0.995PF, 5.1%THD(i)

Test Distance 9.5 m
Test Temperature 25.4 °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

LLIA000930-005B

Integrating Sphere Report

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.



Performance Summary

Voltage	120.0 Vac
Current	0.1566 A
Power	18.70 W
Frequency	59.97 Hz
Power Factor	0.995
Current THD	5.1 %

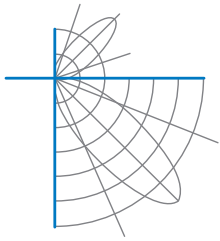
Total Luminous Flux	2690.5 lm
Efficacy	143.9 lm/W
Chromaticity (x,y)	(0.3798, 0.3757)
(u',v')	(0.2251, 0.5011)
Duv	-0.0003
CCT	4009 K
CRI (Ra)	85
R9	19
TM-30: Rf	83
TM-30: Rg	95

Prepared For:

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

Test date: 01/22/2018

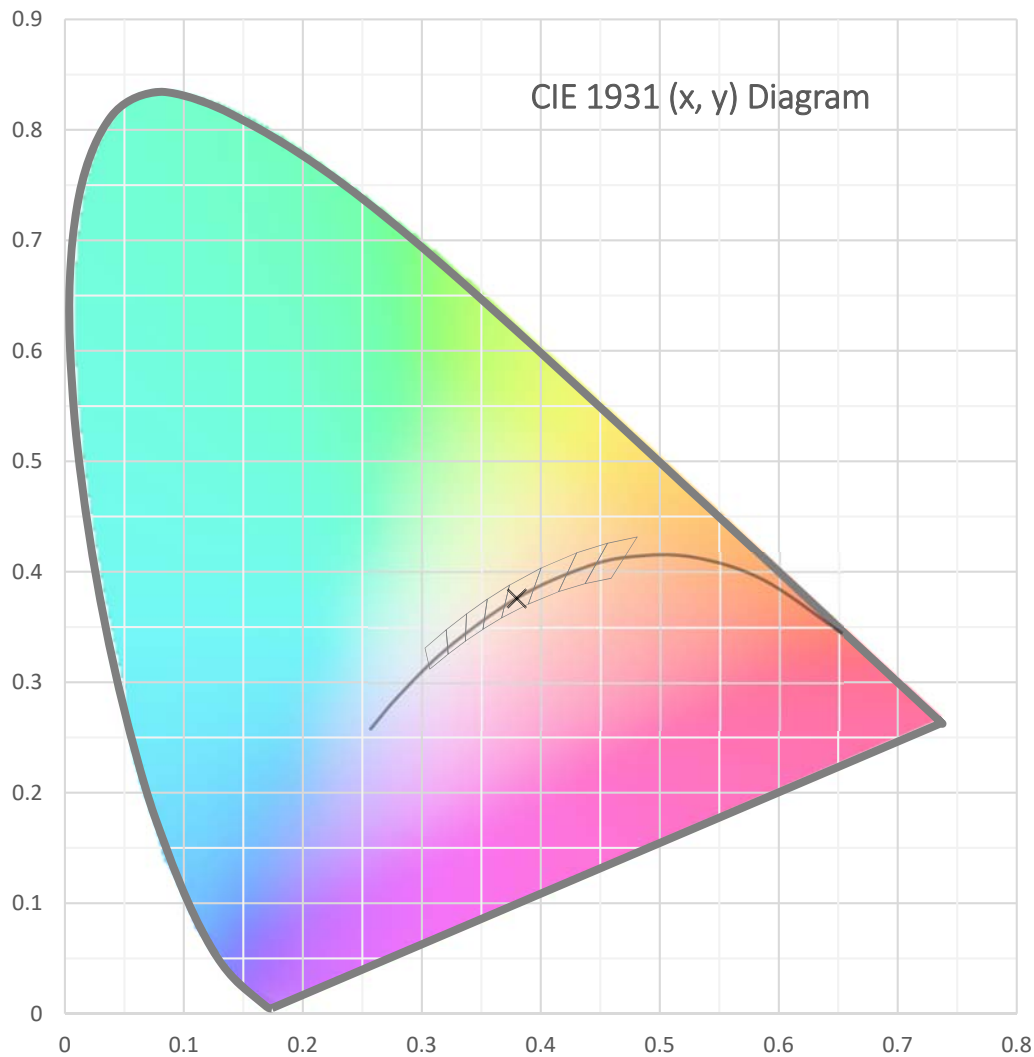
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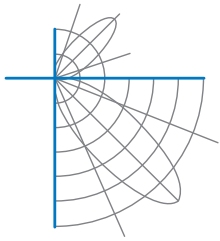


Test Report Number: LLIA000930-005B

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.
90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.





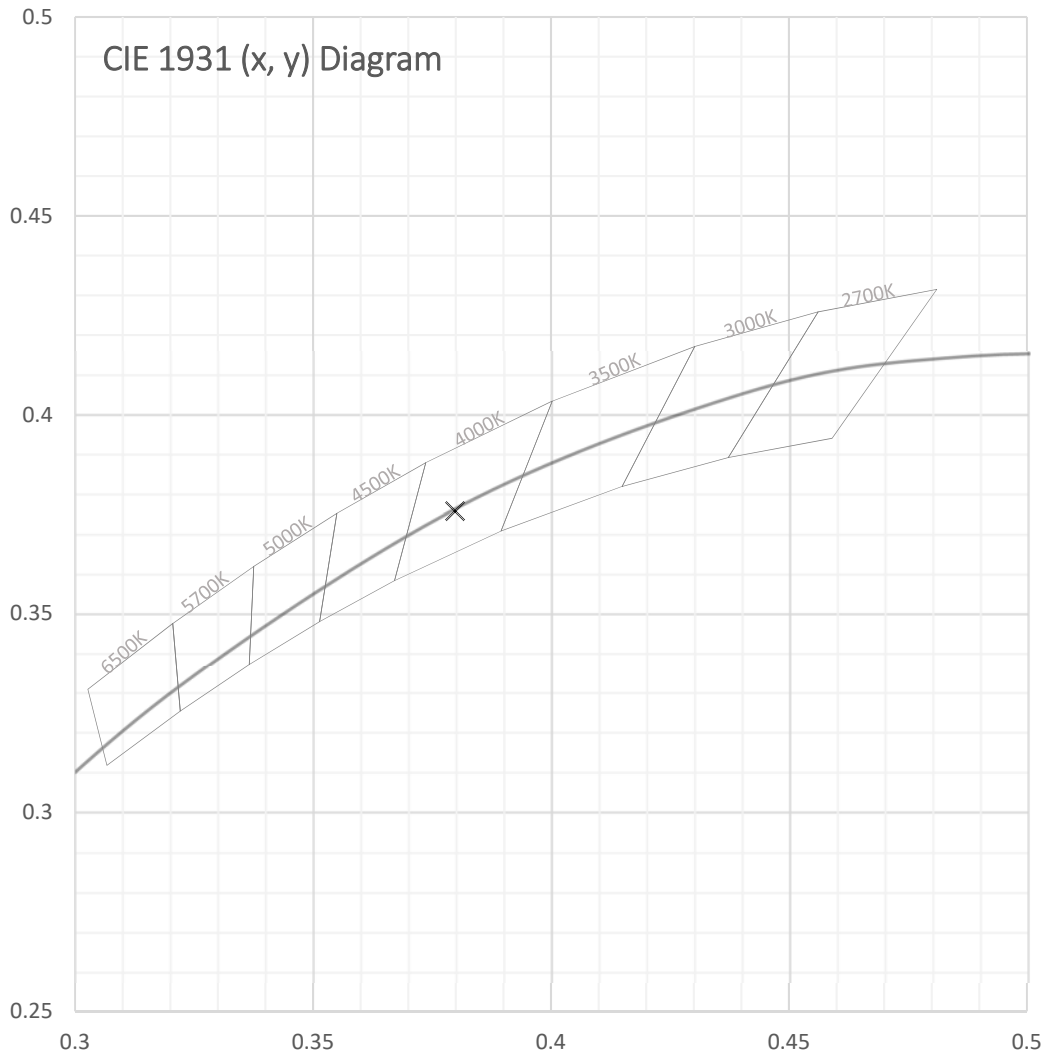
Test Report Number: LLIA000930-005B

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

90 White LEDs with clear, lightly frosted plastic optics above.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.





Test Report Number: LLIA000930-005B

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.
90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.

Spectral Data

Total Radiant Flux	8.378 W
Total Luminous Flux	2690.5 Lm
Chromaticity CIE 1931 (x, y)	(0.3798, 0.3757)
Chromaticity CIE 1976 (u', v')	(0.2251, 0.5011)
Correlated Color Temperature (CCT)	4009 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)	-0.0003
Scotopic/Photopic Ratio *	1.714

Electrical Data

Voltage	120.0 Vac
Current	0.1566 A
Power	18.70 W
Frequency	59.97 Hz
Power Factor	0.995
Current THD	5.1 %



Test Report Number: LLIA000930-005B

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

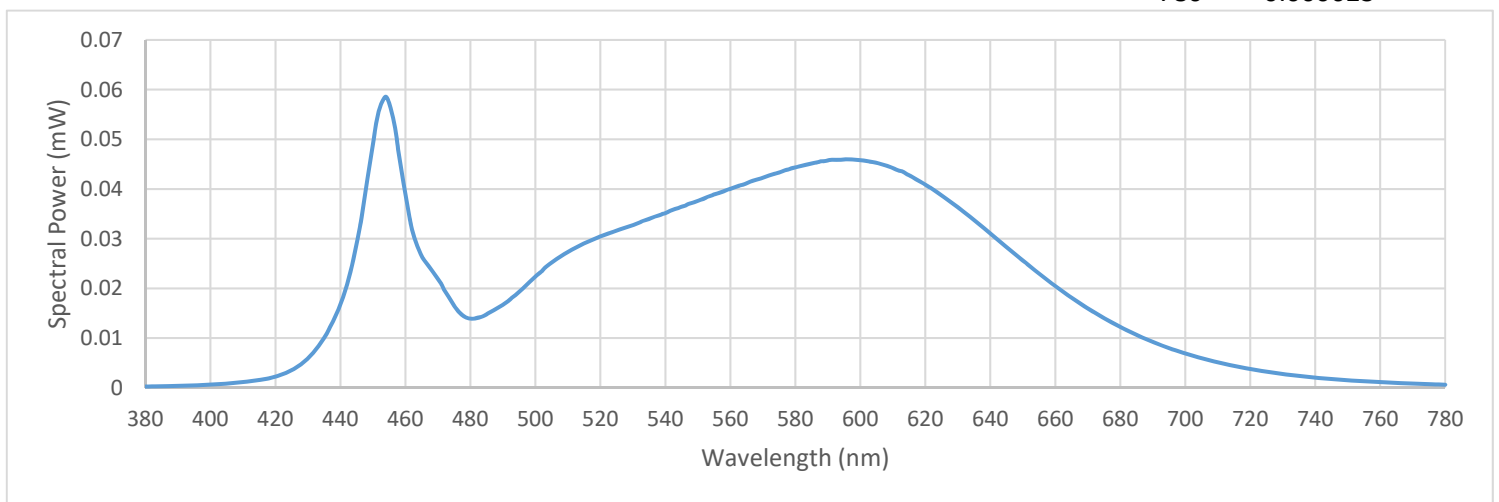
Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.

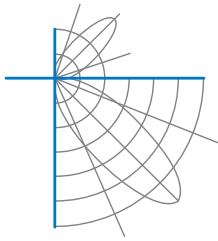
90 White LEDs with clear, lightly frosted plastic optics above.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver.

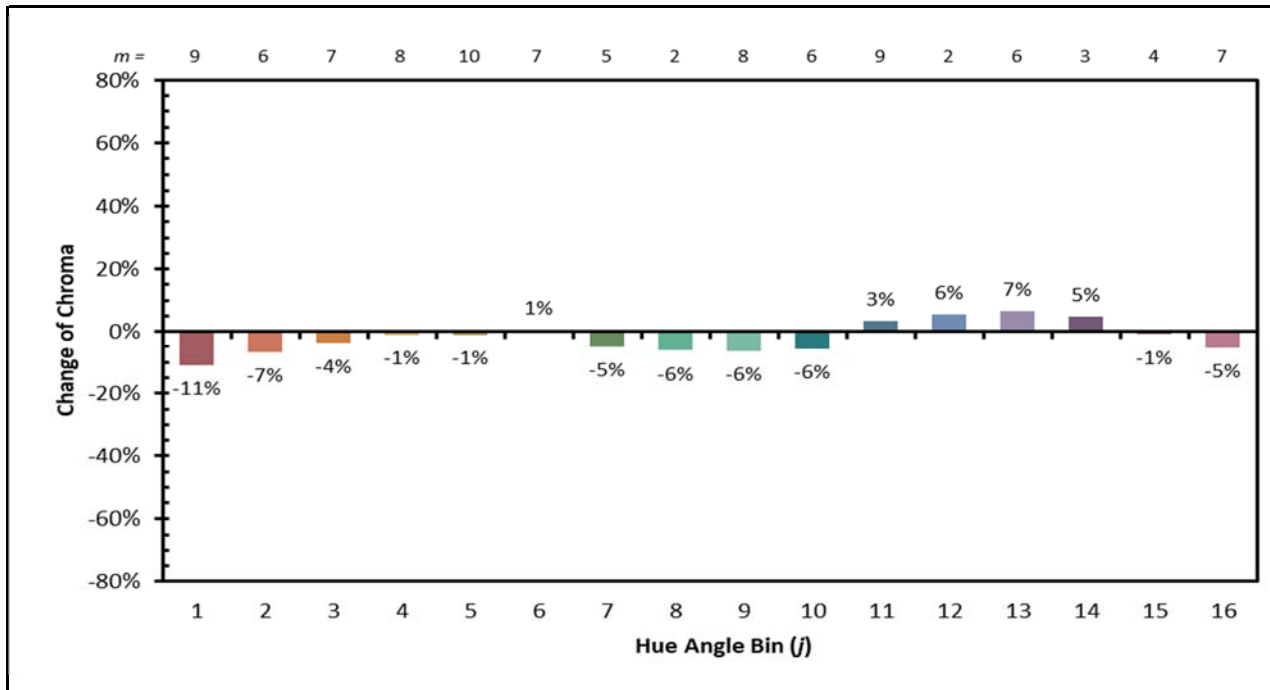
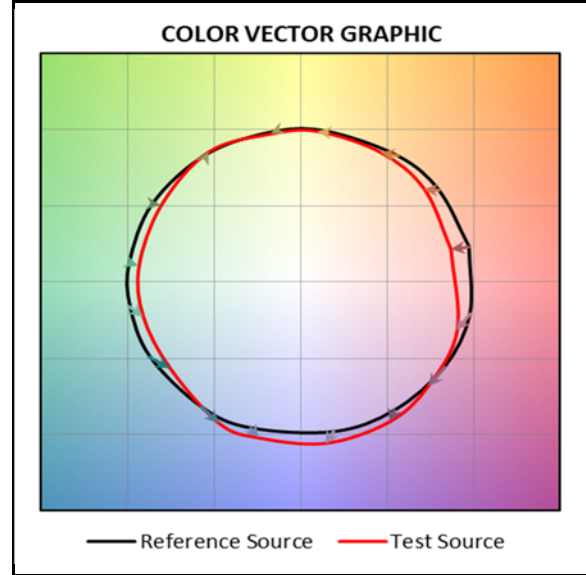
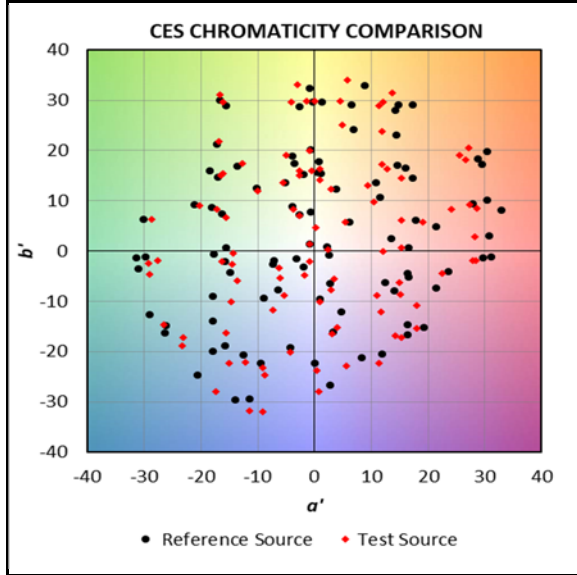
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000268	480	0.013912	580	0.044331	680	0.012225
385	0.000288	485	0.014794	585	0.045157	685	0.010655
390	0.000370	490	0.016748	590	0.045750	690	0.009236
395	0.000474	495	0.019324	595	0.045949	695	0.007987
400	0.000641	500	0.022391	600	0.045781	700	0.006911
405	0.000853	505	0.025176	605	0.045244	705	0.005938
410	0.001148	510	0.027335	610	0.044225	710	0.005098
415	0.001535	515	0.029077	615	0.042758	715	0.004399
420	0.002243	520	0.030428	620	0.040888	720	0.003777
425	0.003531	525	0.031594	625	0.038736	725	0.003241
430	0.005960	530	0.032763	630	0.036333	730	0.002787
435	0.010087	535	0.033960	635	0.033813	735	0.002380
440	0.016834	540	0.035142	640	0.031023	740	0.002045
445	0.029035	545	0.036437	645	0.028323	745	0.001756
450	0.048948	550	0.037628	650	0.025615	750	0.001508
455	0.057259	555	0.038912	655	0.022959	755	0.001300
460	0.039080	560	0.040003	660	0.020505	760	0.001125
465	0.026483	565	0.041153	665	0.018116	765	0.000968
470	0.021940	570	0.042266	670	0.015949	770	0.000832
475	0.016469	575	0.043321	675	0.014022	775	0.000719
						780	0.000623





IES TM-30 Summary





Test Report Number: LLIA000930-005B

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

Pendant mounted, extruded aluminum housing, formed white aluminum reflector tray, frosted plastic enclosure.
90 White LEDs with clear, lightly frosted plastic optics above.
One Osram Optotronic OTi 30/120-277/1A0 DIM L 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: 24.7 °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.

This report is free of erasures and corrections

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