

Report of Test

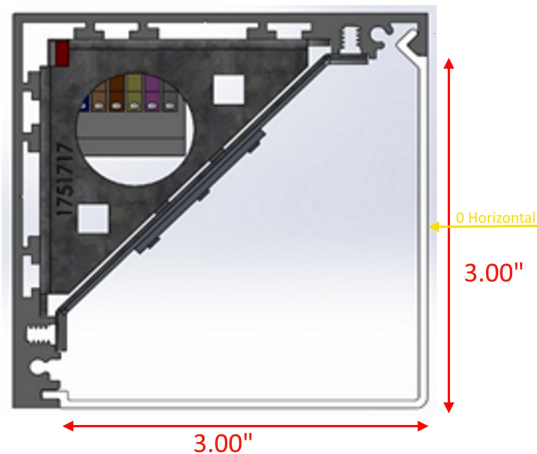
LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

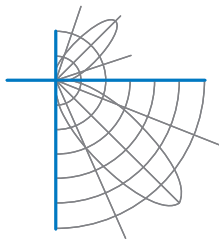
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.
120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)



Performance Summary

Total Light Output	1967 lm
Luminaire Power	17.0 W
Luminous Efficacy	115.7 lm/W

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



Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

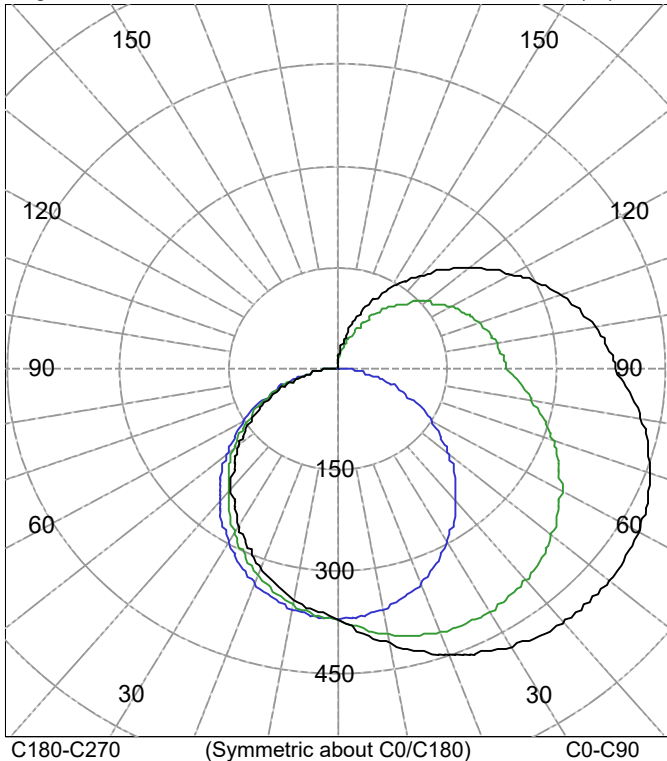
Wall/ceiling mounted extruded aluminum housing, white enamel aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Legend: C0/C180-Black, C45/C225-Green, C90/C270-Blue (cd)



AVERAGE LUMINANCE (cd/m²)

Gamma	C0	C45	C90
45.0	3708	3427	3240
55.0	3734	3338	2963
65.0	3791	3256	2629
75.0	3874	3194	2159
85.0	3982	3212	1301

INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	370	370	370	370	370	
5.0	390	389	384	372	366	36
10.0	413	409	397	376	360	
15.0	432	426	407	375	349	104
20.0	449	440	413	371	335	
25.0	462	450	415	363	317	163
30.0	472	457	414	351	297	
35.0	480	461	410	337	275	205
40.0	484	462	403	321	251	
45.0	486	460	393	303	226	228
50.0	485	456	382	283	199	
55.0	482	449	368	262	172	229
60.0	476	440	352	240	144	
65.0	467	428	333	217	117	212
70.0	455	413	313	193	90	
75.0	440	397	291	168	64	179
80.0	421	378	270	145	40	
85.0	400	356	249	123	18	138
90.0	379	336	230	106	0	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	303	N / A	15.4
0-40	508	N / A	25.8
0-60	965	N / A	49.1
0-90	1494	N / A	75.9
40-90	986	N / A	50.1
60-90	529	N / A	26.9
90-180	473	N / A	24.1
0-180	1967	N / A	100.0

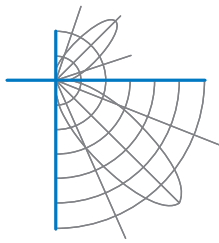
Total Light Output = 1,967 lm

Spacing Criterion: 0-180 1.9
Spacing Criterion: 90-270 1.2

Signed:

Authorized Signatory

Date of test 1-Aug-2018
Date of report 3-Aug-2018



Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

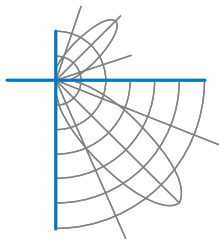
144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	370	370	370	370	370
2.5	379	378	376	370	368
5.0	390	389	384	372	366
7.5	402	400	391	375	363
10.0	413	409	397	376	360
12.5	423	418	403	376	355
15.0	432	426	407	375	349
17.5	441	434	410	374	342
20.0	449	440	413	371	335
22.5	456	446	414	367	326
25.0	462	450	415	363	317
27.5	468	454	415	357	308
30.0	472	457	414	351	297
32.5	477	460	412	345	286
35.0	480	461	410	337	275
37.5	482	462	406	329	263
40.0	484	462	403	321	251
42.5	485	462	398	312	239
45.0	486	460	393	303	226
47.5	486	459	388	293	212
50.0	485	456	382	283	199
52.5	484	453	375	272	185
55.0	482	449	368	262	172
57.5	479	445	360	251	158
60.0	476	440	352	240	144
62.5	472	434	343	229	130
65.0	467	428	333	217	117
67.5	461	421	323	205	103
70.0	455	413	313	193	90
72.5	448	405	302	181	77
75.0	440	397	291	168	64
77.5	431	387	281	156	51
80.0	421	378	270	145	40
82.5	411	367	259	134	29
85.0	400	356	249	123	18
87.5	388	345	238	113	8
90.0	379	336	230	106	0



Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

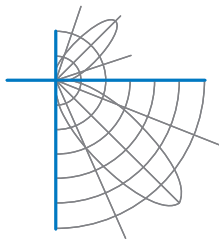
144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	379	336	230	106	0
92.5	375	333	228	105	0
95.0	370	328	226	104	0
97.5	364	324	223	103	0
100.0	357	318	220	102	0
102.5	349	311	216	100	0
105.0	341	304	212	99	0
107.5	331	297	208	98	0
110.0	321	289	203	96	0
112.5	311	280	198	94	0
115.0	300	271	193	91	0
117.5	290	262	187	88	0
120.0	278	252	181	86	0
122.5	267	242	174	83	0
125.0	255	232	167	80	0
127.5	243	222	160	77	0
130.0	231	211	153	73	0
132.5	218	201	145	70	0
135.0	206	190	138	65	0
137.5	194	179	130	61	0
140.0	182	168	123	57	0
142.5	169	156	115	52	0
145.0	157	145	106	48	0
147.5	145	134	98	44	0
150.0	132	123	88	40	0
152.5	120	112	78	36	0
155.0	108	100	69	32	0
157.5	96	90	60	29	0
160.0	84	79	52	25	0
162.5	73	68	44	22	0
165.0	61	57	36	19	0
167.5	51	47	29	16	0
170.0	40	37	22	12	0
172.5	30	28	16	9	0
175.0	18	14	10	6	0
177.5	9	6	5	3	0
180.0	0	0	0	0	0



Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

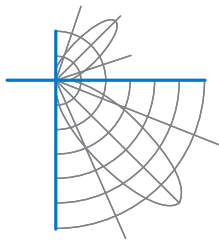
144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	370	370	370	370	370
2.5	368	366	368	366	363
5.0	366	363	364	362	358
7.5	363	359	359	356	352
10.0	360	354	353	350	345
12.5	355	348	347	342	337
15.0	349	342	339	334	329
17.5	342	334	331	326	320
20.0	335	326	322	316	311
22.5	326	317	313	307	301
25.0	317	307	303	296	291
27.5	308	297	292	286	280
30.0	297	286	281	275	269
32.5	286	275	270	264	258
35.0	275	264	259	252	247
37.5	263	252	247	241	235
40.0	251	240	235	229	224
42.5	239	228	223	217	212
45.0	226	216	210	205	201
47.5	212	203	198	193	189
50.0	199	190	186	181	177
52.5	185	177	173	168	165
55.0	172	165	161	156	153
57.5	158	152	148	144	141
60.0	144	139	135	131	129
62.5	130	126	123	119	117
65.0	117	113	110	107	105
67.5	103	100	97	95	94
70.0	90	88	85	83	82
72.5	77	75	73	72	71
75.0	64	62	61	60	60
77.5	51	50	50	49	49
80.0	40	39	39	39	39
82.5	29	28	28	29	29
85.0	18	18	19	19	19
87.5	8	9	9	10	10
90.0	0	0	0	0	2



Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

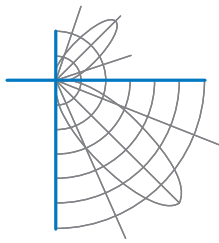
144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	0	0	0	0	2
92.5	0	0	0	0	0
95.0	0	0	0	0	0
97.5	0	0	0	0	0
100.0	0	0	0	0	0
102.5	0	0	0	0	0
105.0	0	0	0	0	0
107.5	0	0	0	0	0
110.0	0	0	0	0	0
112.5	0	0	0	0	0
115.0	0	0	0	0	0
117.5	0	0	0	0	0
120.0	0	0	0	0	0
122.5	0	0	0	0	0
125.0	0	0	0	0	0
127.5	0	0	0	0	0
130.0	0	0	0	0	0
132.5	0	0	0	0	0
135.0	0	0	0	0	0
137.5	0	0	0	0	0
140.0	0	0	0	0	0
142.5	0	0	0	0	0
145.0	0	0	0	0	0
147.5	0	0	0	0	0
150.0	0	0	0	0	0
152.5	0	0	0	0	0
155.0	0	0	0	0	0
157.5	0	0	0	0	0
160.0	0	0	0	0	0
162.5	0	0	0	0	0
165.0	0	0	0	0	0
167.5	0	0	0	0	0
170.0	0	0	0	0	0
172.5	0	0	0	0	0
175.0	0	0	0	0	0
177.5	0	0	0	0	0
180.0	0	0	0	0	0



Test Number: LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX
Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.
120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)

Coefficients Of Utilization - Zonal Cavity Method

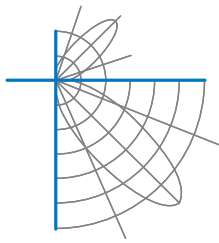
Effective Floor Cavity Reflectance 0.20

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	113	113	113	113	108	108	108	108	98	98	98	88	88	88	80	80	80	76
1	100	94	89	84	95	90	85	81	81	77	74	73	70	67	66	63	61	57
2	90	81	73	66	85	77	70	64	69	64	59	62	58	54	56	52	49	45
3	81	70	61	54	77	67	58	52	60	53	48	54	49	44	49	44	40	37
4	74	61	52	45	70	58	50	43	53	46	40	48	42	37	43	38	34	31
5	68	54	45	38	64	52	43	37	47	40	34	42	36	32	38	33	29	26
6	62	49	39	33	59	46	38	32	42	35	29	38	32	27	34	29	25	23
7	58	44	35	29	54	42	34	28	38	31	26	35	29	24	31	26	22	20
8	54	40	31	25	51	38	30	24	35	28	23	32	26	21	29	24	20	17
9	50	36	28	22	47	35	27	22	32	25	20	29	23	19	26	21	18	16
10	47	33	25	20	44	32	24	19	29	23	18	27	21	17	25	20	16	14

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	10.3	9.00	7.20
8.0	5.8	12.00	9.60
10.0	3.7	15.00	12.00
12.0	2.6	18.00	14.40
14.0	1.9	21.00	16.80
16.0	1.4	24.01	19.20



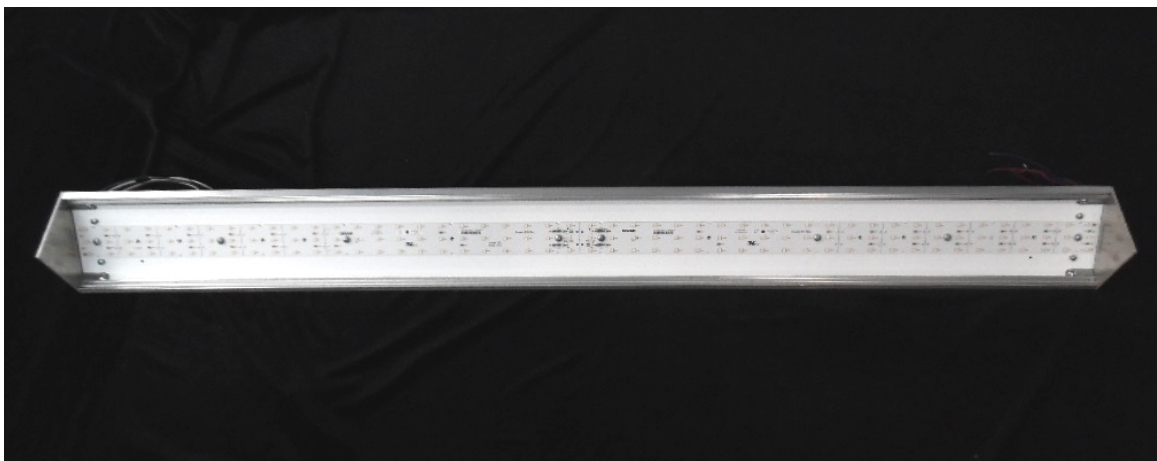
Test Report No. LLIA001008-001A

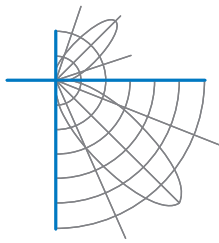
Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.
120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%THD(i)





Test Report No. LLIA001008-001A

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.
120.0Vac, 60.00Hz, 0.1428A, 17.03W, 0.993PF, 5.5%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.

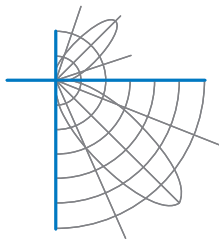
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA001008-001B

Integrating Sphere Report

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.



Performance Summary

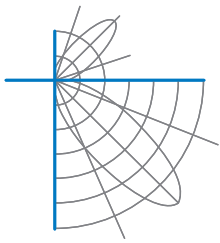
Voltage	120.0 Vac
Current	0.1429 A
Power	17.03 W
Frequency	59.97 Hz
Power Factor	0.993
Current THD	5.6 %
Total Luminous Flux	2055.2 lm
Efficacy	120.7 lm/W
Chromaticity (x,y)	(0.4091, 0.3901)
(u',v')	(0.2385, 0.5116)
Duv	-0.0011
CCT	3412 K
CRI (Ra)	83
R9	18
TM-30: Rf	82
TM-30: Rg	98

Prepared For:

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

Test date: 08/01/2018

Report date: 08/03/2018



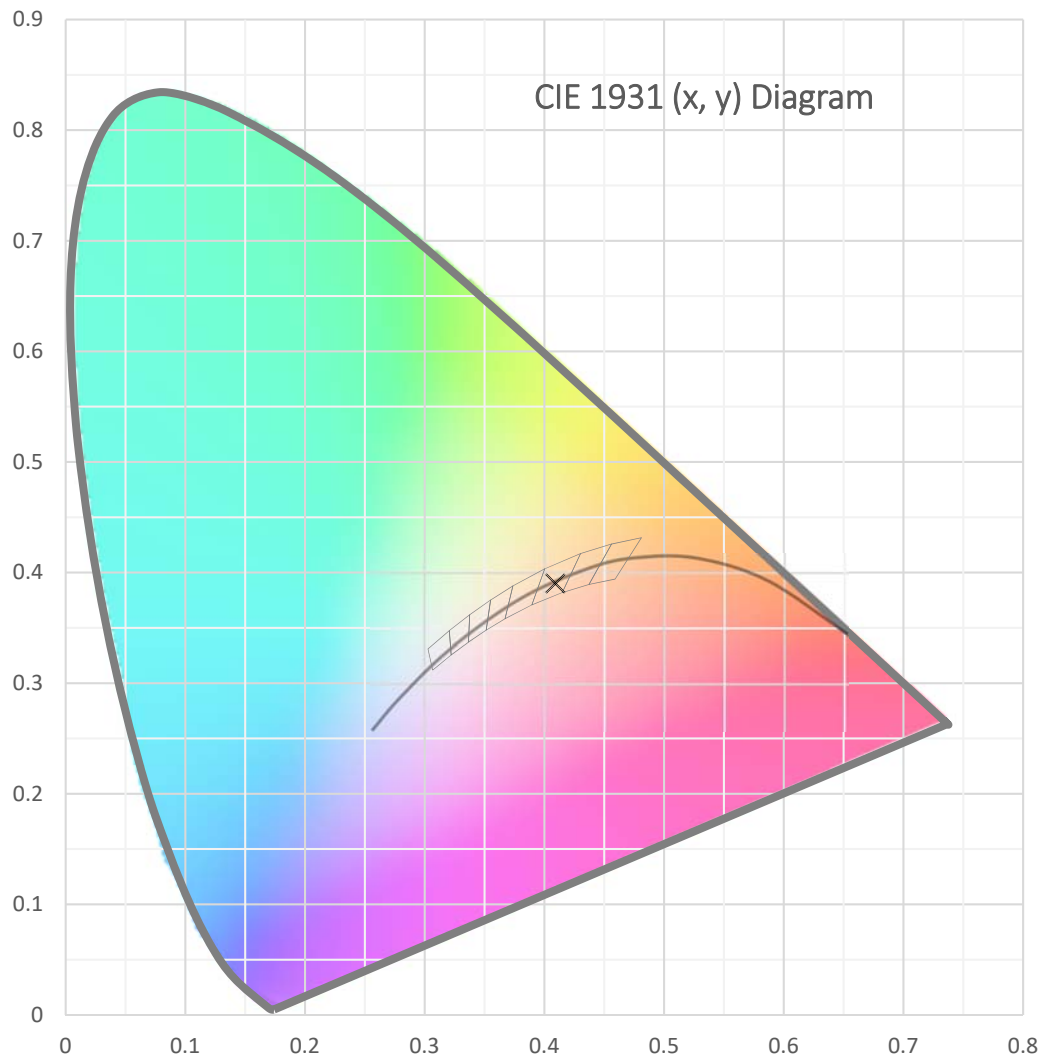
Test Report Number: LLIA001008-001B

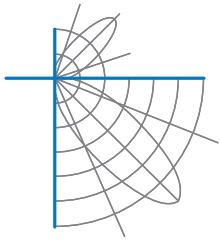
Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.





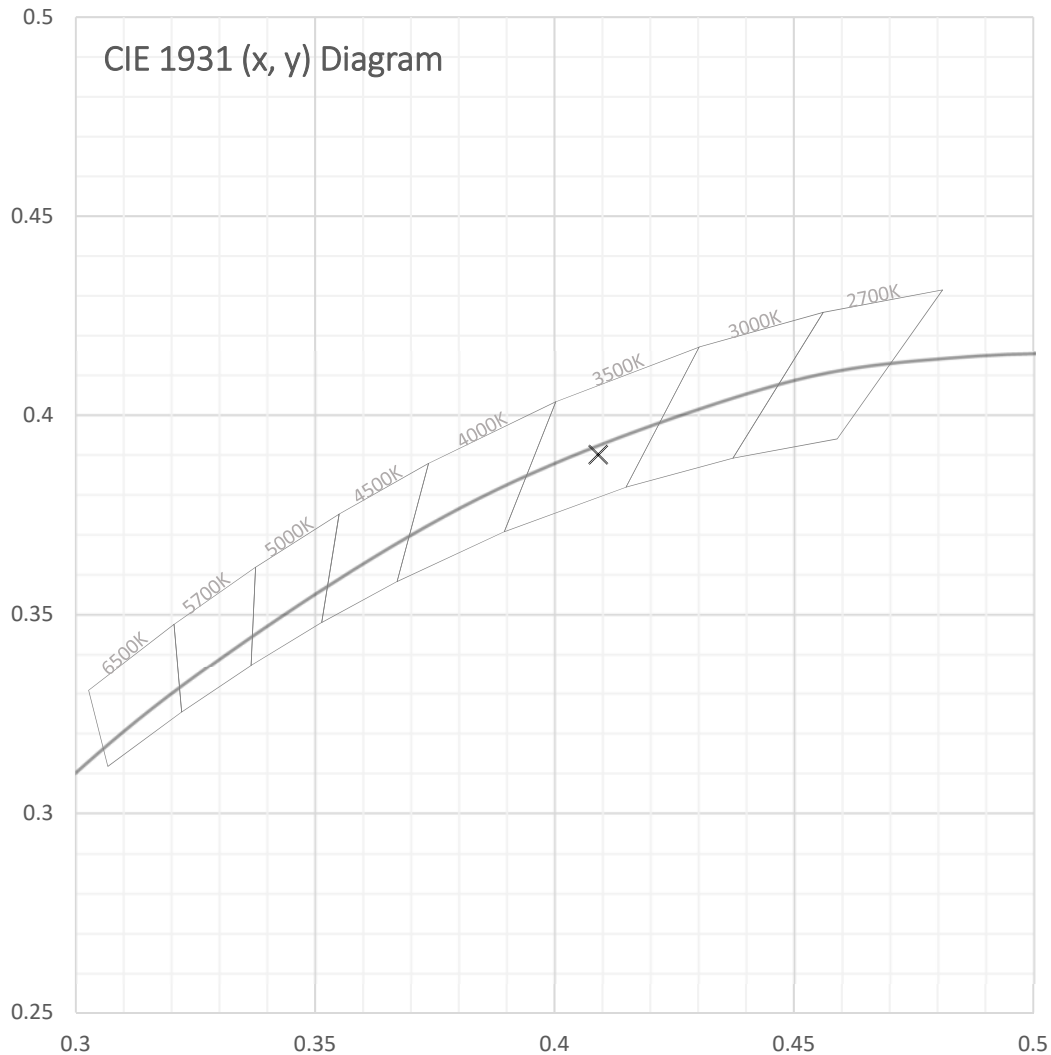
Test Report Number: LLIA001008-001B

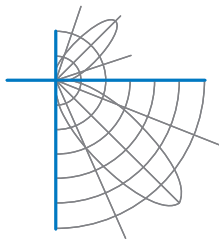
Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.





Test Report Number: LLIA001008-001B

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

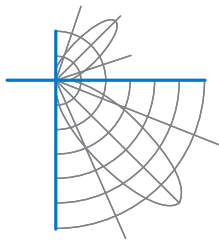
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

Spectral Data

Total Radiant Flux	6.432 W
Total Luminous Flux	2055.2 Lm
Chromaticity CIE 1931 (x, y)	(0.4091, 0.3901)
Chromaticity CIE 1976 (u', v')	(0.2385, 0.5116)
Correlated Color Temperature (CCT)	3412 K
Color Rendering Index (Ra)	83
R1	82
R2	89
R3	94
R4	83
R5	82
R6	85
R7	86
R8	66
R9	18
R10	74
R11	81
R12	65
R13	84
R14	96
TM-30: Rf	82
TM-30: Rg	98
Distance from Planckian Locus (Duv)	-0.0011
Scotopic/Photopic Ratio *	1.475

Electrical Data

Voltage	120.0 Vac
Current	0.1429 A
Power	17.03 W
Frequency	59.97 Hz
Power Factor	0.993
Current THD	5.6 %



Test Report Number: LLIA001008-001B

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

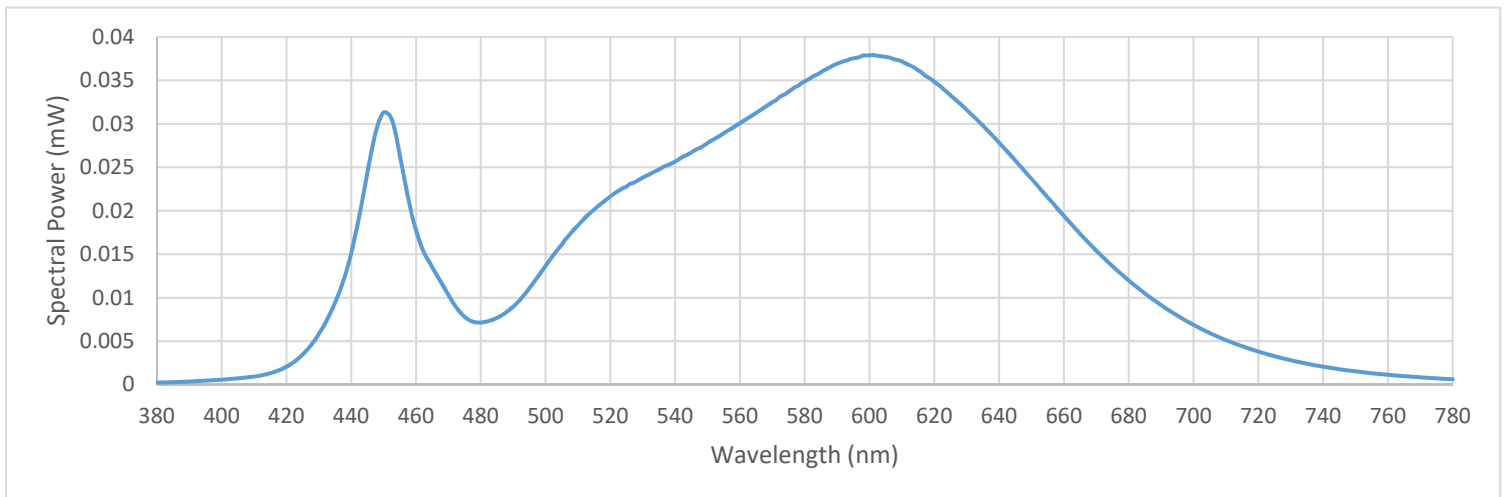
Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

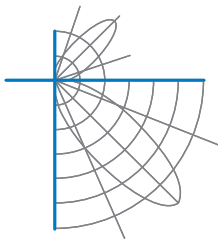
144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

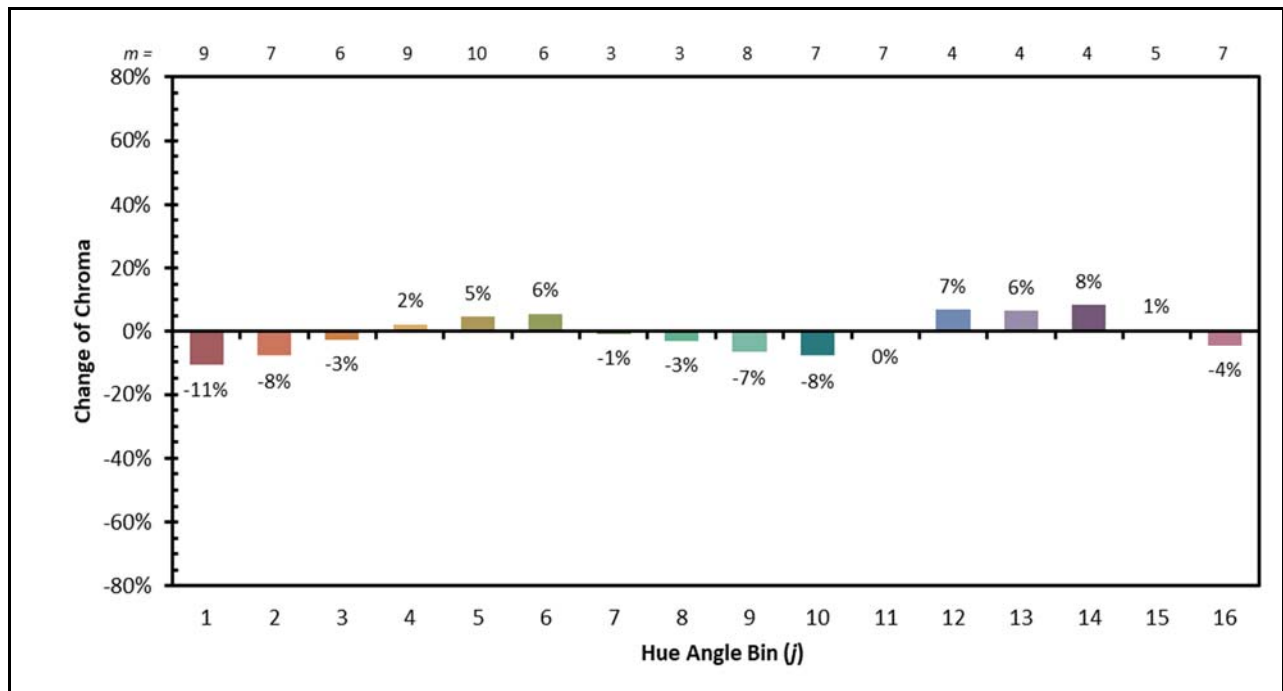
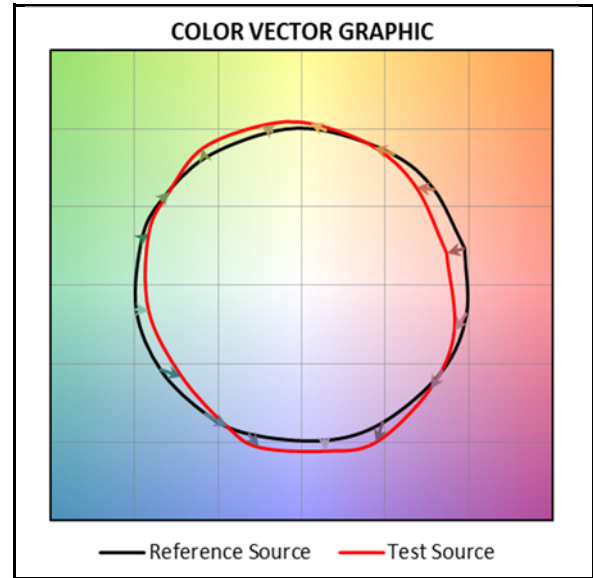
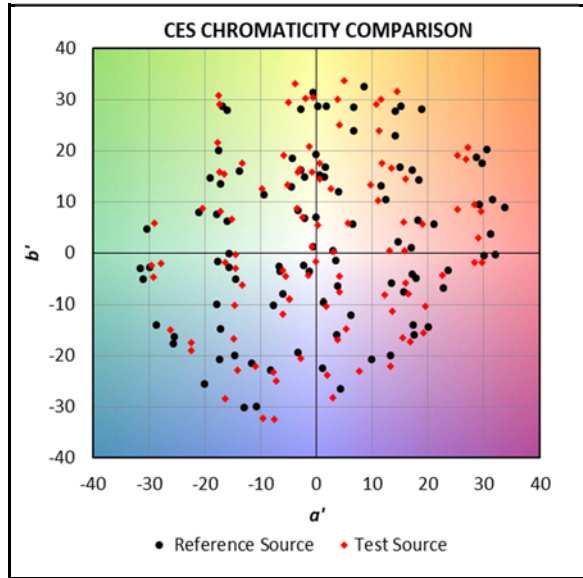
Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

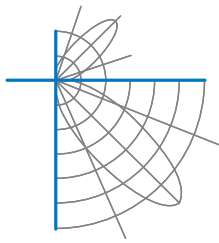
380	0.000246	480	0.007135	580	0.034874	680	0.011980
385	0.000278	485	0.007687	585	0.035957	685	0.010490
390	0.000363	490	0.008976	590	0.036922	690	0.009138
395	0.000451	495	0.011109	595	0.037529	695	0.007936
400	0.000570	500	0.013665	600	0.037870	700	0.006893
405	0.000723	505	0.016109	605	0.037696	705	0.005938
410	0.000929	510	0.018318	610	0.037184	710	0.005122
415	0.001312	515	0.020165	615	0.036149	715	0.004423
420	0.002065	520	0.021661	620	0.034823	720	0.003800
425	0.003441	525	0.022778	625	0.033295	725	0.003275
430	0.005839	530	0.023820	630	0.031591	730	0.002812
435	0.009423	535	0.024745	635	0.029808	735	0.002409
440	0.015090	540	0.025650	640	0.027812	740	0.002058
445	0.024408	545	0.026722	645	0.025801	745	0.001778
450	0.031302	550	0.027760	650	0.023694	750	0.001528
455	0.026389	555	0.028907	655	0.021503	755	0.001314
460	0.017825	560	0.030076	660	0.019449	760	0.001136
465	0.013465	565	0.031234	665	0.017341	765	0.000976
470	0.010334	570	0.032500	670	0.015399	770	0.000840
475	0.007786	575	0.033702	675	0.013622	775	0.000723
						780	0.000624





IES TM-30 Summary





Test Report Number: LLIA001008-001B

Catalog Number: AS350-MO-K35-80-4-XX-LOH-FXXX-UNV-XX

Wall/ceiling mounted extruded aluminum housing, white enamel
aluminum reflector, translucent white plastic enclosure.

144 white LEDs, one Osram PrevaLED Bar board with 144 LEDs.

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver labeled as 440mA.

Test Equipment Configuration: LightLab International Allentown 2m Integrating Sphere
Measurements acquired using a Labsphere CDS 2600 spectroradiometer
Testing was performed using 4π geometry

Test Temperature: 24.4 °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

This report may contain data that are not covered by the NVLAP accreditation.
Quantities marked with * are not covered.