

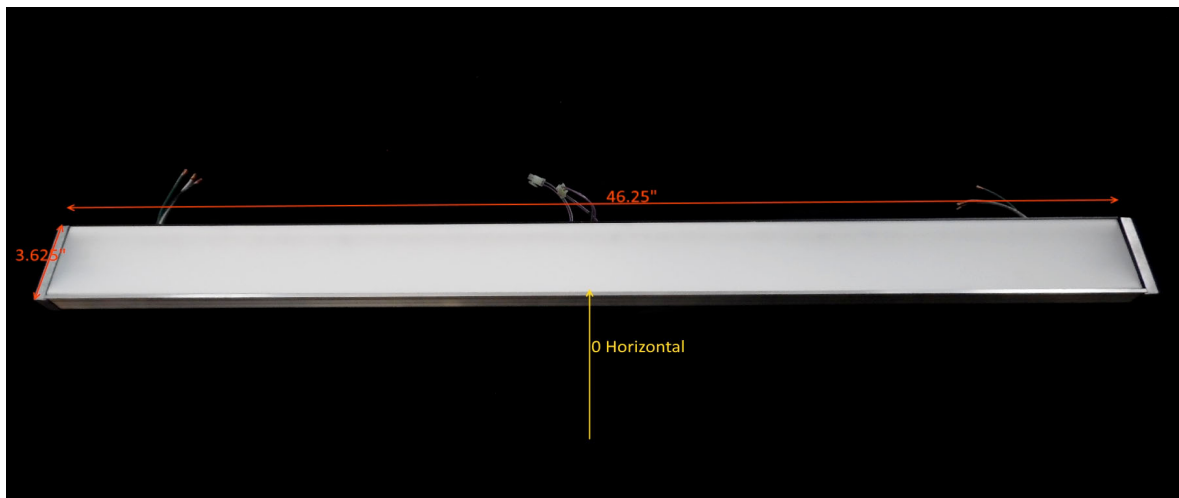
Report of Test

LLIA000817-002A

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
formed white enamel aluminum reflector, translucent white plastic enclosure.
92 white LEDs

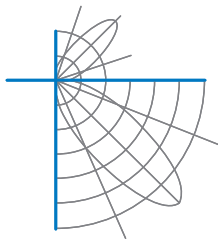
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA
120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)



Performance Summary

Total Light Output	2461 lm
Luminaire Power	18.4 W
Luminous Efficacy	133.8 lm/W

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



Test Report No. LLIA000817-002A

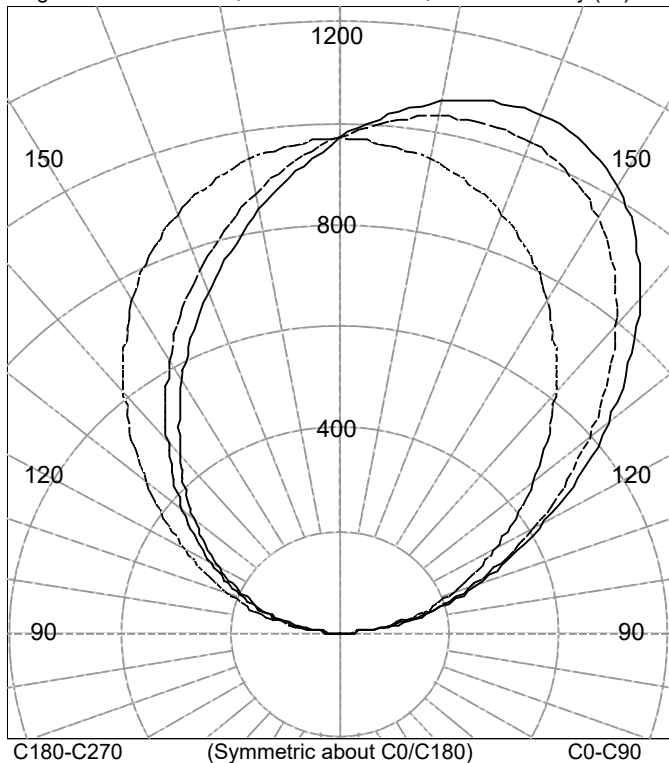
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120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)

Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
90.0	2	2	1	1	1	
95.0	61	61	59	57	53	57
100.0	125	123	120	113	105	
105.0	191	189	182	171	157	167
110.0	263	260	249	233	211	
115.0	343	337	324	299	266	271
120.0	433	424	407	369	325	
125.0	531	522	495	444	390	362
130.0	637	628	590	527	459	
135.0	746	734	687	610	533	427
140.0	849	835	782	695	608	
145.0	940	924	868	775	683	441
150.0	1011	994	940	845	753	
155.0	1058	1042	992	904	818	384
160.0	1081	1067	1023	947	873	
165.0	1081	1070	1034	974	915	260
170.0	1060	1053	1029	985	945	
175.0	1022	1019	1008	983	964	92
180.0	971	971	971	971	971	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
180-150	735	N / A	29.9
180-140	1176	N / A	47.8
180-120	1966	N / A	79.9
180-90	2461	N / A	100.0
140-90	1284	N / A	52.2
120-90	495	N / A	20.1
90-0	0	N / A	0.0
180-0	2461	N / A	100.0

Total Light Output = 2,461 lm

Signed:

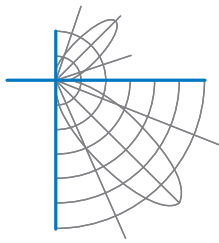
Authorized Signatory

Date of test

7-Jul-2017

Date of report

11-Jul-2017



Test Report No. LLIA000817-002A

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

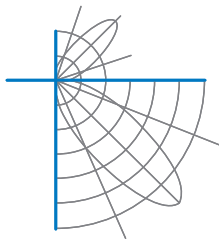
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92 white LEDs

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120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	2	2	1	1	1
92.5	31	31	30	28	26
95.0	61	61	59	57	53
97.5	93	92	89	85	79
100.0	125	123	120	113	105
102.5	157	157	150	142	131
105.0	191	189	182	171	157
107.5	226	226	215	202	184
110.0	263	260	249	233	211
112.5	302	297	286	266	238
115.0	343	337	324	299	266
117.5	387	380	364	333	295
120.0	433	424	407	369	325
122.5	481	472	452	406	357
125.0	531	522	495	444	390
127.5	584	574	542	485	424
130.0	637	628	590	527	459
132.5	692	681	639	568	496
135.0	746	734	687	610	533
137.5	798	786	735	653	570
140.0	849	835	782	695	608
142.5	896	881	826	736	646
145.0	940	924	868	775	683
147.5	978	961	906	811	719
150.0	1011	994	940	845	753
152.5	1038	1021	969	877	786
155.0	1058	1042	992	904	818
157.5	1073	1058	1010	928	847
160.0	1081	1067	1023	947	873
162.5	1084	1071	1031	962	895
165.0	1081	1070	1034	974	915
167.5	1073	1064	1034	981	931
170.0	1060	1053	1029	985	945
172.5	1043	1038	1020	986	956
175.0	1022	1019	1008	983	964
177.5	998	997	992	977	968
180.0	971	971	971	971	971



Test Report No. LLIA000817-002A

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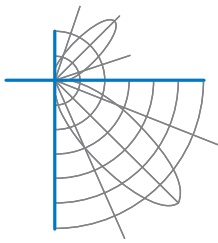
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120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	1	0	1	1	1
92.5	26	24	22	21	20
95.0	53	49	45	43	42
97.5	79	73	68	65	64
100.0	105	97	91	87	85
102.5	131	121	113	108	106
105.0	157	145	134	129	127
107.5	184	169	156	149	147
110.0	211	193	178	170	168
112.5	238	218	201	191	188
115.0	266	243	223	212	209
117.5	295	268	246	234	231
120.0	325	293	270	256	252
122.5	357	319	294	278	275
125.0	390	346	319	302	298
127.5	424	374	345	326	321
130.0	459	403	372	351	346
132.5	496	433	399	377	371
135.0	533	465	428	404	397
137.5	570	498	457	432	425
140.0	608	531	487	461	453
142.5	646	565	519	491	482
145.0	683	600	551	521	511
147.5	719	634	584	552	542
150.0	753	669	618	585	573
152.5	786	703	651	617	606
155.0	818	736	685	651	638
157.5	847	769	719	685	672
160.0	873	799	752	719	706
162.5	895	828	785	753	740
165.0	915	855	816	787	774
167.5	931	879	847	821	809
170.0	945	902	876	854	843
172.5	956	922	904	886	876
175.0	964	940	930	917	909
177.5	968	955	954	946	939
180.0	971	971	971	971	971



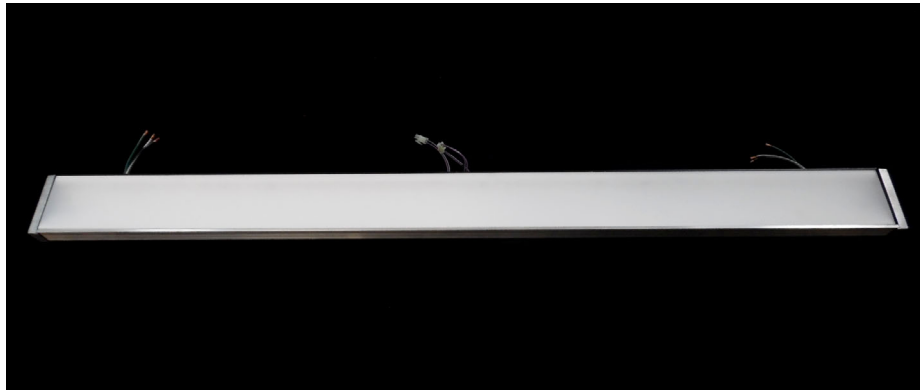
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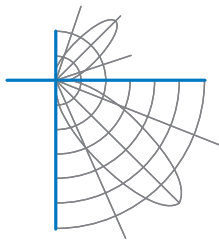
Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
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92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA
120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)





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120.0Vac, 60.00Hz, 0.1545A, 18.43W, 0.995PF, 5.1%THD(i)

Test Distance 9.5 m
Test Temperature 24.9 °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.

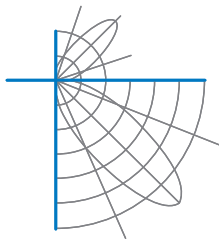
Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

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

LLIA000817-002B

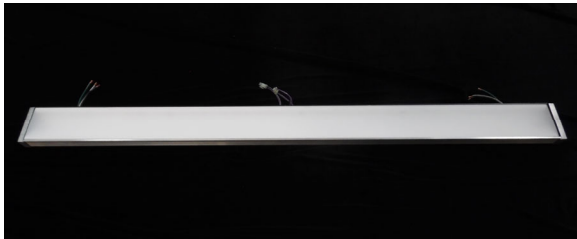
Integrating Sphere Report

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
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92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA



Performance Summary

Voltage	120.0 Vac
Current	0.1543 A
Power	18.42 W
Frequency	60.00 Hz
Power Factor	0.995
Current THD	5.1 %

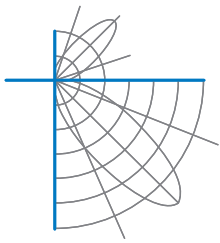
Total Luminous Flux	2544.8 lm
Efficacy	138.2 lm/W
Chromaticity (x,y)	(0.3832, 0.3814)
(u',v')	(0.2251, 0.5040)
Duv	0.0013
CCT	3960 K
CRI (Ra)	84
R9	18

Prepared For:

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

Test date: 07/10/2017

Report date: 07/10/2017



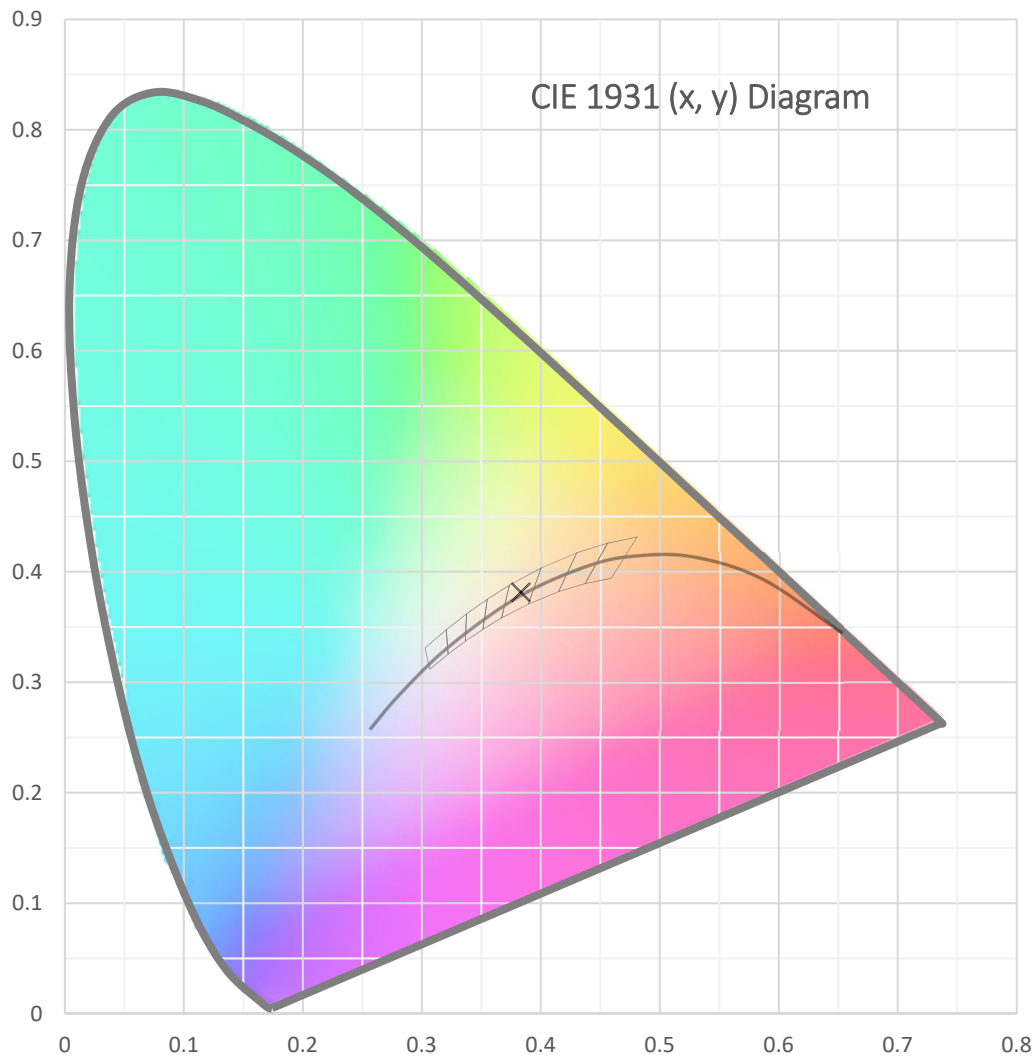
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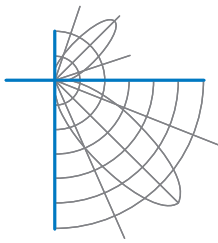
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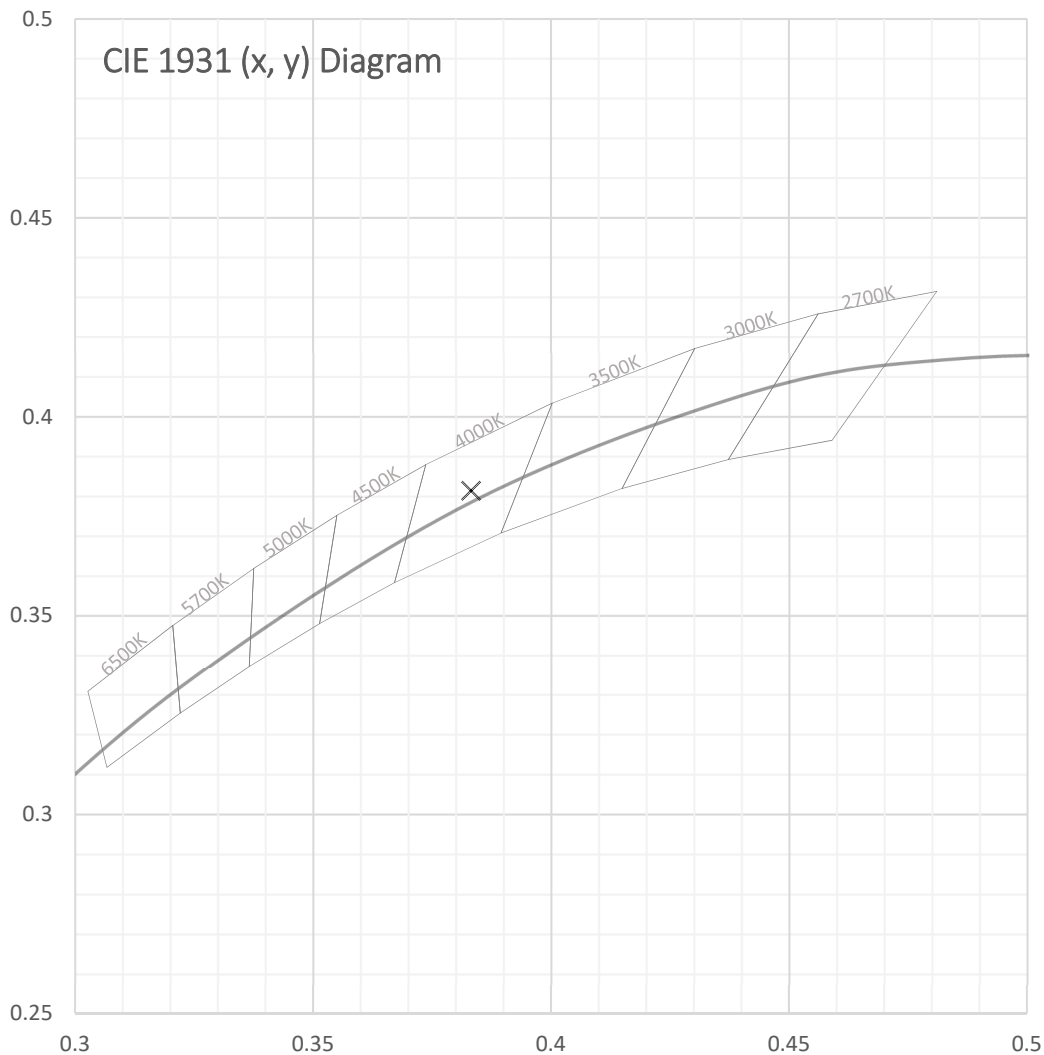
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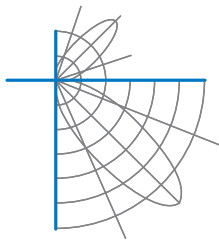
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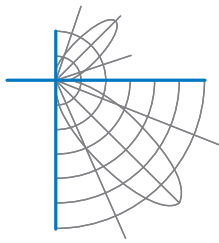
One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA

Spectral Data

Total Radiant Flux	7.894 W
Total Luminous Flux	2544.8 Lm
Chromaticity CIE 1931 (x, y)	(0.3832, 0.3814)
Chromaticity CIE 1976 (u', v')	(0.2251, 0.5040)
Correlated Color Temperature (CCT)	3960 K
Color Rendering Index (Ra)	84
R1	83
R2	91
R3	96
R4	82
R5	82
R6	87
R7	87
R8	68
R9	18
R10	78
R11	80
R12	60
R13	85
R14	98
Distance from Planckian Locus (Duv)	0.0013
Scotopic/Photopic Ratio *	1.699

Electrical Data

Voltage	120.0 Vac
Current	0.1543 A
Power	18.42 W
Frequency	60.00 Hz
Power Factor	0.995
Current THD	5.1 %



Test Report Number: LLIA000817-002B

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

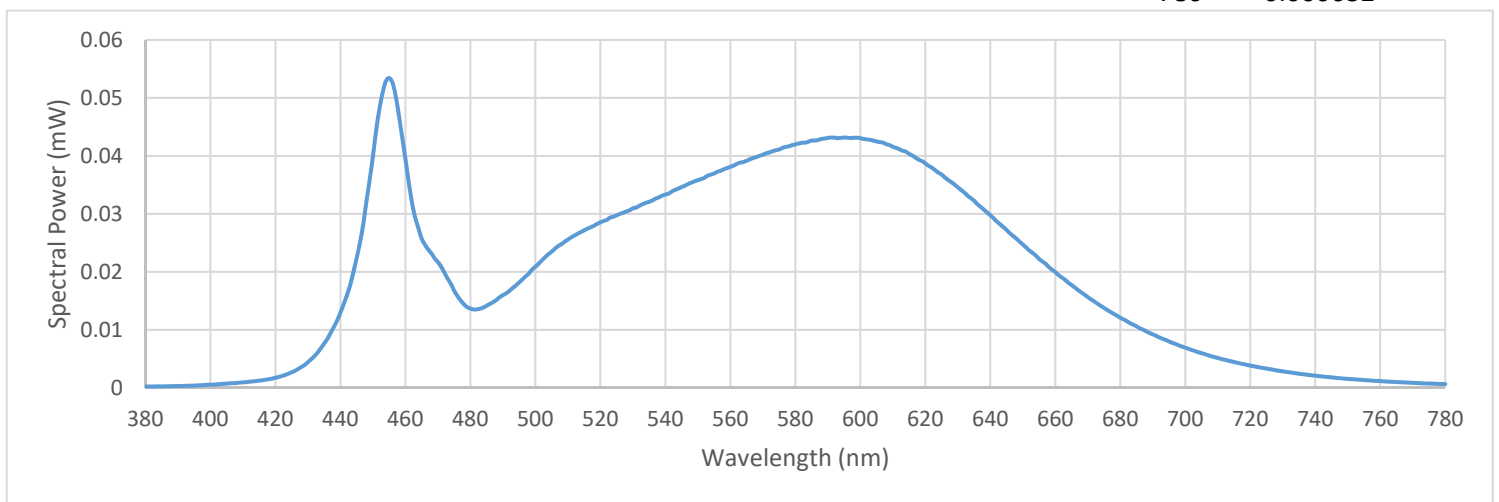
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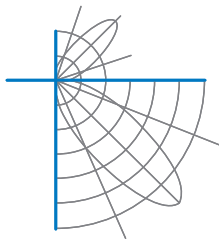
92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA

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

380	0.000230	480	0.013665	580	0.041987	680	0.012090
385	0.000243	485	0.014168	585	0.042655	685	0.010598
390	0.000299	490	0.015983	590	0.043099	690	0.009211
395	0.000391	495	0.018165	595	0.043161	695	0.007975
400	0.000534	500	0.020877	600	0.043061	700	0.006928
405	0.000716	505	0.023479	605	0.042478	705	0.005965
410	0.000942	510	0.025549	610	0.041570	710	0.005138
415	0.001229	515	0.027153	615	0.040349	715	0.004442
420	0.001728	520	0.028530	620	0.038713	720	0.003831
425	0.002669	525	0.029749	625	0.036782	725	0.003303
430	0.004416	530	0.030951	630	0.034571	730	0.002839
435	0.007645	535	0.032087	635	0.032273	735	0.002434
440	0.012994	540	0.033335	640	0.029757	740	0.002084
445	0.022404	545	0.034626	645	0.027225	745	0.001788
450	0.039935	550	0.035801	650	0.024729	750	0.001540
455	0.053423	555	0.036966	655	0.022231	755	0.001327
460	0.039449	560	0.038118	660	0.019956	760	0.001148
465	0.025752	565	0.039169	665	0.017724	765	0.000993
470	0.021678	570	0.040193	670	0.015644	770	0.000848
475	0.016751	575	0.041100	675	0.013776	775	0.000732
						780	0.000632





Test Report Number: LLIA000817-002B

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

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92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA

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: 24.3 °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

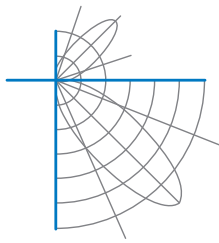
Significance: The laboratory has not participated in the selection of samples to be tested.
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Notes: The measurements and other derived quantities contained in this report
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Prorating the performance of the sample for the use of other component
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Quantities marked with * are not covered.



Report of Test

LLIA000817-002C

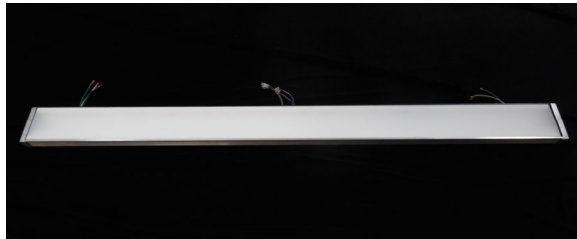
Electrical Test Report

Catalog Number: PPXX-MO-K40-4-W-XX-UNV-FDC

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
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92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA



Performance Summary

Voltage	277.0 Vac
Current	0.0792 A
Power	19.93 W
Frequency	60.00 Hz
Power Factor	0.909
Current THD	17.3 %
Ambient Temperature:	24.4 °C

Prepared For:

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

Tested in accordance with the applicable sections of C82.77-10-2014. 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. 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.

Test date: 07/10/2017

Report date: 07/11/2017

Electrical Report Template V1-2