



Report of Test

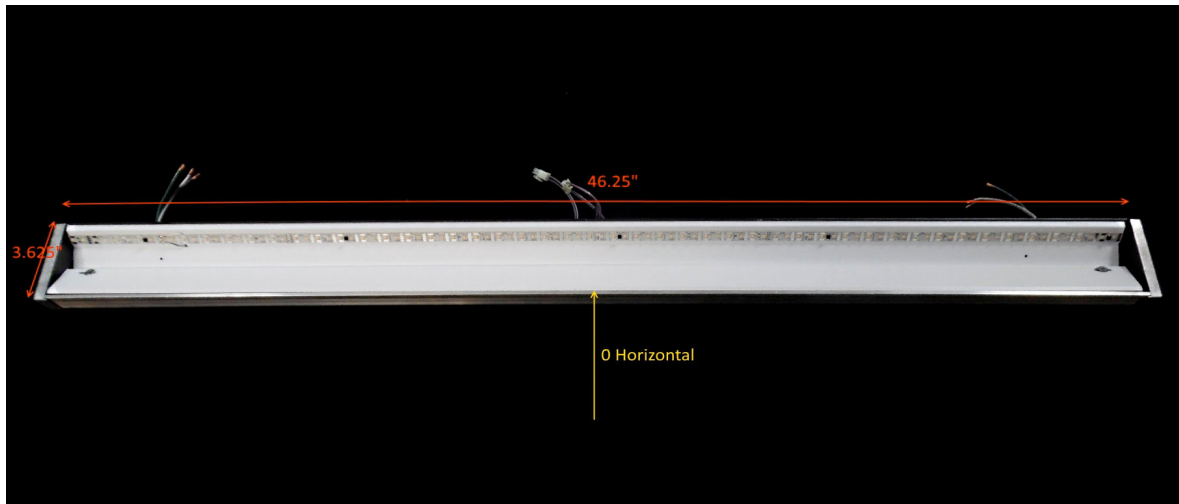
LLIA000817-001A

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

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
formed white enamel aluminum reflector, open top.

92 white LEDs

One Osram Optotronic OTi 30/120-277/1A0 DIM L LED driver programmed to 480mA
120.0Vac, 60.00Hz, 0.1546A, 18.45W, 0.995PF, 5.0%THD(i)



Performance Summary

Total Light Output	2733 lm
Luminaire Power	18.5 W
Luminous Efficacy	147.7 lm/W

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



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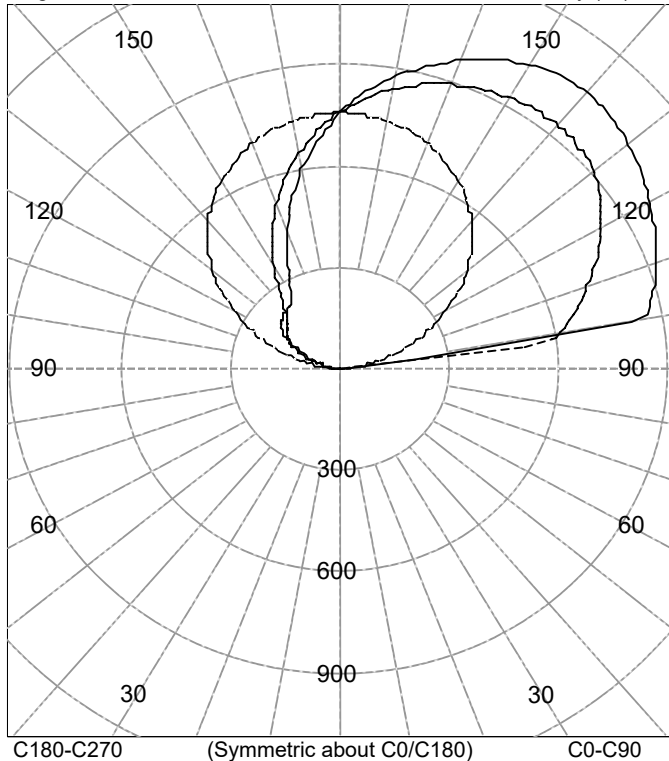
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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
90.0	0	0	0	0	0	
95.0	4	4	5	275	30	84
100.0	806	785	612	351	79	
105.0	890	832	670	428	138	361
110.0	924	872	720	509	201	
115.0	954	903	773	581	265	425
120.0	980	933	823	633	329	
125.0	1007	967	868	674	394	453
130.0	1029	995	904	708	455	
135.0	1046	1019	925	735	511	438
140.0	1059	1032	933	758	561	
145.0	1055	1027	932	777	605	387
150.0	1038	1010	925	791	643	
155.0	1006	984	912	801	677	311
160.0	969	949	893	805	705	
165.0	925	910	868	801	727	204
170.0	877	866	838	792	742	
175.0	821	815	800	775	751	71
180.0	754	754	754	754	754	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
180-150	586	N / A	21.4
180-140	973	N / A	35.6
180-120	1864	N / A	68.2
180-90	2733	N / A	100.0
140-90	1761	N / A	64.4
120-90	870	N / A	31.8
90-0	0	N / A	0.0
180-0	2733	N / A	100.0

Total Light Output = 2,733 lm

Signed:

Authorized Signatory

Date of test

7-Jul-2017

Date of report

11-Jul-2017



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120.0Vac, 60.00Hz, 0.1546A, 18.45W, 0.995PF, 5.0%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	0	0	0	0	0
92.5	1	1	2	2	10
95.0	4	4	5	275	30
97.5	8	16	581	315	53
100.0	806	785	612	351	79
102.5	870	810	643	386	108
105.0	890	832	670	428	138
107.5	908	854	696	469	169
110.0	924	872	720	509	201
112.5	940	888	745	546	233
115.0	954	903	773	581	265
117.5	967	917	799	609	297
120.0	980	933	823	633	329
122.5	994	950	848	656	362
125.0	1007	967	868	674	394
127.5	1018	981	887	691	424
130.0	1029	995	904	708	455
132.5	1038	1008	917	722	484
135.0	1046	1019	925	735	511
137.5	1054	1028	929	747	537
140.0	1059	1032	933	758	561
142.5	1059	1031	934	767	584
145.0	1055	1027	932	777	605
147.5	1048	1020	929	784	625
150.0	1038	1010	925	791	643
152.5	1023	998	919	797	661
155.0	1006	984	912	801	677
157.5	988	968	903	804	692
160.0	969	949	893	805	705
162.5	948	930	881	804	717
165.0	925	910	868	801	727
167.5	902	889	854	798	735
170.0	877	866	838	792	742
172.5	850	841	820	784	748
175.0	821	815	800	775	751
177.5	790	786	779	765	754
180.0	754	754	754	754	754



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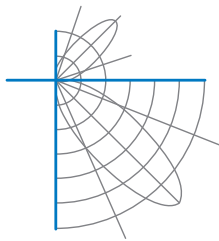
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120.0Vac, 60.00Hz, 0.1546A, 18.45W, 0.995PF, 5.0%THD(i)

Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	0	0	0	0	0
92.5	10	5	5	4	4
95.0	30	14	12	12	11
97.5	53	25	22	20	20
100.0	79	40	33	31	30
102.5	108	63	46	42	41
105.0	138	81	60	55	53
107.5	169	94	75	68	66
110.0	201	105	96	82	80
112.5	233	115	118	97	94
115.0	265	125	136	118	111
117.5	297	134	152	139	133
120.0	329	144	163	158	153
122.5	362	161	171	175	171
125.0	394	183	179	189	187
127.5	424	208	186	197	200
130.0	455	236	192	203	207
132.5	484	264	198	209	213
135.0	511	294	203	214	218
137.5	537	326	211	219	223
140.0	561	358	233	223	226
142.5	584	390	260	225	229
145.0	605	421	290	233	231
147.5	625	452	324	257	240
150.0	643	483	360	288	266
152.5	661	513	397	324	299
155.0	677	542	435	363	338
157.5	692	570	472	405	380
160.0	705	596	509	447	423
162.5	717	621	545	490	467
165.0	727	644	580	532	511
167.5	735	666	614	573	554
170.0	742	686	646	613	597
172.5	748	705	676	652	638
175.0	751	722	705	689	677
177.5	754	737	732	724	715
180.0	754	754	754	754	754



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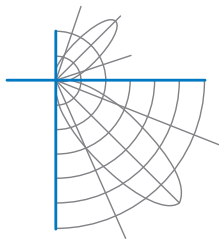
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92 white LEDs

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120.0Vac, 60.00Hz, 0.1546A, 18.45W, 0.995PF, 5.0%THD(i)

Test Distance 9.5 m
Test Temperature 25.0 °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

LLIA000817-001B

Integrating Sphere Report

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

Wall mounted, extruded aluminum housing with cast aluminum endcaps,
formed white enamel aluminum reflector, open top.

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	0.1544 A
Power	18.44 W
Frequency	60.00 Hz
Power Factor	0.995
Current THD	5.1 %

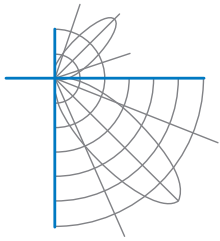
Total Luminous Flux	2833.5 lm
Efficacy	153.7 lm/W
Chromaticity (x,y)	(0.3803, 0.3785)
(u',v')	(0.2243, 0.5023)
Duv	0.0009
CCT	4018 K
CRI (Ra)	85
R9	19

Prepared For:

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

Test date: 07/09/2017

Report date: 07/10/2017



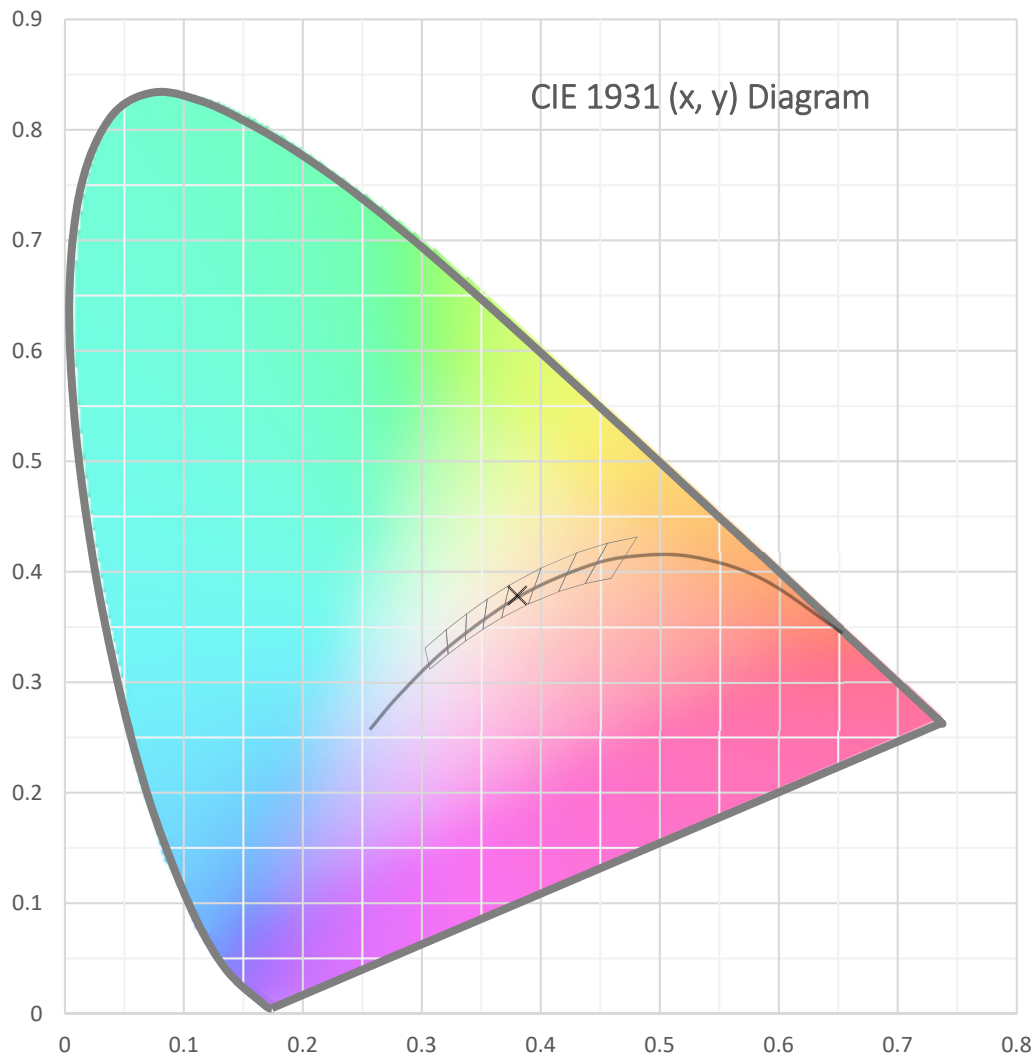
Test Report Number: LLIA000817-001B

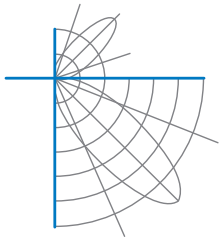
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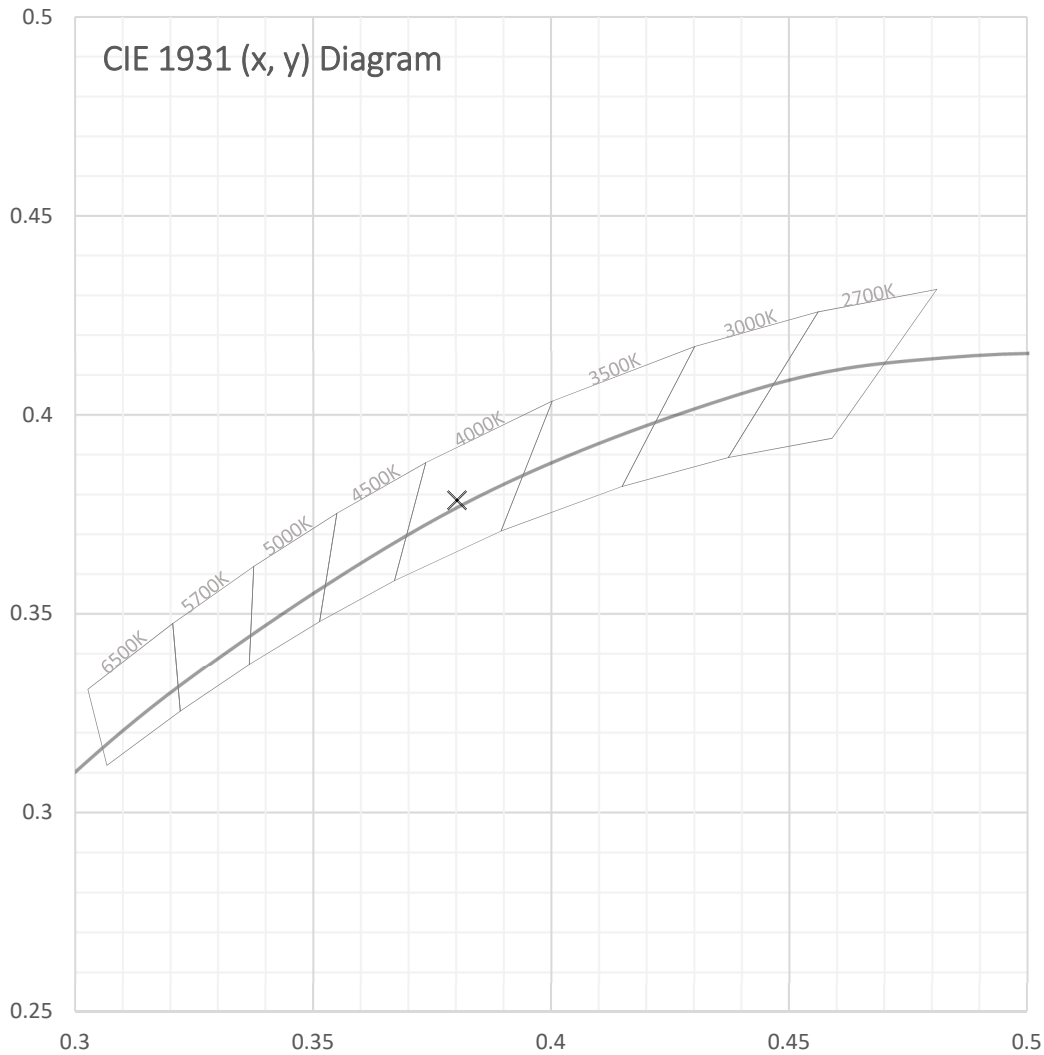
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Spectral Data	Total Radiant Flux	8.825 W
	Total Luminous Flux	2833.5 Lm
	Chromaticity CIE 1931 (x, y)	(0.3803, 0.3785)
	Chromaticity CIE 1976 (u', v')	(0.2243, 0.5023)
	Correlated Color Temperature (CCT)	4018 K
	Color Rendering Index (Ra)	85
	R1	83
	R2	91
	R3	96
	R4	82
	R5	83
	R6	87
	R7	87
	R8	68
	R9	19
	R10	78
	R11	81
	R12	60
	R13	85
	R14	98
	Distance from Planckian Locus (Duv)	0.0009
	Scotopic/Photopic Ratio *	1.721

Electrical Data

Voltage	120.0 Vac
Current	0.1544 A
Power	18.44 W
Frequency	60.00 Hz
Power Factor	0.995
Current THD	5.1 %



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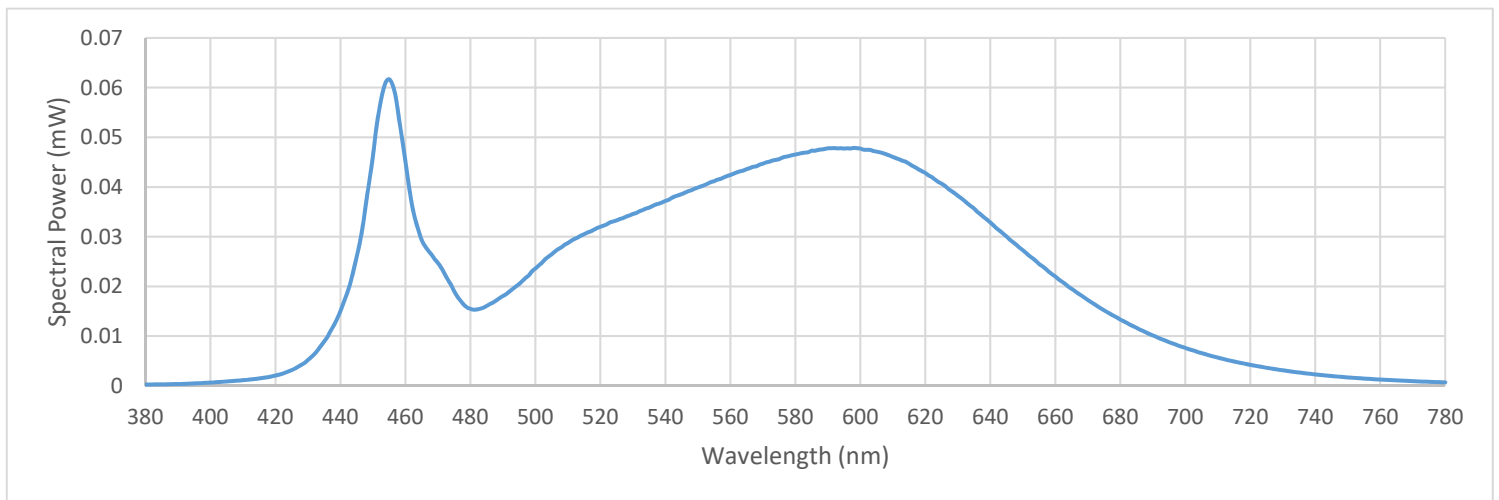
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Summary Spectral Power Distribution (wavelength - nm, spectral power - mW)

380	0.000267	480	0.015481	580	0.046545	680	0.013328
385	0.000286	485	0.016066	585	0.047299	685	0.011667
390	0.000359	490	0.018064	590	0.047794	690	0.010127
395	0.000470	495	0.020479	595	0.047750	695	0.008773
400	0.000645	500	0.023606	600	0.047733	700	0.007630
405	0.000865	505	0.026455	605	0.047120	705	0.006577
410	0.001129	510	0.028741	610	0.046044	710	0.005673
415	0.001476	515	0.030507	615	0.044681	715	0.004894
420	0.002055	520	0.032000	620	0.042823	720	0.004215
425	0.003156	525	0.033286	625	0.040677	725	0.003622
430	0.005192	530	0.034566	630	0.038234	730	0.003116
435	0.008928	535	0.035845	635	0.035681	735	0.002675
440	0.015046	540	0.037193	640	0.032857	740	0.002283
445	0.025984	545	0.038574	645	0.030044	745	0.001966
450	0.046193	550	0.039890	650	0.027298	750	0.001686
455	0.061673	555	0.041170	655	0.024519	755	0.001453
460	0.045143	560	0.042429	660	0.022000	760	0.001257
465	0.029348	565	0.043586	665	0.019515	765	0.001082
470	0.024721	570	0.044700	670	0.017276	770	0.000928
475	0.019034	575	0.045605	675	0.015190	775	0.000799
						780	0.000691





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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: 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

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
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