LM-79 Test Report

Standards

IES LM-79-2008
IES TM-30-2015
CIE 13.3-1995

Product SKU

XFL-SW-243.0-24022-3095

Test Conditions

Test Temperature: 24^{o}C
Test Sample: 300mm
Power Supply: HP
Voltage: 24V
Power Consumption: 3.1W

Test Date

7/9/2020

Prepared By	Approved By
Richard Wong	Ishita Goswami
Director of Engineering	Director of Product Marketing

The results contained in this report pertain only to the tested sample.
Photometric & Colorimetry data measured in accordance to IES LM-79-2008 standards, at Xicato.

Summary of Results

SKU: XFL-SW-243.0-24022-3095

Luminous Flux: 282lm

CCT: 2950K

mDUV: 0.2

Voltage: 24V

Current: 127mA

Power Consumption: 3.1W

Efficacy: 92.4LPW

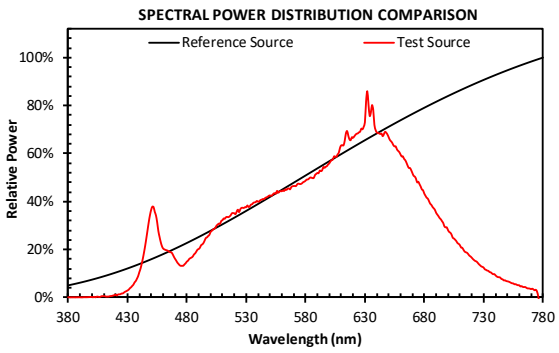
BASIC RESULTS

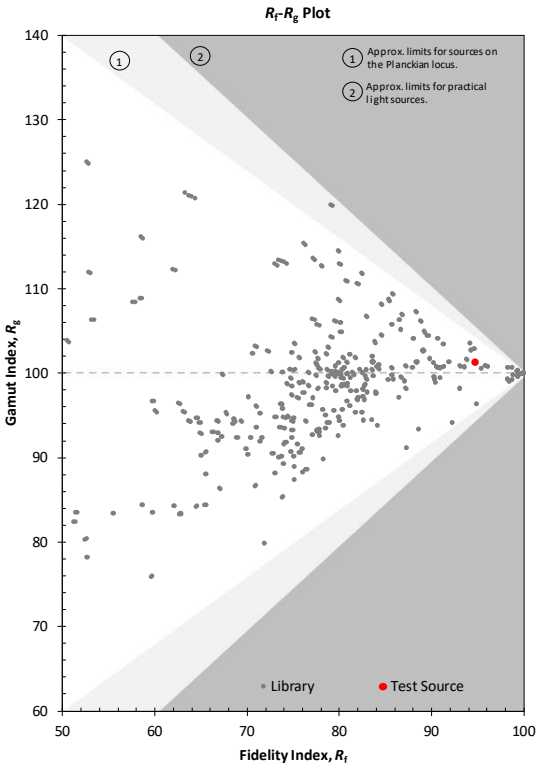
Source:

Test Source

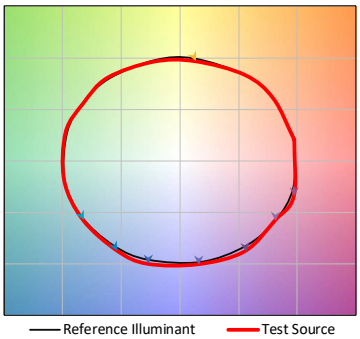
R_f	**95**
R_g	**101**
CCT (K)	2950
D_{uv}	0.0002
x	0.4409
y	0.4060
CIE R_a	98

0

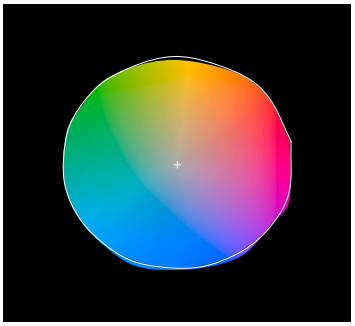




COLOR VECTOR GRAPHIC



COLOR DISTORTION GRAPHIC



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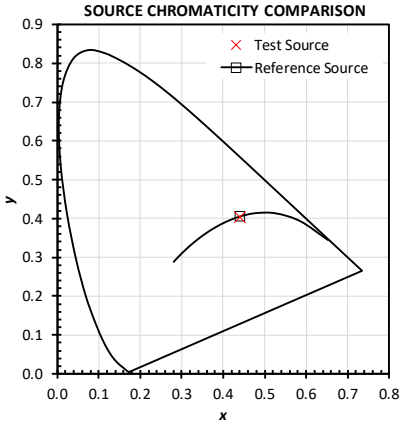
Summary Results

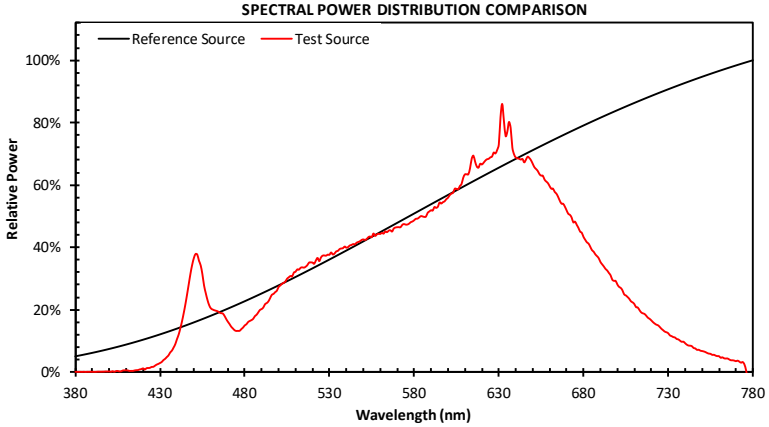
Metric	Test	Reference	Notes
R_f	95	100	IES TM-30-15 Fidelity Index
R_g	101	100	IES TM-30-15 Gamut Index
CIE R_a	98	100	CIE Test Color Method General Index
R_9	95	100	CIE Test Color Method Sample Nine Score
LER	270	160	Luminous Efficacy of Radiation
$R_{f,skin}$	96	100	Average of CES15 and CES18 (skin)

Metric	Test	Reference	Notes
CCT	2950	2949	Correlated Color Temperature
D_{uv}	0.0002	0.0000	Distance from the blackbody locus
x	0.4409	0.4406	CIE 1931 chromaticity coordinate
y	0.4060	0.4053	CIE 1931 chromaticity coordinate
u	0.2523	0.2524	CIE 1960 chromaticity coordinate
v	0.3485	0.3483	CIE 1960 chromaticity coordinate
u'	0.2523	0.2524	CIE 1976 chromaticity coordinate
v'	0.5227	0.5224	CIE 1976 chromaticity coordinate

Source Properties

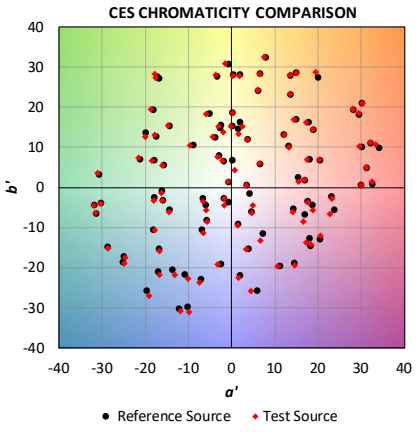


This chart plots the chromaticity of the test and reference sources in the CIE 1931 chromaticity diagram.

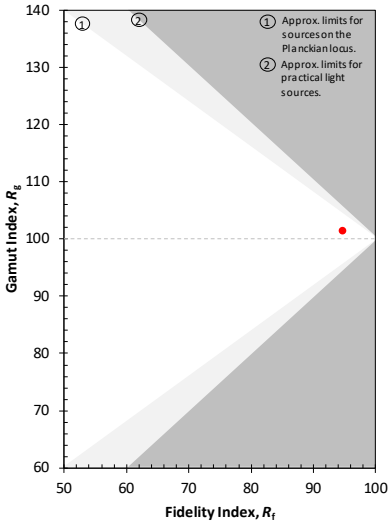


This chart displays the spectral power distributions for the test and reference source. Each SPD has been normalized so that the maximum values is 100%.

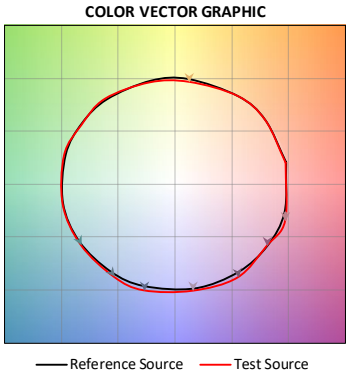
General Color Rendition



This plot shows the shift in chromaticity for each individual CES.



This plot shows a comparison of the R_f and R_g values relative to the range of possible values .



This plot shows the average chromaticity shift for the samples within each of 16 hue bins. The values are normalized so that the reference is a circle.

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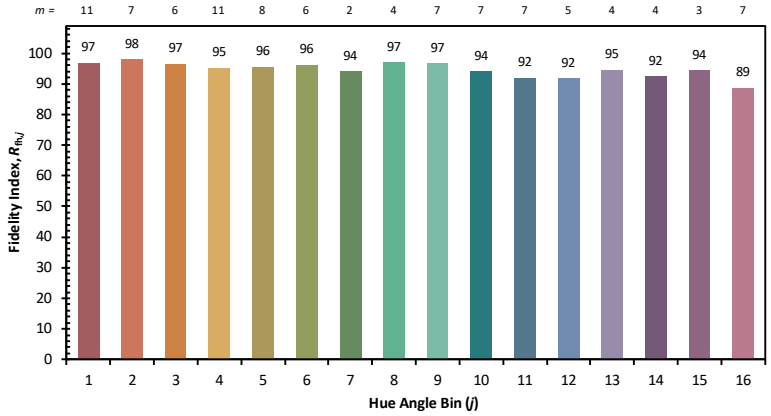
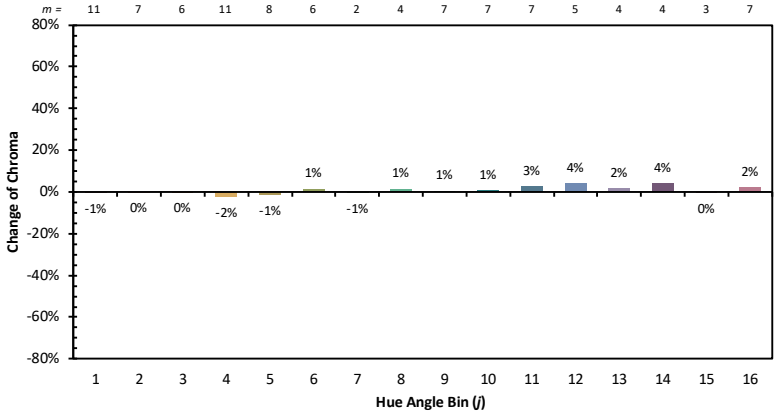
Color Rendition by Hue



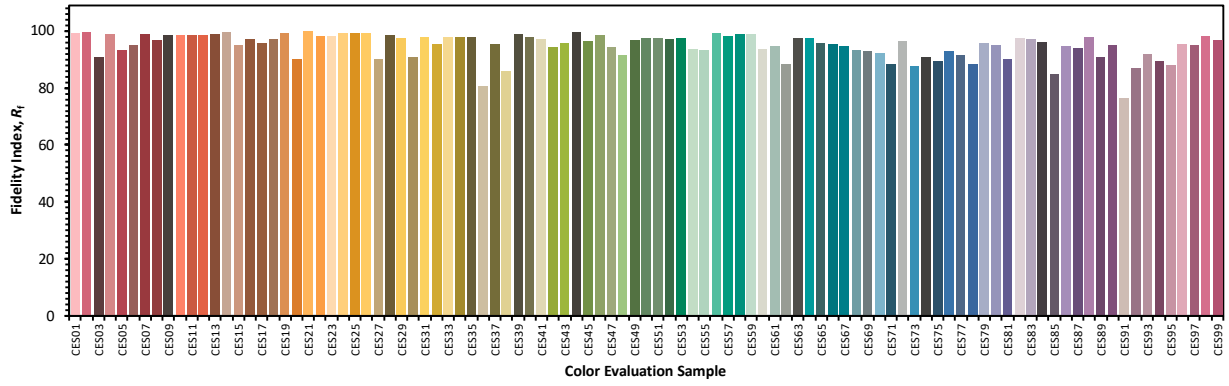
j	Hue Angle
1	0.0°–22.5°
2	22.5° - 45.0°
3	45.0° - 67.5°
4	67.5° - 90.0°
5	90.0°-112.5°
6	112.5°-135.0°
7	135.0°-157.5°
8	157.5°-180.0°
9	180.0°-202.5°
10	202.5°-225.0°
11	225.0°-247.5°
12	247.5°-270.0°
13	270.0°-292.5°
14	292.5°-315.0°
15	315.0°-337.5°
16	337.5°-360.0°

This chart displays the average Fidelity Index for all samples within the hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only.



This chart displays the change in chroma for the average sample within each hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for

Color Fidelity by Sample



This chart displays the Fidelity Index for each of the 99 CES. The CES are arranged by their hue angle under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on proper monitor calibration. Some colors may be outside of the gamut of the monitor, and will not be displayed accurately.

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