LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

NVLAP TESTING
NVLAP LAB CODE 200927-0

Report No: L072110725 **Issue Date: 10/8/2021**

Report Prepared For: Xicato Inc.
102 Cooper Ct, Los Gatos, CA 95032

Model Number: XFL-DW-243.2-22422-22.4095/95 Switch #7

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2019 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2017 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77-10:2014: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested using BLE Switch (EnOcean 2.4GHz switch (x2)).

Date of Tests: 10/8/21

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

General Information	
Manufacturer:	Xicato Inc.
Model Number:	XFL-DW-243.2-22422-22.4095/95 Switch #7
Driver Model Number:	XICATO XAD-DCV-01-010-60-24-PTBF1

Test Summary	
Color Redering Index:	98.1
Correlated Color Temperature:	4076
Input Voltage (VAC/60Hz):	120.01
Input Current (Amp):	0.1383
Input Power (W):	14.27
Input Power Factor:	0.8596
Current ATHD (%):	12.7%

Test Condition	
Ambient Temperature (^{o}C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	0:30

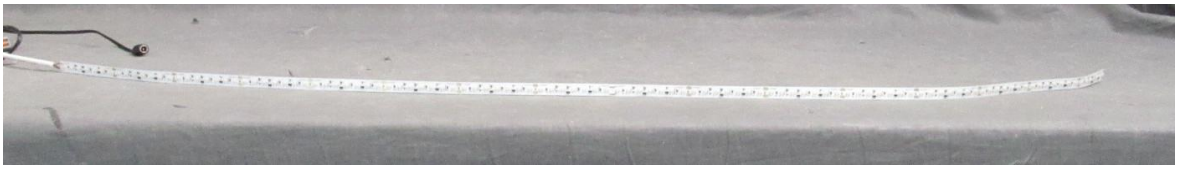

FIG. 1 LUMINAIRE

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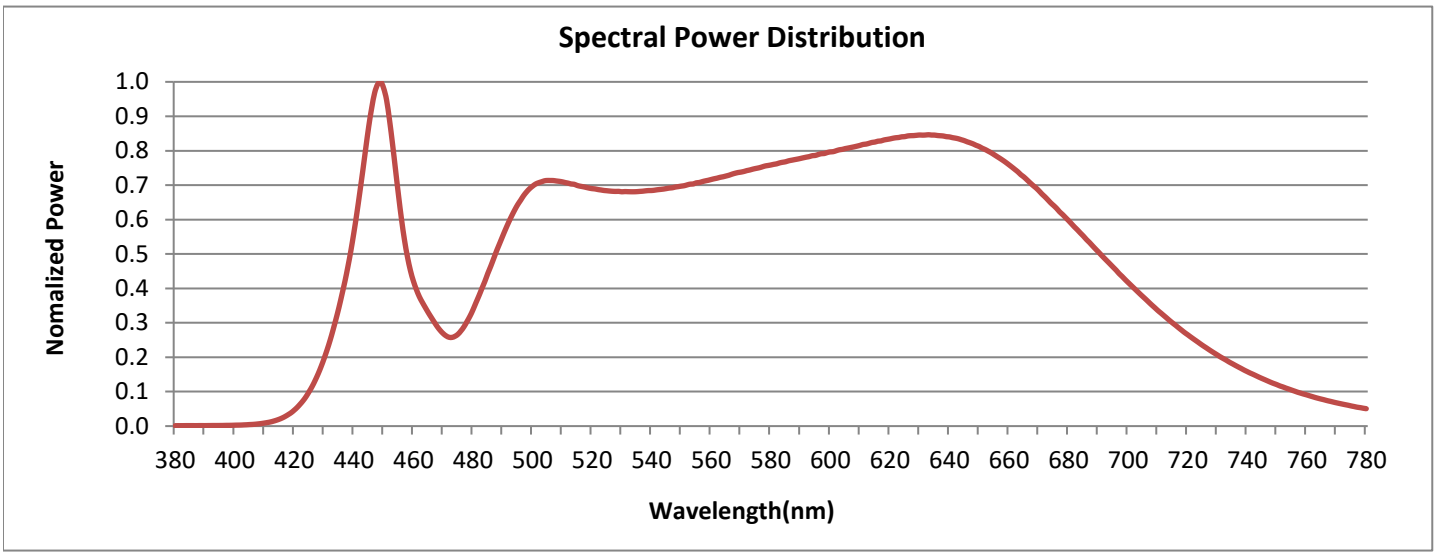
Colorimetry Test Results

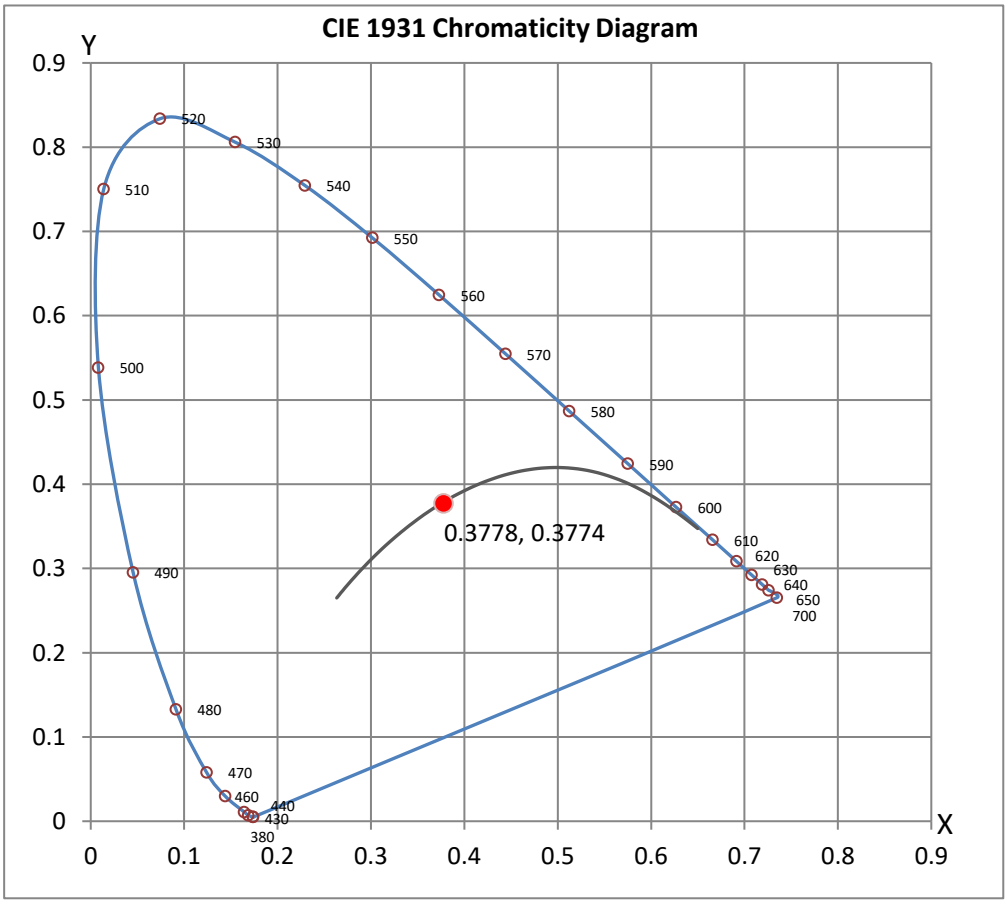


CRI & CCT

x	0.3778
y	0.3774
u'	0.2231
v'	0.5015
CRI	98.10
CCT	4076
Duv	0.00109

R Values

R1	99.34
R2	98.50
R3	97.96
R4	96.33
R5	98.88
R6	98.02
R7	98.20
R8	97.67
R9	93.47
R10	98.07
R11	93.36
R12	88.46
R13	99.16
R14	98.80
R15	97.93



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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25^{o}C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25^{o}C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25^{o}C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25^{o}C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

The results related only to the samples as received and tested. 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 Prepared by : Kunjan Modi

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports.*

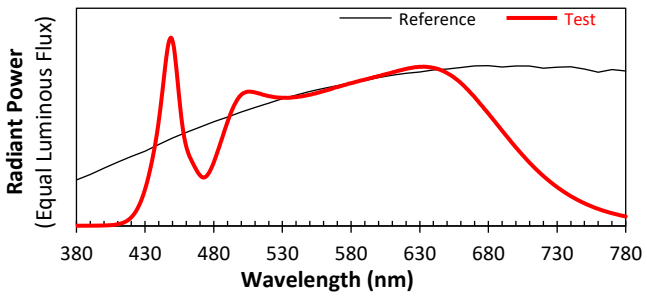
ANSI/IES TM-30-18 Color Rendition Report

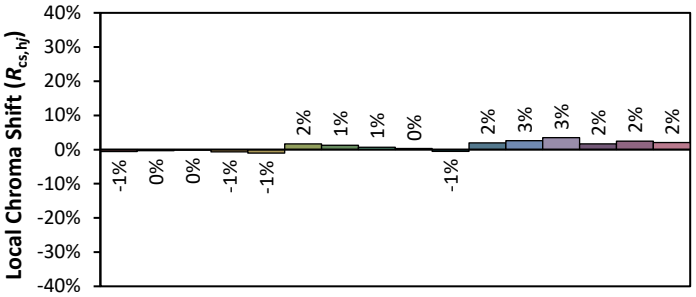
Source: LED STRIP

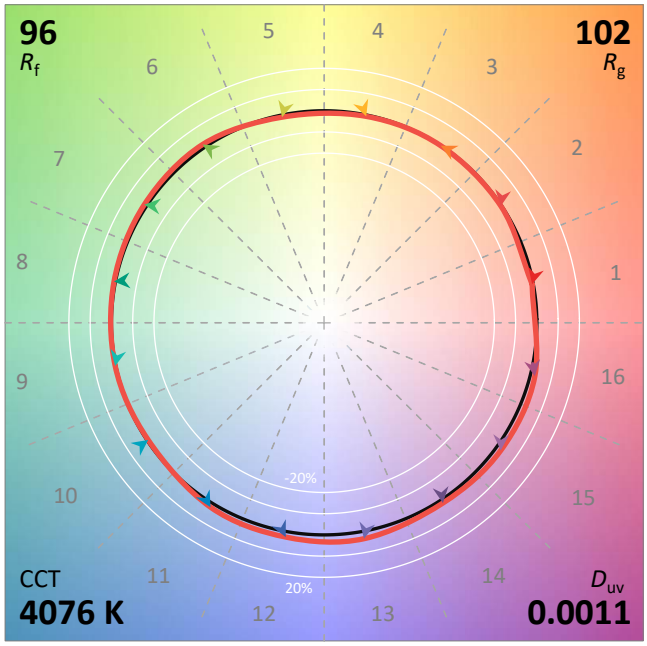
Manufacturer: Xicato Inc.

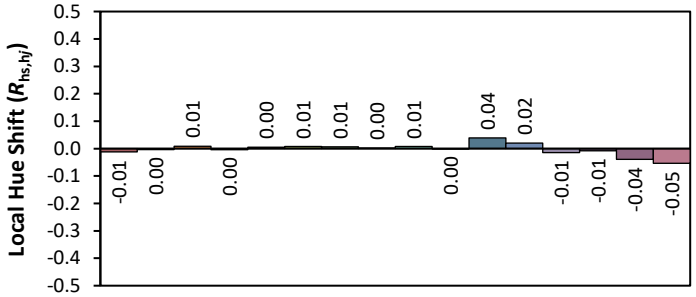
Date: 10/8/2021

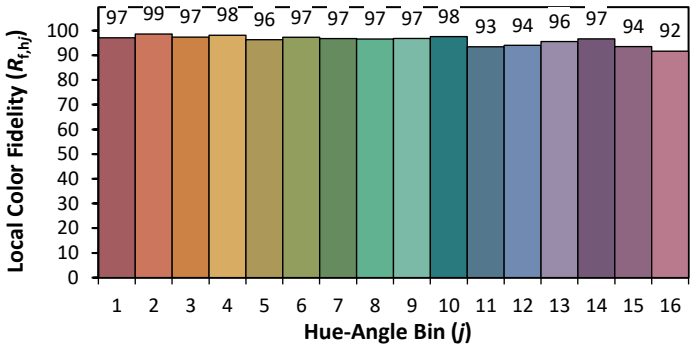
Model: XFL-DW-243.2-22422-22.4095/95 Switch #7

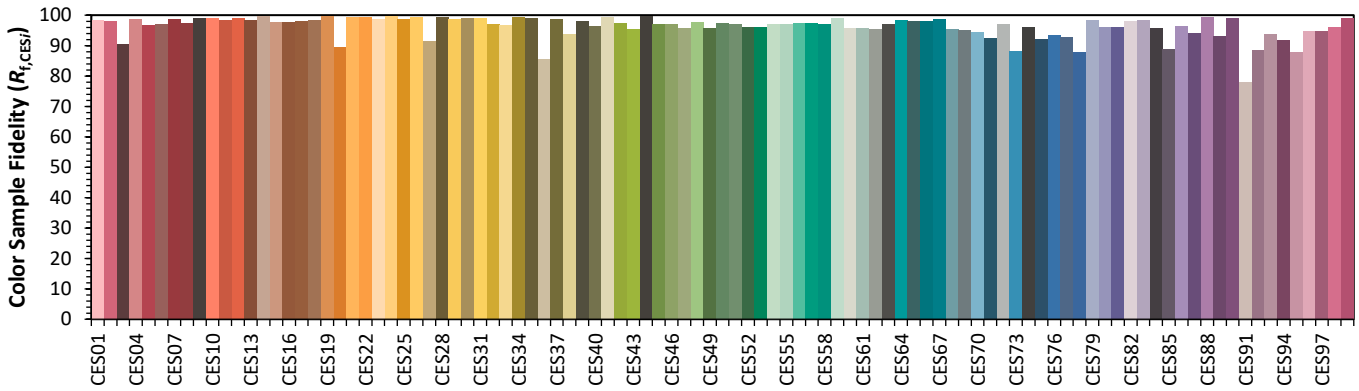












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	**0.3778**
y	**0.3774**
u'	**0.2232**
v'	**0.5015**

CIE 13.3-1995 (CRI)

R_a	98
R_9	93

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.