

# PURE EDGE LIGHTING

## TEST REPORT

### SCOPE OF WORK

LED Performance Testing

### MODEL NUMBER

TCFX-5W5-WZ-3FT-TC

### PROJECT NUMBER

G105870896

### REPORT NUMBER

105870896CHI-009

### ISSUE DATE

7/15/2024

### REVISED DATE

None

### TEST DATES

2024-06-27 through 2024-07-02.

### DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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### PAGES

10

**REPORT NUMBER**

105870896CHI-009

**MODEL NUMBER(s)**

TCFX-5W5-WZ-3FT-TC

**REPORT RENDERED TO:**

PURE EDGE LIGHTING  
1718 WEST FULLERTON  
CHICAGO, IL 60614  
USA

**STATEMENT OF LIMITATION**

NVLAP Lab Code 600186-0. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

**AUTHORIZATION**

The testing performed was authorized by signed quote number Qu-01461581-0.

**TEST STANDARDS**

IES LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

ANSI/IES LM-79-19 Optical and Electrical Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2017: Specifications for the Chromaticity of Solid State Lighting (SSL) Products

ANSI/IES TM-30-18: IES Method for Evaluating Light Source Color Rendition

In Charge of Testing:



David Dalo  
Engineer  
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Reviewer:



Jeff Davis  
NA Technical Lead  
Lighting Division

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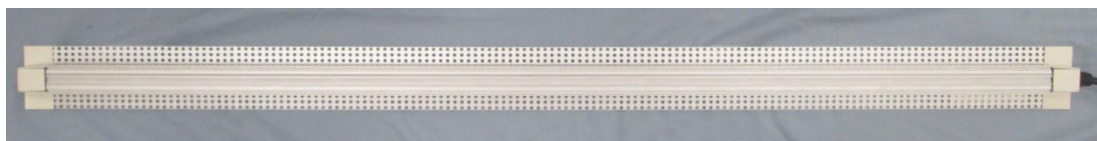
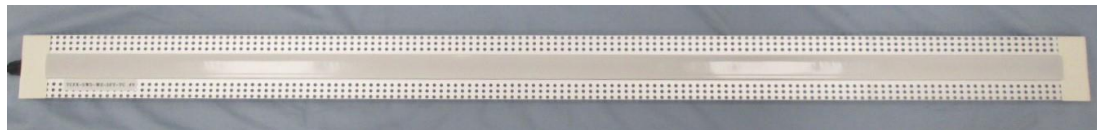
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH06212024013032-009	TCFX-5W5-WZ-3FT-TC	LINEAR CURVE	Production	6/21/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	TCFX-5W5-WZ-3FT-TC	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



# PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	TCFX-5W5-WZ-3FT-TC
Product Description:	LINEAR CURVE
LED Model No.:	LEDWISE/ SS5-12MM-24VDC-C-RGBCW
Driver Model No.:	PURE EDGE/PSBB-96W-WZ-TC5W7-24VDC-RL
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	432.0	441.2
Driver Output Power (W) @ 24 (Vdc)	11.11	
Calculated Efficacy (lm/W)	39.7	

Criteria	Results
Correlated Color Temperature (K)	2812
Color Rendering Index - Ra	96.8
Color Rendering Index - R9	80.0
Duv	-0.0024
Chromaticity Coordinate (x)	0.447
Chromaticity Coordinate (y)	0.401
Chromaticity Coordinate (u')	0.258
Chromaticity Coordinate (v')	0.522

# TEST METHODS

## SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

## INTEGRATING SPHERE TESTING

A spectroradiometer and integrating sphere were used to measure the spectral distribution for each EUT resulting in photometric and colorimetric data. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position inside the sphere and stabilization procedures to LM-79 were followed.

## TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

\*ANSI/IES Technical Memorandums (TM) reported are not NVLAP accredited

Test Configuration	Tested Model No.	Pass/Fail/NA
1	TCFX-5W5-WZ-3FT-TC	NA

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

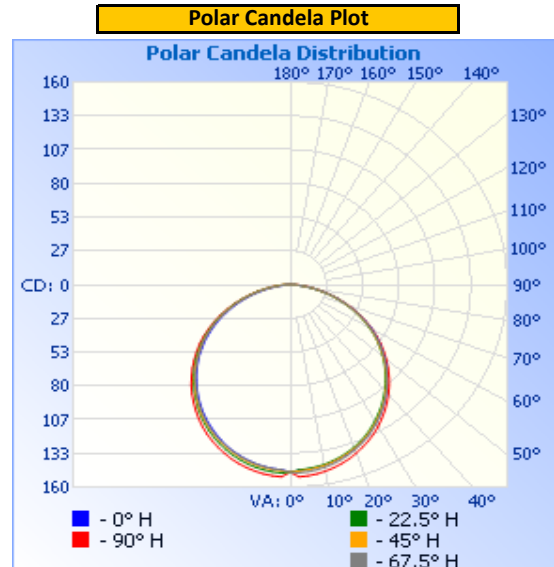
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Up	120.11	174.5	17.88	0.853

Light Output (lm)	Lumen Efficacy (lm/W)
432.0	24.2

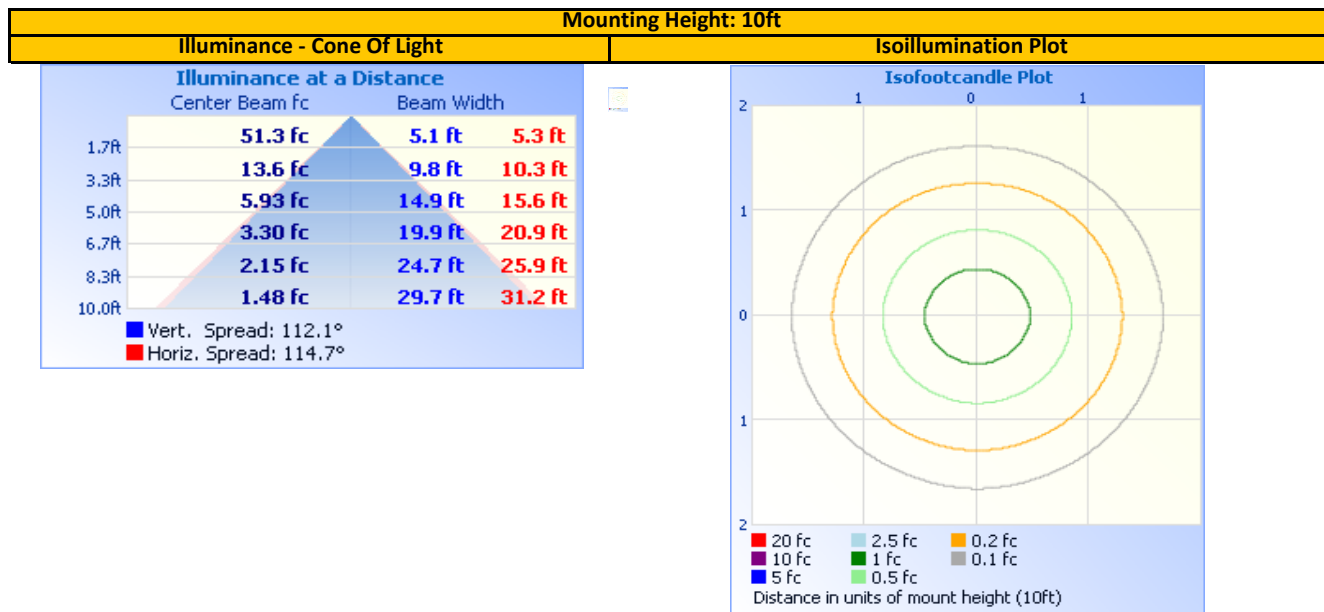
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	148	148	148	148	148
5	146	146	147	148	152
10	145	144	145	146	150
15	142	141	142	143	146
20	138	137	138	139	142
25	133	131	132	133	136
30	126	125	126	127	129
35	119	117	118	119	121
40	110	109	110	110	113
45	101	99	100	101	103
50	91	89	90	91	93
55	80	79	79	80	81
60	69	67	68	68	69
65	56	55	55	56	57
70	43	42	42	43	44
75	30	29	30	30	31
80	17	17	18	19	19
85	7	7	8	9	10
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



## ILLUMINANCE SUMMARY



## ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	115.3	26.7%	90-100	0.0	0.0%
0-40	189.2	43.8%	100-110	0.0	0.0%
0-60	337.1	78.0%	110-120	0.0	0.0%
60-90	94.8	22.0%	120-130	0.0	0.0%
70-100	40.4	9.4%	130-140	0.0	0.0%
90-120	0.0	0.0%	140-150	0.0	0.0%
0-90	432.0	100.0%	150-160	0.0	0.0%
90-180	0.0	0.0%	160-170	0.0	0.0%
0-180	432.0	100.0%	170-180	0.0	0.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	TCFX-5W5-WZ-3FT-TC	NA

PHOTOMETRIC, COLORIMETRIC, AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)

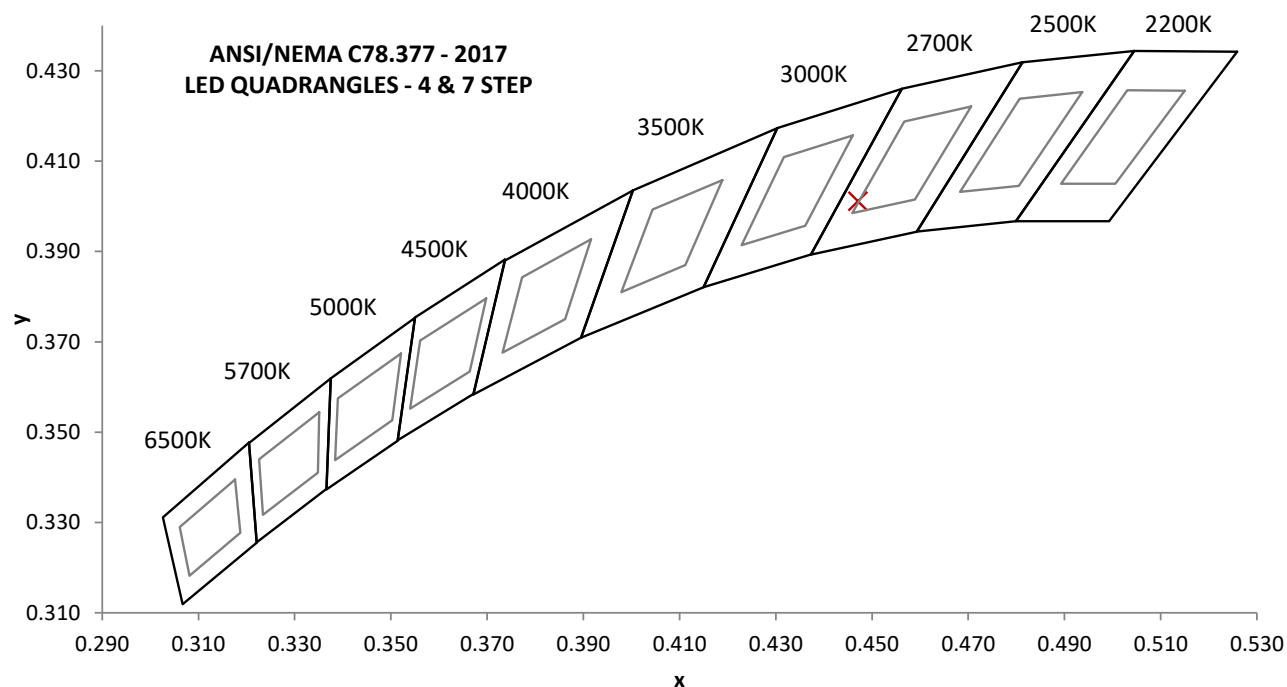
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (l)	Input ATHD (%)
120.00	174.4	17.93	0.857	31.02

Measured at 120(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (l)	CRI - R9 (l)
441.2	24.6	2812	96.8	80.0

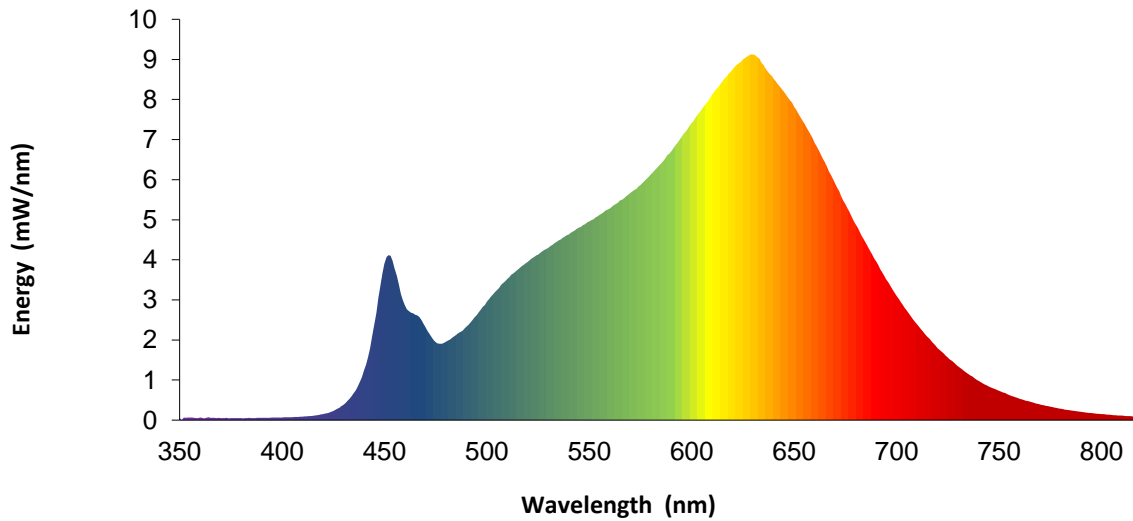
Duv (l)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0024	0.447	0.401	0.258	0.522



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.1		460	2.9		570	5.7		680	4.9
355	0.1		465	2.6		575	5.9		685	4.4
360	0.1		470	2.3		580	6.1		690	4.0
365	0.1		475	1.9		585	6.4		695	3.5
370	0.1		480	2.0		590	6.7		700	3.1
375	0.0		485	2.1		595	7.1		705	2.7
380	0.1		490	2.3		600	7.4		710	2.4
385	0.1		495	2.6		605	7.8		715	2.1
390	0.1		500	3.0		610	8.1		720	1.8
395	0.1		505	3.3		615	8.4		725	1.6
400	0.1		510	3.5		620	8.8		730	1.3
405	0.1		515	3.8		625	9.0		735	1.2
410	0.1		520	4.0		630	9.1		740	1.0
415	0.1		525	4.1		635	8.9		745	0.8
420	0.2		530	4.3		640	8.5		750	0.7
425	0.2		535	4.5		645	8.2		755	0.6
430	0.4		540	4.6		650	7.8		760	0.5
435	0.7		545	4.8		655	7.4		765	0.5
440	1.2		550	5.0		660	6.9		770	0.4
445	2.4		555	5.1		665	6.4		775	0.3
450	3.9		560	5.3		670	5.9		780	0.3
455	3.8		565	5.5		675	5.4		---	---

Without correction of sample absorption.



Portrayed color in graphic is estimated by wavelength (nm) and may not be exact - it is a visual representation only



**EQUIPMENT LIST**

**REPORT NO. 105870896CHI-009**

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT310E	CHI0664	4/2/2024	4/2/2025
2	Omega Thermometer	DPI8-C24	146920	10/9/2023	10/9/2024
3	LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
4	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0764	3/14/2024	3/14/2025
5	Chroma Power Supply	61604	CHI0371	VBV	VBV
8	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0727	3/14/2024	3/14/2025
9	Labsphere Spectroradiometer	CDS2600	CHI0539	VBV	VBV
10	3 Meter Sphere	SPR600	CHI0088	VBV	VBV
11	Elgar AC Power Supply	CW1251	146112	VBV	VBV
12	Sorenson DC Power Supply	XFR150-8	146846	VBV	VBV
13	Yokogawa Power Meter	WT1600	146770	10/11/2023	10/11/2024
17	Omega thermometer	USB TC08	EQAH002615	4/5/2024	4/5/2025
26	Xitron Power Analyzer	XT2640	CHI0611	7/7/2023	7/7/2024

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

**REVISION HISTORY**

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	TCFX-5W5-WZ-3FT-TC	NA

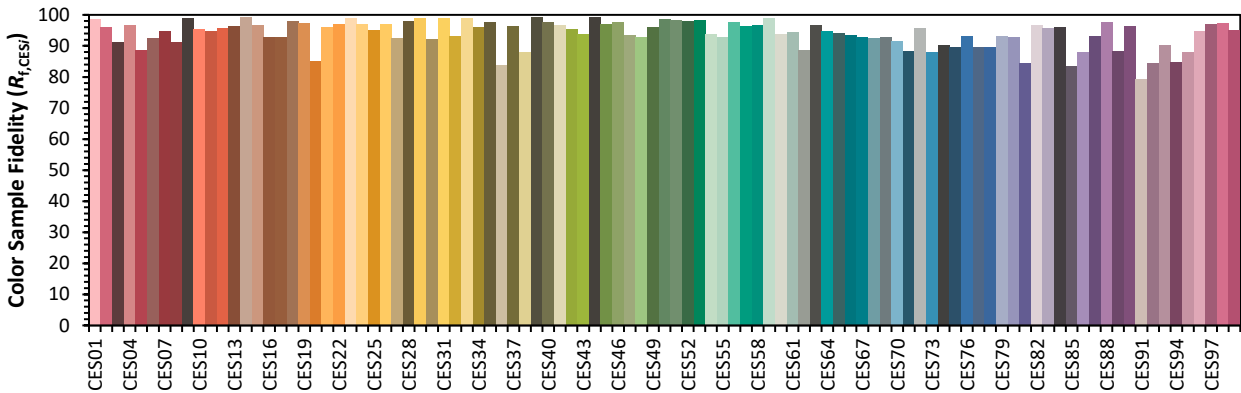
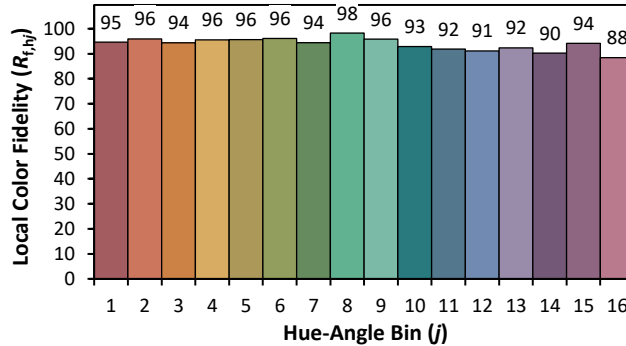
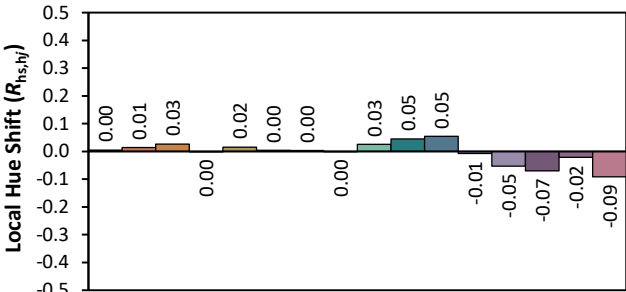
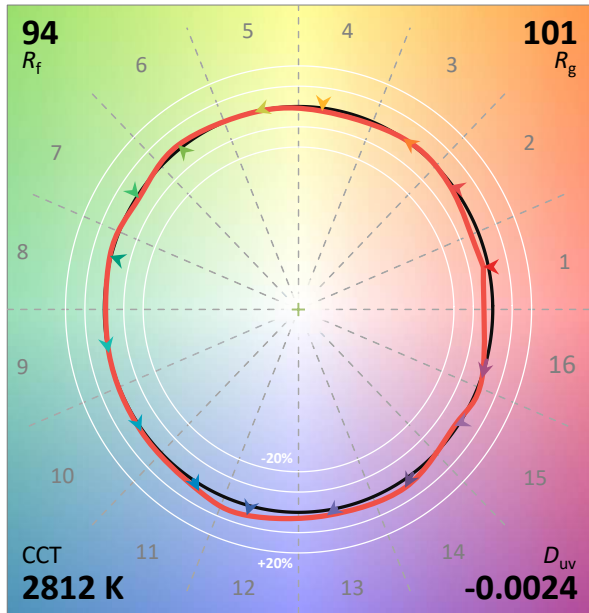
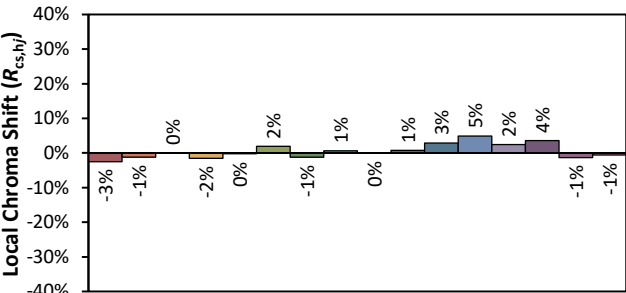
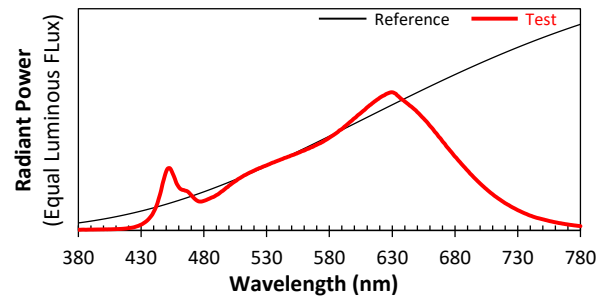
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Pure Edge Lighting

Date: 6/27/2024

Model: TCFX-5W5-WZ-3FT-TC



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

x 0.4471  
y 0.4011  
u' 0.2585  
v' 0.5217