

# PUREEDGE LIGHTING LLC

## TEST REPORT

### SCOPE OF WORK

LED Performance Testing

### MODEL NUMBER

CFDB-7W-\*\*\*-48-\*\*K-\*\*

### PROJECT NUMBER

G104797632

### REPORT NUMBER

104797632CHI-036

### ISSUE DATE

6/20/2022

### REVISED DATE

None

### TEST DATES

2022-06-08 through 2022-06-09.

### DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104797632CHI-036

**MODEL NUMBER(s)**

CFDB-7W-\*\*\*-48-\*\*K-\*\*

**REPORT RENDERED TO:**

PUREEDGE LIGHTING LLC  
1718 W. FULLERTON AVE  
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-01199885-2.

**TEST STANDARDS**

IESNA 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

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

In Charge of Testing:



Maximilian Carvajal  
Engineer  
Lighting Division

Reviewer:



Jeff Davis  
N.A. Technical Lead  
Lighting Division

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**SAMPLE INFORMATION**

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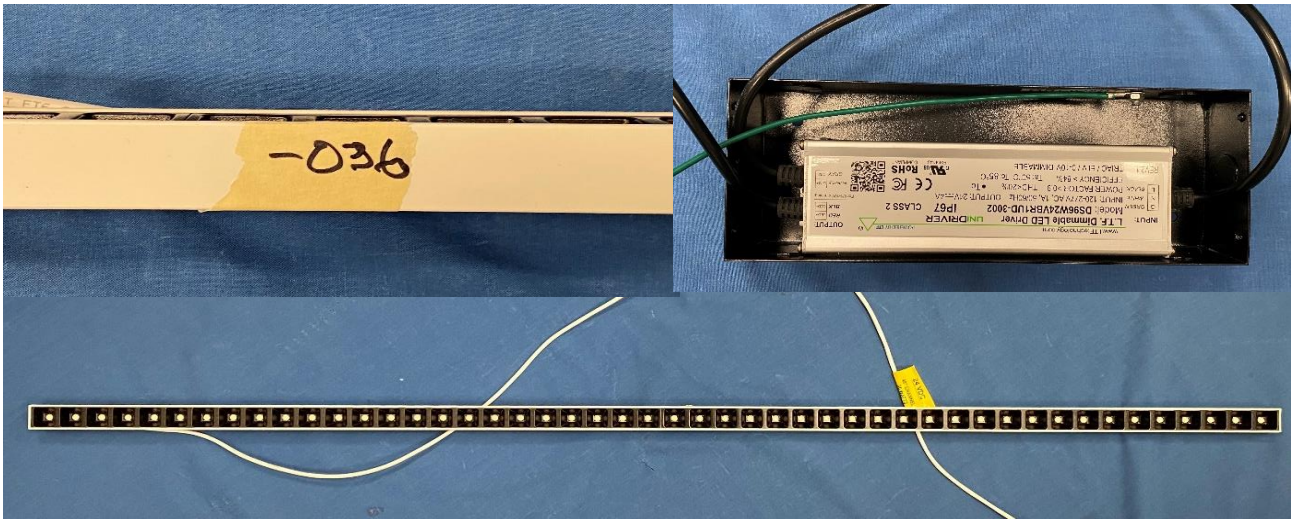
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH05192022111730	CFDB-7W-***-48-**K-**	LINEAR LOW VOLTAGE	Production	5/19/2022

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	CFDB-7W-***-48-**K-**	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



## SUMMARY

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### PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	CFDB-7W-***-48-***K-***
Product Description:	LINEAR LOW VOLTAGE
LED Model No.:	Lumileds 2835
Driver Model No.:	LTF Uni Driver / PSB-96W-UNI-24VDC
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	2324.2	2337.9
Input Power (W) @ 24VCD THROUGH 0-10 POWER SUPPLY	38.63	39.36
Lumen Efficacy (lm/W)	60.2	59.4
Input Power Factor (I) @ 24VCD THROUGH 0-10 POWER SUPPLY	0.944	0.948

Criteria	Results
Input ATHD (%) @ 24VCD THROUGH 0-10 POWER SUPPLY (Vac)	21.63
Correlated Color Temperature (K)	3456
Color Rendering Index - Ra (I)	94.0
Color Rendering Index - R9 (I)	86.1
Duv (I)	-0.0021
Chromaticity Coordinate (x)	0.406
Chromaticity Coordinate (y)	0.386
Chromaticity Coordinate (u')	0.238
Chromaticity Coordinate (v')	0.509
Input Power (W) @ 277 (Vac)	44.06
Input Power Factor (I) @ 277 (Vac)	0.743
Input ATHD (%) @ 277 (Vac)	35.98

## 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.

**TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING**

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	CFDB-7W-***-48-**K-**	NA

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

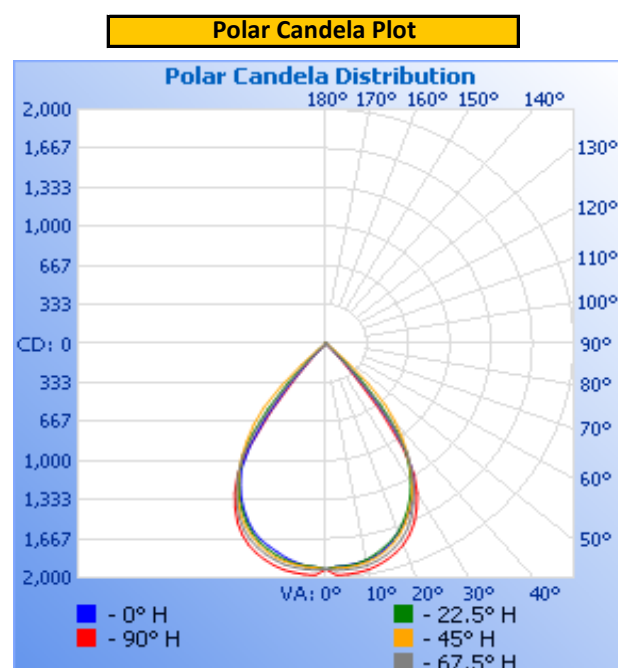
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Up	120.01	340.9	38.63	0.944

Light Output (lm)	Lumen Efficacy (lm/W)
2324.2	60.2

**INTENSITY SUMMARY - CANDELA**

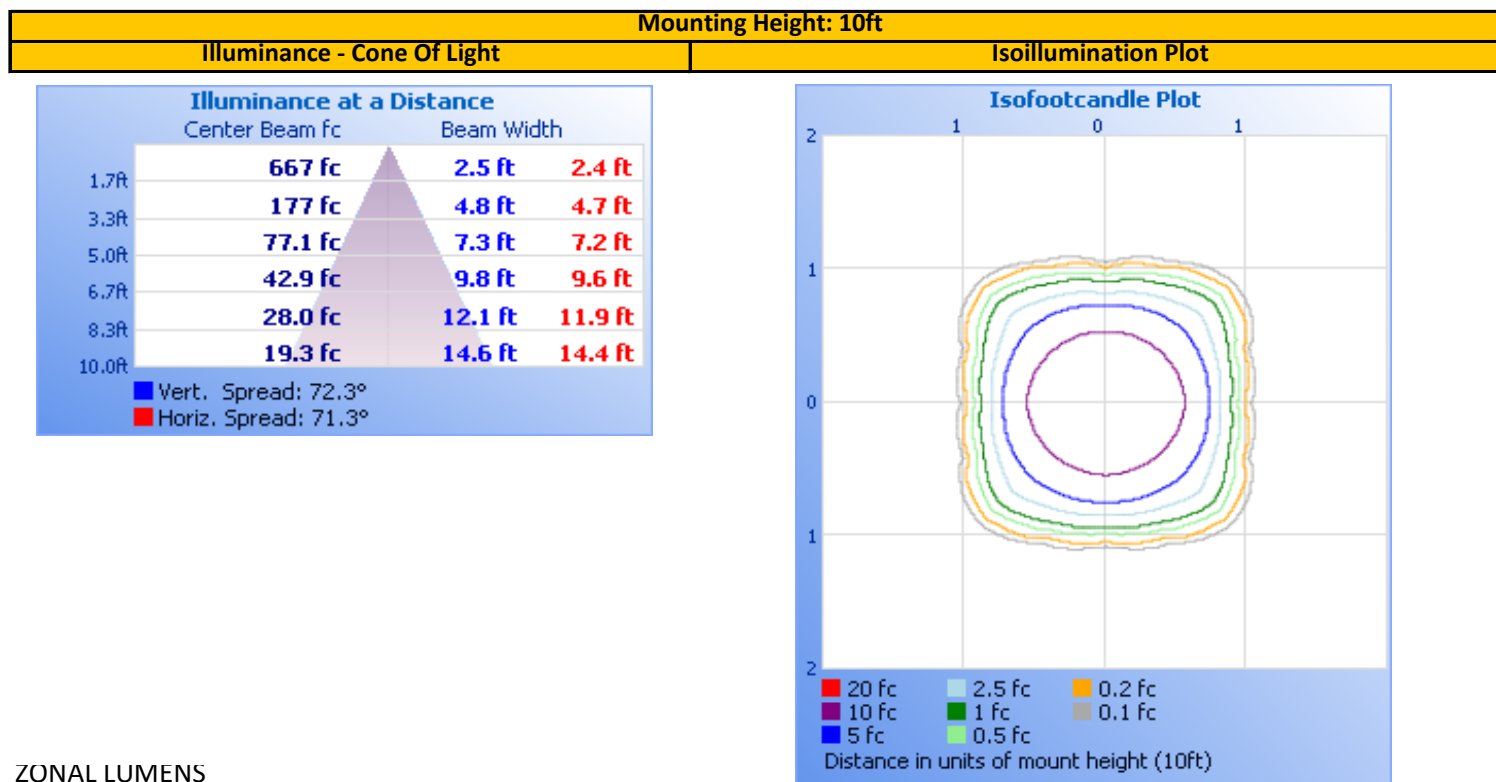
Angle	0	22.5	45	67.5	90
0	1927.5	1927.5	1927.5	1927.5	1927.5
5	1902.6	1907.6	1919.3	1937.3	1979.2
10	1881.5	1875.6	1894.8	1923.3	1961.5
15	1822.9	1803.1	1836.8	1870.2	1909.6
20	1712.9	1711.6	1735.8	1781.2	1827.6
25	1592.9	1563.5	1584.0	1632.1	1686.1
30	1403.9	1372.4	1390.5	1417.3	1470.8
35	1134.0	1128.8	1144.0	1139.1	1082.6
40	558.4	688.6	868.0	592.8	375.6
45	93.9	189.9	482.9	116.9	40.4
50	4.6	13.2	93.0	7.4	2.9
55	1.2	1.2	4.4	1.1	1.2
60	0.8	0.8	0.8	0.7	0.7
65	0.5	0.6	0.6	0.5	0.6
70	0.4	0.4	0.4	0.4	0.4
75	0.3	0.3	0.3	0.3	0.3
80	0.2	0.2	0.2	0.2	0.2
85	0.1	0.1	0.1	0.1	0.1
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



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# ILLUMINANCE SUMMARY



# ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	1,437.6	61.9%	0-10	182.9	7.9%
0-40	2,116.9	91.1%	10-20	518.5	22.3%
0-60	2,323.2	100.0%	20-30	736.2	31.7%
60-90	1.0	0.0%	30-40	679.3	29.2%
70-100	0.4	0.0%	40-50	200.4	8.6%
90-120	0.0	0.0%	50-60	5.9	0.3%
0-90	2,324.2	100.0%	60-70	0.6	0.0%
90-180	0.0	0.0%	70-80	0.3	0.0%
0-180	2,324.2	100.0%	80-90	0.1	0.0%
			90-100	0.0	0.0%
			100-110	0.0	0.0%
			110-120	0.0	0.0%
			120-130	0.0	0.0%
			130-140	0.0	0.0%
			140-150	0.0	0.0%
			150-160	0.0	0.0%
			160-170	0.0	0.0%
			170-180	0.0	0.0%

## INTEGRATING SPHERE TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	CFDB-7W-***-48-**K-**	NA

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

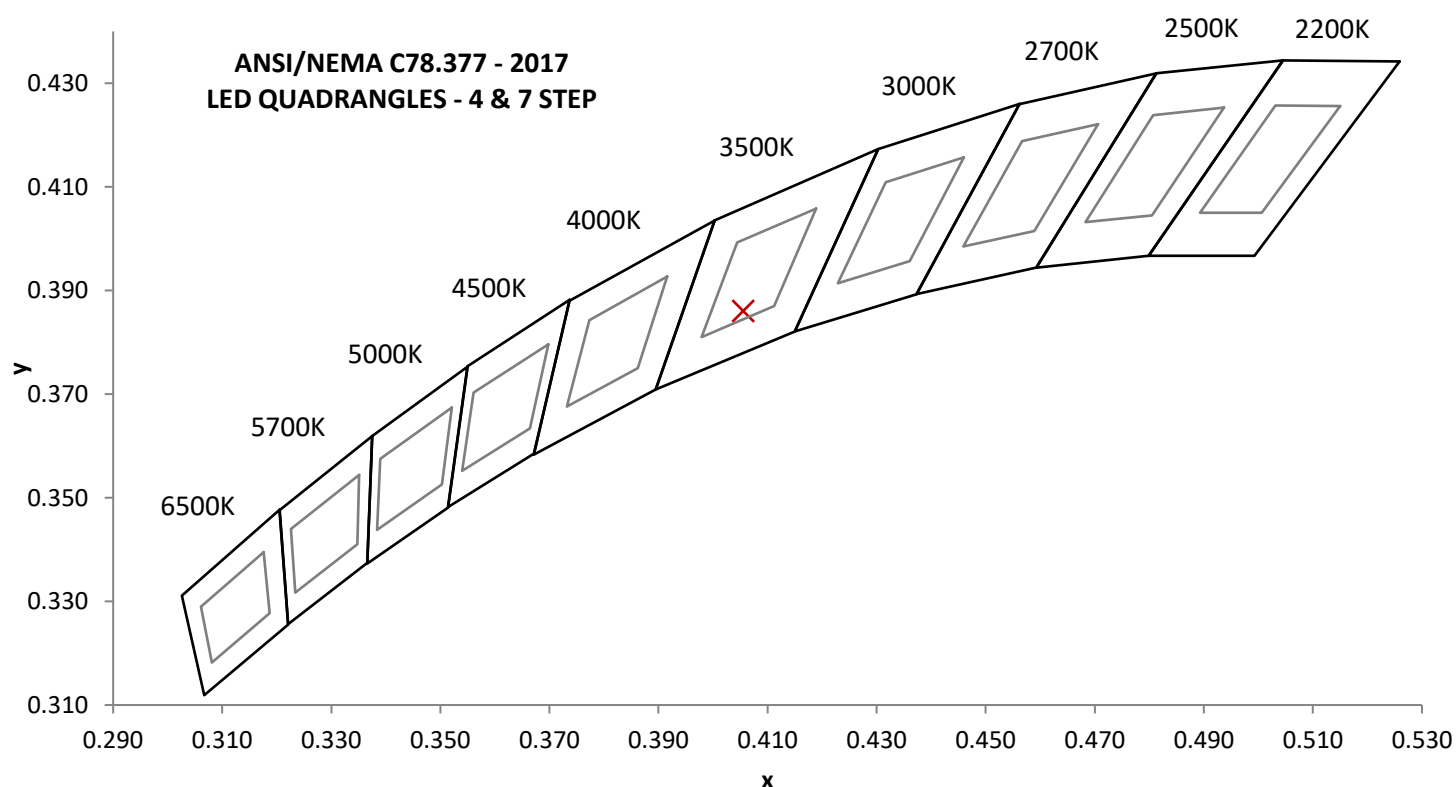
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )	Input ATHD (%)
199.98	346.2	39.36	0.948	21.63
277.04	214.0	44.06	0.743	35.98

## Measured at 199.98(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra ( )	CRI - R9 ( )
2337.9	59.4	3456	94.0	86.1

Duv ( )	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0021	0.406	0.386	0.238	0.509

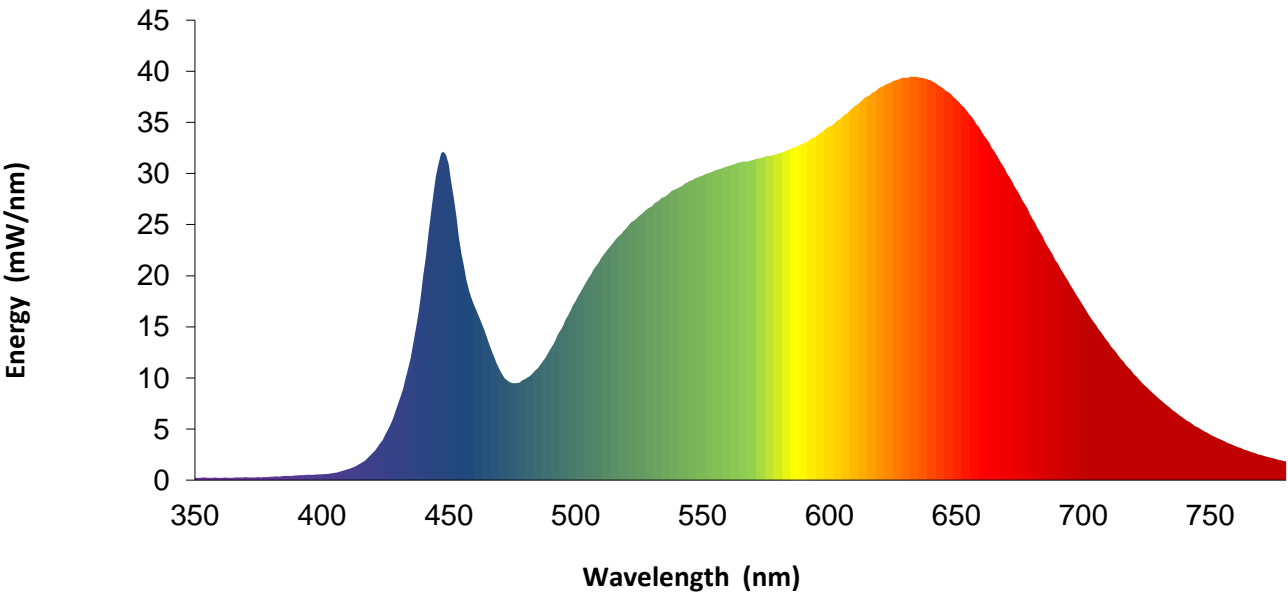


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SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.2		460	17.1		570	31.3		680	25.6
355	0.2		465	14.0		575	31.7		685	23.3
360	0.2		470	10.8		580	32.0		690	21.2
365	0.2		475	9.5		585	32.4		695	19.0
370	0.3		480	9.9		590	33.0		700	17.1
375	0.3		485	10.9		595	33.7		705	15.2
380	0.3		490	12.8		600	34.6		710	13.4
385	0.4		495	15.1		605	35.5		715	11.8
390	0.5		500	17.5		610	36.6		720	10.4
395	0.5		505	19.7		615	37.6		725	9.1
400	0.6		510	21.7		620	38.4		730	7.9
405	0.7		515	23.3		625	39.0		735	6.9
410	1.0		520	24.6		630	39.4		740	6.0
415	1.6		525	25.8		635	39.4		745	5.2
420	2.6		530	26.8		640	39.1		750	4.5
425	4.4		535	27.7		645	38.3		755	3.9
430	7.4		540	28.5		650	37.2		760	3.3
435	12.0		545	29.3		655	35.9		765	2.9
440	20.0		550	29.8		660	34.1		770	2.4
445	29.7		555	30.3		665	32.2		775	2.1
450	30.9		560	30.7		670	30.0		780	1.8
455	22.2		565	31.1		675	27.9		---	---

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**

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT310E	CHI0664	3/30/2022	3/30/2023
2	Omega Thermometer	DPI8-C24	146920	10/4/2021	10/4/2022
3	LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
4	Newport Thermohygrometer	iServer	CHI0452	2/3/2022	2/3/2023
5	Chroma Power Supply	61604	CHI0371	VBU	VBU
8	Newport Humidity Recorder	iServer	146961	9/21/2021	9/21/2022
9	Labsphere Spectroradiometer	CDS2600	CHI0539	VBU	VBU
10	3 Meter Sphere	SPR600	CHI0088	VBU	VBU
11	Elgar AC Power Supply	CW1251	146112	VBU	VBU
12	Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU
13	Yokogawa Power Meter	WT1600	146767	4/4/2022	4/4/2023
17	Omega thermometer	USB TC08	EQAH002615	4/5/2022	4/5/2023

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

**REVISION HISTORY**

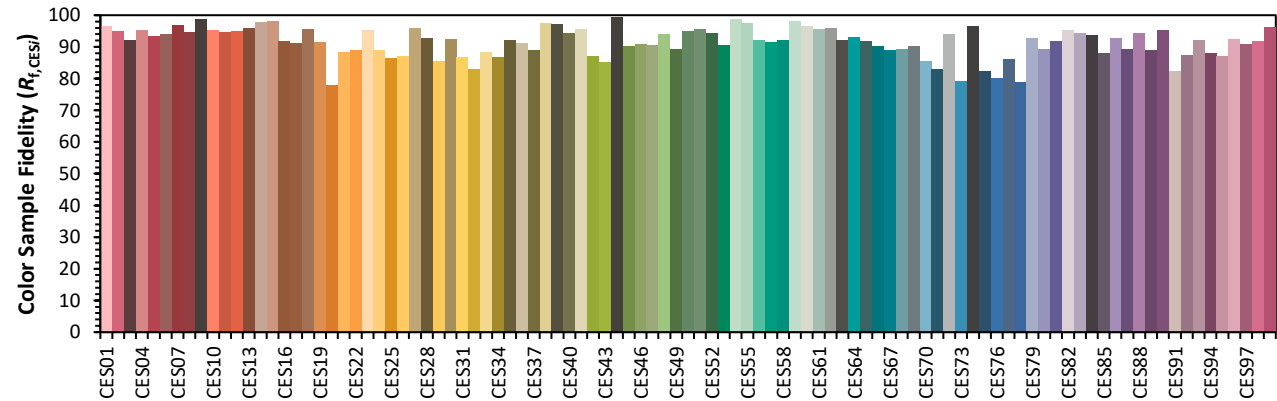
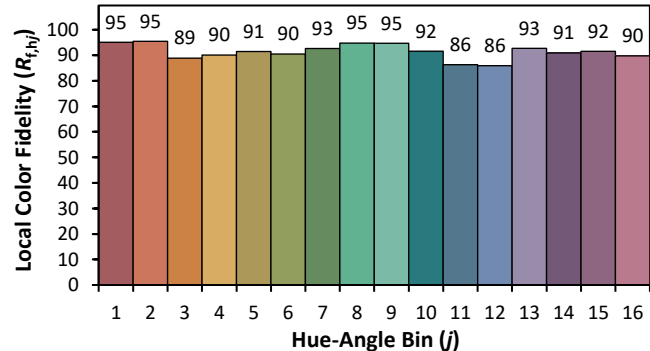
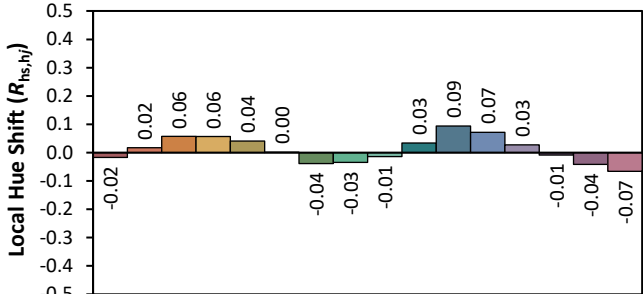
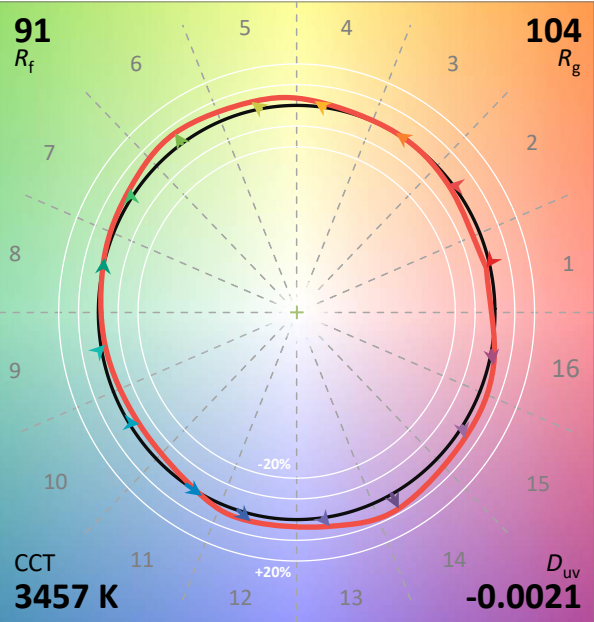
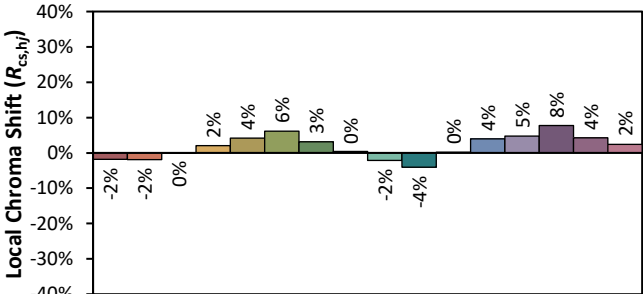
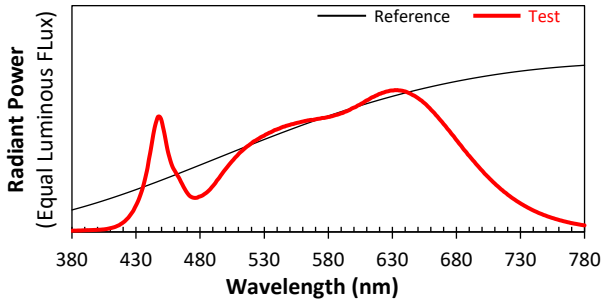
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	CFDB-7W-***-48-**K-**	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD  
Date: 6/9/2022

Manufacturer: PureEdge Lighting LLC  
Model: CFDB-7W-\*\*\*-48-\*\*K-\*\*



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

x 0.4055  
y 0.3860  
u' 0.2378  
v' 0.5093