

# PURE EDGE LIGHTING

## TEST REPORT

### SCOPE OF WORK

LED Performance Testing

### MODEL NUMBER

S5W10-PIN-24V-3-RGBTW

### PROJECT NUMBER

G105870896

### REPORT NUMBER

105870896CHI-015

### ISSUE DATE

7/15/2024

### REVISED DATE

None

### TEST DATES

2024-07-01 through 2024-07-11.

### DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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### PAGES

10

**REPORT NUMBER**

105870896CHI-015

**MODEL NUMBER(s)**

S5W10-PIN-24V-3-RGBTW

**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  
Lighting Division

Reviewer:



Jeff Davis  
NA Technical Lead  
Lighting Division

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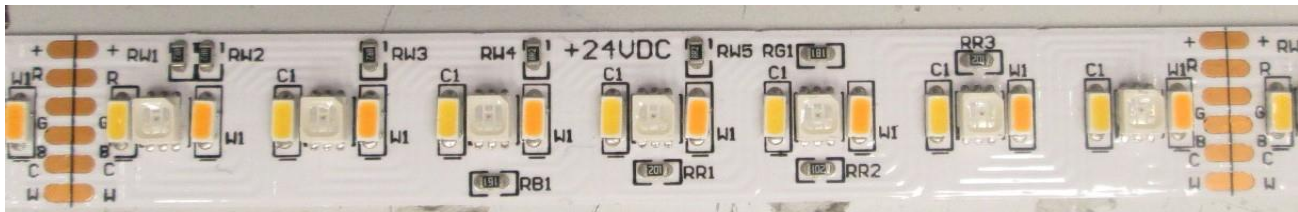
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH06212024013032-015	S5W10-PIN-24V-3-RGBTW	SOFT STRIP	Production	6/21/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	S5W10-PIN-24V-3-RGBTW	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



## PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	S5W10-PIN-24V-3-RGBTW
Product Description:	SOFT STRIP
LED Model No.:	LEDWISE/ SSX-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)	1840.7	1862.3
Driver Output Power (W) @ 24 (Vdc)	18.10	
Calculated Board Efficacy (lm/W)	102.9	

Criteria	Results
Correlated Color Temperature (K)	2906
Color Rendering Index - Ra	96.5
Color Rendering Index - R9	76.8
Duv	-0.0012
Chromaticity Coordinate (x)	0.442
Chromaticity Coordinate (y)	0.403
Chromaticity Coordinate (u')	0.254
Chromaticity Coordinate (v')	0.522

## 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

## TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	S5W10-PIN-24V-3-RGBTW	NA

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

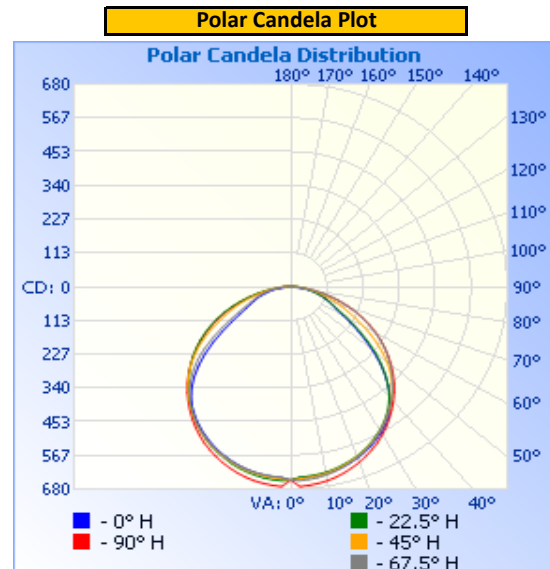
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ( )
Up	119.95	257.7	27.88	0.902

Light Output (lm)	Lumen Efficacy (lm/W)
1840.7	66.0

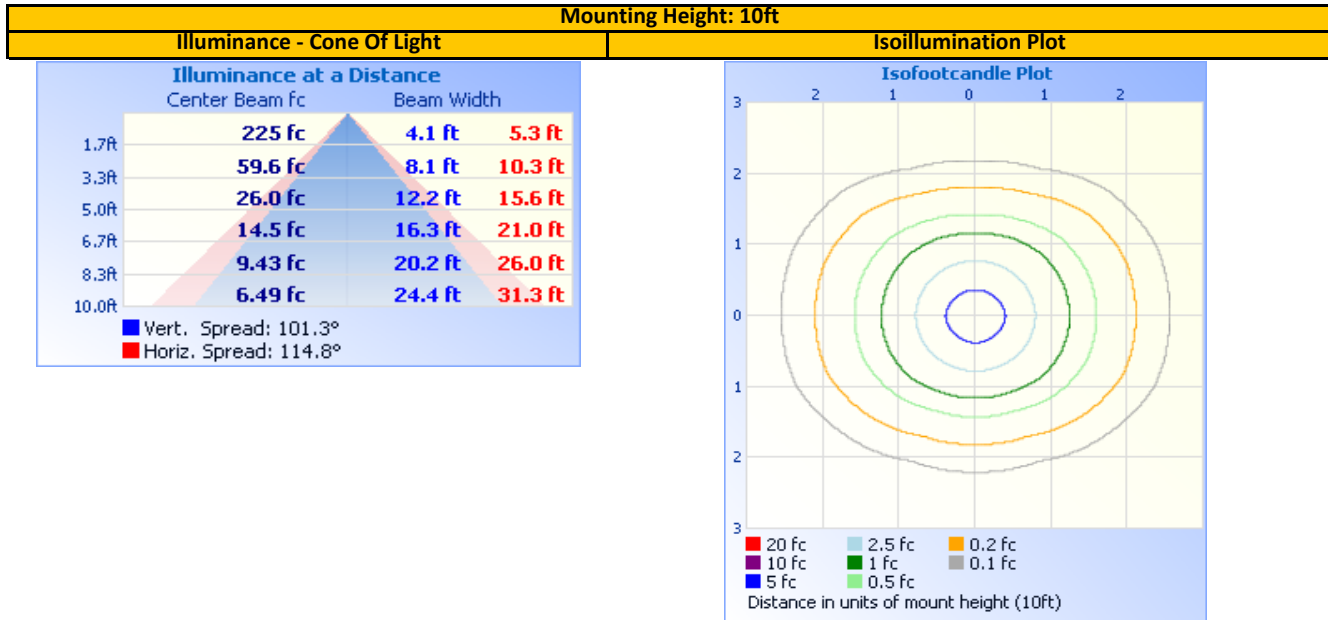
### INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	649	649	649	649	649
5	642	639	643	650	670
10	637	633	636	642	662
15	627	621	624	629	647
20	612	605	608	611	628
25	593	584	587	589	603
30	566	557	560	561	574
35	533	525	529	528	540
40	484	481	493	493	501
45	418	421	449	452	459
50	339	348	395	408	412
55	257	267	330	360	361
60	187	196	262	307	307
65	144	146	199	249	249
70	114	115	148	191	190
75	85	85	105	132	130
80	50	58	66	77	73
85	17	33	34	34	27
90	0	19	17	11	4
95	0	5	12	7	2
100	0	0	3	5	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	510.6	27.7%	90-100	8.5	0.5%
0-40	842.4	45.8%	100-110	0.5	0.0%
0-60	1,474.0	80.1%	110-120	0.0	0.0%
60-90	357.7	19.4%	120-130	0.0	0.0%
70-100	163.8	8.9%	130-140	0.0	0.0%
90-120	9.0	0.5%	140-150	0.0	0.0%
0-90	1,831.7	99.5%	150-160	0.0	0.0%
90-180	9.0	0.5%	160-170	0.0	0.0%
0-180	1,840.7	100.0%	170-180	0.0	0.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	S5W10-PIN-24V-3-RGBTW	NA

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

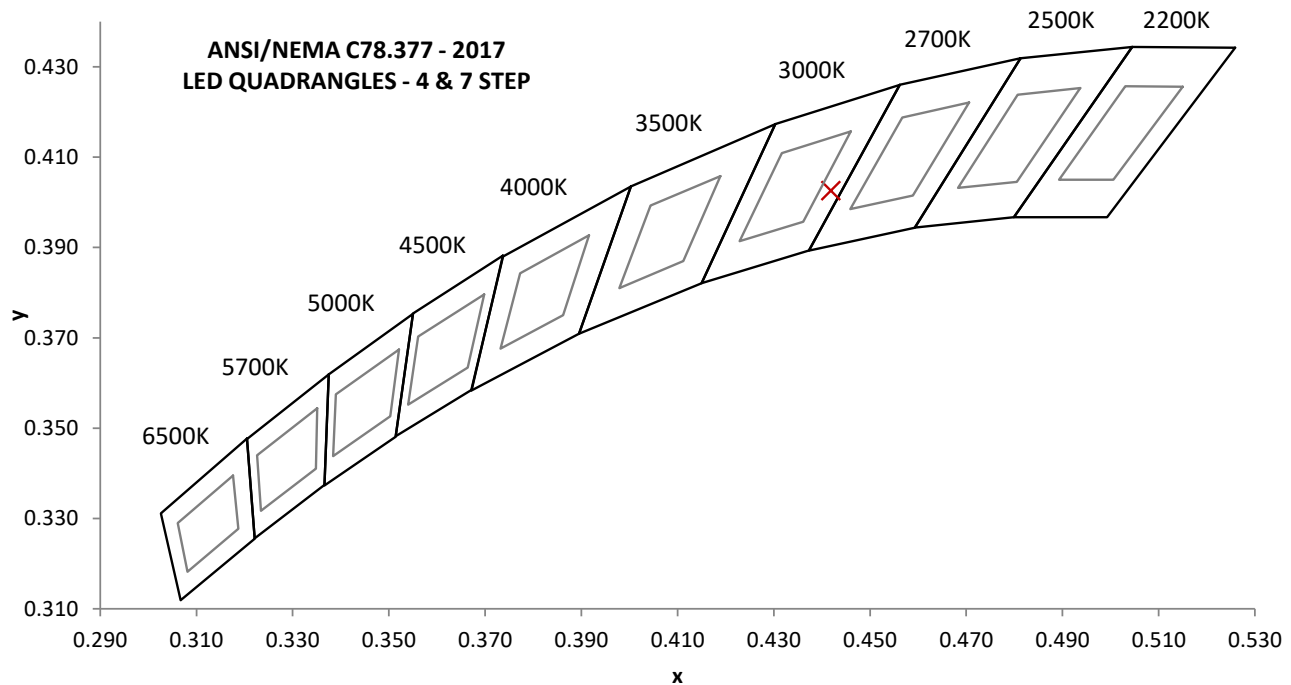
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (l)	Input ATHD (%)
120.00	258.9	28.06	0.903	31.47

Measured at 120(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (l)	CRI - R9 (l)
1862.3	66.4	2906	96.5	76.8

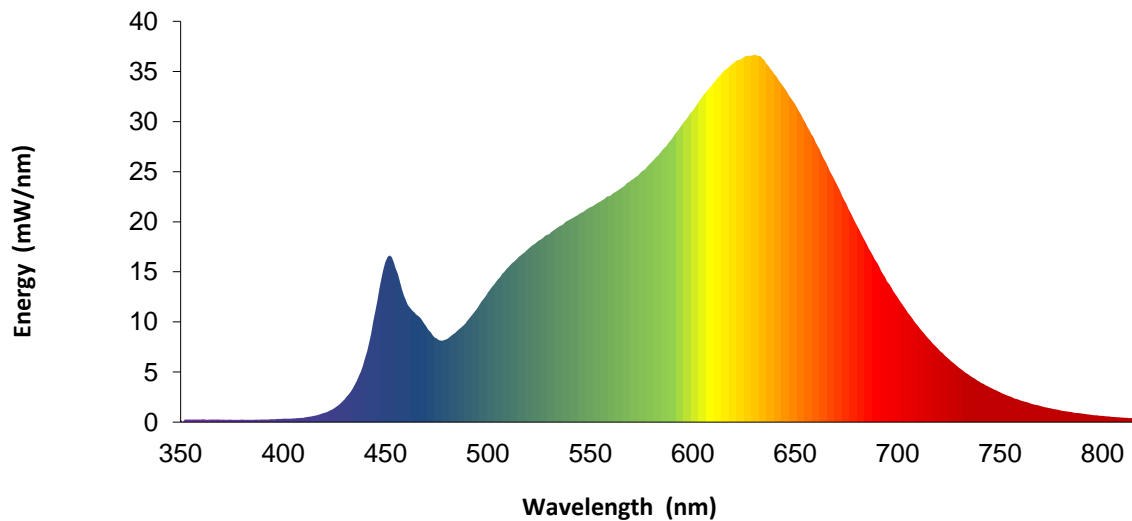
Duv (l)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0012	0.442	0.403	0.254	0.522



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.3		460	12.2		570	24.1		680	19.7
355	0.3		465	10.8		575	25.0		685	17.7
360	0.3		470	9.5		580	26.0		690	15.9
365	0.2		475	8.3		585	27.1		695	14.0
370	0.2		480	8.3		590	28.3		700	12.5
375	0.2		485	9.1		595	29.7		705	10.9
380	0.3		490	10.1		600	31.1		710	9.6
385	0.2		495	11.4		605	32.6		715	8.4
390	0.3		500	12.9		610	33.8		720	7.3
395	0.3		505	14.3		615	35.0		725	6.3
400	0.3		510	15.5		620	35.9		730	5.4
405	0.4		515	16.5		625	36.4		735	4.7
410	0.4		520	17.3		630	36.7		740	4.0
415	0.6		525	18.1		635	36.1		745	3.5
420	0.9		530	18.8		640	34.7		750	3.0
425	1.4		535	19.6		645	33.3		755	2.6
430	2.3		540	20.2		650	31.7		760	2.2
435	3.7		545	20.8		655	29.9		765	1.9
440	6.3		550	21.5		660	27.9		770	1.6
445	11.0		555	22.0		665	25.9		775	1.4
450	16.0		560	22.6		670	23.8		780	1.2
455	15.4		565	23.4		675	21.8		---	---

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-015**

#	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

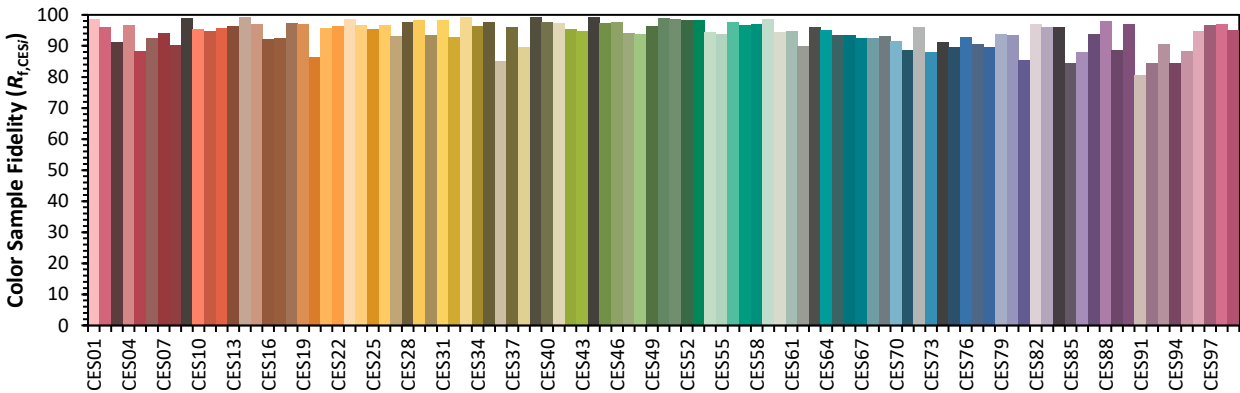
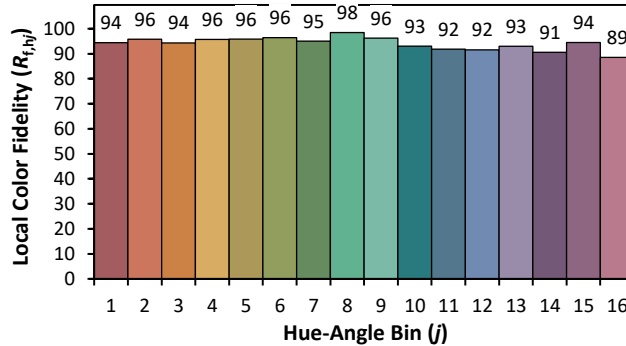
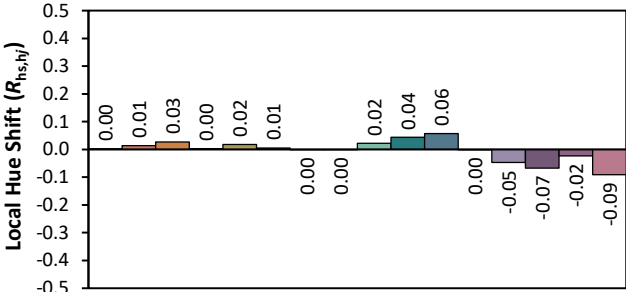
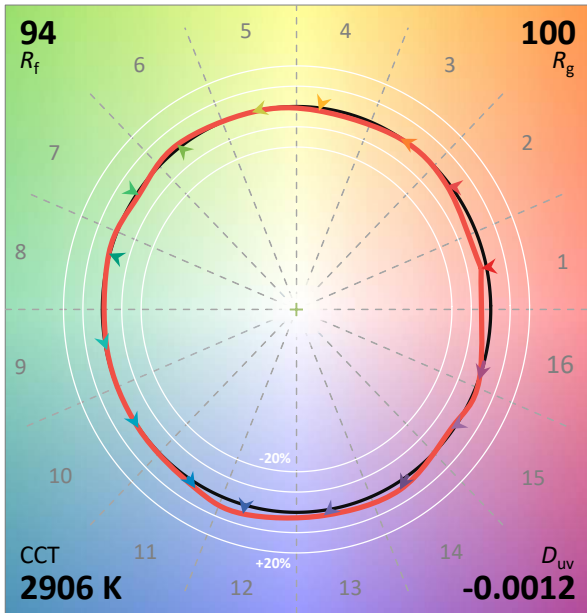
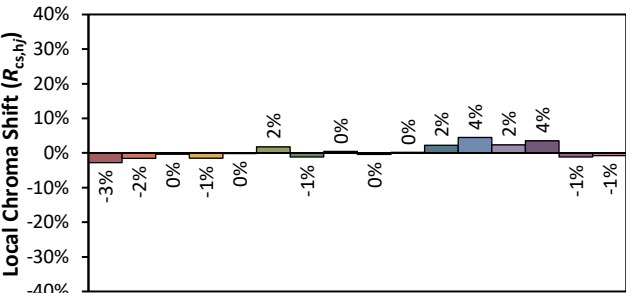
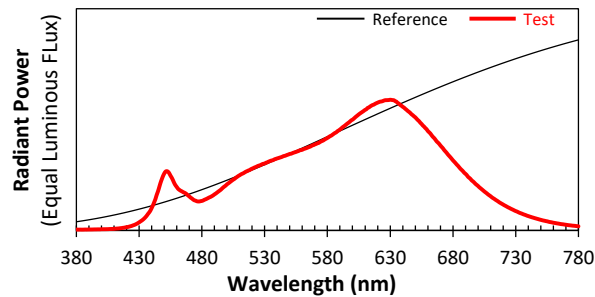
**REVISION HISTORY**

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	S5W10-PIN-24V-3-RGBTW	NA

ANSI/IES TM-30-18 Color Rendition Report

Source:	User SPD	Manufacturer:	Pure Edge Lighting
Date:	7/1/2024	Model:	S5W10-PIN-24V-3-RGBTW



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

x 0.4419  
y 0.4025  
u' 0.2544  
v' 0.5215