

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

ST7A-24V-3-30K

PROJECT NUMBER

G104430061

REPORT NUMBER

104430061CHI-012

ISSUE DATE

3/10/2021

REVISED DATE

None

TEST DATES

03/01/2021 through 03/04/2021.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104430061CHI-012

MODEL NUMBER(s)

ST7A-24V-3-30K

REPORT RENDERED TO:

PURE EDGE LIGHTING
1718 WEST FULLERTON AVE
CHICAGO
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-01100816-1.

TEST STANDARDS

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

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:



Ian Smith
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Reviewer:



Jeff Davis
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SAMPLE INFORMATION

REPORT NO. 104430061CHI-012

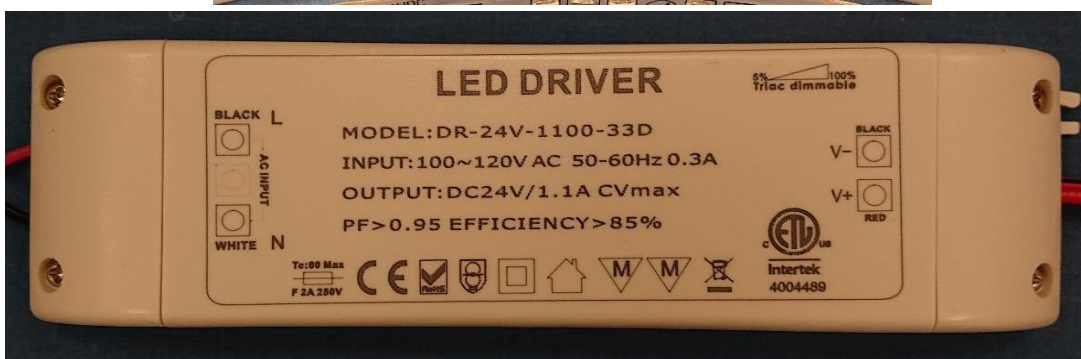
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH02182021102128	ST7A-24V-3-30K	LED STRIP LIGHT	Production	2/18/2021

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	ST7A-24V-3-30K	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

REPORT NO. 104430061CHI-012

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	ST7A-24V-3-30K
Product Description:	LED STRIP LIGHT
LED Model No.:	LIANGAN/ LA-D2835P927M-3E2-00301
Driver Model No.:	HUARI/DR-24V-1100-33D
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	2434.9	2567.3
Input Power (W) @ 120 (Vac)	25.57	25.97
Lumen Efficacy (lm/W)	95.2	98.9
Input Power Factor () @ 120 (Vac)	0.987	0.987

Criteria	Results
Input ATHD (%) @ 120 (Vac)	14.77
Correlated Color Temperature (K)	3128
Color Rendering Index - Ra ()	92.6
Color Rendering Index - R9 ()	63.1
Duv ()	0.0033
Chromaticity Coordinate (x)	0.424
Chromaticity Coordinate (y)	0.392
Chromaticity Coordinate (u')	0.247
Chromaticity Coordinate (v')	0.515

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

REPORT NO. 104430061CHI-012

Test Configuration	Tested Model No.	Pass/Fail/NA
1	ST7A-24V-3-30K	NA

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

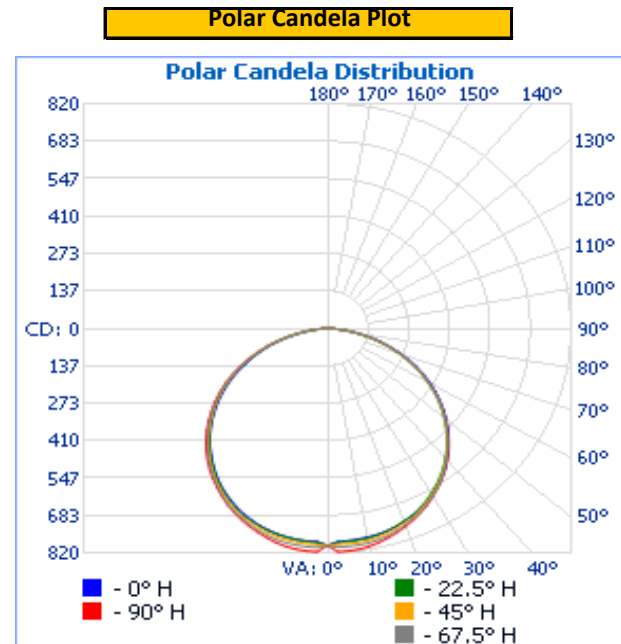
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)
Up	119.98	215.9	25.57	0.987

Light Output (lm)	Lumen Efficacy (lm/W)
2434.9	95.2

INTENSITY SUMMARY - CANDELA

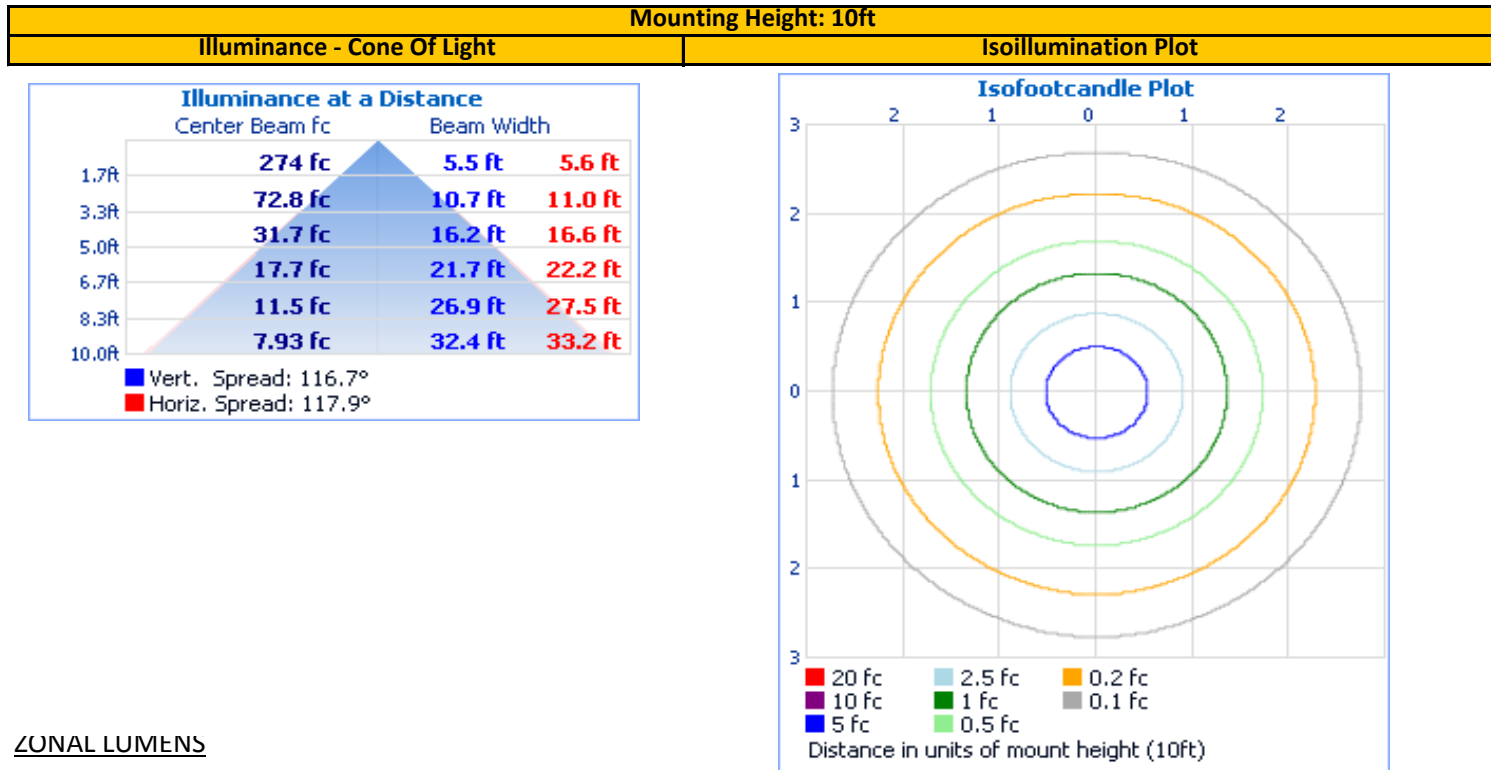
Angle	0	22.5	45	67.5	90
0	793	793	793	793	793
5	778	781	789	799	816
10	774	778	787	796	808
15	766	767	775	784	791
20	752	749	756	764	769
25	732	728	734	741	742
30	703	697	703	709	709
35	669	660	666	670	671
40	625	618	621	625	628
45	575	568	571	573	578
50	522	514	515	518	522
55	462	455	455	457	460
60	399	389	391	391	394
65	330	320	321	322	322
70	256	248	249	249	248
75	183	174	174	174	173
80	110	103	102	102	100
85	46	41	40	40	39
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



REPORT NO. 104430061CHI-012

ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
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Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	632.4	26.0%	0-10	75.4	3.1%
0-40	1,047.7	43.0%	10-20	219.0	9.0%
0-60	1,892.3	77.7%	20-30	338.0	13.9%
60-90	542.6	22.3%	30-40	415.4	17.1%
70-100	227.9	9.4%	40-50	439.2	18.0%
90-120	0.0	0.0%	50-60	405.4	16.6%
0-90	2,434.9	100.0%	60-70	314.7	12.9%
90-180	0.0	0.0%	70-80	181.2	7.4%
0-180	2,434.9	100.0%	80-90	46.7	1.9%
			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

REPORT NO. 104430061CHI-012

Test Configuration	Tested Model No.	Pass/Fail/NA
1	ST7A-24V-3-30K	NA

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

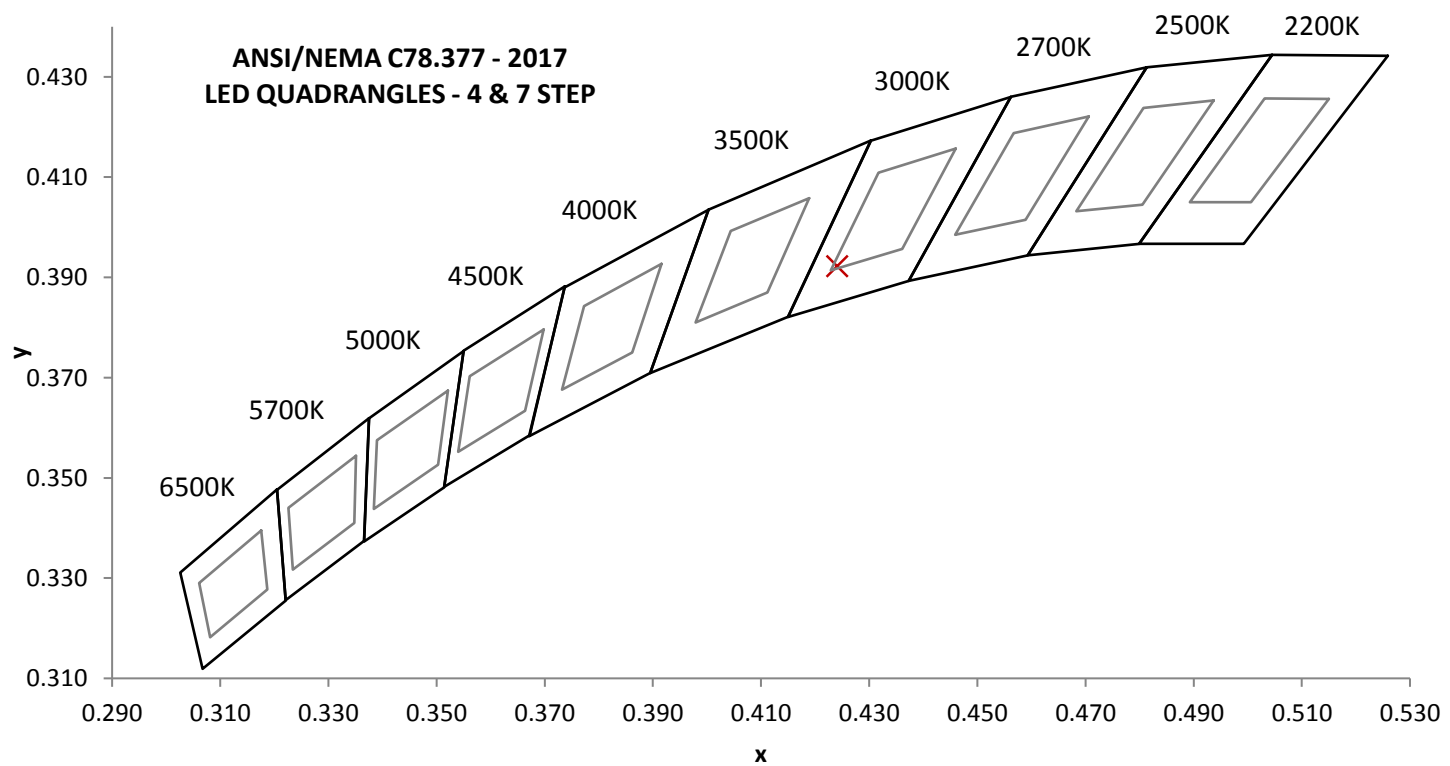
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
119.95	219.3	25.97	0.987	14.77

Measured at 119.95(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (I)	CRI - R9 (I)
2567.3	98.9	3128	92.6	63.1

Duv (I)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
0.0033	0.424	0.392	0.247	0.515

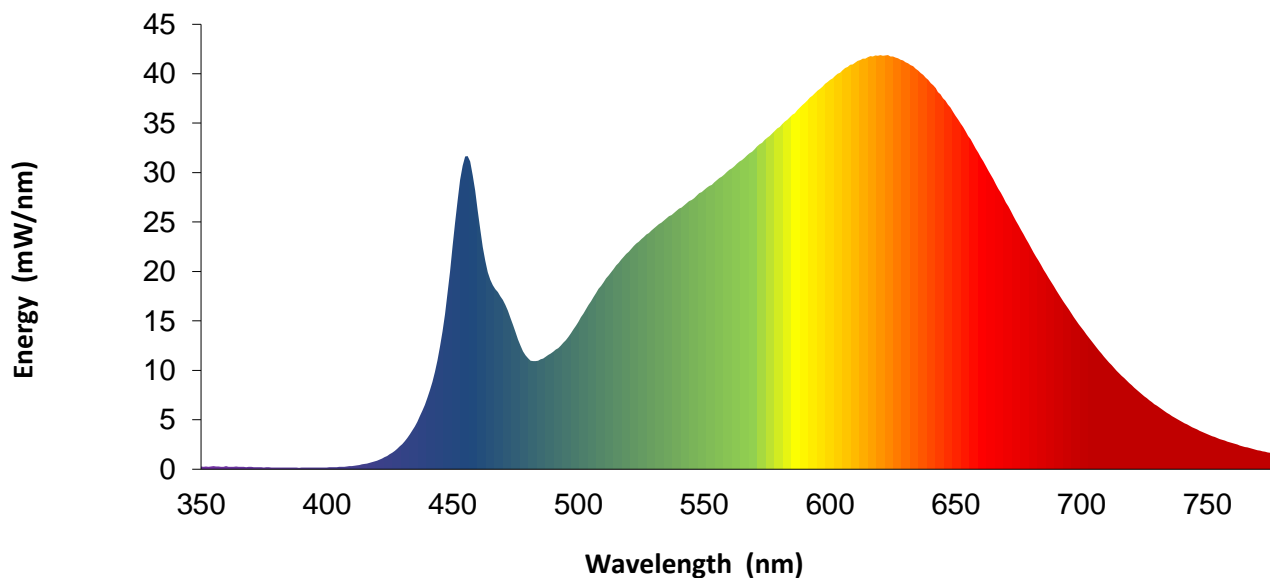


REPORT NO. 104430061CHI-012

SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.3		460	26.1		570	32.4		680	22.4
355	0.3		465	19.2		575	33.5		685	20.2
360	0.3		470	17.1		580	34.6		690	18.1
365	0.3		475	13.9		585	35.9		695	16.2
370	0.2		480	11.2		590	37.0		700	14.3
375	0.2		485	11.1		595	38.3		705	12.6
380	0.2		490	11.9		600	39.4		710	11.1
385	0.2		495	13.0		605	40.4		715	9.7
390	0.2		500	14.9		610	41.1		720	8.5
395	0.2		505	17.0		615	41.7		725	7.4
400	0.2		510	18.9		620	41.9		730	6.4
405	0.2		515	20.6		625	41.7		735	5.6
410	0.3		520	22.0		630	41.2		740	4.8
415	0.5		525	23.3		635	40.3		745	4.1
420	0.9		530	24.4		640	39.1		750	3.6
425	1.5		535	25.4		645	37.5		755	3.1
430	2.6		540	26.4		650	35.7		760	2.7
435	4.3		545	27.2		655	33.7		765	2.3
440	7.2		550	28.2		660	31.6		770	1.9
445	12.4		555	29.2		665	29.3		775	1.7
450	22.6		560	30.3		670	27.0		780	1.4
455	31.6		565	31.3		675	24.7		---	---

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. 104430061CHI-012

#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
2	Omega Thermometer	DPI8-C24	146920	10/1/2020	10/1/2021
3	LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
4	Newport Thermohygrometer	iServer	146957	1/29/2021	1/29/2022
5	Pacific AC Power Supply	118-ACX	CHI0153	VBV	VBV
6	Newport Humidity Recorder	iServer	146961	9/3/2020	9/3/2021
7	Labsphere 2M Sphere & Spectroradiometer	CDS1100	146137	VBV	VBV
8	Elgar AC Power Supply	CW1251	146113	VBV	VBV
9	Sorenson DC Power Supply	XFR150-8	146847	VBV	VBV
10	Yokogawa Power Meter	WT1600	146767	4/6/2020	4/6/2021
11	Omega Thermometer	MDSi8	146873	7/1/2020	7/1/2021

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	ST7A-24V-3-30K	NA

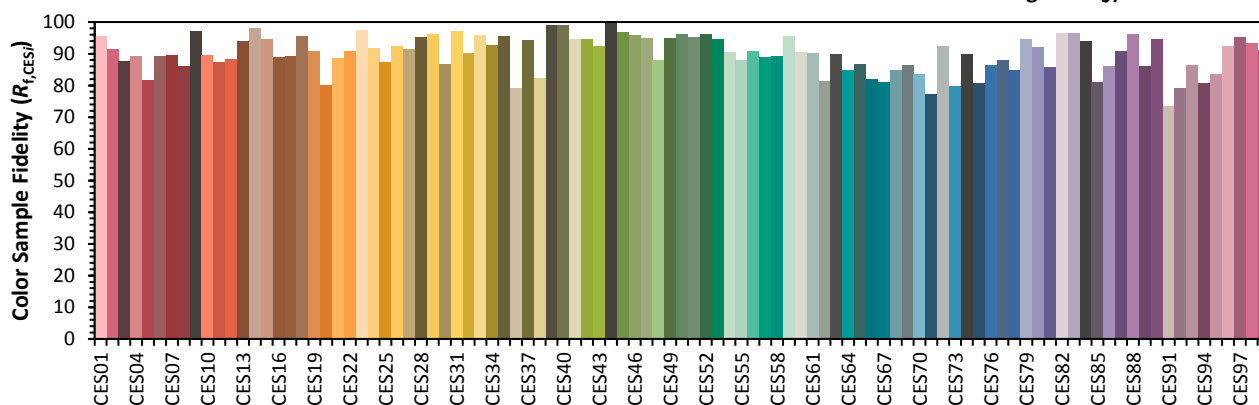
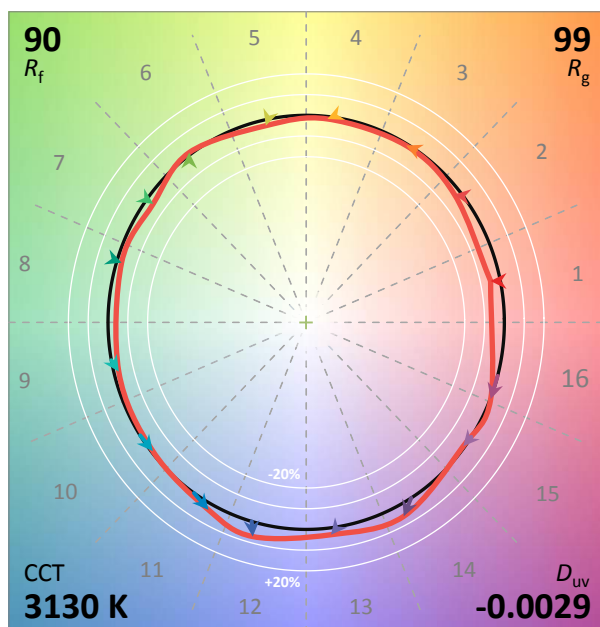
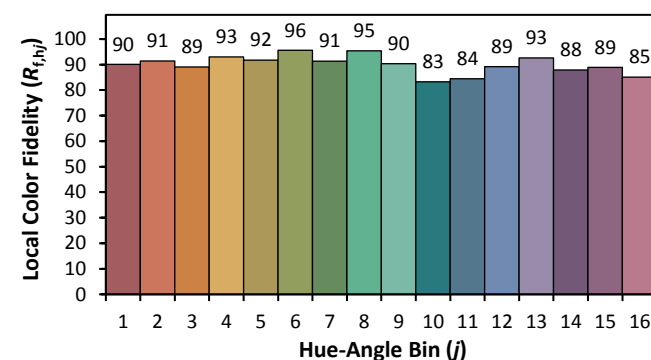
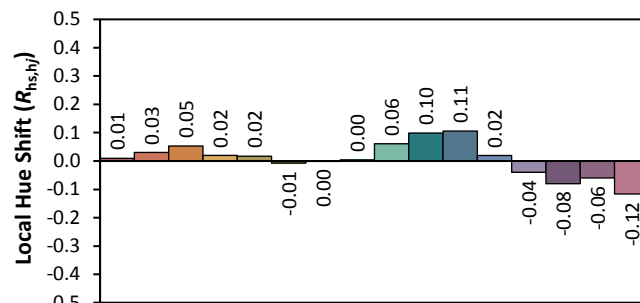
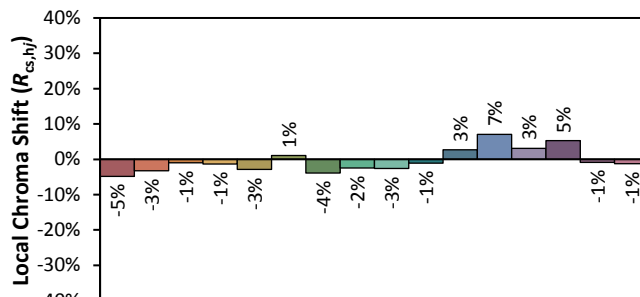
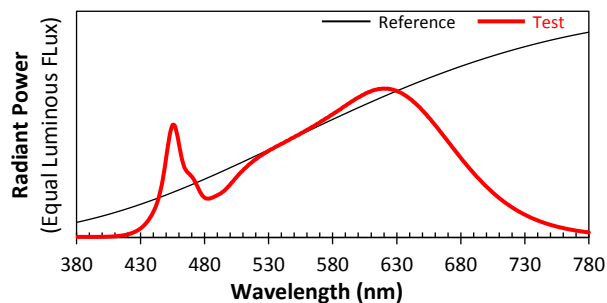
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Pure Edge Lighting

Date: 3/4/2021

Model: ST7A-24V-3-30K



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

x 0.4241

y 0.3923

 u' 0.2473 v' 0.5147