

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700PRTLGSN8BR-LED927

PROJECT NUMBER

G105235466

REPORT NUMBER

105235466CHI-001

ISSUE DATE

10/31/2022

REVISED DATE

None

TEST DATES

2022-10-18 through 2022-10-21.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

105235466CHI-001

MODEL NUMBER(s)

700PRTLGSN8BR-LED927

REPORT RENDERED TO:

VISUAL COMFORT AND COMPANY
7400 LINDER AVE
SKOKIE, IL 60077
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-01297671-0.

TEST STANDARDS

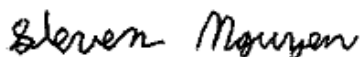
IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

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:



Steven Nguyen
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Reviewer:



Jeff Davis
N.A. Technical Lead
Lighting Division

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SAMPLE INFORMATION

REPORT NO. 105235466CHI-001

ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH10112022074545	700PRTLGSN8BR-LED927	Langston Table Lamp	Production	10/11/2022

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700PRTLGSN8BR-LED927	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700PRTLGSN8BR-LED927
Product Description:	Langston Table Lamp
LED Model No.:	XYboard:.CONCEPT_07_TRIPND_LED(X2)
Driver Model No.:	A122.1201000ID-E+TL19_OBJT_2019-09
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	733.4	745.0
Input Power (W) @ 120VAC (Vac)	9.88	9.91
Lumen Efficacy (lm/W)	74.2	75.2
Input Power Factor (I) @ 120VAC (Vac)	0.848	0.861

Criteria	Results
Input ATHD (%) @ 120VAC (Vac)	55.37
Correlated Color Temperature (K)	2968
Color Rendering Index - Ra (I)	90.8
Color Rendering Index - R9 (I)	58.3
Duv (I)	0.0039
Chromaticity Coordinate (x)	0.445
Chromaticity Coordinate (y)	0.417
Chromaticity Coordinate (u')	0.250
Chromaticity Coordinate (v')	0.527

Criteria	Results
	Standby Power
Input Voltage (V) @ 120 (Vac)	119.99
Output Power (W) @ 120 (Vac)	0.01

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	700PRTLGSN8BR-LED927	NA

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

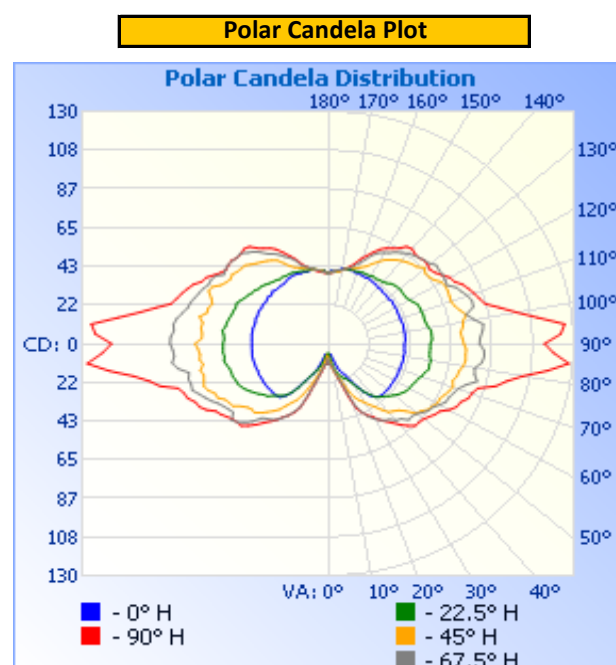
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Horizontal	120.03	97.0	9.88	0.848

Light Output (lm)	Lumen Efficacy (lm/W)
733.4	74.2

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	8	8	8	8	8
5	6	6	10	11	12
10	6	10	14	13	14
15	8	16	18	19	20
20	14	19	24	30	32
25	18	21	33	42	43
30	24	26	38	49	48
35	33	33	43	53	53
40	39	39	50	56	59
45	40	42	53	60	65
50	41	45	61	61	66
55	40	48	65	65	69
60	40	50	67	68	74
65	41	51	68	71	77
70	41	53	70	73	81
75	41	55	71	82	92
80	40	55	73	79	105
85	41	54	73	83	128
90	40	54	72	80	115
95	41	55	70	82	126
100	41	54	72	78	101
105	41	53	72	80	86
110	41	53	69	79	82
115	41	52	70	75	79
120	41	49	69	71	74
125	41	49	65	72	69
130	41	49	66	70	69
135	41	47	63	68	68
140	41	45	61	66	69
145	42	44	57	63	65
150	42	44	53	59	62
155	42	44	48	54	56
160	42	43	45	48	50
165	43	43	44	44	45
170	42	42	42	42	42
175	41	40	41	41	40
180	39	39	39	39	39

Entire luminous intensity matrix found in .IES file



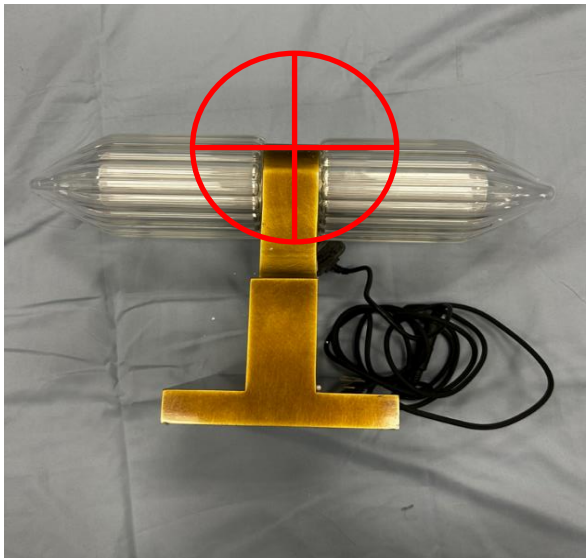
REPORT NO. 105235466CHI-001

ORIENTATION AND ALIGNMENT OF EUT

Luminous Opening		
Length (ft)	Width (ft)	Height (ft)
-0.25	1.17	-0.25
0°-180° H	90°-270° H	0°-180° V

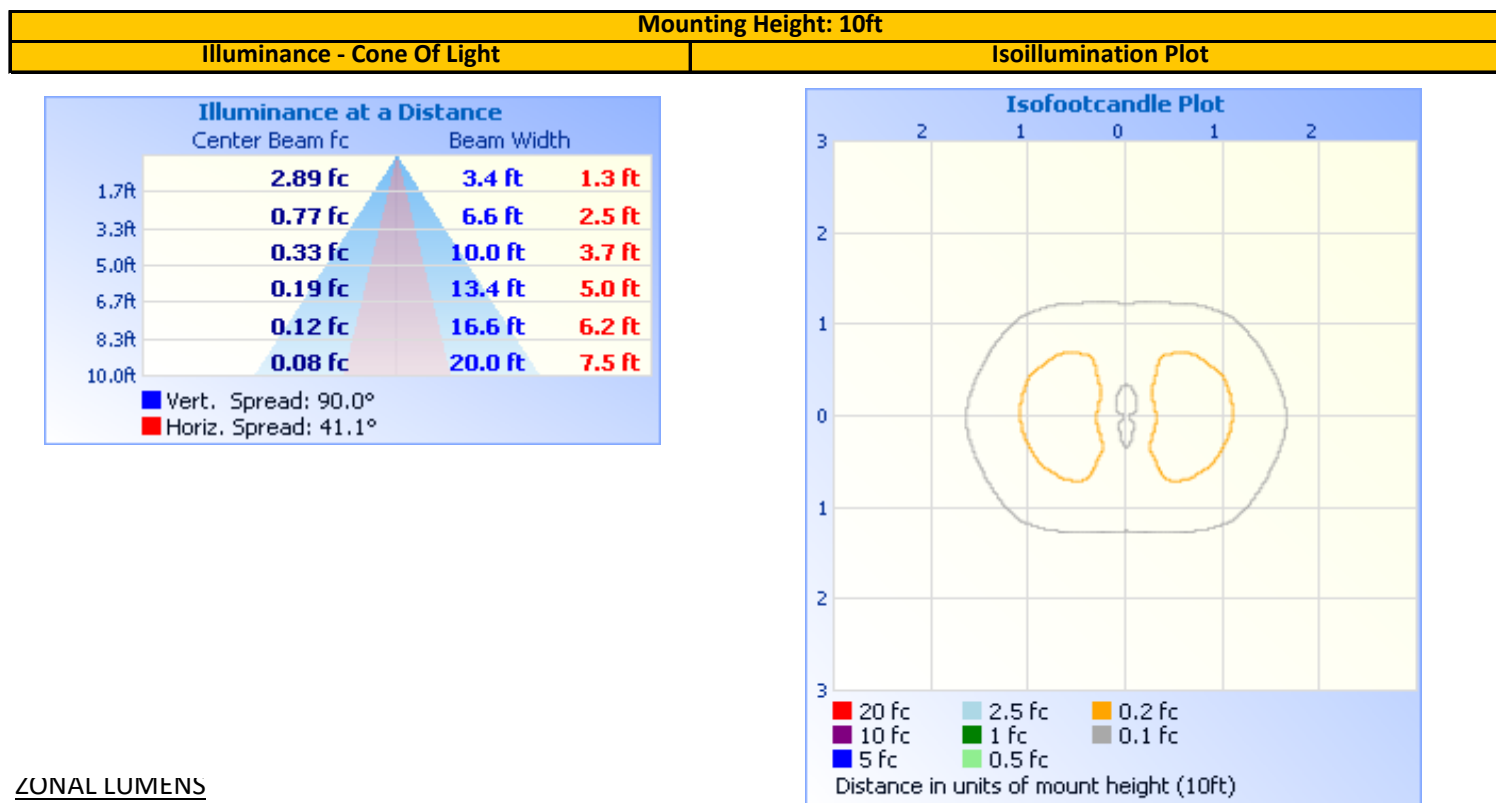
Test Distance (ft)
30.0

PHOTOMETRIC CENTER OF EUT



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ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	20.2	2.8%	90-100	77.9	10.6%
0-40	47.3	6.5%	100-110	70.3	9.6%
0-60	139.1	19.0%	110-120	63.0	8.6%
60-90	211.1	28.8%	120-130	53.8	7.3%
70-100	227.0	31.0%	130-140	44.9	6.1%
90-120	211.3	28.8%	140-150	34.2	4.7%
0-90	350.2	47.7%	150-160	22.7	3.1%
90-180	383.2	52.3%	160-170	12.4	1.7%
0-180	733.4	100.0%	170-180	3.9	0.5%

INTEGRATING SPHERE TESTING

REPORT NO. 105235466CHI-001

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTLGSN8BR-LED927	NA

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

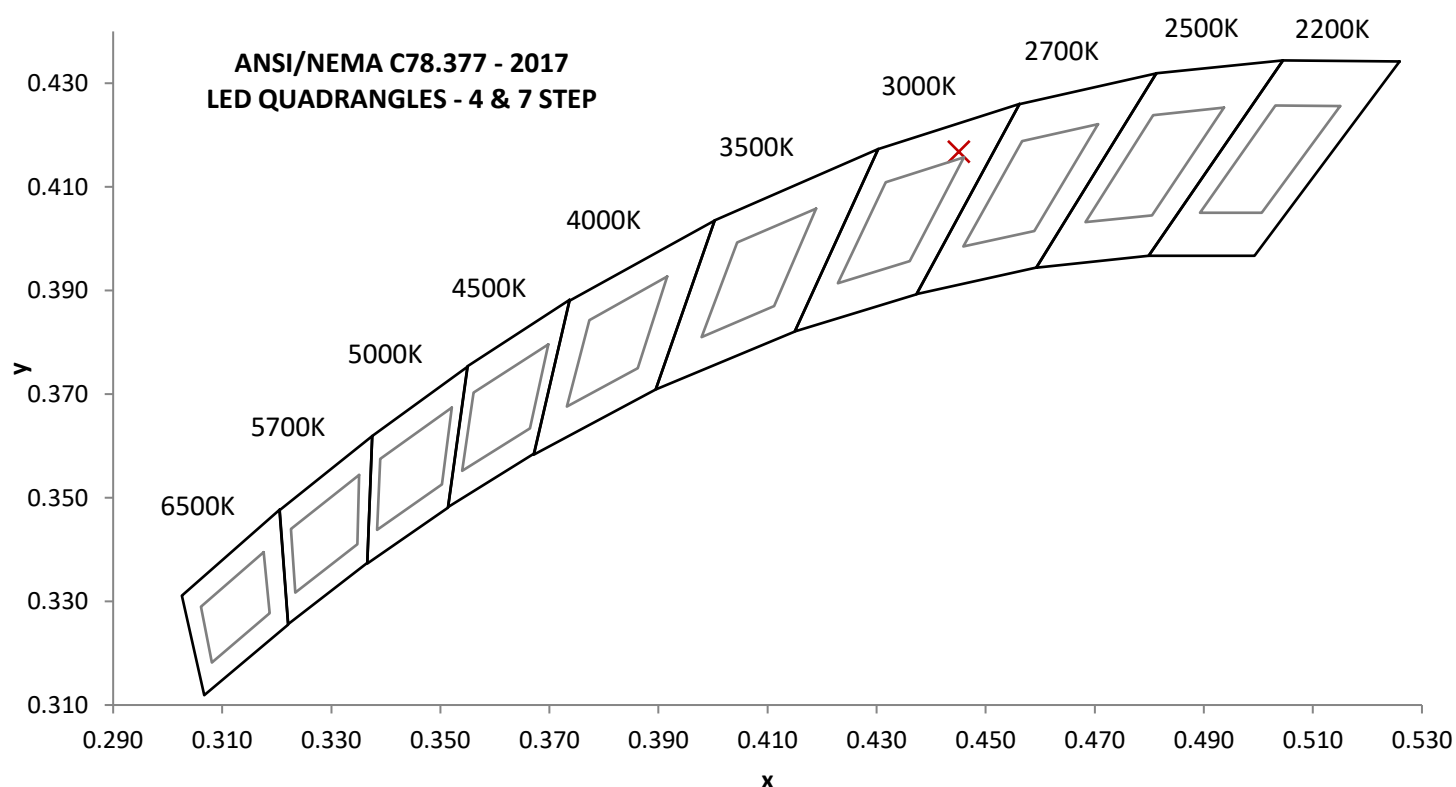
Base Orientation
Horizontal

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()	Input ATHD (%)
120.00	95.9	9.91	0.861	55.37

Measured at 120(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra ()	CRI - R9 ()
745.0	75.2	2968	90.8	58.3

Duv ()	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
0.0039	0.445	0.417	0.250	0.527

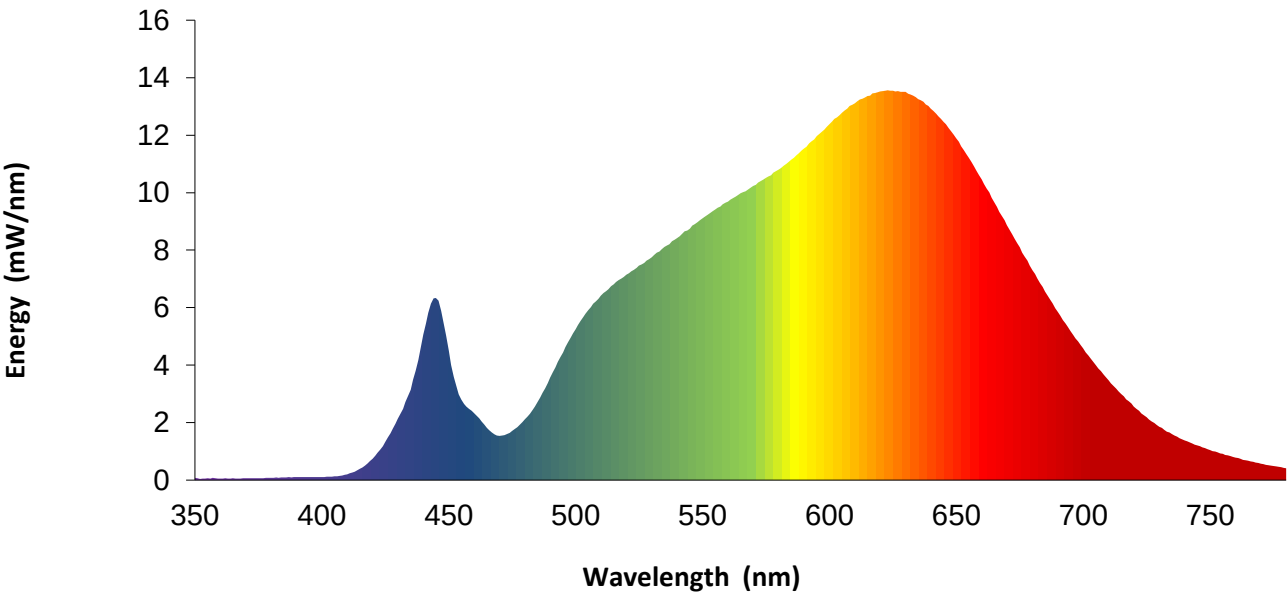


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SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.1		460	2.3		570	10.2		680	7.3
355	0.1		465	1.8		575	10.5		685	6.6
360	0.1		470	1.5		580	10.8		690	5.9
365	0.1		475	1.7		585	11.1		695	5.2
370	0.1		480	2.1		590	11.5		700	4.6
375	0.1		485	2.7		595	12.0		705	4.0
380	0.1		490	3.6		600	12.4		710	3.5
385	0.1		495	4.4		605	12.8		715	3.0
390	0.1		500	5.3		610	13.1		720	2.6
395	0.1		505	5.9		615	13.4		725	2.2
400	0.1		510	6.4		620	13.5		730	1.9
405	0.1		515	6.8		625	13.6		735	1.6
410	0.2		520	7.1		630	13.5		740	1.4
415	0.4		525	7.5		635	13.3		745	1.2
420	0.7		530	7.8		640	12.9		750	1.1
425	1.3		535	8.1		645	12.5		755	0.9
430	2.1		540	8.4		650	11.9		760	0.8
435	3.1		545	8.8		655	11.2		765	0.7
440	5.1		550	9.1		660	10.5		770	0.6
445	6.3		555	9.4		665	9.7		775	0.5
450	4.5		560	9.7		670	8.9		780	0.4
455	2.8		565	10.0		675	8.1		---	---

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	10/4/2022	10/4/2023
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	4/5/2022	4/5/2023
17	Omega thermometer	USB TC08	EQAH002615	4/5/2022	4/5/2023
26	Xitron Power Analyzer	XT-2640	CHI0611	7/6/2022	7/6/2023

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

REVISION HISTORY

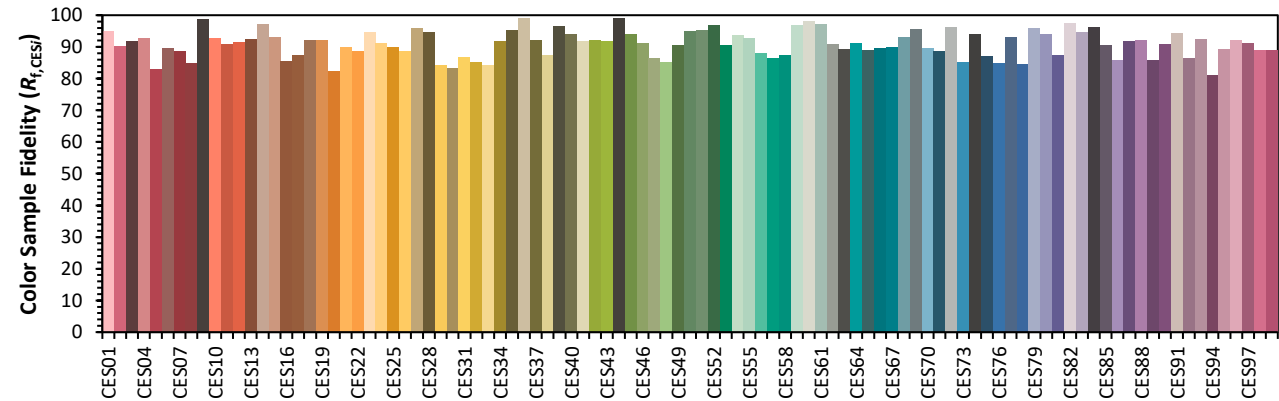
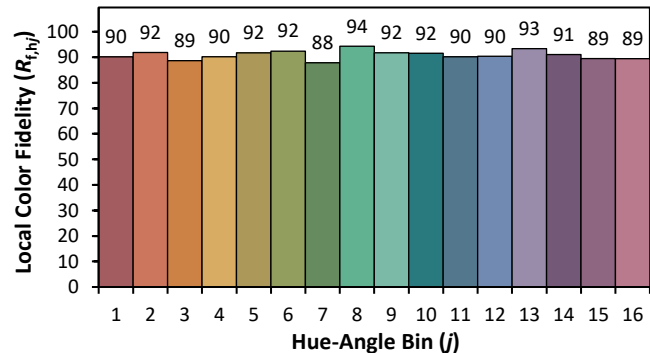
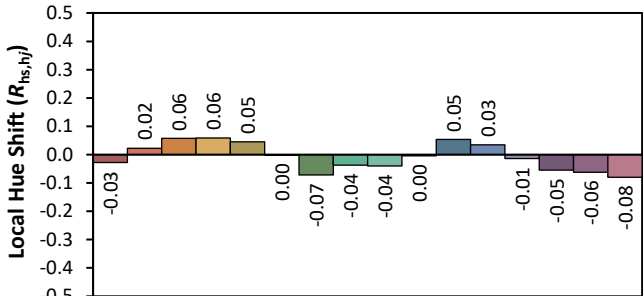
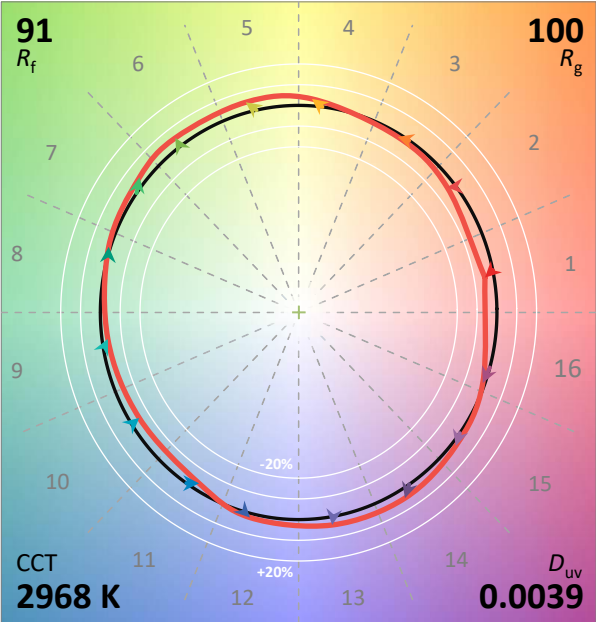
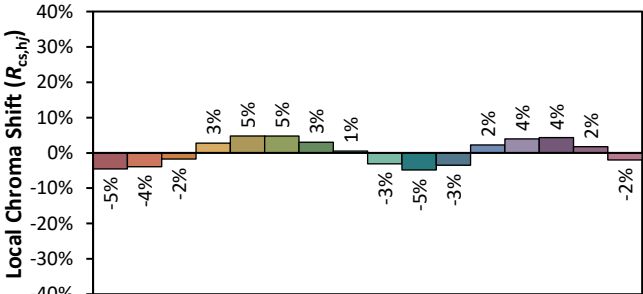
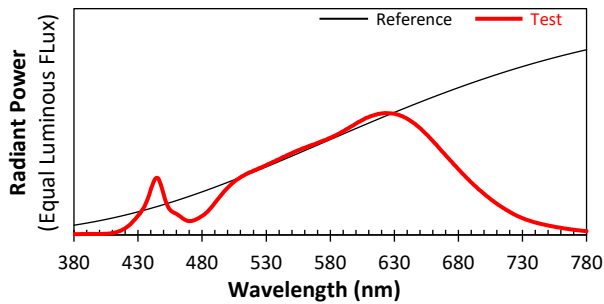
#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700PRTLGSN8BR-LED927	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 10/18/2022

Manufacturer: VISUAL COMFORT AND COMPANY
Model: 700PRTLGSN8BR-LED927



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

x 0.4451
y 0.4167
u' 0.2504
v' 0.5275