

VISUAL COMFORT & CO TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

SLCH66327XXXWWO

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-011

ISSUE DATE

2/12/2025

REVISED DATE

None

TEST DATES

2025-02-07 through 2025-02-12.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105735679CHI-011

MODEL NUMBER(s)

SLCH66327XXXWWO

REPORT RENDERED TO:

VISUAL COMFORT & CO
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-01387083-0.

TEST STANDARDS

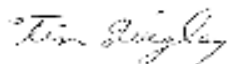
IES LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

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:



T. Quigley
Engineer
Lighting Division

Reviewer:



J. Davis
N.A. Technical Lead
Lighting Division

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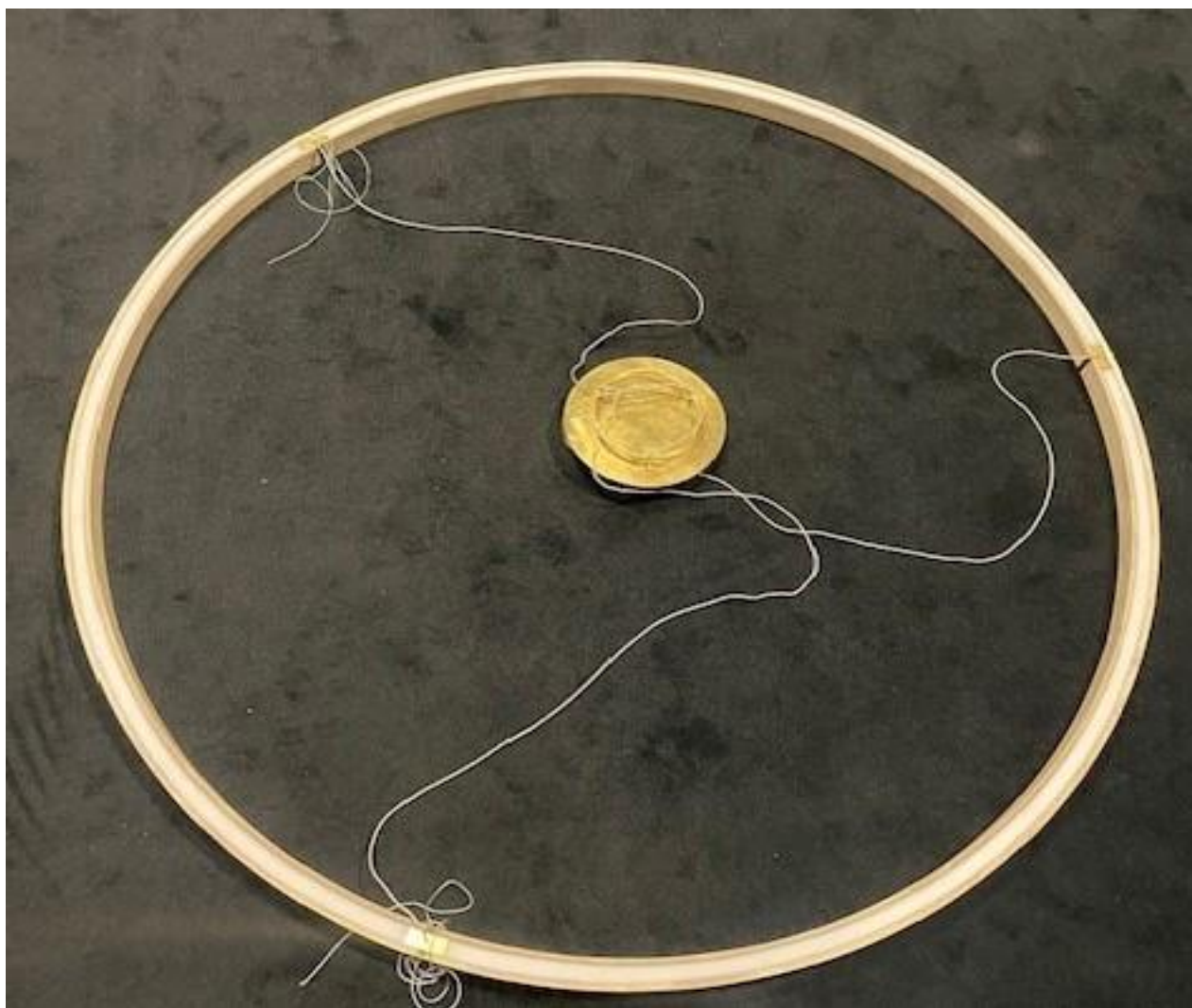
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH01302025124734	SLCH66327XXXWWO	ASHOK 65 Chandelier	Production	1/30/2025

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	SLCH66327XXXWWO	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	SLCH66327XXXWWO
Product Description:	ASHOK 65 Chandelier
LED Model No.:	XY 23SL-11205-03(Samsung 2835 CRI90 2700K)
Driver Model No.:	LTF DS50W1400C2036F5UD-0000
Light Source:	LED

Criteria	Results
	Goniophotometer
Light Output (lumens)	8107.4
Input Power (W) @ 120 (Vac)	111.51
Lumen Efficacy (lm/W)	72.7
Input Power Factor @ 120 (Vac)	0.989

Criteria	Results
Input ATHD (%) @ 120 (Vac)	10.77
Correlated Color Temperature (K)	2561
Color Rendering Index - Ra	92.0
Color Rendering Index - R9	52.9
Duv	-0.0012
Chromaticity Coordinate (x)	0.469
Chromaticity Coordinate (y)	0.409
Chromaticity Coordinate (u')	0.269
Chromaticity Coordinate (v')	0.528
Input Power (W) @ 277 (Vac)	109.15
Input Power Factor @ 277 (Vac)	0.926
Input ATHD (%) @ 277 (Vac)	18.01

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.

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

Test Configuration	Tested Model No.	Pass/Fail/NA
1	SLCH66327XXXWWO	NA

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

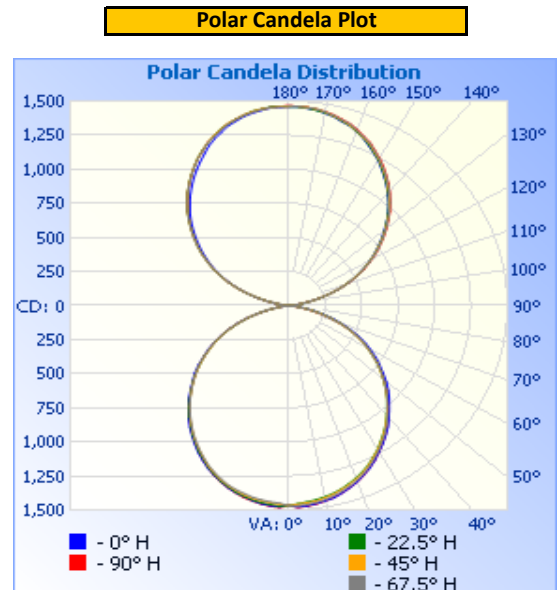
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	120.02	939.6	111.51	0.989

Light Output (lm)	Lumen Efficacy (lm/W)
8107.4	72.7

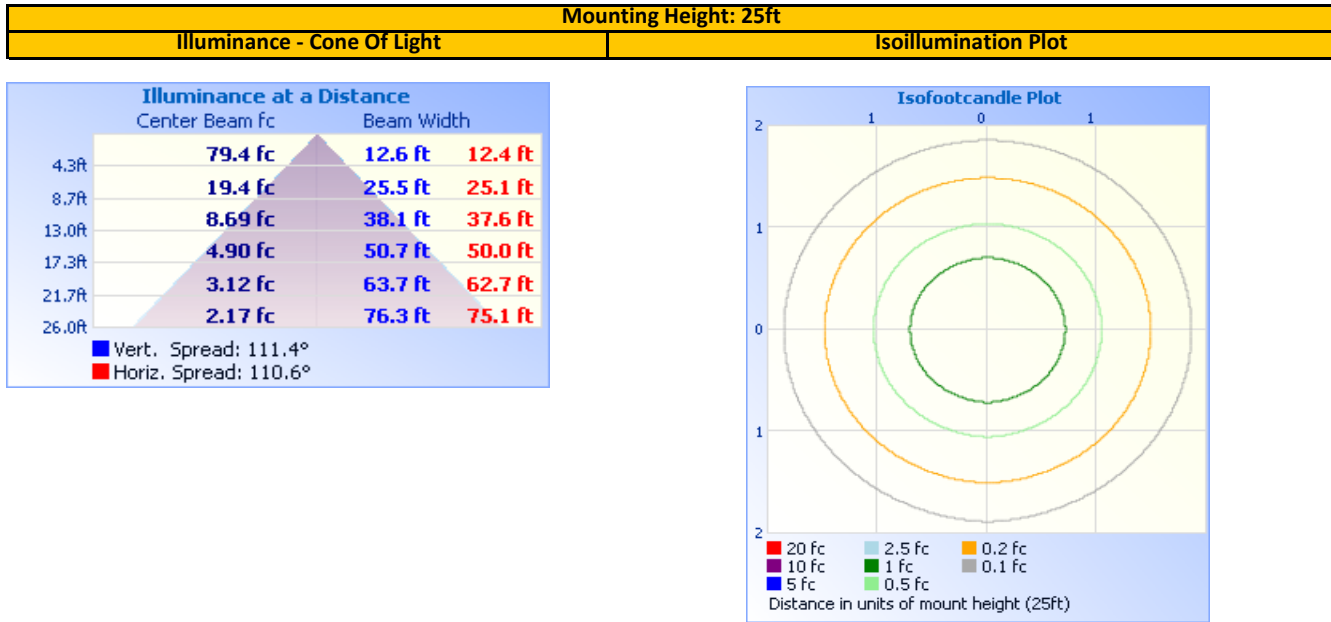
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	1468	1468	1468	1468	1468
5	1473	1446	1452	1465	1476
10	1453	1424	1431	1445	1454
15	1421	1392	1396	1409	1421
20	1375	1346	1352	1364	1376
25	1316	1289	1292	1303	1312
30	1239	1215	1220	1230	1239
35	1160	1134	1139	1148	1157
40	1069	1045	1047	1056	1065
45	976	951	951	954	962
50	874	848	848	852	858
55	762	742	744	747	748
60	648	627	626	628	630
65	525	507	504	505	508
70	388	373	368	365	365
75	249	233	226	219	216
80	120	108	101	92	87
85	30	25	25	22	20
90	5	5	5	5	5
95	20	20	20	19	18
100	94	96	93	92	90
105	230	229	229	229	229
110	374	374	375	376	378
115	505	507	510	513	517
120	630	631	633	638	643
125	744	747	750	756	760
130	854	859	861	868	873
135	962	965	973	976	982
140	1057	1062	1068	1074	1079
145	1145	1148	1156	1161	1166
150	1228	1231	1238	1243	1248
155	1296	1300	1310	1315	1320
160	1359	1359	1365	1370	1374
165	1400	1402	1408	1411	1415
170	1434	1436	1443	1443	1444
175	1454	1455	1461	1460	1461
180	1460	1462	1463	1467	1467

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
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Zone	Lumens	Luminaire
0-30	1,135.1	14.0%
0-40	1,852.5	22.8%
0-60	3,258.5	40.2%
60-90	773.8	9.5%
70-100	307.8	3.8%
90-120	780.9	9.6%
0-90	4,032.3	49.7%
90-180	4,075.2	50.3%
0-180	8,107.4	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	138.6	1.7%	90-100	32.3	0.4%
10-20	397.0	4.9%	100-110	242.2	3.0%
20-30	599.5	7.4%	110-120	506.3	6.2%
30-40	717.5	8.8%	120-130	676.6	8.3%
40-50	739.6	9.1%	130-140	751.8	9.3%
50-60	666.4	8.2%	140-150	725.6	9.0%
60-70	498.3	6.1%	150-160	603.4	7.4%
70-80	240.0	3.0%	160-170	398.2	4.9%
80-90	35.4	0.4%	170-180	138.6	1.7%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	SLCH66327XXXWWO	NA

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

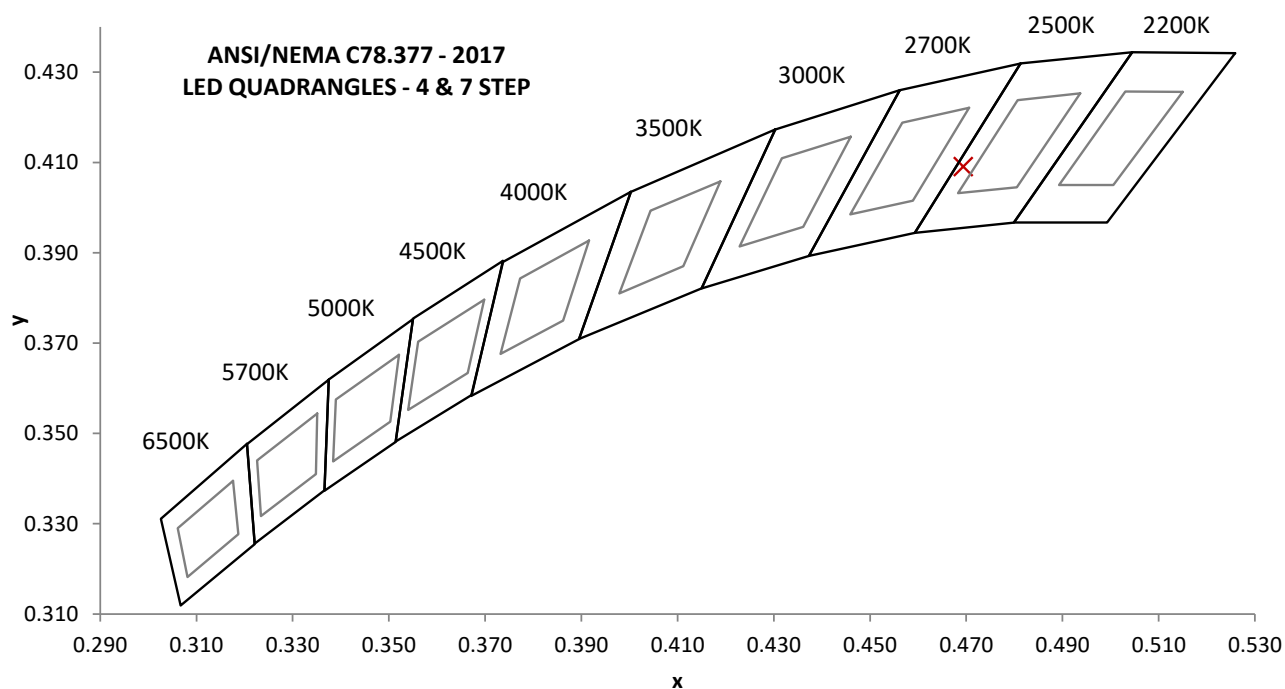
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
119.98	939.6	111.45	0.989	10.77
276.97	425.6	109.15	0.926	18.01

Measured at 119.98(Vac)

CCT	CRI - Ra	CRI - R9
2561	92.0	52.9

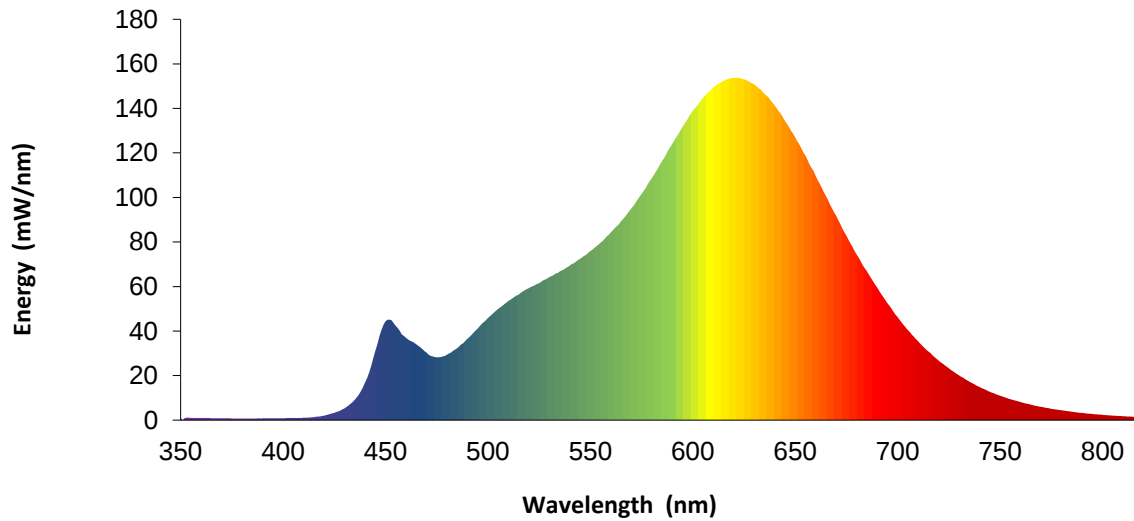
Duv	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0012	0.469	0.409	0.269	0.528



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	1.0		460	37.0		570	95.0		680	74.4
355	1.0		465	34.1		575	101.5		685	66.8
360	0.9		470	30.4		580	108.6		690	59.5
365	0.9		475	28.2		585	116.2		695	52.6
370	0.8		480	29.4		590	124.0		700	46.3
375	0.8		485	32.3		595	131.6		705	40.5
380	0.8		490	36.5		600	138.8		710	35.5
385	0.7		495	41.1		605	144.7		715	30.9
390	0.8		500	45.9		610	149.3		720	26.9
395	0.9		505	50.0		615	152.4		725	23.3
400	0.9		510	53.5		620	153.6		730	20.1
405	1.0		515	56.4		625	153.1		735	17.3
410	1.1		520	59.3		630	150.8		740	14.9
415	1.4		525	61.5		635	146.6		745	12.8
420	2.0		530	64.2		640	141.2		750	11.0
425	3.3		535	66.7		645	134.4		755	9.5
430	5.4		540	69.4		650	127.1		760	8.2
435	9.1		545	72.5		655	118.7		765	7.0
440	16.7		550	76.0		660	109.7		770	6.0
445	30.8		555	79.8		665	100.6		775	5.1
450	44.3		560	84.4		670	91.8		780	4.4
455	42.4		565	89.2		675	82.9		---	---

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



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Arlington Heights, IL 60005
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EQUIPMENT LIST

REPORT NO. 105735679CHI-011

#	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	9/30/2024	9/30/2025
3	LSI High Speed Mirror Goniometer	6440T	146928	VBUE	VBUE
4	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0764	3/14/2024	3/14/2025
5	Chroma Power Supply	61604	CHI0371	VBUE	VBUE
8	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0727	10/8/2024	10/8/2025
9	Labsphere Spectroradiometer	CDS2600	CHI0539	VBUE	VBUE
10	3 Meter Sphere	SPR600	CHI0088	VBUE	VBUE
11	Elgar AC Power Supply	CW1251	146112	VBUE	VBUE
12	Sorenson DC Power Supply	XFR150-8	146846	VBUE	VBUE
13	Yokogawa Power Meter	WT1600	146769	4/10/2024	4/10/2025
17	Omega thermometer	USB TC08	CHI0625	4/10/2024	4/10/2025
26	Xitron Power Analyzer	XT2640	CHI0611	7/17/2024	7/17/2025

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	SLCH66327XXXWWO	NA

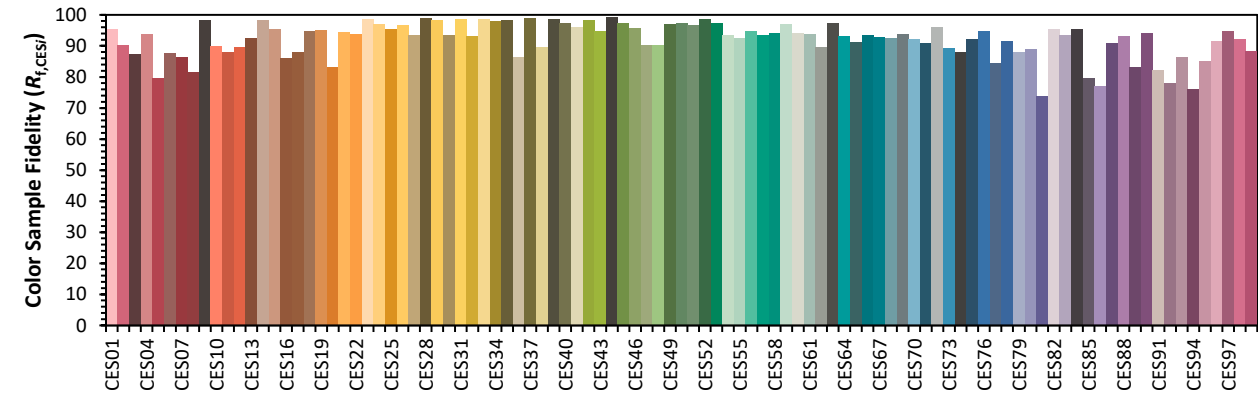
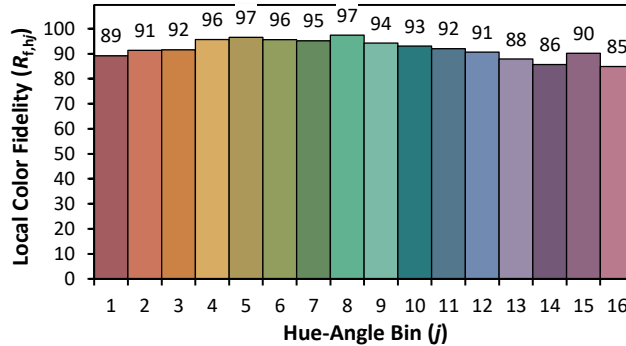
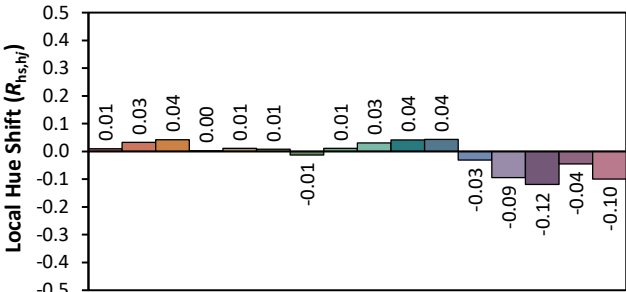
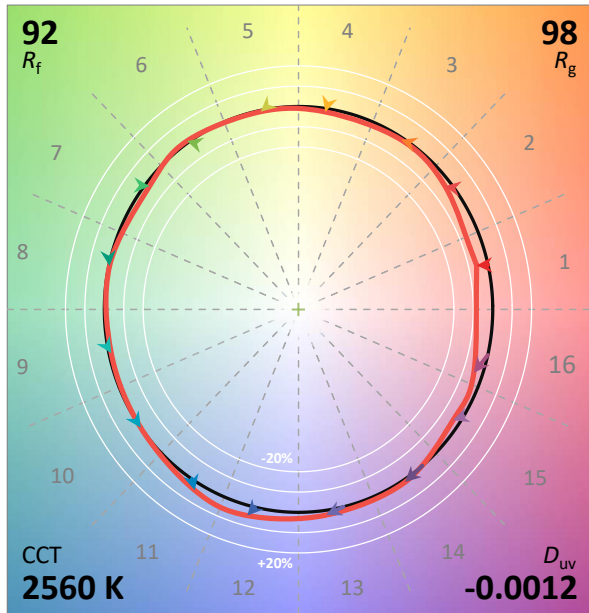
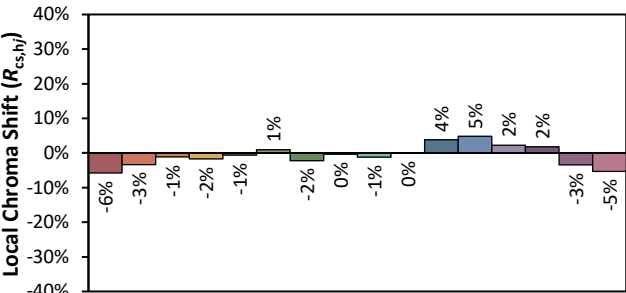
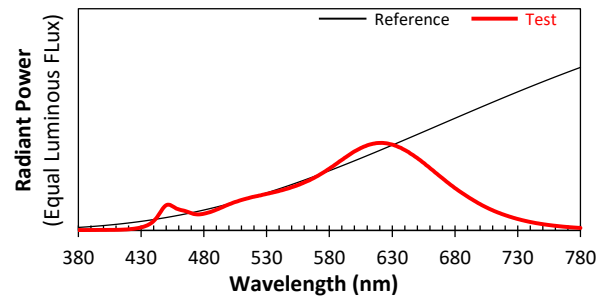
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co

Date: 2/7/2025

Model: SLCH66327XXXWWO



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

x 0.4694
y 0.4091
u' 0.2694
v' 0.5282