

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700LSWIT6XX-LED930

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-009

ISSUE DATE

1/16/2025

REVISED DATE

None

TEST DATES

2024-12-23 through 2025-01-07.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105735679CHI-009

MODEL NUMBER(s)

700LSWIT6XX-LED930

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-01387083-0.

TEST STANDARDS

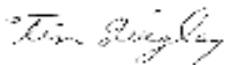
IES LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

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	AH12122024023126-007	700LSWIT6XX-LED930	Wit 6 Linear Suspension	Production	12/12/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700LSWIT6XX-LED930	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700LSWIT6XX-LED930
Product Description:	Wit 6 Linear Suspension
LED Model No.:	XY ELC0435
Driver Model No.:	Macron GBLD001
Light Source:	LED

Criteria	Results
	Goniophotometer
Light Output (lumens)	4816.9
Input Power (W) @ 120 (Vac)	64.25
Lumen Efficacy (lm/W)	75.0
Input Power Factor (I) @ 120 (Vac)	0.982

Criteria	Results
Input ATHD (%) @ 120 (Vac)	8.93
Correlated Color Temperature (K)	2953
Color Rendering Index - Ra	93.9
Color Rendering Index - R9	65.8
Duv	-0.0013
Chromaticity Coordinate (x)	0.438
Chromaticity Coordinate (y)	0.401
Chromaticity Coordinate (u')	0.253
Chromaticity Coordinate (v')	0.521
Input Power (W) @ 277 (Vac)	64.46
Input Power Factor (I) @ 277 (Vac)	0.889
Input ATHD (%) @ 277 (Vac)	18.74

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

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

REPORT NO. 105735679CHI-009

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT6XX-LED930	NA

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

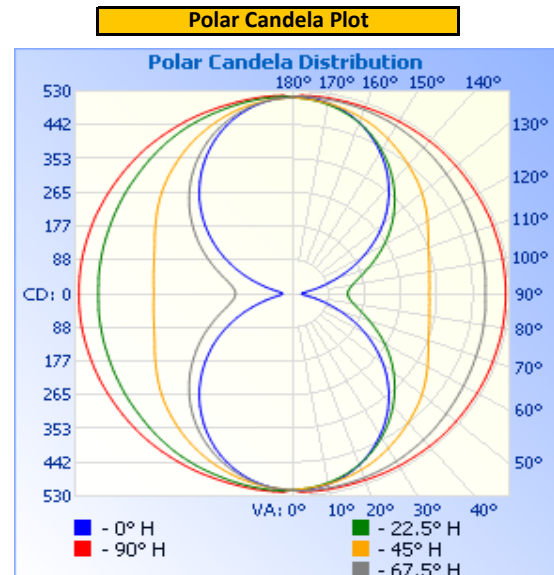
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	120.01	545.2	64.25	0.982

Light Output (lm)	Lumen Efficacy (lm/W)
4816.9	75.0

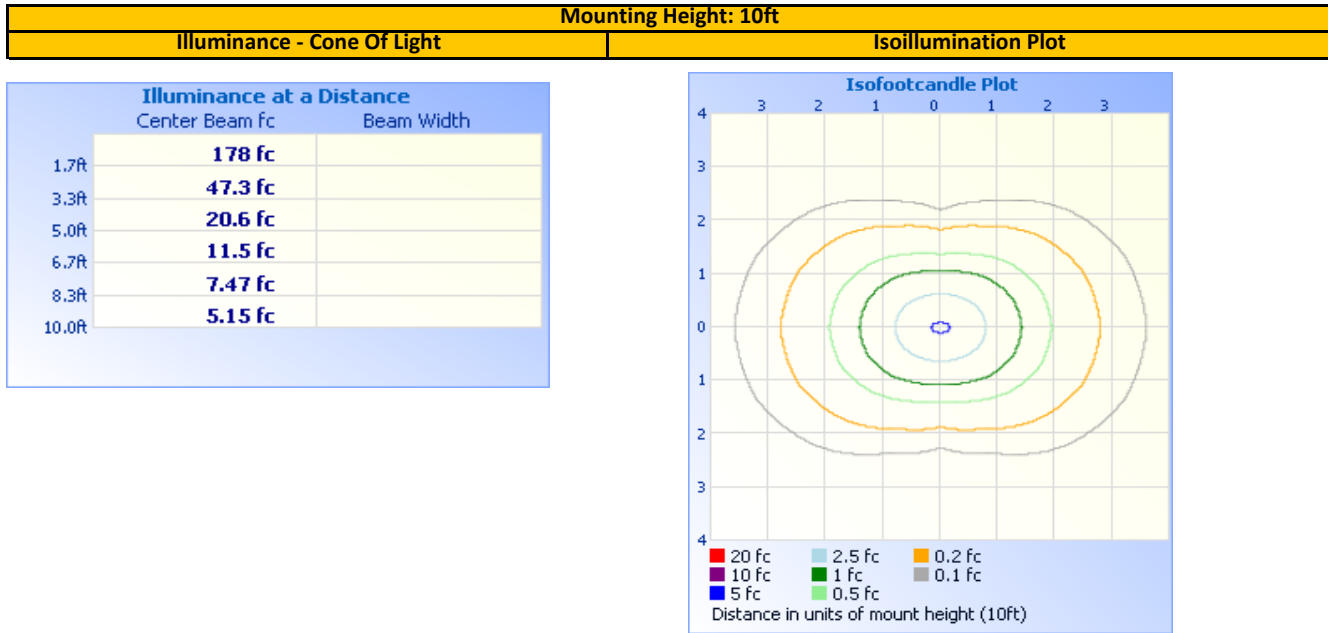
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	515	515	515	515	515
5	513	510	510	517	520
10	507	503	506	516	520
15	495	491	499	514	519
20	477	477	491	512	519
25	455	458	480	510	520
30	429	435	468	507	521
35	400	410	454	503	521
40	367	383	441	499	521
45	330	354	427	495	522
50	291	324	413	490	521
55	249	292	397	486	521
60	205	260	381	483	521
65	160	228	366	480	521
70	115	198	354	478	521
75	76	172	346	476	521
80	43	152	340	474	522
85	27	139	336	474	521
90	23	135	334	472	521
95	27	139	336	474	521
100	43	152	340	474	522
105	76	172	346	476	521
110	115	198	354	478	521
115	160	228	366	480	521
120	205	260	381	483	521
125	249	292	397	486	521
130	291	324	413	490	521
135	330	354	427	495	522
140	367	383	441	499	521
145	400	410	454	503	521
150	429	435	468	507	521
155	455	458	480	510	520
160	477	477	491	512	519
165	495	491	499	514	519
170	507	503	506	516	520
175	513	510	510	517	520
180	515	515	515	515	515

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary								
Zone	Lumens	Luminaire	Zone	Lumens	Total	Zone	Lumens	Total
0-30	414.1	8.6%	0-10	48.9	1.0%	90-100	335.5	7.0%
0-40	700.5	14.5%	10-20	142.1	2.9%	100-110	342.8	7.1%
0-60	1,378.8	28.6%	20-30	223.2	4.6%	110-120	351.5	7.3%
60-90	1,029.8	21.4%	30-40	286.4	5.9%	120-130	349.5	7.3%
70-100	1,013.9	21.0%	40-50	328.7	6.8%	130-140	328.6	6.8%
90-120	1,029.8	21.4%	50-60	349.5	7.3%	140-150	286.3	5.9%
0-90	2,408.6	50.0%	60-70	351.5	7.3%	150-160	223.1	4.6%
90-180	2,408.3	50.0%	70-80	342.8	7.1%	160-170	142.1	2.9%
0-180	4,816.9	100.0%	80-90	335.5	7.0%	170-180	48.8	1.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT6XX-LED930	NA

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

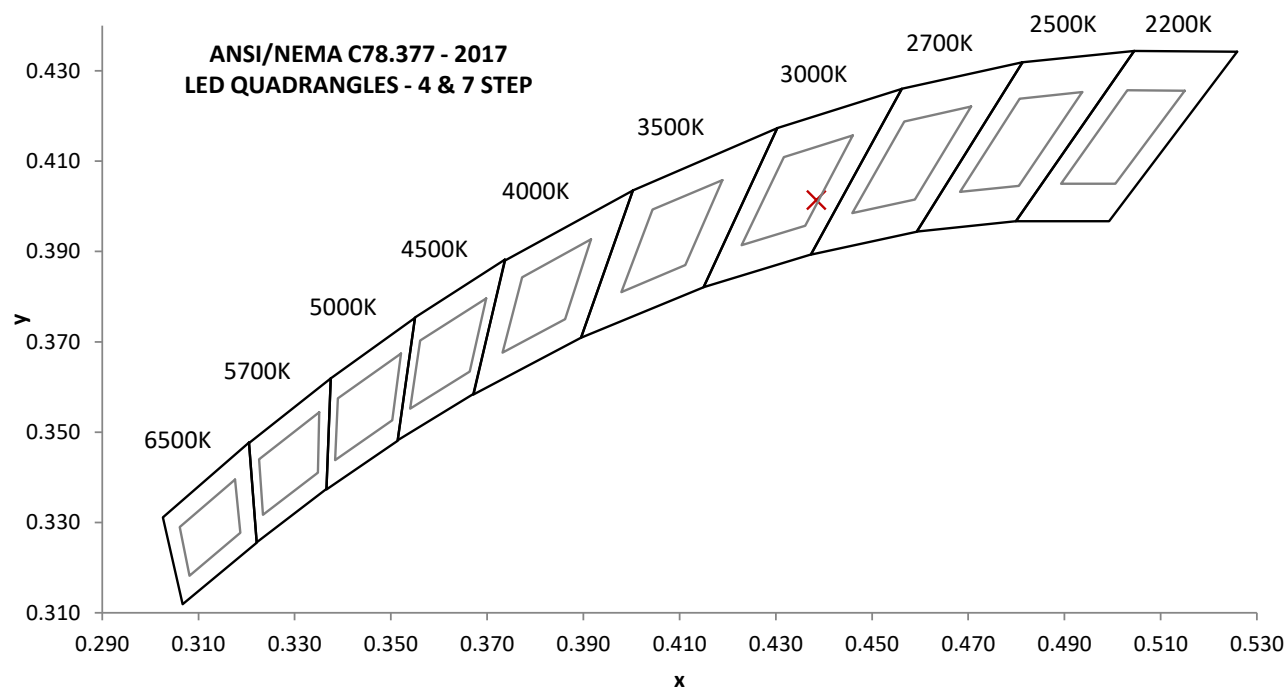
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
120.00	543.0	64.16	0.985	8.93
277.00	261.9	64.46	0.889	18.74

Measured at 120(Vac)

CCT (K)	CRI - Ra	CRI - R9
2953	93.9	65.8

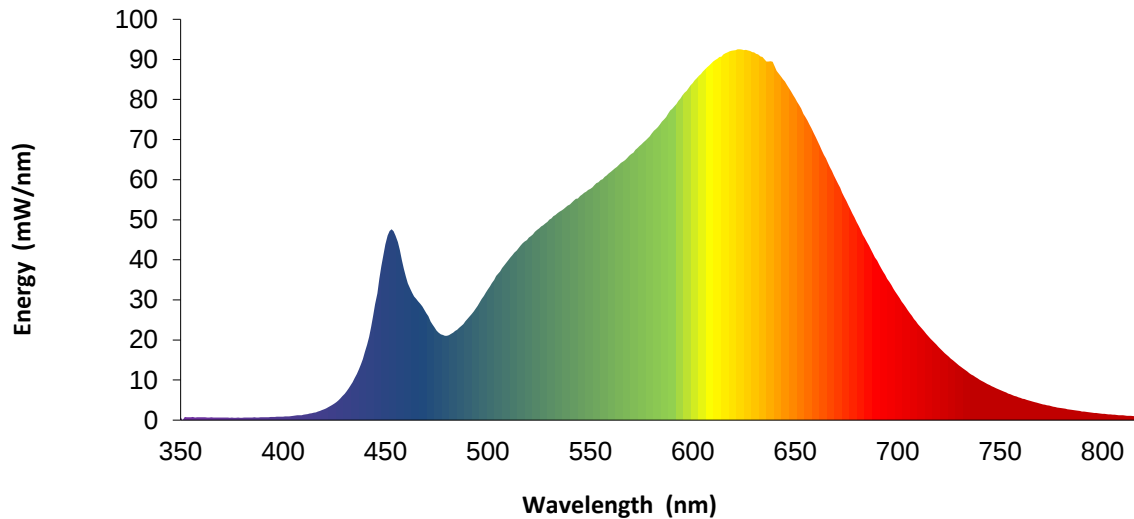
Duv (I)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0013	0.438	0.401	0.253	0.521



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.7		460	35.8		570	66.4		680	49.4
355	0.7		465	30.3		575	68.8		685	44.4
360	0.7		470	26.7		580	71.5		690	39.8
365	0.7		475	22.3		585	74.5		695	35.2
370	0.7		480	21.1		590	77.7		700	31.3
375	0.6		485	22.5		595	81.0		705	27.4
380	0.6		490	25.2		600	84.0		710	24.0
385	0.6		495	28.5		605	87.0		715	21.0
390	0.7		500	32.6		610	89.4		720	18.3
395	0.8		505	36.5		615	91.3		725	15.9
400	0.9		510	39.9		620	92.3		730	13.6
405	1.1		515	42.9		625	92.3		735	11.7
410	1.3		520	45.6		630	91.8		740	10.1
415	1.9		525	47.8		635	90.0		745	8.7
420	2.7		530	50.1		640	88.2		750	7.5
425	4.1		535	52.0		645	84.5		755	6.5
430	6.6		540	53.8		650	80.3		760	5.5
435	10.4		545	55.9		655	75.6		765	4.8
440	17.0		550	57.7		660	70.7		770	4.1
445	28.9		555	59.9		665	65.3		775	3.5
450	43.8		560	62.0		670	59.9		780	3.0
455	46.0		565	64.2		675	54.7		---	---

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



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EQUIPMENT LIST

REPORT NO. 105735679CHI-009

#	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	10/8/2024	10/8/2025
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

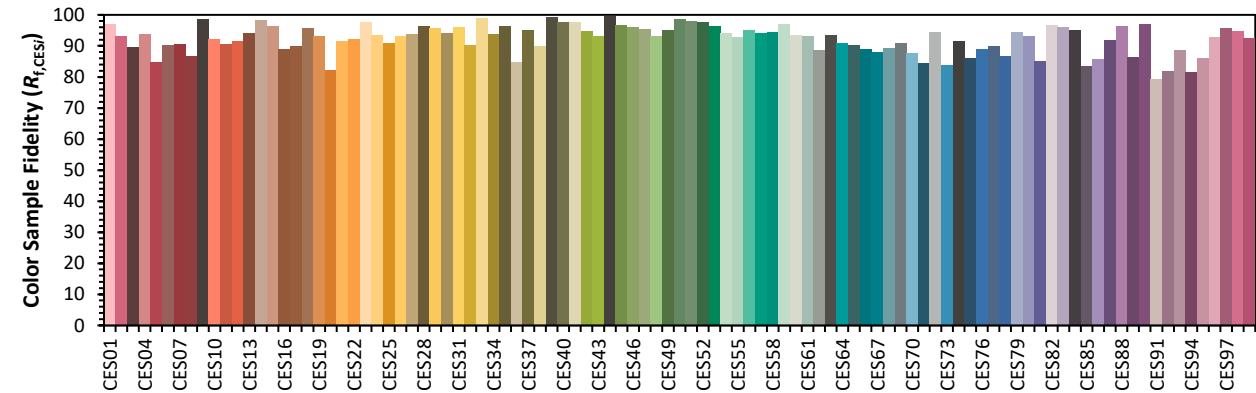
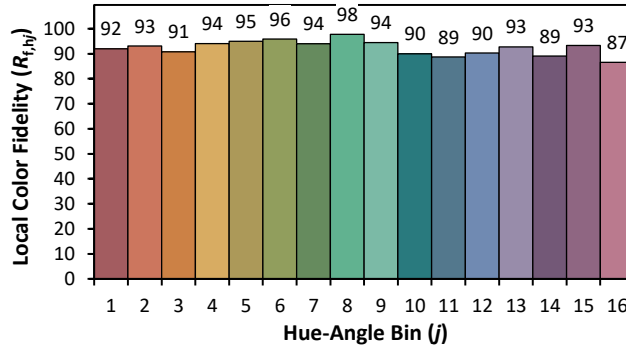
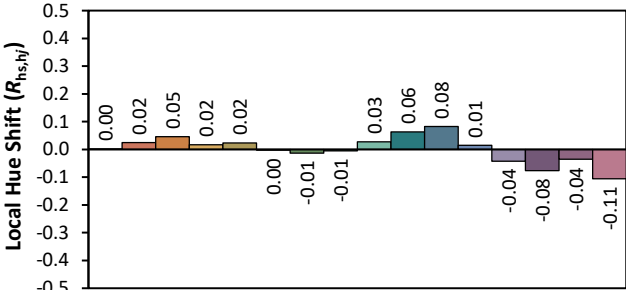
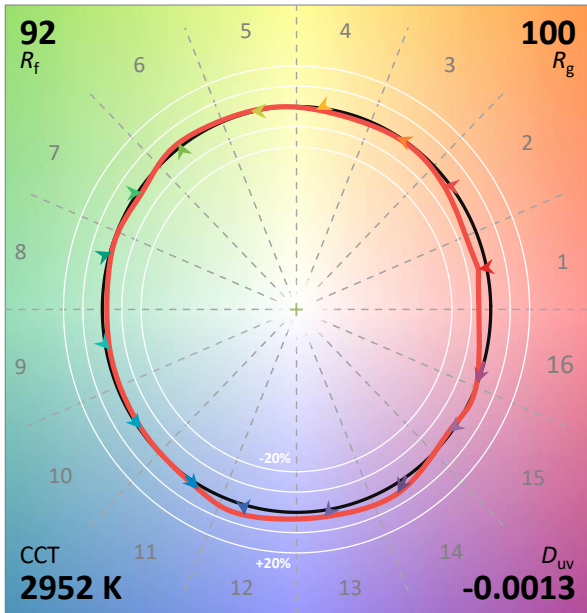
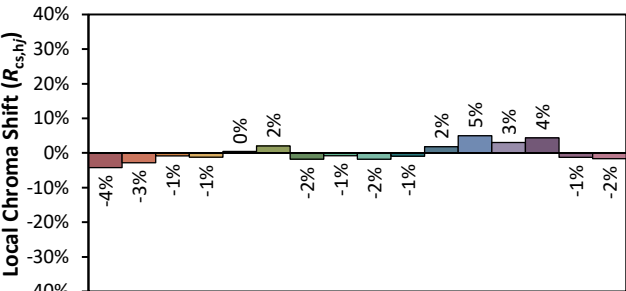
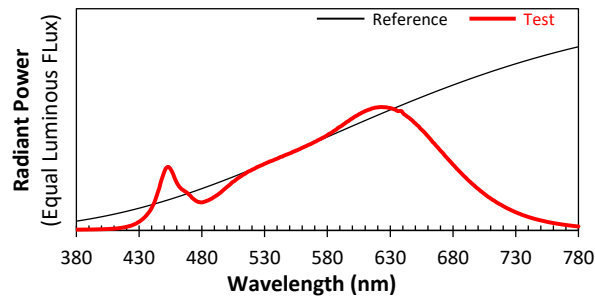
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT6XX-LED930	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 1/7/2025

Manufacturer: VISUAL COMFORT AND COMPANY
Model: 700LSWIT6XX-LED930



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

x 0.4385
y 0.4014
u' 0.2527
v' 0.5205