

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700LSWIT7XX-LED930

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-010

ISSUE DATE

1/16/2025

REVISED DATE

None

TEST DATES

2024-12-23 through 2025-01-06.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105735679CHI-010

MODEL NUMBER(s)

700LSWIT7XX-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

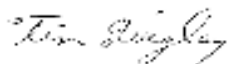
IES LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

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	AH12122024023126-008	700LSWIT7XX-LED930	Wit 7 Linear Suspension	Production	12/12/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700LSWIT7XX-LED930	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700LSWIT7XX-LED930
Product Description:	Wit 7 Linear Suspension
LED Model No.:	XY ELC0435
Driver Model No.:	Macron GBLD001
Light Source:	LED

Criteria	Results
	Goniophotometer
Light Output (lumens)	5606.4
Input Power (W) @ 120 (Vac)	77.66
Lumen Efficacy (lm/W)	72.2
Input Power Factor (I) @ 120 (Vac)	0.984

Criteria	Results
Input ATHD (%) @ 120 (Vac)	8.19
Correlated Color Temperature (K)	2958
Color Rendering Index - Ra	93.5
Color Rendering Index - R9	64.9
Duv	-0.0008
Chromaticity Coordinate (x)	0.439
Chromaticity Coordinate (y)	0.403
Chromaticity Coordinate (u')	0.252
Chromaticity Coordinate (v')	0.521
Input Power (W) @ 277 (Vac)	77.26
Input Power Factor (I) @ 277 (Vac)	0.901
Input ATHD (%) @ 277 (Vac)	17.46

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-010

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT7XX-LED930	NA

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

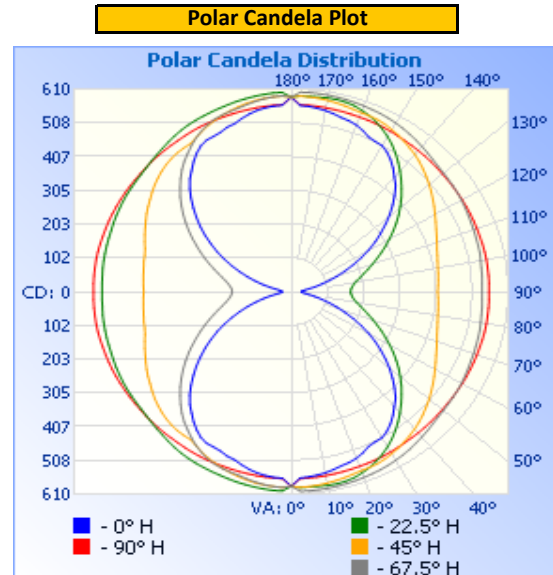
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	119.99	657.5	77.66	0.984

Light Output (lm)	Lumen Efficacy (lm/W)
5606.4	72.2

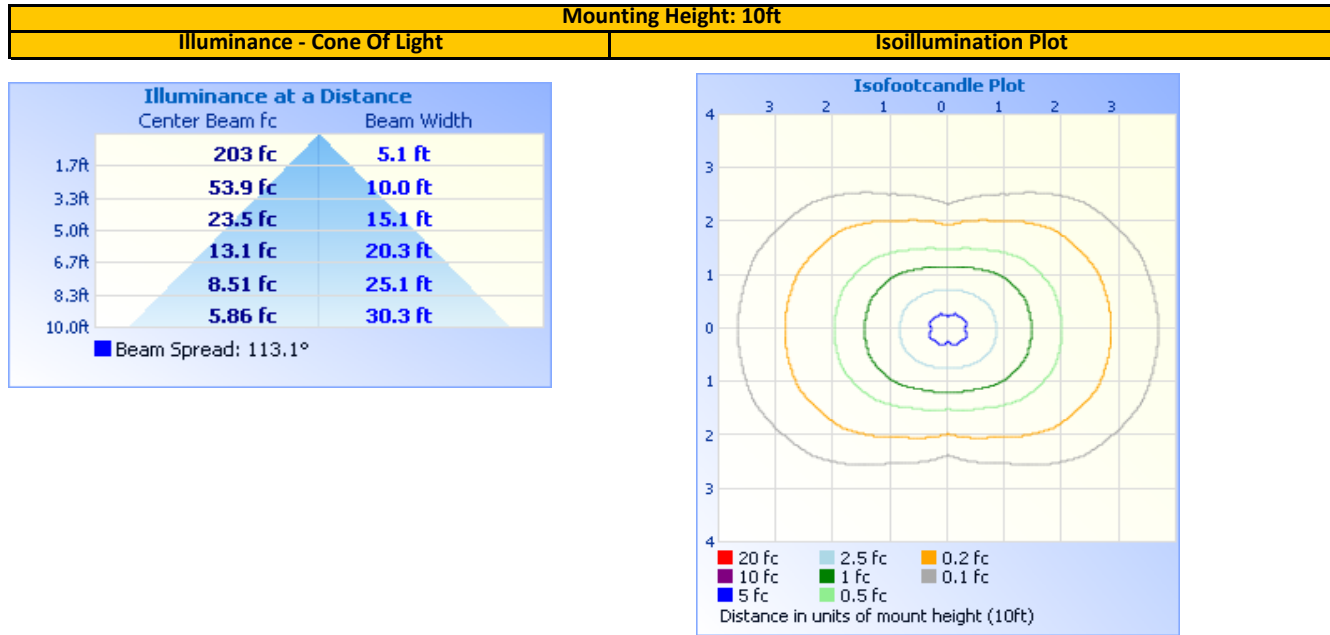
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	586	586	586	586	586
5	560	590	589	602	564
10	554	592	585	601	563
15	543	591	580	599	561
20	534	581	574	596	560
25	514	564	572	592	559
30	509	540	564	587	558
35	486	510	553	580	556
40	451	475	540	571	555
45	411	439	523	563	554
50	361	400	505	558	554
55	307	360	486	555	554
60	251	319	466	552	554
65	192	279	449	548	555
70	138	243	435	545	555
75	89	211	425	543	556
80	52	187	418	541	557
85	32	172	415	538	556
90	29	167	411	536	555
95	32	172	415	538	556
100	52	187	418	541	557
105	89	211	425	543	556
110	138	243	435	545	555
115	192	279	449	548	555
120	251	319	466	552	554
125	307	360	486	555	554
130	361	400	505	558	554
135	411	439	523	563	554
140	451	475	540	571	555
145	486	510	553	580	556
150	509	540	564	587	558
155	514	564	572	592	559
160	534	581	574	596	560
165	543	591	580	599	561
170	554	592	585	601	563
175	560	590	589	602	564
180	586	586	586	586	586

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
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Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	478.6	8.5%	90-100	387.3	6.9%
0-40	814.7	14.5%	10-20	163.3	2.9%
0-60	1,609.8	28.7%	20-30	259.6	4.6%
60-90	1,193.5	21.3%	30-40	336.1	6.0%
70-100	1,171.8	20.9%	40-50	386.2	6.9%
90-120	1,193.5	21.3%	50-60	408.9	7.3%
0-90	2,803.4	50.0%	60-70	409.1	7.3%
90-180	2,803.0	50.0%	70-80	397.1	7.1%
0-180	5,606.4	100.0%	80-90	387.3	6.9%
			110-120	409.1	7.3%
			120-130	408.9	7.3%
			130-140	386.1	6.9%
			140-150	336.0	6.0%
			150-160	259.5	4.6%
			160-170	163.2	2.9%
			170-180	55.8	1.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT7XX-LED930	NA

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

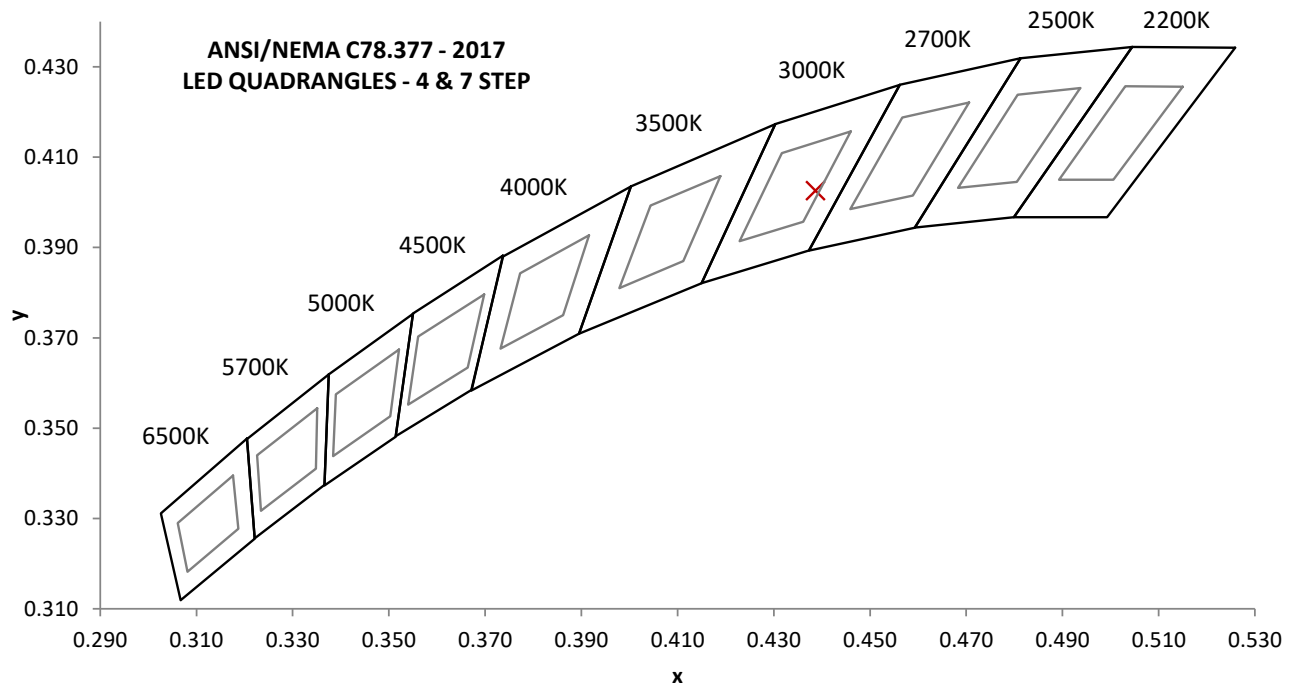
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (l)	Input ATHD (%)
120.02	653.7	77.49	0.988	8.19
277.03	309.6	77.26	0.901	17.46

Measured at 120.02(Vac)

CCT (K)	CRI - Ra (l)	CRI - R9 (l)
2958	93.5	64.9

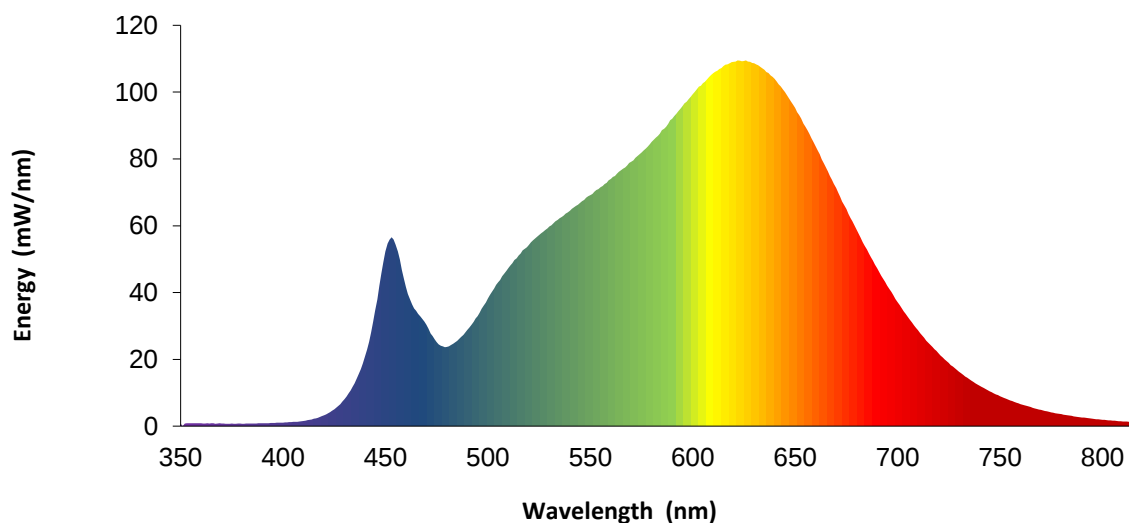
Duv (l)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0008	0.439	0.403	0.252	0.521



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.8		460	41.7		570	79.2		680	58.7
355	0.9		465	34.5		575	81.9		685	52.9
360	0.8		470	30.3		580	85.1		690	47.3
365	0.8		475	25.2		585	88.6		695	42.0
370	0.8		480	23.7		590	92.1		700	37.2
375	0.8		485	25.5		595	95.8		705	32.7
380	0.7		490	28.9		600	99.4		710	28.7
385	0.7		495	33.0		605	102.7		715	25.0
390	0.8		500	38.2		610	105.6		720	21.8
395	0.9		505	43.1		615	107.8		725	19.0
400	1.1		510	47.3		620	109.1		730	16.3
405	1.3		515	51.1		625	109.3		735	14.0
410	1.5		520	54.3		630	108.7		740	12.1
415	2.2		525	57.2		635	106.7		745	10.4
420	3.2		530	59.8		640	103.9		750	9.0
425	5.0		535	62.2		645	100.0		755	7.7
430	8.1		540	64.4		650	95.2		760	6.6
435	12.8		545	66.9		655	89.6		765	5.7
440	20.8		550	69.2		660	83.8		770	4.9
445	34.6		555	71.5		665	77.5		775	4.1
450	52.3		560	74.0		670	71.3		780	3.6
455	54.3		565	76.6		675	65.0		---	---

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. 105735679CHI-010

#	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

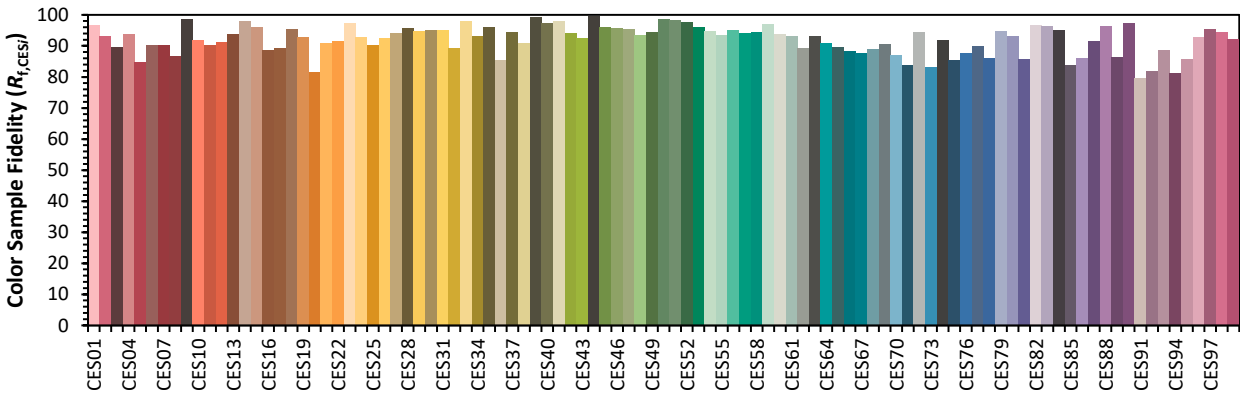
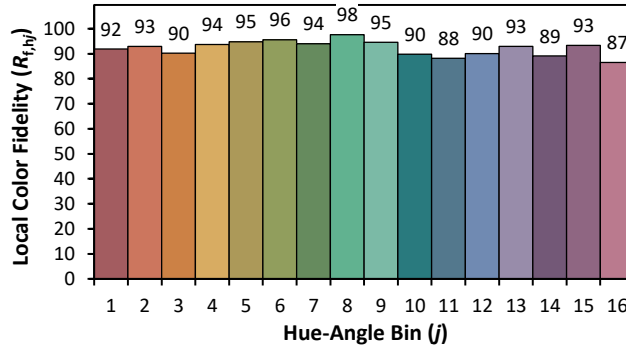
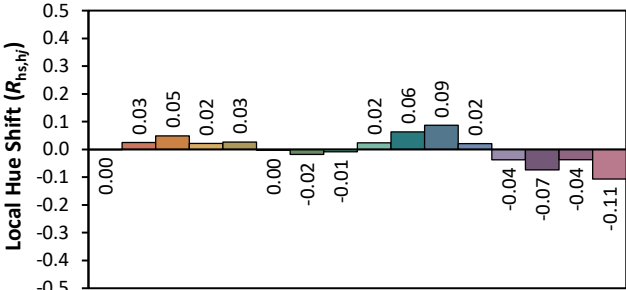
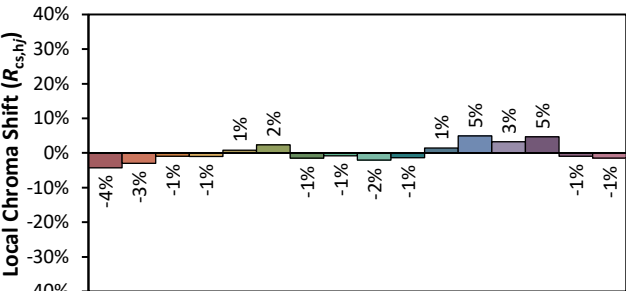
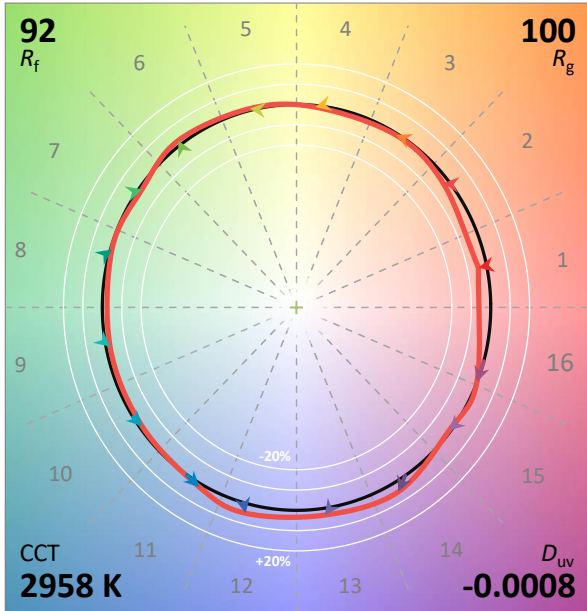
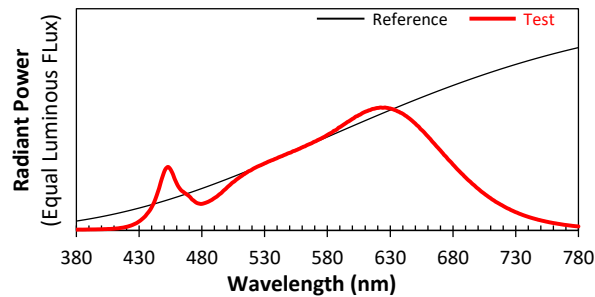
#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSWIT7XX-LED930	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 1/6/2025

Manufacturer: VISUAL COMFORT AND COMPANY
Model: 700LSWIT7XX-LED930



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

x 0.4387
y 0.4025
u' 0.2524
v' 0.5210