

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700TDWIT3XX-LED930

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-003

ISSUE DATE

1/16/2025

REVISED DATE

None

TEST DATES

2024-12-20 through 2025-01-16.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105735679CHI-003

MODEL NUMBER(s)

700TDWIT3XX-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

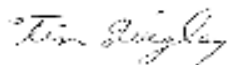
IES LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

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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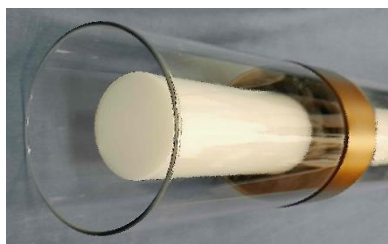
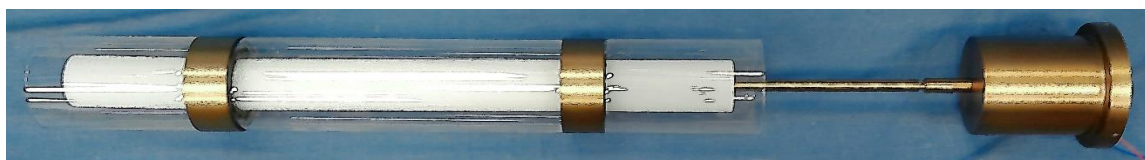
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH12122024023126-001	700TDWIT3XX-LED930	Wit 3 Pendant	Production	12/12/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700TDWIT3XX-LED930	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700TDWIT3XX-LED930
Product Description:	Wit 3 Pendant
LED Model No.:	XY ELC0435
Driver Model No.:	Macron GBLD001
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	1809.2	1879.5
Input Power (W) @ 120 (Vac)	29.23	29.23
Lumen Efficacy (lm/W)	61.9	64.3
Input Power Factor (I) @ 120 (Vac)	0.942	0.966

Criteria	Results
Input ATHD (%) @ 120 (Vac)	11.11
Correlated Color Temperature (K)	2938
Color Rendering Index - Ra (I)	93.6
Color Rendering Index - R9 (I)	65.9
Duv (I)	-0.0007
Chromaticity Coordinate (x)	0.440
Chromaticity Coordinate (y)	0.403
Chromaticity Coordinate (u')	0.253
Chromaticity Coordinate (v')	0.522
Input Power (W) @ 277 (Vac)	29.67
Input Power Factor (I) @ 277 (Vac)	0.589
Input ATHD (%) @ 277 (Vac)	68.44

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	700TDWIT3XX-LED930	NA

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

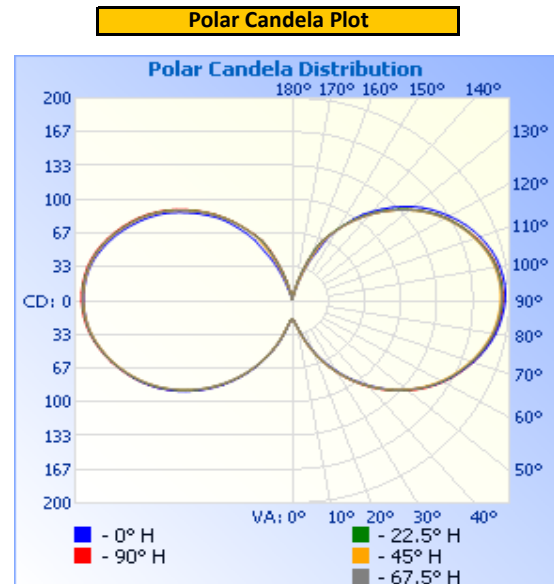
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	120.06	258.6	29.23	0.942

Light Output (lm)	Lumen Efficacy (lm/W)
1809.2	61.9

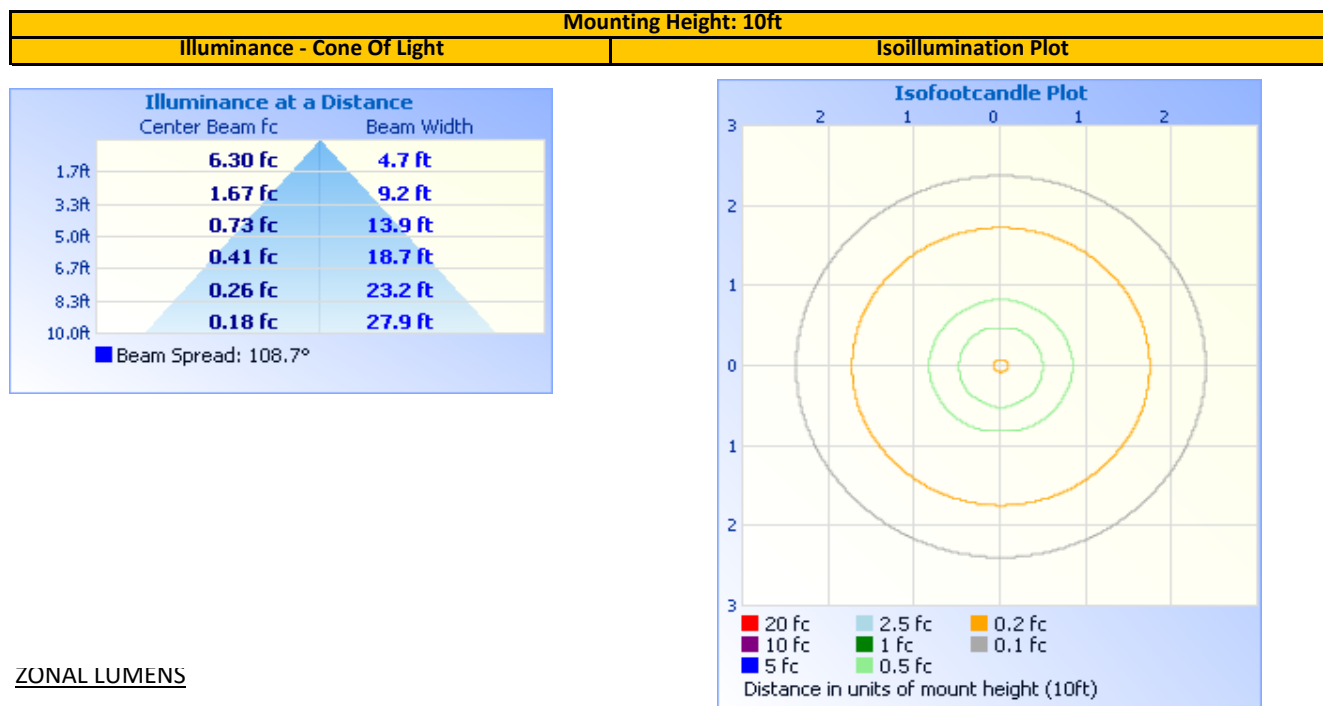
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	18	18	18	18	18
5	20	21	21	21	20
10	26	27	27	27	27
15	36	37	37	37	38
20	49	51	51	51	51
25	64	66	65	65	66
30	79	81	81	81	81
35	95	96	96	96	96
40	109	110	110	110	111
45	124	124	124	124	125
50	137	137	136	137	138
55	149	149	148	149	150
60	160	160	159	159	160
65	169	168	167	168	169
70	177	176	175	176	177
75	185	183	182	183	184
80	190	188	187	188	189
85	194	191	190	191	193
90	196	193	192	193	194
95	196	193	192	193	194
100	194	191	190	190	192
105	190	186	185	186	187
110	184	180	179	180	181
115	177	172	171	172	173
120	167	163	162	163	163
125	157	153	152	152	153
130	144	140	139	139	140
135	130	127	126	126	126
140	115	112	111	111	111
145	98	96	96	95	95
150	79	80	79	79	80
155	53	65	60	65	65
160	34	41	35	40	42
165	12	19	14	18	20
170	3	5	3	5	5
175	1	1	1	1	1
180	1	1	1	1	1

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	44.1	2.4%	90-100	210.1	11.6%
0-40	104.7	5.8%	100-110	196.7	10.9%
0-60	334.8	18.5%	110-120	170.5	9.4%
60-90	569.2	31.5%	120-130	136.3	7.5%
70-100	612.2	33.8%	130-140	97.4	5.4%
90-120	577.4	31.9%	140-150	60.1	3.3%
0-90	904.1	50.0%	150-160	28.3	1.6%
90-180	905.1	50.0%	160-170	5.5	0.3%
0-180	1,809.2	100.0%	170-180	0.2	0.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT3XX-LED930	NA

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

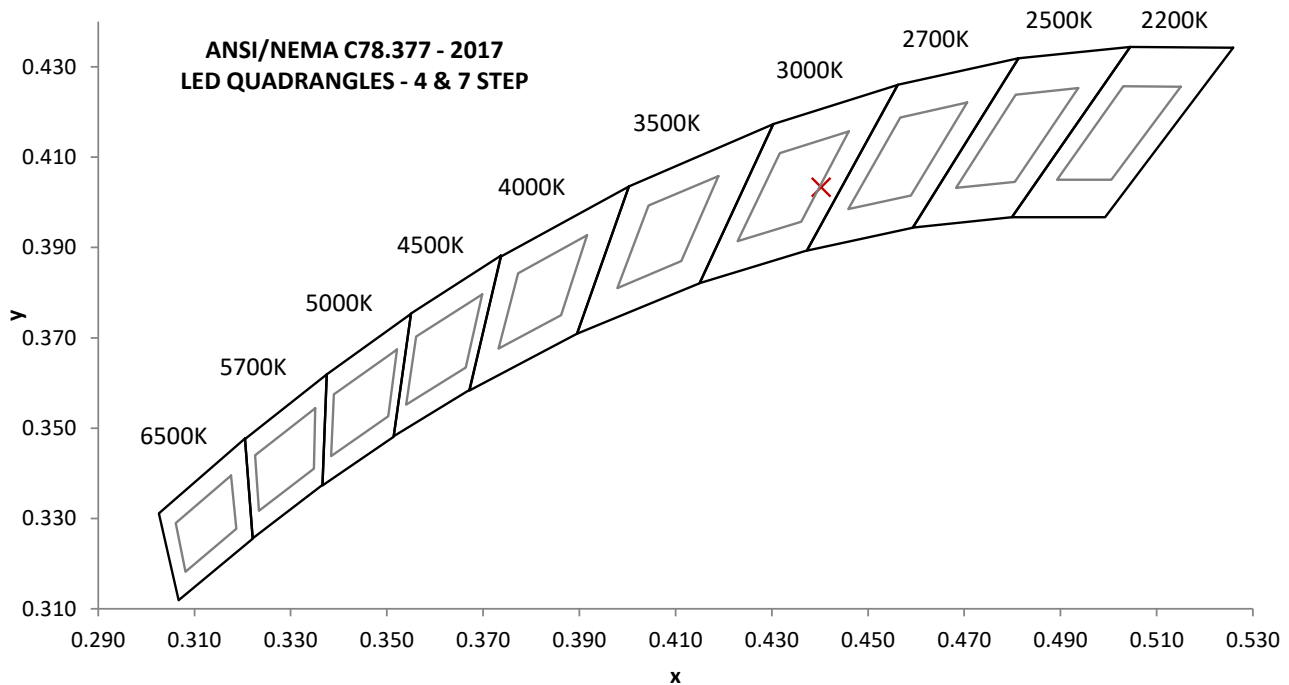
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (l)	Input ATHD (%)
119.99	252.3	29.23	0.966	11.11
277.02	181.7	29.67	0.589	68.44

Measured at 119.99(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (l)	CRI - R9 (l)
1879.5	64.3	2938	93.6	65.9

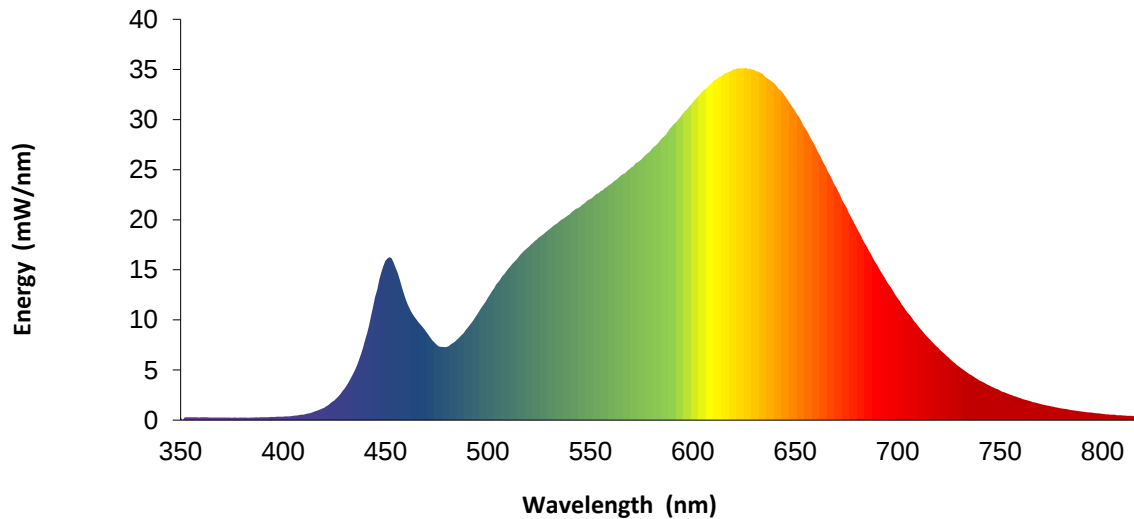
Duv (l)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0007	0.440	0.403	0.253	0.522



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.3		460	12.0		570	25.2		680	19.2
355	0.3		465	10.1		575	26.0		685	17.3
360	0.3		470	8.8		580	27.0		690	15.5
365	0.3		475	7.5		585	28.1		695	13.8
370	0.2		480	7.3		590	29.3		700	12.2
375	0.2		485	8.0		595	30.5		705	10.7
380	0.3		490	9.2		600	31.7		710	9.4
385	0.3		495	10.6		605	32.9		715	8.2
390	0.3		500	12.2		610	33.8		720	7.2
395	0.3		505	13.8		615	34.5		725	6.2
400	0.4		510	15.1		620	35.0		730	5.4
405	0.4		515	16.3		625	35.1		735	4.6
410	0.6		520	17.3		630	34.9		740	4.0
415	0.8		525	18.3		635	34.3		745	3.4
420	1.2		530	19.1		640	33.6		750	3.0
425	2.0		535	19.9		645	32.4		755	2.5
430	3.2		540	20.6		650	30.8		760	2.2
435	4.9		545	21.3		655	29.1		765	1.9
440	7.9		550	22.1		660	27.2		770	1.6
445	12.3		555	22.9		665	25.3		775	1.4
450	15.9		560	23.6		670	23.2		780	1.2
455	15.2		565	24.4		675	21.2		---	---

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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545 E Algonquin Rd
Arlington Heights, IL 60005
Telephone: (847) 439-5667
www.intertek.com

EQUIPMENT LIST

REPORT NO. 105735679CHI-003

#	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	VBV	VBV
4	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0764	10/8/2024	10/8/2025
5	Chroma Power Supply	61604	CHI0371	VBV	VBV
8	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0727	10/8/2024	10/8/2025
9	Labsphere Spectroradiometer	CDS2600	CHI0539	VBV	VBV
10	3 Meter Sphere	SPR600	CHI0088	VBV	VBV
11	Elgar AC Power Supply	CW1251	146112	VBV	VBV
12	Sorenson DC Power Supply	XFR150-8	146846	VBV	VBV
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

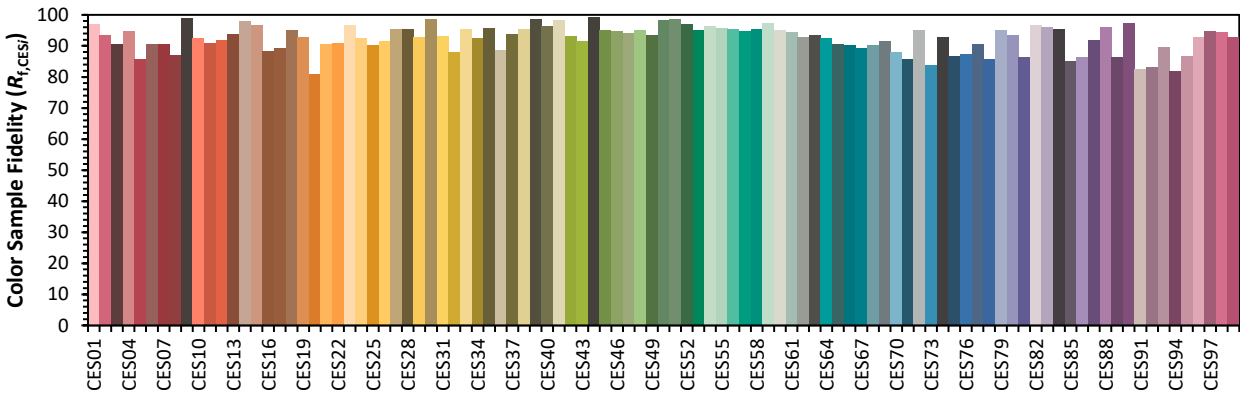
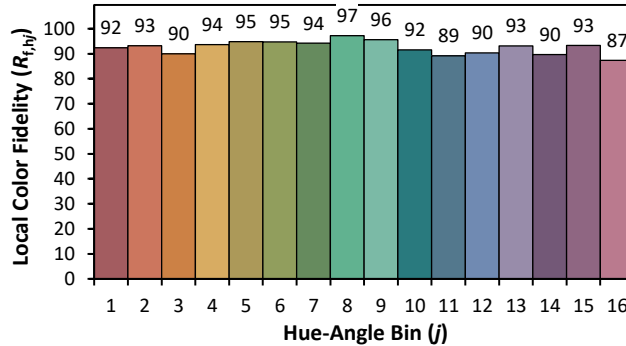
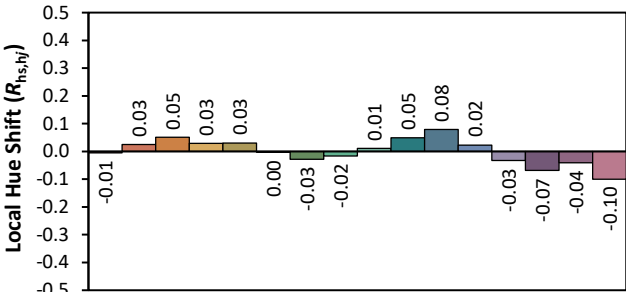
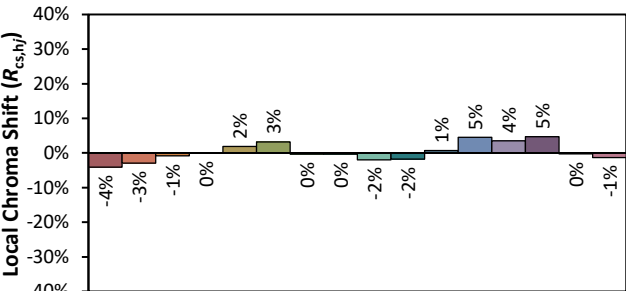
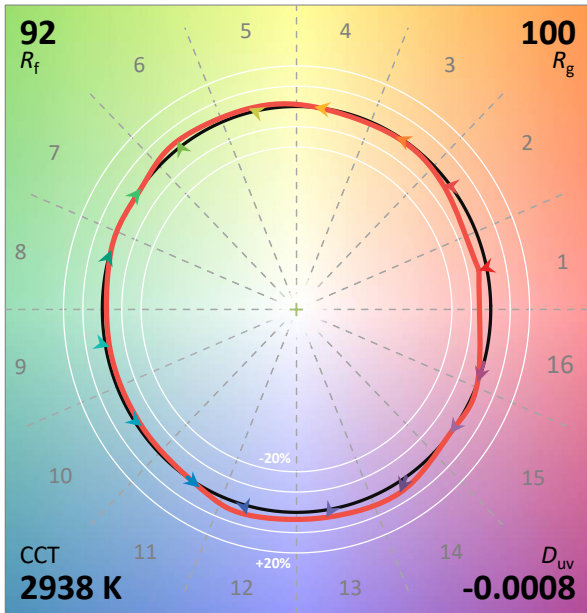
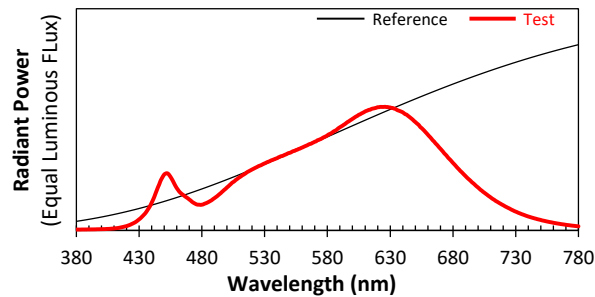
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT3XX-LED930	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 1/16/2025

Manufacturer: VISUAL COMFORT AND COMPANY
Model: 700TDWIT3XX-LED930



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

x 0.4403
y 0.4033
u' 0.2531
v' 0.5216