

VISUAL COMFORT AND CO.

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700TDWIT5XX-LED930

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-005

ISSUE DATE

1/16/2025

REVISED DATE

None

TEST DATES

2024-12-20 through 2025-01-06.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105735679CHI-005

MODEL NUMBER(s)

700TDWIT5XX-LED930

REPORT RENDERED TO:

VISUAL COMFORT AND 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

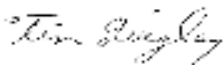
ANSI/IES LM-79-19 Optical and Electrical Measurements of Solid-State Lighting Products

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:

Reviewer:



T. Quigley
Engineer
Lighting Division



J. Davis
N.A> Technical Lead
Lighting Division

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ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH12122024023126-003	700TDWIT5XX-LED930	Wit 5 Pendant	Production	12/12/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700TDWIT5XX-LED930	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700TDWIT5XX-LED930
Product Description:	Wit 5 Pendant
LED Model No.:	XY ELC0435
Driver Model No.:	Macron GBLD001
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	3922.5	4116.6
Input Power (W) @ 120 (Vac)	53.68	53.64
Lumen Efficacy (lm/W)	73.1	76.7
Input Power Factor (I) @ 120 (Vac)	0.981	0.985

Criteria	Results
Input ATHD (%) @ 120 (Vac)	8.16
Correlated Color Temperature (K)	2934
Color Rendering Index - Ra	93.9
Color Rendering Index - R9	66.2
Duv	-0.0013
Chromaticity Coordinate (x)	0.440
Chromaticity Coordinate (y)	0.402
Chromaticity Coordinate (u')	0.253
Chromaticity Coordinate (v')	0.521
Input Power (W) @ 277 (Vac)	54.05
Input Power Factor (I) @ 277 (Vac)	0.725
Input ATHD (%) @ 277 (Vac)	29.95

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-005

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT5XX-LED930	NA

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

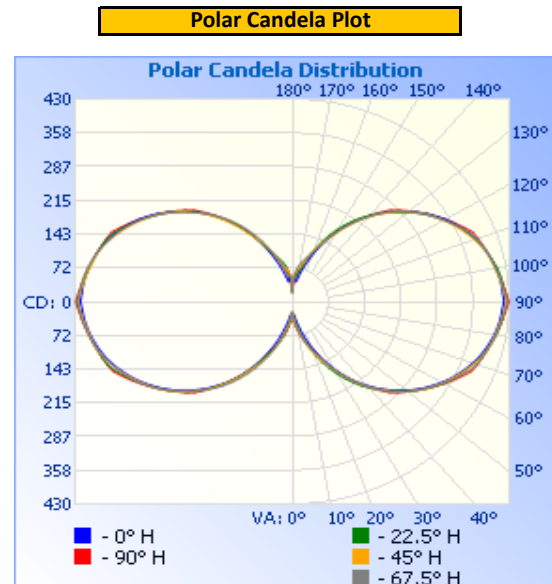
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	120.02	456.1	53.68	0.981

Light Output (lm)	Lumen Efficacy (lm/W)
3922.5	73.1

INTENSITY SUMMARY - CANDELA

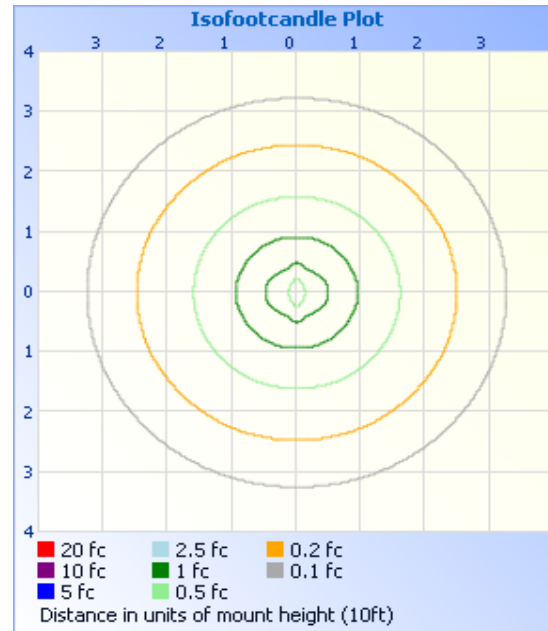
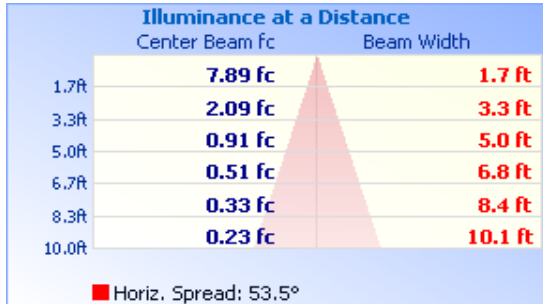
Angle	0	22.5	45	67.5	90
0	23	23	23	23	23
5	26	33	39	42	43
10	38	51	58	62	63
15	61	77	83	83	83
20	92	109	110	106	103
25	127	143	139	131	130
30	164	176	167	167	166
35	200	209	203	202	202
40	233	239	236	236	237
45	264	267	268	269	273
50	293	295	297	297	298
55	319	322	323	321	323
60	342	346	345	346	348
65	363	367	365	369	373
70	381	384	384	390	390
75	395	398	399	399	400
80	406	410	408	408	409
85	414	418	416	418	419
90	419	425	425	427	429
95	416	419	416	418	419
100	410	412	408	409	410
105	401	400	400	400	401
110	388	385	384	391	392
115	370	368	366	370	374
120	350	347	346	347	350
125	326	323	324	322	325
130	299	295	297	298	300
135	269	267	267	270	275
140	238	239	235	236	239
145	202	209	200	202	204
150	167	176	163	166	168
155	130	142	136	130	133
160	93	109	110	108	104
165	64	79	85	93	83
170	44	58	70	78	62
175	54	58	61	57	41
180	20	20	20	20	20

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY

Mounting Height: 10ft	
Illuminance - Cone Of Light	Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary					
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Zone	Lumens	Luminaire
0-30	91.4	2.3%
0-40	220.1	5.6%
0-60	716.7	18.3%
60-90	1,240.3	31.6%
70-100	1,331.6	33.9%
90-120	1,244.5	31.7%
0-90	1,957.0	49.9%
90-180	1,965.6	50.1%
0-180	3,922.5	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	4.1	0.1%	90-100	455.6	11.6%
10-20	23.3	0.6%	100-110	422.7	10.8%
20-30	63.9	1.6%	110-120	366.2	9.3%
30-40	128.7	3.3%	120-130	290.4	7.4%
40-50	207.8	5.3%	130-140	208.5	5.3%
50-60	288.8	7.4%	140-150	128.5	3.3%
60-70	364.3	9.3%	150-160	63.8	1.6%
70-80	421.1	10.7%	160-170	24.4	0.6%
80-90	454.9	11.6%	170-180	5.5	0.1%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT5XX-LED930	NA

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

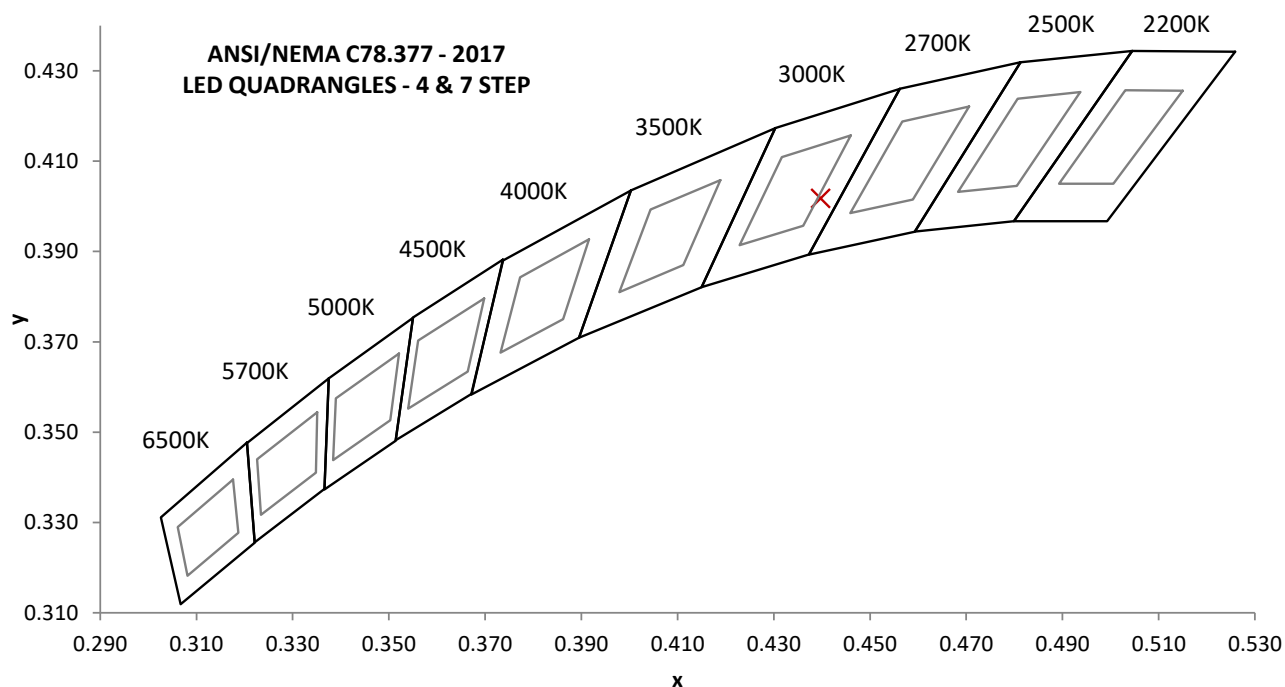
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor	Input ATHD (%)
120.00	454.0	53.64	0.985	8.16
277.02	269.0	54.05	0.725	29.95

Measured at 120(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra	CRI - R9
4116.6	76.7	2934	93.9	66.2

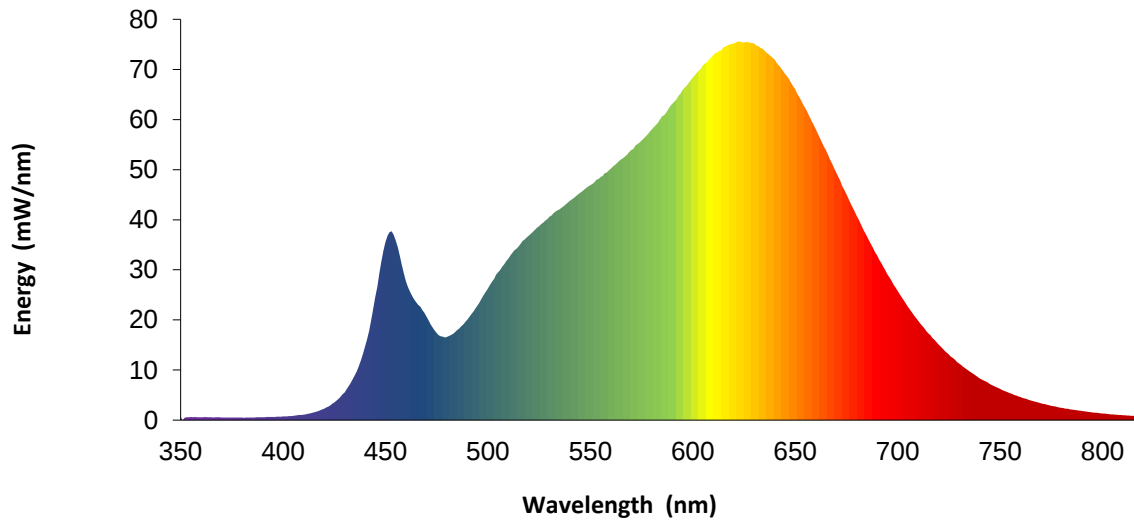
Duv	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0013	0.440	0.402	0.253	0.521



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.6		460	27.8		570	53.9		680	40.7
355	0.6		465	23.5		575	55.7		685	36.7
360	0.6		470	20.7		580	58.0		690	32.9
365	0.6		475	17.4		585	60.6		695	29.2
370	0.5		480	16.6		590	63.1		700	25.9
375	0.5		485	18.0		595	65.8		705	22.7
380	0.5		490	20.1		600	68.3		710	19.9
385	0.5		495	22.9		605	70.8		715	17.4
390	0.6		500	26.3		610	72.8		720	15.1
395	0.7		505	29.5		615	74.4		725	13.2
400	0.8		510	32.3		620	75.2		730	11.3
405	0.9		515	34.7		625	75.4		735	9.8
410	1.1		520	36.8		630	75.2		740	8.4
415	1.5		525	38.7		635	73.8		745	7.2
420	2.3		530	40.6		640	72.0		750	6.3
425	3.5		535	42.1		645	69.2		755	5.3
430	5.6		540	43.8		650	66.0		760	4.6
435	8.9		545	45.3		655	62.2		765	3.9
440	14.5		550	46.9		660	58.1		770	3.4
445	24.4		555	48.5		665	53.9		775	2.9
450	35.5		560	50.2		670	49.4		780	2.5
455	35.9		565	52.0		675	45.1		---	---

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



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EQUIPMENT LIST

REPORT NO. 105735679CHI-005

#	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

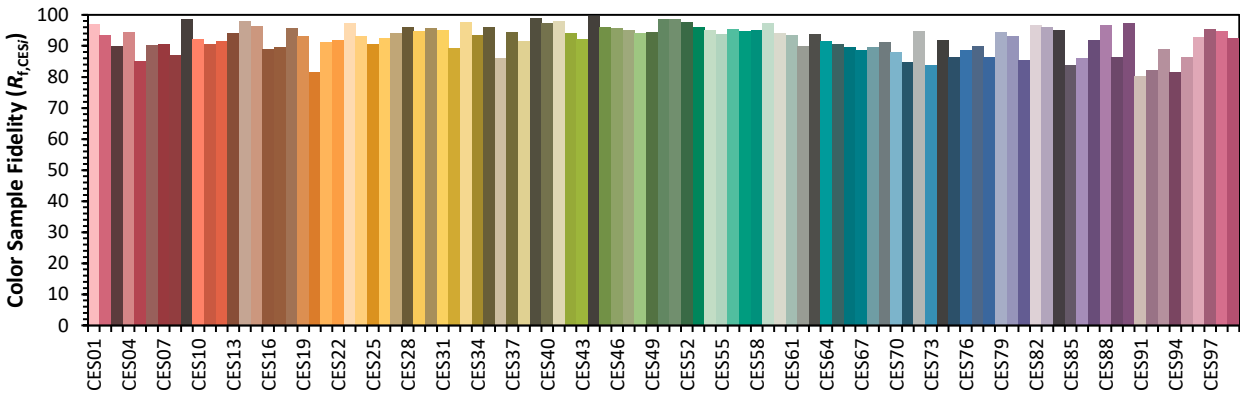
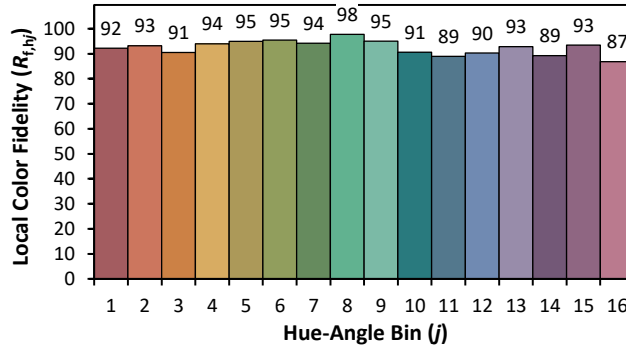
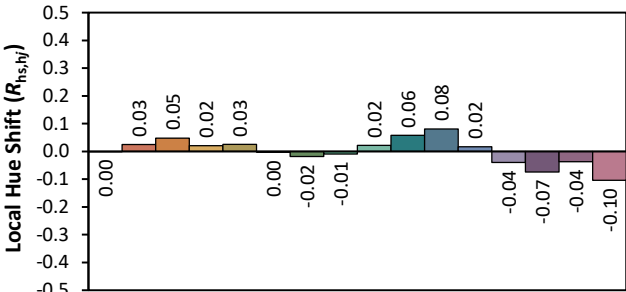
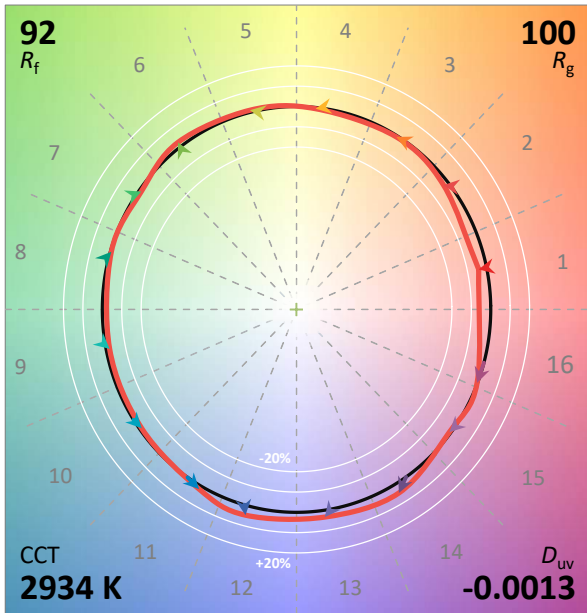
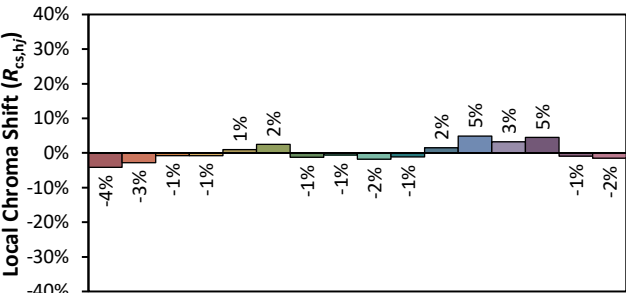
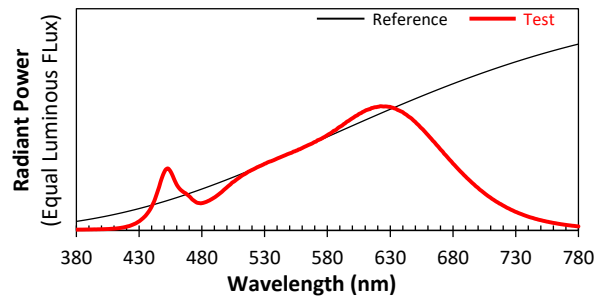
REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
---	---	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT5XX-LED930	NA

ANSI/IES TM-30-18 Color Rendition Report

Source:	User SPD	Manufacturer:	z
Date:	1/6/2025	Model:	700TDWIT5XX-LED930



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

x 0.4397
y 0.4017
u' 0.2534
v' 0.5209