

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

700TDWIT7XX-LED930

PROJECT NUMBER

G105735679

REPORT NUMBER

105735679CHI-007

ISSUE DATE

1/16/2025

REVISED DATE

None

TEST DATES

2024-12-21 through 2025-01-07.

DOCUMENT CONTROL NUMBER

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PAGES

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REPORT NUMBER

105735679CHI-007

MODEL NUMBER(s)

700TDWIT7XX-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
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Reviewer:



J. Davis
N.A. Technical Lead
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ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH12122024023126-005	700TDWIT7XX-LED930	Wit 7 Pendant	Production	12/12/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	700TDWIT7XX-LED930	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700TDWIT7XX-LED930
Product Description:	Wit 7 Pendant
LED Model No.:	XY ELC0435
Driver Model No.:	Macron GBLD001
Light Source:	LED

Criteria	Results
	Goniophotometer
Light Output (lumens)	5295.5
Input Power (W) @ 120 (Vac)	74.57
Lumen Efficacy (lm/W)	71.0
Input Power Factor (I) @ 120 (Vac)	0.986

Criteria	Results
Input ATHD (%) @ 120 (Vac)	6.77
Correlated Color Temperature (K)	2948
Color Rendering Index - Ra	94.2
Color Rendering Index - R9	68.7
Duv	-0.0011
Chromaticity Coordinate (x)	0.439
Chromaticity Coordinate (y)	0.402
Chromaticity Coordinate (u')	0.253
Chromaticity Coordinate (v')	0.521
Input Power (W) @ 277 (Vac)	74.36
Input Power Factor (I) @ 277 (Vac)	0.900
Input ATHD (%) @ 277 (Vac)	17.75

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-007

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT7XX-LED930	NA

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

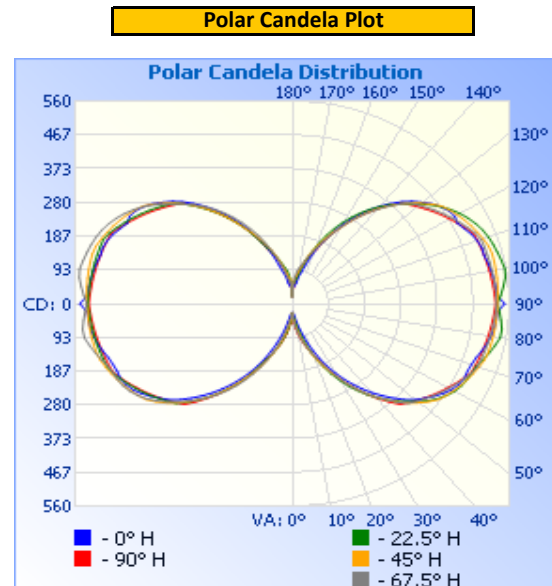
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up/Down	119.99	630.3	74.57	0.986

Light Output (lm)	Lumen Efficacy (lm/W)
5295.5	71.0

INTENSITY SUMMARY - CANDELA

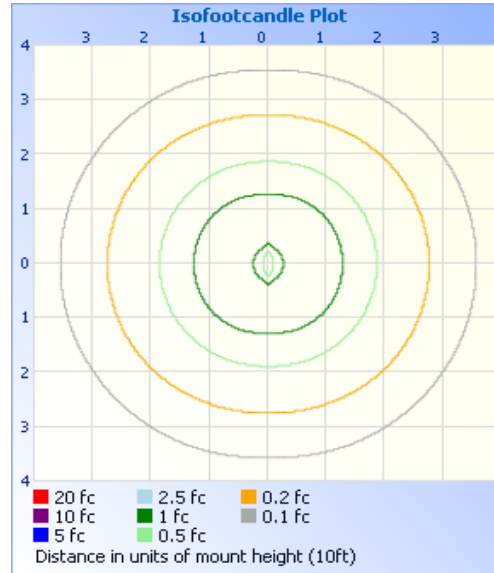
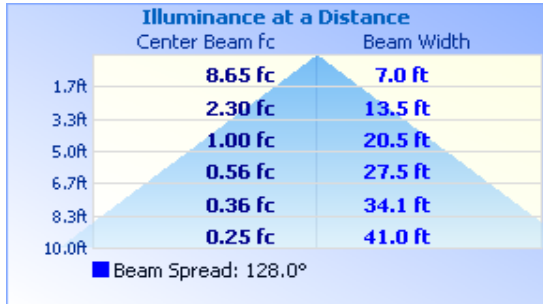
Angle	0	22.5	45	67.5	90
0	25	25	25	25	25
5	26	38	47	53	55
10	39	60	73	82	85
15	71	97	108	112	114
20	117	144	149	145	144
25	167	194	192	183	185
30	221	244	235	236	237
35	272	293	288	288	289
40	323	339	338	338	341
45	370	382	384	385	394
50	414	422	426	420	417
55	446	458	461	444	441
60	475	484	481	467	464
65	489	497	498	490	488
70	492	505	512	509	502
75	506	526	523	514	508
80	521	545	526	518	514
85	528	541	528	523	519
90	548	530	530	528	525
95	527	547	532	526	521
100	522	557	533	523	517
105	513	548	534	521	513
110	508	539	524	519	509
115	491	523	509	499	494
120	484	499	492	475	469
125	468	468	471	450	444
130	436	430	432	424	419
135	398	390	389	389	394
140	352	350	342	341	342
145	301	306	292	290	291
150	246	258	239	239	239
155	191	209	198	186	188
160	137	157	158	151	147
165	89	114	120	122	115
170	58	77	89	98	84
175	47	59	71	73	52
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

Zone	Lumens	Luminaire
0-30	123.7	2.3%
0-40	305.3	5.8%
0-60	1,006.0	19.0%
60-90	1,612.9	30.5%
70-100	1,704.3	32.2%
90-120	1,641.5	31.0%
0-90	2,619.0	49.5%
90-180	2,676.5	50.5%
0-180	5,295.5	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	5.0	0.1%	90-100	580.4	11.0%
10-20	30.5	0.6%	100-110	559.3	10.6%
20-30	88.2	1.7%	110-120	501.8	9.5%
30-40	181.6	3.4%	120-130	412.7	7.8%
40-50	296.3	5.6%	130-140	302.3	5.7%
50-60	404.4	7.6%	140-150	187.0	3.5%
60-70	489.0	9.2%	150-160	92.5	1.7%
70-80	547.0	10.3%	160-170	33.9	0.6%
80-90	576.9	10.9%	170-180	6.6	0.1%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT7XX-LED930	NA

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

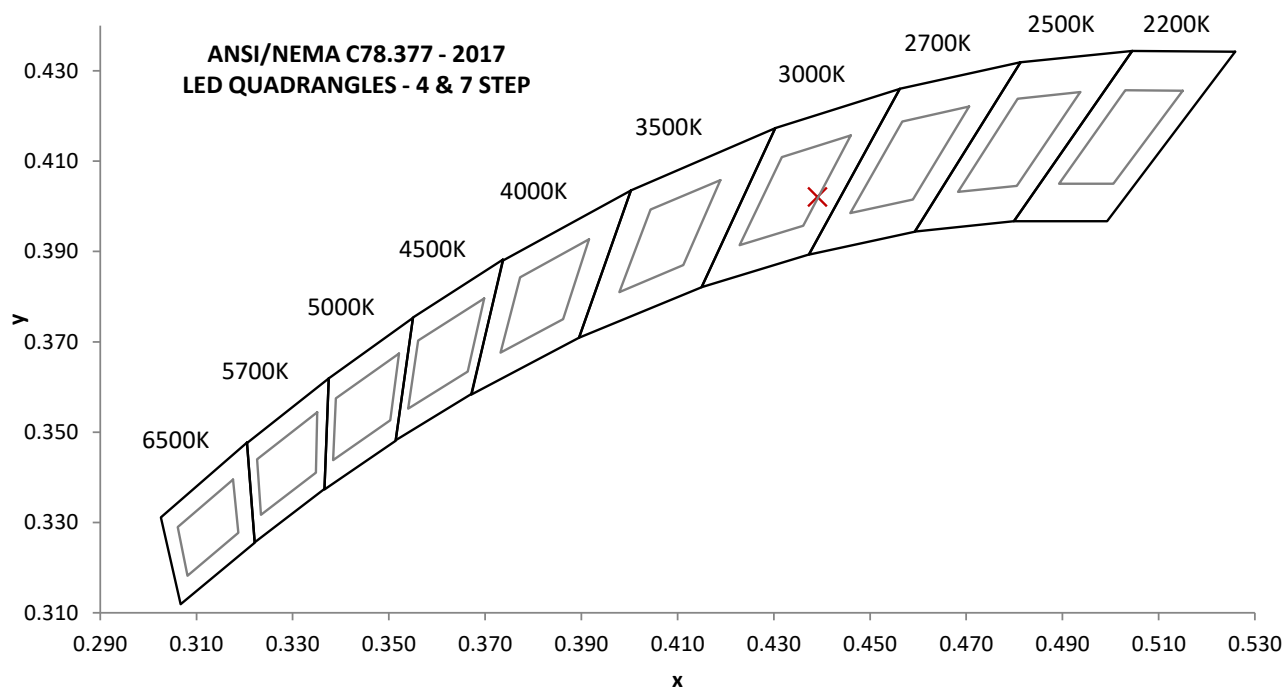
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor	Input ATHD (%)
119.96	627.3	74.45	0.989	6.77
276.98	298.2	74.36	0.900	17.75

Measured at 119.96(Vac)

CCT (K)	CRI - Ra	CRI - R9
2948	94.2	68.7

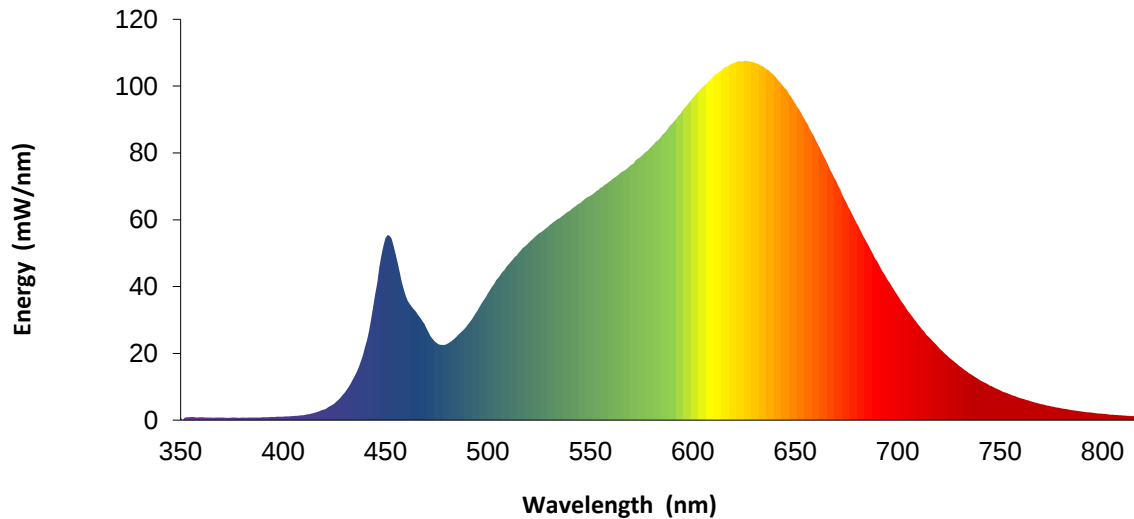
Duv	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0011	0.439	0.402	0.253	0.521



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.8		460	37.1		570	76.4		680	59.0
355	0.9		465	32.4		575	79.0		685	53.1
360	0.8		470	27.5		580	81.9		690	47.5
365	0.8		475	23.2		585	85.3		695	42.2
370	0.8		480	22.8		590	88.8		700	37.4
375	0.8		485	25.1		595	92.6		705	32.8
380	0.8		490	28.4		600	96.3		710	28.7
385	0.8		495	32.8		605	99.8		715	25.0
390	0.9		500	37.9		610	102.9		720	21.9
395	0.9		505	42.6		615	105.3		725	18.9
400	1.1		510	46.6		620	106.9		730	16.3
405	1.2		515	50.1		625	107.6		735	14.0
410	1.5		520	53.2		630	107.1		740	12.1
415	2.1		525	55.9		635	105.6		745	10.4
420	3.2		530	58.4		640	103.1		750	8.9
425	5.0		535	60.5		645	99.4		755	7.7
430	8.2		540	62.7		650	94.9		760	6.6
435	13.1		545	65.0		655	89.6		765	5.7
440	21.7		550	67.2		660	83.8		770	4.8
445	37.6		555	69.6		665	77.8		775	4.1
450	54.4		560	71.7		670	71.5		780	3.5
455	49.7		565	74.1		675	65.1		---	---

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

EQUIPMENT LIST

REPORT NO. 105735679CHI-007

#	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	10/8/2024
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

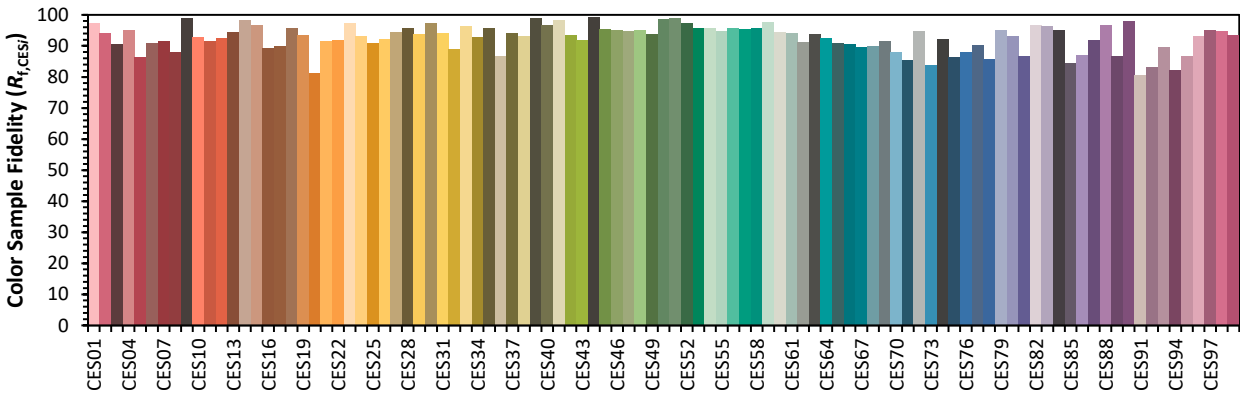
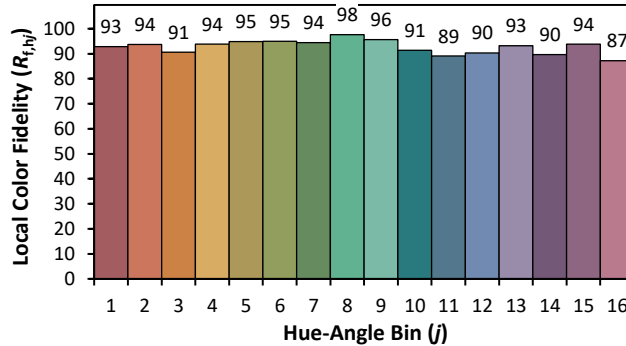
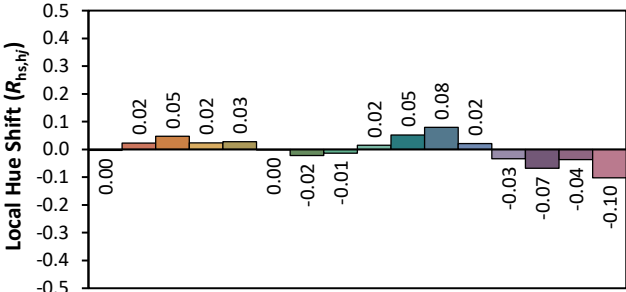
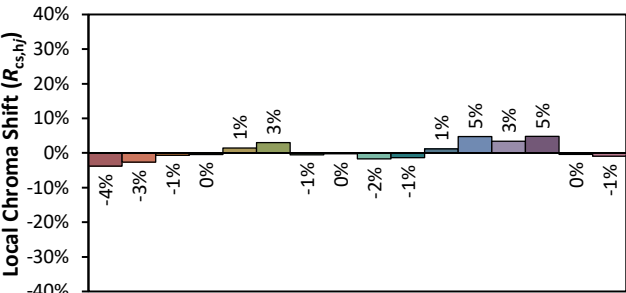
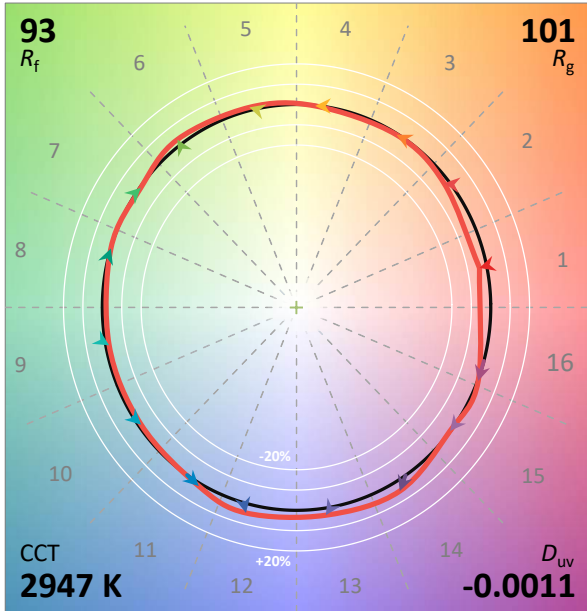
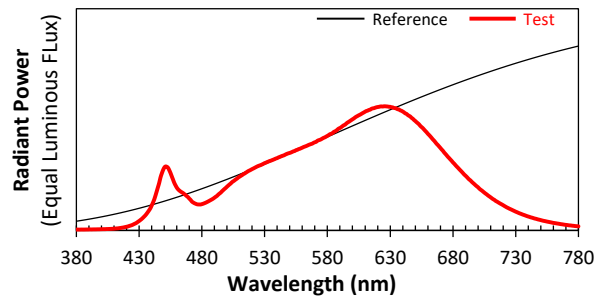
REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700TDWIT7XX-LED930	NA

ANSI/IES TM-30-18 Color Rendition Report

Source:	User SPD	Manufacturer:	VISUAL COMFORT AND COMPANY
Date:	1/7/2025	Model:	700TDWIT7XX-LED930



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

x 0.4391
y 0.4020
u' 0.2528
v' 0.5209