

# VISUAL COMFORT AND COMPANY TEST REPORT

## SCOPE OF WORK

LED Performance Testing

## MODEL NUMBER

700LSSTG284XX-LED927

## PROJECT NUMBER

G104941221

## REPORT NUMBER

104941221CHI-002

## ISSUE DATE

1/21/2022

## REVISED DATE

None

## TEST DATES

2022-01-21.

## DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104941221CHI-002

**MODEL NUMBER(s)**

700LSSTG284XX-LED927

**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-01236637-1.

**TEST STANDARDS**

IESNA 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

IES TM-30-18: IES Method for Evaluating Light Source Color Rendition

In Charge of Testing:



Maximilian Carvajal  
Engineer  
Lighting Division

Reviewer:



Jeff Davis  
N.A. Technical Lead  
Lighting Division

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**SAMPLE INFORMATION**

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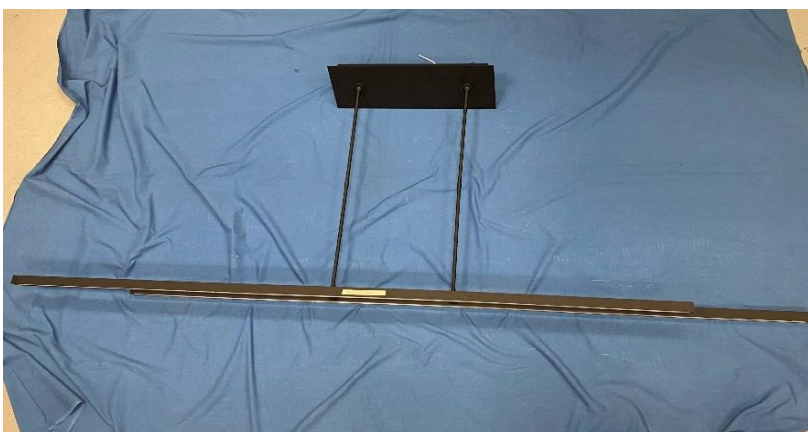
**ITEMS RECEIVED**

Item No.	Control No.	Model No.	Description	Type	Received
1	AH01192022024856-002	700LSSTG284XX-LED927	Stagger 2 84 Linear Suspension	Prototype	1/19/2022

**TESTED SAMPLE CONFIGURATIONS**

Config No.	Tested Model No.	Item Nos. Utilized
1	700LSSTG284XX-LED927	1

**SAMPLE PHOTOS - TESTED CONFIGURATIONS**



## SUMMARY

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### PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	700LSSTG284XX-LED927
Product Description:	Stagger 2 84 Linear Suspension
LED Model No.:	WW-FLS102T23WW240B-24(WCP)-UR-3S(2700K)/WW-FLS102T23WW120B-24(WCP)-UR-3S(PAM12)(2700K)
Driver Model No.:	MDR-608-24-100-LC
Light Source:	LED

Criteria	Results
Light Output (lumens)	3779.8
Input Power (W) @ 120 (Vac)	84.46
Lumen Efficacy (lm/W)	44.8
Input Power Factor ( ) @ 120 (Vac)	0.997
Input ATHD (%) @ 120 (Vac)	5.45
Correlated Color Temperature (K)	2636
Color Rendering Index - Ra ( )	94.0
Color Rendering Index - R9 ( )	71.1
Duv ( )	-0.0011
Chromaticity Coordinate (x)	0.463
Chromaticity Coordinate (y)	0.408
Chromaticity Coordinate (u')	0.266
Chromaticity Coordinate (v')	0.527

## 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.

**INTEGRATING SPHERE TESTING**

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	700LSSTG284XX-LED927	NA

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

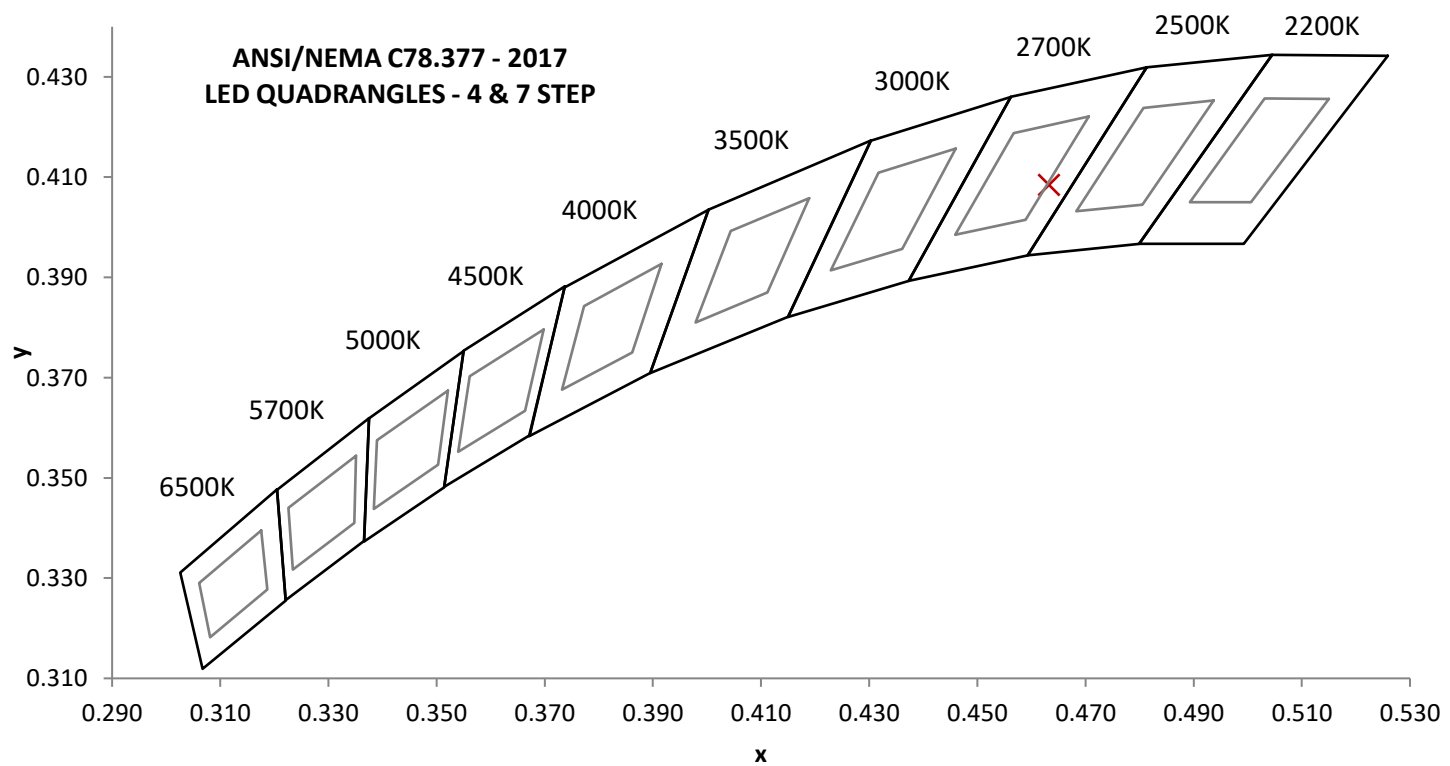
Base Orientation
Up/Down

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
120.00	705.8	84.46	0.997	5.45

**Measured at 120(Vac)**

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (I)	CRI - R9 (I)
3779.8	44.8	2636	94.0	71.1

Duv (I)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0011	0.463	0.408	0.266	0.527

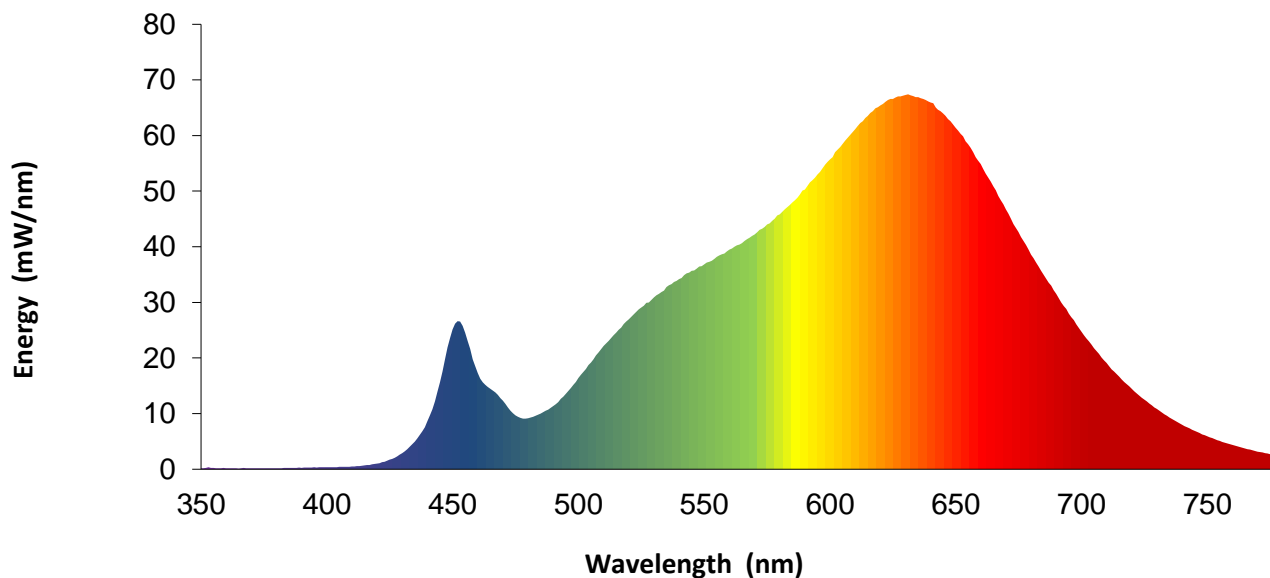


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SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.2		460	17.3		570	42.2		680	38.6
355	0.2		465	14.4		575	44.0		685	35.0
360	0.2		470	12.3		580	45.8		690	31.5
365	0.1		475	9.7		585	48.0		695	28.0
370	0.2		480	9.2		590	50.3		700	24.7
375	0.2		485	10.0		595	53.0		705	21.8
380	0.2		490	11.4		600	55.7		710	19.1
385	0.2		495	13.5		605	58.5		715	16.6
390	0.3		500	16.4		610	61.1		720	14.4
395	0.3		505	19.2		615	63.6		725	12.6
400	0.4		510	22.2		620	65.4		730	10.8
405	0.4		515	24.5		625	66.6		735	9.3
410	0.5		520	26.9		630	67.3		740	8.0
415	0.7		525	29.1		635	66.9		745	6.9
420	1.0		530	30.9		640	65.9		750	5.9
425	1.7		535	32.8		645	64.0		755	5.1
430	2.9		540	34.2		650	61.4		760	4.4
435	5.0		545	35.7		655	58.4		765	3.7
440	8.7		550	36.8		660	54.9		770	3.2
445	15.6		555	38.2		665	50.9		775	2.7
450	25.1		560	39.5		670	46.7		780	2.3
455	24.6		565	40.7		675	42.7		---	---

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

**EQUIPMENT LIST**

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
8	Newport Humidity Recorder	iServer	146961	9/21/2021	9/21/2022
9	Labsphere Spectroradiometer	CDS2600	CHI0539	VBU	VBU
10	3 Meter Sphere	SPR600	CHI0088	VBU	VBU
11	Elgar AC Power Supply	CW1251	146112	VBU	VBU
12	Sorenson DC Power Supply	XFR150-8	146846	VBU	VBU
13	Yokogawa Power Meter	WT1600	146767	4/8/2021	4/8/2022
17	Omega thermometer	USB TC08	EQA002615	4/6/2021	4/6/2022
26	Xitron Power Analyzer	XT-2640	CHI0611	6/9/2021	6/9/2022

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	700LSSTG284XX-LED927	NA

## ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

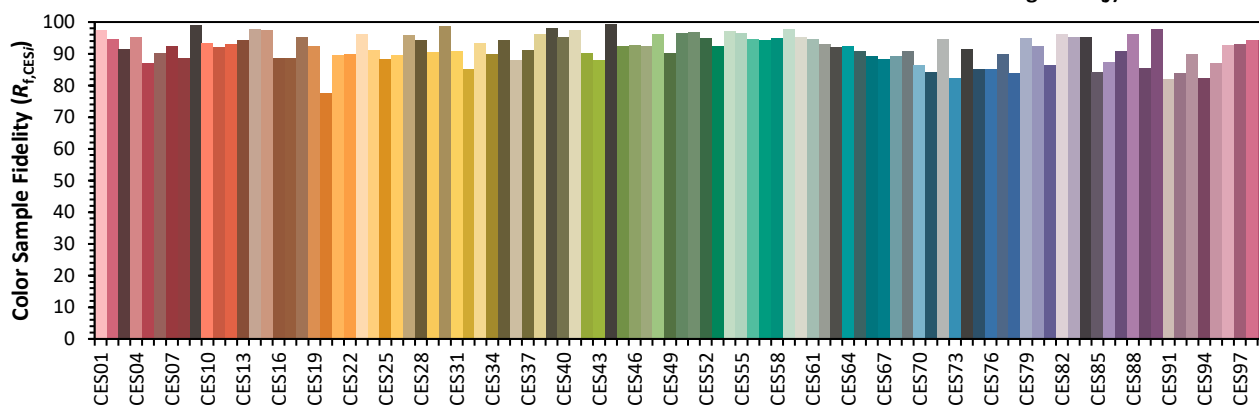
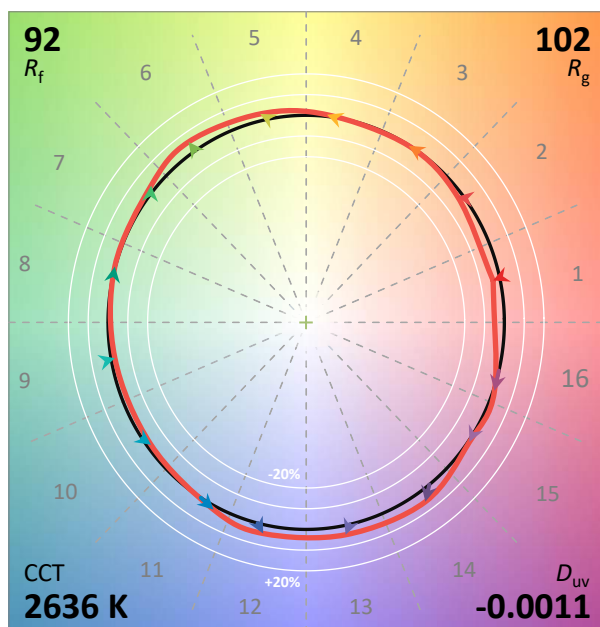
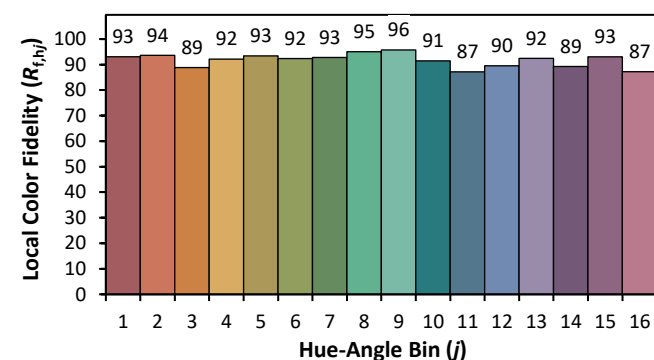
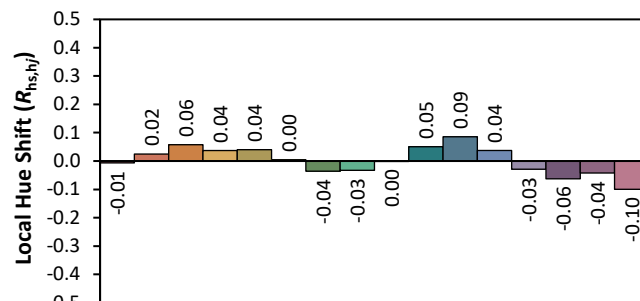
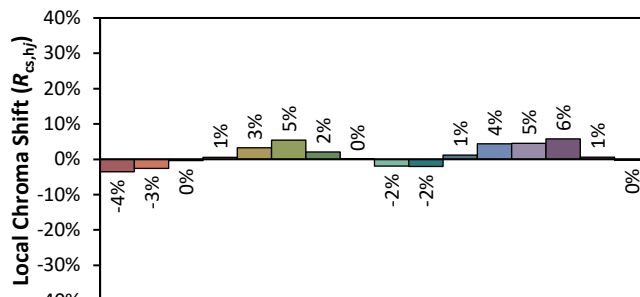
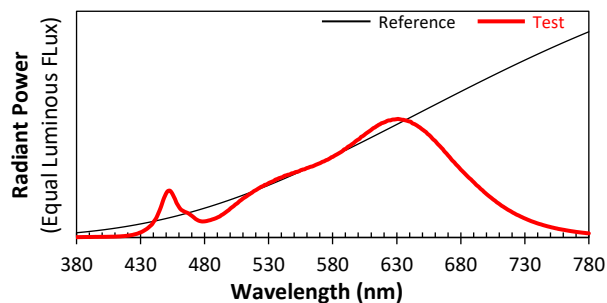
Manufacturer:

VISUAL COMFORT AND COMPANY

Date: 1/21/2022

Model:

700LSSTG284XX-LED927



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

x 0.4633

y 0.4084

u' 0.2657

v' 0.5270