ILLUMADYNE, INC

TEST REPORT

SCOPE OF WORK
LED Performance Testing

MODEL NUMBER
8STK-HE-UNV-42-3500K-DL

PROJECT NUMBER
G104680750

REPORT NUMBER
104680750CRT-007

ISSUE DATE
5/14/2021

REVISED DATE
None

TEST DATES
5/14/2021

DOCUMENT CONTROL NUMBER
RTTDS-R-AMER-Test-3407

PAGES
8

REPORT NUMBER
104680750CRT-007

MODEL NUMBER(s)
8STK-HE-UNV-42-3500K-DL

REPORT RENDERED TO:
ILLUMADYNE, INC
3840 HOPKINS STREET
PENSACOLA, FL 32534

STATEMENT OF LIMITATION

NVLAP Lab Code 100402-0. 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-01171482-0.

TEST STANDARDS

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting
ANSI NEMA ANSLG C78.377: 2017: Specifications for the Chromaticity of Solid State Lighting (SSL) Products

In Charge of Testing:

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Reviewer:

Jeff Davis
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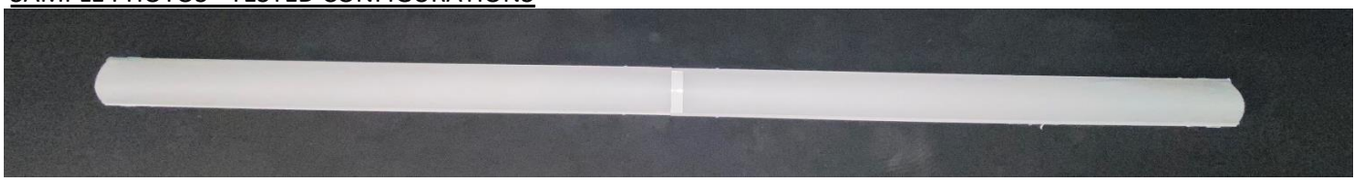
SAMPLE INFORMATION

REPORT NO. 104680750CRT-007

ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	CRT2103161223-011	8STK-HE-UNV-42-3500K-DL	LED Strip Luminaire	Production	3/16/2021

SAMPLE PHOTOS - TESTED CONFIGURATIONS



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SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	8STK-HE-UNV-42-3500K-DL
Product Description:	LED Strip Luminaire
LED Model No.:	SPMWH1228FD7WAW0SC
Driver Model No.:	Illuma Source ILF-U-02-58W-1300-A
Light Source:	LED

Criteria	Results
Light Output (lumens)	5692.9
Input Power (W) @ 120 (Vac)	46.46
Lumen Efficacy (lm/W)	122.5
Input Power Factor () @ 120 (Vac)	0.995
Input ATHD (%) @ 120 (Vac)	5.7
Correlated Color Temperature (K)	3455
Color Rendering Index - Ra ()	84.5
Color Rendering Index - R9 ()	14.3
Duv ()	0.0019
Chromaticity Coordinate (x)	0.406
Chromaticity Coordinate (y)	0.387
Chromaticity Coordinate (u')	0.238
Chromaticity Coordinate (v')	0.510
Input Power (W) @ 277 (Vac)	46.48
Input Power Factor () @ 277 (Vac)	0.950
Input ATHD (%) @ 277 (Vac)	11.6

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.

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INTEGRATING SPHERE TESTING **REPORT NO. 104680750CRT-007**

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

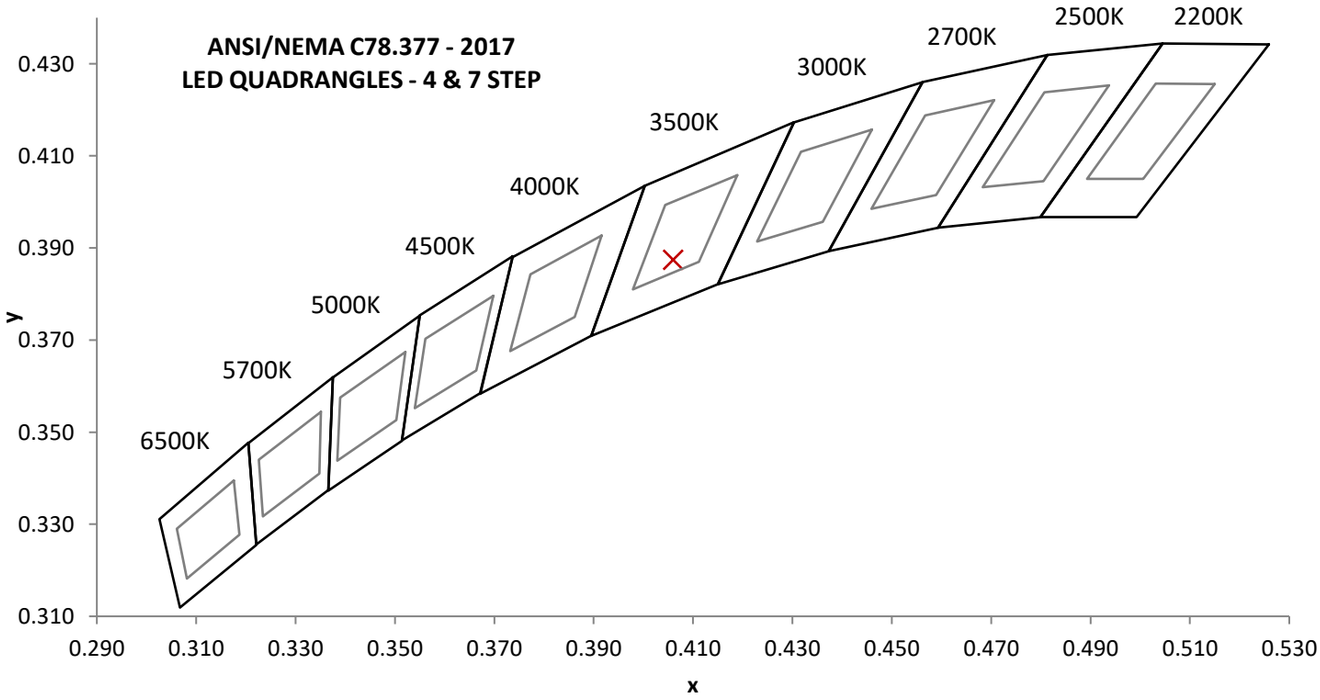
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()	Input ATHD (%)
120.03	388.8	46.46	0.995	5.7
277.04	176.7	46.48	0.950	11.6

Measured at 120.03(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra ()	CRI - R9 ()
5692.9	122.5	3455	84.5	14.3

Duv ()	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
0.0019	0.406	0.387	0.238	0.510



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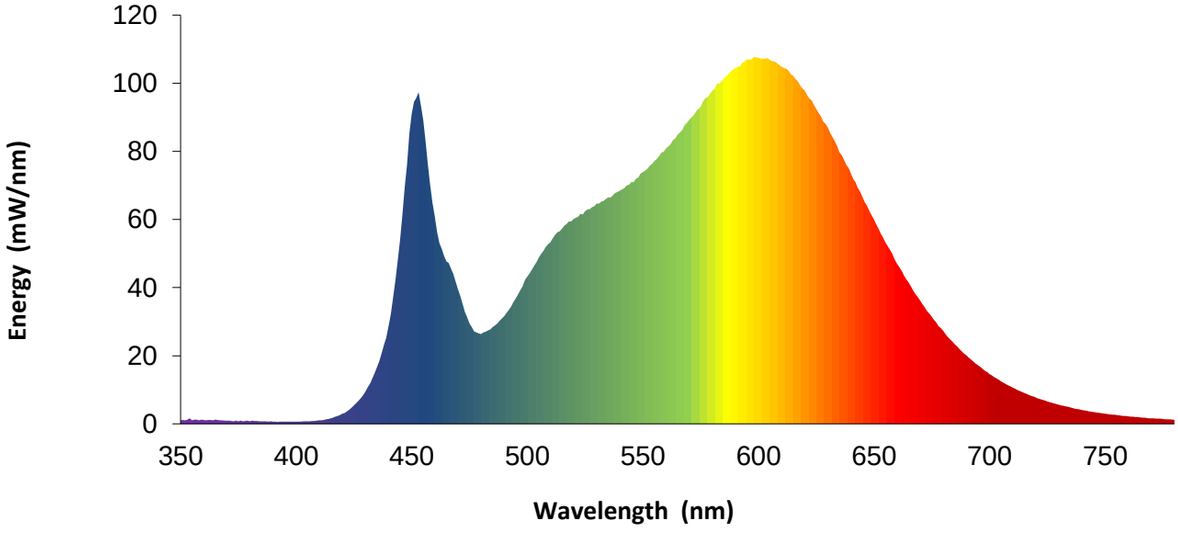
SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	1.1		460	60.9		570	89.2		680	27.3
355	1.0		465	47.7		575	93.0		685	23.4
360	1.1		470	39.6		580	97.9		690	20.2
365	1.2		475	29.4		585	101.4		695	17.2
370	0.9		480	26.3		590	104.4		700	14.7
375	0.8		485	28.4		595	106.9		705	12.5
380	0.8		490	31.6		600	107.4		710	10.7
385	0.8		495	36.8		605	106.8		715	9.1
390	0.7		500	43.3		610	104.8		720	7.7
395	0.6		505	48.9		615	102.2		725	6.6
400	0.6		510	53.3		620	97.9		730	5.6
405	0.8		515	57.3		625	92.5		735	4.8
410	1.0		520	60.1		630	87.0		740	4.1
415	1.6		525	62.4		635	79.7		745	3.5
420	3.0		530	64.6		640	73.4		750	3.0
425	5.4		535	66.5		645	66.8		755	2.5
430	9.5		540	68.5		650	60.1		760	2.2
435	16.6		545	71.0		655	53.3		765	1.9
440	28.7		550	73.9		660	47.0		770	1.6
445	54.1		555	77.2		665	41.6		775	1.4
450	90.9		560	80.9		670	36.2		780	1.2
455	89.2		565	84.9		675	31.5		---	---



Portrayed color in graphic is estimated by wavelength (nm) and may not be exact - it is a visual representation only

Input Voltage (Vac)	Output Voltage (Vdc)	Output Current (mA)	Output Power (W)	Efficiency (%)
120.03	38.76	1041.0	40.35	86.85
277.04	38.76	1039.0	40.27	86.64

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EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Elgar AC Power Supply	CW1251	---	VBU	VBU
2	Sorenson DC Power Supply	XFR 150-8	---	VBU	VBU
3	Traceable Hygrothermometer	4800	L206	2/12/2021	2/12/2022
4	Yokogawa Power Analyzer	WT1600	E473	6/22/2020	6/22/2021
5	Fluke Thermometer	53 II	D587	2/5/2021	2/5/2022
6	Fluke Multimeter	87V	D590	6/15/2020	6/15/2021
7	3M Integrating Sphere Spectrometer System	CDS 1100	O235	4/1/2021	7/1/2021
8	Fisher Scientific Stopwatch	14-649-9	N1132	3/26/2021	3/26/2022

REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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ANNEX A - TM-30 CALCULATIONS **REPORT NO. 104680750CRT-007**

TM-30 REPORT