

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

L27L-14W-FL-WZ-TC-RDWW

PROJECT NUMBER

G105870896

REPORT NUMBER

105870896CHI-003

ISSUE DATE

7/15/2024

REVISED DATE

None

TEST DATES

2024-07-01 through 2024-07-09.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105870896CHI-003

MODEL NUMBER(s)

L27L-14W-FL-WZ-TC-RDWW

REPORT RENDERED TO:

PURE EDGE LIGHTING
1718 WEST FULLERTON
CHICAGO, IL 60614
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-01461581-0.

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:



David Dalo
Engineer
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Reviewer:



Jeff Davis
NA Technical Lead
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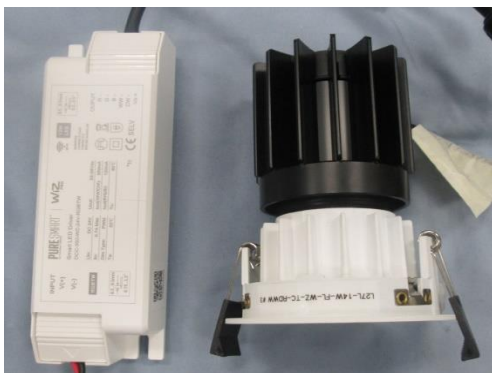
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH06212024013032-003	L27L-14W-FL-WZ-TC-RDWW	Downlight	Production	6/21/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	L27L-14W-FL-WZ-TC-RDWW	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	L27L-14W-FL-WZ-TC-RDWW
Product Description:	Downlight
LED Model No.:	TYF/ TB 1814D-058-RGBCW
Driver Model No.:	BERNSN/DCC-350WZ24VRGBTW
Light Source:	LED

Criteria	Results	
	Goniophotometer	Integrating Sphere
Light Output (lumens)	618.8	614.8
Driver Output Power (W) @ 24 (Vdc)	12.15	
Calculated Efficacy (lm/W)	50.6	

Criteria	Results
Correlated Color Temperature (K)	2910
Color Rendering Index - Ra (l)	95.0
Color Rendering Index - R9 (l)	95.5
Duv (l)	-0.0018
Chromaticity Coordinate (x)	0.441
Chromaticity Coordinate (y)	0.401
Chromaticity Coordinate (u')	0.254
Chromaticity Coordinate (v')	0.521

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	L27L-14W-FL-WZ-TC-RDWW	NA

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

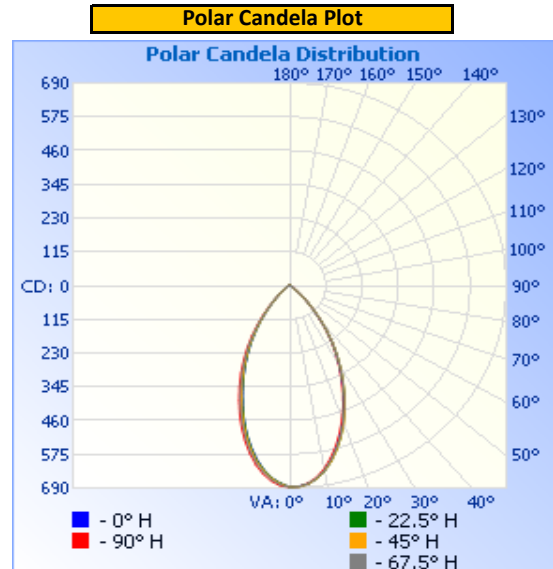
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.01	172.9	17.66	0.852

Light Output (lm)	Lumen Efficacy (lm/W)
618.8	35.0

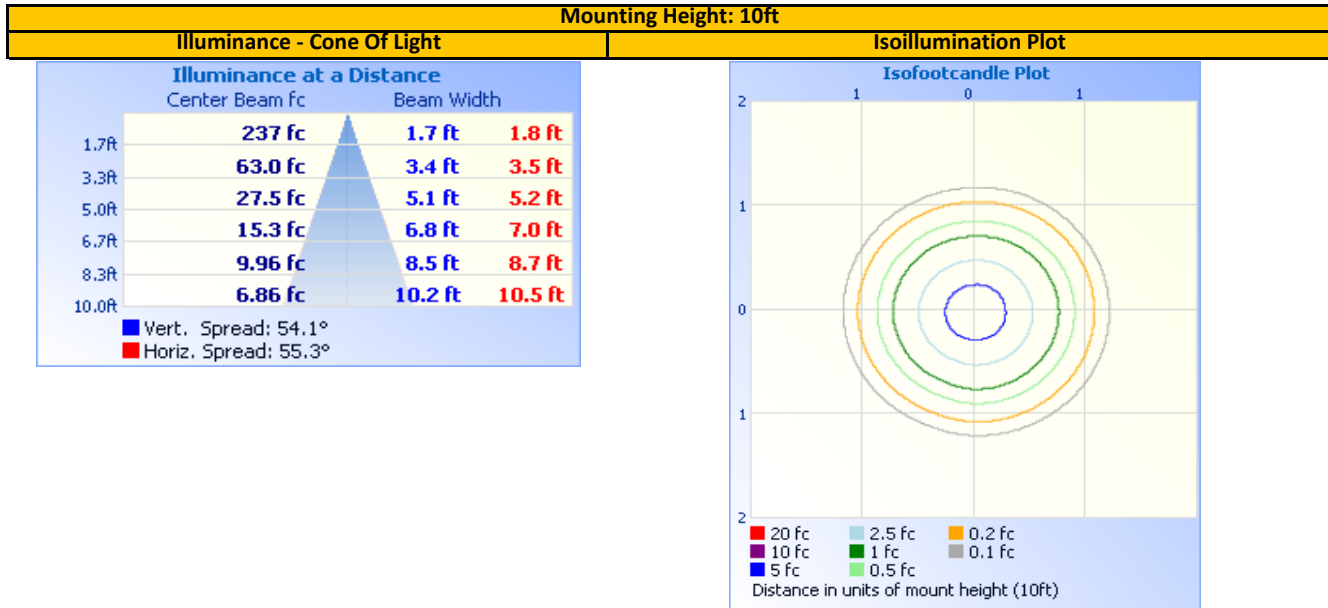
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	686	686	686	686	686
5	678	678	679	677	675
10	640	641	640	637	633
15	575	578	578	574	566
20	497	499	501	495	486
25	408	411	413	409	399
30	319	321	323	321	313
35	235	236	238	236	231
40	149	151	153	153	148
45	81	83	83	83	81
50	40	41	41	41	40
55	16	17	17	17	18
60	12	12	12	13	13
65	9	9	9	10	10
70	6	6	7	7	7
75	4	4	4	5	5
80	3	3	3	3	3
85	1	1	1	1	1
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	392.0	63.3%	90-100	0.0	0.0%
0-40	525.5	84.9%	100-110	0.0	0.0%
0-60	603.9	97.6%	110-120	0.0	0.0%
60-90	14.9	2.4%	120-130	0.0	0.0%
70-100	5.9	0.9%	130-140	0.0	0.0%
90-120	0.0	0.0%	140-150	0.0	0.0%
0-90	618.8	100.0%	150-160	0.0	0.0%
90-180	0.0	0.0%	160-170	0.0	0.0%
0-180	618.8	100.0%	170-180	0.0	0.0%

Test Configuration	Tested Model No.	Pass/Fail/NA
1	L27L-14W-FL-WZ-TC-RDWW	NA

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

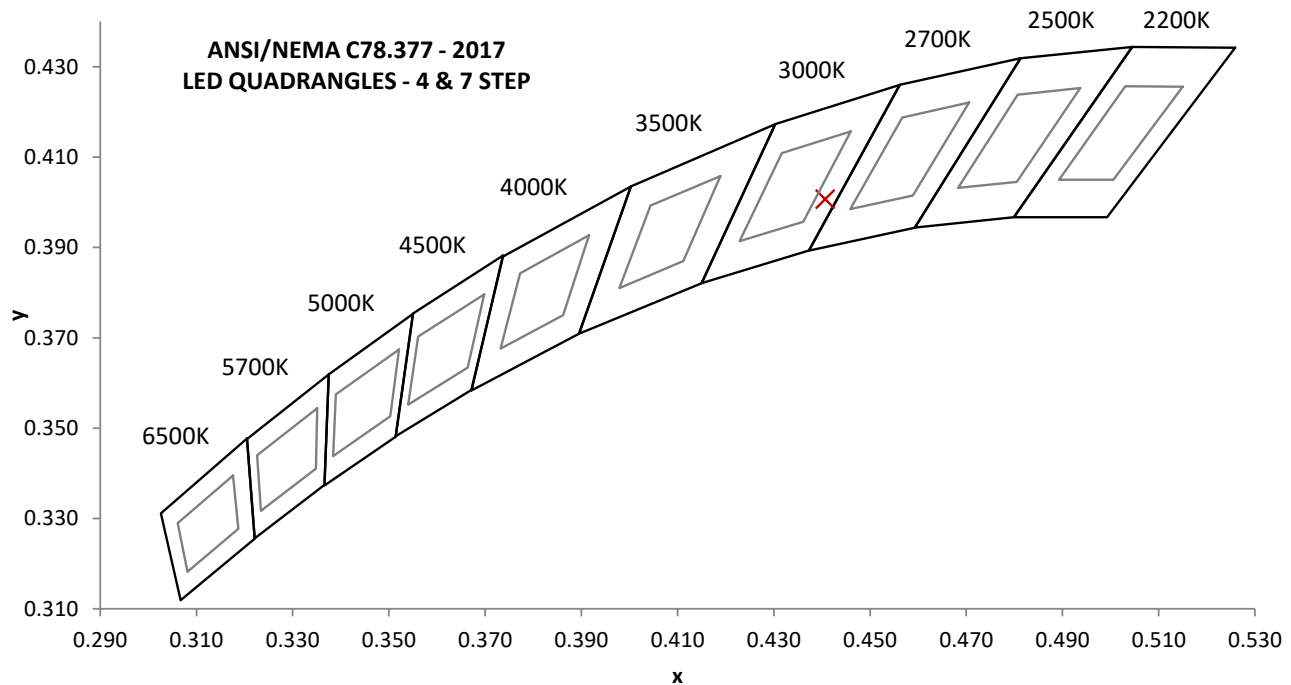
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
120.01	172.7	17.66	0.852	29.56

Measured at 120.01(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (I)	CRI - R9 (I)
614.8	34.8	2910	95.0	95.5

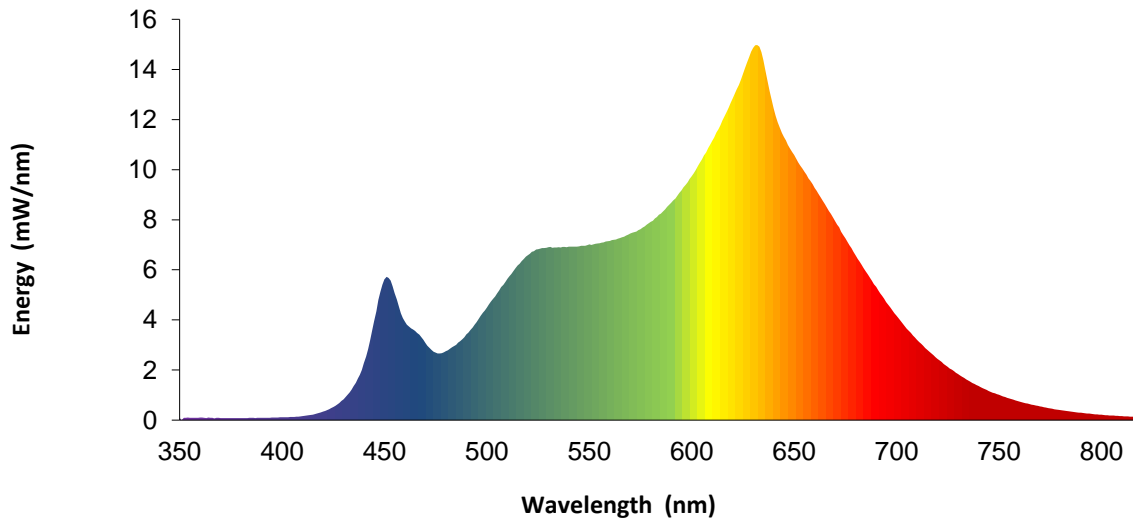
Duv (I)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0018	0.441	0.401	0.254	0.521



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.1		460	3.9		570	7.4		680	6.6
355	0.1		465	3.6		575	7.6		685	5.9
360	0.1		470	3.1		580	7.9		690	5.3
365	0.1		475	2.7		585	8.2		695	4.7
370	0.1		480	2.8		590	8.7		700	4.2
375	0.1		485	3.0		595	9.2		705	3.6
380	0.1		490	3.4		600	9.7		710	3.2
385	0.1		495	3.9		605	10.4		715	2.8
390	0.1		500	4.5		610	11.1		720	2.5
395	0.1		505	5.1		615	12.0		725	2.1
400	0.1		510	5.6		620	12.8		730	1.8
405	0.1		515	6.2		625	13.8		735	1.6
410	0.2		520	6.6		630	14.9		740	1.4
415	0.2		525	6.8		635	14.4		745	1.2
420	0.3		530	6.9		640	12.4		750	1.0
425	0.5		535	6.9		645	11.3		755	0.9
430	0.8		540	6.9		650	10.6		760	0.7
435	1.4		545	6.9		655	9.9		765	0.6
440	2.3		550	7.0		660	9.3		770	0.5
445	3.9		555	7.1		665	8.6		775	0.5
450	5.6		560	7.1		670	7.9		780	0.4
455	5.1		565	7.3		675	7.3		---	---

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. 105870896CHI-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	10/9/2023	10/9/2024
3	LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
4	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0764	3/14/2024	3/14/2025
5	Chroma Power Supply	61604	CHI0371	VBU	VBU
8	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0727	3/14/2024	3/14/2025
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	146770	10/11/2023	10/11/2024
17	Omega thermometer	USB TC08	EQAH002615	4/5/2024	4/5/2025
26	Xitron Power Analyzer	XT2640	CHI0611	7/7/2023	7/7/2024

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	L27L-14W-FL-WZ-TC-RDWW	NA

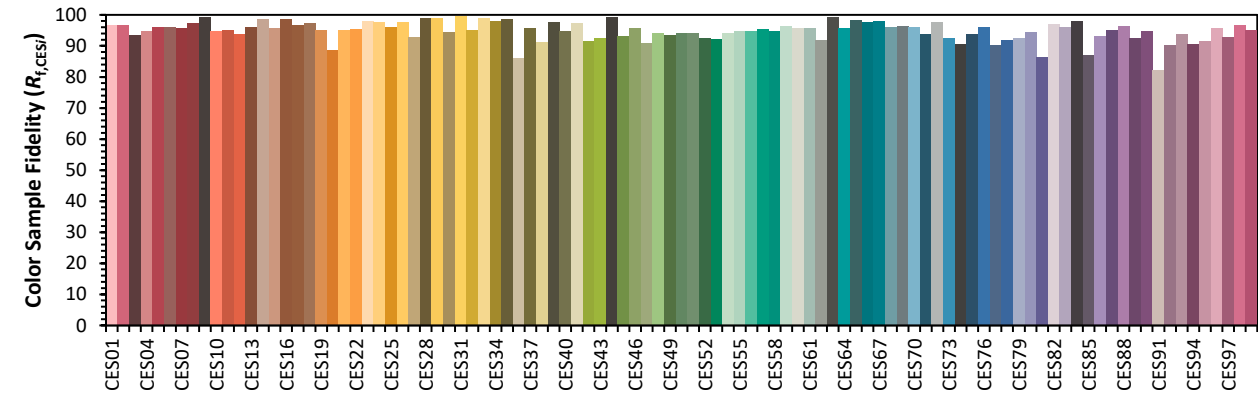
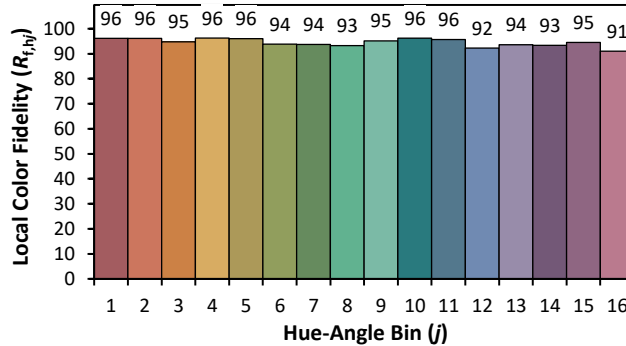
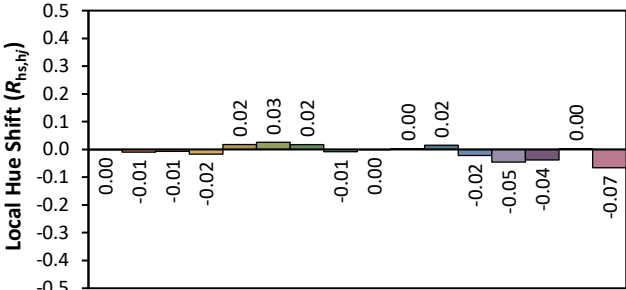
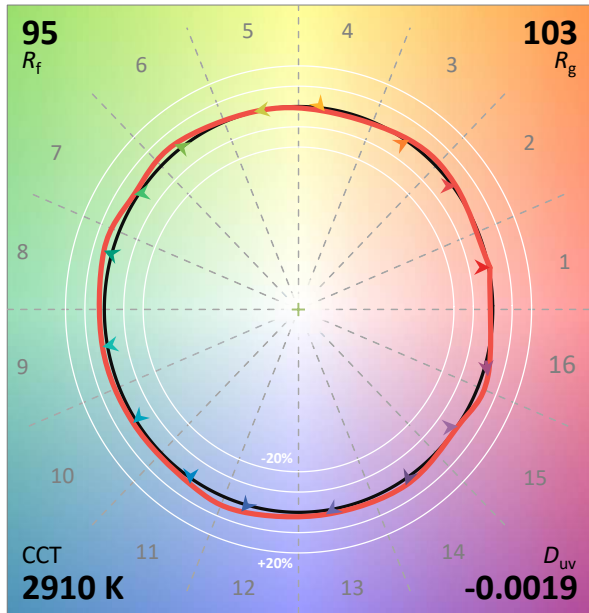
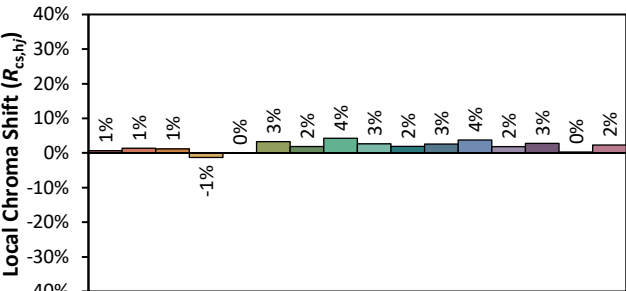
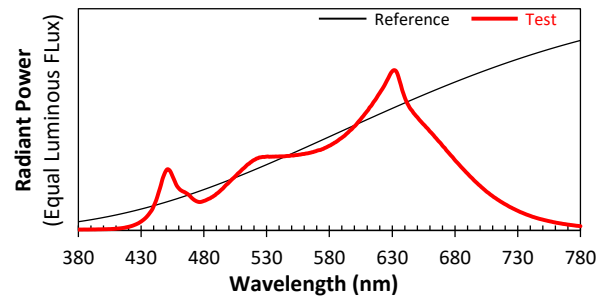
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Pure Edge Lighting

Date: 7/1/2024

Model: L27L-14W-FL-WZ-TC-RDWW



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

x 0.4407
y 0.4006
u' 0.2545
v' 0.5206