

PURE EDGE LIGHTING

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

L27L-14W-WW-WZ-TC-RWWW

PROJECT NUMBER

G105870896

REPORT NUMBER

105870896CHI-005

ISSUE DATE

7/15/2024

REVISED DATE

None

TEST DATES

2024-07-09 through 2024-07-12.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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PAGES

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REPORT NUMBER

105870896CHI-005

MODEL NUMBER(s)

L27L-14W-WW-WZ-TC-RWWW

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
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ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH06212024013032-005	L27L-14W-WW-WZ-TC-RWWW	Downlight	Production	6/21/2024

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	L27L-14W-WW-WZ-TC-RWWW	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	L27L-14W-WW-WZ-TC-RWWW
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)	444.8	449.3
Output Driver Power (W) @ 24 (Vdc)	11.95	
Calculated Efficacy (lm/W)	37.6	

Criteria	Results
Correlated Color Temperature (K)	2902
Color Rendering Index - Ra (l)	94.2
Color Rendering Index - R9 (l)	92.0
Duv (l)	-0.0020
Chromaticity Coordinate (x)	0.441
Chromaticity Coordinate (y)	0.400
Chromaticity Coordinate (u')	0.255
Chromaticity Coordinate (v')	0.520

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. 105870896CHI-005

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

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

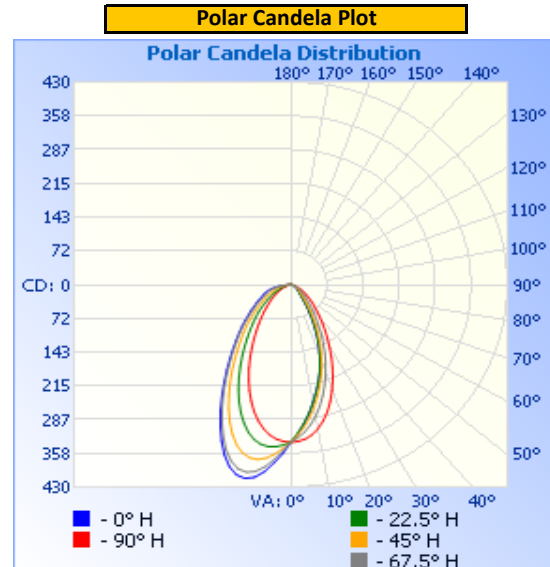
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.02	171.0	17.44	0.850

Light Output (lm)	Lumen Efficacy (lm/W)
444.8	25.5

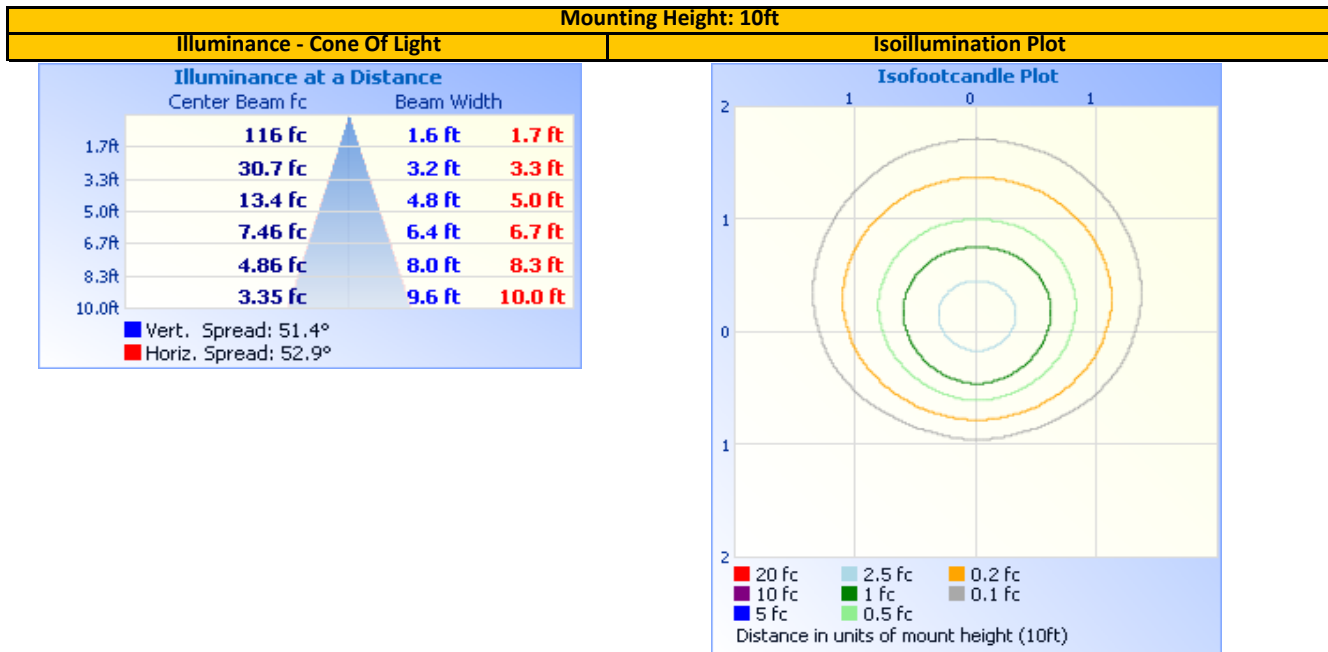
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	335	335	335	335	335
5	297	296	303	314	329
10	254	254	264	284	311
15	213	213	223	245	280
20	169	170	180	202	239
25	125	126	137	160	196
30	83	86	98	121	154
35	52	55	66	88	119
40	32	34	44	62	90
45	24	24	30	45	68
50	19	20	23	34	51
55	16	16	18	26	38
60	12	12	14	19	27
65	10	10	11	13	18
70	7	7	8	9	12
75	5	5	5	5	8
80	3	3	3	3	5
85	1	1	1	1	2
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	211.2	47.5%	90-100	0.0	0.0%
0-40	292.5	65.7%	100-110	0.0	0.0%
0-60	395.0	88.8%	110-120	0.0	0.0%
60-90	49.8	11.2%	120-130	0.0	0.0%
70-100	22.0	4.9%	130-140	0.0	0.0%
90-120	0.0	0.0%	140-150	0.0	0.0%
0-90	444.8	100.0%	150-160	0.0	0.0%
90-180	0.0	0.0%	160-170	0.0	0.0%
0-180	444.8	100.0%	170-180	0.0	0.0%

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

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

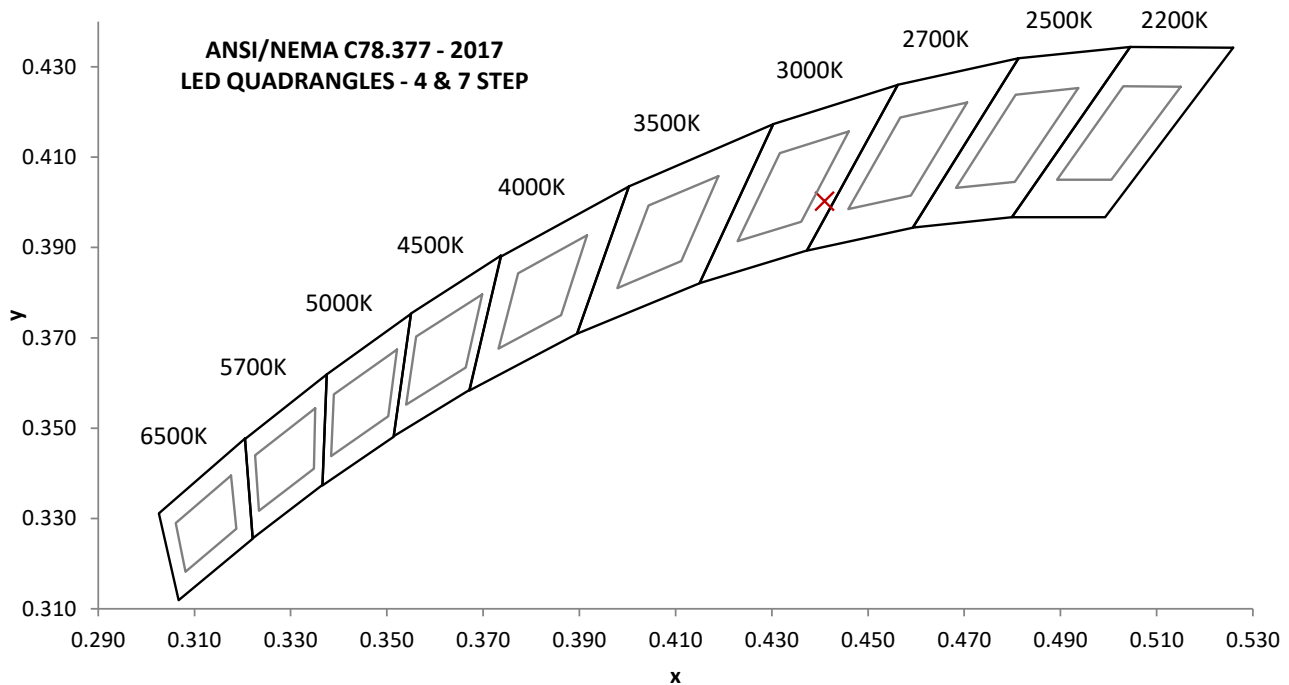
Base Orientation
Up

Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)	Input ATHD (%)
120.00	171.5	17.54	0.889	29.80

Measured at 120(Vac)

Light Output (lm)	Lumen Efficacy (lm/W)	CCT (K)	CRI - Ra (I)	CRI - R9 (I)
449.3	25.6	2902	94.2	92.0

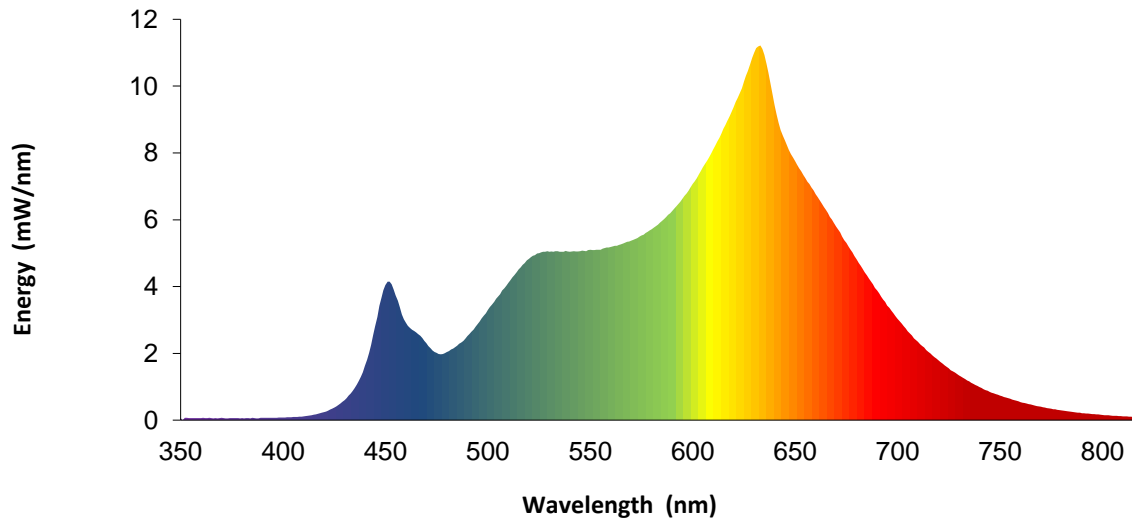
Duv (I)	1931 Chrom (x)	1931 Chrom (y)	1976 Chrom (u')	1976 Chrom (v')
-0.0020	0.441	0.400	0.255	0.520



SPECTRAL DISTRIBUTION OVER WAVELENGTHS

nm	mW/nm		nm	mW/nm		nm	mW/nm		nm	mW/nm
350	0.1		460	2.9		570	5.4		680	4.8
355	0.1		465	2.6		575	5.5		685	4.3
360	0.1		470	2.3		580	5.7		690	3.9
365	0.1		475	2.0		585	6.0		695	3.4
370	0.1		480	2.0		590	6.3		700	3.0
375	0.1		485	2.2		595	6.6		705	2.7
380	0.1		490	2.5		600	7.1		710	2.3
385	0.1		495	2.9		605	7.6		715	2.1
390	0.1		500	3.3		610	8.1		720	1.8
395	0.1		505	3.7		615	8.7		725	1.6
400	0.1		510	4.1		620	9.4		730	1.3
405	0.1		515	4.5		625	10.1		735	1.2
410	0.1		520	4.8		630	11.0		740	1.0
415	0.2		525	5.0		635	10.9		745	0.8
420	0.2		530	5.0		640	9.4		750	0.7
425	0.4		535	5.0		645	8.4		755	0.6
430	0.6		540	5.0		650	7.8		760	0.5
435	1.0		545	5.1		655	7.2		765	0.5
440	1.6		550	5.1		660	6.8		770	0.4
445	2.8		555	5.1		665	6.3		775	0.3
450	4.0		560	5.2		670	5.8		780	0.3
455	3.7		565	5.3		675	5.3		---	---

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



Total Quality. Assured.

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EQUIPMENT LIST

REPORT NO. 105870896CHI-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	10/9/2023	10/9/2024
3	LSI High Speed Mirror Goniometer	6440T	146928	VBV	VBV
4	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0764	3/14/2024	3/14/2025
5	Chroma Power Supply	61604	CHI0371	VBV	VBV
8	Omega Thermohygrometer	OM-CP-RFPRHTEMP2000A	CHI0727	3/14/2024	3/14/2025
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	146770	10/11/2023	10/11/2024
17	Omega thermometer	USB TC08	EQAH002615	4/5/2024	4/5/2025
26	Xitron Power Analyzer	2801	CHI0763	4/10/2024	4/10/2025

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

REVISION HISTORY

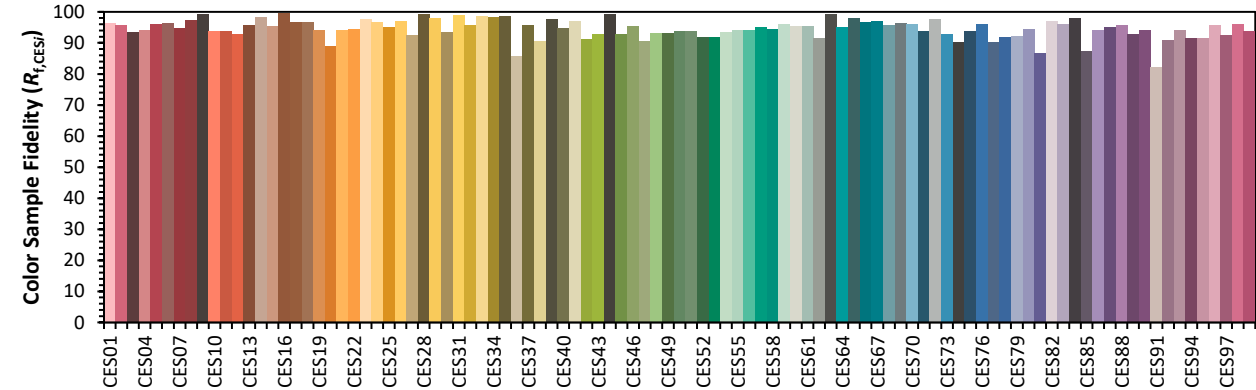
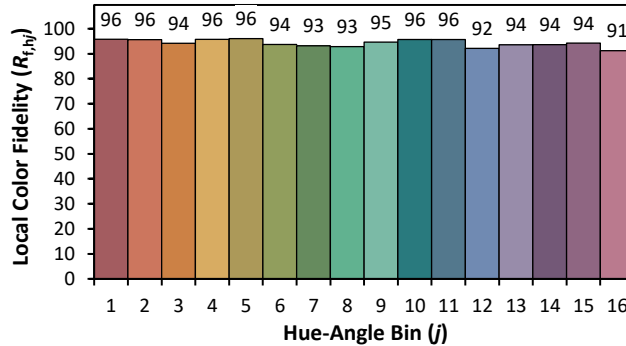
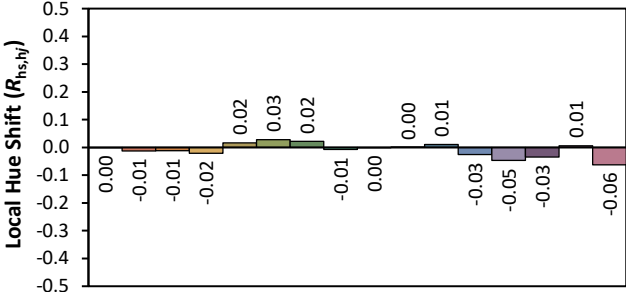
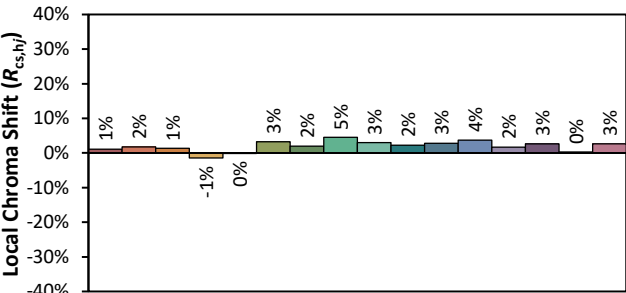
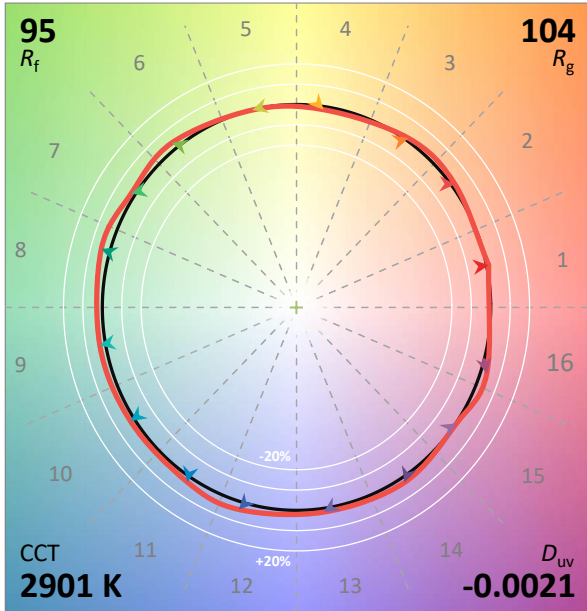
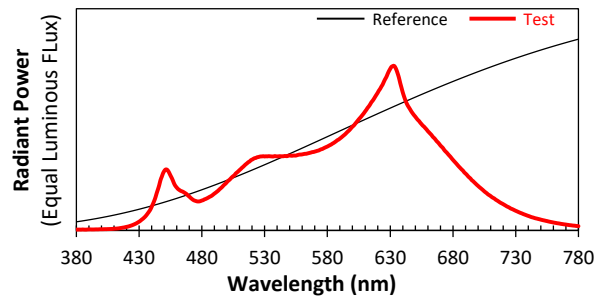
#	Revision Date	Updated By	Reviewed By	Description of Change
---	None	---	---	---
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Test Configuration	Tested Model No.	Pass/Fail/NA
1	L27L-14W-WW-WZ-TC-RWWW	NA

ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 7/12/2024

Manufacturer: Pure Edge Lighting
Model: L27L-14W-WW-WZ-TC-RWWW



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

x 0.4410
y 0.4002
u' 0.2549
v' 0.5205