



8165 E Kaiser Blvd. Anaheim, CA 92808  
www.lightlaboratory.com

Report No: L072413212



**Report No:** L072413212  
**Report Prepared For:** Vode Lighting LLC  
21684 8th St E # 700, Sonoma, CA 95476  
**Model Number:** 707-Z2-48-35-80-B3WB-WH\_SO  
**Test:** Photometric/Colorimetric/Electrical Test

**Issue Date: 8/6/2024**  
**Reference:N/A**  
**Amendment:N/A**

**Standards Used:** Appropriate part or all test guidelines were used for test performed:  
*IESNA LM79: 2019* Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products  
*ANSI NEMA ANSLG C78.377: 2017* Specification of the Chromaticity of Solid State Lighting Products  
*ANSI C82.77-10:2014:* Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

**Description of Sample:** Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

**Special Test Condition:** Fixture is tested with no special conditions.

**Date of Tests:** 8/5/24

**Seasoning of Sample:** No seasoning was performed in accordance with IESNA LM-79.

**Equipment List**

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/25
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	5/24/25
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

**General Information**

<b>Manufacturer:</b>	Vode Lighting LLC
<b>Model Number:</b>	707-Z2-48-35-80-B3WB-WH_SO
<b>Driver Model Number:</b>	MEANWELL HLG-40H-36A

**Test Summary**

<b>Total Lumens:</b>	1619.00
<b>Efficacy:</b>	62.08
<b>Color Redering Index:</b>	82.6
<b>Correlated Color Temperature:</b>	3274
<b>Input Voltage (VAC/60Hz):</b>	120.05
<b>Input Current (Amp):</b>	0.2189
<b>Input Power (W):</b>	26.08
<b>Input Power Factor:</b>	0.9924
<b>Current ATHD (%):</b>	9.7%

**Test Condition**

<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:30
<b>Total Operating Time (Hours):</b>	1:20

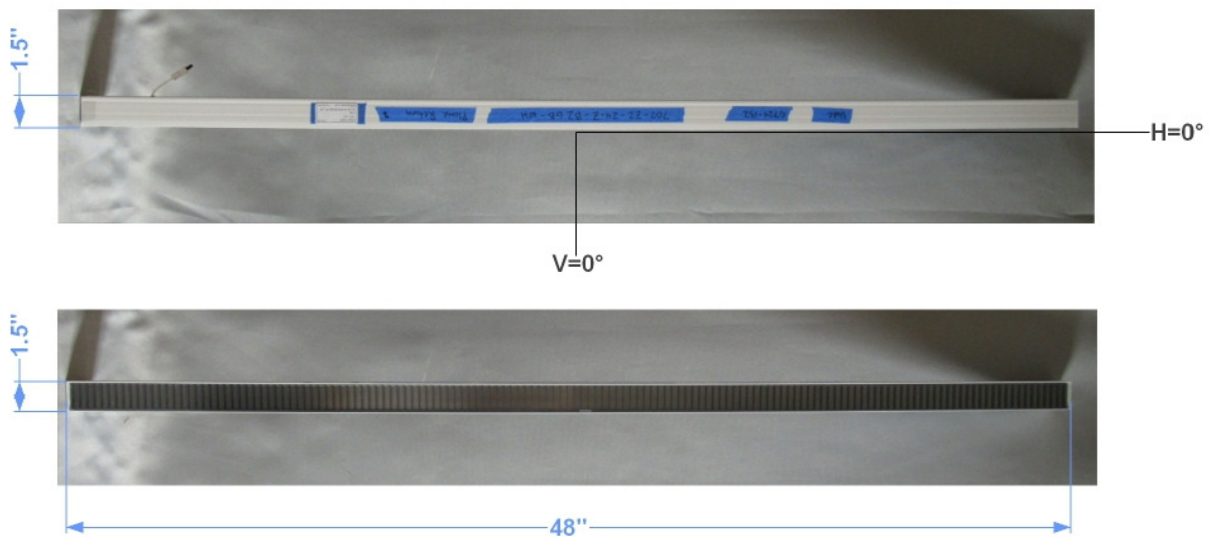
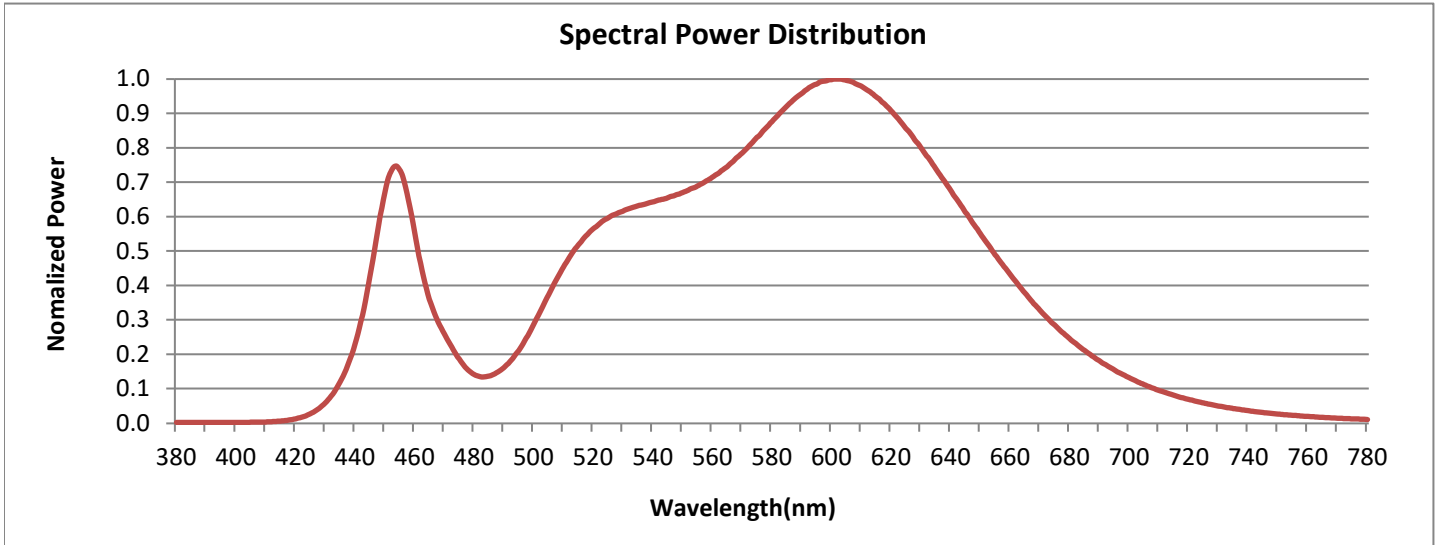


FIG. 1 LUMINAIRE

**Colorimetry Test Results**

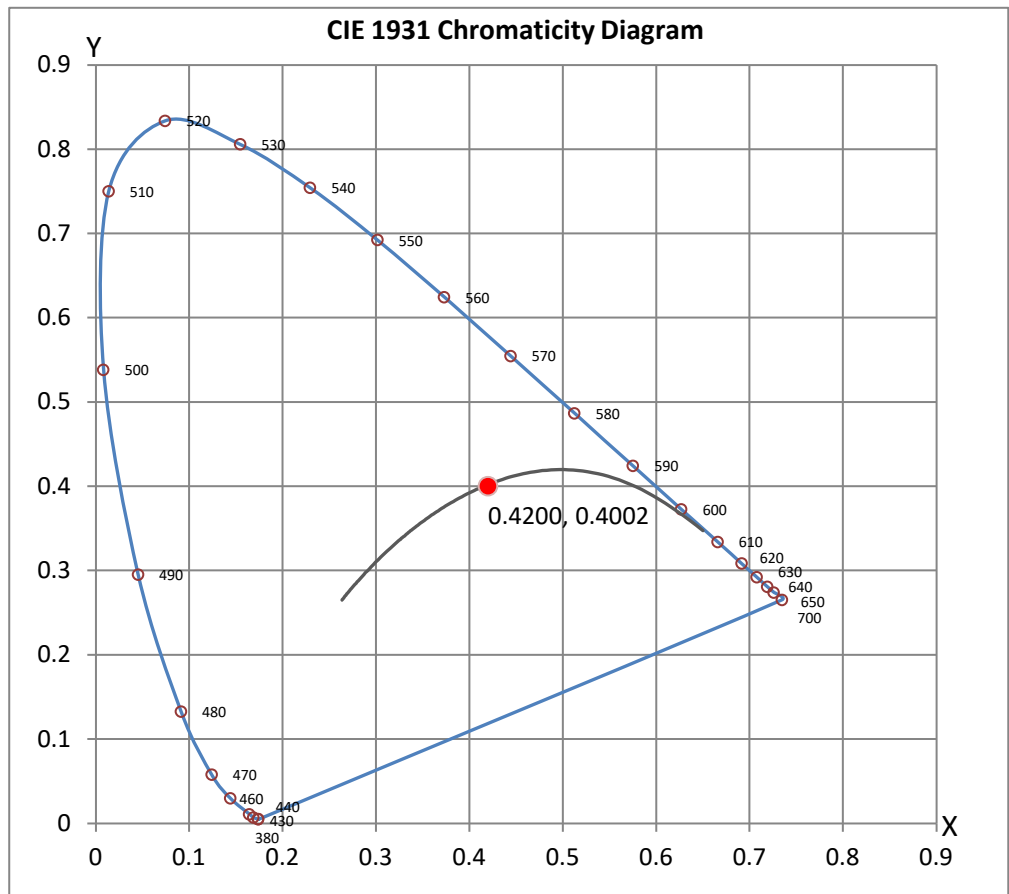


**CRI & CCT**

x	0.4200
y	0.4002
u'	0.2413
v'	0.5173
CRI	82.60
CCT	3274
Duv	0.00111

**R Values**

R1	81.50
R2	88.68
R3	94.71
R4	82.64
R5	80.92
R6	85.48
R7	85.18
R8	61.85
R9	7.80
R10	73.07
R11	82.19
R12	59.53
R13	83.18
R14	96.63
R15	74.21



## Test Methods

### Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

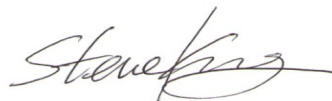
Electrical measurements are measured using the listed equipment.

### Disclaimers:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by :                 JG                

Test Report Reviewed by:



Steve Kang  
Quality Assurance

*\*Attached are photometric data reports.*



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# Photometric Test Report

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072413212.IES**

## DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] L072413212  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUEDATE] 8/5/2024  
 [MANUFAC] Vode Lighting LLC  
 [LUMCAT] 707-Z2-48-35-80-B3WB-WH\_SO  
 [LUMINAIRE] ZipTwo, Ultra Low UGR, 120 Degree, Gray Baffle, 48", 3500K, 80 CRI, white, standard output  
 [BALLASTCAT] MEANWELL HLG-40H-36A  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 120VAC  
 [TEST PROCEDURE] IESNA:LM-79-19

## CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1619
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	26.08
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.96
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.13 ft
Luminous Height	0.13 ft

## LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8158	6441	6083
55	6409	3777	3772
65	5078	2212	2132
75	3207	922	827
85	865	127	134

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072413212.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	300.45	N.A.	18.60
0-30	623.88	N.A.	38.50
0-40	971.22	N.A.	60.00
0-60	1443.42	N.A.	89.20
0-80	1610.89	N.A.	99.50
0-90	1618.79	N.A.	100.00
10-90	1539.95	N.A.	95.10
20-40	670.76	N.A.	41.40
20-50	949.65	N.A.	58.70
40-70	590.88	N.A.	36.50
60-80	167.47	N.A.	10.30
70-80	48.79	N.A.	3.00
80-90	7.90	N.A.	0.50
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1618.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	78.84
10-20	221.61
20-30	323.42
30-40	347.34
40-50	278.89
50-60	193.32
60-70	118.67
70-80	48.79
80-90	7.90
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072413212.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	105	101	99	100	98	96	97	95	93	93	91	90	88
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76
3	95	86	79	73	92	84	78	72	81	76	71	79	74	70	76	72	69	67
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	54	49	58	53	49	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	40	52	45	40	51	45	40	49	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	40	36	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	32

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072413212.IES**

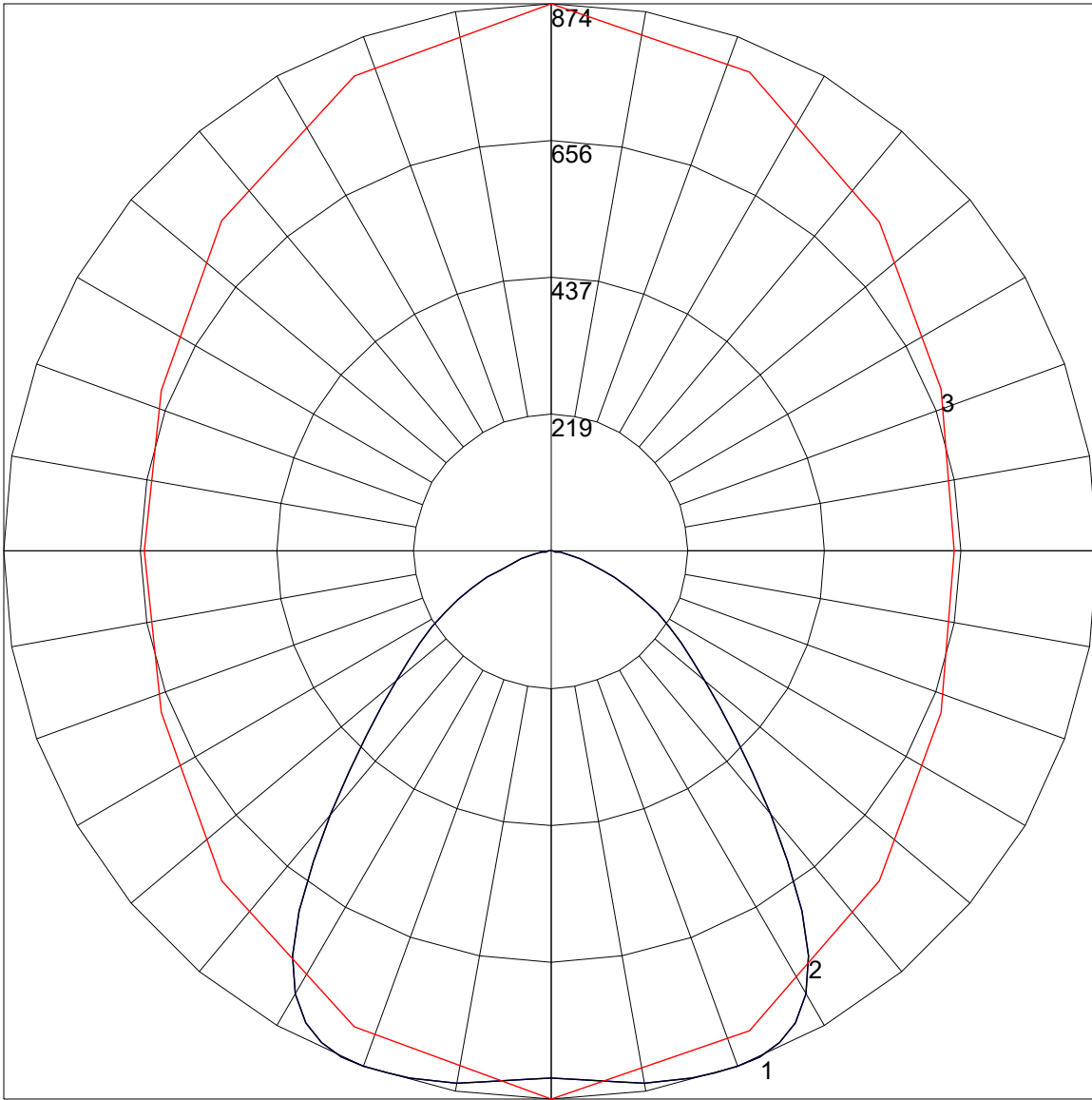
**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.2	15.6	14.5	15.9	16.3	17.3	18.8	17.7	19.1	19.4
	3H	15.1	16.4	15.5	16.7	17.1	18.4	19.7	18.8	20.0	20.4
	4H	15.3	16.5	15.7	16.9	17.2	18.6	19.8	19.0	20.2	20.6
	6H	15.4	16.5	15.8	16.8	17.2	18.8	19.9	19.2	20.2	20.6
	8H	15.3	16.4	15.8	16.8	17.2	18.8	19.8	19.2	20.2	20.6
	12H	15.3	16.3	15.8	16.7	17.1	18.8	19.8	19.2	20.1	20.6
4H	2H	14.7	15.9	15.1	16.2	16.6	17.4	18.6	17.8	19.0	19.3
	3H	15.7	16.7	16.2	17.1	17.5	18.6	19.6	19.0	20.0	20.4
	4H	16.0	16.9	16.4	17.3	17.7	18.9	19.8	19.3	20.2	20.6
	6H	16.1	16.8	16.5	17.3	17.7	19.0	19.8	19.5	20.3	20.7
	8H	16.1	16.8	16.5	17.2	17.7	19.1	19.8	19.5	20.2	20.7
	12H	16.0	16.7	16.5	17.1	17.6	19.0	19.7	19.5	20.2	20.6
8H	4H	16.1	16.8	16.6	17.2	17.7	18.9	19.6	19.3	20.0	20.5
	6H	16.2	16.8	16.7	17.3	17.7	19.0	19.6	19.5	20.1	20.6
	8H	16.2	16.7	16.7	17.2	17.7	19.0	19.6	19.5	20.1	20.6
	12H	16.1	16.6	16.6	17.1	17.7	19.0	19.5	19.5	20.0	20.6
12H	4H	16.1	16.7	16.5	17.2	17.6	18.8	19.4	19.3	19.9	20.4
	6H	16.2	16.7	16.7	17.1	17.7	19.0	19.5	19.5	20.0	20.5
	8H	16.1	16.6	16.7	17.1	17.7	19.0	19.5	19.5	20.0	20.5

Maximum UGR = 20.7



POLAR GRAPH



Maximum Candela = 874 Located At Horizontal Angle = 90, Vertical Angle = 20  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 3 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)

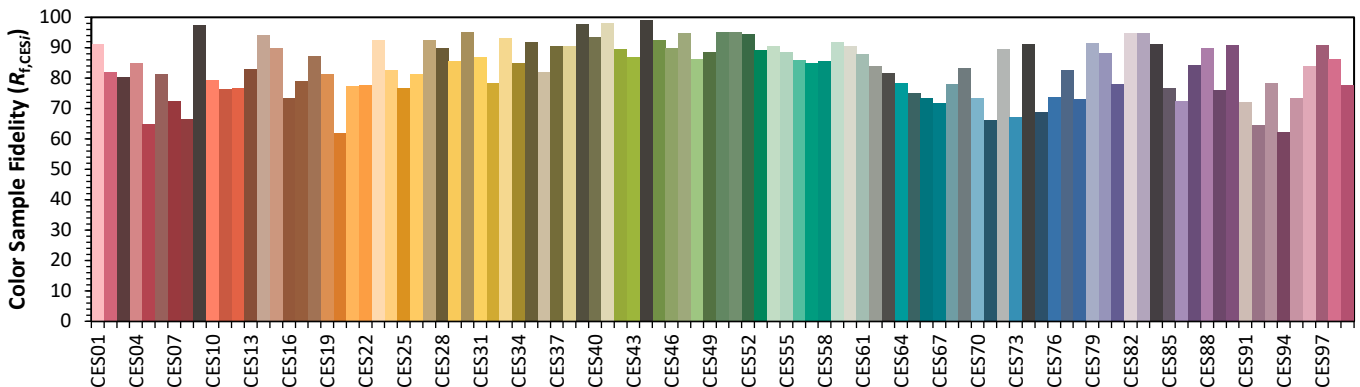
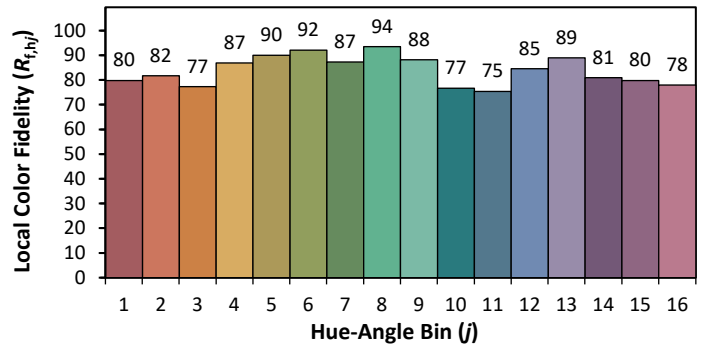
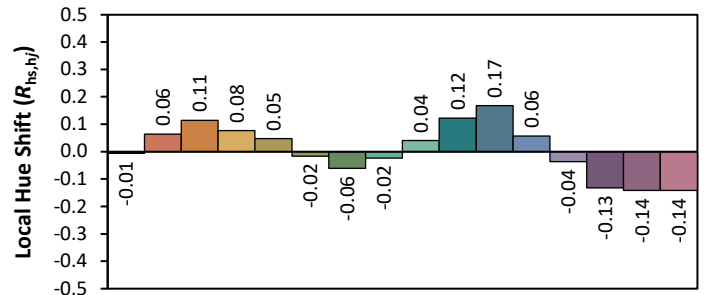
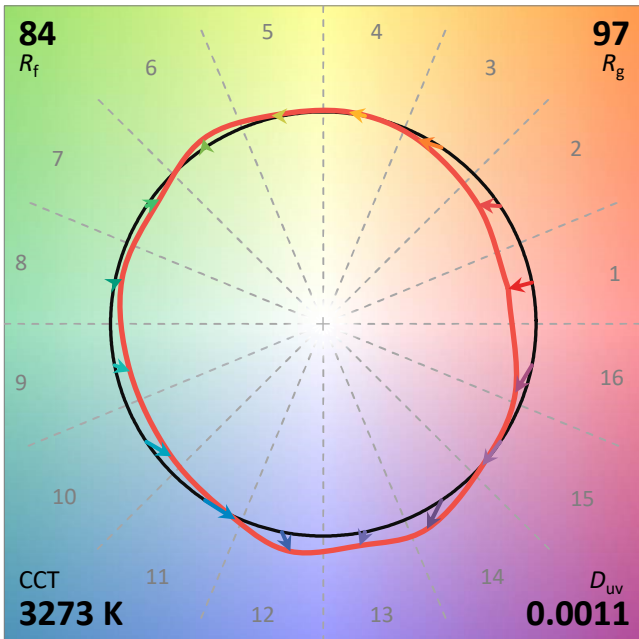
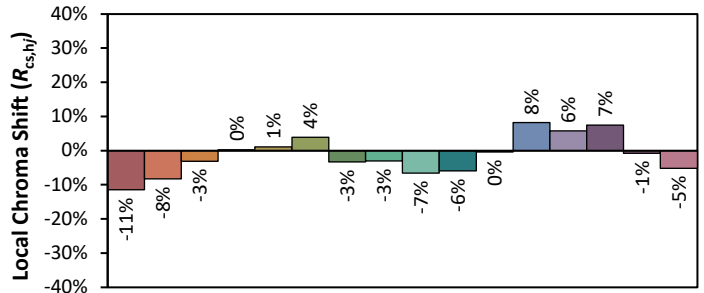
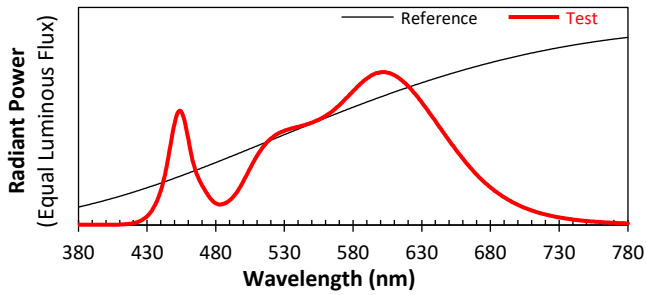
# ANSI/IES TM-30-18 Color Rendition Report

Source: L072413212

Manufacturer: Vode

Date: 8/2/2024

Model: 707-Z2-48-35-80-B3WB-WH\_SO



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

x 0.4200  
y 0.4002  
u' 0.2413  
v' 0.5173

CIE 13.3-1995	
(CRI)	
R <sub>a</sub>	83
R <sub>g</sub>	8