



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

Report No: L072413208



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Report Prepared For: Vode Lighting LLC
21684 8th St E # 700, Sonoma, CA 95476
Model Number: 707-Z2-48-35-80-B2GB-BL_SO
Test: Photometric/Colorimetric/Electrical Test

Issue Date: 8/16/2024
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: 8/15/24

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

Manufacturer:	Vode Lighting LLC
Model Number:	707-Z2-48-35-80-B2GB-BL_SO
Driver Model Number:	MEANWELL HLG-40H-36A

Test Summary

Total Lumens:	841.00
Efficacy:	31.87
Color Redering Index:	83.2
Correlated Color Temperature:	3421
Input Voltage (VAC/60Hz):	120.02
Input Current (Amp):	0.2215
Input Power (W):	26.39
Input Power Factor:	0.9926
Current ATHD (%):	9.6%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	1:00

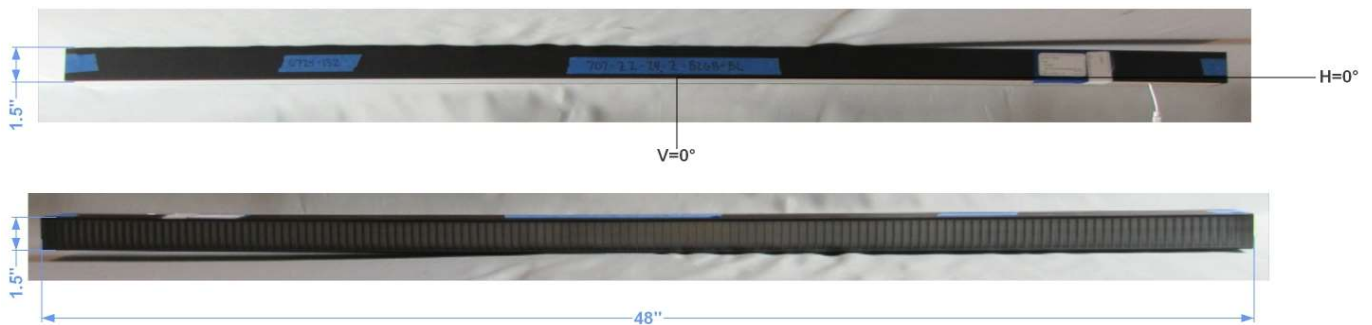
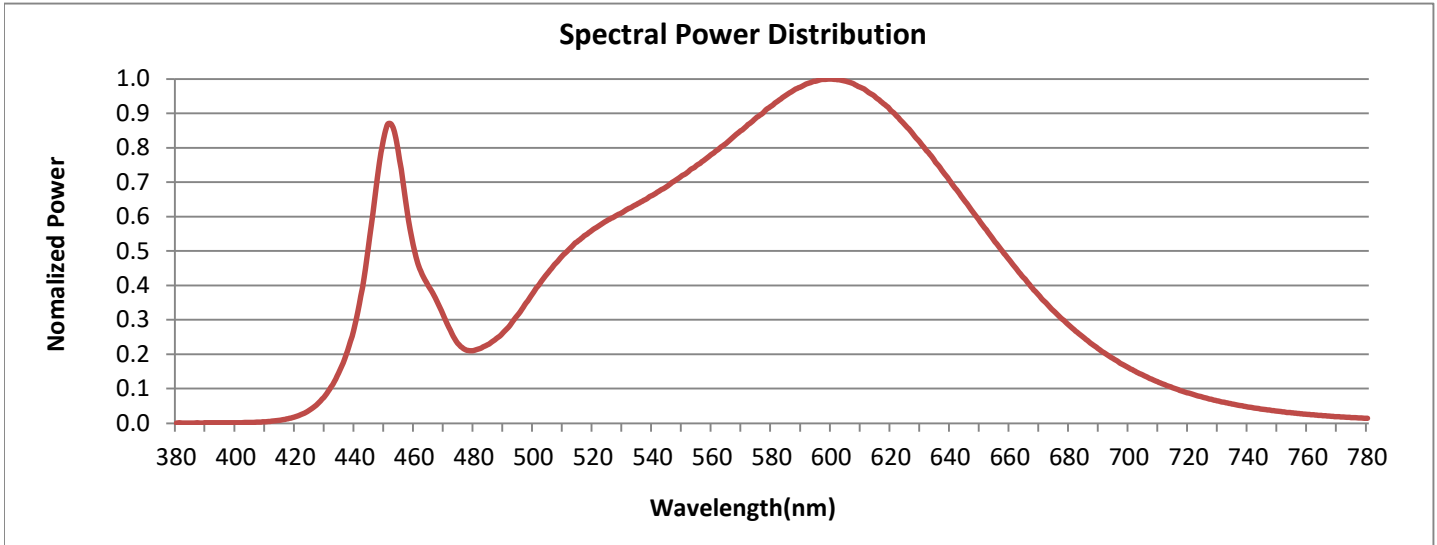


FIG. 1 LUMINAIRE

Colorimetry Test Results

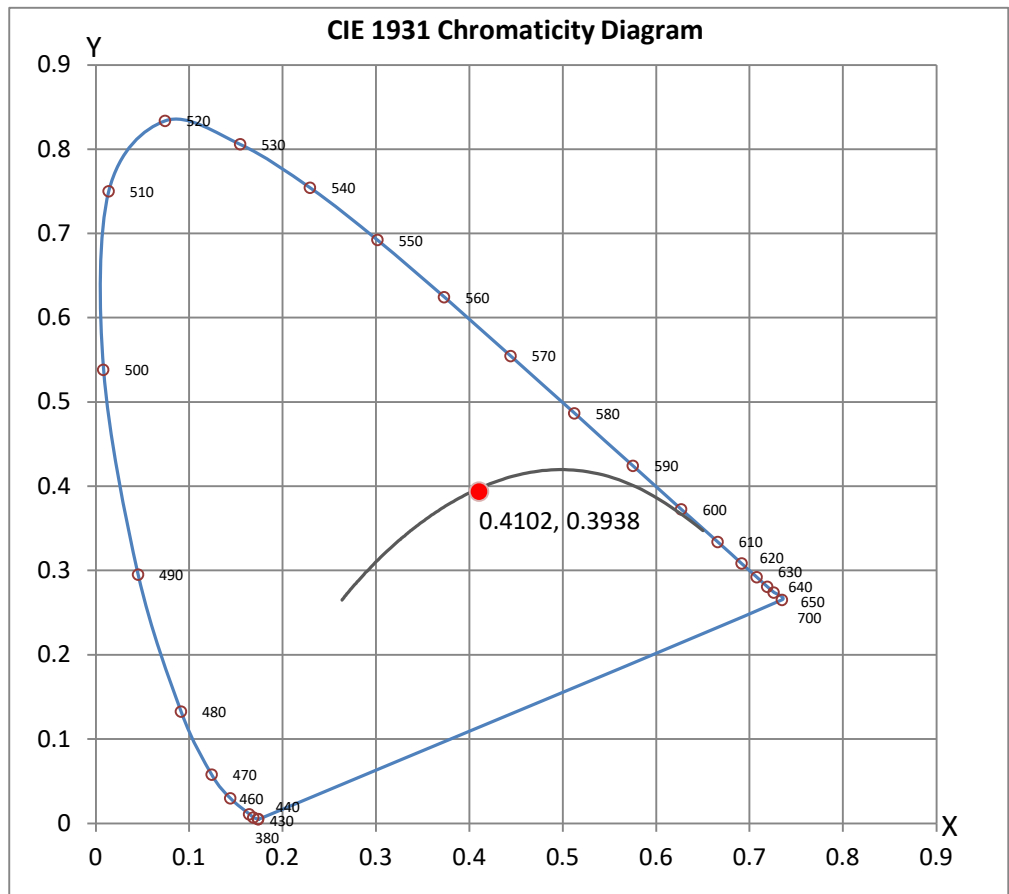


CRI & CCT

x	0.4102
y	0.3938
u'	0.2376
v'	0.5133
CRI	83.20
CCT	3421
Duv	0.00029

R Values

R1	81.41
R2	89.62
R3	95.80
R4	81.86
R5	81.37
R6	86.22
R7	85.42
R8	63.59
R9	12.43
R10	75.58
R11	80.65
R12	63.61
R13	83.27
R14	97.58
R15	75.31



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.*



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

Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L072413208.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L072413208
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 8/16/2024
 [MANUFAC] Vode Lighting LLC
 [LUMCAT] 707-Z2-48-35-80-B2GB-BL_SO
 [LUMINAIRE] ZipTwo, Ultra Low UGR, 60 Degree, Gray Baffle, 48", 3500K, 80 CRI, black, 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	841
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	32
Total Luminaire Watts	26.39
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.82
Spacing Criterion (90-270)	0.86
Spacing Criterion (Diagonal)	0.86
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	2238	1319	994
55	586	318	505
65	229	95	156
75	143	0	34
85	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L072413208.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	332.76	N.A.	39.60
0-30	588.68	N.A.	70.00
0-40	746.40	N.A.	88.80
0-60	832.70	N.A.	99.00
0-80	840.73	N.A.	100.00
0-90	840.73	N.A.	100.00
10-90	751.88	N.A.	89.40
20-40	413.64	N.A.	49.20
20-50	479.20	N.A.	57.00
40-70	92.98	N.A.	11.10
60-80	8.04	N.A.	1.00
70-80	1.35	N.A.	0.20
80-90	0.00	N.A.	0.00
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	840.73	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	88.85
10-20	243.91
20-30	255.92
30-40	157.72
40-50	65.56
50-60	20.73
60-70	6.69
70-80	1.35
80-90	0.00
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 : L072413208.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	0
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	0
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86	0
3	102	96	90	86	100	94	89	86	92	88	84	89	86	83	87	84	82	80	0
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	0
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69	0
6	87	78	72	68	86	77	72	67	76	71	67	74	70	67	73	69	66	65	0
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	0
8	79	69	63	59	78	69	63	59	67	62	59	66	62	58	65	61	58	57	0
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53	0
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L072413208.IES

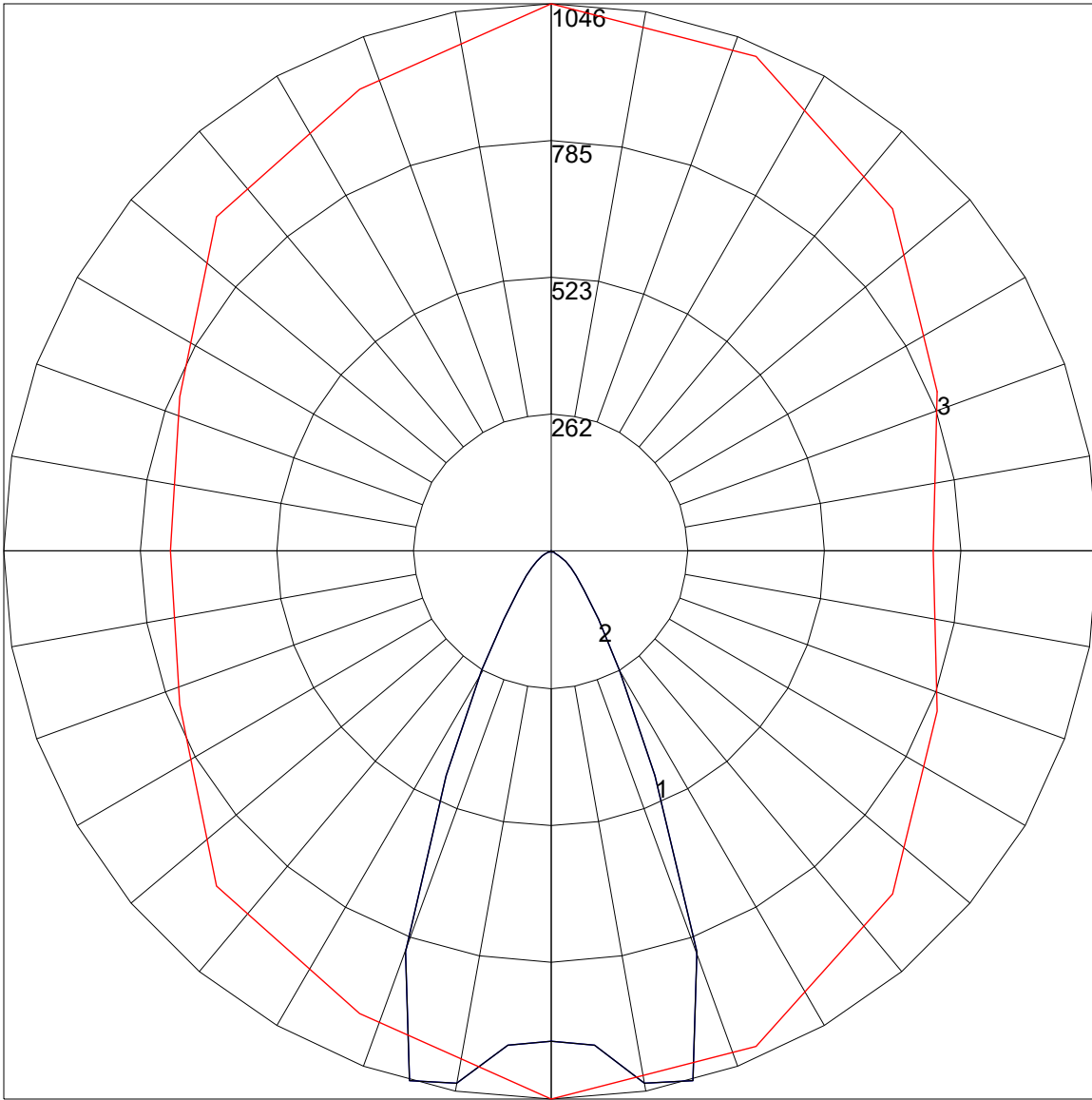
UGR TABLE - CORRECTED

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	0.0	0.3	0.0	0.6	0.9	4.4	5.4	4.7	5.7	6.0
	3H	0.0	0.3	0.0	0.7	1.0	4.6	5.5	4.9	5.8	6.2
	4H	0.0	0.2	0.0	0.6	1.0	4.5	5.4	4.9	5.7	6.1
	6H	0.0	0.0	0.0	0.4	0.8	4.4	5.2	4.9	5.6	6.0
	8H	0.0	0.0	0.0	0.3	0.7	4.4	5.1	4.8	5.5	5.9
	12H	0.0	0.0	0.0	0.2	0.7	4.3	5.0	4.8	5.4	5.8
4H	2H	0.0	0.1	0.0	0.4	0.8	4.1	4.9	4.5	5.3	5.7
	3H	0.0	0.1	0.0	0.5	0.9	4.3	5.0	4.7	5.4	5.8
	4H	0.0	0.0	0.0	0.4	0.8	4.3	4.9	4.7	5.3	5.8
	6H	0.0	0.0	0.0	0.2	0.7	4.2	4.7	4.7	5.2	5.7
	8H	0.0	0.0	0.0	0.1	0.6	4.1	4.6	4.6	5.1	5.5
	12H	0.0	0.0	0.0	0.0	0.5	4.1	4.5	4.6	5.0	5.5
8H	4H	0.0	0.0	0.0	0.1	0.6	4.1	4.6	4.6	5.1	5.5
	6H	0.0	0.0	0.0	0.0	0.5	4.0	4.4	4.5	4.9	5.4
	8H	0.0	0.0	0.0	0.0	0.4	3.9	4.3	4.5	4.8	5.3
	12H	0.0	0.0	0.0	0.0	0.3	3.9	4.2	4.4	4.7	5.3
12H	4H	0.0	0.0	0.0	0.0	0.5	4.1	4.5	4.6	5.0	5.5
	6H	0.0	0.0	0.0	0.0	0.4	4.0	4.3	4.5	4.8	5.3
	8H	0.0	0.0	0.0	0.0	0.3	3.9	4.2	4.4	4.7	5.3

Maximum UGR = 6.2

POLAR GRAPH



Maximum Candela = 1046 Located At Horizontal Angle = 90, Vertical Angle = 15
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 (15) (Through Max. Cd.)

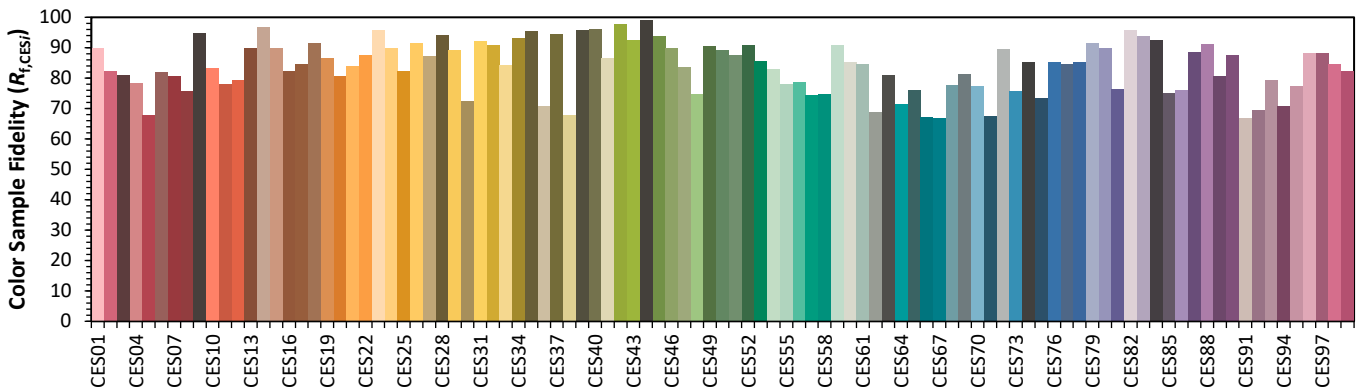
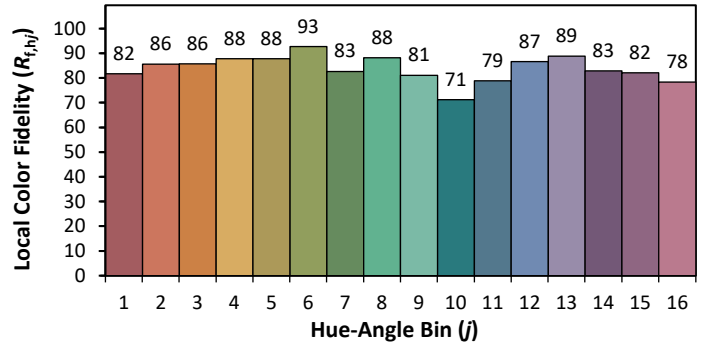
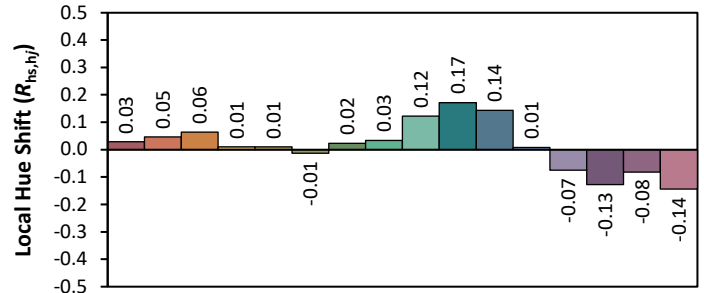
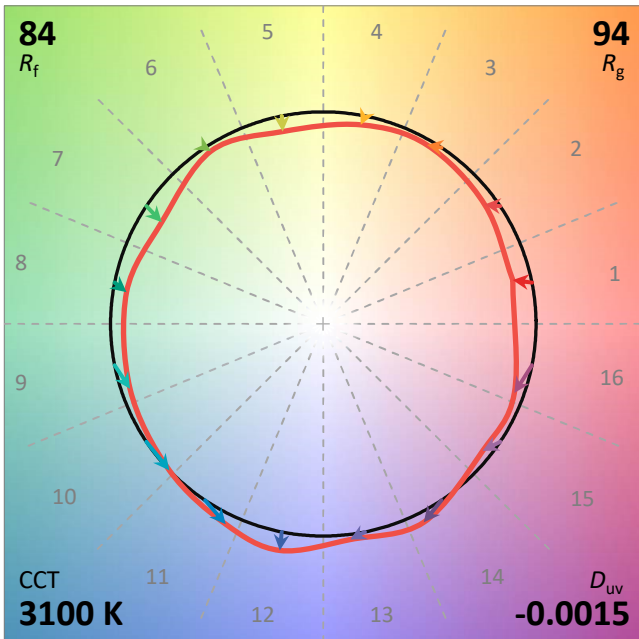
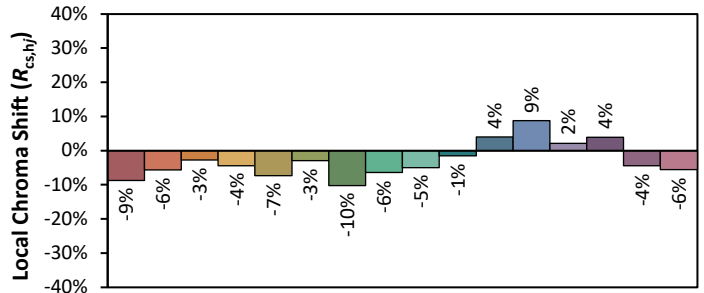
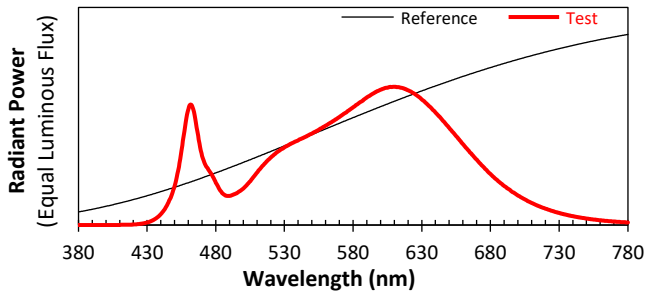
ANSI/IES TM-30-18 Color Rendition Report

Source: L072413208

Manufacturer: Vode Lighting LLC

Date: 8/15/2024

Model: 707-Z2-48-35-80-B2GB-BL_SO



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

x 0.4279
 y 0.3970
 u' 0.2478
 v' 0.5172

CIE 13.3-1995	
(CRI)	
R _a	87
R _g	35