



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

Report No: L072413206



Report No: L072413206
Report Prepared For: Vode Lighting LLC
21684 8th St E # 700, Sonoma, CA 95476
Model Number: 707-Z2-48-35-80-B1WB-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: 8/2/24

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-B1WB-WH_SO
Driver Model Number:	MEANWELL HLG-40H-36A

Test Summary

Total Lumens:	1681.00
Efficacy:	63.73
Color Redering Index:	83.1
Correlated Color Temperature:	3340
Input Voltage (VAC/60Hz):	120.04
Input Current (Amp):	0.2214
Input Power (W):	26.38
Input Power Factor:	0.9925
Current ATHD (%):	9.6%

Test Condition

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

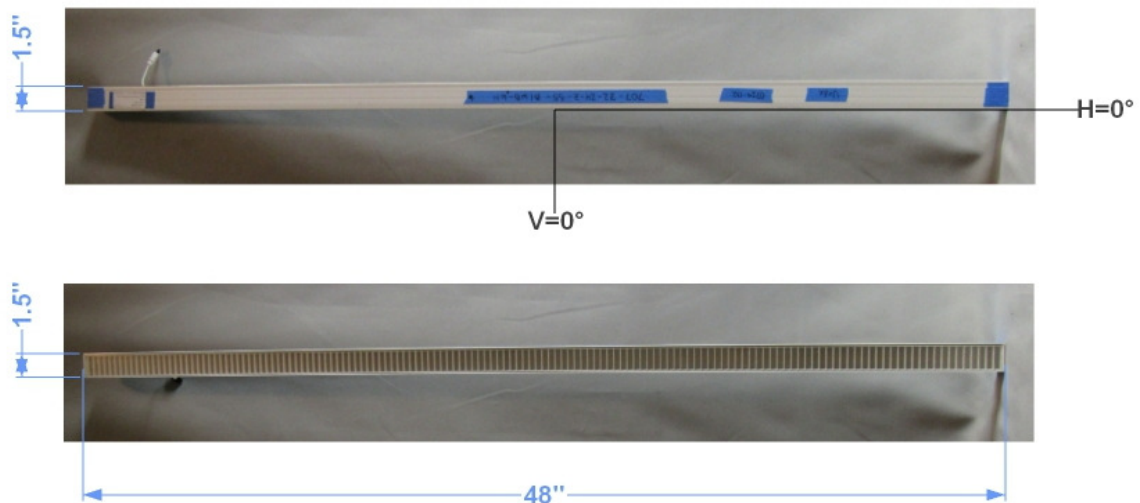
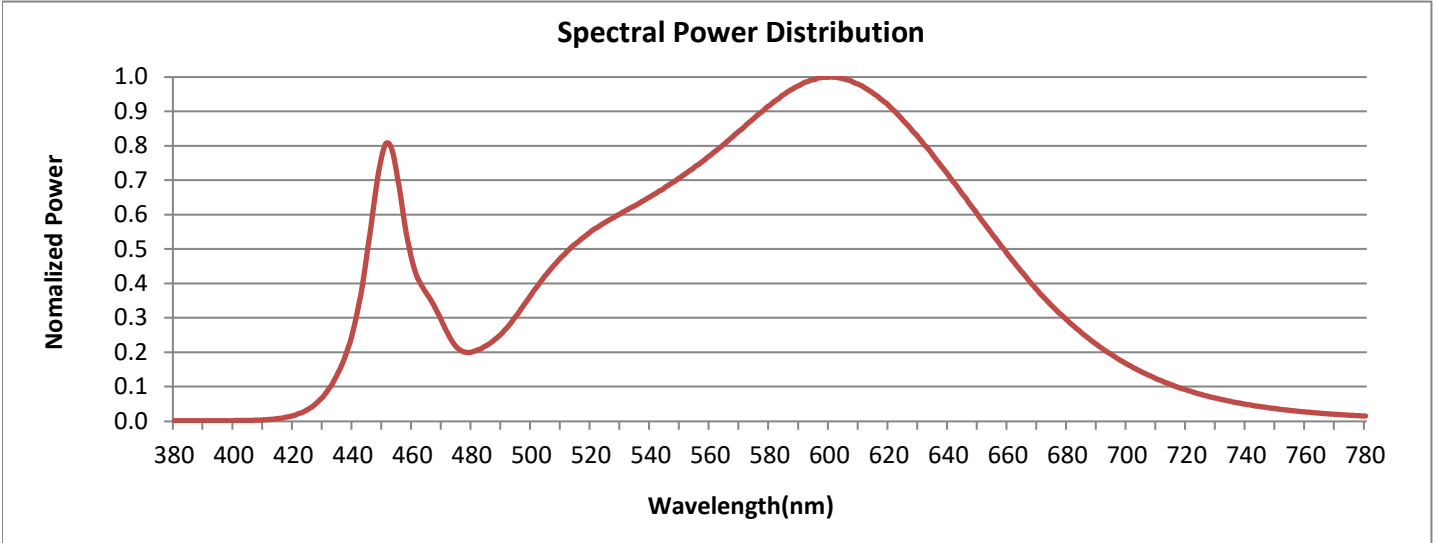


FIG. 1 LUMINAIRE

Colorimetry Test Results

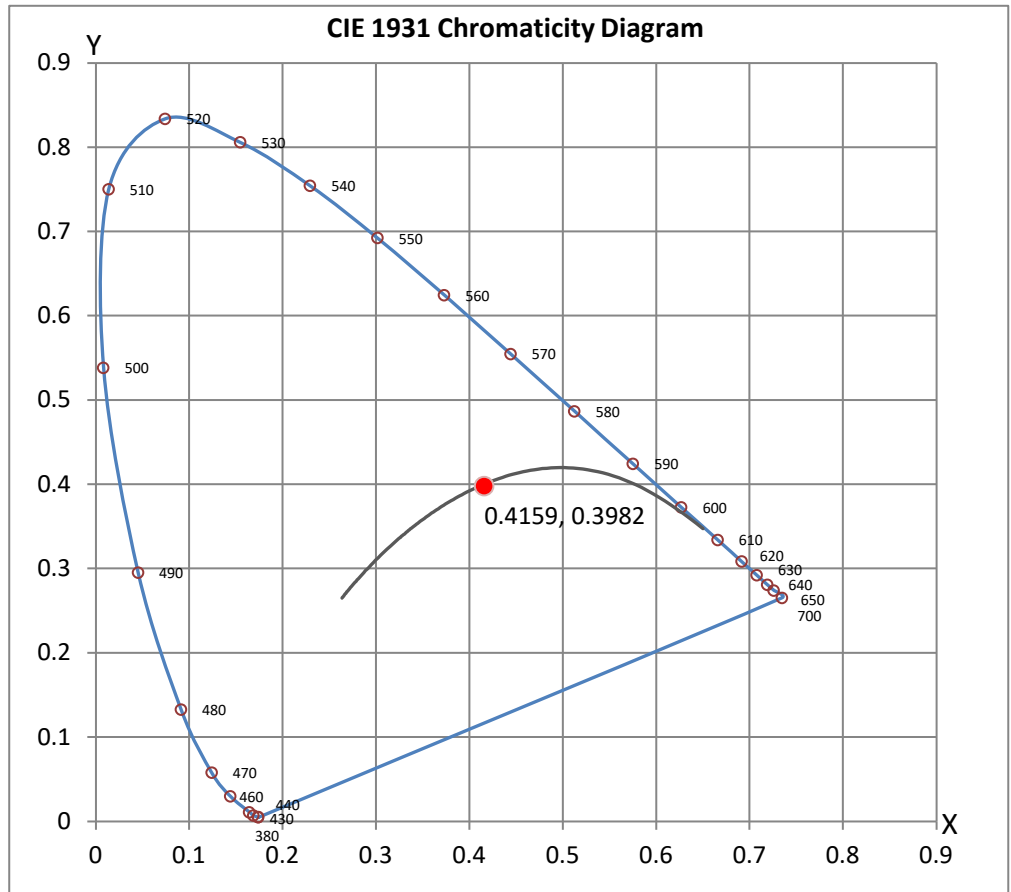


CRI & CCT

x	0.4159
y	0.3982
u'	0.2395
v'	0.5159
CRI	83.10
CCT	3340
Duv	0.00104

R Values

R1	81.19
R2	89.42
R3	95.97
R4	81.82
R5	81.10
R6	86.12
R7	85.54
R8	63.40
R9	12.41
R10	75.26
R11	80.59
R12	63.48
R13	82.99
R14	97.63
R15	74.93



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 : L072413206.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L072413206
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 8/5/2024
[MANUFAC] Vode Lighting LLC
[LUMCAT] 707-Z2-48-35-80-B1WB-WH_SO
[LUMINAIRE] ZipTwo, Ultra Low UGR, 20 Degree, white 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	1681
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	26.38
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.84
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.72
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	9461	4953	4270
55	6650	3477	3029
65	5124	2155	1883
75	3207	944	692
85	865	127	115

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	476.67	N.A.	28.40
0-30	807.67	N.A.	48.00
0-40	1100.35	N.A.	65.50
0-60	1512.06	N.A.	89.90
0-80	1673.57	N.A.	99.60
0-90	1681.01	N.A.	100.00
10-90	1528.59	N.A.	90.90
20-40	623.67	N.A.	37.10
20-50	858.99	N.A.	51.10
40-70	525.69	N.A.	31.30
60-80	161.51	N.A.	9.60
70-80	47.54	N.A.	2.80
80-90	7.44	N.A.	0.40
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	1681.01	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	152.42
10-20	324.26
20-30	331.00
30-40	292.67
40-50	235.32
50-60	176.40
60-70	113.97
70-80	47.54
80-90	7.44
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 : L072413206.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	108	104	101	109	105	102	100	101	99	97	98	96	94	94	92	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	87	80	76	84	79	74	81	77	73	79	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	56	50	73	62	55	50	61	54	50	59	54	50	58	53	49	48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	55	49	46	44
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	42	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

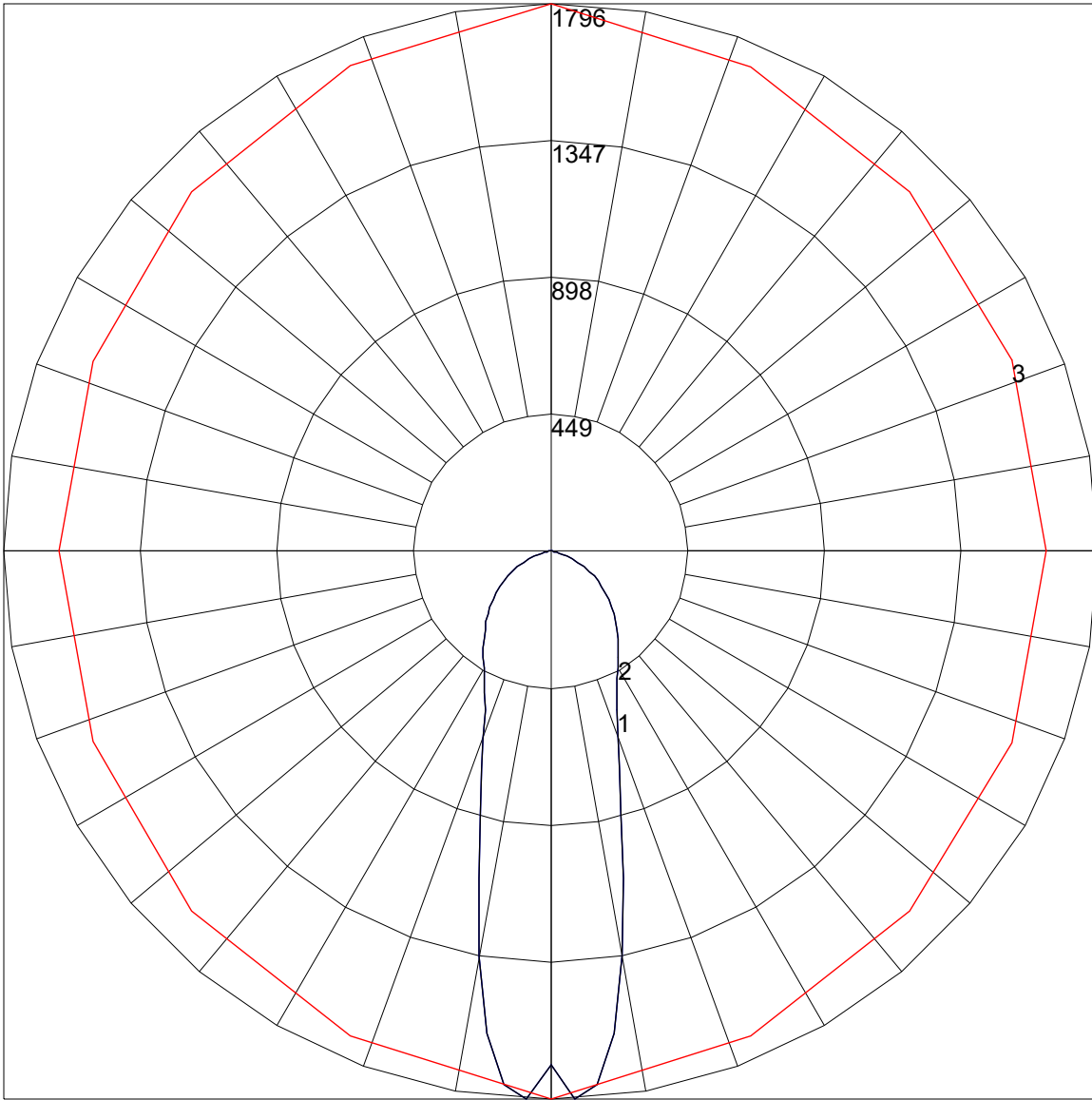
IES INDOOR REPORT
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UGR TABLE - CORRECTED

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	14.1	15.5	14.5	15.8	16.1	16.2	17.6	16.6	17.9	18.2
	3H	15.0	16.3	15.4	16.6	17.0	17.4	18.6	17.7	18.9	19.3
	4H	15.2	16.4	15.6	16.7	17.1	17.6	18.8	18.0	19.1	19.5
	6H	15.3	16.3	15.7	16.7	17.1	17.7	18.8	18.1	19.1	19.5
	8H	15.3	16.3	15.7	16.7	17.1	17.7	18.7	18.2	19.1	19.5
	12H	15.2	16.2	15.7	16.6	17.0	17.7	18.7	18.1	19.0	19.5
4H	2H	14.6	15.7	15.0	16.1	16.4	16.4	17.5	16.8	17.9	18.3
	3H	15.6	16.6	16.0	17.0	17.4	17.6	18.6	18.0	19.0	19.4
	4H	15.9	16.7	16.3	17.1	17.6	17.9	18.8	18.4	19.2	19.6
	6H	15.9	16.7	16.4	17.1	17.6	18.1	18.8	18.5	19.3	19.7
	8H	15.9	16.6	16.4	17.1	17.5	18.1	18.8	18.6	19.2	19.7
	12H	15.9	16.5	16.4	17.0	17.5	18.1	18.7	18.6	19.2	19.6
8H	4H	15.9	16.6	16.4	17.1	17.5	17.9	18.6	18.4	19.0	19.5
	6H	16.0	16.6	16.5	17.1	17.6	18.0	18.6	18.5	19.1	19.6
	8H	16.0	16.5	16.5	17.0	17.5	18.1	18.6	18.6	19.1	19.6
	12H	16.0	16.4	16.5	16.9	17.5	18.1	18.5	18.6	19.0	19.6
12H	4H	15.9	16.5	16.4	17.0	17.5	17.9	18.5	18.4	19.0	19.4
	6H	16.0	16.5	16.5	17.0	17.5	18.0	18.5	18.5	19.0	19.5
	8H	16.0	16.5	16.5	16.9	17.5	18.0	18.5	18.6	19.0	19.6

Maximum UGR = 19.7

POLAR GRAPH

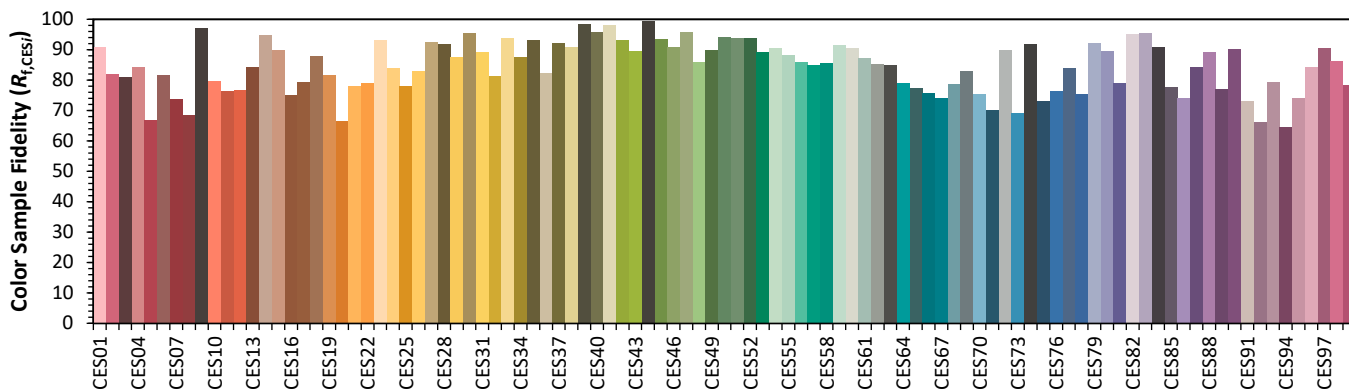
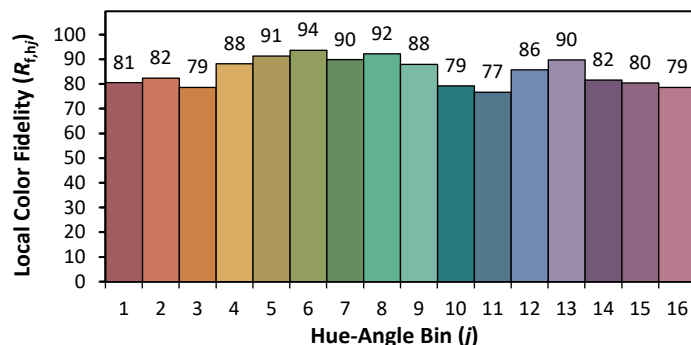
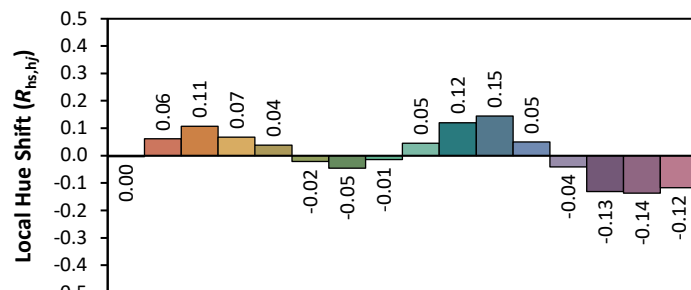
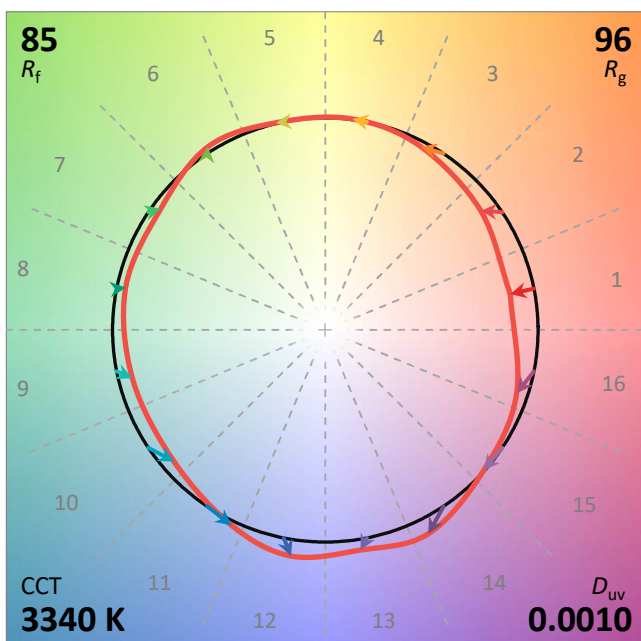
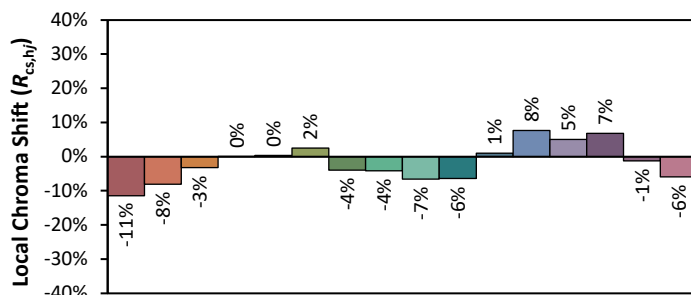
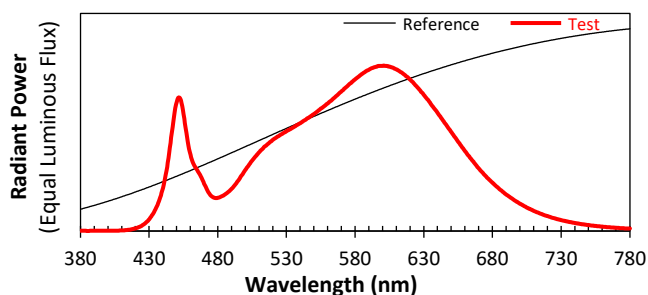


Maximum Candela = 1796 Located At Horizontal Angle = 90, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (90 - 270)
3 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

ANSI/IES TM-30-18 Color Rendition Report

Source: L072413206
 Date: 8/2/2024

Manufacturer: Vode
 Model: 707-Z2-48-35-80-B1WB-WH_SO



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

x 0.4159
 y 0.3982
 u' 0.2395
 v' 0.5159

CIE 13.3-1995	
(CRI)	
R _a	83
R _g	12