

IES REPORT

# ZipTwo | Square 3535 | Low Glare | 707

60° Symmetric Graphite Baffle | 80 CRI | Standard Output

707-Z2-SL-4-48-XX-XX-XX-XX-X-X-Z-SO-XX-B2GB-X-WH-X

Reporting by Color Temperature	2700K	3000K	3500K	4000K
Efficacy - Lumens per Watt	43	44	45	45
Total Lumens, 4' rail length (1219mm)	1102	1137	1160	1160
Lumens per foot (305mm)	276	284	290	290
Input Power (W), 4' rail length (1219mm)	26.1	26.1	26.1	26.1
Watts per foot (305mm)	6.6	6.6	6.6	6.6
CRI	80	80	80	80

Due to the large number of options in Vode's product offering, most Vode IES reports are factored reports prepared from source reports. Source reports are the IES test reports prepared for Vode by an NVLAP accredited photometric test laboratory. Factored reports are based on data from the Vode source reports.

If the data above is in black, it is directly from a Vode source report. If it is in grey, it is factored from Vode source reports. Reference details on Vode source reports can be found on the IES File Finder page on vode.com.



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

Report No: L072410602



**Report No:** L072410602  
**Report Prepared For:** Vode Lighting LLC  
21684 8th St E # 700, Sonoma, CA 95476  
**Model Number:** Ultra Low UGR Dark Gray  
**Test:** Photometric/Colorimetric/Electrical Test

**Issue Date:** 7/12/2024  
**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:** 7/12/24

**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>	Ultra Low UGR Dark Gray
<b>Driver Model Number:</b>	MEAN WELL HLG-40H-36A

**Test Summary**

<b>Total Lumens:</b>	1160.00
<b>Efficacy:</b>	44.53
<b>Color Redering Index:</b>	82.5
<b>Correlated Color Temperature:</b>	3369
<b>Input Voltage (VAC/60Hz):</b>	120.09
<b>Input Current (Amp):</b>	0.2186
<b>Input Power (W):</b>	26.05
<b>Input Power Factor:</b>	0.9920
<b>Current ATHD (%):</b>	9.8%

**Test Condition**

<b>Ambient Temperature (°C):</b>	25.0
<b>Stabilization Time (Hours):</b>	0:30
<b>Total Operating Time (Hours):</b>	1:10

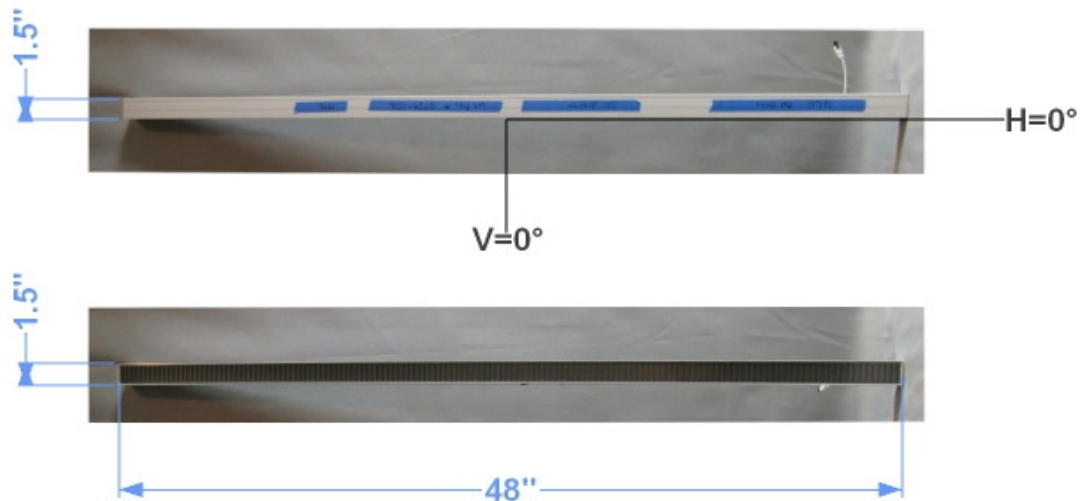
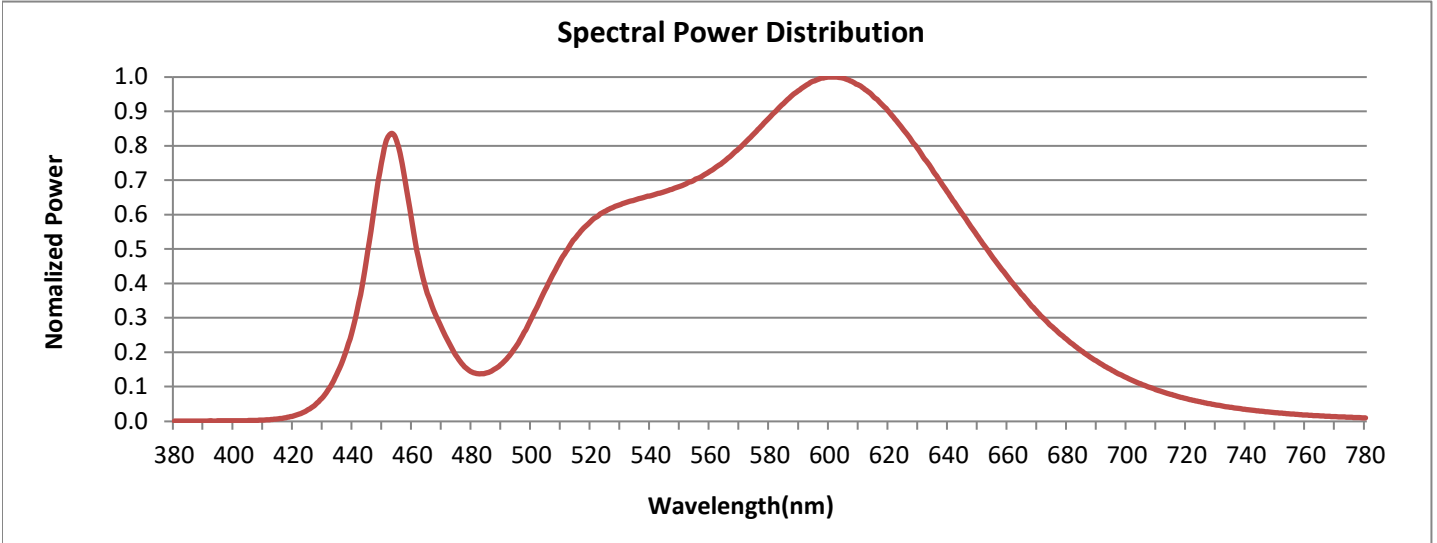


FIG. 1 LUMINAIRE

**Colorimetry Test Results**

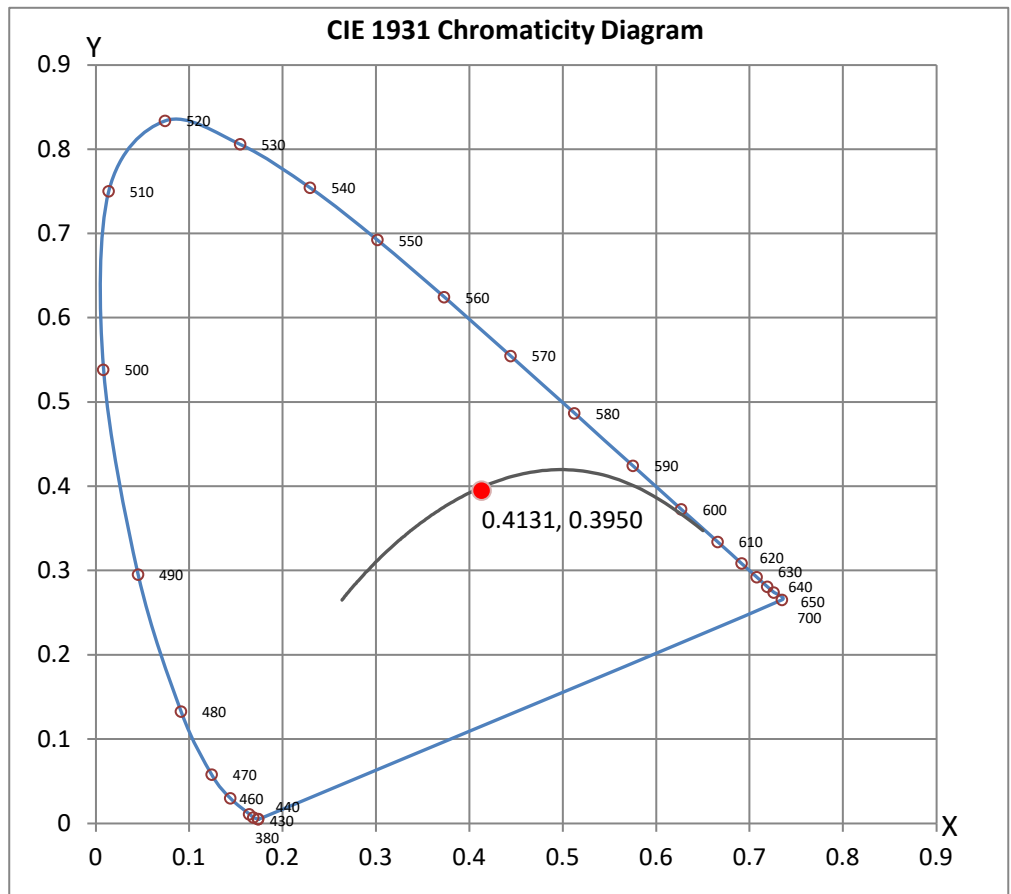


**CRI & CCT**

x	0.4131
y	0.3950
u'	0.2390
v'	0.5142
CRI	82.50
CCT	3369
Duv	0.00022

**R Values**

R1	81.50
R2	88.54
R3	94.26
R4	82.62
R5	81.04
R6	85.14
R7	85.01
R8	61.91
R9	7.05
R10	72.71
R11	82.23
R12	59.47
R13	83.18
R14	96.41
R15	74.39



## 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 : L072410602.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L072410602  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUE DATE] 7/12/2024  
[MANUFAC] Vode Lighting LLC  
[LUMCAT] Ultra Low UGR Dark Gray  
[LUMINAIRE] Ultra Low UGR Dark Gray, 48", 3500K 80 CRI, 60 degree optic  
[BALLASTCAT] MEAN WELL 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	1160
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	45
Total Luminaire Watts	26.05
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.82
Spacing Criterion (90-270)	0.90
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.13 ft
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3042	3861	5674
55	901	1334	4399
65	489	587	2496
75	400	400	879
85	0	237	237

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072410602.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	408.66	N.A.	35.20
0-30	737.30	N.A.	63.50
0-40	962.66	N.A.	83.00
0-60	1130.66	N.A.	97.40
0-80	1159.16	N.A.	99.90
0-90	1160.4	N.A.	100.00
10-90	1051.81	N.A.	90.60
20-40	553.99	N.A.	47.70
20-50	670.51	N.A.	57.80
40-70	189.60	N.A.	16.30
60-80	28.49	N.A.	2.50
70-80	6.90	N.A.	0.60
80-90	1.24	N.A.	0.10
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	1160.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	108.59
10-20	300.08
20-30	328.63
30-40	225.36
40-50	116.52
50-60	51.49
60-70	21.59
70-80	6.90
80-90	1.24
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 : L072410602.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78
4	95	87	81	76	93	86	80	76	83	79	75	81	77	74	79	76	73	71
5	90	81	74	70	88	80	74	69	78	73	69	76	72	68	75	71	68	66
6	85	75	69	64	83	74	68	64	73	68	64	71	67	63	70	66	63	61
7	80	70	64	59	79	70	64	59	68	63	59	67	62	59	66	62	58	57
8	76	66	60	55	75	66	59	55	64	59	55	63	58	55	62	58	54	53
9	72	62	56	52	71	62	56	52	61	55	51	60	55	51	59	54	51	50
10	69	59	52	48	68	58	52	48	57	52	48	57	52	48	56	51	48	47



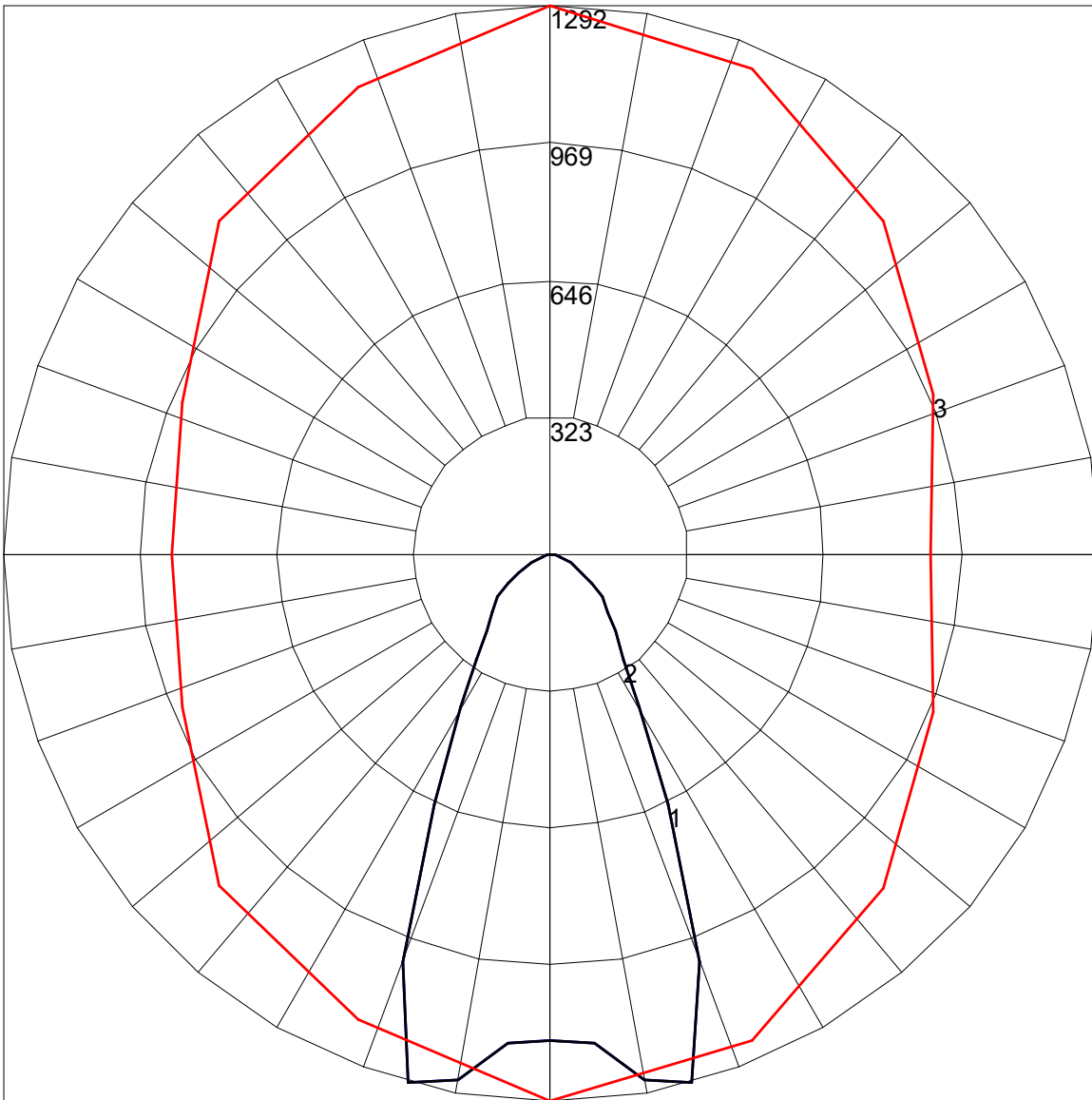
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L072410602.IES**

**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	4.5	5.6	4.8	5.9	6.2	13.2	14.3	13.6	14.6	15.0
	3H	5.2	6.1	5.5	6.5	6.8	13.7	14.7	14.1	15.0	15.4
	4H	5.4	6.3	5.8	6.7	7.1	13.8	14.7	14.2	15.1	15.4
	6H	5.5	6.3	5.9	6.7	7.1	13.8	14.6	14.2	15.0	15.4
	8H	5.5	6.3	5.9	6.7	7.1	13.8	14.5	14.2	14.9	15.3
	12H	5.4	6.2	5.9	6.6	7.0	13.7	14.5	14.1	14.8	15.3
4H	2H	4.7	5.6	5.1	6.0	6.4	13.0	13.9	13.4	14.3	14.6
	3H	5.6	6.3	6.0	6.7	7.1	13.6	14.3	14.0	14.7	15.1
	4H	5.8	6.5	6.3	6.9	7.4	13.7	14.3	14.1	14.7	15.2
	6H	6.0	6.5	6.5	7.0	7.5	13.7	14.2	14.1	14.7	15.2
	8H	6.0	6.5	6.4	6.9	7.4	13.6	14.2	14.1	14.6	15.1
	12H	5.9	6.4	6.4	6.9	7.3	13.6	14.1	14.1	14.5	15.0
8H	4H	6.0	6.5	6.5	7.0	7.5	13.5	14.0	14.0	14.5	15.0
	6H	6.2	6.6	6.7	7.1	7.6	13.5	14.0	14.0	14.5	14.9
	8H	6.2	6.6	6.7	7.1	7.6	13.5	13.9	14.1	14.4	14.9
	12H	6.2	6.5	6.7	7.0	7.6	13.5	13.8	14.0	14.3	14.9
12H	4H	6.0	6.5	6.5	6.9	7.4	13.4	13.9	13.9	14.4	14.9
	6H	6.2	6.6	6.8	7.1	7.6	13.5	13.9	14.0	14.3	14.9
	8H	6.3	6.6	6.8	7.1	7.7	13.5	13.8	14.0	14.3	14.9

Maximum UGR = 15.4

POLAR GRAPH



Maximum Candela = 1292 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.)

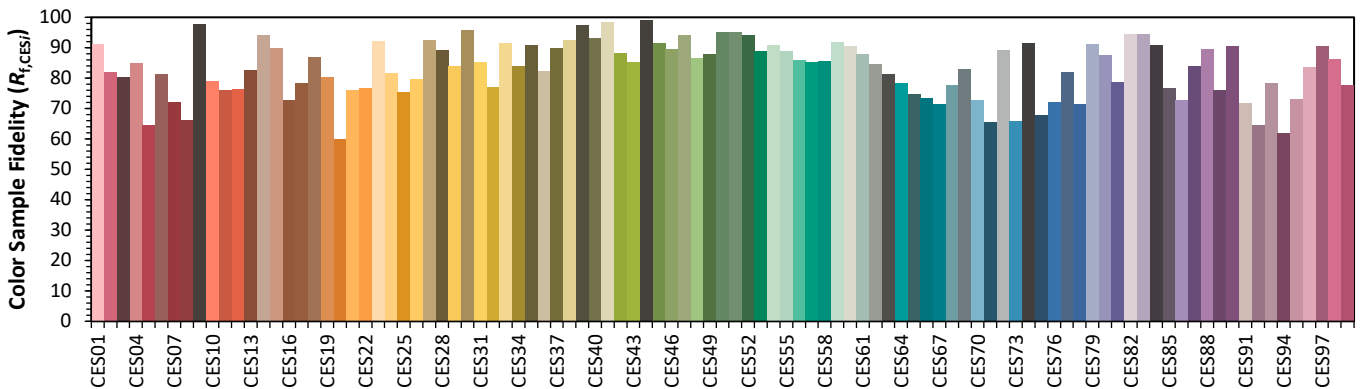
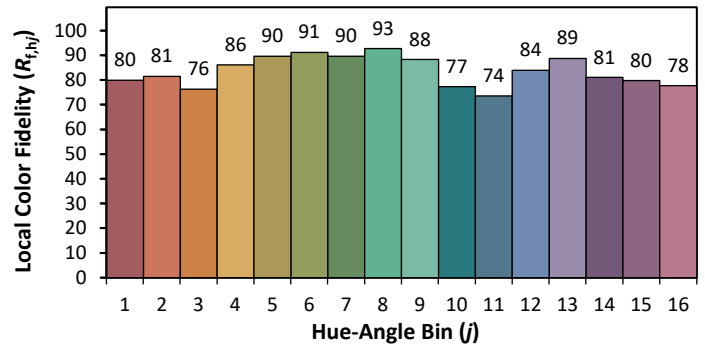
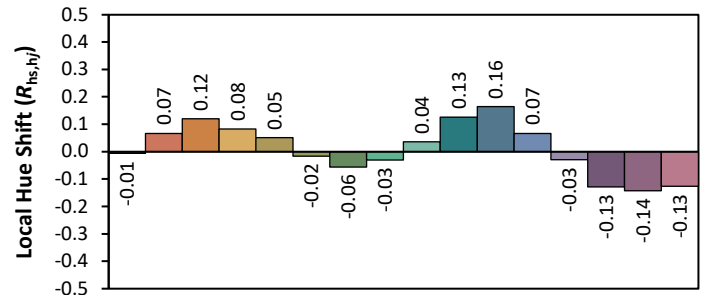
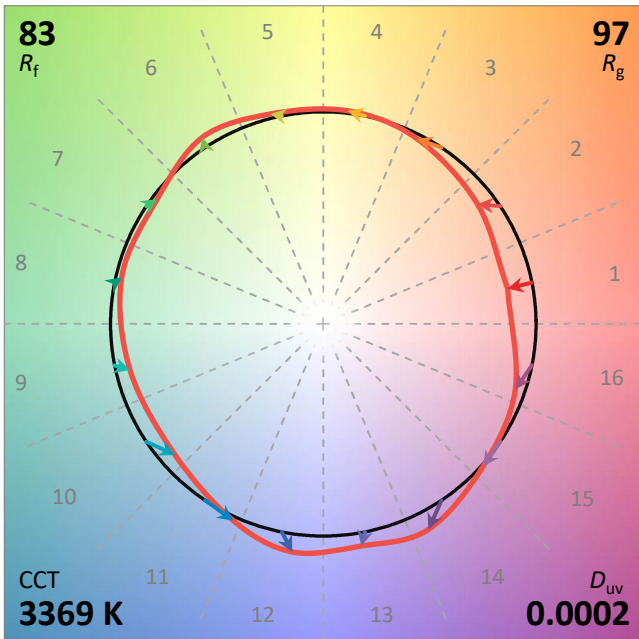
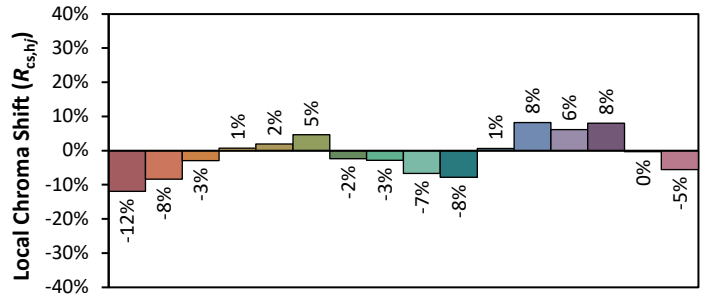
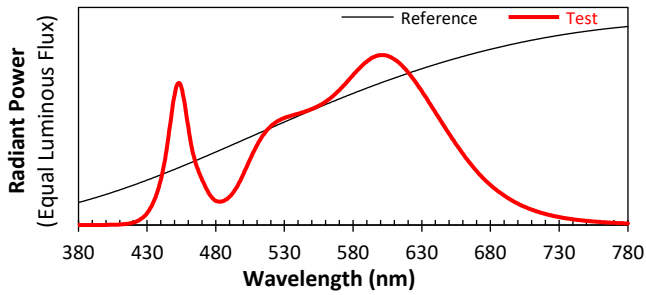
# ANSI/IES TM-30-18 Color Rendition Report

Source: L072410602

Manufacturer: Vode Lighting LLC

Date: 7/12/2024

Model: Ultra Low UGR Dark Gray



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

x 0.4131  
y 0.3950  
u' 0.2390  
v' 0.5142

CIE 13.3-1995	
(CRI)	
R <sub>a</sub>	83
R <sub>g</sub>	7