

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P634991

Luminaire Tested: GWS-SA3C-830-U-5NQ-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P634991
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-8)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3C-830-U-5NQ-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE V NARROW OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7797.7 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G0

Input Watts (W): 93
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



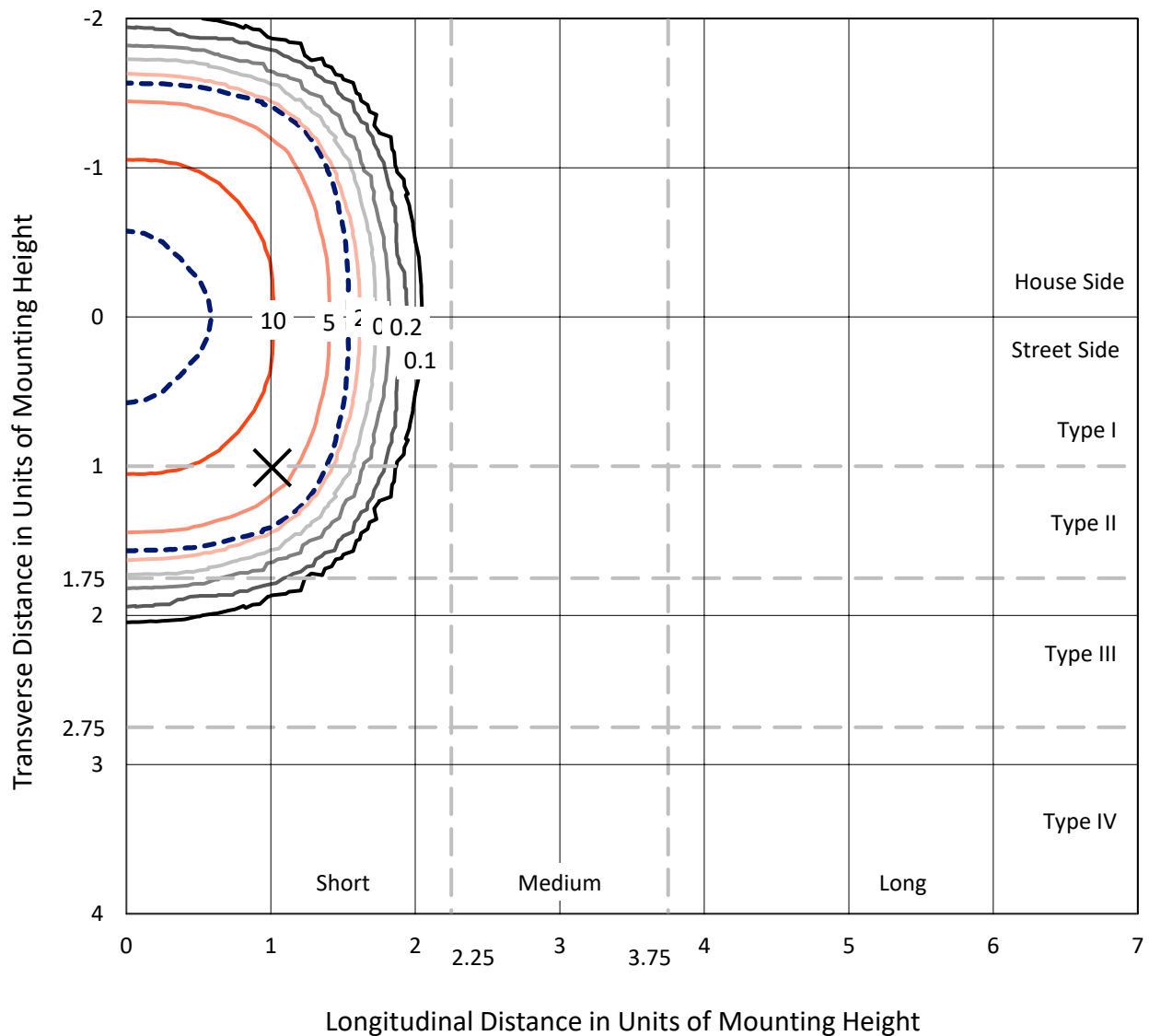
REPORT NUMBER: P634991

CATALOG NUMBER: GWS-SA3C-830-U-5NQ-W-GRSBK

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

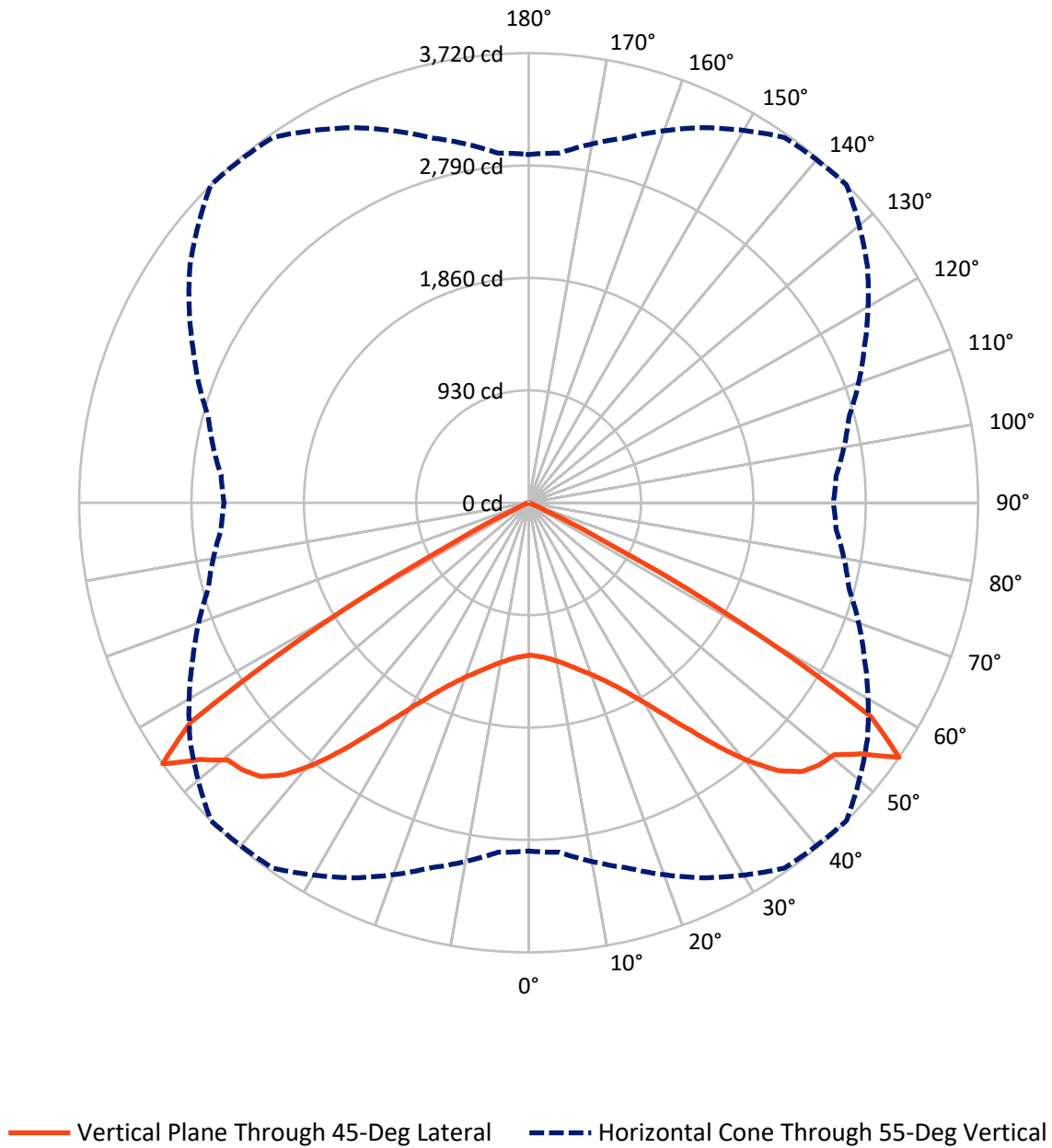


Based on 10 foot mounting height. Maximum calculated value = 12.7 fc
Type V - Short - N/A

REPORT NUMBER: P634991

CATALOG NUMBER: GWS-SA3C-830-U-5NQ-W-GRSBK

Luminous Intensity Polar Plot



REPORT NUMBER: P634991

CATALOG NUMBER: GWS-SA3C-830-U-5NQ-W-GRSBK

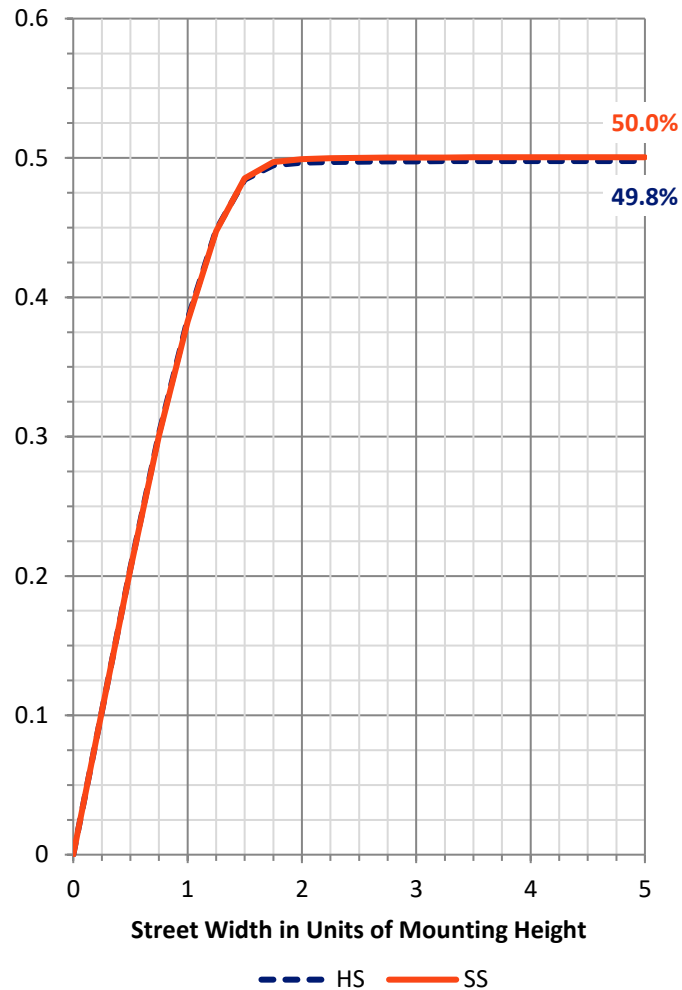
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3898.8	0.0	3898.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3898.8	0.0	3898.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	7797.7	0.0	7797.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.5	1.6
10°-20°	400.4	5.1
20°-30°	775.5	9.9
30°-40°	1389.3	17.8
40°-50°	2329.2	29.9
50°-60°	2493.3	32.0
60°-70°	274.0	3.5
70°-80°	12.1	0.2
80°-90°	0.6	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7797.7	100.0
0°-180°	7797.7	100.0

Coefficient of Utilization



REPORT NUMBER: P634991

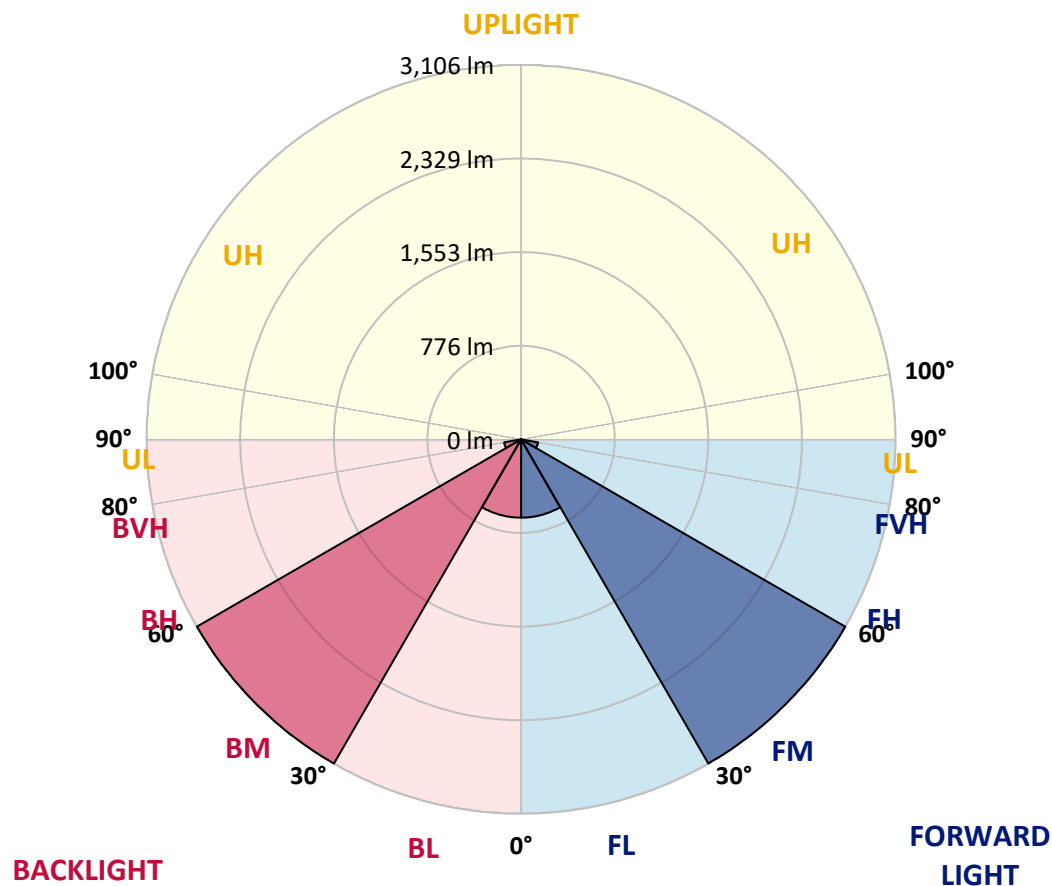
CATALOG NUMBER: GWS-SA3C-830-U-5NQ-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	649.7	8.3			
FM	(30°-60°)	3105.9	39.8			
FH	(60°-80°)	143.0	1.8			G0/660
FVH	(80°-90°)	0.3	0.0			G0/10
BL	(0°-30°)	649.7	8.3	B2/1000		
BM	(30°-60°)	3105.9	39.8	B3/5000		
BH	(60°-80°)	143.0	1.8	B1/500		G0/660
BVH	(80°-90°)	0.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G0

Type V Short





REPORT NUMBER: P634991

CATALOG NUMBER: GWS-SA3C-830-U-5NQ-W-GRSBK

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7	1260.7
2.5°	1258.4	1258.4	1261.5	1263.9	1263.9	1270.3	1267.9	1265.5	1265.5	1262.3	1268.7
5°	1276.6	1275.8	1279.0	1280.6	1277.4	1283.8	1279.8	1277.4	1275.8	1272.7	1279.0
7.5°	1296.5	1297.3	1298.1	1301.3	1299.7	1306.0	1302.8	1298.1	1296.5	1291.7	1298.1
10°	1320.3	1320.3	1321.9	1325.9	1326.7	1334.6	1331.4	1325.9	1321.1	1316.3	1322.7
12.5°	1350.5	1351.3	1353.7	1359.2	1362.4	1371.2	1366.4	1355.3	1348.1	1342.6	1349.7
15°	1394.2	1393.4	1396.6	1404.5	1408.5	1414.9	1407.7	1392.6	1383.9	1377.5	1382.3
17.5°	1441.9	1441.9	1443.5	1451.4	1457.0	1466.5	1457.8	1439.5	1431.5	1422.8	1427.6
20°	1494.3	1496.7	1498.3	1503.8	1513.4	1522.9	1515.7	1497.5	1488.7	1477.6	1483.2
22.5°	1563.4	1561.0	1561.8	1571.4	1584.9	1594.4	1588.8	1567.4	1552.3	1543.5	1546.7
25°	1640.5	1639.7	1642.1	1656.4	1671.5	1681.8	1673.8	1646.0	1630.9	1615.8	1622.2
27.5°	1735.0	1735.8	1737.4	1754.9	1778.7	1793.8	1773.9	1746.1	1725.5	1705.6	1710.4
30°	1847.0	1845.4	1850.2	1874.0	1909.0	1932.8	1909.8	1870.8	1841.5	1822.4	1824.8
32.5°	1966.2	1967.8	1980.5	2018.6	2064.7	2106.8	2059.9	2008.3	1970.2	1934.4	1939.2
35°	2094.9	2098.8	2127.4	2183.8	2259.3	2315.7	2250.6	2165.6	2111.6	2065.5	2067.1
37.5°	2246.6	2256.1	2295.9	2380.1	2488.1	2563.6	2468.2	2355.4	2285.5	2228.3	2224.4
40°	2446.0	2457.1	2511.1	2611.2	2742.3	2811.4	2701.0	2585.0	2498.4	2436.5	2426.9
42.5°	2674.8	2689.1	2747.9	2850.4	2981.4	3028.3	2920.3	2822.6	2744.7	2671.6	2668.4
45°	2933.0	2940.9	2988.6	3067.2	3161.8	3172.9	3091.9	3037.8	2959.2	2890.9	2885.3
47.5°	3175.3	3183.2	3215.8	3256.3	3278.6	3238.8	3224.5	3200.7	3099.0	3014.8	2997.3
50°	3359.6	3365.9	3406.5	3422.3	3360.4	3276.2	3304.0	3253.1	3142.7	3048.2	3021.2
52.5°	3346.9	3362.8	3466.8	3557.4	3518.5	3450.1	3375.5	3265.8	3094.2	2964.8	2931.4
55°	2881.3	2902.8	3126.0	3423.9	3690.1	3719.5	3420.8	3067.2	2744.7	2554.8	2520.7
57.5°	1851.8	1857.3	2129.8	2547.7	3147.5	3336.5	2836.9	2312.5	1911.4	1702.4	1688.1
60°	680.8	669.7	875.4	1221.8	1812.9	2013.0	1669.9	1169.4	834.1	686.4	674.5
62.5°	163.6	165.2	205.0	307.4	568.8	703.9	556.1	310.6	197.8	166.0	164.4
65°	82.6	81.0	81.8	88.2	121.5	145.4	119.2	84.2	81.0	81.8	81.0
67.5°	53.2	52.4	54.0	54.8	54.0	50.8	50.0	51.6	51.6	52.4	50.8
70°	32.6	31.8	33.4	35.7	34.2	30.2	31.8	33.4	31.8	31.0	31.0
72.5°	17.5	17.5	19.1	20.7	19.1	17.5	17.5	18.3	17.5	17.5	17.5
75°	7.9	7.9	8.7	9.5	7.9	7.9	7.9	7.9	7.9	7.9	7.9
77.5°	2.4	2.4	3.2	3.2	2.4	2.4	2.4	2.4	3.2	3.2	3.2
80°	0.8	1.6	1.6	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

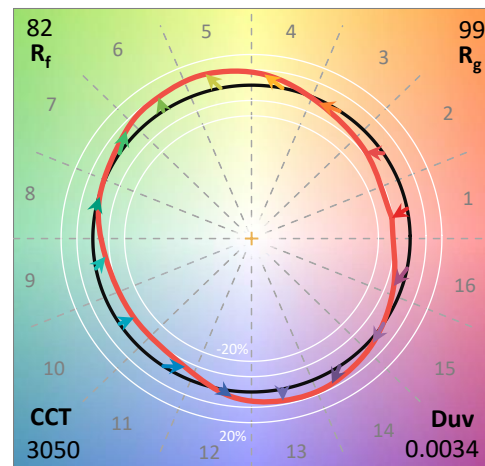
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u' : 0.2476
 CIE v' : 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

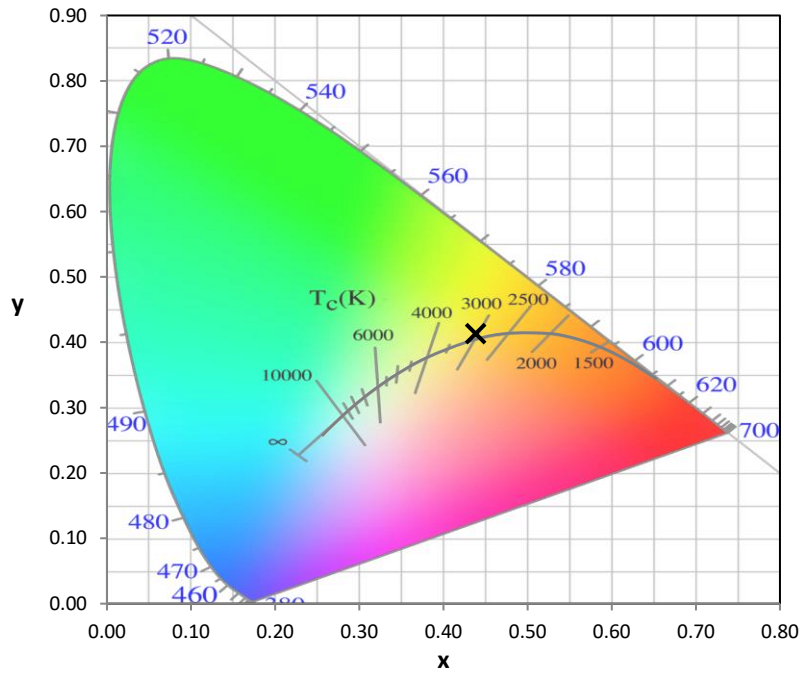
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

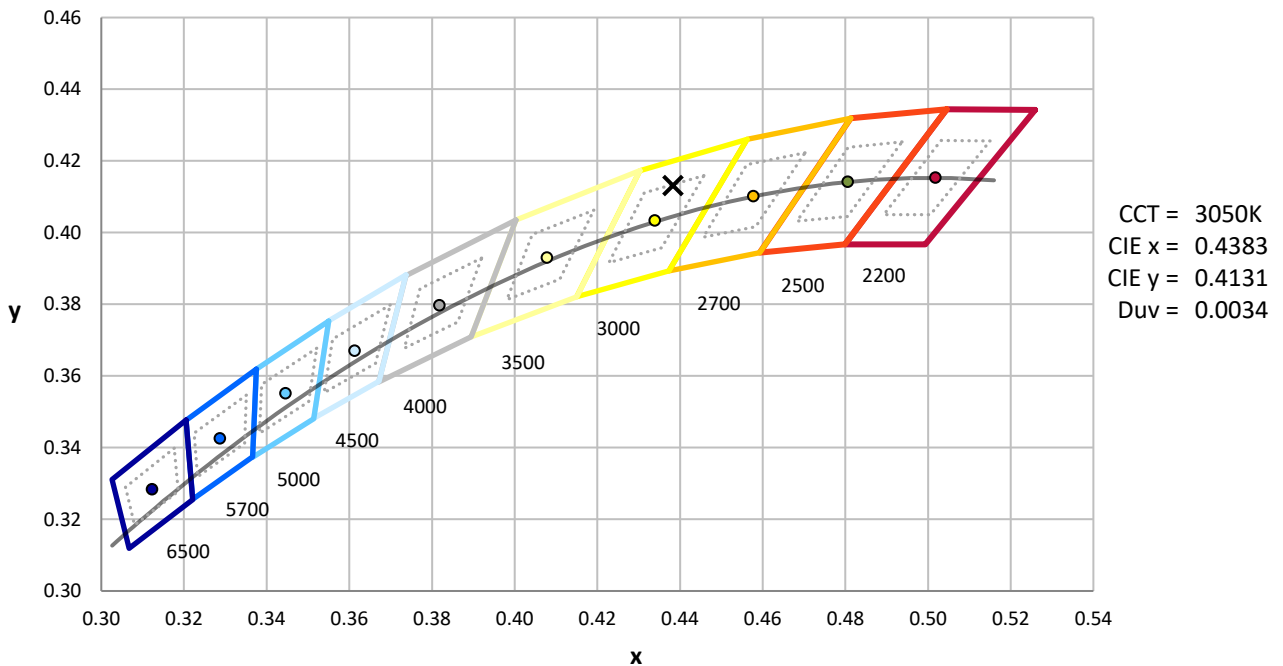
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



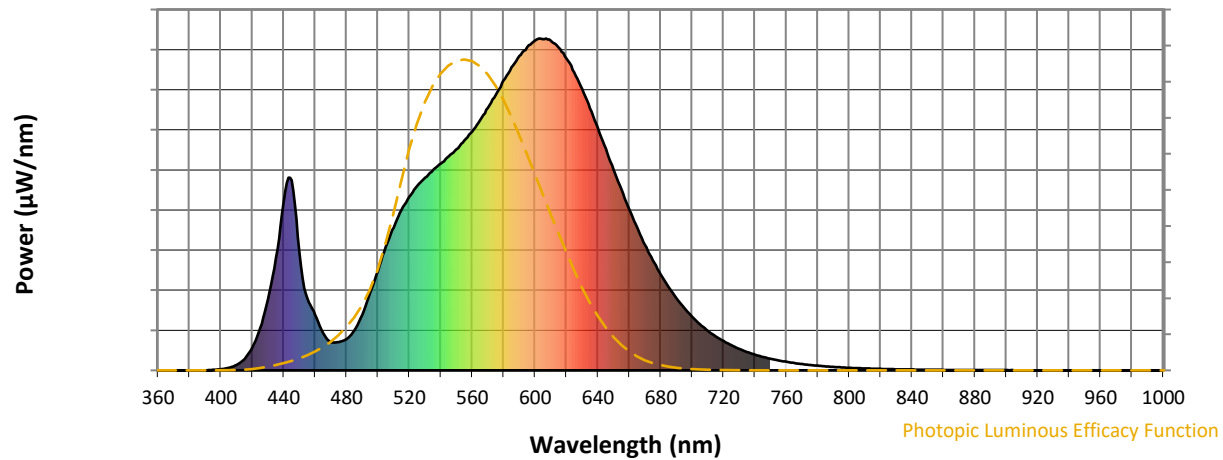
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

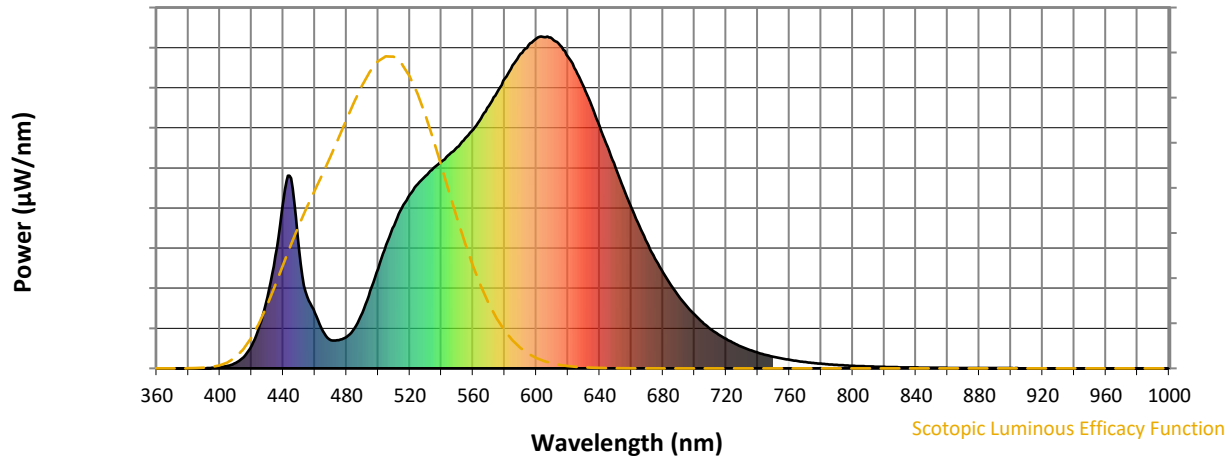


Photopic Lumens: NR

λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



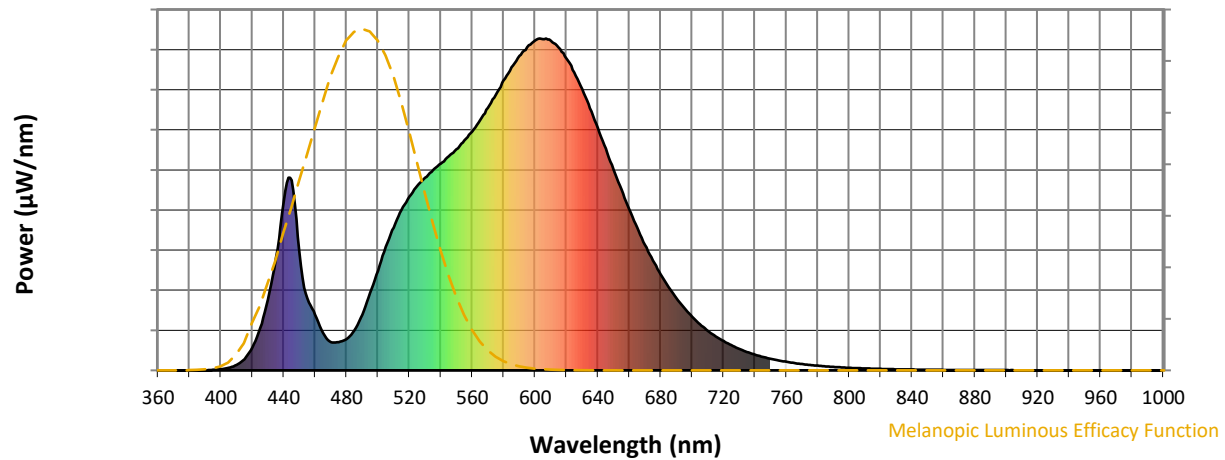
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

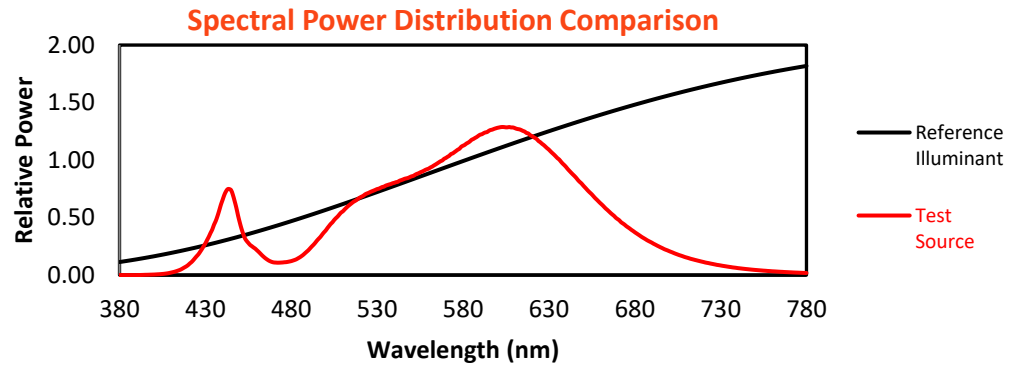
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

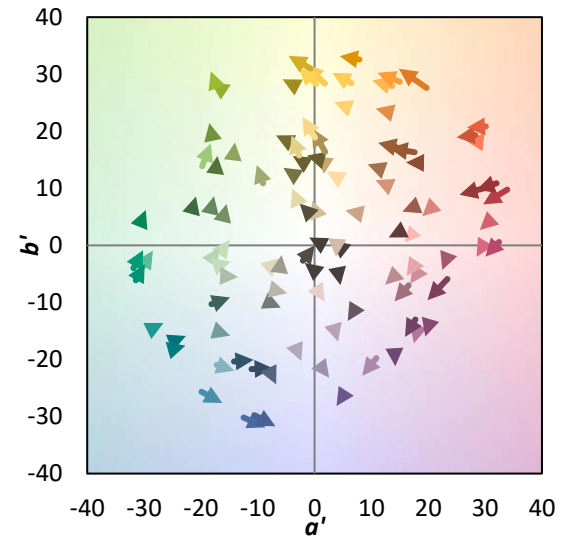
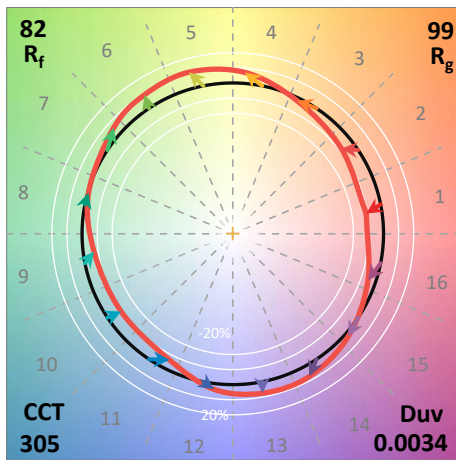
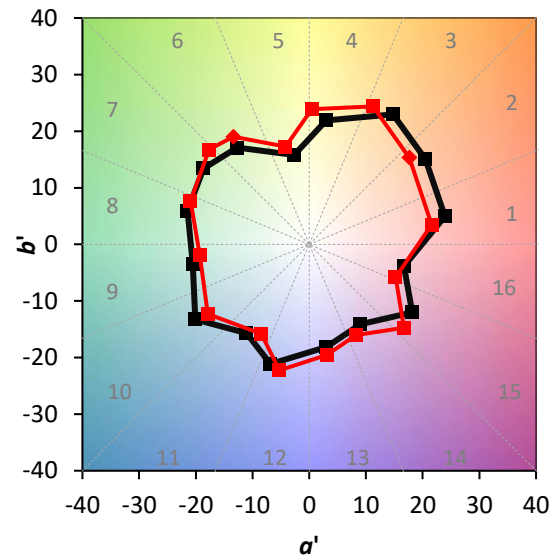
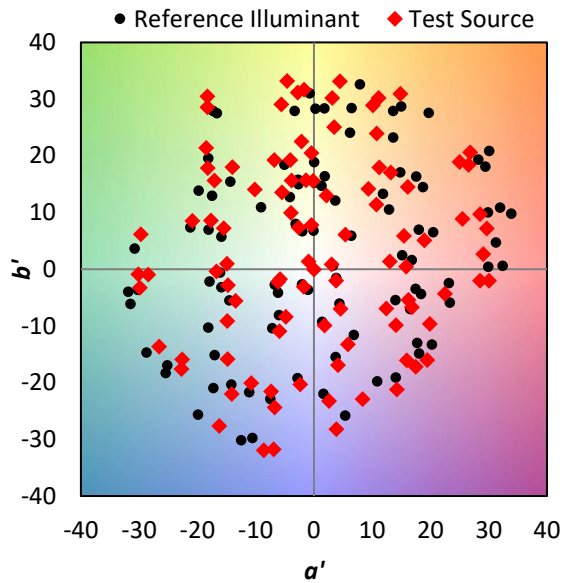
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$

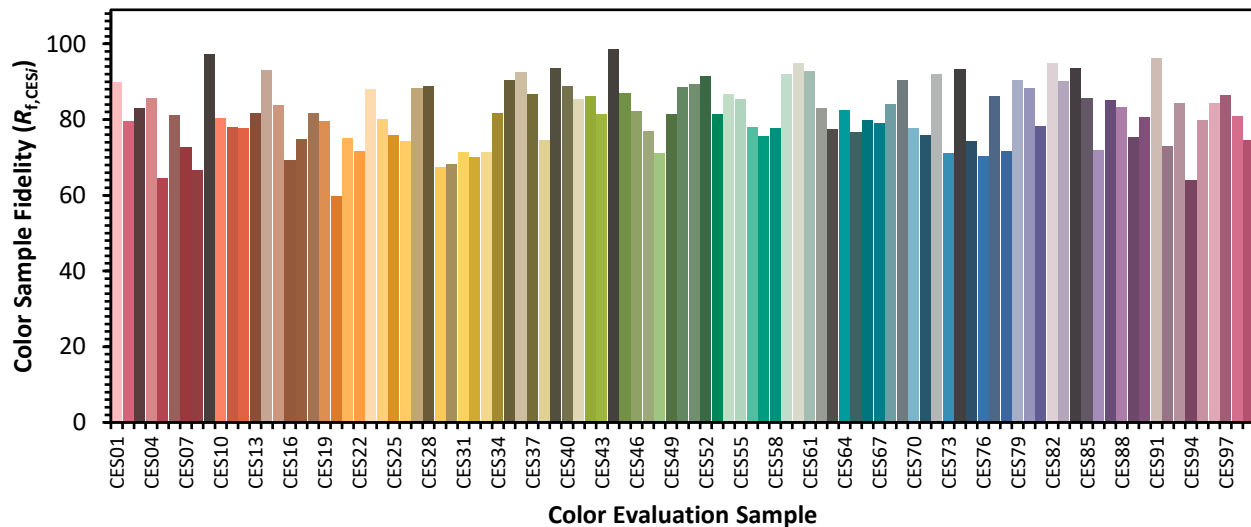


Color Vector Graphics

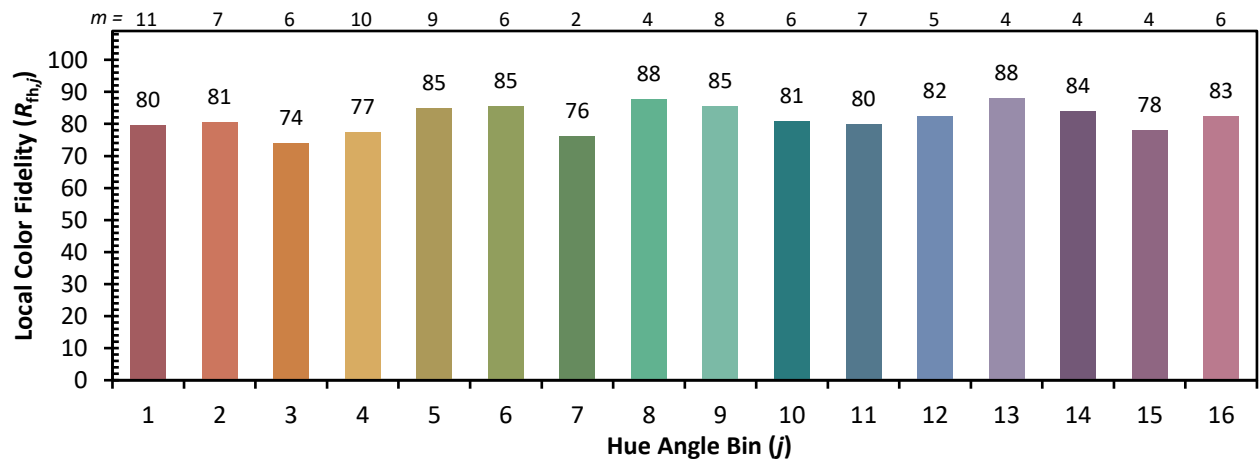
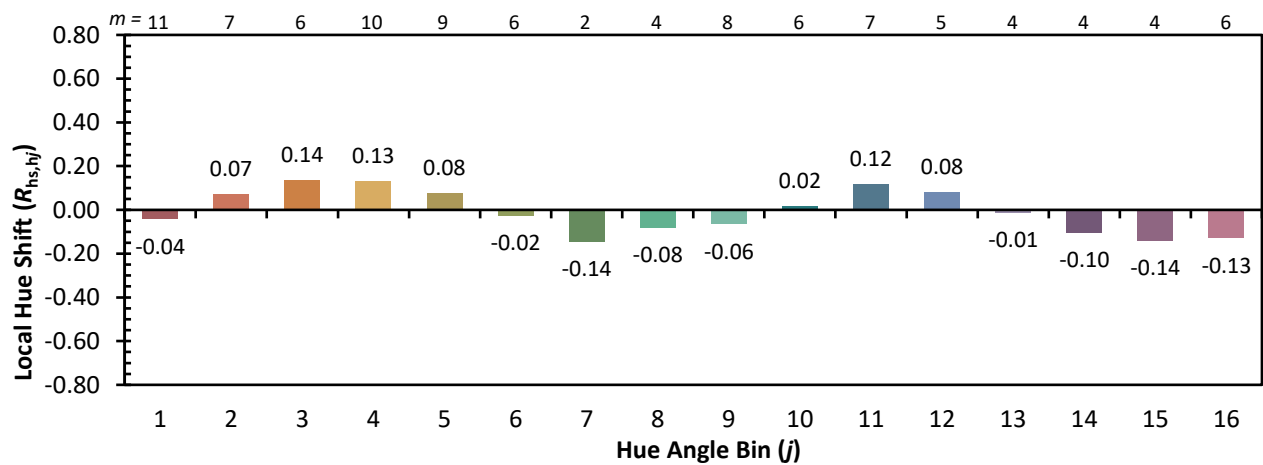
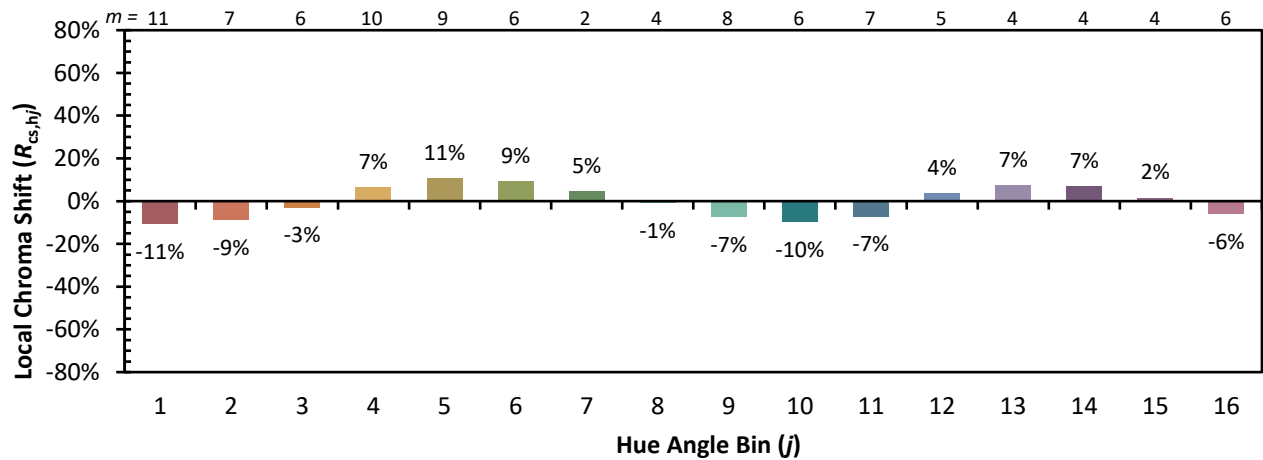


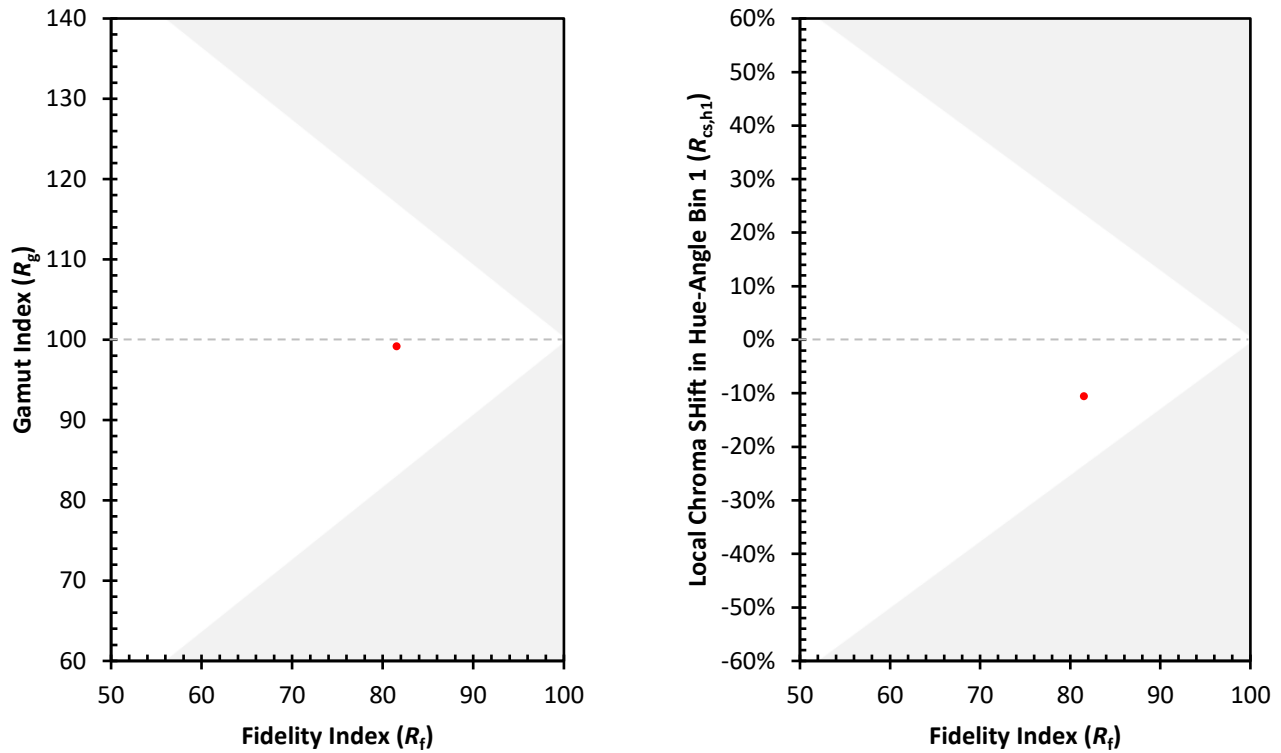
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)