

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P316627

Luminaire Tested: **GLEON-SA3A-830-U-5MQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P316627  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA3A-830-U-5MQ  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(3) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11877 lumens  
Efficiency: N/A  
Efficacy: 123.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B4 - U0 - G2

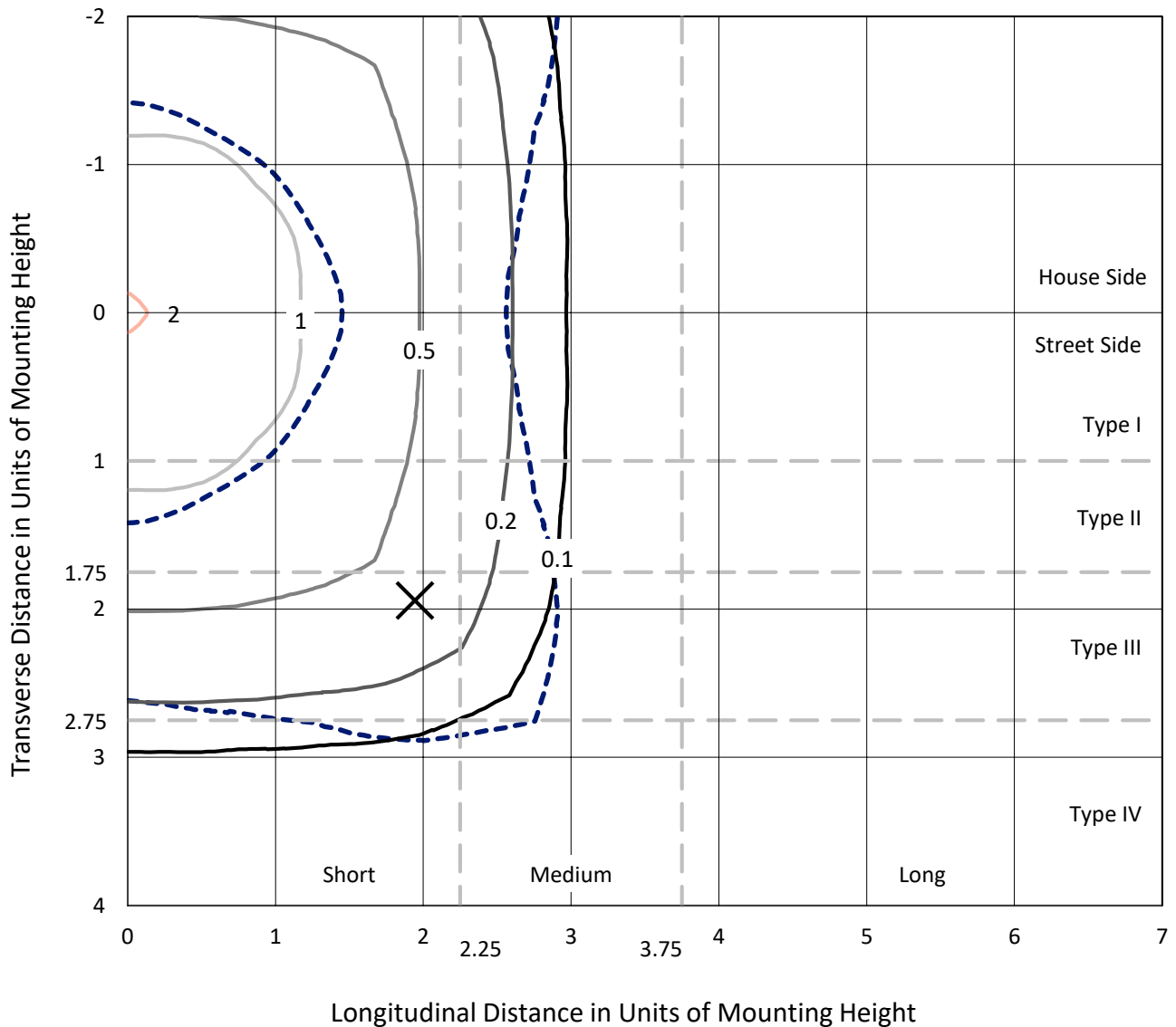
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P316627  
 CATALOG NUMBER: GLEON-SA3A-830-U-5MQ

### Iso-Footcandle Lines of Horizontal Illumination

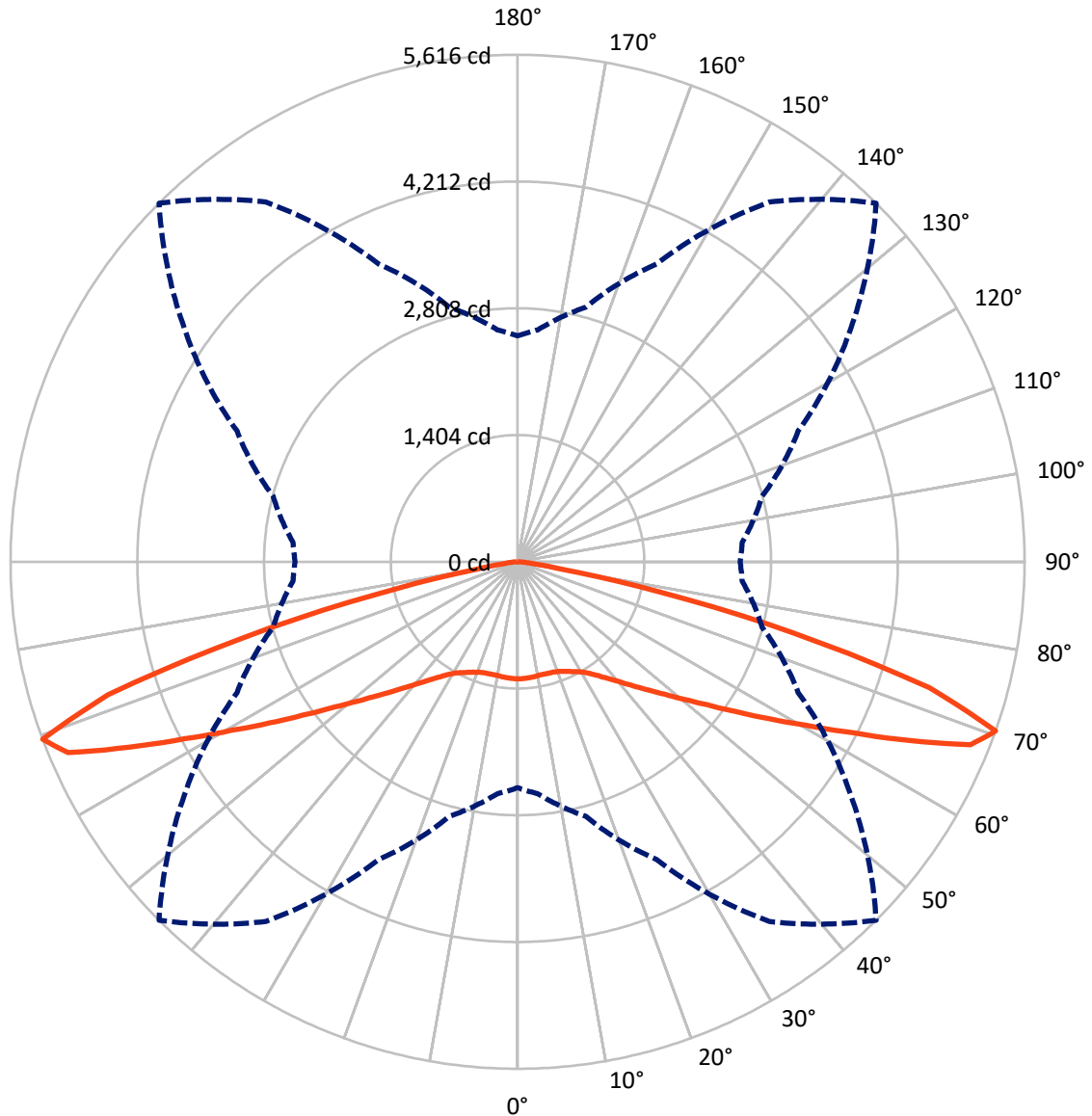
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type V - Short - N/A

REPORT NUMBER: P316627  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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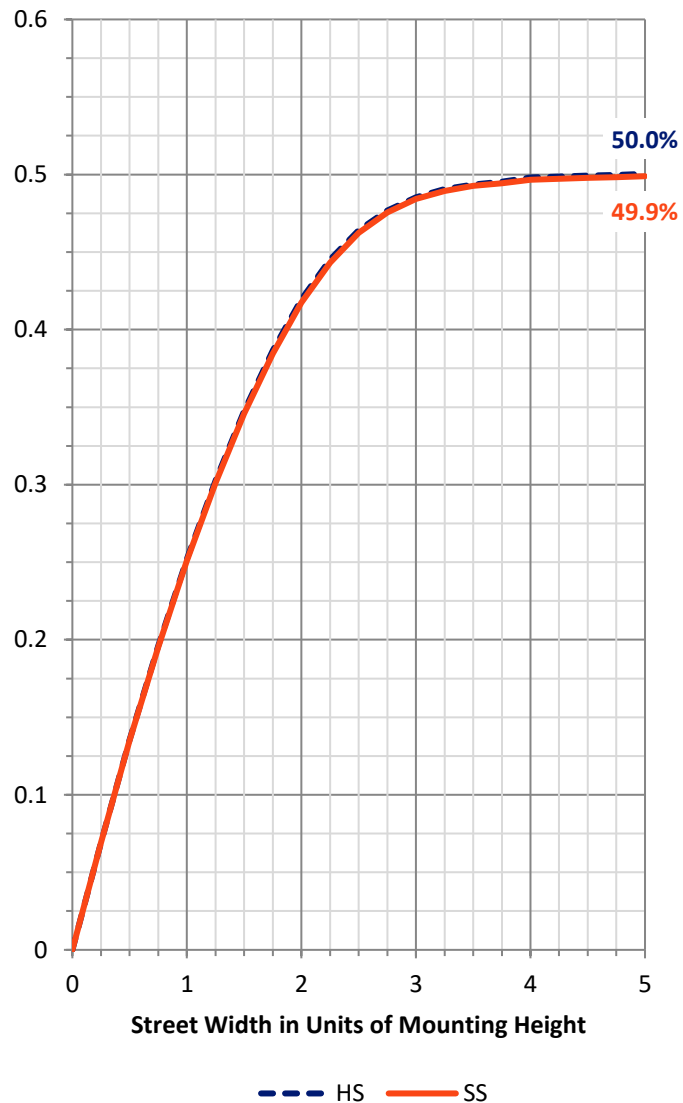
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5938.5	0.0	5938.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5938.5	0.0	5938.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11877.0	0.0	11877.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.9	1.0
10°-20°	360.7	3.0
20°-30°	614.0	5.2
30°-40°	973.8	8.2
40°-50°	1584.6	13.3
50°-60°	2612.7	22.0
60°-70°	3835.5	32.3
70°-80°	1696.1	14.3
80°-90°	76.8	0.6
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°	11877.0	100.0
0°-180°	11877.0	100.0

**Coefficient of Utilization**



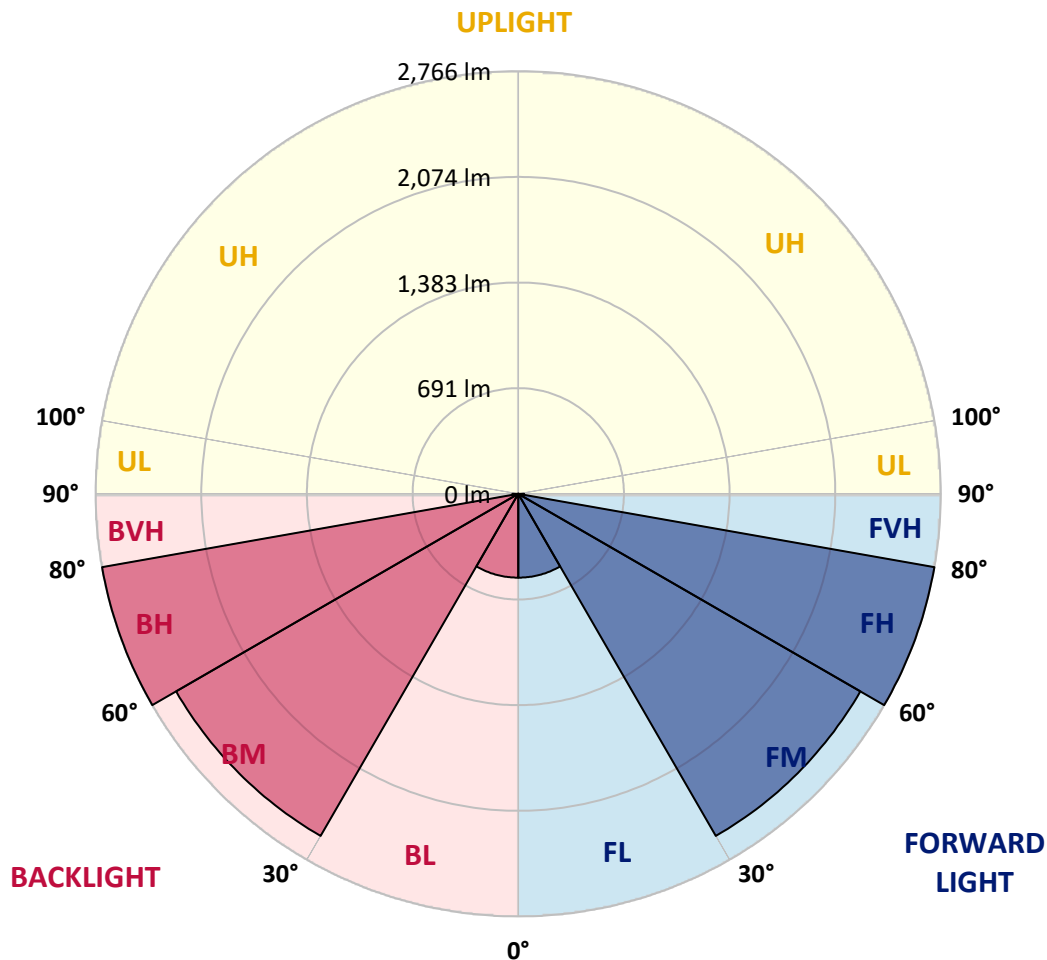
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 CATALOG NUMBER: GLEON-SA3A-830-U-5MQ

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	548.7	4.6			
FM (30°-60°)	2585.5	21.8			
FH (60°-80°)	2765.8	23.3			G2/5000
FVH (80°-90°)	38.4	0.3			G1/100
BL (0°-30°)	548.7	4.6	B2/1000		
BM (30°-60°)	2585.5	21.8	B3/5000		
BH (60°-80°)	2765.8	23.3	B4/5000		G2/5000
BVH (80°-90°)	38.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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CATALOG NUMBER: GLEON-SA3A-830-U-5MQ

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2	1297.2
2.5°	1295.2	1294.0	1296.8	1296.4	1294.0	1294.4	1294.4	1295.6	1295.6	1294.8	1294.8
5°	1290.5	1289.7	1292.8	1292.8	1290.5	1291.3	1292.0	1293.2	1292.8	1292.0	1291.7
7.5°	1284.6	1284.2	1287.3	1287.3	1285.8	1286.5	1285.8	1286.1	1285.4	1284.6	1283.4
10°	1274.7	1275.5	1278.3	1279.1	1279.1	1279.5	1278.7	1276.7	1275.5	1274.4	1273.2
12.5°	1265.7	1265.3	1269.2	1271.2	1274.4	1277.9	1275.5	1270.0	1267.7	1265.3	1264.5
15°	1259.8	1260.2	1264.1	1267.7	1273.2	1280.6	1277.9	1269.2	1264.5	1261.8	1261.0
17.5°	1258.6	1259.4	1264.5	1270.8	1276.7	1285.0	1283.4	1274.7	1266.9	1261.8	1260.6
20°	1261.4	1261.8	1269.6	1278.7	1288.9	1296.8	1293.2	1283.8	1273.2	1265.3	1263.3
22.5°	1266.5	1268.1	1277.9	1292.0	1307.8	1318.4	1314.1	1297.9	1281.4	1271.6	1268.9
25°	1282.6	1283.0	1296.4	1315.6	1334.5	1346.7	1341.6	1318.8	1297.5	1286.5	1283.0
27.5°	1316.0	1317.2	1330.6	1353.0	1369.1	1376.9	1373.8	1355.3	1337.2	1325.5	1326.6
30°	1364.4	1365.9	1380.9	1405.6	1415.5	1417.4	1416.6	1408.0	1391.5	1375.8	1376.9
32.5°	1423.3	1424.1	1444.2	1466.6	1474.4	1476.0	1474.4	1466.6	1446.9	1425.7	1426.9
35°	1499.2	1501.6	1520.8	1542.4	1548.7	1551.9	1549.1	1538.9	1518.5	1497.6	1496.8
37.5°	1592.7	1593.1	1613.2	1635.6	1643.5	1644.2	1641.1	1634.4	1608.9	1590.0	1588.8
40°	1701.2	1702.8	1726.4	1750.4	1753.5	1750.0	1754.3	1750.4	1724.0	1702.4	1706.0
42.5°	1833.3	1836.8	1865.1	1888.7	1879.7	1877.7	1880.5	1881.7	1860.4	1834.1	1831.7
45°	1987.0	1990.1	2025.5	2044.4	2038.5	2025.5	2031.0	2040.5	2011.0	1978.4	1981.5
47.5°	2162.3	2170.2	2207.9	2225.6	2211.1	2193.4	2204.0	2218.1	2183.5	2143.1	2141.1
50°	2357.3	2367.1	2417.4	2442.2	2427.6	2395.0	2412.7	2422.1	2372.2	2319.9	2315.6
52.5°	2565.2	2575.0	2638.3	2689.4	2680.0	2629.3	2654.1	2644.2	2586.8	2516.5	2511.0
55°	2800.7	2804.6	2873.0	2955.5	2965.0	2927.6	2926.1	2909.9	2825.0	2743.7	2739.7
57.5°	3042.8	3045.6	3134.0	3231.5	3275.9	3275.9	3231.9	3197.7	3084.9	2990.5	2980.7
60°	3304.2	3314.0	3411.9	3544.4	3648.1	3678.8	3601.0	3507.8	3385.2	3270.0	3258.6
62.5°	3536.9	3548.3	3698.1	3895.4	4062.1	4173.7	3983.4	3831.7	3608.4	3423.7	3402.1
65°	3566.4	3597.0	3815.2	4172.5	4545.5	4768.4	4403.6	4029.8	3623.0	3366.3	3344.3
67.5°	3257.0	3308.9	3603.7	4159.9	4930.8	5409.1	4672.1	3916.6	3362.0	3078.2	3053.8
70°	2502.7	2578.2	2918.2	3638.7	4864.3	5615.5	4503.9	3428.8	2803.0	2497.6	2463.4
72.5°	1373.0	1404.1	1709.9	2491.7	3899.7	4772.0	3756.6	2535.3	1858.9	1512.6	1455.2
75°	435.5	446.5	602.2	1019.6	2205.9	3160.7	2386.4	1244.5	685.1	505.1	499.2
77.5°	193.4	194.6	217.8	297.6	759.8	1601.4	912.7	338.8	233.5	204.0	210.7
80°	122.2	122.2	134.8	147.4	206.8	465.0	246.9	161.2	137.6	127.7	130.5
82.5°	58.6	64.9	87.7	94.3	113.6	156.4	126.6	105.3	92.0	68.4	63.7
85°	38.5	32.2	55.4	62.5	66.0	75.1	73.5	69.6	60.1	34.2	38.1
87.5°	17.3	16.5	28.7	26.3	24.8	18.9	28.3	35.0	33.8	16.9	16.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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.



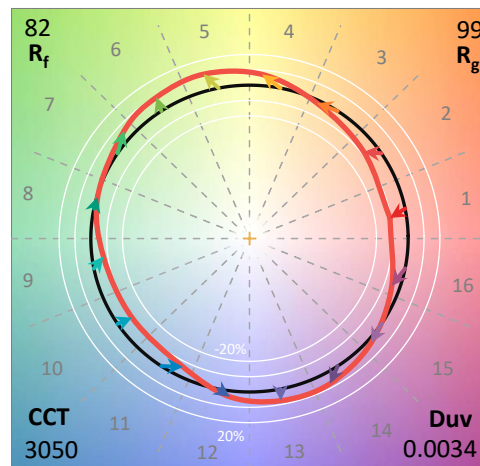
**Test Information**

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  
 Rf: 81.5  
 Rg: 99.2

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



**Test Conditions**

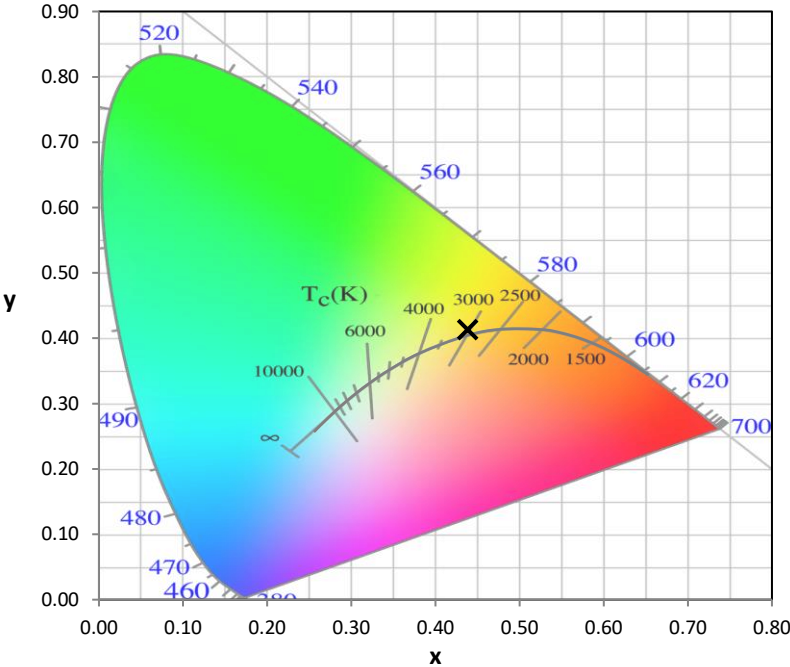
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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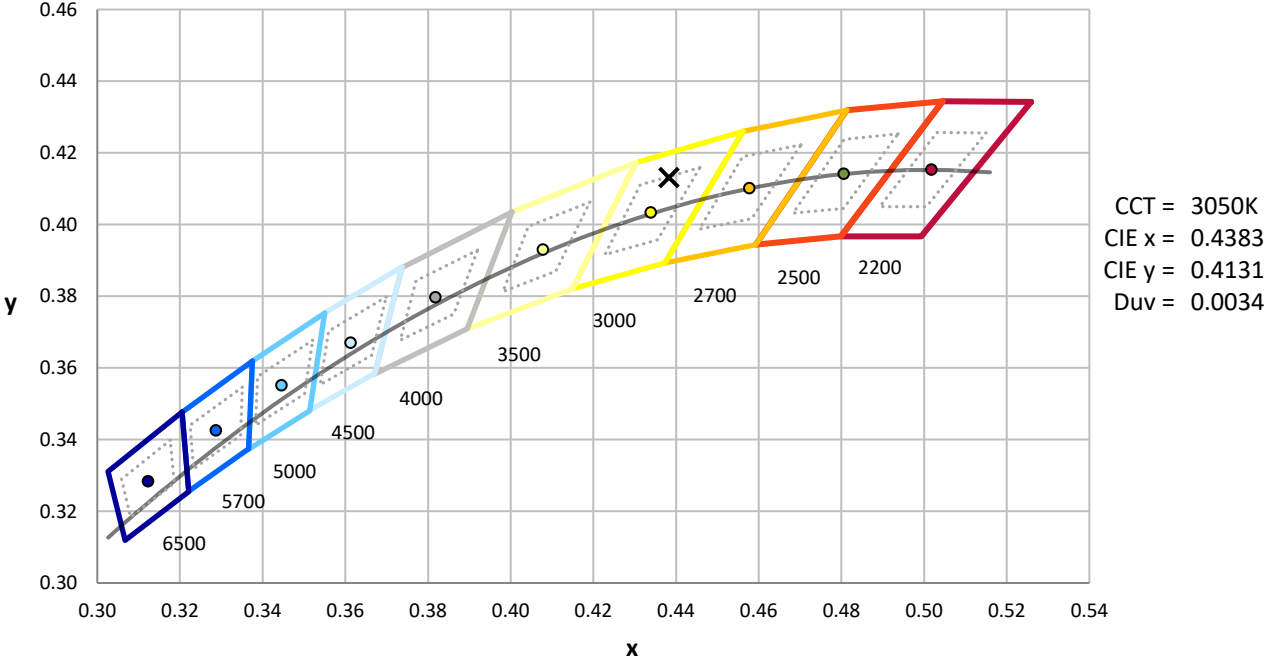
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



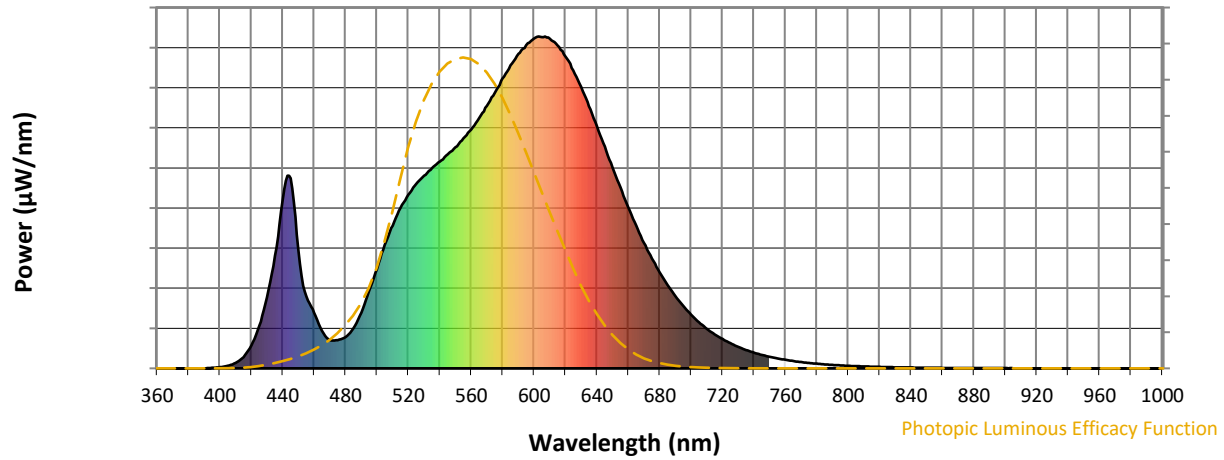
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

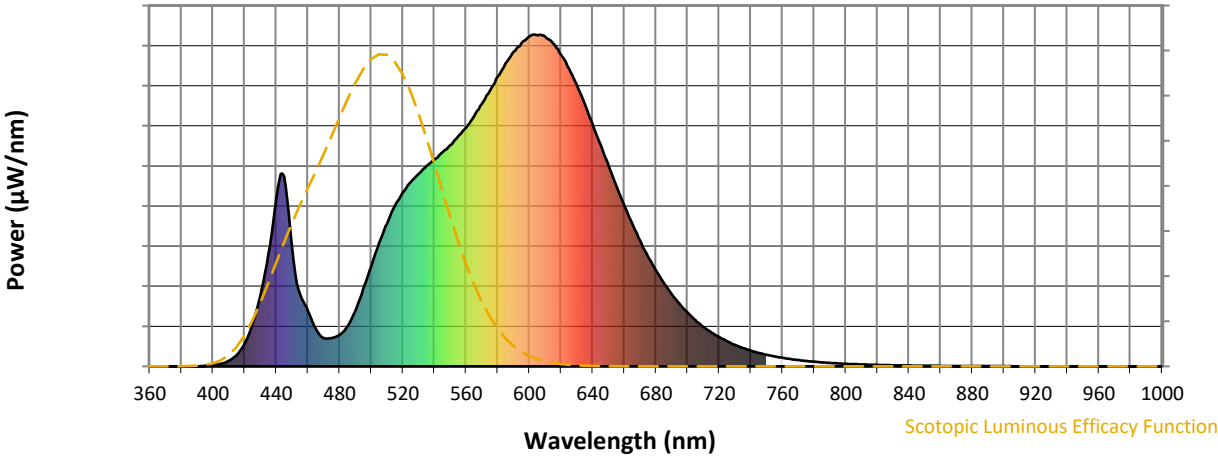


**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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			

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**Scotopic Flux vs. Wavelength**

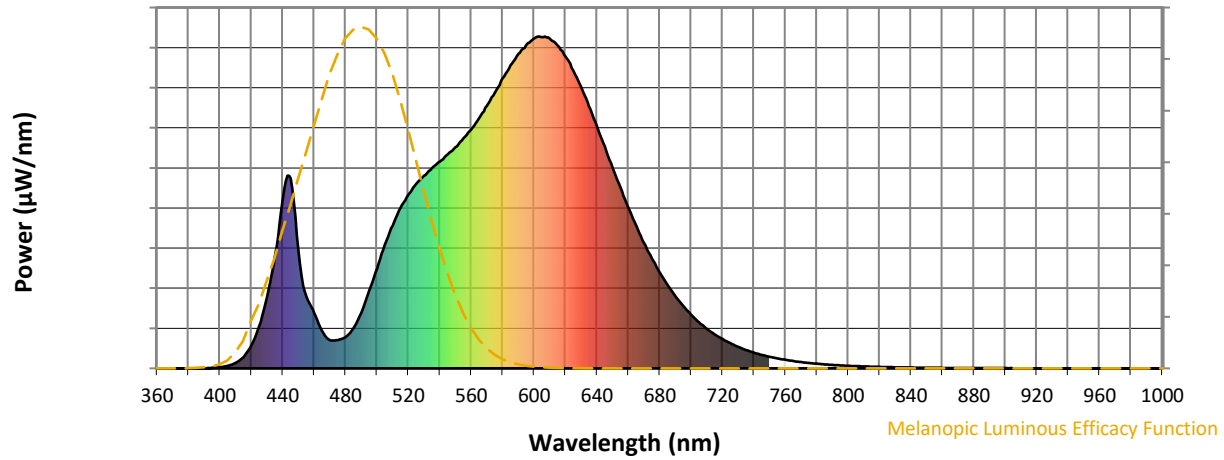


**Scotopic Lumens: NR S/P: 1.27**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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			

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**Melanopic Flux vs. Wavelength**



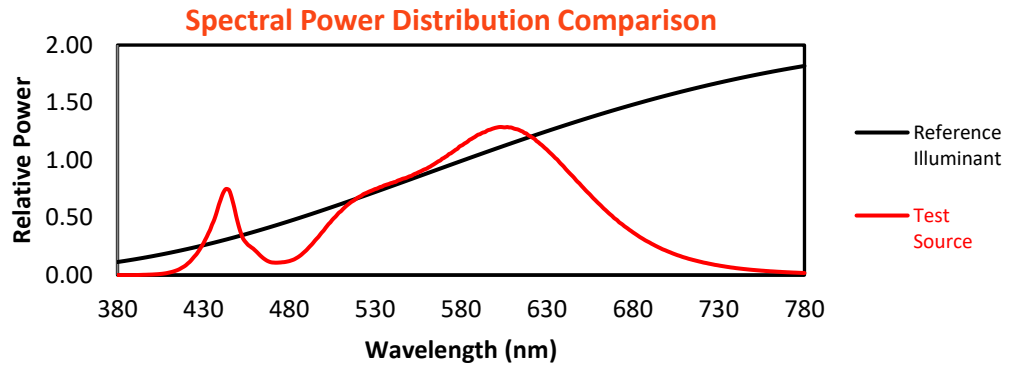
**Melanopic Lumens: NR**

**M/P: 2.32**

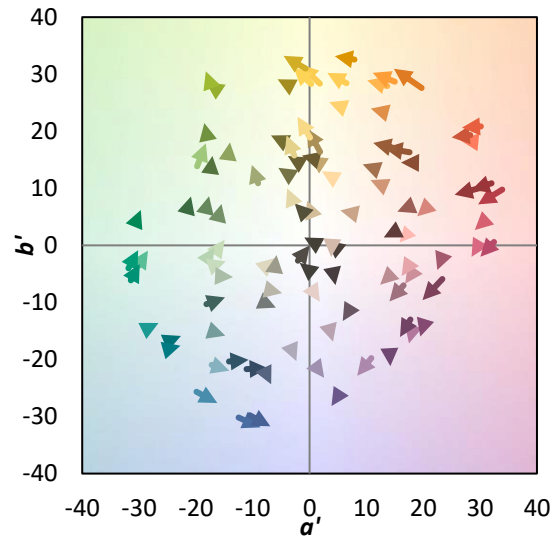
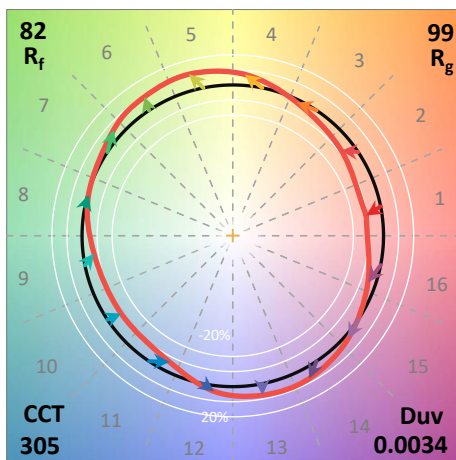
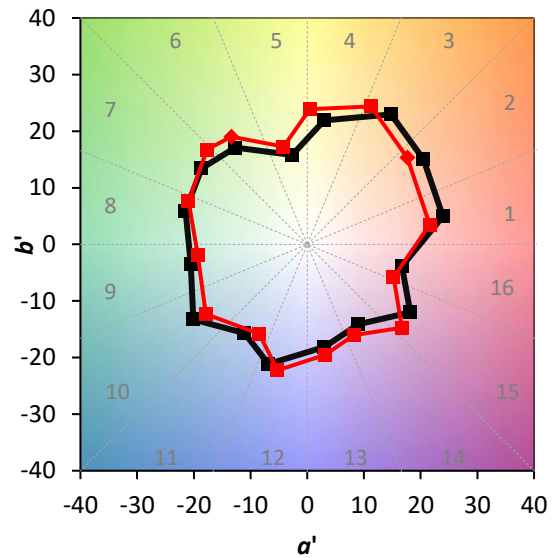
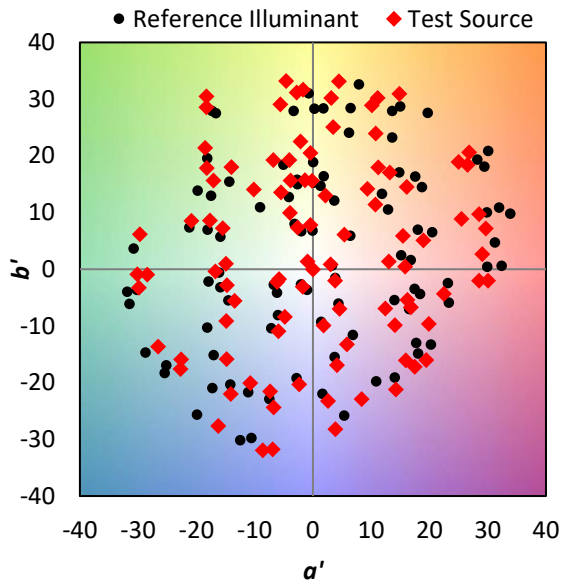
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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			

**Summary**

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

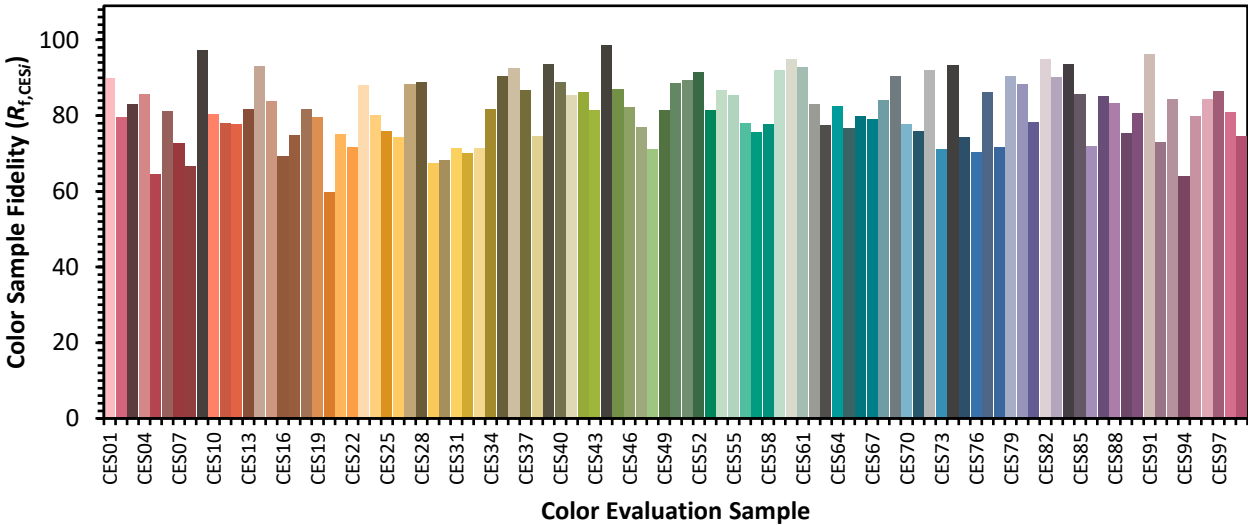


**Color Vector Graphics**



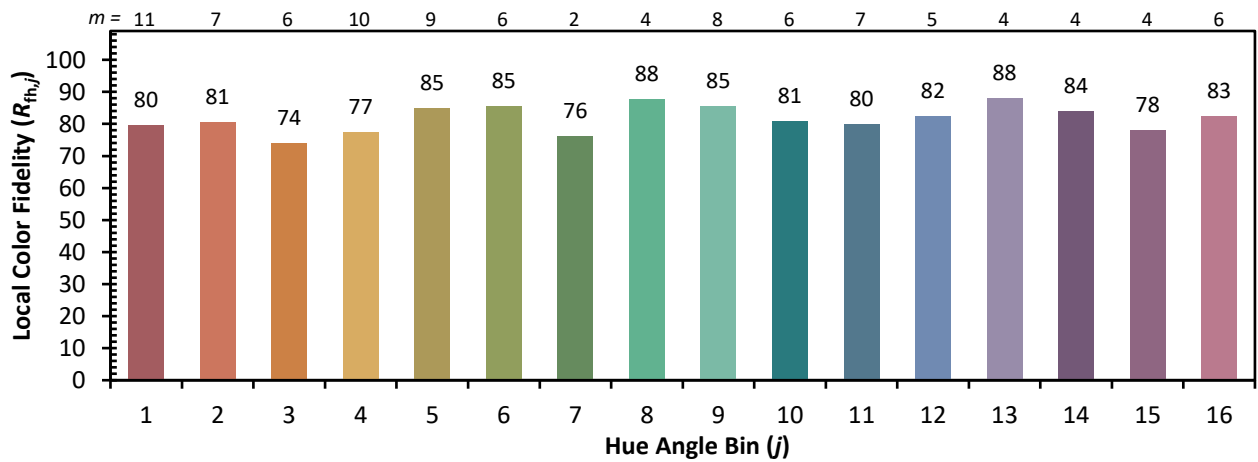
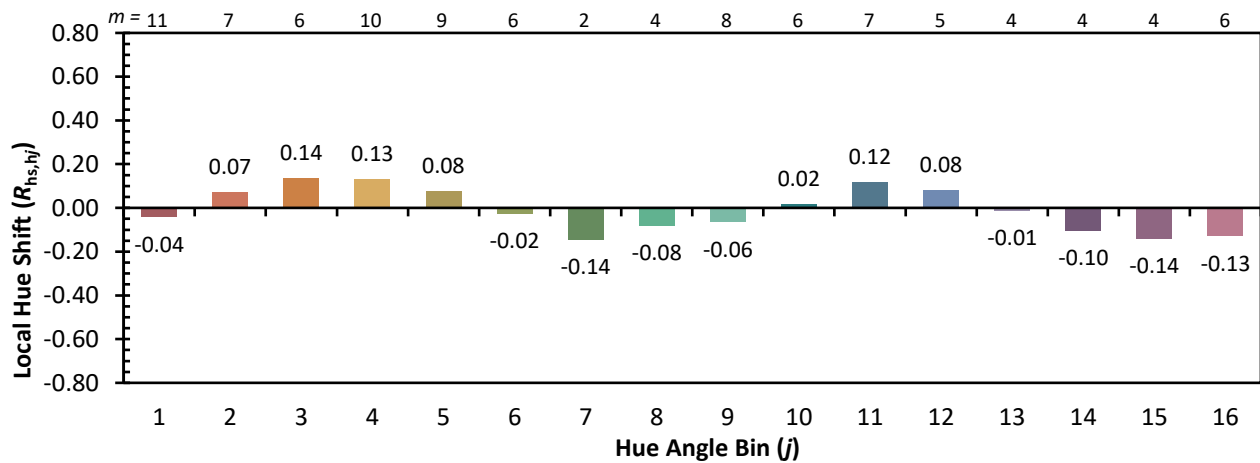
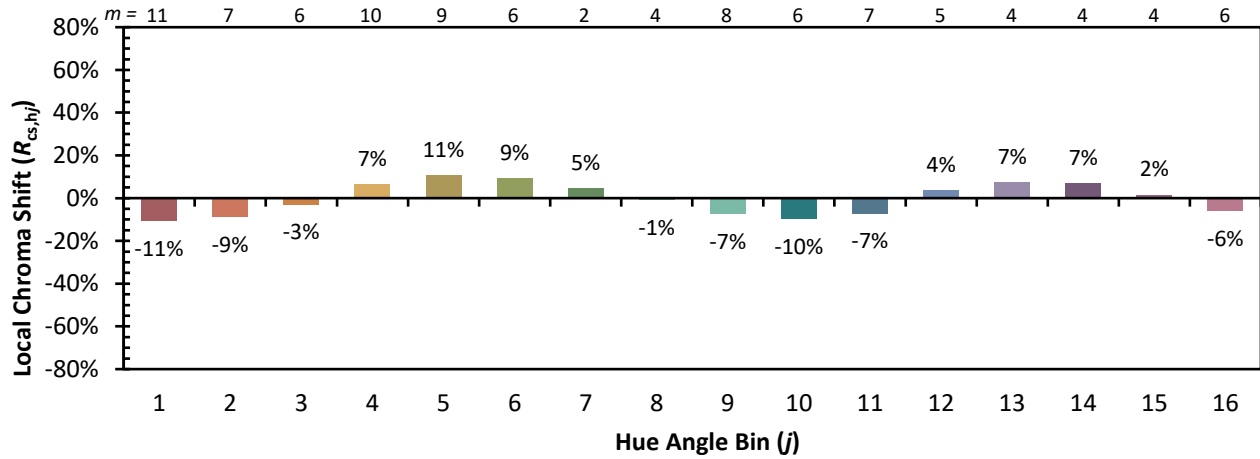
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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	

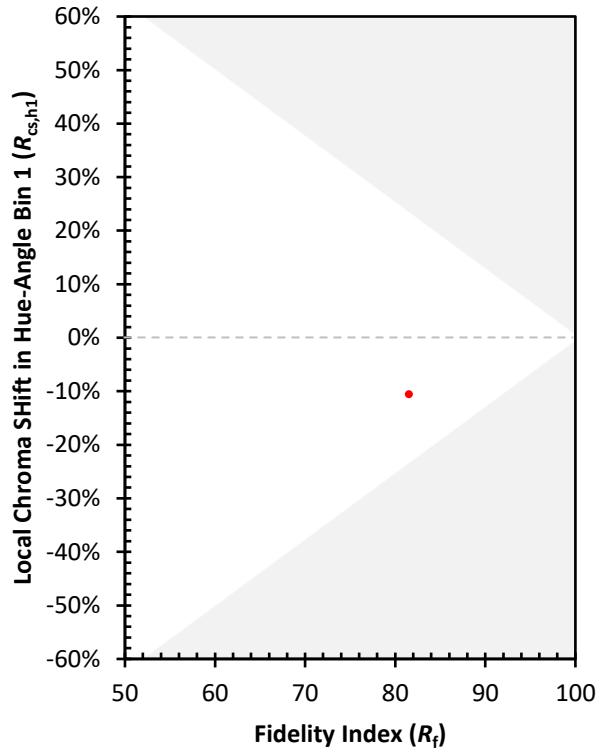
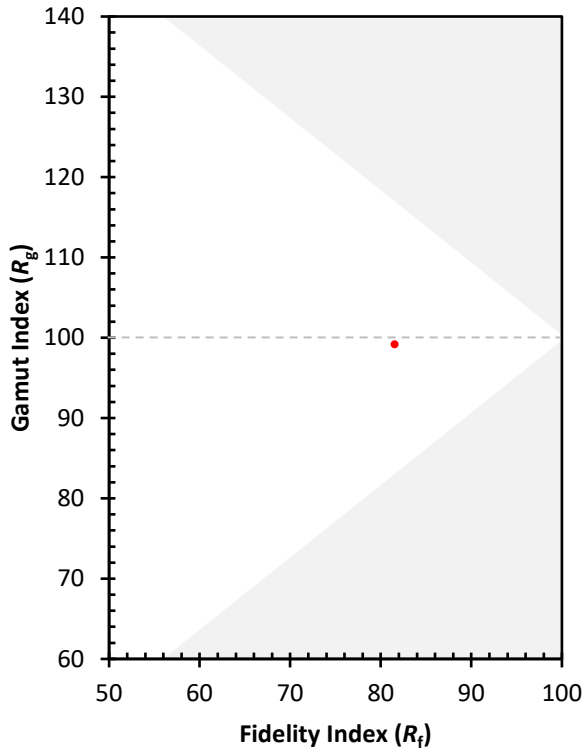




Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)