

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



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

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P631546

Luminaire Tested: GWS-SA1F-830-U-SL3-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P631546  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-31)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1F-830-U-SL3-W  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

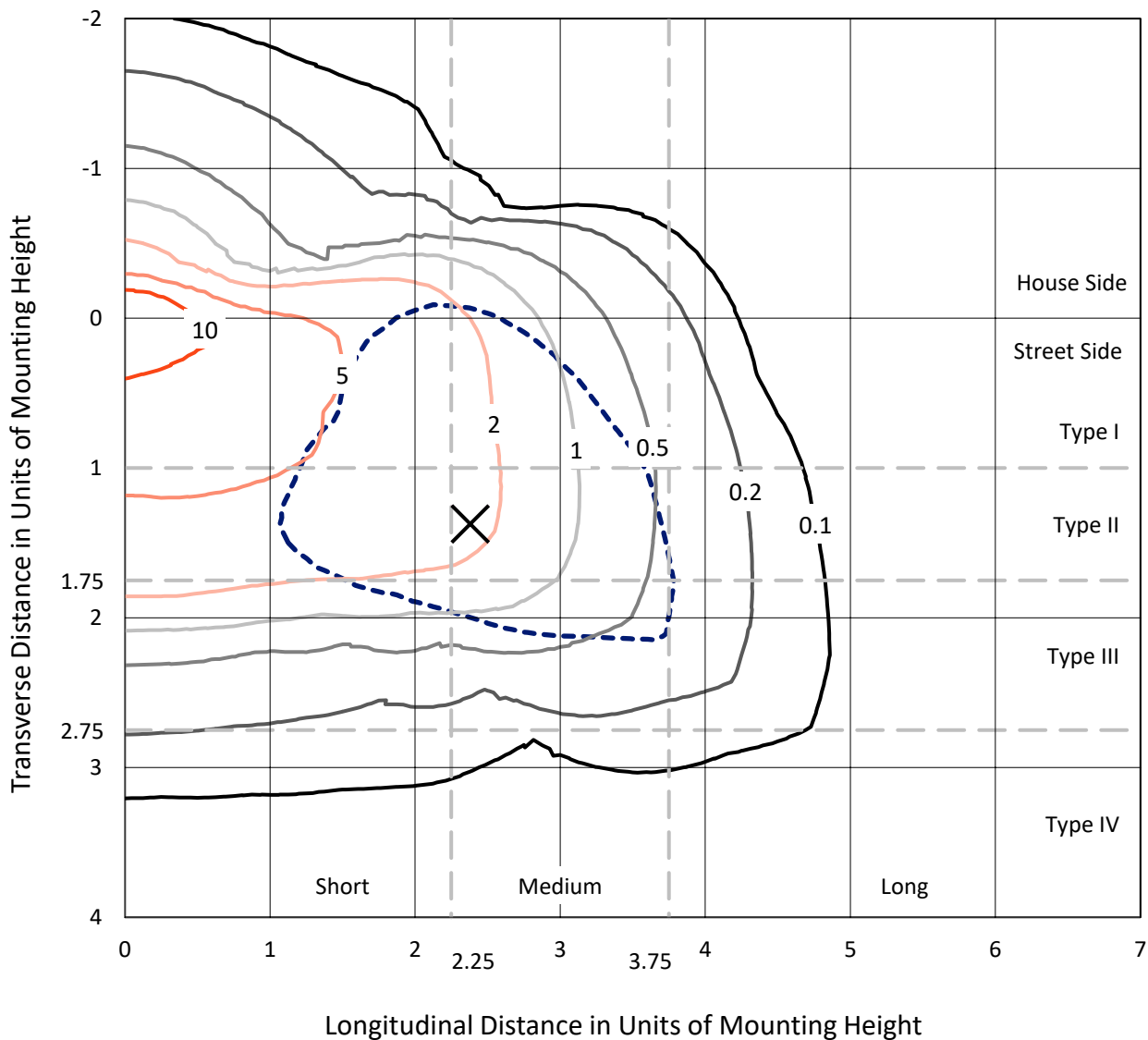
Lumens per Lamp: N/A  
Luminaire Lumens: 6557.6 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 67.2  
Input Voltage (V): 120  
Input Current (Ain): 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



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 CATALOG NUMBER: GWS-SA1F-830-U-SL3-W

### Iso-Footcandle Lines of Horizontal Illumination

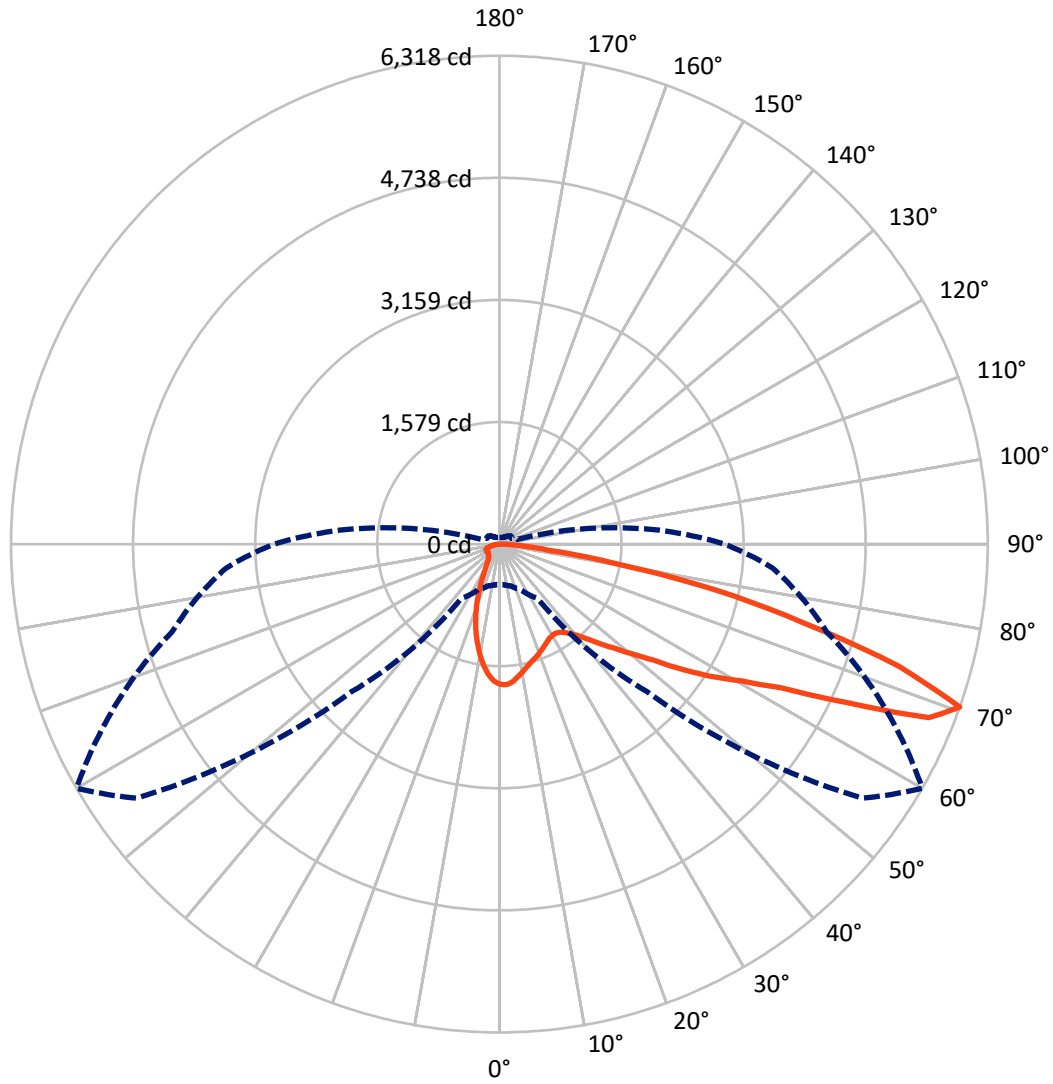
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.1 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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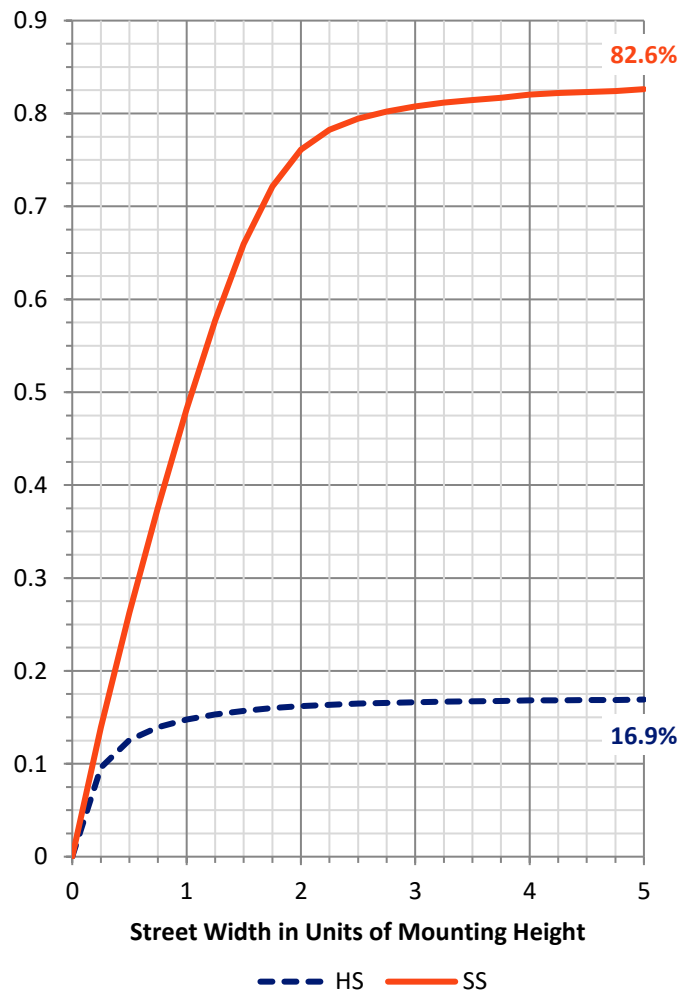
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1121.5	0.0	1121.5
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	5436.1	0.0	5436.1
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	6557.6	0.0	6557.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.4	2.4
10°-20°	350.4	5.3
20°-30°	448.8	6.8
30°-40°	589.8	9.0
40°-50°	855.7	13.0
50°-60°	1335.0	20.4
60°-70°	1747.8	26.7
70°-80°	966.5	14.7
80°-90°	107.3	1.6
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°	6557.6	100.0
0°-180°	6557.6	100.0

**Coefficient of Utilization**



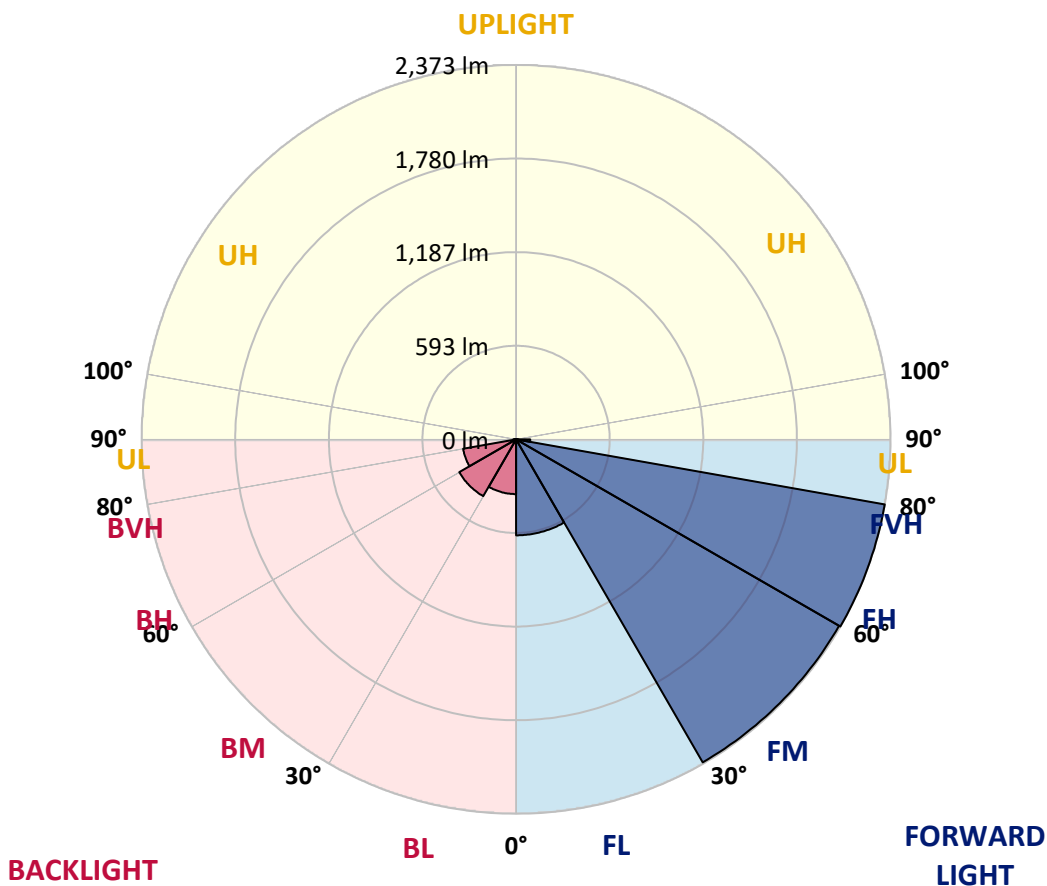
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	608.6	9.3			
FM (30°-60°)	2364.6	36.1			
FH (60°-80°)	2373.5	36.2			G2/5000
FVH (80°-90°)	89.4	1.4			G1/100
BL (0°-30°)	347.0	5.3	B1/500		
BM (30°-60°)	415.8	6.3	B1/1000		
BH (60°-80°)	340.8	5.2	B1/500		G1/500
BVH (80°-90°)	17.9	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6
2.5°	1789.1	1791.1	1796.3	1804.0	1811.7	1815.5	1825.1	1822.2	1820.3	1816.5	1811.7
5°	1710.0	1713.8	1718.6	1733.5	1750.3	1763.7	1785.3	1787.7	1788.7	1790.6	1782.9
7.5°	1609.2	1610.2	1621.7	1641.4	1663.4	1686.5	1722.5	1732.5	1741.2	1750.8	1744.5
10°	1497.9	1500.3	1508.9	1537.3	1575.2	1609.2	1657.7	1674.5	1692.7	1713.8	1705.2
12.5°	1406.7	1407.2	1421.1	1451.4	1492.6	1538.7	1599.1	1619.3	1643.3	1676.4	1668.7
15°	1334.3	1334.3	1347.3	1373.2	1420.7	1474.9	1546.8	1572.8	1605.4	1650.0	1636.6
17.5°	1276.7	1277.2	1285.4	1312.7	1354.9	1414.9	1500.3	1535.3	1571.3	1630.3	1610.2
20°	1246.5	1244.1	1245.5	1262.3	1298.3	1356.4	1453.8	1494.6	1543.0	1616.9	1586.2
22.5°	1245.1	1240.7	1234.5	1235.9	1257.1	1305.0	1403.9	1453.3	1514.2	1605.9	1561.7
25°	1269.5	1264.7	1253.7	1241.2	1239.3	1268.1	1356.9	1413.0	1484.5	1601.1	1538.2
27.5°	1310.8	1307.4	1293.0	1274.3	1254.7	1253.7	1321.3	1379.9	1462.9	1605.9	1521.4
30°	1365.5	1359.7	1350.6	1326.6	1296.9	1266.2	1307.4	1362.1	1448.5	1621.2	1514.2
32.5°	1427.4	1424.0	1415.4	1391.4	1359.7	1310.8	1318.5	1366.0	1448.5	1648.1	1515.7
35°	1493.1	1492.6	1492.6	1476.8	1441.8	1380.8	1362.1	1398.6	1470.6	1691.3	1531.0
37.5°	1556.9	1556.4	1571.8	1577.6	1537.7	1472.0	1436.5	1463.8	1519.0	1755.1	1568.9
40°	1608.7	1610.7	1644.2	1673.0	1651.0	1590.0	1540.1	1554.0	1597.7	1845.8	1635.1
42.5°	1661.0	1666.3	1716.7	1767.6	1776.2	1723.4	1673.0	1681.2	1710.5	1965.7	1734.0
45°	1718.1	1720.5	1791.1	1862.1	1903.8	1872.6	1831.4	1842.4	1849.1	2114.0	1881.3
47.5°	1773.3	1779.5	1870.7	1968.1	2047.3	2044.4	2021.4	2018.0	2019.4	2294.4	2055.4
50°	1848.6	1857.8	1964.7	2082.3	2198.4	2251.7	2258.4	2233.0	2222.4	2494.9	2272.3
52.5°	1991.6	1991.6	2087.6	2203.2	2359.1	2491.1	2536.2	2494.4	2460.9	2707.0	2502.6
55°	2170.6	2178.3	2254.5	2348.1	2545.8	2743.0	2895.5	2849.5	2754.5	2937.8	2743.9
57.5°	2250.2	2259.8	2380.7	2526.1	2790.0	3029.4	3241.0	3224.7	3086.0	3177.7	2994.4
60°	2106.3	2126.4	2292.9	2536.7	3011.2	3491.4	3640.7	3593.2	3395.0	3429.6	3265.9
62.5°	1757.0	1779.1	1963.8	2304.0	2980.5	3990.9	4270.6	4095.5	3780.8	3747.7	3627.7
65°	1048.3	1047.4	1269.5	1720.5	2601.9	4129.6	5267.6	4940.9	4376.7	4184.3	4000.0
67.5°	666.4	665.0	711.5	911.6	1731.6	3789.9	5908.6	5993.6	5186.1	4505.2	4030.7
70°	525.9	525.4	559.0	650.1	856.4	2696.9	5730.2	6317.9	5675.0	4382.9	3549.0
72.5°	383.4	384.3	436.1	544.6	660.7	1354.0	4640.1	5405.8	5219.7	3869.0	2881.2
75°	275.4	276.8	308.0	416.9	609.3	740.3	3085.5	4064.8	3971.2	3101.4	1982.0
77.5°	175.1	177.0	204.4	292.2	492.3	597.8	1870.7	2869.6	2642.2	1747.4	704.8
80°	107.0	113.2	136.3	217.8	393.4	448.6	935.1	1511.8	1323.3	479.3	237.0
82.5°	55.2	60.0	82.0	134.8	271.1	393.9	529.2	635.2	409.7	200.6	126.2
85°	17.3	20.2	28.8	54.7	129.1	244.2	350.2	315.7	188.1	94.5	58.5
87.5°	4.3	4.3	4.8	4.8	5.3	11.0	67.7	71.5	49.9	29.7	24.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P631546  
 CATALOG NUMBER: GWS-SA1F-830-U-SL3-W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6	1814.6
2.5°	1802.1	1790.6	1785.8	1785.3	1773.3	1756.0	1744.5	1736.4	1731.6	1730.6	1730.6
5°	1770.0	1755.1	1735.4	1720.5	1688.4	1655.8	1628.4	1613.1	1595.3	1592.9	1592.4
7.5°	1727.3	1705.7	1668.2	1626.5	1570.4	1516.1	1470.1	1438.9	1407.7	1402.0	1400.0
10°	1681.2	1651.9	1588.1	1514.7	1430.7	1349.7	1279.1	1223.9	1187.5	1161.6	1156.8
12.5°	1635.6	1596.7	1503.2	1393.8	1278.6	1167.8	1061.8	971.6	906.3	868.4	861.7
15°	1592.9	1538.7	1410.6	1271.0	1121.3	969.7	819.5	702.4	610.8	578.1	570.5
17.5°	1554.0	1486.4	1320.9	1143.8	957.2	759.0	588.2	484.1	430.4	414.1	410.2
20°	1515.2	1432.7	1229.7	1010.0	783.0	560.9	429.9	381.0	360.8	354.6	352.6
22.5°	1473.4	1373.6	1130.4	878.0	606.9	419.8	351.7	330.1	323.9	324.3	323.9
25°	1431.7	1313.7	1026.3	734.6	452.0	340.7	307.1	298.9	300.3	304.7	305.6
27.5°	1397.2	1260.4	924.1	577.2	353.1	293.2	277.3	276.8	282.1	287.9	288.8
30°	1372.2	1212.9	823.3	443.8	290.8	260.5	254.3	257.2	263.4	267.7	269.2
32.5°	1354.5	1172.1	715.8	348.8	254.8	237.5	234.6	237.5	241.3	245.7	246.6
35°	1348.2	1142.4	610.3	284.5	230.3	220.7	218.8	220.2	222.1	224.5	225.5
37.5°	1362.1	1127.5	499.9	247.6	215.4	209.7	206.8	205.8	206.3	207.3	207.7
40°	1403.4	1134.2	409.7	226.0	205.8	200.6	195.8	193.8	193.4	194.3	193.8
42.5°	1474.4	1162.5	344.5	213.5	198.2	190.5	185.2	183.3	183.3	185.7	185.7
45°	1578.5	1218.2	297.5	204.4	191.4	181.8	176.1	175.1	177.0	180.9	181.4
47.5°	1731.1	1299.8	269.2	197.7	185.2	174.2	168.4	167.9	171.8	178.0	178.5
50°	1912.0	1417.3	253.8	192.9	180.9	167.9	162.2	162.6	167.0	173.7	175.1
52.5°	2129.8	1577.6	254.8	191.0	178.5	164.1	158.3	157.4	161.7	168.4	169.8
55°	2354.8	1772.4	273.5	191.4	175.1	162.2	154.5	151.1	155.0	159.8	160.3
57.5°	2602.4	1992.1	320.0	190.5	170.8	160.3	151.1	143.5	145.9	148.7	150.2
60°	2881.6	2250.7	420.3	192.4	168.9	155.9	144.4	134.3	133.9	135.8	136.3
62.5°	3254.9	2602.4	533.0	195.8	173.2	150.7	134.3	123.8	121.9	122.8	123.3
65°	3540.4	2770.3	497.5	192.9	182.3	146.8	124.7	113.7	109.9	108.9	108.9
67.5°	3424.3	2548.2	346.4	185.2	186.6	147.3	117.1	103.2	98.4	96.0	95.5
70°	2913.8	2069.8	240.9	177.5	181.8	146.3	108.9	94.5	88.3	84.9	84.4
72.5°	2302.0	1580.4	194.8	162.2	165.0	131.9	96.9	84.9	79.6	75.3	75.3
75°	1481.6	964.4	162.6	144.4	134.8	102.7	84.0	75.8	70.5	66.2	66.2
77.5°	498.5	357.9	126.2	122.3	100.8	77.2	70.5	65.3	60.9	57.1	56.6
80°	202.5	169.8	92.6	92.6	70.5	59.0	55.2	52.8	49.9	45.1	45.1
82.5°	117.5	103.2	64.8	56.1	47.0	40.8	38.4	36.0	36.0	32.6	32.6
85°	56.6	57.1	38.9	34.5	26.9	23.5	22.6	21.1	20.6	18.7	18.2
87.5°	30.7	31.2	19.7	15.4	10.6	9.1	7.7	7.2	6.7	6.2	6.2
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.

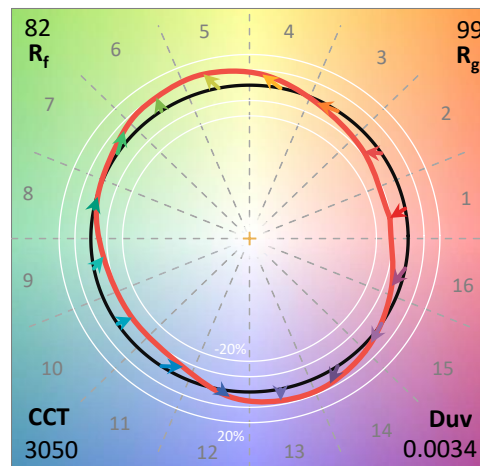
**Test Information**

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**

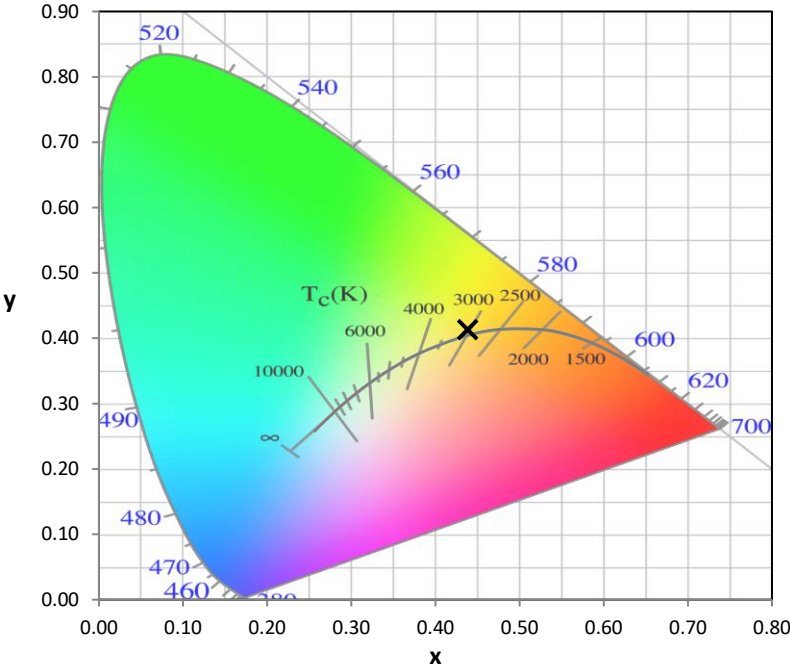
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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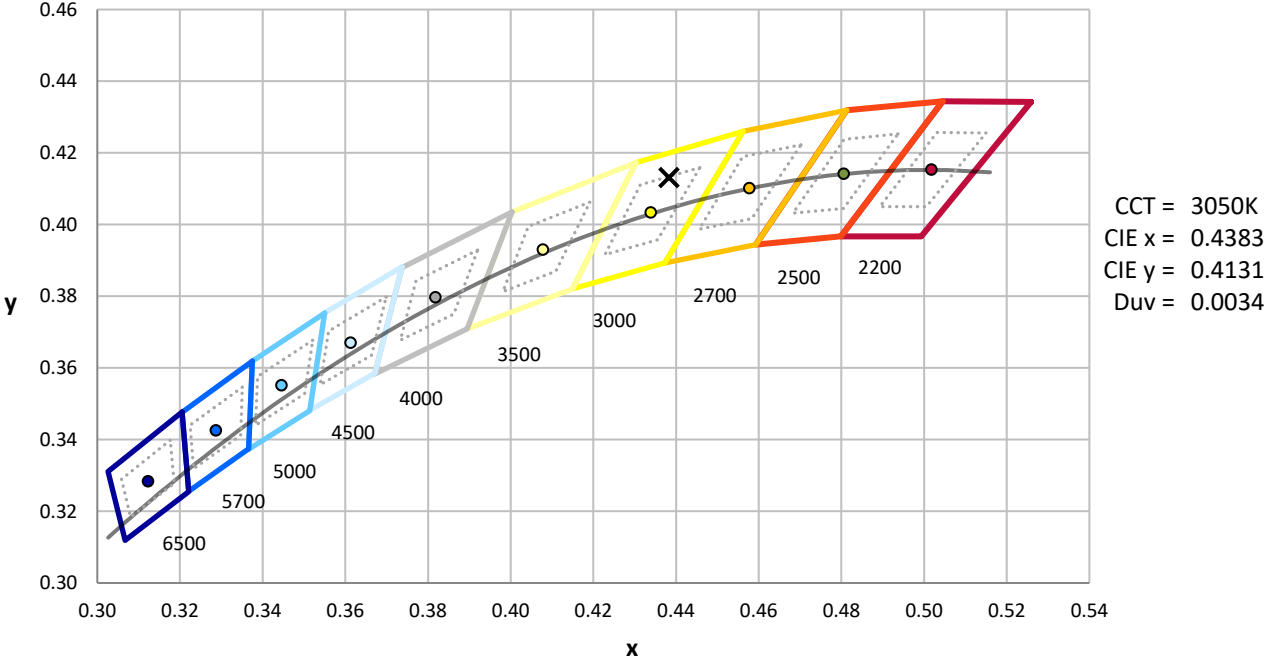
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



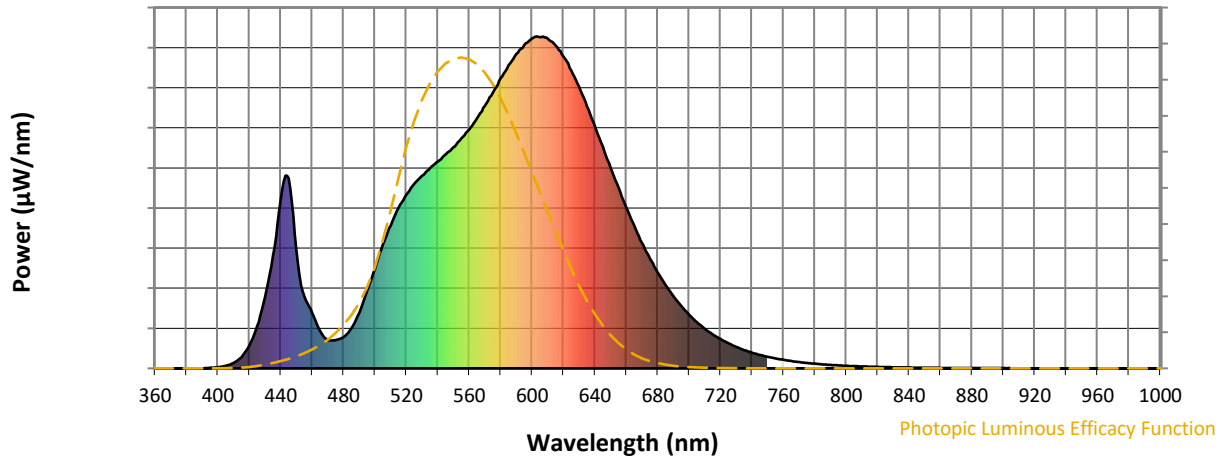
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

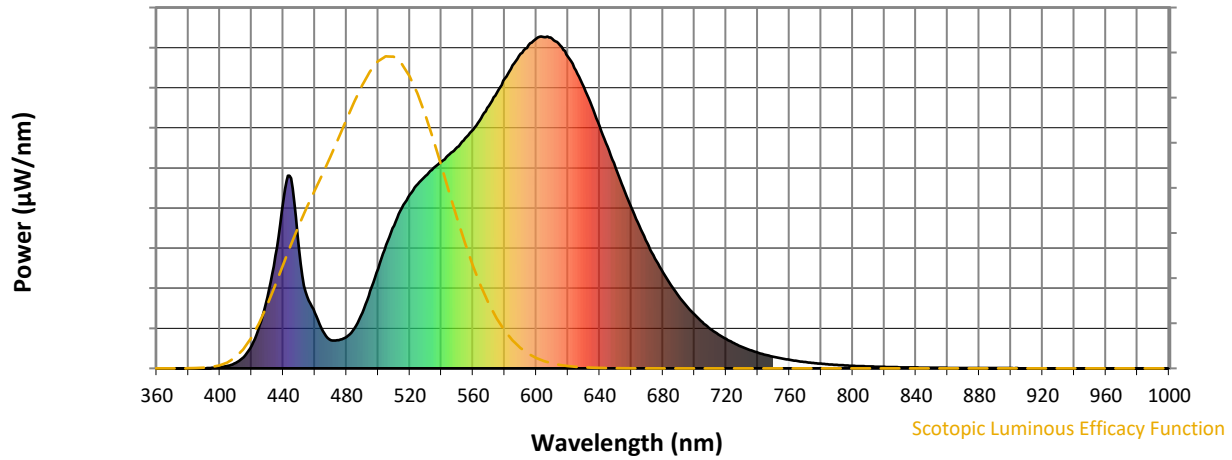


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**



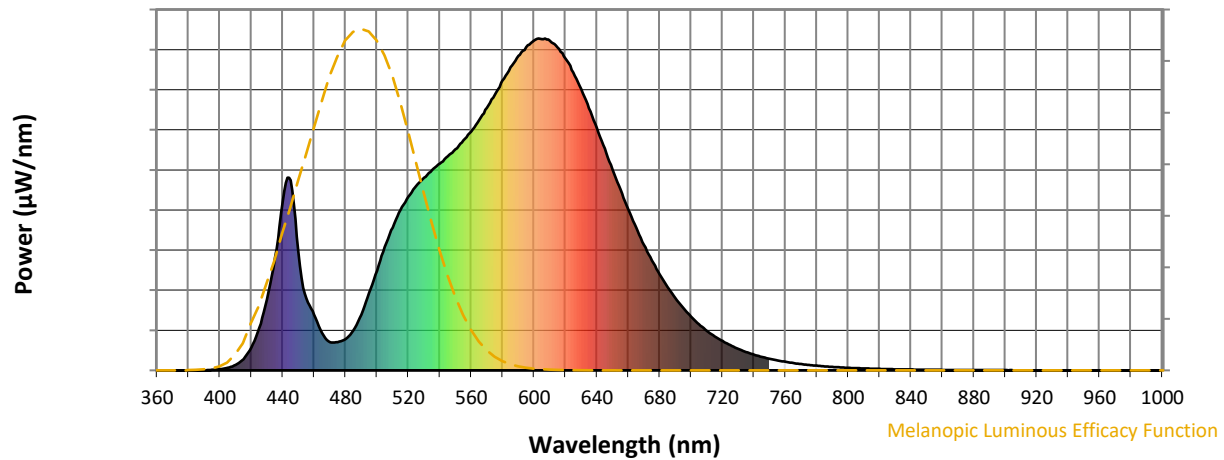
**Scotopic Lumens: NR**

**S/P: 1.27**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**



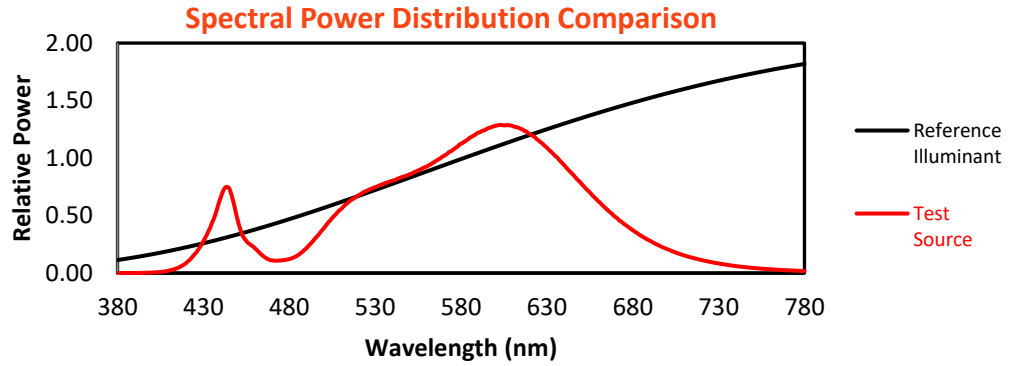
**Melanopic Lumens: NR**

**M/P: 2.32**

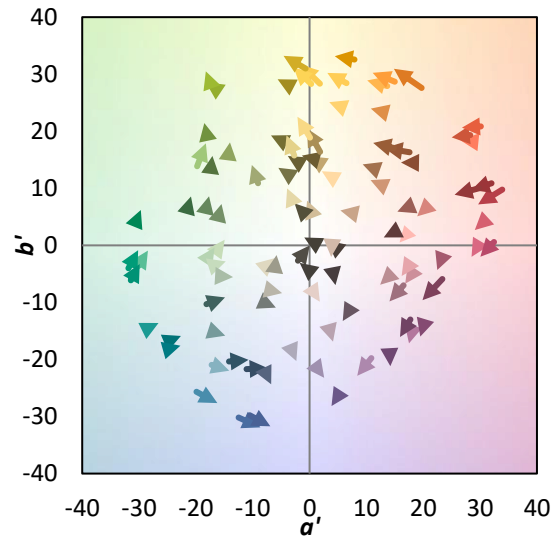
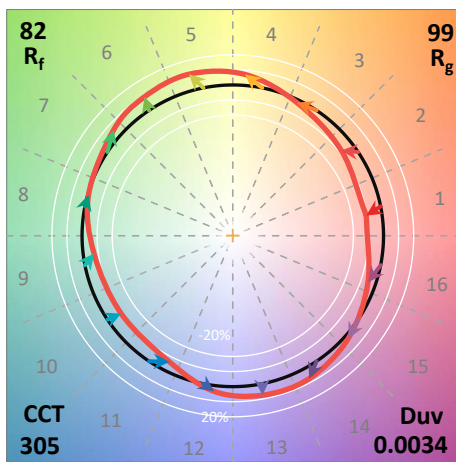
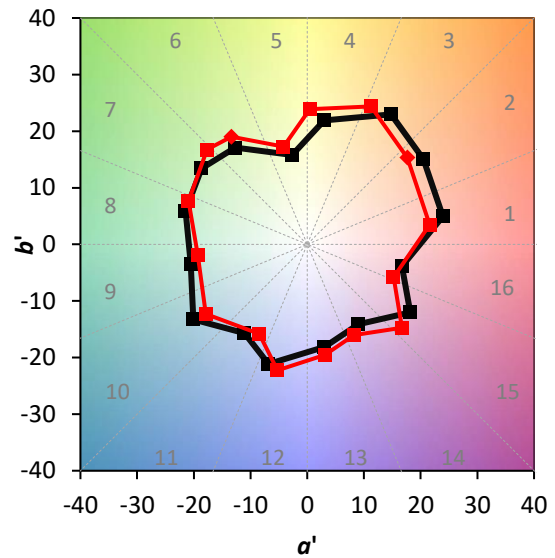
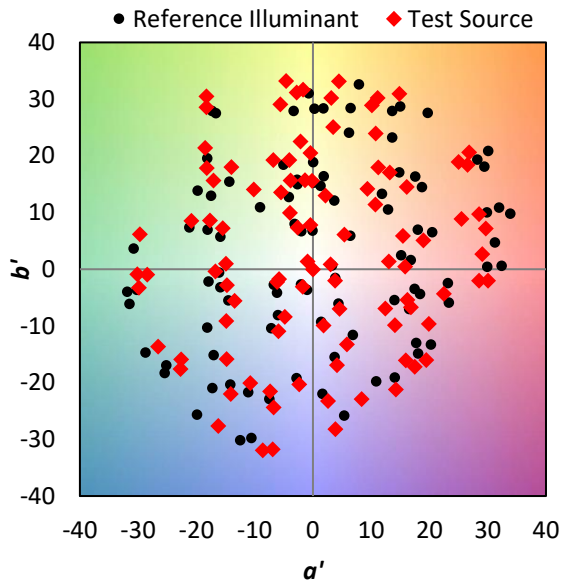
$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
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**

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



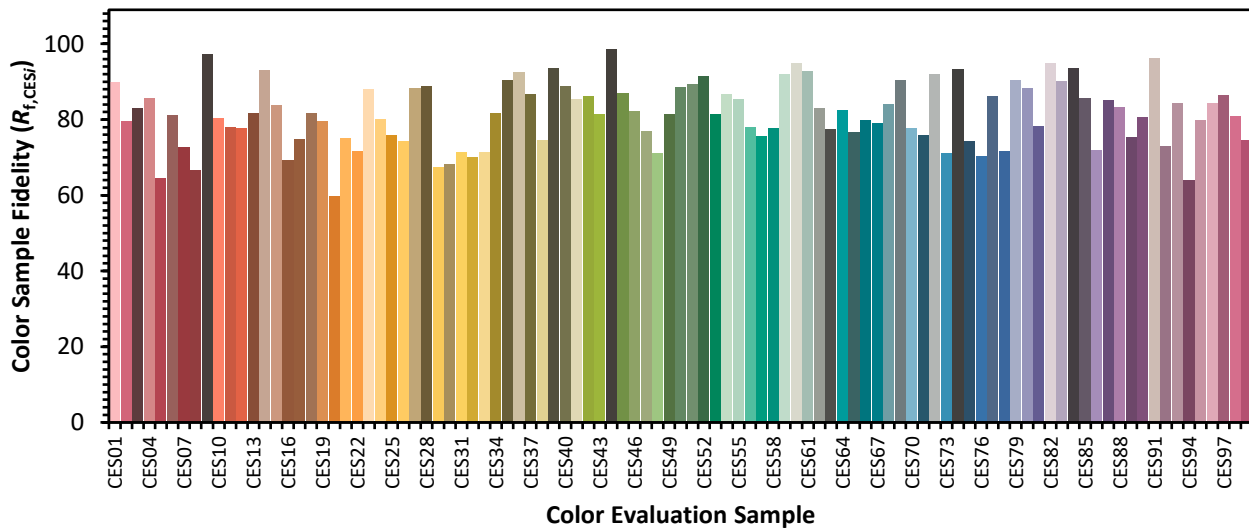
**Color Vector Graphics**



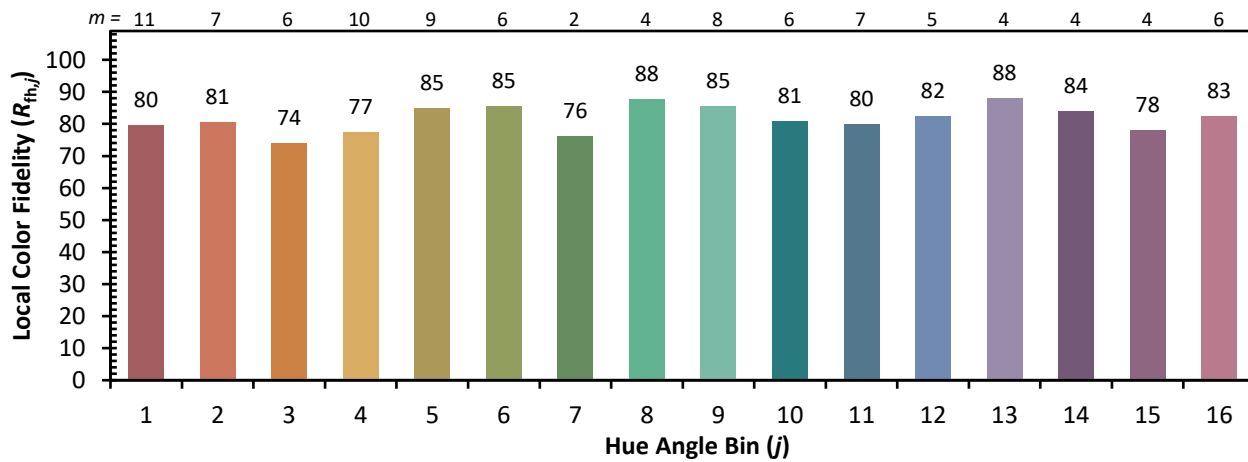
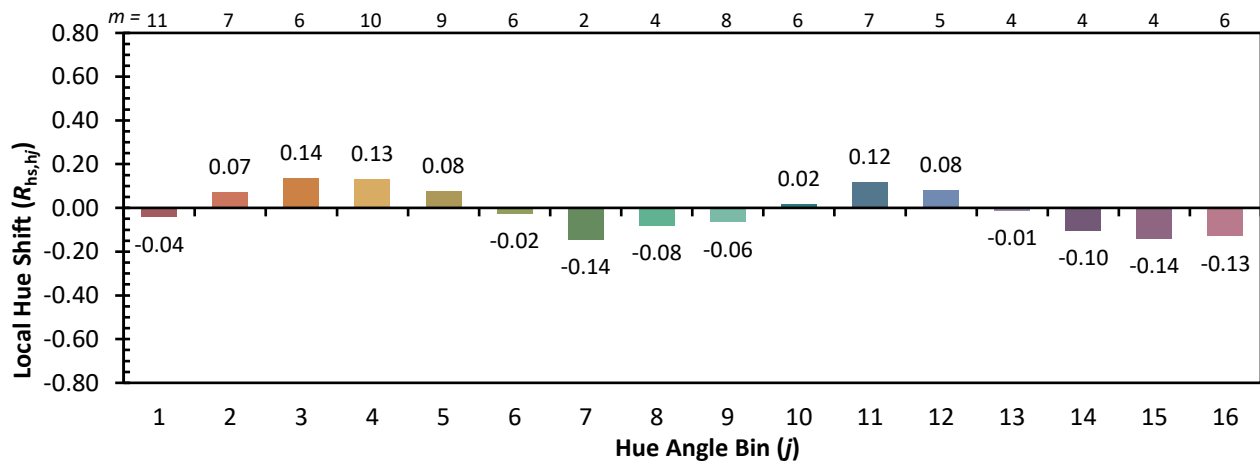
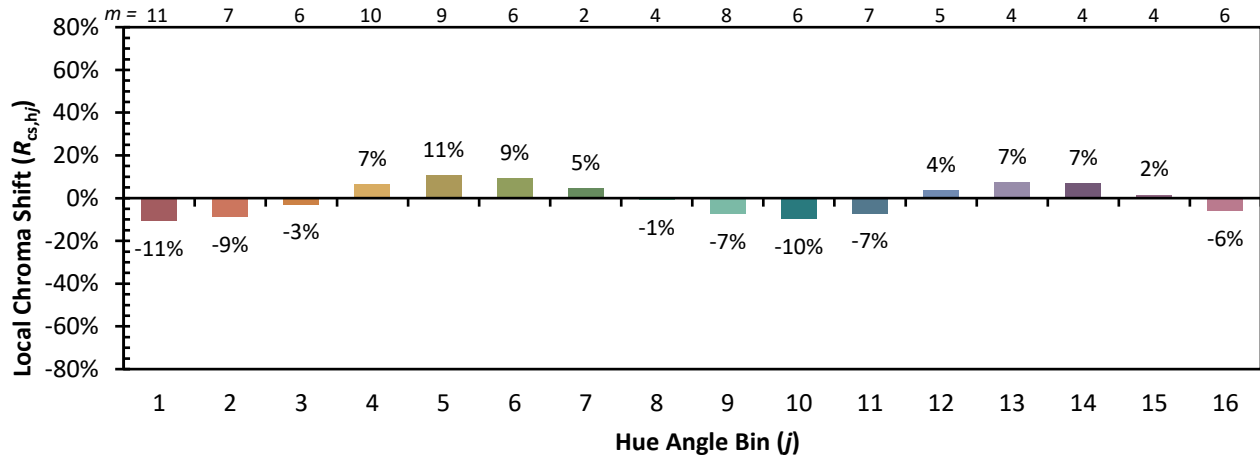


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

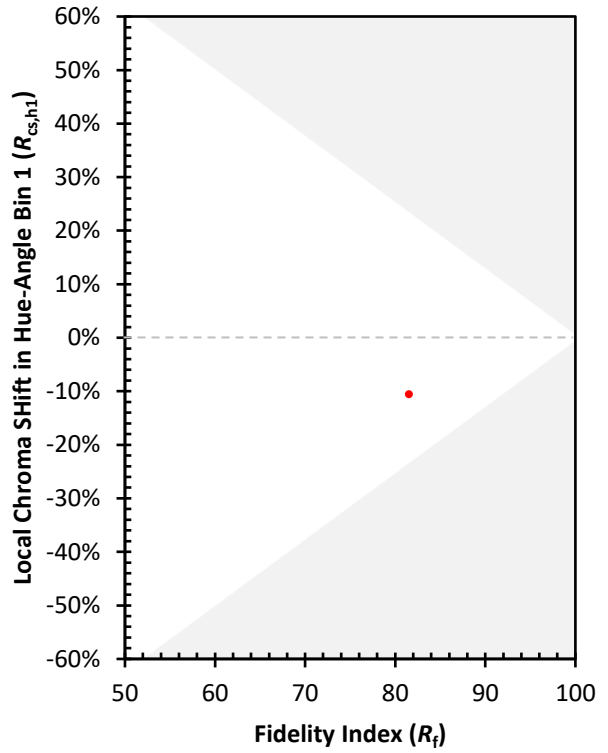
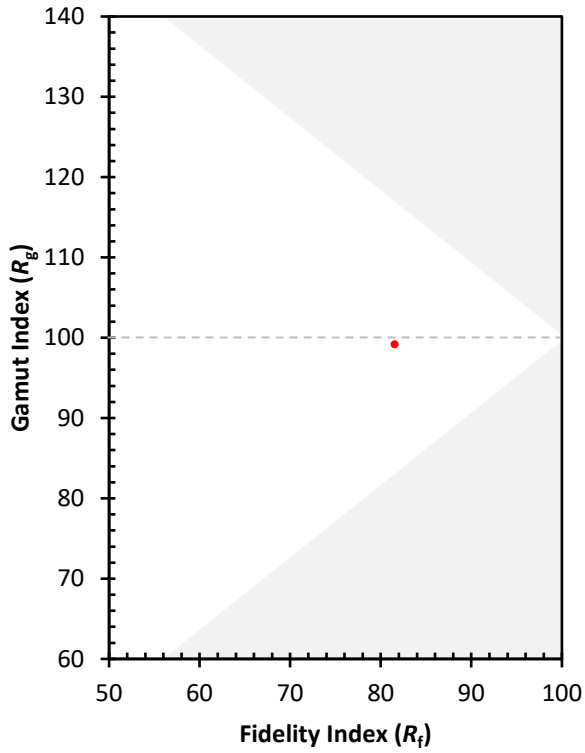
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)