

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: P629577

Luminaire Tested: GWS-SA1B-830-U-SLR-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P629577  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-44)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA1B-830-U-SLR-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (16) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

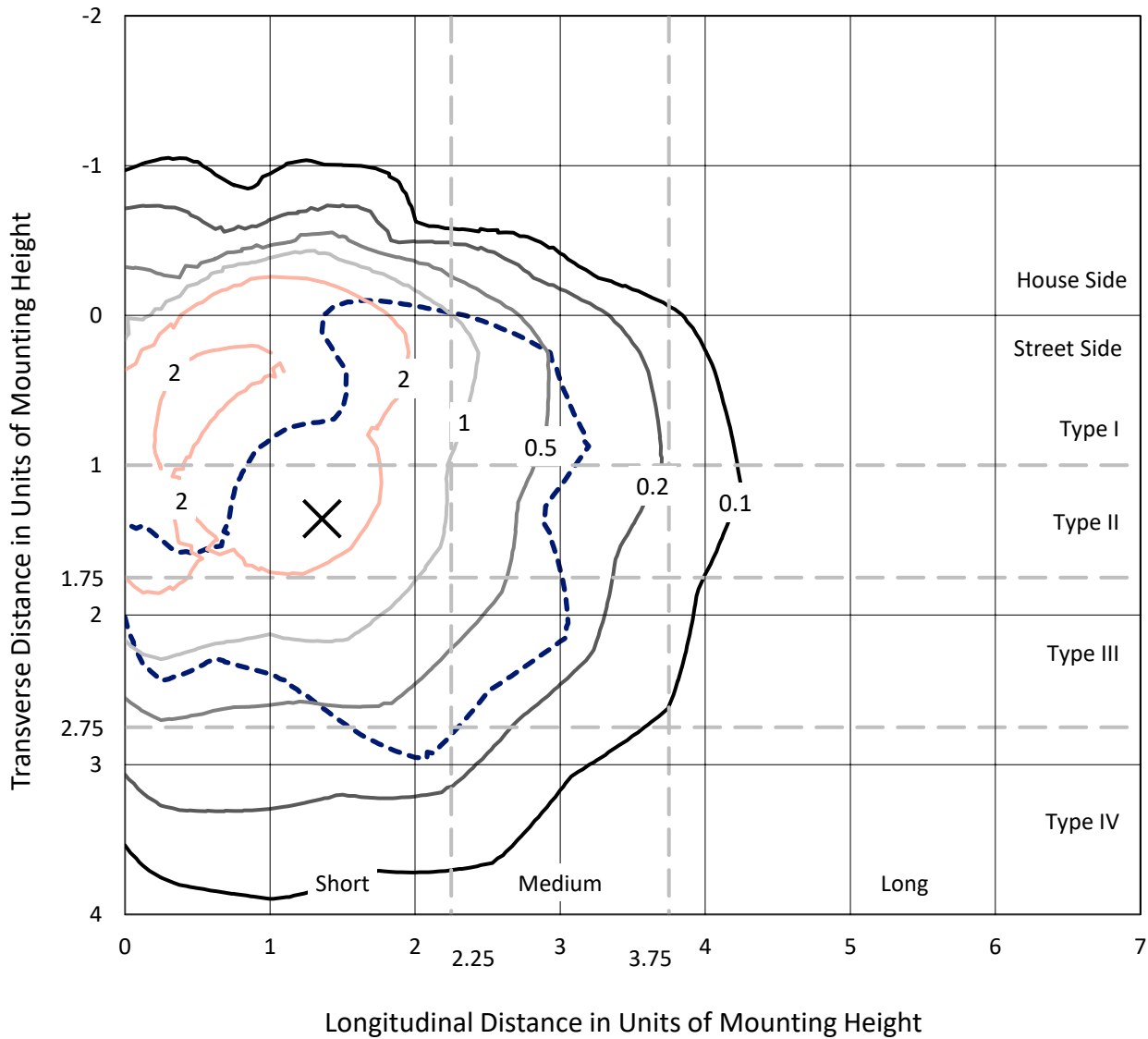
Lumens per Lamp: N/A  
Luminaire Lumens: 1766.9 lumens  
Efficiency: N/A  
Efficacy: 70.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 25  
Input Voltage (V): 120  
Input Current (Ain): NR  
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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### Iso-Footcandle Lines of Horizontal Illumination

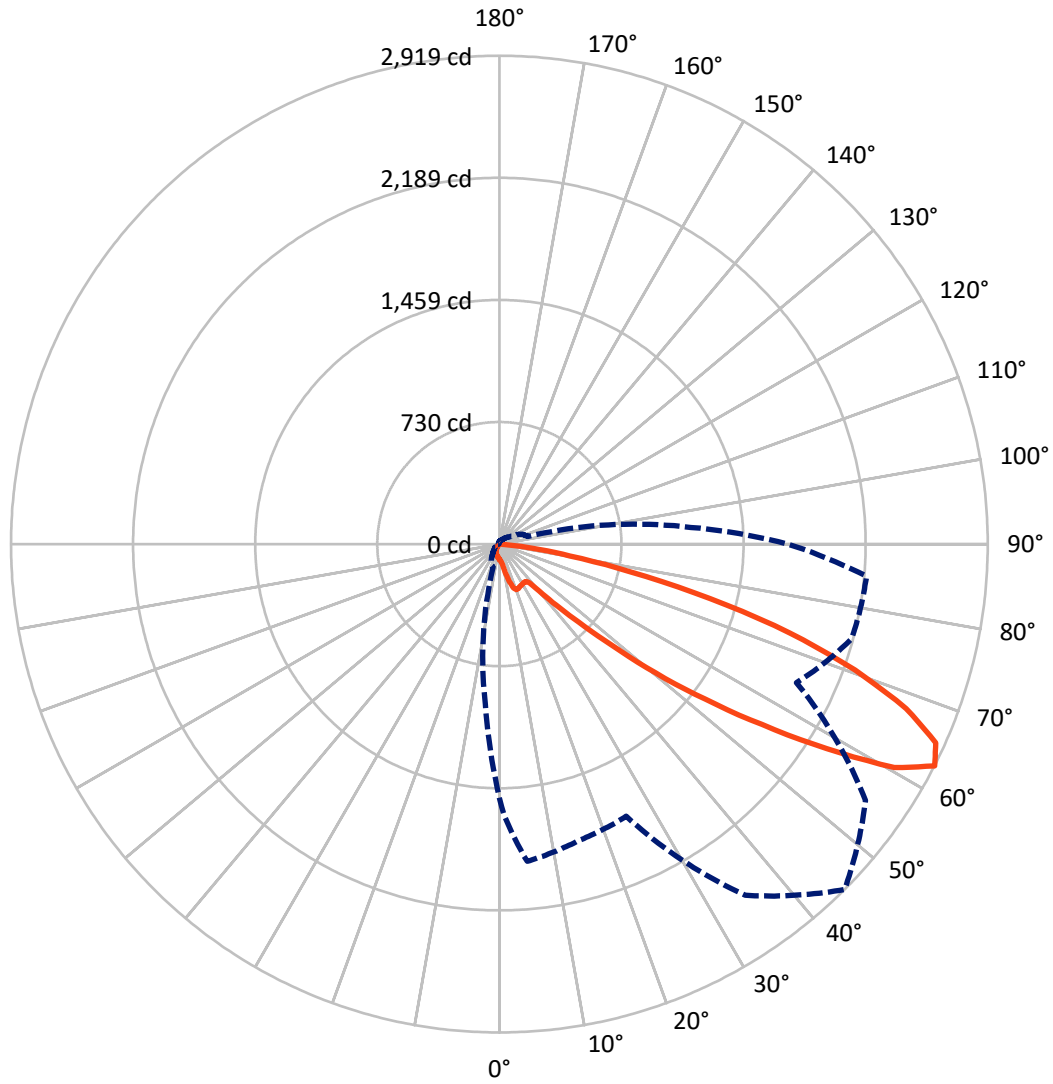
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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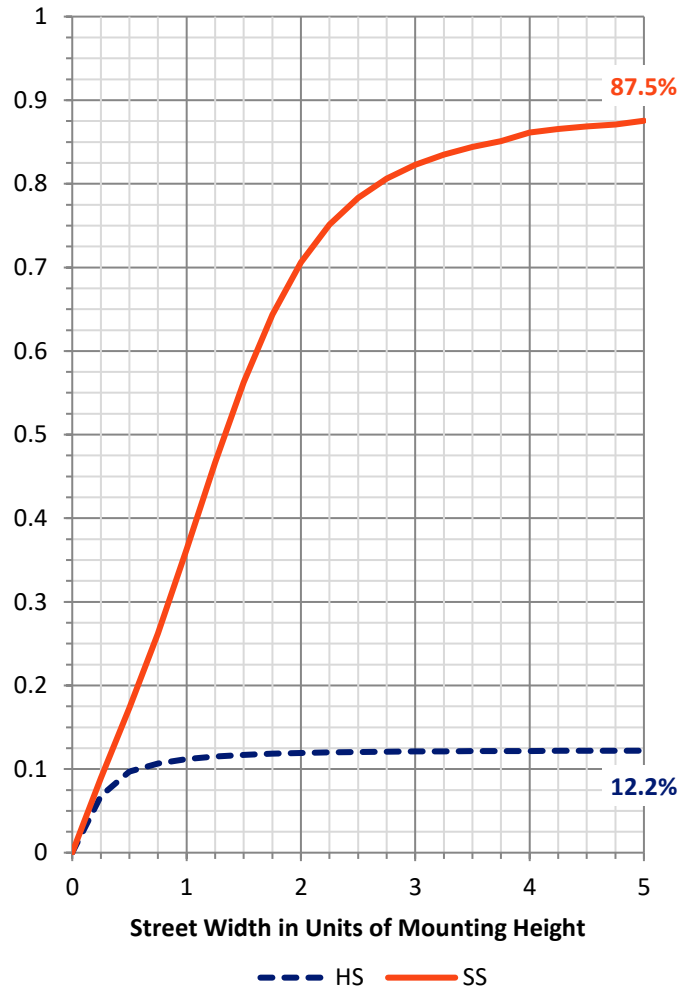
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	218.0	0.0	218.0
	% Fixture	12.3	0.0	12.3
<b>Street Side</b>	Lumens	1548.9	0.0	1548.9
	% Fixture	87.7	0.0	87.7
<b>Total</b>	Lumens	1766.9	0.0	1766.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	8.1	0.5
10°-20°	30.8	1.7
20°-30°	67.0	3.8
30°-40°	109.9	6.2
40°-50°	202.1	11.4
50°-60°	433.9	24.6
60°-70°	582.8	33.0
70°-80°	303.5	17.2
80°-90°	28.8	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°	1766.9	100.0
0°-180°	1766.9	100.0

**Coefficient of Utilization**



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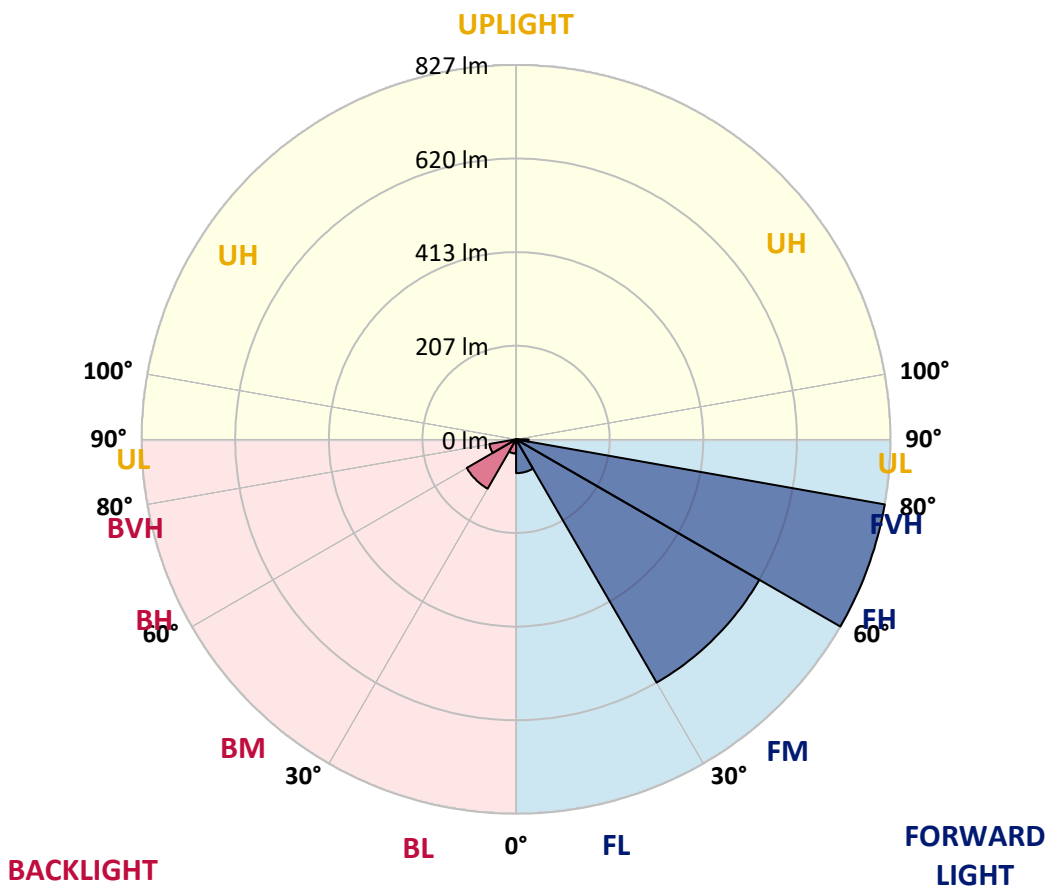
CATALOG NUMBER: GWS-SA1B-830-U-SLR-W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	74.6	4.2			
FM (30°-60°)	620.2	35.1			
FH (60°-80°)	826.6	46.8			G1/1800
FVH (80°-90°)	27.5	1.6			G1/100
BL (0°-30°)	31.3	1.8	B0/110		
BM (30°-60°)	125.7	7.1	B0/220		
BH (60°-80°)	59.7	3.4	B0/110		G0/110
BVH (80°-90°)	1.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8
2.5°	93.7	94.1	94.5	95.9	96.9	97.8	98.0	97.4	95.9	94.5	92.5
5°	90.8	91.2	92.7	96.5	100.4	103.5	104.5	103.9	100.4	95.9	91.2
7.5°	90.6	91.4	94.9	103.1	111.4	117.8	119.4	118.0	111.4	102.5	92.9
10°	98.0	99.4	104.5	119.2	134.5	145.7	150.2	144.1	133.7	117.4	101.6
12.5°	117.1	119.6	129.4	150.8	174.5	189.4	195.5	188.0	171.6	148.0	123.1
15°	147.4	151.0	165.7	197.8	225.7	239.0	241.0	236.7	217.8	191.6	158.2
17.5°	190.0	195.3	218.2	250.8	271.0	275.7	275.1	270.6	256.7	238.8	207.2
20°	241.0	247.4	269.8	296.8	298.8	293.3	290.2	287.6	282.9	279.8	255.1
22.5°	292.5	300.2	323.7	330.4	312.1	296.1	288.6	290.6	297.6	312.7	302.7
25°	343.7	351.0	373.1	354.9	318.2	291.6	282.1	287.0	303.5	336.1	349.0
27.5°	403.5	409.0	422.1	371.7	319.2	288.0	278.6	286.1	306.3	350.8	399.8
30°	465.7	469.0	462.7	376.1	315.7	282.5	275.1	286.1	311.2	360.6	438.0
32.5°	511.5	512.1	491.5	376.6	313.9	278.0	271.9	284.9	315.9	368.8	474.9
35°	558.6	555.5	519.0	382.7	318.8	279.6	274.3	288.4	323.3	378.4	507.4
37.5°	606.4	600.8	549.8	392.7	331.4	297.4	294.1	306.1	335.1	391.7	543.1
40°	655.3	647.8	581.9	407.8	359.6	357.8	369.0	367.6	367.6	408.6	579.8
42.5°	715.1	706.4	629.2	450.4	425.3	466.4	497.0	478.0	442.9	447.6	627.6
45°	794.1	786.6	711.3	532.1	528.4	622.7	663.9	626.4	539.0	537.6	707.4
47.5°	920.5	919.0	842.1	626.8	654.5	821.7	901.3	829.0	648.6	632.9	858.4
50°	1098.0	1093.7	1005.2	737.8	804.5	1068.2	1210.3	1089.9	781.1	744.1	1060.7
52.5°	1298.0	1302.5	1233.5	859.0	963.9	1342.5	1540.3	1388.6	924.9	885.6	1315.2
55°	1486.4	1512.1	1494.0	1000.9	1119.7	1645.4	1902.8	1716.4	1103.1	1070.7	1600.5
57.5°	1633.8	1706.2	1833.6	1207.0	1302.7	1999.7	2307.5	2071.7	1311.1	1371.3	1988.9
60°	1641.9	1737.9	2033.6	1638.3	1538.2	2303.6	2711.6	2418.9	1638.0	1881.7	2293.2
62.5°	1518.9	1621.7	1903.4	1834.2	1794.8	2562.2	2918.9	2672.0	1959.7	2180.7	2203.0
65°	1378.0	1481.9	1758.1	1611.9	1765.0	2551.2	2866.3	2677.9	1988.9	1977.5	2041.5
67.5°	1165.2	1258.4	1508.5	1426.8	1626.8	2428.1	2623.0	2509.1	1832.3	1849.5	1878.1
70°	850.5	940.3	1172.3	1176.4	1420.7	2206.2	2253.8	2238.1	1687.4	1705.6	1624.0
72.5°	614.3	690.0	890.3	964.7	1134.1	1850.1	1817.2	1877.9	1447.8	1519.1	1304.4
75°	441.7	498.4	653.1	839.2	899.0	1374.0	1300.9	1454.4	1161.7	1308.0	980.7
77.5°	179.2	199.2	257.0	565.3	590.8	924.3	796.4	1056.4	828.2	859.4	475.3
80°	7.3	8.2	10.6	291.9	405.1	520.0	426.1	564.7	547.0	346.1	112.3
82.5°	0.8	0.8	1.8	84.1	177.4	287.0	200.8	325.3	277.0	146.7	51.0
85°	0.2	0.2	0.4	9.6	41.6	45.9	27.1	99.8	128.8	60.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8	2.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8
2.5°	92.5	91.4	90.2	89.0	88.4	86.7	86.1	85.7	85.3	85.5	85.5
5°	89.4	87.1	84.5	81.8	80.4	78.8	78.0	77.6	77.8	78.6	78.6
7.5°	89.0	84.7	79.0	75.5	73.9	72.7	71.8	71.4	71.6	72.7	73.1
10°	95.7	88.2	78.0	72.0	70.2	69.0	68.2	67.6	67.1	68.0	68.2
12.5°	110.2	99.8	82.9	71.6	68.4	66.7	66.1	64.9	64.3	64.7	64.9
15°	140.2	122.3	92.7	73.3	66.7	64.9	63.9	62.9	61.8	61.6	61.8
17.5°	179.4	153.7	107.6	77.1	65.5	63.3	61.8	60.4	59.0	58.8	58.6
20°	228.0	192.3	128.4	83.3	64.5	61.8	59.8	57.8	55.9	55.3	55.3
22.5°	272.3	238.8	155.1	90.8	63.1	59.8	57.4	54.9	52.9	51.8	51.6
25°	326.3	288.2	187.2	99.6	61.0	57.1	54.5	52.0	50.0	48.8	48.4
27.5°	380.8	340.2	223.5	111.0	58.6	54.5	52.0	49.8	47.6	46.1	45.7
30°	433.7	396.3	264.3	125.3	56.7	51.8	49.8	47.6	45.5	43.3	42.7
32.5°	490.4	453.7	310.0	141.2	55.3	50.0	47.8	45.7	43.1	41.0	40.0
35°	545.1	512.9	360.4	156.7	53.9	48.4	45.9	43.9	41.0	38.8	37.3
37.5°	600.2	573.1	413.1	166.1	51.8	46.1	43.9	42.2	39.0	36.3	34.7
40°	658.6	635.3	470.0	162.3	50.0	43.7	42.5	40.6	36.9	33.9	31.8
42.5°	722.7	694.7	528.0	147.4	48.4	41.6	40.4	38.6	35.1	31.4	28.8
45°	803.3	759.8	575.5	124.9	49.2	39.6	37.1	36.7	33.5	28.8	25.5
47.5°	941.9	859.8	612.5	110.4	54.7	37.3	34.5	35.5	32.0	26.1	22.5
50°	1153.9	1025.6	647.0	109.4	63.1	36.3	32.0	34.7	30.6	23.5	19.8
52.5°	1356.0	1193.9	669.0	118.4	70.4	39.0	29.6	33.7	29.6	21.6	18.0
55°	1549.3	1291.1	629.6	124.9	77.4	46.9	27.8	32.0	28.4	20.6	17.3
57.5°	1757.6	1334.4	495.7	138.2	82.2	53.7	28.2	29.6	26.7	20.0	17.1
60°	1819.9	1279.1	299.2	155.5	79.6	55.7	31.2	26.3	24.5	18.8	16.5
62.5°	1723.2	1147.8	176.5	141.6	77.4	52.7	35.7	24.3	22.2	17.1	15.3
65°	1578.5	969.6	115.1	119.6	82.0	46.9	38.0	23.3	20.2	15.5	13.5
67.5°	1413.1	781.1	80.6	70.6	75.7	42.2	32.0	23.1	18.2	13.1	11.0
70°	1190.3	584.9	56.7	46.7	63.1	37.6	24.9	22.5	15.9	10.6	8.6
72.5°	919.6	366.1	42.2	30.2	44.9	30.6	19.8	19.0	12.9	8.8	6.5
75°	678.2	208.8	29.8	21.8	29.6	23.3	14.7	13.5	11.0	8.4	5.9
77.5°	354.1	104.5	18.6	16.7	16.9	14.5	10.6	9.8	10.2	8.4	5.5
80°	68.0	20.8	11.2	12.2	9.2	9.2	7.8	8.2	9.0	6.7	4.7
82.5°	28.4	4.5	6.1	6.9	5.7	6.3	6.3	6.5	6.3	4.9	3.5
85°	0.0	0.0	2.7	2.9	3.9	3.9	3.3	3.3	3.3	2.9	2.0
87.5°	0.0	0.0	0.0	0.0	0.2	0.6	1.2	1.4	1.6	1.2	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





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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8
2.5°	85.3	84.9	85.5	85.9	86.3	86.3	85.9	85.5	84.9	85.5	84.9
5°	78.8	79.4	80.4	80.8	81.2	80.4	80.0	78.8	77.8	78.0	77.6
7.5°	73.7	74.3	75.5	76.3	76.3	75.9	74.7	73.5	71.8	71.8	71.6
10°	69.0	69.8	71.2	72.2	72.7	72.2	71.0	69.4	68.0	68.0	67.4
12.5°	65.1	66.1	67.8	69.2	69.6	69.2	68.0	66.3	64.7	64.7	64.3
15°	61.8	63.1	64.9	66.5	67.1	66.5	65.1	63.1	61.4	61.6	61.0
17.5°	58.8	59.8	62.2	64.1	64.7	64.1	62.2	59.6	58.0	58.4	58.0
20°	55.3	56.5	59.0	61.0	61.6	61.0	59.0	56.1	54.5	54.5	54.7
22.5°	51.6	52.9	55.3	56.7	57.6	56.9	54.9	52.2	50.6	50.6	50.8
25°	48.4	49.0	50.8	52.2	52.5	51.8	50.2	48.2	46.9	47.6	47.8
27.5°	45.3	45.3	46.1	46.9	46.7	46.1	45.5	43.9	43.7	44.3	44.9
30°	42.0	41.0	40.6	40.0	39.8	39.6	40.2	40.2	40.6	41.4	42.0
32.5°	39.2	37.1	35.3	33.5	32.5	33.3	34.9	36.3	37.8	39.0	39.6
35°	35.9	32.7	29.6	27.1	25.5	26.7	29.4	32.0	34.5	36.1	37.1
37.5°	32.7	28.0	24.3	21.2	20.0	21.0	23.9	27.6	31.2	33.3	34.7
40°	29.2	23.3	19.0	16.5	15.3	16.3	19.2	22.9	27.8	30.4	32.2
42.5°	25.7	19.2	15.3	12.9	12.2	12.9	15.1	18.8	24.1	27.3	29.8
45°	22.2	15.9	12.2	10.4	9.8	10.4	12.2	15.3	20.6	24.3	27.1
47.5°	19.2	13.5	10.2	8.6	8.2	8.8	10.2	12.9	17.3	21.0	24.3
50°	16.7	11.8	8.8	7.3	6.9	7.6	8.8	10.8	14.7	18.0	21.4
52.5°	15.1	11.0	7.8	6.3	6.1	6.5	7.6	9.2	12.4	15.3	18.6
55°	14.7	11.0	7.1	5.7	5.5	5.9	6.7	8.0	10.8	13.3	16.1
57.5°	15.1	11.8	6.7	4.9	4.7	5.1	5.9	6.9	9.4	11.4	14.1
60°	15.1	12.0	5.9	3.9	3.7	4.1	4.9	6.1	8.4	10.0	12.2
62.5°	13.7	11.0	4.9	3.1	2.7	3.1	4.1	5.1	7.3	9.0	10.8
65°	11.8	9.4	4.1	2.2	1.8	2.2	3.3	4.3	6.3	7.8	9.8
67.5°	9.6	7.1	3.1	1.6	1.2	1.6	2.4	3.5	5.3	6.7	8.8
70°	7.1	5.1	2.4	1.4	1.2	1.4	2.2	3.3	4.7	6.1	8.2
72.5°	5.3	3.5	2.0	1.4	1.0	1.4	2.0	3.1	4.5	5.9	7.8
75°	4.5	2.9	1.8	1.2	1.0	1.2	1.8	2.9	4.1	5.5	7.3
77.5°	4.3	2.7	1.6	1.0	0.8	1.0	1.6	2.4	3.7	5.1	7.1
80°	3.7	2.2	1.4	0.8	0.6	0.8	1.4	2.0	2.9	3.9	5.5
82.5°	2.9	1.8	1.0	0.4	0.2	0.4	1.0	1.2	1.8	2.2	3.3
85°	1.8	1.0	0.4	0.0	0.0	0.0	0.4	0.8	0.8	1.0	1.6
87.5°	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8	91.8
2.5°	86.1	86.3	86.7	87.4	88.8	90.0	91.2	92.9	93.7	93.7
5°	78.0	78.2	78.4	79.2	81.2	82.9	85.5	88.8	90.4	90.8
7.5°	71.6	72.0	72.5	73.1	75.1	77.4	80.8	86.9	90.0	90.6
10°	68.0	68.6	69.4	70.6	72.5	74.9	80.8	91.8	96.9	98.0
12.5°	65.1	66.1	66.9	68.4	70.6	74.5	86.3	105.7	114.7	117.1
15°	62.2	63.5	64.7	66.1	68.6	75.9	96.9	130.6	145.5	147.4
17.5°	59.4	60.8	62.5	64.1	67.1	79.4	113.7	165.1	185.9	190.0
20°	56.1	58.0	60.2	62.2	65.7	84.9	136.9	206.1	232.3	241.0
22.5°	52.7	54.9	57.6	60.2	64.1	91.6	165.1	250.2	286.8	292.5
25°	49.8	52.0	54.5	57.1	61.4	99.8	199.2	304.9	338.2	343.7
27.5°	47.1	49.4	51.6	54.1	58.8	110.4	240.2	363.1	397.8	403.5
30°	44.3	46.9	49.2	51.6	56.3	123.5	287.6	427.6	460.4	465.7
32.5°	41.8	44.5	46.7	49.2	54.5	137.8	337.4	484.7	511.5	511.5
35°	39.8	42.7	44.3	47.6	53.1	146.9	384.5	539.2	559.4	558.6
37.5°	37.6	41.0	42.2	44.5	51.2	148.0	428.8	596.8	611.7	606.4
40°	35.3	39.0	40.8	42.0	49.2	139.6	477.4	649.6	662.3	655.3
42.5°	33.3	36.1	38.8	40.2	48.0	124.9	516.4	706.2	721.3	715.1
45°	31.2	33.7	35.3	38.0	48.8	114.7	549.8	772.1	798.6	794.1
47.5°	29.2	31.2	32.2	36.3	54.3	110.0	570.2	874.1	924.1	920.5
50°	26.9	29.4	29.4	35.9	62.5	111.6	588.0	1021.9	1099.2	1098.0
52.5°	24.7	27.3	26.9	39.0	68.8	119.2	608.2	1152.3	1286.8	1298.0
55°	22.5	24.9	25.3	45.1	72.5	125.7	530.0	1207.2	1447.0	1486.4
57.5°	20.0	21.4	26.3	49.8	71.2	144.7	363.1	1217.2	1549.3	1633.8
60°	17.3	18.6	29.8	48.8	67.4	133.7	228.6	1127.4	1534.8	1641.9
62.5°	15.1	17.1	31.4	43.1	68.6	115.9	145.7	960.9	1396.6	1518.9
65°	13.3	16.5	28.6	39.0	69.4	78.6	98.4	781.7	1261.7	1378.0
67.5°	11.8	18.4	23.5	34.7	59.6	55.3	67.6	607.4	1060.9	1165.2
70°	10.8	18.8	19.2	29.8	46.1	35.5	44.5	408.8	731.3	850.5
72.5°	9.8	13.9	14.5	23.9	29.8	21.6	28.8	233.9	533.1	614.3
75°	9.4	9.4	10.0	15.5	16.5	15.7	18.6	139.6	382.3	441.7
77.5°	8.8	7.1	6.3	10.0	9.0	11.2	11.0	62.0	165.7	179.2
80°	6.9	5.1	4.3	6.3	6.1	7.6	6.5	5.1	7.6	7.3
82.5°	4.3	3.3	3.1	3.9	3.5	3.9	3.1	0.8	0.8	0.8
85°	2.0	1.8	1.6	1.6	1.8	1.6	1.2	0.4	0.2	0.2
87.5°	1.0	1.0	0.8	0.6	0.8	0.8	0.6	0.2	0.0	0.0
90°	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

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

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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

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**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			



REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

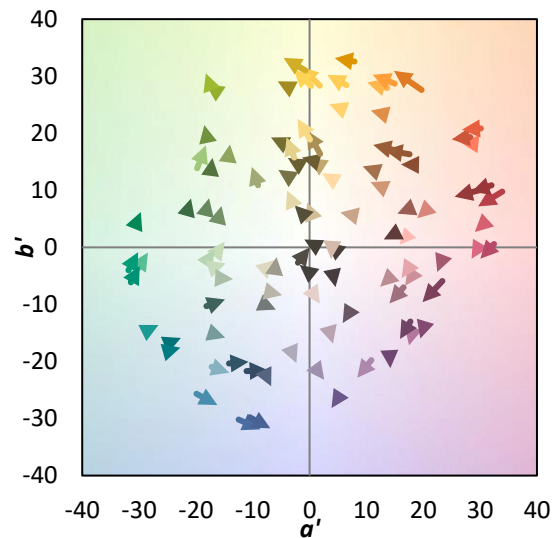
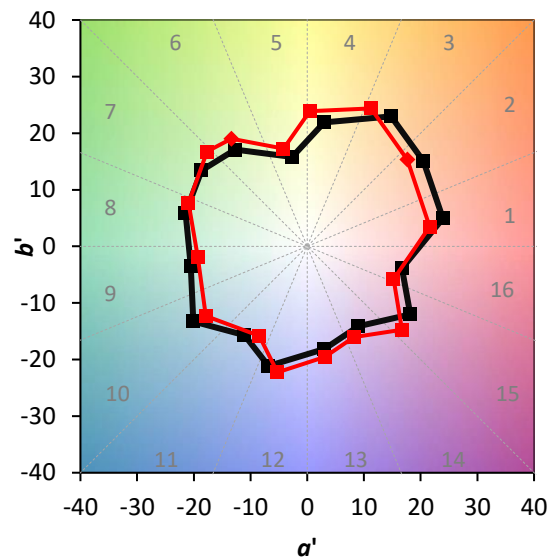
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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

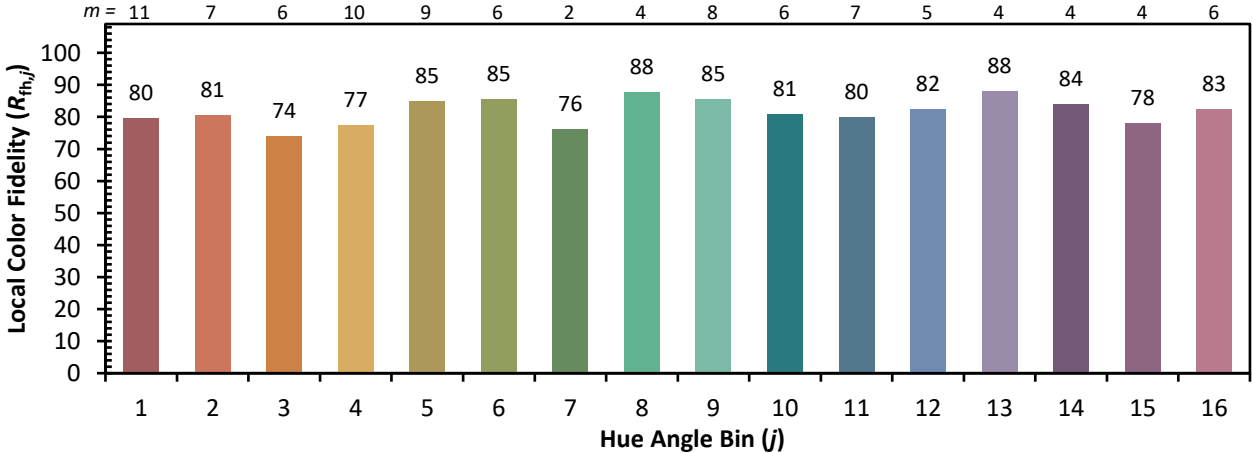


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)