

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: P633041

Luminaire Tested: GWS-SA2D-830-U-SLR-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P633041  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-41)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2D-830-U-SLR-W  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

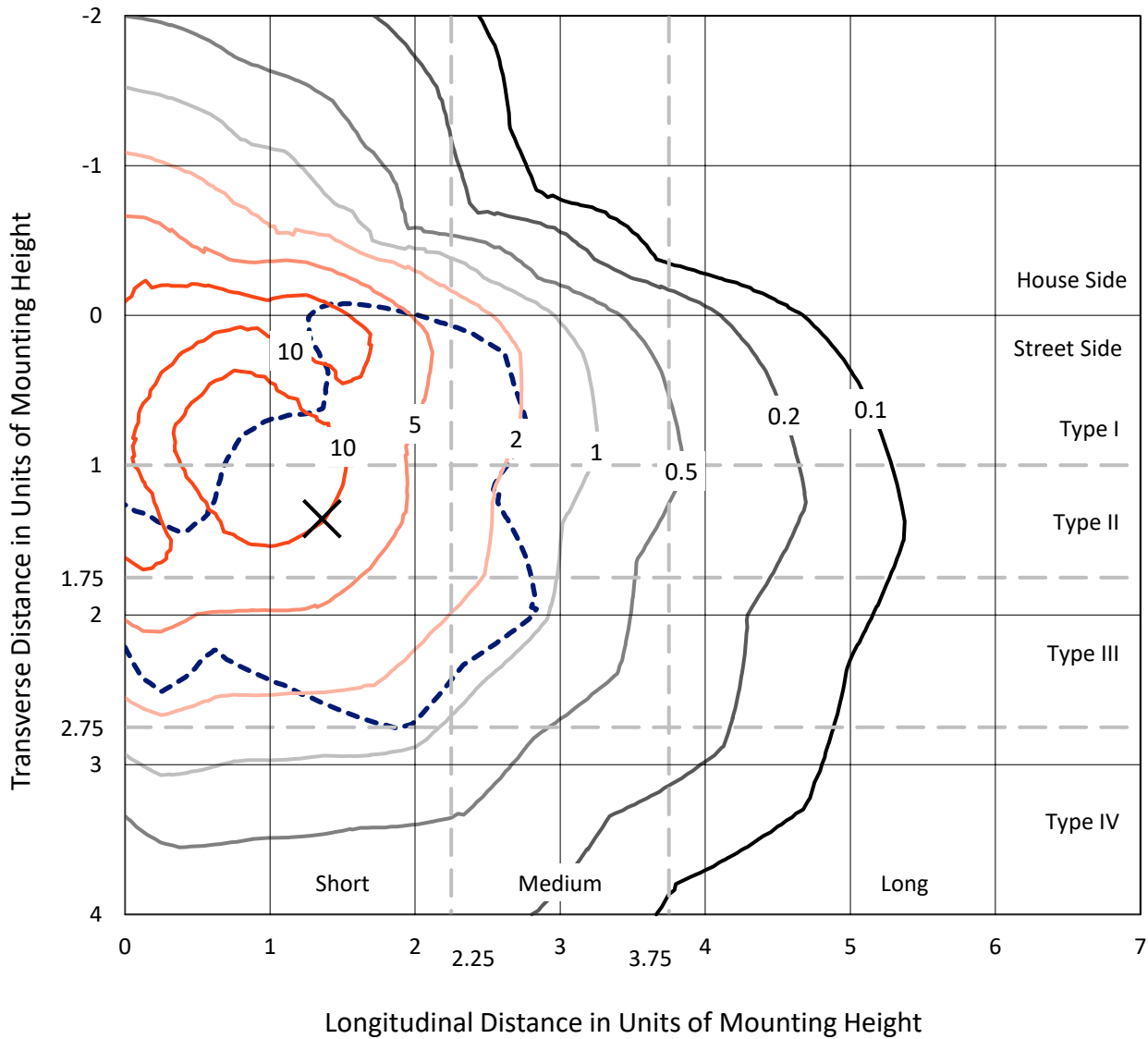
Lumens per Lamp: N/A  
Luminaire Lumens: 8782.3 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 82.1  
Input Voltage (V): 120  
Input Current (Ain): 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

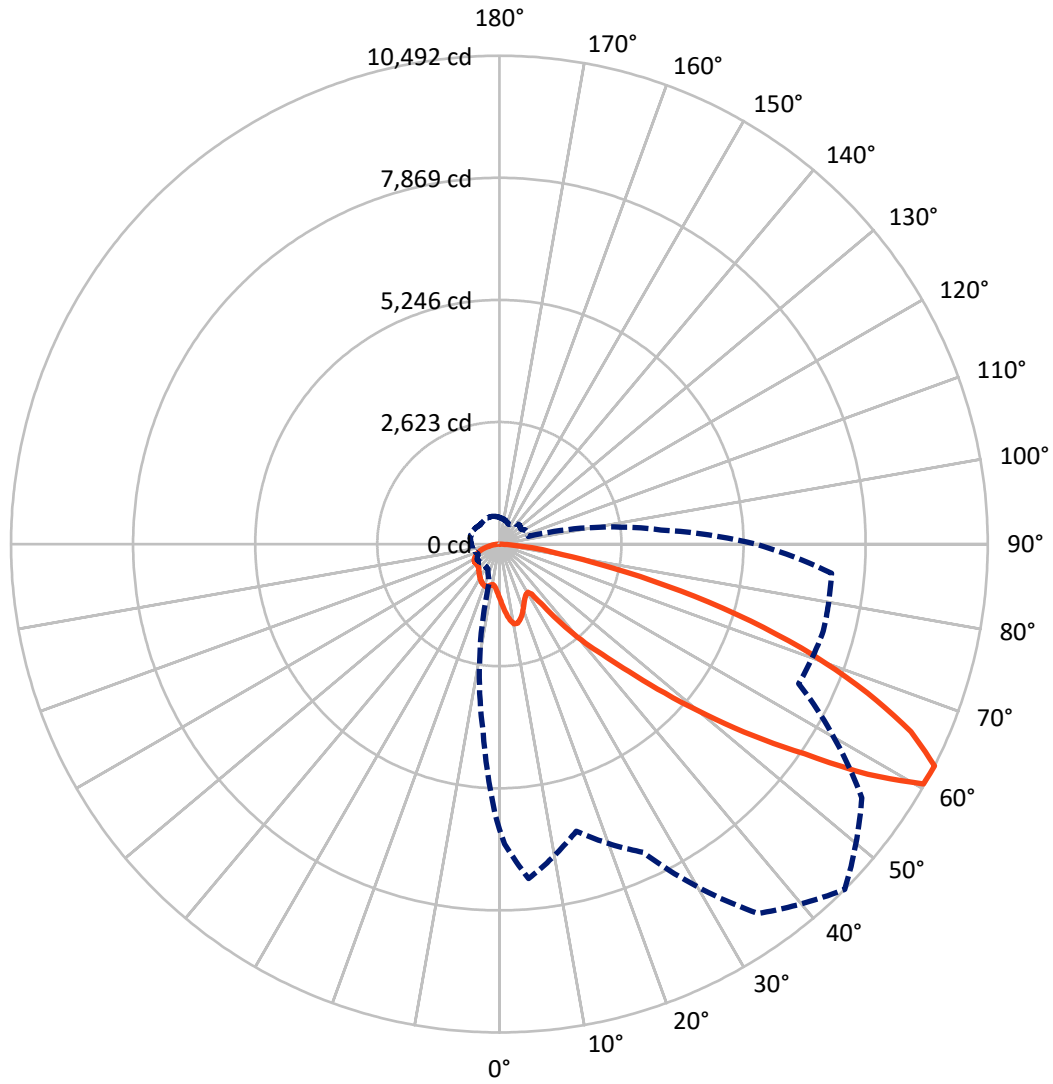
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.6 fc  
 Type III - 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	2095.6	0.0	2095.6
	% Fixture	23.9	0.0	23.9
<b>Street Side</b>	Lumens	6686.7	0.0	6686.7
	% Fixture	76.1	0.0	76.1
<b>Total</b>	Lumens	8782.3	0.0	8782.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.8	1.3
10°-20°	356.9	4.1
20°-30°	554.3	6.3
30°-40°	752.6	8.6
40°-50°	1192.7	13.6
50°-60°	2104.0	24.0
60°-70°	2341.0	26.7
70°-80°	1187.3	13.5
80°-90°	179.8	2.0
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°	8782.3	100.0
0°-180°	8782.3	100.0

**Coefficient of Utilization**



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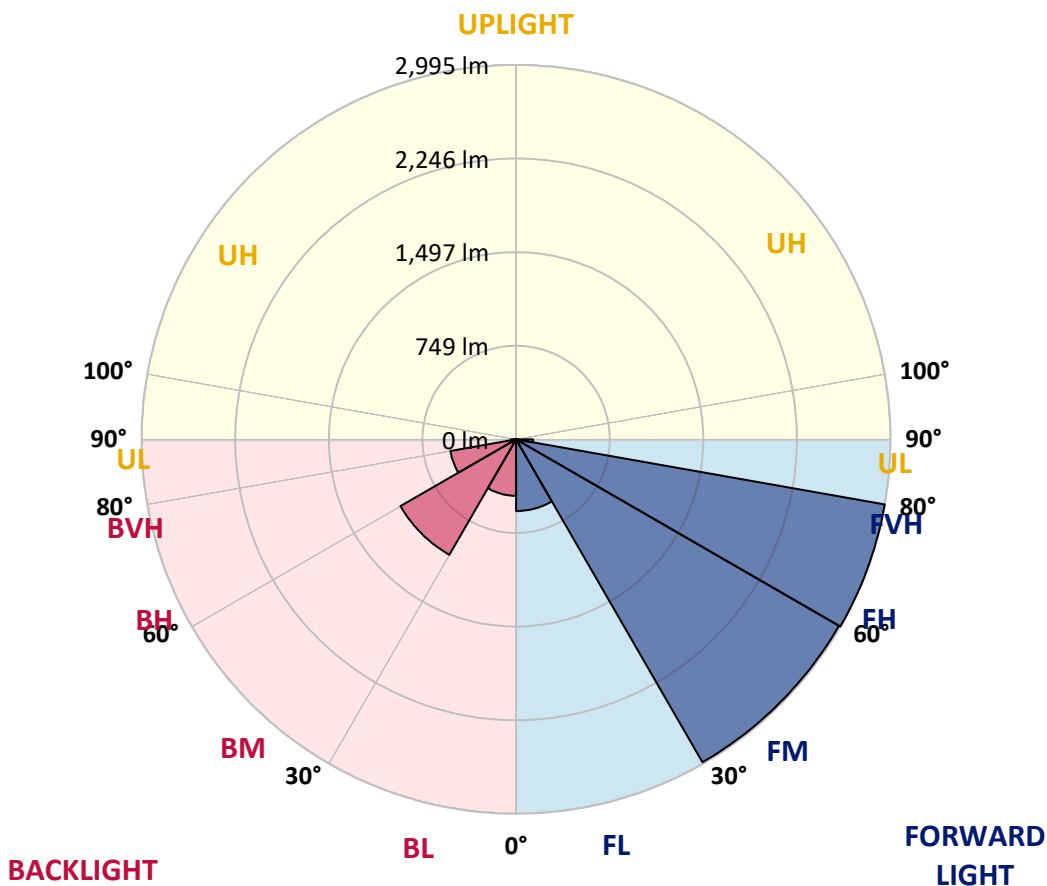
CATALOG NUMBER: GWS-SA2D-830-U-SLR-W

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	573.4	6.5			
FM (30°-60°)	2982.0	34.0			
FH (60°-80°)	2994.8	34.1			G2/5000
FVH (80°-90°)	136.5	1.6			G2/225
BL (0°-30°)	451.6	5.1	B1/500		
BM (30°-60°)	1067.3	12.2	B2/2500		
BH (60°-80°)	533.4	6.1	B2/1000		G2/1000
BVH (80°-90°)	43.3	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6
2.5°	1252.7	1252.0	1264.7	1283.9	1301.9	1309.9	1323.2	1321.8	1311.2	1297.2	1292.6
5°	1351.1	1353.8	1375.7	1418.3	1465.5	1485.4	1494.1	1490.7	1471.5	1446.8	1403.6
7.5°	1440.2	1444.9	1478.8	1542.6	1601.1	1627.7	1649.0	1645.0	1617.1	1571.2	1507.4
10°	1505.4	1510.7	1551.2	1626.4	1691.5	1714.8	1742.1	1743.4	1718.8	1657.0	1591.8
12.5°	1570.5	1575.8	1613.7	1682.2	1724.8	1725.4	1741.4	1750.0	1751.4	1722.8	1657.6
15°	1638.3	1643.0	1677.6	1716.1	1714.1	1676.9	1676.9	1693.5	1730.1	1750.7	1705.5
17.5°	1696.2	1702.2	1728.8	1716.1	1657.0	1589.8	1581.8	1603.1	1666.9	1746.1	1741.4
20°	1744.1	1748.7	1763.3	1679.6	1571.9	1484.1	1468.8	1493.4	1579.8	1717.5	1768.7
22.5°	1789.9	1792.6	1784.6	1631.7	1480.1	1379.7	1361.1	1387.0	1480.1	1666.9	1791.9
25°	1844.5	1841.8	1803.9	1581.8	1396.3	1297.2	1278.0	1307.2	1404.3	1599.8	1817.2
27.5°	1907.6	1897.7	1820.5	1528.0	1331.8	1236.1	1222.8	1254.0	1344.5	1537.9	1837.2
30°	1961.5	1942.2	1823.2	1480.1	1298.6	1210.1	1202.2	1231.4	1315.2	1496.1	1862.4
32.5°	2021.3	1994.7	1838.5	1467.5	1317.2	1272.6	1283.3	1285.3	1323.2	1484.1	1900.3
35°	2107.1	2072.5	1880.4	1504.0	1508.7	1583.8	1622.4	1570.5	1443.5	1510.7	1972.1
37.5°	2236.8	2192.9	1965.5	1662.3	1904.3	2072.5	2165.6	2047.3	1809.2	1611.1	2080.5
40°	2394.3	2338.5	2074.5	1954.8	2274.0	2543.3	2708.9	2535.3	2185.6	1861.8	2232.8
42.5°	2614.4	2555.9	2286.0	2242.1	2616.4	3017.4	3233.5	2974.8	2517.4	2185.6	2476.8
45°	2998.1	2941.6	2673.6	2530.0	3017.4	3601.2	3904.4	3544.6	2854.5	2510.7	2932.9
47.5°	3706.9	3640.4	3249.4	2849.1	3474.8	4359.2	4783.4	4259.4	3204.9	2883.1	3698.9
50°	4558.0	4494.1	3972.2	3226.8	3980.2	5169.7	5759.5	5099.2	3608.5	3335.9	4614.5
52.5°	5581.9	5570.0	5003.5	3704.2	4506.1	6034.1	6842.6	6029.4	4050.6	3945.6	5651.8
55°	6504.8	6621.9	6313.3	4432.3	5185.6	7119.9	7956.3	7044.1	4650.4	4953.6	6866.5
57.5°	7002.2	7316.7	7790.8	5917.7	6173.7	8417.8	9330.7	8282.8	5681.0	6631.8	7992.9
60°	6673.7	7030.1	7889.2	7036.1	7153.8	9457.7	10465.0	9324.1	6693.0	7796.8	7929.1
62.5°	6127.2	6447.0	7211.0	6383.2	7305.4	9686.4	10491.6	9505.6	7095.3	7205.7	7162.4
65°	5478.9	5801.4	6610.6	5572.0	6823.3	9143.2	9717.7	8971.7	6372.5	6510.2	6526.1
67.5°	4617.8	4915.7	5739.5	4954.3	6219.6	8346.0	8529.5	8211.0	5868.5	6087.9	5858.5
70°	3450.2	3718.9	4446.3	4026.0	5242.8	7307.4	7159.1	7206.3	5302.7	5520.8	4893.8
72.5°	2357.8	2559.9	3183.6	3163.7	4014.7	5849.9	5643.1	6090.6	4429.0	4718.2	3730.8
75°	1649.0	1806.6	2301.3	2499.4	3034.7	4335.9	4018.7	4558.6	3458.9	3871.8	2722.1
77.5°	1012.0	1116.4	1453.5	1851.8	1952.2	2967.5	2496.1	3430.3	2428.9	2823.9	1815.9
80°	506.0	556.5	706.1	1164.3	1294.6	1748.7	1378.4	1991.4	1643.7	1748.7	1004.7
82.5°	152.9	168.9	206.8	442.2	670.9	1006.7	814.5	1156.9	897.6	819.8	395.6
85°	40.6	45.9	57.2	131.0	235.4	361.0	275.3	560.5	430.2	302.5	148.9
87.5°	3.3	3.3	2.7	2.7	1.3	0.0	0.0	39.9	80.5	45.9	25.9
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°	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6
2.5°	1269.3	1266.7	1239.4	1219.4	1196.2	1173.6	1150.3	1129.7	1106.4	1083.1	1076.5
5°	1371.7	1353.1	1295.2	1246.7	1198.8	1156.9	1120.4	1082.5	1051.9	1022.0	1010.7
7.5°	1462.1	1429.6	1345.8	1272.0	1205.5	1153.6	1099.8	1044.6	1001.4	958.8	948.2
10°	1543.9	1500.7	1395.0	1301.9	1228.1	1168.9	1105.7	1031.9	969.4	917.6	903.6
12.5°	1604.4	1557.2	1437.5	1330.5	1246.7	1180.2	1117.7	1052.6	986.7	919.6	904.3
15°	1652.3	1603.1	1472.8	1352.4	1247.4	1161.6	1101.1	1078.5	1057.9	992.0	964.1
17.5°	1690.9	1639.0	1503.4	1365.7	1229.4	1105.1	1052.6	1085.8	1138.3	1097.1	1044.6
20°	1726.1	1673.6	1526.6	1375.0	1189.5	1027.3	998.0	1068.5	1147.6	1146.3	1099.1
22.5°	1764.7	1713.5	1560.5	1380.4	1133.7	948.2	965.5	1043.2	1107.7	1127.0	1097.8
25°	1813.9	1768.7	1607.8	1392.3	1070.5	893.6	941.5	1010.7	1064.5	1069.2	1051.9
27.5°	1871.1	1837.2	1678.2	1420.3	1009.3	865.7	913.6	964.8	1014.0	1016.0	995.4
30°	1933.6	1911.0	1743.4	1443.5	963.5	857.1	877.7	918.9	950.2	955.5	937.5
32.5°	2013.4	1993.4	1801.2	1428.2	936.2	855.1	844.4	865.7	891.6	891.6	877.7
35°	2123.1	2095.1	1862.4	1369.7	903.0	847.1	809.2	815.2	826.5	828.5	820.5
37.5°	2278.7	2232.8	1924.3	1254.0	848.4	818.5	768.6	761.3	765.3	770.6	768.6
40°	2471.5	2396.3	2014.7	1115.1	783.3	763.3	726.7	712.8	709.5	720.1	724.1
42.5°	2714.2	2599.1	2111.8	985.4	724.1	700.2	677.5	665.6	660.3	678.2	688.8
45°	3101.8	2912.3	2204.8	857.1	690.8	646.3	631.0	622.4	625.0	646.3	659.6
47.5°	3771.4	3390.4	2293.3	776.0	688.2	607.7	589.1	591.1	598.4	621.0	637.0
50°	4618.5	4030.7	2352.5	742.0	696.2	584.5	559.9	570.5	581.8	603.7	622.4
52.5°	5480.9	4627.1	2282.0	723.4	695.5	585.1	532.6	564.5	569.8	591.8	611.7
55°	6074.0	4693.6	1971.5	694.8	684.9	611.7	511.3	561.9	565.2	585.1	603.1
57.5°	6300.0	4466.2	1503.4	702.8	652.9	632.3	502.0	543.2	567.2	584.5	603.1
60°	6026.8	4037.3	913.6	723.4	601.7	631.0	508.0	509.3	550.5	579.8	598.4
62.5°	5511.5	3486.8	641.6	664.9	564.5	595.8	522.0	469.4	521.3	556.5	573.2
65°	4921.0	2839.2	489.4	572.5	546.6	541.2	526.6	434.2	481.4	516.0	530.6
67.5°	4306.0	2206.8	397.6	426.9	494.0	489.4	481.4	402.9	434.2	458.8	475.4
70°	3531.3	1543.9	335.8	320.5	423.5	438.8	420.9	363.7	373.7	398.9	412.2
72.5°	2583.2	962.1	275.9	264.6	340.4	383.7	374.3	320.5	325.1	349.1	359.7
75°	1857.8	550.5	221.4	218.1	260.0	328.5	309.8	275.9	281.3	299.2	306.5
77.5°	1180.9	306.5	170.9	175.5	186.2	245.4	264.6	236.0	236.0	246.7	252.7
80°	632.3	175.5	125.0	127.0	130.3	187.5	208.8	182.9	182.9	175.5	182.9
82.5°	258.0	101.1	85.8	79.8	87.1	128.3	146.3	116.4	121.7	109.7	112.4
85°	85.1	50.5	42.6	41.9	41.2	56.5	70.5	57.8	69.2	43.9	45.9
87.5°	11.3	9.3	5.3	4.0	4.7	2.0	4.0	4.7	4.7	3.3	3.3
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°	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6
2.5°	1071.8	1066.5	1047.2	1051.9	1048.6	1043.2	1048.6	1038.6	1046.6	1049.2	1065.9
5°	1002.0	989.4	970.8	961.5	959.5	954.1	954.8	950.2	951.5	962.8	981.4
7.5°	939.5	927.6	912.9	906.3	900.3	894.3	893.6	893.0	898.3	908.3	926.2
10°	894.3	887.7	881.7	884.3	881.7	879.0	874.4	874.4	883.0	901.0	922.9
12.5°	894.3	893.0	894.3	902.3	901.6	902.3	896.3	899.6	923.6	954.1	985.4
15°	942.2	931.5	931.5	935.5	934.2	934.2	934.2	948.2	1002.7	1049.9	1083.1
17.5°	1000.7	969.4	956.1	954.1	953.5	953.5	956.1	986.1	1071.2	1121.0	1140.3
20°	1041.3	982.1	960.1	951.5	952.2	953.5	961.5	1002.7	1096.4	1121.7	1117.1
22.5°	1048.6	972.1	945.5	932.9	934.9	936.2	948.2	992.0	1061.9	1065.9	1056.5
25°	1014.7	944.2	915.6	905.6	908.3	907.6	918.2	950.2	1000.0	998.7	993.4
27.5°	964.1	899.6	878.3	871.7	876.4	871.0	874.4	899.0	937.5	936.2	934.2
30°	912.3	856.4	837.1	833.8	839.8	831.8	832.5	853.1	879.7	878.3	877.7
32.5°	860.4	813.2	795.9	795.9	801.9	793.2	794.6	812.5	830.5	825.2	825.2
35°	811.2	777.9	764.0	761.3	766.0	760.0	762.7	779.3	785.9	778.6	774.0
37.5°	768.0	753.3	739.4	730.1	730.7	731.4	739.4	752.0	748.0	737.4	731.4
40°	728.1	728.1	714.8	697.5	695.5	700.2	713.5	727.4	716.1	704.1	696.8
42.5°	699.5	705.5	692.8	675.6	671.6	679.5	694.2	704.1	690.8	677.5	667.6
45°	672.9	687.5	678.9	659.6	654.3	663.6	682.2	686.2	668.2	655.6	648.3
47.5°	654.3	674.2	668.2	649.6	641.6	654.9	674.2	673.6	650.9	637.7	631.7
50°	641.0	666.2	665.6	649.6	641.0	657.6	674.9	666.2	641.6	627.7	621.7
52.5°	630.3	665.6	670.2	660.9	654.9	669.6	680.2	663.6	635.0	620.4	615.7
55°	625.7	668.2	671.6	662.9	657.6	670.9	680.2	668.9	635.0	621.7	617.7
57.5°	627.0	664.9	665.6	653.6	644.3	660.9	675.6	672.2	642.3	627.0	622.4
60°	619.0	647.0	648.3	629.7	619.0	639.0	664.9	662.9	639.0	623.0	614.4
62.5°	592.4	617.0	617.7	600.4	585.1	613.7	642.3	641.6	619.7	603.7	593.8
65°	547.9	573.8	580.5	563.8	551.9	582.5	612.4	611.1	589.1	574.5	564.5
67.5°	492.7	520.6	533.3	522.0	517.3	545.2	573.2	572.5	554.5	540.6	531.9
70°	425.5	448.8	470.1	470.1	466.8	498.7	528.6	525.9	509.3	498.7	492.0
72.5°	369.7	387.6	394.3	400.9	410.9	444.2	469.4	471.4	459.5	454.1	459.5
75°	314.5	325.8	331.8	326.5	343.8	378.3	411.6	414.9	402.3	393.6	395.6
77.5°	258.7	271.3	277.3	265.3	264.0	307.9	348.4	355.7	345.1	331.8	335.8
80°	186.8	203.5	213.4	205.5	202.8	222.1	277.9	285.9	275.9	265.3	271.3
82.5°	114.4	123.7	126.3	134.3	150.9	158.9	178.9	205.5	198.1	188.8	205.5
85°	45.2	53.9	59.8	67.8	79.1	93.8	110.4	131.7	119.7	115.7	136.3
87.5°	2.7	0.7	0.0	1.3	11.3	21.9	47.2	65.2	54.5	58.5	70.5
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: P633041  
 CATALOG NUMBER: GWS-SA2D-830-U-SLR-W

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6	1165.6
2.5°	1079.2	1096.4	1119.7	1139.0	1163.6	1186.9	1210.8	1234.7	1247.4	1252.7
5°	1002.7	1034.6	1071.8	1113.1	1160.9	1211.5	1262.7	1315.2	1348.4	1351.1
7.5°	956.8	1002.7	1053.9	1105.7	1164.9	1234.7	1315.9	1397.0	1430.9	1440.2
10°	971.4	1022.6	1063.2	1111.7	1176.9	1264.0	1359.7	1454.8	1494.1	1505.4
12.5°	1029.9	1039.9	1052.6	1097.1	1176.9	1289.3	1405.0	1518.0	1559.9	1570.5
15°	1078.5	1030.6	1008.0	1055.2	1160.9	1311.2	1452.8	1577.8	1628.4	1638.3
17.5°	1082.5	1000.0	950.8	993.4	1133.0	1326.5	1498.7	1644.3	1686.9	1696.2
20°	1041.9	967.4	903.6	929.5	1095.1	1333.1	1532.0	1692.9	1734.8	1744.1
22.5°	996.0	940.9	871.7	870.4	1049.2	1340.5	1571.9	1738.7	1784.0	1789.9
25°	952.8	904.3	845.8	827.2	996.0	1354.4	1625.7	1807.9	1842.5	1844.5
27.5°	902.3	865.1	825.2	807.2	949.5	1381.0	1705.5	1890.3	1911.0	1907.6
30°	856.4	828.5	810.5	805.2	920.2	1401.0	1781.3	1971.5	1972.8	1961.5
32.5°	807.9	797.2	797.2	814.5	896.3	1396.3	1843.1	2050.6	2038.0	2021.3
35°	764.6	766.6	780.6	821.2	856.4	1349.8	1902.3	2149.7	2131.0	2107.1
37.5°	723.4	738.7	758.7	797.9	803.9	1280.6	1971.5	2290.0	2266.7	2236.8
40°	688.2	711.5	734.7	754.0	748.0	1182.2	2067.9	2454.9	2428.9	2394.3
42.5°	660.3	682.9	708.8	710.8	712.8	1079.8	2170.3	2657.0	2652.3	2614.4
45°	642.3	656.9	681.5	678.2	710.8	966.8	2264.7	2965.5	3026.7	2998.1
47.5°	630.3	641.6	644.3	658.3	728.1	865.7	2386.4	3569.2	3739.5	3706.9
50°	623.7	635.0	605.1	659.6	730.7	800.6	2554.6	4327.2	4601.2	4558.0
52.5°	623.0	620.4	575.1	673.6	716.1	760.7	2642.4	4880.5	5488.2	5581.9
55°	624.4	591.1	559.9	677.5	686.9	746.0	2348.5	5146.4	6306.7	6504.8
57.5°	612.4	559.2	568.5	661.6	631.7	785.3	1736.1	5051.3	6633.8	7002.2
60°	589.8	528.6	584.5	618.4	575.1	718.1	1195.5	4627.1	6294.7	6673.7
62.5°	557.2	507.3	582.5	562.5	554.5	587.8	821.8	4033.4	5756.8	6127.2
65°	520.6	490.0	551.2	508.7	513.3	452.1	581.1	3363.1	5114.5	5478.9
67.5°	481.4	479.4	505.3	452.8	433.5	358.4	423.5	2695.6	4289.3	4617.8
70°	436.8	451.5	459.5	402.3	351.7	281.3	314.5	1885.0	3164.3	3450.2
72.5°	392.3	393.6	404.9	349.7	263.3	225.4	236.0	1141.7	2149.7	2357.8
75°	347.1	334.5	345.1	284.6	196.1	184.8	182.2	705.5	1484.7	1649.0
77.5°	298.5	284.6	270.6	214.1	157.6	143.0	139.6	395.6	910.9	1012.0
80°	242.7	224.1	202.1	156.9	115.0	102.4	101.7	192.8	454.1	506.0
82.5°	188.8	153.6	147.6	97.7	71.1	62.5	66.5	73.8	137.0	152.9
85°	132.3	111.7	78.5	39.2	31.9	25.9	25.3	21.9	36.6	40.6
87.5°	73.8	48.5	25.3	4.7	5.3	6.0	4.7	3.3	3.3	3.3
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**

$\lambda$ (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

**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			



REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

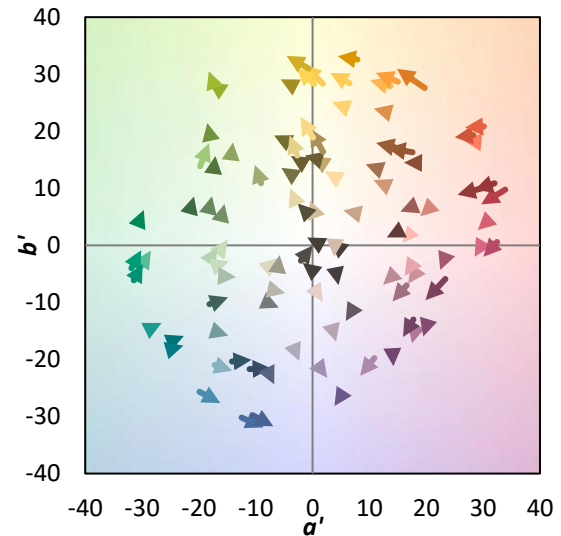
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625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

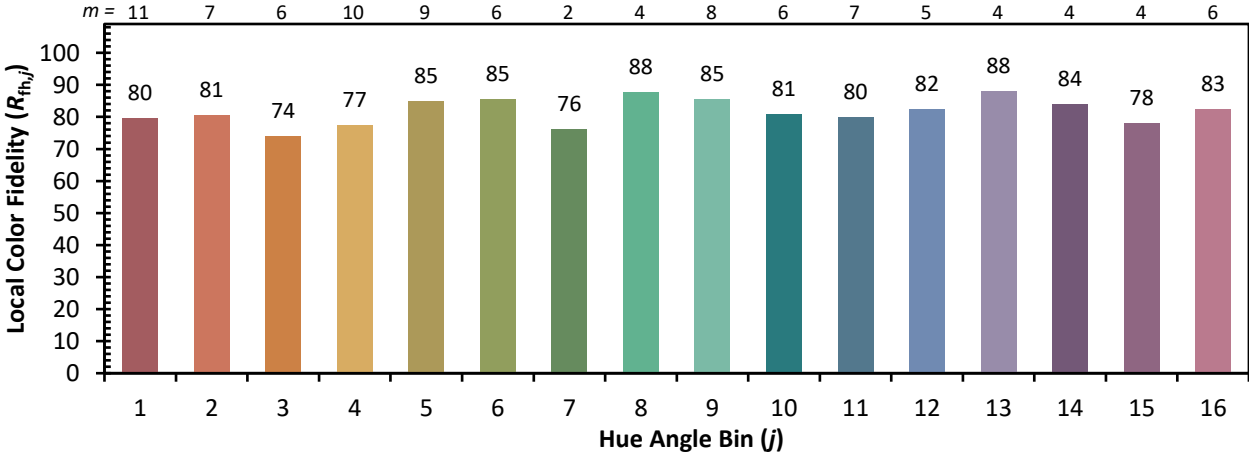


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)