

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: P639967

Luminaire Tested: GWS-SA5C-830-U-SLL-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P639967
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5C-830-U-SLL-W
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17729.1 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

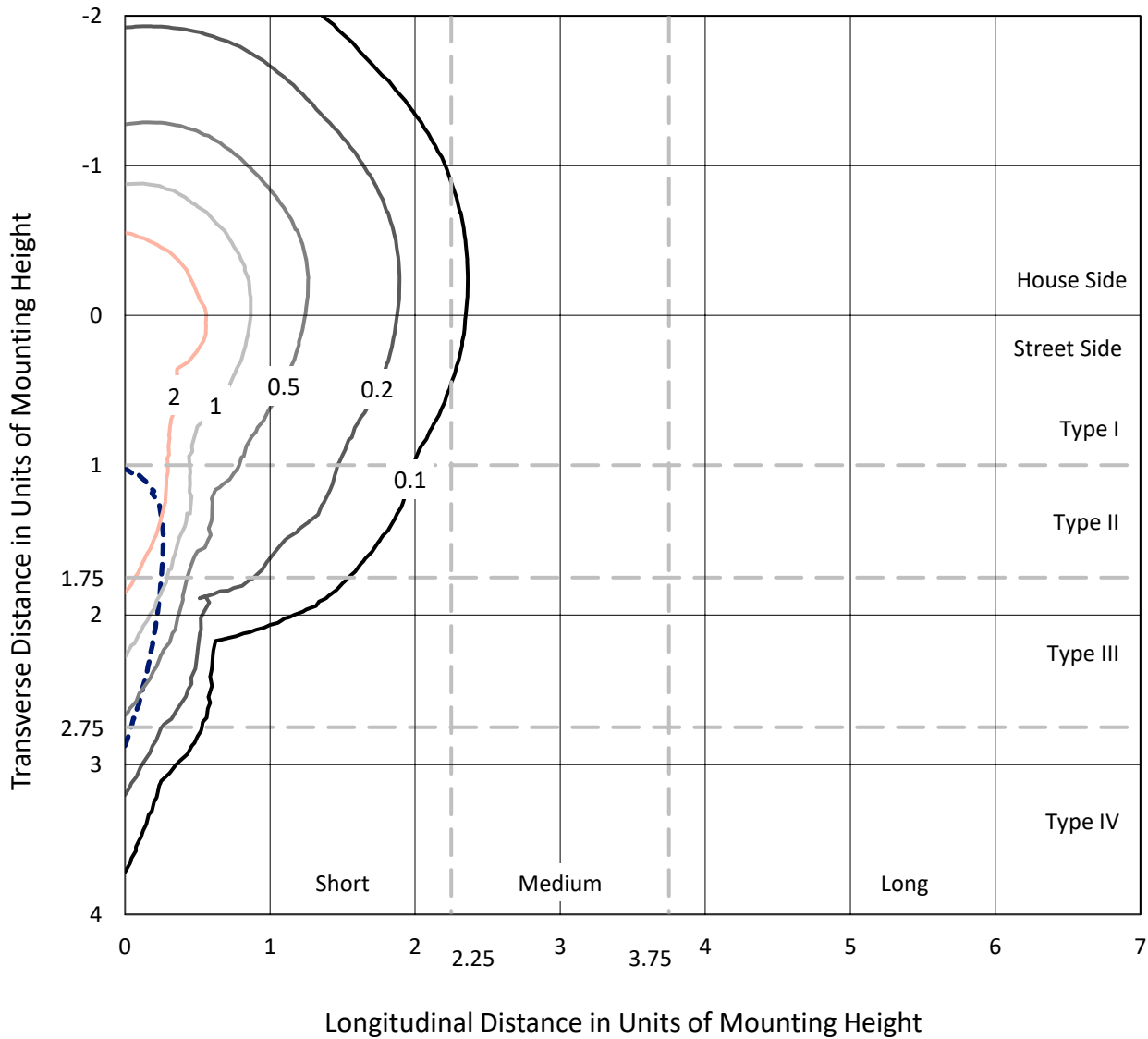
Input Watts (W): 157.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

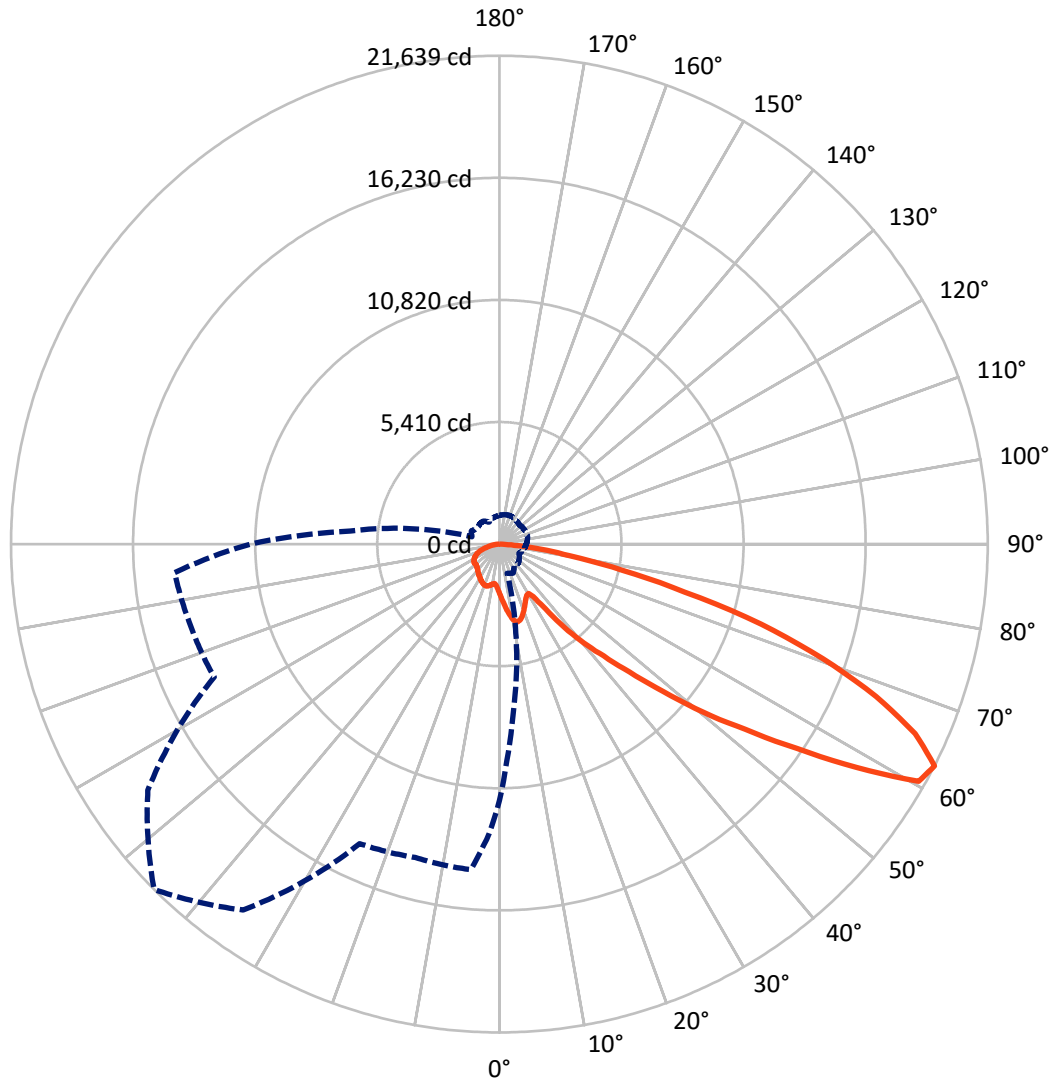
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4239.0	0.0	4239.0
	% Fixture	23.9	0.0	23.9
Street Side	Lumens	13490.1	0.0	13490.1
	% Fixture	76.1	0.0	76.1
Total	Lumens	17729.1	0.0	17729.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.8	1.2
10°-20°	707.7	4.0
20°-30°	1114.1	6.3
30°-40°	1527.1	8.6
40°-50°	2382.8	13.4
50°-60°	4108.4	23.2
60°-70°	4761.1	26.9
70°-80°	2513.1	14.2
80°-90°	397.0	2.2
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°	17729.1	100.0
0°-180°	17729.1	100.0

Coefficient of Utilization



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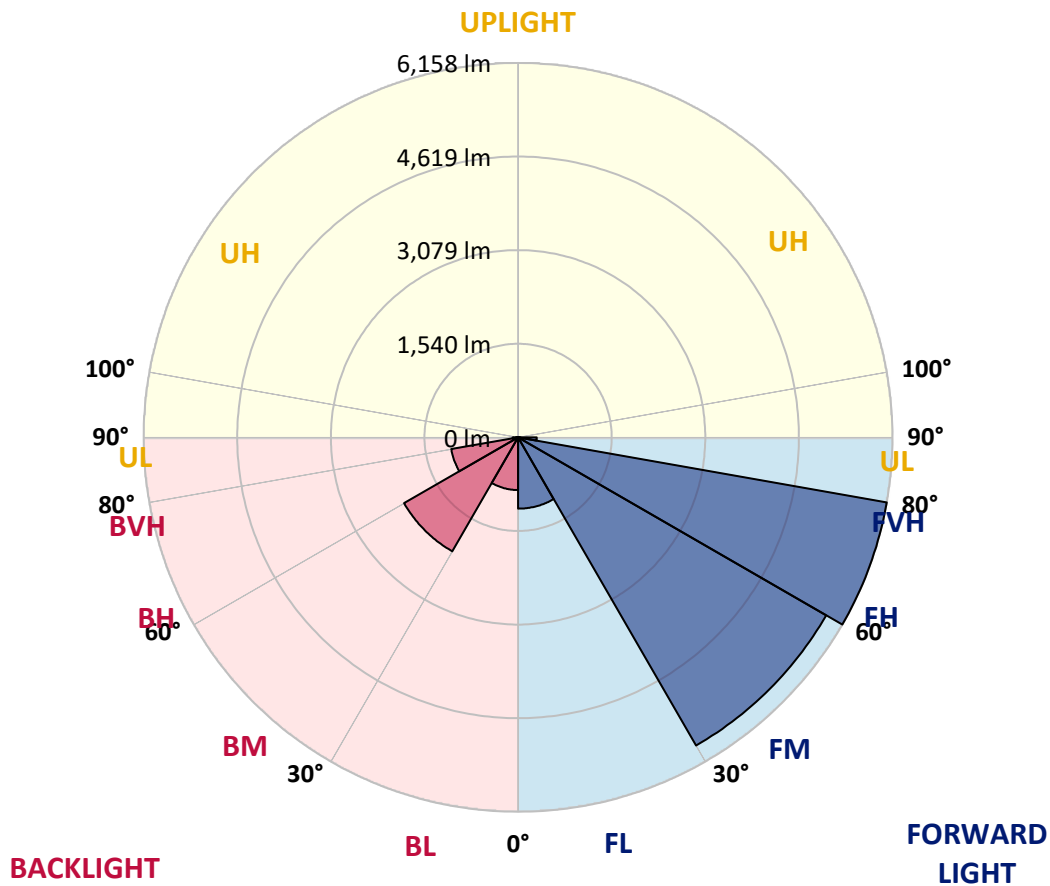
CATALOG NUMBER: GWS-SA5C-830-U-SLL-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1172.6	6.6			
FM (30°-60°)	5853.0	33.0			
FH (60°-80°)	6158.1	34.7			G3/7500
FVH (80°-90°)	306.4	1.7			G3/500
BL (0°-30°)	867.0	4.9	B2/1000		
BM (30°-60°)	2165.3	12.2	B2/2500		
BH (60°-80°)	1116.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	90.6	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5
2.5°	2401.7	2392.2	2378.6	2332.5	2304.0	2271.5	2237.6	2198.2	2153.5	2122.3	2091.1
5°	2605.1	2590.2	2557.6	2447.8	2371.8	2289.1	2219.9	2141.3	2064.0	2011.1	1958.2
7.5°	2800.4	2781.4	2731.2	2563.0	2439.6	2320.3	2215.9	2102.0	1986.7	1908.0	1845.7
10°	2995.6	2956.3	2892.6	2672.9	2510.2	2371.8	2252.5	2112.8	1959.6	1852.4	1786.0
12.5°	3144.8	3108.2	3039.0	2773.2	2580.7	2407.1	2272.8	2144.0	2013.8	1899.9	1832.1
15°	3284.5	3237.0	3158.4	2866.8	2639.0	2405.7	2232.1	2119.6	2100.6	2072.1	1984.0
17.5°	3384.8	3341.4	3260.1	2942.7	2671.5	2363.7	2119.6	2053.1	2138.6	2225.4	2141.3
20°	3473.0	3422.8	3340.1	2995.6	2678.3	2270.1	1982.6	1984.0	2118.2	2237.6	2217.2
22.5°	3547.6	3492.0	3418.7	3055.3	2675.6	2139.9	1863.3	1944.7	2078.9	2172.5	2175.2
25°	3639.8	3593.7	3532.7	3143.5	2675.6	2007.0	1776.5	1897.2	2012.5	2091.1	2088.4
27.5°	3752.3	3721.2	3671.0	3277.7	2700.0	1895.8	1727.7	1836.2	1927.0	1994.8	1993.5
30°	3878.5	3850.0	3812.0	3420.1	2742.0	1813.1	1700.6	1760.2	1826.7	1880.9	1880.9
32.5°	4007.3	3996.4	3955.8	3534.0	2709.5	1787.3	1677.5	1684.3	1719.5	1764.3	1760.2
35°	4186.3	4175.4	4123.9	3622.2	2568.5	1750.7	1640.9	1607.0	1611.1	1639.5	1649.0
37.5°	4448.0	4431.8	4355.8	3725.2	2355.6	1658.5	1581.2	1525.6	1513.4	1525.6	1543.2
40°	4764.0	4739.6	4636.5	3864.9	2110.1	1533.8	1487.6	1441.5	1421.2	1425.3	1445.6
42.5°	5160.0	5108.4	4960.6	4012.7	1867.4	1423.9	1383.2	1354.7	1331.7	1329.0	1368.3
45°	5802.8	5661.7	5427.1	4144.3	1662.6	1365.6	1289.7	1269.3	1250.3	1261.2	1307.3
47.5°	6925.6	6665.3	6208.3	4256.8	1537.8	1367.0	1215.1	1193.4	1192.0	1213.7	1265.2
50°	8468.9	8093.2	7388.1	4332.8	1472.7	1383.2	1170.3	1135.1	1160.8	1182.5	1231.3
52.5°	9947.0	9373.4	8534.0	4331.4	1444.3	1385.9	1182.5	1080.8	1160.8	1166.3	1212.4
55°	11209.6	10170.8	8843.2	3886.6	1403.6	1375.1	1230.0	1038.8	1145.9	1166.3	1202.9
57.5°	12213.1	10678.0	8820.1	3139.4	1527.0	1315.4	1258.5	1029.3	1102.5	1169.0	1211.0
60°	12101.9	10446.1	8251.9	1927.0	1514.8	1209.6	1254.4	1046.9	1029.3	1132.3	1201.5
62.5°	11362.8	9614.8	7274.1	1337.1	1422.6	1148.6	1187.9	1078.1	961.5	1079.5	1155.4
65°	10328.1	8542.1	6061.8	1025.2	1178.5	1151.3	1075.4	1056.4	901.8	995.4	1076.7
67.5°	8959.8	7211.8	4785.7	812.3	821.8	996.7	976.4	938.4	846.2	920.8	994.0
70°	6735.8	5263.0	3292.6	653.6	622.5	832.6	877.4	843.5	792.0	813.7	891.0
72.5°	4746.4	3436.4	1803.6	518.0	480.1	640.1	762.1	756.7	699.8	716.0	792.0
75°	3527.2	2431.5	1126.9	409.5	390.6	458.4	638.7	655.0	607.5	626.5	684.8
77.5°	2347.4	1574.4	626.5	303.8	303.8	335.0	476.0	551.9	516.7	531.6	572.3
80°	1295.1	801.5	313.3	199.3	204.8	230.5	347.2	397.3	398.7	435.3	446.2
82.5°	409.5	254.9	139.7	116.6	109.8	131.5	223.8	284.8	265.8	339.0	311.9
85°	93.6	59.7	25.8	25.8	28.5	43.4	85.4	151.9	193.9	233.3	169.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	59.7	88.1	78.7
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°	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5
2.5°	2072.1	2045.0	2036.9	2013.8	2011.1	1989.4	1981.3	1981.3	1990.8	1990.8	2000.3
5°	1936.5	1902.6	1883.6	1856.5	1849.7	1833.5	1822.6	1824.0	1836.2	1844.3	1860.6
7.5°	1817.2	1794.1	1780.6	1768.4	1765.6	1762.9	1750.7	1749.4	1753.4	1765.6	1777.9
10°	1767.0	1750.7	1754.8	1764.3	1779.2	1787.3	1776.5	1771.1	1767.0	1775.1	1786.0
12.5°	1815.8	1799.6	1807.7	1824.0	1844.3	1852.4	1848.4	1847.0	1851.1	1882.3	1905.3
15°	1923.0	1891.8	1880.9	1887.7	1904.0	1912.1	1908.0	1913.5	1939.2	2020.6	2078.9
17.5°	2055.9	1979.9	1936.5	1924.3	1931.1	1937.9	1937.9	1951.4	1996.2	2115.5	2188.8
20°	2127.7	2028.7	1955.5	1925.7	1928.4	1935.2	1935.2	1954.1	2004.3	2131.8	2179.3
22.5°	2108.7	2017.9	1928.4	1895.8	1897.2	1902.6	1902.6	1918.9	1963.6	2076.2	2097.9
25°	2034.2	1954.1	1866.0	1837.5	1840.2	1849.7	1847.0	1856.5	1890.4	1982.6	1994.8
27.5°	1944.7	1874.1	1787.3	1765.6	1777.9	1796.8	1780.6	1781.9	1813.1	1890.4	1891.8
30°	1848.4	1790.1	1712.8	1696.5	1719.5	1729.0	1714.1	1714.1	1745.3	1798.2	1796.8
32.5°	1744.0	1707.3	1651.7	1634.1	1659.9	1674.8	1655.8	1658.5	1682.9	1718.2	1704.6
35°	1646.3	1627.3	1601.6	1589.4	1605.6	1619.2	1607.0	1612.4	1635.5	1645.0	1626.0
37.5°	1552.7	1550.0	1552.7	1552.7	1556.8	1560.9	1552.7	1566.3	1586.6	1574.4	1552.7
40°	1471.4	1482.2	1508.0	1501.2	1497.1	1501.2	1495.8	1518.8	1539.2	1517.5	1491.7
42.5°	1403.6	1423.9	1463.2	1463.2	1455.1	1457.8	1455.1	1483.6	1498.5	1468.7	1440.2
45°	1345.3	1375.1	1425.3	1432.0	1418.5	1418.5	1423.9	1459.2	1464.6	1423.9	1394.1
47.5°	1304.6	1341.2	1398.1	1410.3	1390.0	1388.7	1403.6	1441.5	1441.5	1394.1	1360.2
50°	1276.1	1316.8	1384.6	1400.9	1380.5	1375.1	1399.5	1436.1	1428.0	1371.0	1337.1
52.5°	1257.1	1299.1	1383.2	1406.3	1392.7	1387.3	1411.7	1437.5	1417.1	1356.1	1320.8
55°	1244.9	1291.0	1387.3	1406.3	1391.4	1381.9	1406.3	1429.3	1418.5	1348.0	1314.1
57.5°	1251.7	1297.8	1381.9	1391.4	1373.7	1357.5	1385.9	1418.5	1414.4	1350.7	1316.8
60°	1240.8	1282.9	1352.0	1354.7	1324.9	1299.1	1341.2	1390.0	1390.0	1341.2	1311.4
62.5°	1190.7	1232.7	1293.7	1296.4	1262.5	1234.1	1282.9	1341.2	1339.8	1300.5	1269.3
65°	1107.9	1147.3	1216.4	1223.2	1189.3	1159.5	1209.6	1263.9	1268.0	1232.7	1205.6
67.5°	1017.1	1052.3	1103.9	1131.0	1102.5	1071.3	1117.4	1169.0	1167.6	1125.6	1097.1
70°	908.6	941.1	988.6	1011.7	994.0	964.2	1006.2	1033.4	1021.1	1000.8	981.8
72.5°	801.5	832.6	877.4	877.4	858.4	829.9	842.1	891.0	905.9	891.0	878.8
75°	688.9	716.0	747.2	754.0	712.0	660.4	717.4	759.4	777.0	770.3	755.4
77.5°	573.6	594.0	640.1	627.9	549.2	522.1	568.2	630.6	642.8	638.7	618.4
80°	442.1	454.3	503.1	478.7	417.7	400.1	420.4	469.2	471.9	458.4	432.6
82.5°	297.0	313.3	345.8	298.3	297.0	280.7	264.4	269.9	294.3	291.6	273.9
85°	151.9	160.0	191.2	179.0	153.2	132.9	126.1	134.3	120.7	109.8	94.9
87.5°	63.7	69.2	94.9	52.9	16.3	0.0	0.0	8.1	12.2	17.6	19.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5
2.5°	2022.0	2036.9	2073.5	2119.6	2164.3	2210.5	2260.6	2291.8	2329.8	2378.6	2380.0
5°	1880.9	1914.8	1967.7	2038.2	2111.5	2195.5	2293.2	2374.5	2472.2	2549.5	2580.7
7.5°	1794.1	1842.9	1909.4	1998.9	2095.2	2199.6	2327.1	2464.0	2624.1	2727.1	2788.2
10°	1802.3	1876.8	1943.3	2019.2	2106.0	2218.6	2382.7	2564.4	2761.0	2896.6	2972.6
12.5°	1947.4	2026.0	2013.8	2009.7	2068.1	2205.0	2427.4	2666.1	2906.1	3041.7	3132.6
15°	2130.4	2160.3	2045.0	1958.2	1993.5	2156.2	2451.8	2757.0	3026.8	3192.3	3281.8
17.5°	2224.0	2164.3	2024.7	1894.5	1885.0	2081.6	2464.0	2849.2	3162.4	3327.9	3422.8
20°	2180.6	2093.8	1975.8	1852.4	1784.6	1979.9	2457.3	2922.4	3285.8	3470.3	3547.6
22.5°	2087.0	2011.1	1918.9	1800.9	1703.3	1868.7	2439.6	2995.6	3395.7	3581.5	3649.3
25°	1985.3	1928.4	1852.4	1749.4	1657.2	1771.1	2427.4	3093.3	3521.8	3699.5	3742.9
27.5°	1883.6	1841.6	1779.2	1699.2	1646.3	1703.3	2431.5	3220.8	3684.5	3852.7	3835.1
30°	1783.3	1746.7	1703.3	1668.0	1645.0	1687.0	2420.6	3356.4	3863.5	4019.5	3915.1
32.5°	1688.4	1654.4	1627.3	1632.8	1646.3	1693.8	2365.0	3479.8	4027.6	4160.5	4001.9
35°	1607.0	1571.7	1571.7	1590.7	1640.9	1670.7	2221.3	3576.0	4209.4	4342.2	4125.3
37.5°	1531.0	1499.9	1520.2	1551.4	1598.8	1608.3	2036.9	3669.6	4473.8	4598.6	4316.5
40°	1464.6	1433.4	1470.0	1509.3	1533.8	1529.7	1849.7	3799.8	4785.7	4914.5	4570.1
42.5°	1411.7	1383.2	1415.8	1465.9	1470.0	1474.1	1712.8	3924.6	5147.8	5311.9	5006.7
45°	1368.3	1348.0	1364.2	1414.4	1414.4	1476.8	1627.3	4029.0	5692.9	5983.1	5808.2
47.5°	1334.4	1322.2	1330.3	1346.6	1373.7	1525.6	1573.1	4109.0	6685.6	7255.2	7078.9
50°	1315.4	1303.2	1314.1	1280.2	1361.5	1550.0	1555.5	4170.0	7994.2	8886.6	8668.2
52.5°	1299.1	1295.1	1301.9	1223.2	1388.7	1533.8	1541.9	4088.7	8871.6	10492.2	10707.8
55°	1293.7	1296.4	1263.9	1181.2	1421.2	1479.5	1501.2	3506.9	9110.3	11876.8	13215.2
57.5°	1296.4	1288.3	1205.6	1185.2	1422.6	1371.0	1559.5	2502.0	8763.2	12478.9	15668.4
60°	1286.9	1246.3	1135.1	1221.9	1360.2	1243.5	1517.5	1631.4	7847.8	12016.4	15810.8
62.5°	1244.9	1185.2	1074.0	1242.2	1249.0	1167.6	1377.8	1257.1	6627.3	11026.5	14438.5
65°	1183.9	1103.9	1022.5	1200.2	1136.4	1132.3	1036.1	1007.6	5329.5	9848.0	13136.6
67.5°	1083.5	1003.5	984.5	1103.9	1022.5	1003.5	832.6	835.4	4252.7	8592.3	11828.0
70°	969.6	889.6	904.5	998.1	909.9	834.0	674.0	695.7	3226.2	7158.9	10063.7
72.5°	895.0	787.9	789.3	878.8	800.1	675.3	554.6	573.6	2047.7	5395.9	8001.0
75°	755.4	694.3	664.5	712.0	679.4	526.2	466.5	462.4	1213.7	3867.6	5991.3
77.5°	630.6	583.1	568.2	587.2	507.2	389.2	375.6	368.9	687.5	2477.6	3925.9
80°	457.0	444.8	443.4	452.9	390.6	286.1	286.1	287.5	370.2	1345.3	2213.2
82.5°	290.2	317.3	280.7	311.9	265.8	203.4	189.9	215.6	212.9	573.6	933.0
85°	120.7	165.4	154.6	164.1	126.1	111.2	119.3	128.8	123.4	221.0	363.4
87.5°	23.1	27.1	29.8	28.5	28.5	35.3	39.3	47.5	47.5	63.7	109.8
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: P639967
 CATALOG NUMBER: GWS-SA5C-830-U-SLL-W

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5	2210.5
2.5°	2431.5	2470.8	2462.7	2480.3	2457.3	2465.4	2419.3	2407.1	2399.0	2401.7
5°	2681.0	2761.0	2775.9	2805.8	2785.4	2785.4	2704.1	2643.0	2621.4	2605.1
7.5°	2934.6	3049.9	3125.8	3134.0	3123.1	3101.4	2983.4	2873.6	2834.3	2800.4
10°	3159.7	3298.0	3383.5	3424.2	3403.8	3369.9	3223.5	3072.9	3025.5	2995.6
12.5°	3332.0	3454.0	3511.0	3538.1	3535.4	3523.2	3403.8	3241.1	3190.9	3144.8
15°	3443.2	3504.2	3482.5	3481.1	3500.1	3548.9	3512.3	3384.8	3326.5	3284.5
17.5°	3515.0	3456.7	3360.4	3315.7	3356.4	3471.6	3555.7	3483.8	3430.9	3384.8
20°	3540.8	3333.3	3193.6	3110.9	3158.4	3325.2	3532.7	3555.7	3511.0	3473.0
22.5°	3511.0	3182.8	2992.9	2895.3	2941.4	3140.7	3464.8	3614.0	3584.2	3547.6
25°	3437.7	3025.5	2797.6	2709.5	2759.7	2963.1	3344.2	3668.3	3669.6	3639.8
27.5°	3346.9	2880.4	2660.7	2578.0	2626.8	2816.6	3226.2	3715.7	3763.2	3752.3
30°	3254.7	2793.6	2595.6	2537.3	2573.9	2742.0	3105.5	3764.5	3859.5	3878.5
32.5°	3212.6	2835.6	2748.8	2774.6	2727.1	2785.4	3062.1	3833.7	3976.1	4007.3
35°	3268.2	3208.5	3428.2	3529.9	3361.8	3140.7	3117.7	3938.1	4140.2	4186.3
37.5°	3538.1	4007.3	4335.5	4693.5	4401.9	3915.1	3393.0	4115.8	4374.8	4448.0
40°	4125.3	4704.3	5296.9	5759.4	5318.6	4663.6	3916.4	4380.2	4697.5	4764.0
42.5°	4678.6	5358.0	6174.3	6772.4	6200.1	5275.2	4480.6	4825.0	5123.4	5160.0
45°	5221.0	5999.4	7236.2	8067.5	7290.4	5857.0	5056.9	5576.3	5801.4	5802.8
47.5°	5857.0	6722.2	8567.9	9751.8	8737.4	6501.2	5598.0	6765.6	7078.9	6925.6
50°	6617.8	7440.9	9938.9	11711.3	10501.7	7293.1	6285.5	8215.3	8642.5	8468.9
52.5°	7636.2	8232.9	11449.6	13622.1	12424.6	8194.9	7282.3	10130.1	10271.1	9947.0
55°	9069.6	9376.1	13388.8	15981.7	14571.4	9305.6	8740.1	12533.1	12138.5	11209.6
57.5°	12333.8	11185.2	15878.6	18673.6	17000.1	11323.5	11935.1	15183.0	13779.4	12213.1
60°	15065.0	13382.0	18182.7	21345.1	19081.8	13547.5	14934.8	15644.0	13718.4	12101.9
62.5°	14144.2	13942.1	19014.0	21639.4	19792.4	14641.9	14377.4	14481.8	12823.3	11362.8
65°	12409.7	12861.3	18272.2	20243.9	19004.5	13661.4	13005.0	13407.8	11799.5	10328.1
67.5°	11385.9	11718.1	16952.7	18010.4	17572.4	12600.9	11937.8	11646.2	10210.1	8959.8
70°	10338.9	10614.2	15100.2	15207.4	15338.9	10838.0	9761.2	8893.3	7610.5	6735.8
72.5°	8934.0	8948.9	12758.2	12137.1	12386.7	8481.1	7857.3	6649.0	5539.7	4746.4
75°	7495.2	7085.7	10098.9	8483.8	8984.2	6597.5	6524.2	5010.8	4178.2	3527.2
77.5°	5714.6	5235.9	7377.2	5579.0	6310.0	4393.8	4905.0	3398.4	2940.0	2347.4
80°	3836.4	3538.1	4076.5	3148.9	4128.0	3028.2	3199.1	1925.7	1669.4	1295.1
82.5°	2023.3	1727.7	2519.6	1867.4	2489.8	1663.9	1200.2	595.3	507.2	409.5
85°	783.8	907.2	1235.4	664.5	965.5	594.0	347.2	147.8	123.4	93.6
87.5°	151.9	234.6	128.8	0.0	0.0	0.0	0.0	0.0	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 [^] /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 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			

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 ($R_{f,i}$)

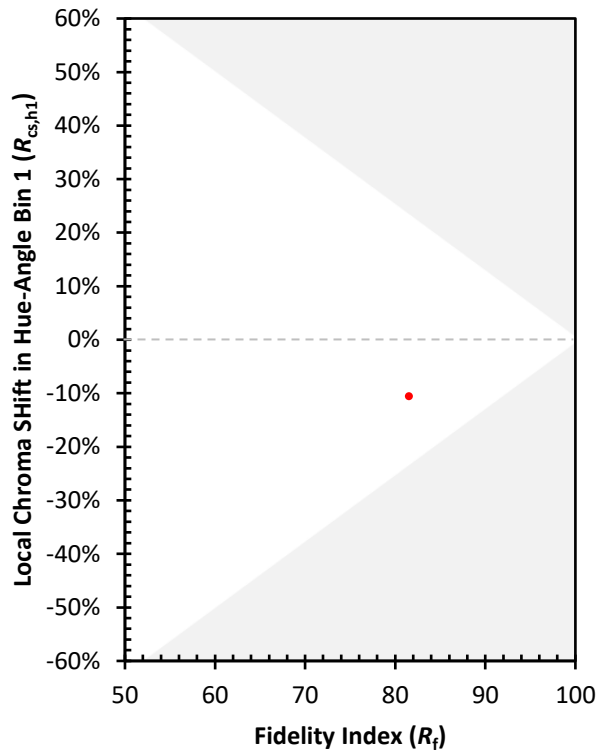
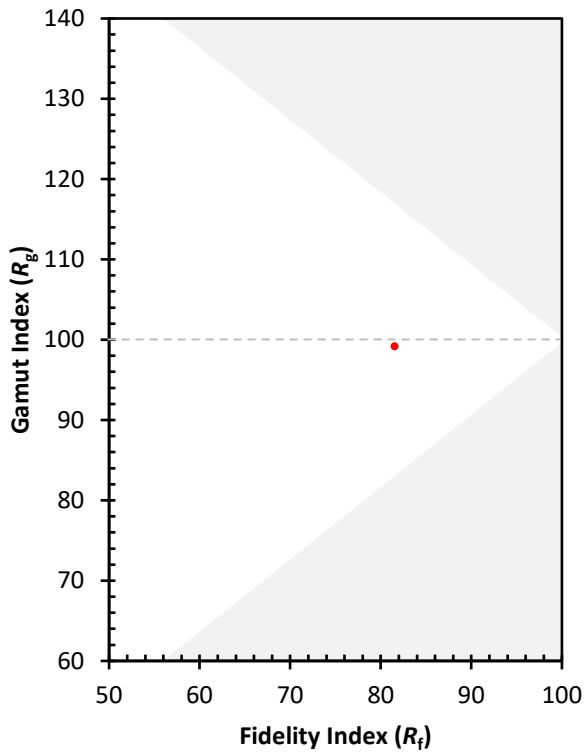
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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