

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



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

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P438794

Luminaire Tested: **IST-SA1E-830-U-SLL**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1E-830-U-SLL
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5058 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

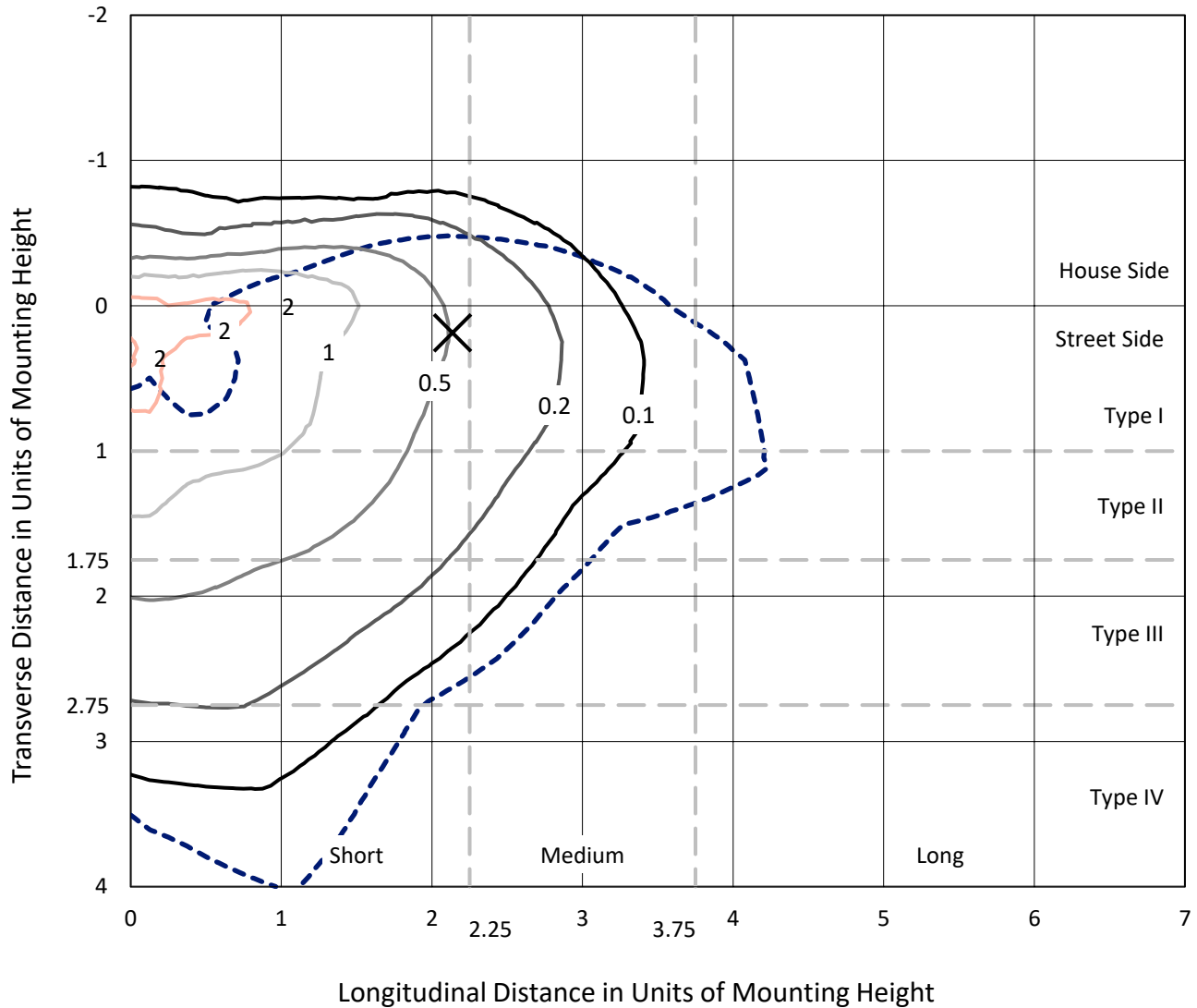
Input Watts (W): 58.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

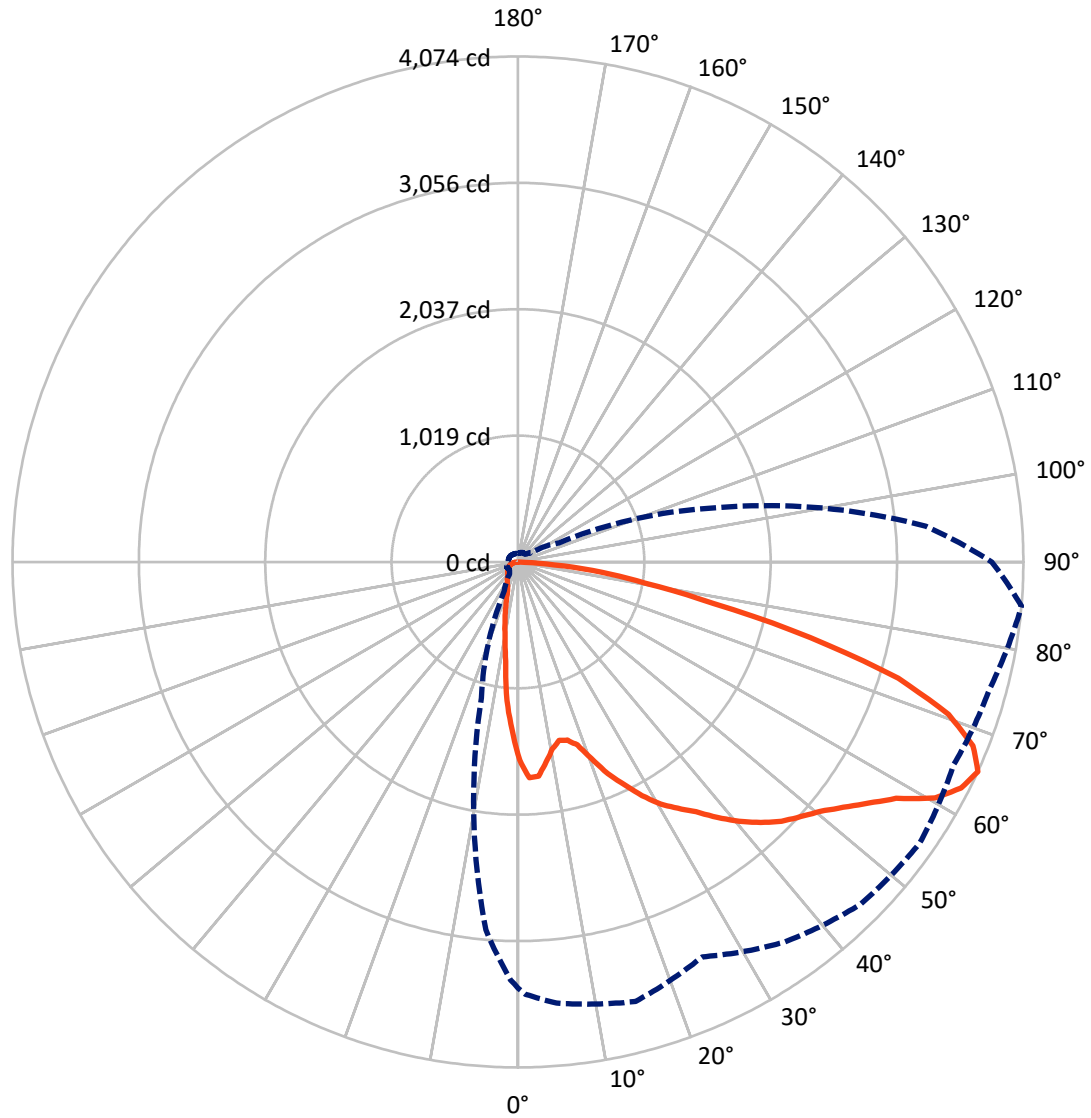
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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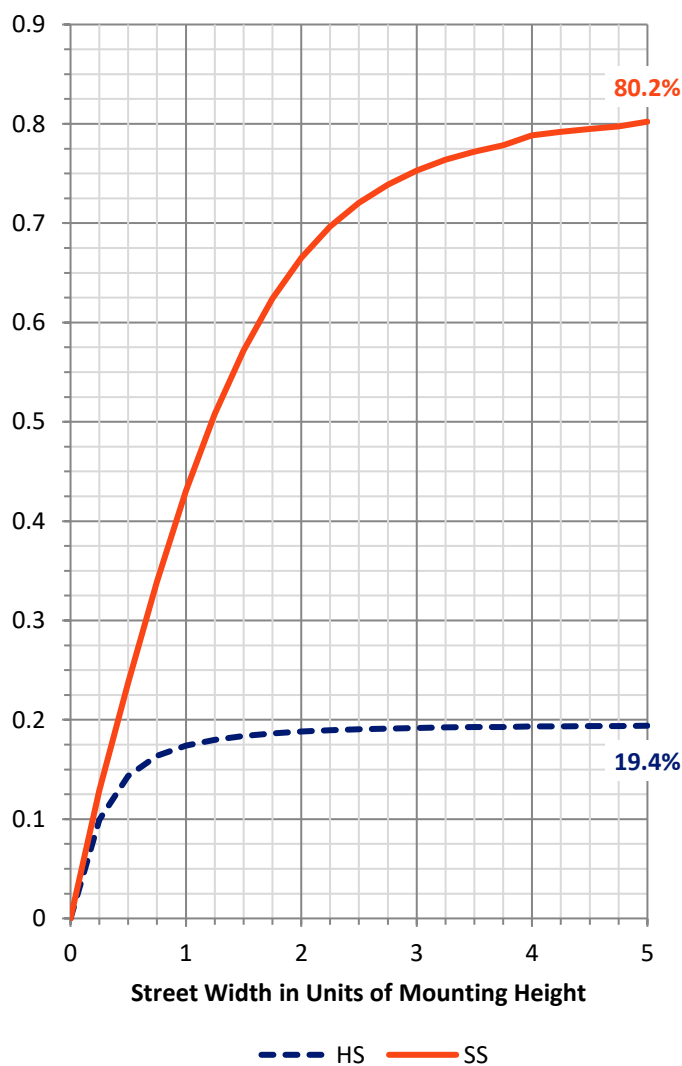
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	989.9	0.0	989.9
	% Fixture	19.6	0.0	19.6
Street Side	Lumens	4068.1	0.0	4068.1
	% Fixture	80.4	0.0	80.4
Total	Lumens	5058.0	0.0	5058.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	2.4
10°-20°	253.0	5.0
20°-30°	363.8	7.2
30°-40°	522.3	10.3
40°-50°	739.4	14.6
50°-60°	1028.1	20.3
60°-70°	1224.2	24.2
70°-80°	707.6	14.0
80°-90°	97.8	1.9
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°	5058.0	100.0
0°-180°	5058.0	100.0

Coefficient of Utilization

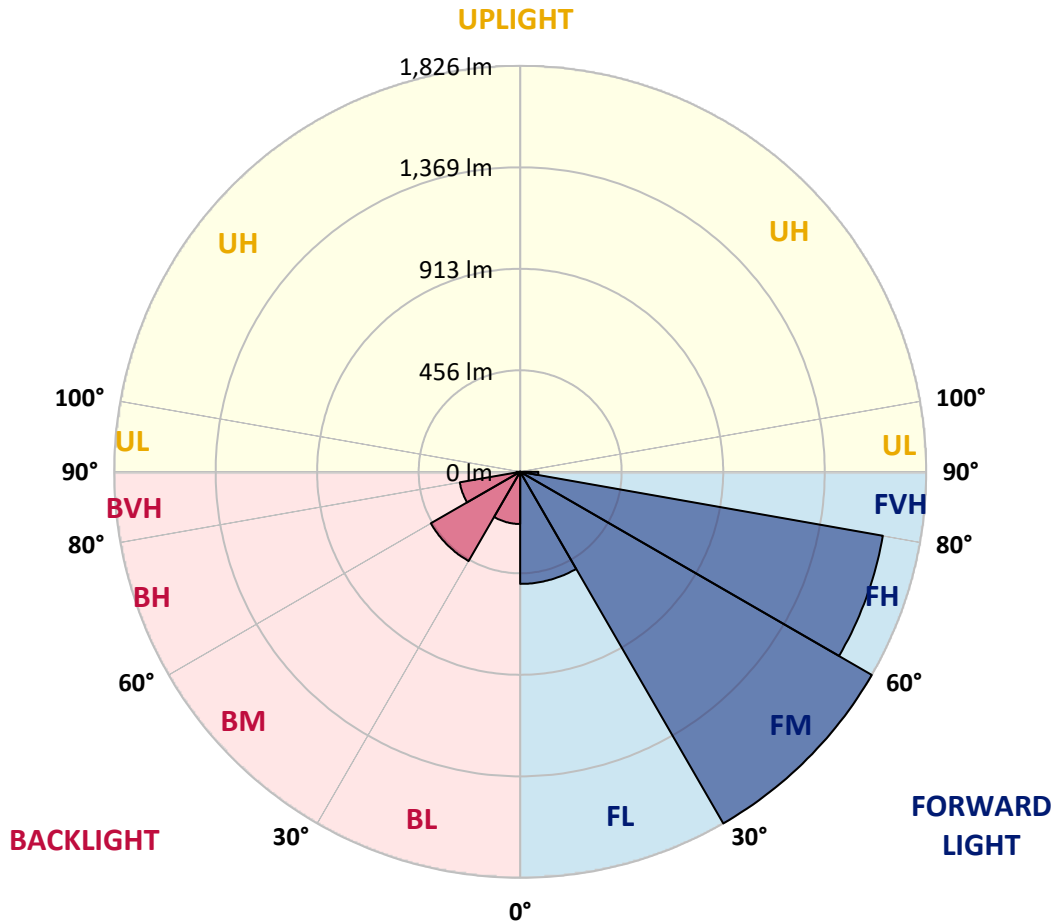


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	504.0	10.0			
FM (30°-60°)	1826.0	36.1			
FH (60°-80°)	1656.2	32.7			G1/1800
FVH (80°-90°)	81.8	1.6			G1/100
BL (0°-30°)	234.5	4.6	B1/500		
BM (30°-60°)	463.8	9.2	B1/1000		
BH (60°-80°)	275.6	5.4	B1/500		G1/500
BVH (80°-90°)	16.0	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-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1674.4	1680.6	1695.0	1744.6	1775.6	1800.4	1831.5	1800.4	1792.2	1750.8	1742.6
5°	1614.4	1628.9	1670.2	1763.2	1839.7	1920.3	1961.7	1926.5	1879.0	1806.6	1734.3
7.5°	1496.6	1515.2	1568.9	1713.6	1858.3	1967.9	2021.6	1984.4	1887.3	1759.1	1628.9
10°	1376.7	1405.6	1469.7	1651.6	1804.6	1926.5	2009.2	1969.9	1852.1	1684.7	1529.7
12.5°	1304.3	1325.0	1397.4	1587.5	1748.8	1870.7	1932.7	1910.0	1800.4	1641.3	1475.9
15°	1287.8	1308.5	1380.8	1564.8	1707.4	1798.4	1812.8	1819.1	1777.7	1655.8	1490.4
17.5°	1333.3	1349.8	1449.0	1602.0	1659.9	1678.5	1701.2	1728.1	1748.8	1684.7	1550.3
20°	1442.8	1475.9	1562.7	1678.5	1647.5	1604.1	1616.5	1649.5	1728.1	1769.4	1688.8
22.5°	1589.6	1626.8	1736.4	1783.9	1655.8	1562.7	1552.4	1581.3	1726.0	1862.5	1854.2
25°	1752.9	1804.6	1922.4	1924.5	1690.9	1533.8	1513.1	1540.0	1721.9	1945.1	1986.5
27.5°	1922.4	1969.9	2098.1	2034.0	1759.1	1535.9	1511.1	1537.9	1732.2	2034.0	2133.3
30°	2048.5	2110.5	2222.1	2137.4	1802.5	1562.7	1525.5	1560.7	1755.0	2079.5	2263.5
32.5°	2176.7	2215.9	2333.8	2197.3	1850.1	1604.1	1556.5	1610.3	1812.8	2122.9	2366.8
35°	2290.4	2342.0	2461.9	2232.5	1920.3	1674.4	1612.3	1682.6	1895.5	2184.9	2472.3
37.5°	2435.0	2484.7	2594.2	2282.1	1978.2	1763.2	1711.6	1802.5	1996.8	2240.7	2612.8
40°	2563.2	2641.8	2724.4	2344.1	2044.4	1893.5	1860.4	1984.4	2133.3	2317.2	2749.2
42.5°	2689.3	2755.4	2846.4	2414.4	2129.1	2052.6	2067.1	2197.3	2298.6	2433.0	2871.2
45°	2780.3	2856.7	2937.4	2470.2	2238.7	2224.2	2321.4	2430.9	2468.1	2554.9	2980.8
47.5°	2869.1	2929.1	3001.4	2526.0	2371.0	2416.4	2585.9	2670.7	2633.5	2664.5	3067.6
50°	2987.0	3051.0	3071.7	2614.9	2538.4	2660.4	2844.3	2900.1	2792.7	2751.3	3158.5
52.5°	3156.5	3187.5	3177.1	2720.3	2697.6	2914.6	3065.5	3150.3	2958.0	2834.0	3284.6
55°	3383.8	3437.6	3371.4	2891.9	2860.9	3158.5	3334.2	3375.6	3142.0	2937.4	3429.3
57.5°	3600.9	3648.4	3627.8	3100.7	3073.8	3369.4	3538.9	3578.2	3321.8	3129.6	3594.7
60°	3681.5	3696.0	3770.4	3321.8	3286.7	3549.2	3741.5	3747.7	3536.8	3361.1	3863.4
62.5°	3594.7	3652.6	3724.9	3528.5	3414.9	3704.2	3875.8	3915.1	3741.5	3642.2	4010.2
65°	3433.5	3485.1	3569.9	3667.0	3512.0	3741.5	3902.7	3952.3	3873.8	3937.8	4074.3
67.5°	3247.4	3311.5	3369.4	3689.8	3499.6	3528.5	3662.9	3693.9	3803.5	4068.1	3956.4
70°	3007.6	3080.0	3129.6	3600.9	3204.0	2916.7	3011.8	3096.5	3264.0	3836.5	3681.5
72.5°	2490.9	2606.6	2730.6	3197.8	2592.1	2265.5	2340.0	2395.8	2515.7	3276.4	3206.1
75°	1752.9	1837.7	1990.6	2575.6	1990.6	1604.1	1719.8	1719.8	1870.7	2691.4	2435.0
77.5°	1048.0	1050.1	1198.9	1695.0	1211.3	1081.1	1147.2	1178.2	1223.7	1905.9	1616.5
80°	593.3	601.5	651.1	1095.6	717.3	738.0	816.5	899.2	831.0	1182.4	1039.8
82.5°	277.0	243.9	258.4	516.8	407.2	481.6	494.0	531.2	535.4	756.6	682.1
85°	22.7	18.6	24.8	93.0	72.3	66.1	47.5	91.0	142.6	330.7	293.5
87.5°	0.0	0.0	0.0	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1715.7	1695.0	1649.5	1614.4	1581.3	1519.3	1494.5	1459.4	1440.8	1407.7	1416.0
5°	1680.6	1633.0	1529.7	1459.4	1368.4	1294.0	1248.5	1207.2	1190.7	1155.5	1143.1
7.5°	1552.4	1511.1	1380.8	1265.1	1153.4	1064.6	979.8	917.8	888.9	857.8	855.8
10°	1442.8	1374.6	1225.8	1089.4	961.2	878.5	816.5	764.8	719.4	680.1	657.3
12.5°	1380.8	1296.1	1130.7	965.3	876.5	818.6	750.4	686.3	634.6	589.1	562.3
15°	1380.8	1281.6	1085.2	924.0	835.1	748.3	669.7	603.6	535.4	481.6	465.1
17.5°	1444.9	1322.9	1095.6	897.1	771.0	673.9	574.7	487.8	421.7	374.1	357.6
20°	1571.0	1424.2	1120.4	866.1	709.0	574.7	454.8	361.7	301.8	279.1	274.9
22.5°	1717.8	1546.2	1157.6	837.2	644.9	469.2	341.1	274.9	248.1	239.8	239.8
25°	1879.0	1682.6	1205.1	806.2	578.8	372.1	260.5	229.4	219.1	215.0	215.0
27.5°	2029.9	1831.5	1289.9	793.8	516.8	301.8	227.4	204.6	198.4	194.3	196.4
30°	2176.7	1963.7	1376.7	769.0	448.6	262.5	204.6	188.1	179.8	177.8	179.8
32.5°	2302.8	2077.4	1436.6	731.8	401.0	235.6	190.2	173.6	165.4	163.3	165.4
35°	2447.5	2189.1	1496.6	704.9	376.2	219.1	179.8	163.3	155.0	150.9	150.9
37.5°	2617.0	2323.4	1542.1	665.6	359.7	202.6	171.6	155.0	144.7	140.6	140.6
40°	2844.3	2486.7	1579.3	634.6	341.1	194.3	161.2	146.8	136.4	132.3	130.2
42.5°	3001.4	2629.4	1610.3	613.9	322.5	190.2	155.0	142.6	130.2	124.0	122.0
45°	3108.9	2755.4	1630.9	603.6	305.9	179.8	150.9	138.5	124.0	115.8	115.8
47.5°	3212.3	2858.8	1633.0	589.1	293.5	167.4	157.1	132.3	117.8	109.6	109.6
50°	3328.0	2989.0	1672.3	574.7	279.1	153.0	155.0	130.2	113.7	105.4	103.4
52.5°	3443.8	3166.8	1748.8	554.0	258.4	140.6	146.8	132.3	109.6	101.3	99.2
55°	3650.5	3388.0	1843.9	523.0	231.5	128.2	136.4	130.2	103.4	95.1	93.0
57.5°	3784.9	3594.7	1918.3	489.9	192.2	119.9	119.9	126.1	97.2	88.9	86.8
60°	3861.3	3634.0	1932.7	450.6	157.1	107.5	103.4	128.2	91.0	80.6	80.6
62.5°	3859.3	3499.6	1860.4	413.4	136.4	99.2	93.0	111.6	84.8	76.5	74.4
65°	3820.0	3301.2	1697.1	365.9	128.2	91.0	82.7	84.8	78.5	70.3	68.2
67.5°	3650.5	2958.0	1436.6	318.3	124.0	82.7	76.5	72.3	68.2	62.0	59.9
70°	3239.2	2571.5	1120.4	295.6	122.0	72.3	66.1	62.0	57.9	53.7	53.7
72.5°	2633.5	2005.1	855.8	283.2	124.0	66.1	55.8	53.7	49.6	47.5	45.5
75°	1823.2	1482.1	620.1	250.1	119.9	55.8	47.5	43.4	41.3	37.2	37.2
77.5°	1172.0	969.5	411.4	200.5	97.2	45.5	35.1	33.1	31.0	28.9	28.9
80°	771.0	659.4	239.8	142.6	59.9	31.0	24.8	24.8	22.7	18.6	18.6
82.5°	489.9	498.2	124.0	66.1	35.1	18.6	14.5	12.4	12.4	8.3	8.3
85°	107.5	188.1	55.8	26.9	12.4	2.1	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1387.0	1370.5	1364.3	1364.3	1337.4	1339.5	1339.5	1356.0	1354.0	1368.4	1362.2
5°	1128.6	1112.1	1112.1	1116.2	1120.4	1101.8	1108.0	1091.4	1122.4	1099.7	1083.2
7.5°	833.0	831.0	845.4	878.5	872.3	866.1	853.7	822.7	806.2	822.7	814.4
10°	638.7	644.9	640.8	655.3	657.3	655.3	634.6	628.4	620.1	628.4	638.7
12.5°	535.4	510.6	483.7	481.6	498.2	498.2	496.1	498.2	504.4	504.4	512.6
15°	446.5	430.0	394.8	378.3	390.7	382.4	384.5	392.7	399.0	407.2	403.1
17.5°	355.5	341.1	324.5	314.2	320.4	314.2	312.1	310.1	310.1	308.0	316.3
20°	270.8	268.7	274.9	270.8	272.9	268.7	262.5	254.3	248.1	252.2	256.3
22.5°	235.6	237.7	241.9	246.0	246.0	241.9	231.5	223.2	221.2	221.2	223.2
25°	217.0	217.0	223.2	225.3	227.4	221.2	208.8	202.6	202.6	202.6	202.6
27.5°	196.4	200.5	204.6	208.8	210.8	204.6	194.3	188.1	188.1	186.0	184.0
30°	181.9	184.0	188.1	190.2	192.2	186.0	179.8	173.6	173.6	173.6	171.6
32.5°	165.4	171.6	173.6	175.7	177.8	173.6	167.4	163.3	161.2	159.2	155.0
35°	153.0	155.0	161.2	161.2	163.3	161.2	157.1	153.0	146.8	144.7	144.7
37.5°	140.6	140.6	144.7	148.8	153.0	150.9	144.7	138.5	136.4	136.4	136.4
40°	132.3	130.2	132.3	138.5	142.6	142.6	134.4	130.2	130.2	128.2	128.2
42.5°	122.0	122.0	122.0	128.2	136.4	132.3	124.0	124.0	124.0	122.0	122.0
45°	115.8	113.7	115.8	115.8	126.1	119.9	117.8	115.8	117.8	115.8	117.8
47.5°	107.5	107.5	107.5	109.6	115.8	111.6	109.6	109.6	111.6	111.6	111.6
50°	101.3	101.3	101.3	103.4	105.4	105.4	105.4	105.4	105.4	107.5	107.5
52.5°	97.2	95.1	97.2	97.2	99.2	101.3	99.2	101.3	101.3	101.3	103.4
55°	93.0	91.0	93.0	93.0	97.2	95.1	95.1	97.2	97.2	99.2	101.3
57.5°	86.8	84.8	88.9	88.9	93.0	93.0	91.0	93.0	93.0	95.1	95.1
60°	80.6	80.6	82.7	82.7	86.8	88.9	88.9	88.9	88.9	88.9	88.9
62.5°	74.4	74.4	76.5	78.5	82.7	82.7	84.8	84.8	84.8	84.8	82.7
65°	68.2	70.3	72.3	72.3	76.5	78.5	78.5	78.5	78.5	78.5	78.5
67.5°	59.9	64.1	66.1	68.2	72.3	72.3	74.4	74.4	72.3	72.3	72.3
70°	53.7	55.8	57.9	59.9	66.1	66.1	68.2	68.2	66.1	66.1	68.2
72.5°	45.5	47.5	49.6	53.7	59.9	59.9	62.0	62.0	59.9	59.9	59.9
75°	39.3	39.3	41.3	45.5	53.7	53.7	53.7	55.8	53.7	53.7	51.7
77.5°	28.9	31.0	33.1	39.3	45.5	47.5	47.5	47.5	45.5	45.5	43.4
80°	18.6	20.7	24.8	28.9	35.1	37.2	39.3	39.3	37.2	37.2	35.1
82.5°	8.3	12.4	14.5	18.6	22.7	28.9	28.9	31.0	28.9	26.9	26.9
85°	0.0	0.0	2.1	6.2	10.3	16.5	18.6	20.7	18.6	16.5	16.5
87.5°	0.0	0.0	0.0	0.0	0.0	4.1	4.1	4.1	2.1	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	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9	1597.9
2.5°	1385.0	1407.7	1442.8	1463.5	1511.1	1554.5	1599.9	1659.9	1672.3	1674.4
5°	1099.7	1126.6	1192.7	1219.6	1306.4	1376.7	1480.0	1581.3	1608.2	1614.4
7.5°	839.2	859.9	932.3	983.9	1079.0	1178.2	1310.5	1430.4	1490.4	1496.6
10°	655.3	711.1	766.9	843.4	926.1	1023.2	1161.7	1314.7	1380.8	1376.7
12.5°	551.9	609.8	678.0	754.5	839.2	926.1	1052.2	1221.7	1287.8	1304.3
15°	442.4	512.6	587.1	665.6	764.8	849.6	996.3	1184.5	1265.1	1287.8
17.5°	343.1	399.0	471.3	572.6	669.7	789.6	975.7	1219.6	1310.5	1333.3
20°	270.8	312.1	363.8	461.0	585.0	733.8	965.3	1285.7	1409.8	1442.8
22.5°	231.5	248.1	285.3	370.0	500.2	673.9	959.1	1378.8	1533.8	1589.6
25°	206.7	217.0	237.7	291.5	415.5	622.2	969.5	1494.5	1707.4	1752.9
27.5°	188.1	196.4	206.7	246.0	359.7	576.7	988.1	1624.7	1856.3	1922.4
30°	171.6	177.8	192.2	219.1	314.2	531.2	994.3	1752.9	1988.6	2048.5
32.5°	159.2	167.4	179.8	202.6	287.3	500.2	977.7	1850.1	2110.5	2176.7
35°	146.8	157.1	169.5	188.1	264.6	473.4	940.5	1930.7	2226.3	2290.4
37.5°	140.6	146.8	159.2	173.6	248.1	446.5	907.5	2011.3	2346.2	2435.0
40°	132.3	138.5	150.9	163.3	227.4	417.6	884.7	2114.6	2482.6	2563.2
42.5°	126.1	134.4	144.7	159.2	210.8	386.5	862.0	2197.3	2604.6	2689.3
45°	122.0	130.2	140.6	159.2	196.4	361.7	837.2	2269.7	2697.6	2780.3
47.5°	115.8	126.1	140.6	153.0	190.2	345.2	837.2	2356.5	2782.3	2869.1
50°	113.7	124.0	146.8	148.8	186.0	339.0	872.3	2455.7	2904.3	2987.0
52.5°	111.6	122.0	146.8	140.6	181.9	343.1	926.1	2635.6	3061.4	3156.5
55°	105.4	119.9	140.6	130.2	171.6	347.3	986.0	2871.2	3295.0	3383.8
57.5°	101.3	117.8	132.3	119.9	157.1	341.1	1066.6	3082.1	3538.9	3600.9
60°	95.1	115.8	115.8	111.6	140.6	322.5	1157.6	3216.4	3631.9	3681.5
62.5°	91.0	113.7	103.4	103.4	128.2	293.5	1188.6	3183.3	3540.9	3594.7
65°	84.8	99.2	93.0	95.1	117.8	260.5	1134.8	2976.6	3369.4	3433.5
67.5°	78.5	84.8	82.7	86.8	113.7	227.4	990.1	2730.6	3148.2	3247.4
70°	70.3	74.4	74.4	78.5	107.5	204.6	826.8	2414.4	2860.9	3007.6
72.5°	64.1	66.1	66.1	72.3	101.3	192.2	653.2	2048.5	2399.9	2490.9
75°	53.7	57.9	57.9	62.0	91.0	163.3	446.5	1500.7	1678.5	1752.9
77.5°	47.5	47.5	49.6	51.7	72.3	109.6	262.5	924.0	1008.7	1048.0
80°	37.2	39.3	37.2	37.2	45.5	72.3	142.6	541.6	613.9	593.3
82.5°	26.9	26.9	22.7	22.7	26.9	39.3	62.0	281.1	287.3	277.0
85°	14.5	10.3	8.3	8.3	8.3	8.3	8.3	59.9	28.9	22.7
87.5°	0.0	0.0	0.0	2.1	2.1	2.1	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

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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

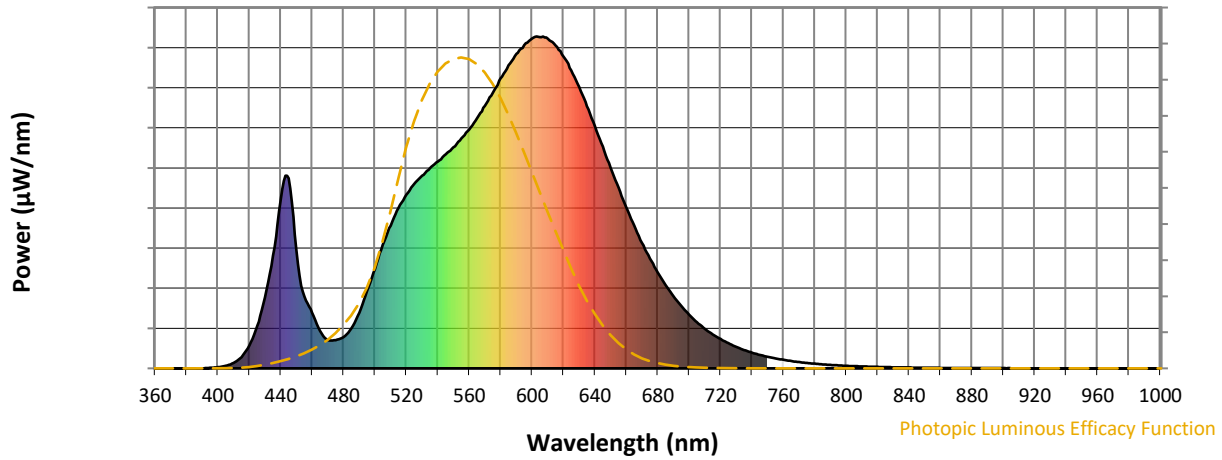


CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

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

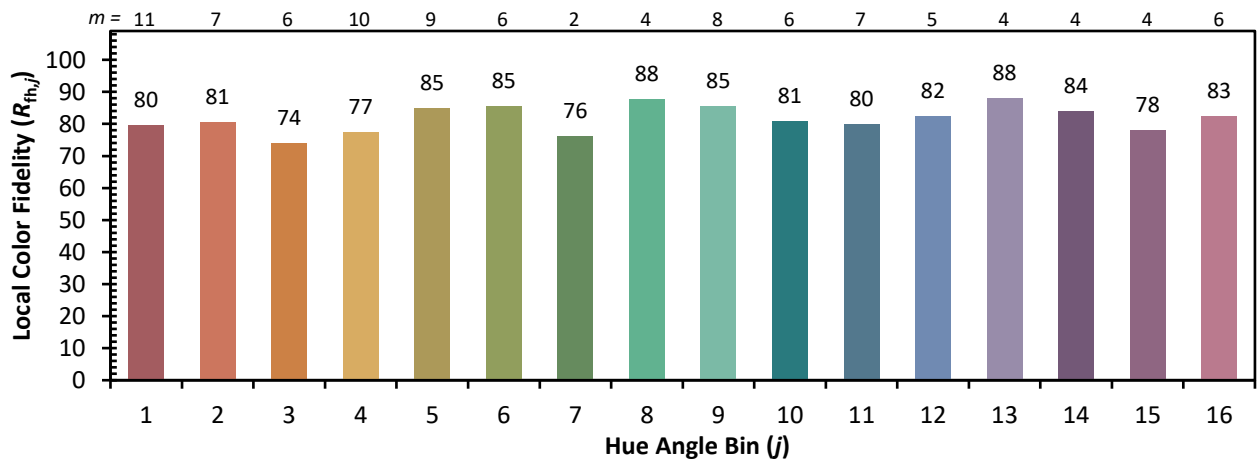
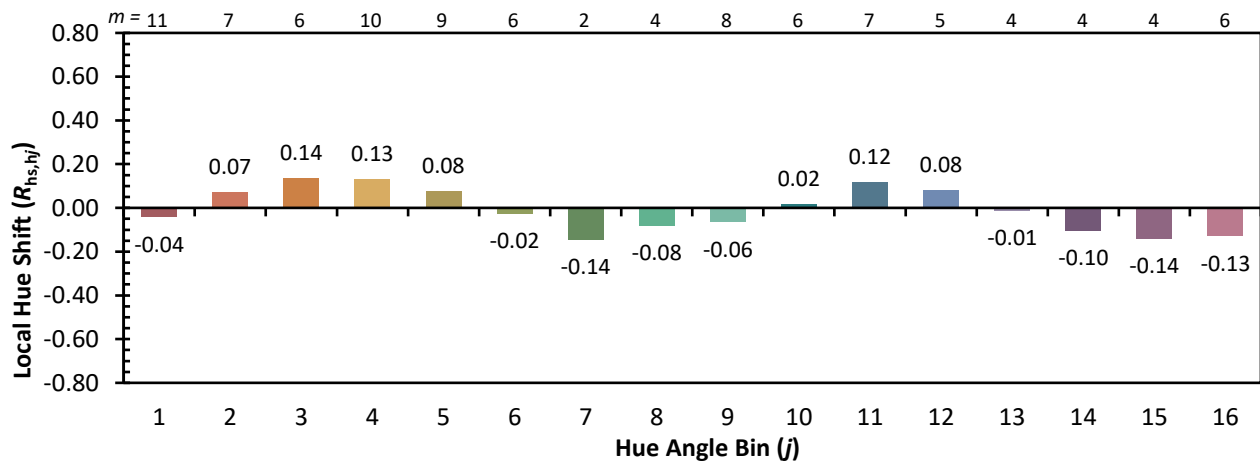
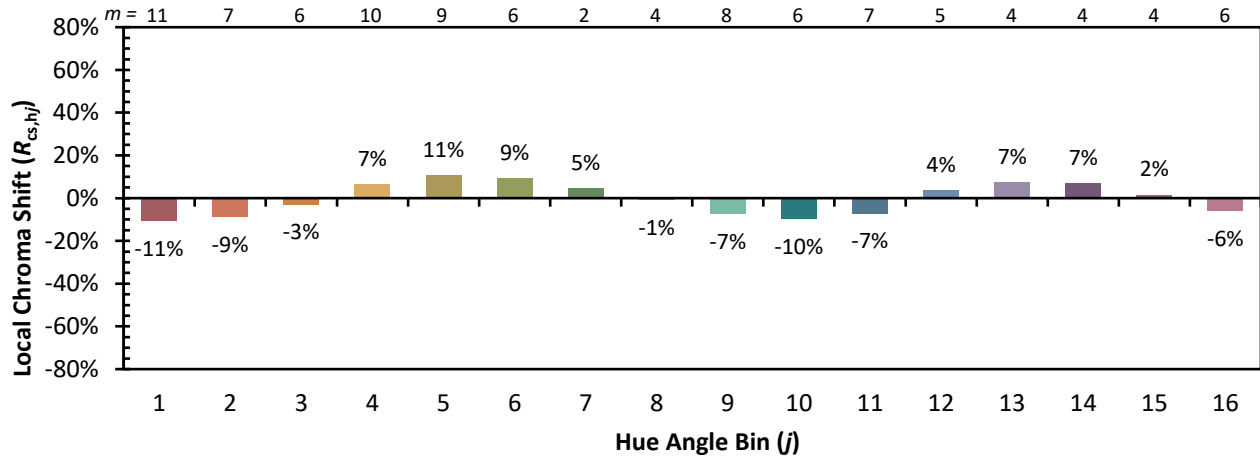


Individual Sample Fidelity Index ($R_{f,i}$)

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)