

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: P631553

Luminaire Tested: GWS-SA1F-830-U-SLR-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631553
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1F-830-U-SLR-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3570.5 lumens
Efficiency: N/A
Efficacy: 53.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G0

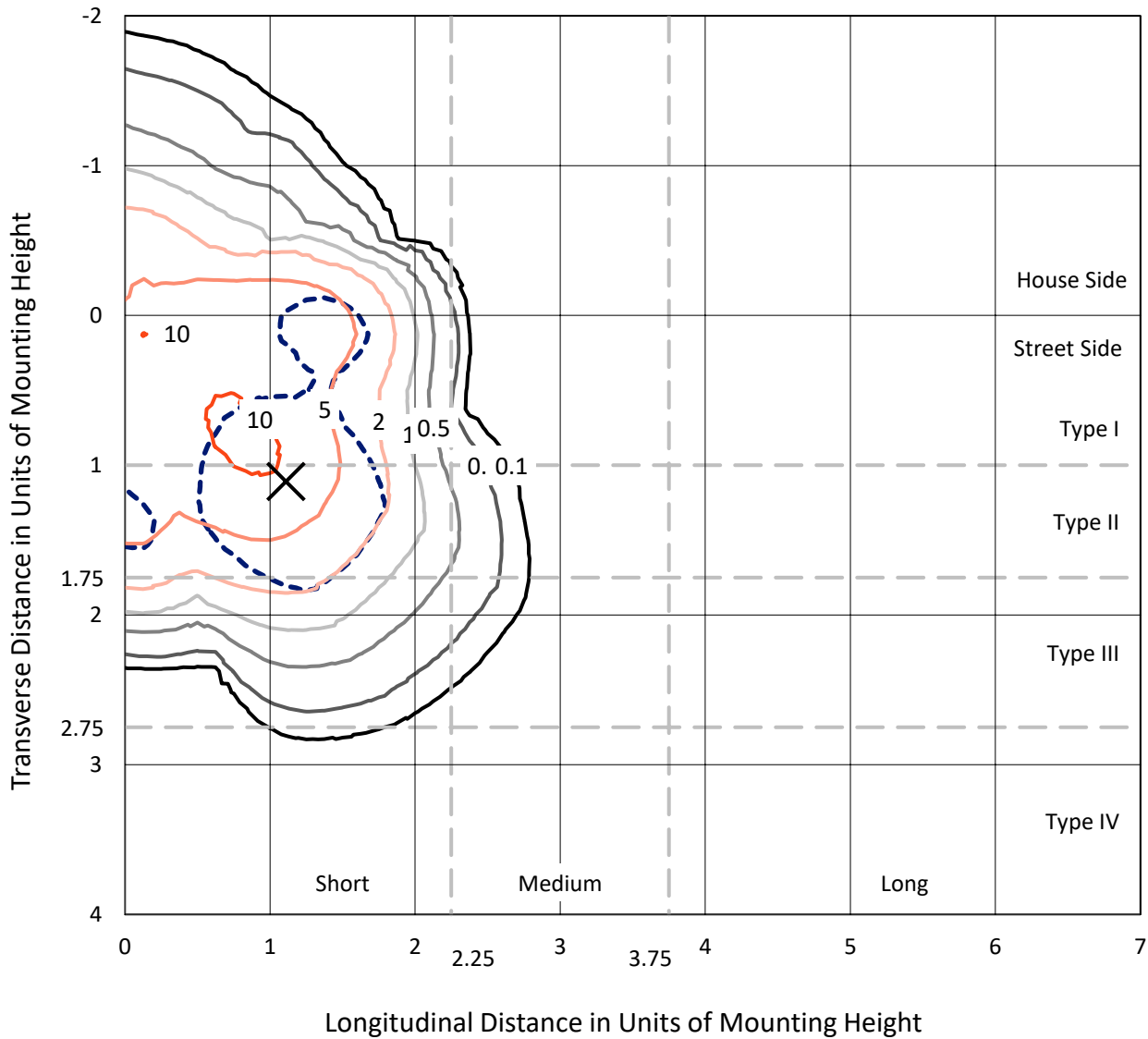
Input Watts (W): 67.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

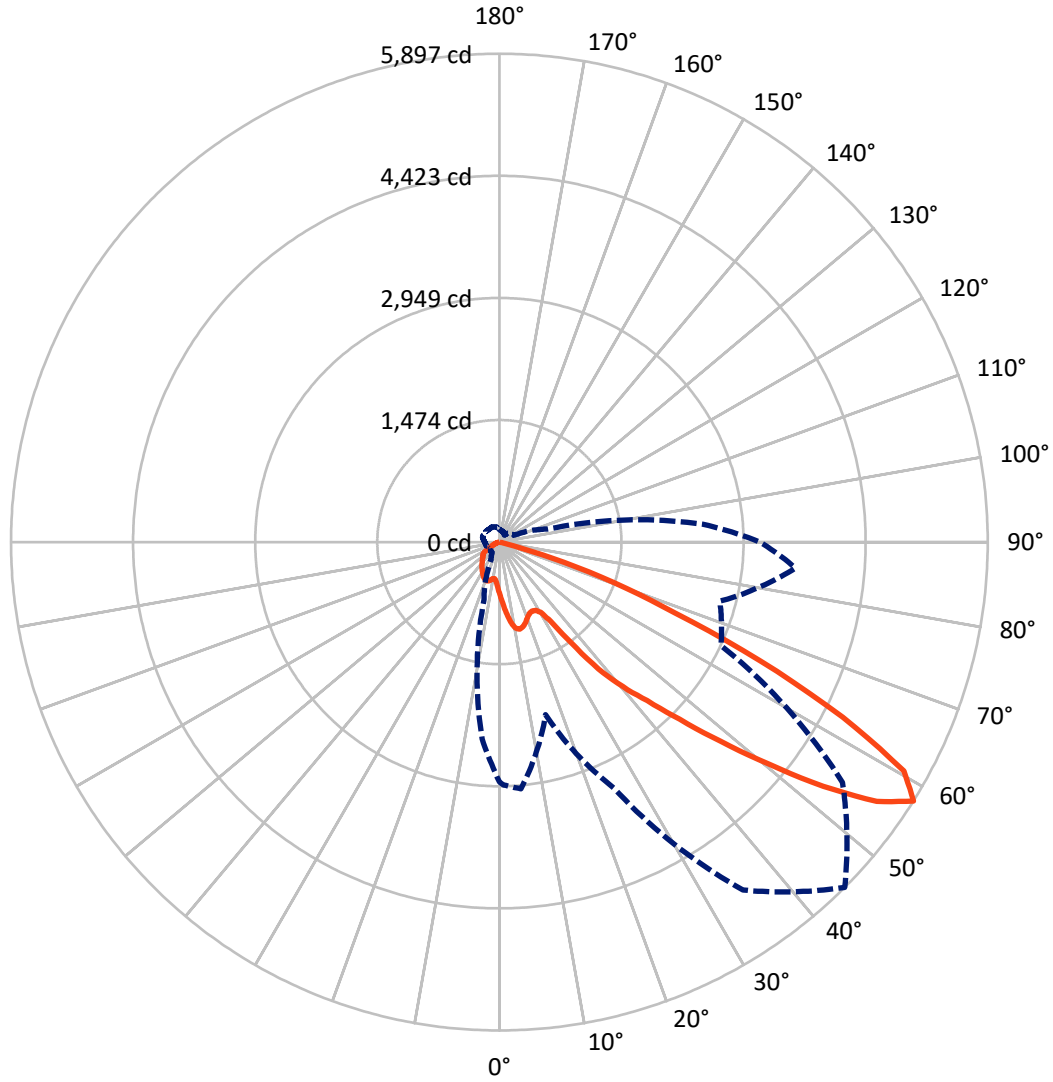
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	799.5	0.0	799.5
	% Fixture	22.4	0.0	22.4
Street Side	Lumens	2771.0	0.0	2771.0
	% Fixture	77.6	0.0	77.6
Total	Lumens	3570.5	0.0	3570.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.7	1.7
10°-20°	199.7	5.6
20°-30°	324.4	9.1
30°-40°	501.3	14.0
40°-50°	803.8	22.5
50°-60°	1098.6	30.8
60°-70°	532.1	14.9
70°-80°	48.7	1.4
80°-90°	0.1	0.0
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°	3570.5	100.0
0°-180°	3570.5	100.0

Coefficient of Utilization



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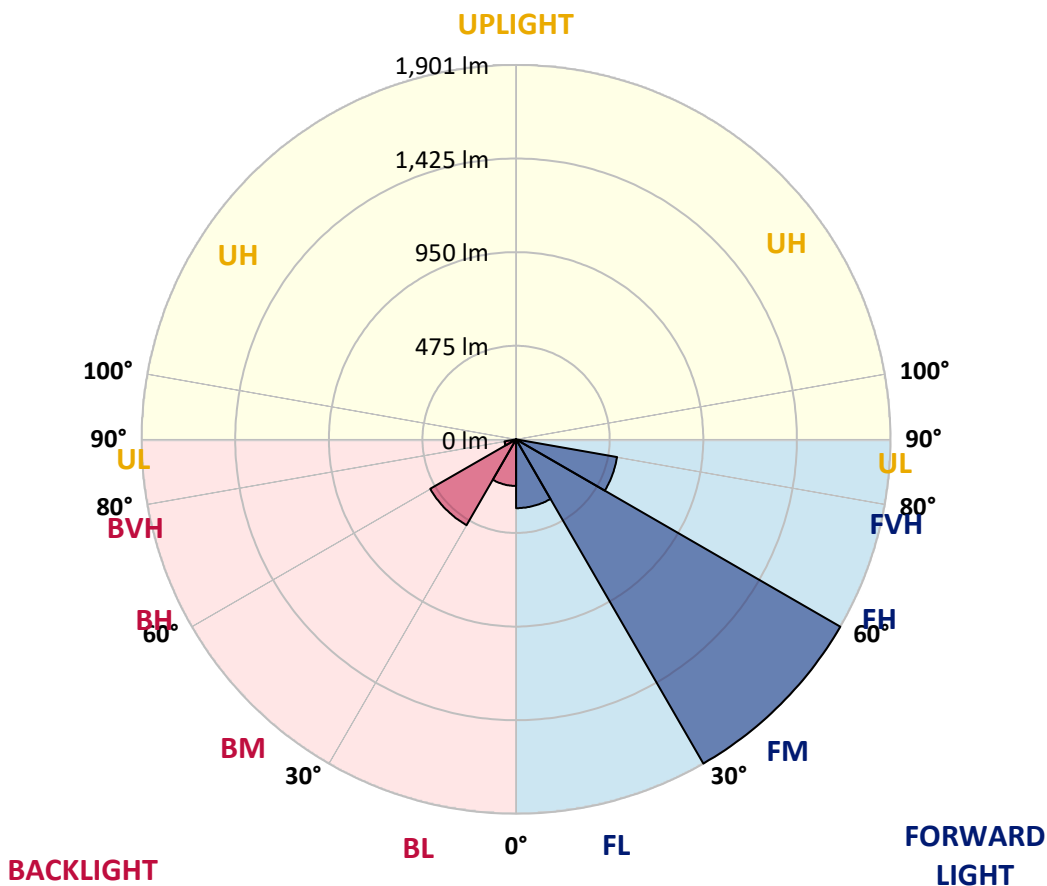
CATALOG NUMBER: GWS-SA1F-830-U-SLR-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	349.3	9.8			
FM (30°-60°)	1900.7	53.2			
FH (60°-80°)	520.9	14.6			G0/660
FVH (80°-90°)	0.1	0.0			G0/10
BL (0°-30°)	236.6	6.6	B1/500		
BM (30°-60°)	503.0	14.1	B1/1000		
BH (60°-80°)	59.9	1.7	B0/110		G0/110
BVH (80°-90°)	0.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6
2.5°	679.8	684.2	691.4	706.7	719.7	728.3	732.1	731.2	725.9	722.1	714.4
5°	752.8	752.8	766.7	801.7	828.6	845.4	854.0	848.7	838.2	821.4	795.5
7.5°	816.6	819.0	842.5	892.4	933.2	957.2	971.1	968.2	949.5	917.3	865.5
10°	866.5	869.4	900.5	961.5	1009.5	1033.9	1054.6	1056.5	1035.8	993.1	933.7
12.5°	914.9	917.8	950.4	1009.0	1051.2	1061.3	1079.5	1086.7	1081.4	1051.2	989.3
15°	967.2	974.0	1001.8	1045.4	1063.2	1051.2	1063.2	1076.1	1093.9	1091.0	1035.4
17.5°	1018.6	1023.4	1051.7	1067.0	1047.4	1016.2	1021.9	1037.3	1077.6	1116.9	1080.9
20°	1066.1	1072.8	1096.3	1076.1	1016.7	968.2	968.7	988.8	1050.2	1132.8	1127.5
22.5°	1116.0	1126.0	1142.8	1086.2	988.3	930.3	932.7	950.9	1028.7	1147.6	1180.3
25°	1181.2	1190.8	1201.9	1111.2	979.2	911.6	920.7	937.5	1028.7	1173.1	1245.5
27.5°	1269.5	1276.2	1276.7	1157.7	995.1	914.5	933.7	952.8	1059.4	1223.9	1332.8
30°	1380.3	1390.9	1377.0	1230.2	1044.5	952.8	981.2	1005.1	1125.6	1309.8	1461.4
32.5°	1515.1	1530.0	1511.3	1337.6	1147.6	1085.3	1136.6	1150.5	1231.1	1434.1	1607.3
35°	1673.5	1686.0	1665.8	1486.4	1388.5	1400.0	1493.1	1475.3	1443.2	1587.1	1777.6
37.5°	1847.2	1858.7	1819.8	1711.9	1744.5	1794.4	1943.1	1882.2	1778.5	1784.3	1962.3
40°	2006.4	2018.9	1958.0	1957.0	2024.2	2115.4	2294.8	2210.8	2069.8	2042.4	2135.5
42.5°	2171.5	2180.1	2125.0	2087.5	2240.1	2427.7	2617.7	2504.5	2262.6	2232.9	2352.4
45°	2407.1	2425.3	2326.9	2151.8	2434.4	2787.0	3051.9	2830.7	2394.1	2370.1	2684.4
47.5°	2753.5	2766.9	2566.3	2192.1	2615.3	3234.7	3594.5	3253.9	2509.7	2455.0	3138.2
50°	3039.9	3049.0	2786.6	2236.3	2807.7	3717.3	4213.0	3755.7	2639.8	2595.6	3561.9
52.5°	3251.0	3285.5	3075.9	2326.9	3060.5	4284.9	4897.6	4350.2	2842.7	2867.2	3913.1
55°	3294.7	3341.7	3273.5	2382.6	3283.1	4863.1	5530.0	4882.3	3045.2	3073.0	4031.1
57.5°	2895.5	2932.9	2989.5	2158.1	3277.9	5127.9	5897.0	5058.8	2953.1	2755.9	3589.2
60°	2169.1	2195.0	2297.7	1649.5	3014.5	4893.8	5611.0	4758.5	2582.2	2102.9	2734.8
62.5°	1286.3	1297.8	1427.8	1068.5	2502.1	4214.4	4653.4	4106.0	2040.5	1414.4	1674.9
65°	493.7	488.9	588.2	527.3	1840.0	3357.0	3461.1	3130.1	1400.0	648.2	638.6
67.5°	76.3	72.9	98.4	155.9	1327.1	2326.5	2283.8	2255.9	877.0	151.1	131.9
70°	17.3	17.3	21.1	46.1	810.8	1366.9	1462.9	1394.7	561.3	32.1	17.3
72.5°	8.2	8.2	10.1	19.7	293.6	563.3	656.3	646.3	182.3	10.6	6.2
75°	2.9	3.4	3.4	4.3	17.8	29.3	67.2	48.0	11.5	0.0	0.0
77.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6
2.5°	697.6	694.2	681.8	665.0	648.7	634.3	619.4	601.6	588.7	573.8	569.0
5°	775.3	754.2	720.2	684.6	652.0	624.2	597.3	568.5	547.4	526.3	519.1
7.5°	841.1	809.9	754.7	701.4	656.8	617.5	578.6	539.3	508.6	483.6	475.9
10°	900.1	864.1	790.2	724.5	668.3	622.8	575.7	526.3	486.5	456.8	449.6
12.5°	950.9	909.2	820.4	741.7	673.1	620.8	575.3	535.9	499.9	465.9	456.8
15°	993.6	947.6	845.9	753.3	665.9	596.8	557.0	550.8	547.9	510.5	492.7
17.5°	1035.4	983.6	866.5	758.5	645.8	554.6	525.8	554.1	584.4	559.9	537.4
20°	1079.0	1020.0	887.6	759.5	612.2	507.1	502.3	547.0	585.3	577.7	556.5
22.5°	1130.4	1065.6	914.0	759.0	570.0	466.8	485.1	533.0	564.2	563.7	547.0
25°	1204.7	1123.2	949.5	761.9	523.9	435.6	465.9	509.5	535.0	534.0	520.1
27.5°	1284.4	1191.8	995.5	769.1	484.6	417.4	443.3	477.4	499.5	498.5	486.5
30°	1396.2	1270.9	1039.7	769.6	456.3	407.8	418.4	441.9	463.0	460.6	451.5
32.5°	1531.9	1360.2	1076.6	742.2	438.5	398.7	392.5	404.5	420.8	417.4	415.0
35°	1696.0	1466.2	1108.3	682.2	411.2	380.5	363.7	366.1	377.6	379.5	378.5
37.5°	1883.1	1592.4	1147.6	603.1	374.2	354.1	331.5	329.6	336.3	342.6	347.4
40°	2067.9	1734.4	1200.9	523.0	340.6	320.5	298.9	294.1	297.0	308.0	318.1
42.5°	2275.6	1899.0	1258.5	454.4	317.6	283.6	262.9	253.8	262.0	279.7	291.7
45°	2575.0	2129.7	1314.6	399.7	308.0	250.9	223.1	222.1	231.3	254.3	267.7
47.5°	2995.3	2428.2	1351.5	357.0	307.5	225.5	192.4	198.1	208.7	231.3	246.6
50°	3405.0	2801.9	1310.8	324.3	297.5	208.7	169.4	180.9	191.4	211.1	226.9
52.5°	3652.1	3003.0	1152.0	293.6	266.3	201.0	146.8	167.0	168.9	186.6	203.4
55°	3626.2	2872.9	882.3	246.1	220.2	190.0	123.3	150.7	151.6	165.0	179.4
57.5°	3147.4	2466.6	606.0	199.6	165.5	156.9	101.7	127.1	136.3	144.4	155.0
60°	2345.6	1799.7	270.1	162.2	105.1	106.0	86.8	96.0	109.9	119.5	128.6
62.5°	1382.2	1035.4	109.9	97.4	58.1	66.7	70.0	70.0	78.7	85.9	91.6
65°	522.5	362.2	44.6	48.9	30.2	31.2	41.3	50.9	57.6	63.8	71.5
67.5°	91.6	63.3	23.0	18.2	17.8	15.8	21.1	33.1	36.9	41.7	45.1
70°	15.4	13.0	9.6	9.1	8.2	8.6	13.9	23.5	25.9	27.3	28.8
72.5°	4.3	3.8	2.9	2.4	1.9	2.4	8.6	18.2	19.2	20.2	21.6
75°	0.0	0.0	0.0	0.0	0.0	0.0	3.4	13.0	13.9	14.4	15.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	3.8	4.8	3.8
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	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°	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6
2.5°	566.1	556.5	551.3	548.4	548.4	544.6	540.2	538.8	545.0	545.0	555.6
5°	510.0	502.3	493.7	488.4	480.3	481.7	476.9	476.4	482.7	485.5	496.6
7.5°	471.1	461.5	456.3	452.9	448.6	446.7	442.4	440.9	444.3	449.1	459.6
10°	445.2	443.8	443.3	445.7	445.7	443.3	439.5	437.1	438.0	447.2	459.2
12.5°	452.0	454.8	455.8	459.6	461.5	459.6	456.8	457.7	463.9	480.7	498.5
15°	481.2	478.8	477.9	479.8	481.2	479.3	478.3	485.5	507.1	531.1	551.3
17.5°	512.4	497.1	490.3	490.3	491.3	490.3	491.3	505.2	540.2	564.2	579.1
20°	528.2	499.9	489.4	487.0	488.9	489.4	492.7	508.6	547.0	563.7	567.1
22.5°	523.4	487.9	475.9	474.0	475.9	477.9	481.2	494.7	530.6	539.3	537.8
25°	499.5	464.4	454.8	454.8	459.2	458.7	460.1	469.7	499.5	504.7	502.3
27.5°	469.2	436.1	428.0	432.8	436.6	435.6	436.1	444.3	466.3	467.8	465.4
30°	438.5	409.7	402.1	407.8	413.1	412.1	412.6	420.8	434.7	433.2	429.9
32.5°	407.3	386.2	380.5	383.8	392.0	391.0	392.9	401.6	406.9	400.6	396.8
35°	378.5	367.5	363.2	365.1	371.4	372.8	376.1	381.9	381.9	374.2	367.5
37.5°	351.7	350.2	347.4	345.0	350.7	355.0	359.8	366.6	357.0	345.9	339.7
40°	326.7	333.0	329.1	322.9	326.3	332.5	342.1	347.4	335.8	324.8	314.3
42.5°	303.7	314.3	312.8	305.1	308.0	313.8	324.8	329.1	315.7	303.2	293.1
45°	281.6	296.5	297.5	287.9	290.7	296.5	309.5	310.9	293.6	280.2	273.0
47.5°	262.4	278.8	279.2	272.0	273.0	281.2	293.1	293.6	274.0	261.5	252.4
50°	244.2	262.9	264.4	258.1	259.1	268.7	278.8	276.8	255.7	242.8	234.6
52.5°	222.1	247.6	250.9	248.0	251.9	259.6	265.8	259.1	234.6	221.7	214.5
55°	198.1	231.3	238.5	236.5	240.9	247.1	248.5	244.2	213.5	200.5	193.8
57.5°	170.3	190.5	202.9	199.1	202.5	208.7	213.0	209.7	186.6	176.6	170.8
60°	141.1	154.5	157.4	151.1	148.3	159.3	169.4	165.0	145.4	139.1	132.4
62.5°	103.2	118.5	120.4	112.3	108.9	120.9	129.5	125.2	103.6	96.9	91.6
65°	82.5	96.9	100.8	93.1	91.2	100.3	105.6	95.0	79.6	72.4	66.7
67.5°	54.2	65.7	75.8	75.3	71.5	74.4	70.5	61.9	50.9	47.0	43.2
70°	33.6	40.3	46.5	48.9	48.5	47.5	42.2	36.0	32.6	31.2	29.3
72.5°	25.9	32.6	37.4	38.9	39.3	37.9	33.6	27.8	24.5	22.5	21.1
75°	19.2	24.5	28.3	30.2	31.2	30.2	25.9	22.1	18.7	17.3	15.8
77.5°	6.7	8.2	10.1	11.0	10.6	10.1	9.1	9.1	7.2	6.7	5.8
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6	627.6
2.5°	567.6	576.2	592.0	606.4	621.8	637.6	654.9	672.7	680.8	679.8
5°	513.4	532.1	558.0	586.3	618.0	652.0	689.9	728.8	745.6	752.8
7.5°	479.3	505.7	539.8	575.7	617.5	665.9	723.0	784.0	808.4	816.6
10°	483.6	514.3	542.6	577.7	622.3	685.1	756.1	828.6	857.4	866.5
12.5°	518.6	525.4	533.0	561.8	618.0	699.5	786.4	872.7	905.8	914.9
15°	550.3	519.1	504.7	531.1	602.6	709.6	817.1	920.2	956.7	967.2
17.5°	551.7	504.7	472.6	493.2	577.7	713.9	847.3	968.7	1008.5	1018.6
20°	534.0	488.9	447.6	448.1	543.6	713.0	872.2	1012.3	1057.0	1066.1
22.5°	508.1	470.2	427.5	412.6	507.1	711.0	899.6	1058.9	1107.3	1116.0
25°	479.3	446.2	408.3	385.7	470.7	713.0	938.0	1119.8	1173.1	1181.2
27.5°	448.1	419.8	393.4	375.2	440.0	720.2	984.0	1197.5	1260.9	1269.5
30°	415.5	394.4	383.8	372.8	420.8	722.1	1033.9	1288.2	1368.3	1380.3
32.5°	383.3	371.8	372.3	374.2	402.5	708.6	1079.5	1389.0	1496.0	1515.1
35°	353.6	350.2	359.8	369.4	376.1	674.1	1119.3	1508.0	1653.8	1673.5
37.5°	328.2	331.0	343.0	352.6	347.4	625.2	1172.1	1656.7	1830.4	1847.2
40°	303.7	310.9	324.8	329.1	325.3	568.1	1235.4	1800.1	1983.4	2006.4
42.5°	281.2	286.4	306.1	307.1	319.1	510.0	1296.4	1954.6	2159.5	2171.5
45°	262.9	262.0	282.1	288.3	327.2	445.7	1355.9	2160.5	2389.8	2407.1
47.5°	245.2	244.2	249.0	277.3	330.6	386.2	1414.9	2461.8	2723.7	2753.5
50°	228.4	229.8	214.9	272.0	312.3	340.6	1441.7	2740.5	3027.4	3039.9
52.5°	213.5	208.2	182.3	254.8	273.5	297.5	1365.5	2867.2	3215.5	3251.0
55°	192.4	163.1	150.2	206.8	215.9	259.6	1118.4	2793.8	3231.8	3294.7
57.5°	164.6	128.1	127.6	152.6	152.6	240.9	716.3	2386.9	2785.1	2895.5
60°	126.7	99.3	105.6	106.0	97.9	175.6	402.1	1729.1	2059.2	2169.1
62.5°	90.2	75.8	79.6	63.3	56.1	87.8	192.9	995.5	1270.9	1286.3
65°	60.5	51.3	41.7	35.0	34.5	37.4	79.6	359.8	437.6	493.7
67.5°	39.8	31.2	22.1	22.1	24.9	24.9	30.2	59.5	83.5	76.3
70°	25.9	21.6	13.9	13.4	16.3	16.3	15.4	16.3	17.3	17.3
72.5°	19.2	16.3	8.2	7.2	9.1	9.6	8.6	8.2	8.2	8.2
75°	14.4	11.5	4.8	3.4	4.3	5.8	4.8	3.4	3.4	2.9
77.5°	5.8	4.3	1.9	1.4	2.4	3.4	2.9	1.4	1.0	1.0
80°	0.5	1.0	1.0	1.0	1.4	1.9	2.4	1.0	0.5	0.5
82.5°	0.0	0.5	0.5	0.5	1.0	1.4	1.9	1.0	0.5	0.5
85°	0.0	0.0	0.0	0.0	1.0	1.4	1.0	0.5	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.5	1.4	1.0	0.5	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



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

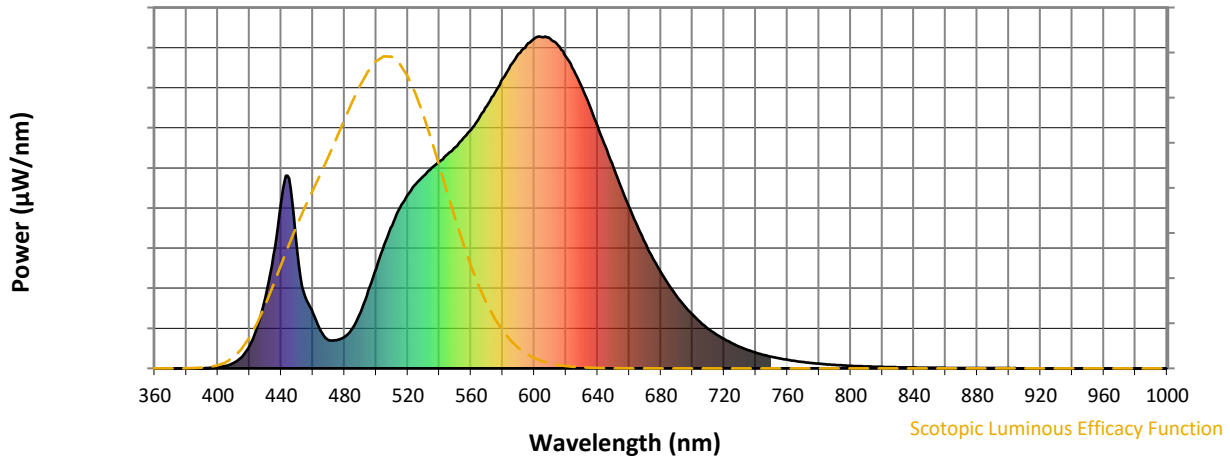


Photopic Lumens: NR

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

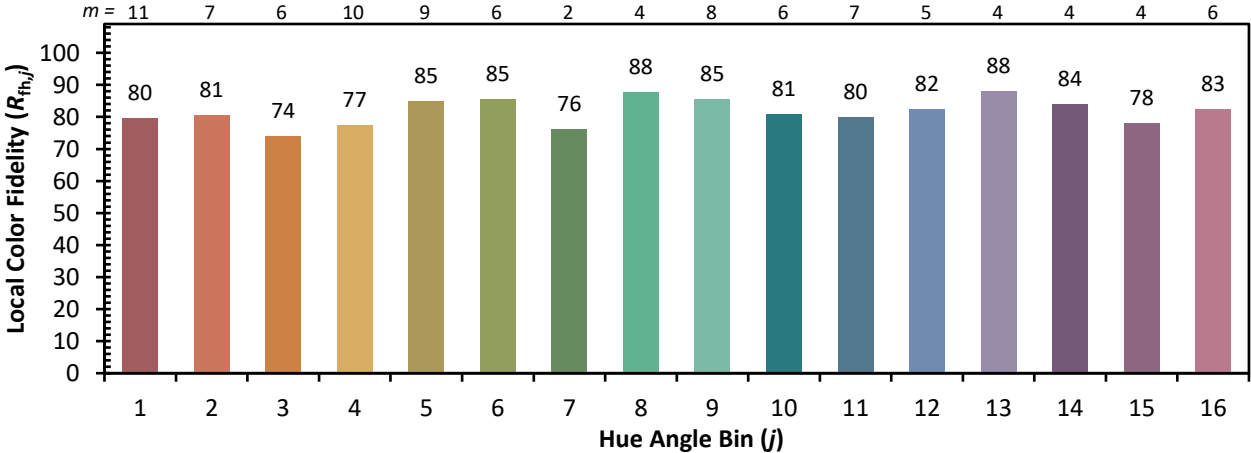


Individual Sample Fidelity Index ($R_{f,i}$)

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)