

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: P637491

Luminaire Tested: GWS-SA4C-830-U-SLL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637491
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-40)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4C-830-U-SLL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9336.6 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

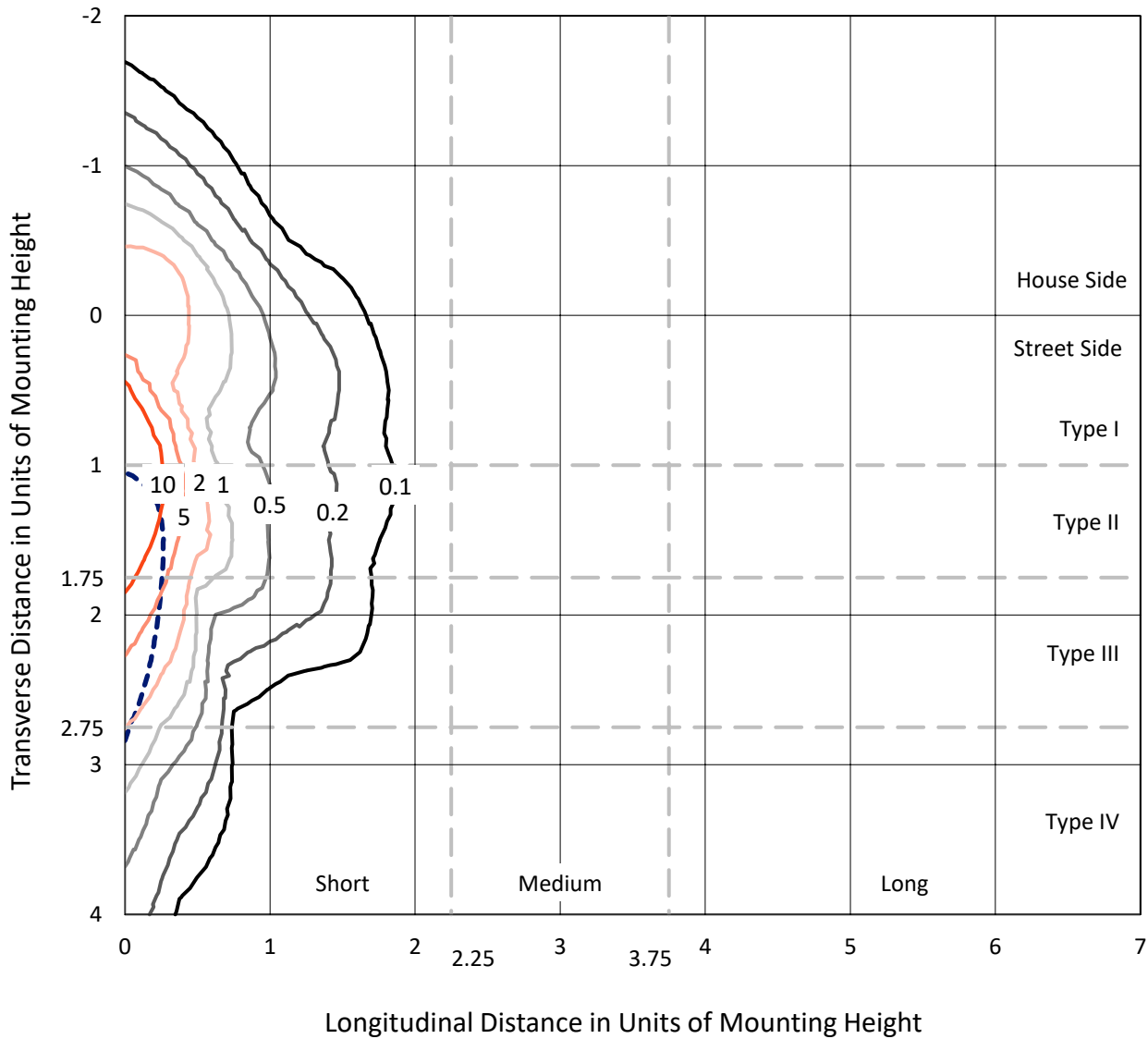
Input Watts (W): 128.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

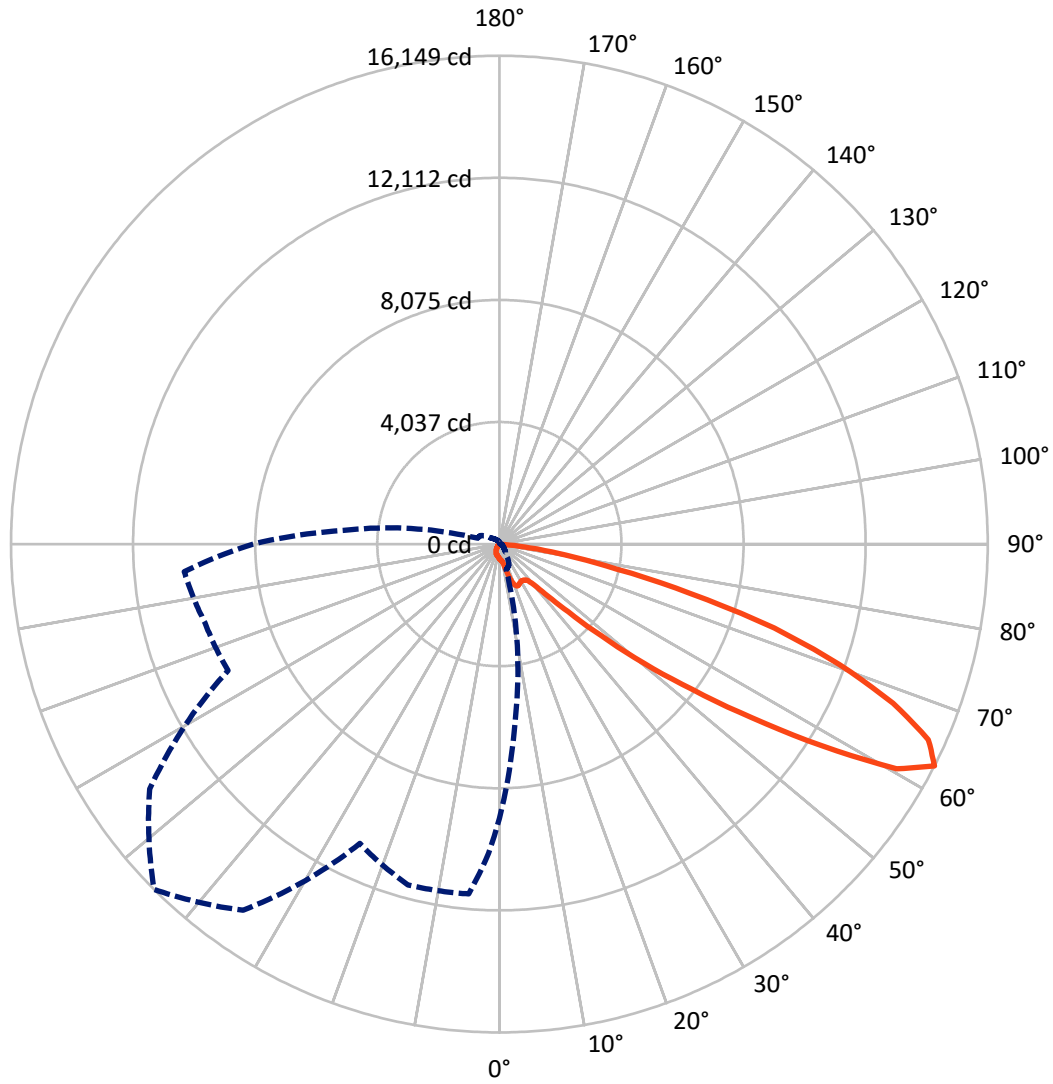
× Max cd
 - - - 1/2 Max cd



Based on 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 315-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1084.8	0.0	1084.8
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	8251.8	0.0	8251.8
	% Fixture	88.4	0.0	88.4
Total	Lumens	9336.6	0.0	9336.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.8	0.4
10°-20°	143.3	1.5
20°-30°	323.8	3.5
30°-40°	557.8	6.0
40°-50°	1052.2	11.3
50°-60°	2349.2	25.2
60°-70°	3142.0	33.7
70°-80°	1575.6	16.9
80°-90°	151.0	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	9336.6	100.0
0°-180°	9336.6	100.0

Coefficient of Utilization

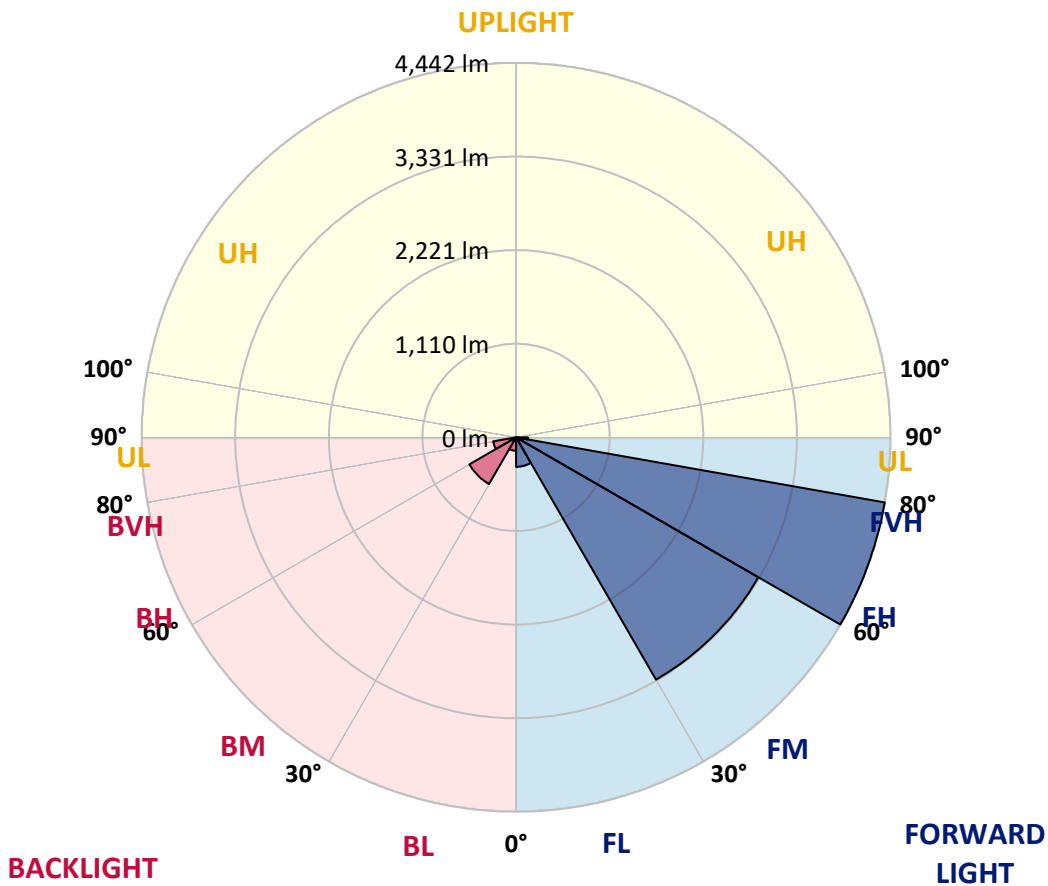


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	349.7	3.7			
FM (30°-60°)	3319.4	35.6			
FH (60°-80°)	4441.7	47.6			G2/5000
FVH (80°-90°)	141.0	1.5			G2/225
BL (0°-30°)	159.2	1.7	B1/500		
BM (30°-60°)	639.7	6.9	B1/1000		
BH (60°-80°)	275.9	3.0	B1/500		G1/500
BVH (80°-90°)	10.0	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2
2.5°	478.7	477.6	475.4	468.7	463.2	459.9	453.3	453.3	452.1	449.9	445.5
5°	463.2	458.8	454.4	442.2	428.9	421.2	412.4	411.2	411.2	409.0	407.9
7.5°	438.9	434.5	428.9	409.0	396.9	389.1	381.4	380.3	377.0	377.0	377.0
10°	425.6	419.0	410.1	388.0	375.9	369.2	363.7	360.4	358.2	354.9	353.8
12.5°	454.4	442.2	423.4	383.6	367.0	358.2	351.5	349.3	342.7	338.3	335.0
15°	543.9	514.1	476.5	393.6	363.7	350.4	341.6	337.2	331.7	323.9	318.4
17.5°	690.9	647.8	584.8	425.6	360.4	343.8	332.8	325.0	317.3	308.4	301.8
20°	894.4	830.2	755.1	484.2	360.4	336.1	322.8	312.9	301.8	291.9	284.1
22.5°	1153.0	1088.9	960.7	583.7	364.8	326.1	310.6	297.4	284.1	275.3	266.4
25°	1442.7	1352.0	1232.6	704.2	377.0	312.9	296.3	283.0	270.8	259.8	249.8
27.5°	1765.5	1667.1	1507.9	875.6	403.5	299.6	280.8	268.6	257.6	246.5	233.3
30°	2062.9	2004.3	1841.8	1081.2	446.6	290.7	268.6	257.6	246.5	232.2	220.0
32.5°	2419.9	2316.0	2182.3	1315.5	504.1	281.9	258.7	243.2	234.4	221.1	207.8
35°	2779.2	2690.8	2515.0	1604.1	568.2	273.1	246.5	232.2	224.4	208.9	194.6
37.5°	3149.6	3129.7	2956.1	1923.6	631.2	263.1	232.2	223.3	215.6	197.9	181.3
40°	3514.4	3477.9	3317.6	2288.4	669.9	252.1	220.0	214.5	205.6	185.7	166.9
42.5°	3863.7	3836.1	3680.2	2637.7	664.4	242.1	207.8	201.2	194.6	174.7	151.5
45°	4292.7	4247.3	4050.6	2896.4	608.0	253.2	195.7	184.6	183.5	164.7	136.0
47.5°	5095.3	4946.0	4612.2	3095.4	551.6	281.9	182.4	169.1	176.9	154.8	120.5
50°	6219.5	6043.8	5560.7	3250.2	550.5	319.5	180.2	154.8	171.4	147.0	107.2
52.5°	7349.4	7039.8	6452.8	3333.1	591.4	347.1	200.1	140.4	164.7	139.3	97.3
55°	8431.7	7789.4	6826.5	3058.9	623.5	377.0	236.6	132.7	152.6	130.4	91.8
57.5°	9463.1	8391.9	6989.0	2419.9	730.7	389.1	258.7	136.0	134.9	119.4	87.3
60°	9604.6	8363.1	6660.6	1407.3	805.9	368.1	249.8	151.5	118.3	106.1	79.6
62.5°	9069.5	7807.0	5912.2	877.8	748.4	360.4	222.2	172.5	107.2	94.0	69.6
65°	8257.0	6934.8	4929.4	566.0	567.1	400.2	194.6	169.1	100.6	82.9	59.7
67.5°	6986.8	5803.9	3883.6	379.2	320.6	341.6	170.2	116.1	98.4	70.8	46.4
70°	5099.7	4131.3	2528.3	253.2	191.3	273.1	142.6	82.9	92.9	58.6	33.2
72.5°	3727.7	2775.9	1411.7	165.8	108.3	159.2	105.0	59.7	71.9	43.1	23.2
75°	2683.1	1910.3	805.9	106.1	71.9	87.3	68.5	40.9	46.4	34.3	21.0
77.5°	1291.2	930.8	365.9	58.6	48.6	44.2	36.5	25.4	28.7	31.0	18.8
80°	48.6	36.5	27.6	28.7	31.0	19.9	16.6	13.3	16.6	21.0	9.9
82.5°	0.0	0.0	0.0	3.3	4.4	5.5	6.6	5.5	6.6	7.7	1.1
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°	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2
2.5°	448.8	446.6	448.8	451.0	453.3	455.5	452.1	454.4	456.6	451.0	453.3
5°	413.5	412.4	419.0	422.3	426.7	428.9	426.7	426.7	425.6	419.0	419.0
7.5°	382.5	383.6	389.1	396.9	402.4	405.7	403.5	402.4	399.1	389.1	389.1
10°	359.3	359.3	368.1	374.8	382.5	385.8	383.6	380.3	377.0	367.0	365.9
12.5°	340.5	340.5	347.1	358.2	367.0	371.4	370.3	365.9	360.4	350.4	349.3
15°	322.8	321.7	331.7	341.6	353.8	359.3	357.1	353.8	343.8	335.0	332.8
17.5°	305.1	304.0	312.9	326.1	339.4	347.1	346.0	338.3	329.4	318.4	316.2
20°	287.4	285.2	296.3	309.5	322.8	330.5	328.3	321.7	310.6	299.6	297.4
22.5°	269.7	268.6	276.4	287.4	299.6	306.2	305.1	299.6	288.5	278.6	278.6
25°	249.8	249.8	255.4	263.1	272.0	275.3	276.4	274.2	267.5	262.0	262.0
27.5°	233.3	229.9	232.2	234.4	238.8	244.3	244.3	246.5	247.6	245.4	246.5
30°	220.0	214.5	211.2	206.7	204.5	206.7	208.9	216.7	224.4	228.8	231.0
32.5°	204.5	197.9	189.0	176.9	169.1	166.9	173.6	187.9	202.3	212.3	217.8
35°	189.0	180.2	163.6	145.9	136.0	132.7	140.4	157.0	178.0	195.7	203.4
37.5°	173.6	161.4	138.2	117.2	106.1	103.9	111.7	129.3	153.7	178.0	187.9
40°	155.9	141.5	113.9	91.8	82.9	80.7	87.3	105.0	130.4	158.1	173.6
42.5°	138.2	120.5	91.8	73.0	64.1	64.1	73.0	86.2	109.4	139.3	158.1
45°	120.5	101.7	75.2	58.6	53.1	54.2	59.7	73.0	91.8	122.7	140.4
47.5°	103.9	87.3	61.9	48.6	44.2	45.3	52.0	63.0	78.5	106.1	124.9
50°	89.5	74.1	54.2	40.9	37.6	39.8	46.4	56.4	69.6	94.0	109.4
52.5°	80.7	66.3	49.7	35.4	33.2	35.4	42.0	50.9	63.0	82.9	98.4
55°	76.3	65.2	49.7	32.1	28.7	31.0	37.6	46.4	56.4	75.2	88.4
57.5°	75.2	67.4	53.1	28.7	24.3	26.5	33.2	42.0	52.0	68.5	79.6
60°	70.8	64.1	52.0	23.2	18.8	22.1	27.6	36.5	47.5	64.1	74.1
62.5°	61.9	56.4	45.3	18.8	14.4	16.6	23.2	32.1	43.1	58.6	69.6
65°	50.9	45.3	35.4	12.2	8.8	11.1	17.7	27.6	37.6	53.1	63.0
67.5°	37.6	32.1	24.3	7.7	4.4	7.7	14.4	23.2	34.3	47.5	57.5
70°	23.2	18.8	13.3	4.4	3.3	6.6	13.3	22.1	31.0	44.2	54.2
72.5°	13.3	8.8	5.5	2.2	3.3	6.6	13.3	22.1	29.8	42.0	50.9
75°	9.9	5.5	2.2	1.1	2.2	5.5	12.2	19.9	28.7	39.8	48.6
77.5°	6.6	3.3	1.1	0.0	1.1	4.4	11.1	18.8	26.5	37.6	46.4
80°	1.1	0.0	0.0	0.0	0.0	3.3	9.9	16.6	24.3	33.2	40.9
82.5°	0.0	0.0	0.0	0.0	0.0	1.1	7.7	14.4	21.0	27.6	33.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	4.4	11.1	16.6	21.0	23.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.1	13.3	15.5
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°	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2
2.5°	452.1	458.8	458.8	463.2	468.7	478.7	484.2	491.9	497.5	503.0	505.2
5°	417.9	419.0	420.1	422.3	428.9	440.0	449.9	462.1	476.5	487.5	494.2
7.5°	389.1	389.1	389.1	392.5	399.1	406.8	416.8	433.4	449.9	463.2	474.3
10°	364.8	368.1	369.2	374.8	382.5	392.5	403.5	417.9	436.7	454.4	474.3
12.5°	349.3	352.7	358.2	363.7	371.4	382.5	394.7	413.5	452.1	488.6	530.6
15°	335.0	339.4	346.0	353.8	362.6	374.8	388.0	426.7	517.4	585.9	652.2
17.5°	319.5	326.1	335.0	342.7	353.8	367.0	383.6	458.8	636.8	750.6	863.4
20°	299.6	308.4	318.4	330.5	343.8	359.3	383.6	525.1	809.2	972.8	1122.1
22.5°	280.8	289.6	301.8	317.3	332.8	348.2	389.1	625.7	1031.4	1238.2	1427.2
25°	265.3	276.4	288.5	301.8	319.5	337.2	402.4	767.2	1299.0	1565.4	1699.2
27.5°	250.9	264.2	276.4	287.4	302.9	322.8	432.3	956.3	1615.1	1886.0	1991.0
30°	236.6	252.1	264.2	275.3	290.7	311.8	477.6	1197.3	1966.7	2229.8	2240.9
32.5°	224.4	238.8	253.2	264.2	278.6	302.9	540.6	1479.2	2327.1	2581.3	2477.4
35°	211.2	227.7	241.0	253.2	268.6	295.2	613.6	1783.2	2690.8	2904.2	2712.9
37.5°	197.9	216.7	233.3	242.1	257.6	287.4	666.6	2100.5	3062.2	3219.2	2919.6
40°	185.7	206.7	225.5	234.4	242.1	277.5	674.4	2425.5	3439.2	3529.9	3114.2
42.5°	172.5	195.7	212.3	224.4	231.0	270.8	627.9	2699.6	3755.4	3839.4	3368.5
45°	158.1	185.7	199.0	207.8	221.1	275.3	568.2	2911.9	4116.9	4261.7	3787.4
47.5°	143.7	174.7	185.7	192.4	210.0	301.8	546.1	3053.4	4712.8	5013.4	4493.9
50°	130.4	164.7	176.9	175.8	207.8	336.1	570.4	3160.6	5608.2	5962.0	5462.3
52.5°	116.1	153.7	168.0	163.6	224.4	362.6	619.1	3245.8	6296.9	7074.1	6763.5
55°	103.9	141.5	154.8	153.7	255.4	382.5	656.7	2796.9	6582.2	8107.7	8229.4
57.5°	95.1	128.2	139.3	158.1	275.3	382.5	759.5	1985.5	6587.7	8868.3	10175.0
60°	87.3	116.1	123.8	173.6	267.5	362.6	751.7	1216.1	6071.4	8816.4	11209.8
62.5°	80.7	105.0	115.0	178.0	236.6	359.3	678.8	754.0	5178.2	8145.3	10459.1
65°	75.2	96.2	110.6	163.6	214.5	384.7	457.7	541.7	4199.8	7380.3	9598.0
67.5°	69.6	88.4	117.2	133.8	194.6	343.8	330.5	384.7	3296.6	6541.3	8807.5
70°	65.2	84.0	123.8	109.4	170.2	268.6	234.4	291.9	2523.9	5457.9	7694.3
72.5°	61.9	78.5	103.9	86.2	138.2	207.8	163.6	212.3	1649.4	4260.6	6272.6
75°	58.6	71.9	76.3	69.6	102.8	136.0	123.8	142.6	982.8	3114.2	4759.2
77.5°	57.5	67.4	61.9	56.4	69.6	80.7	94.0	96.2	479.8	1557.7	2494.0
80°	50.9	60.8	53.1	46.4	47.5	53.1	69.6	64.1	109.4	395.8	665.5
82.5°	39.8	47.5	44.2	38.7	38.7	38.7	46.4	43.1	35.4	178.0	300.7
85°	27.6	33.2	33.2	31.0	29.8	29.8	28.7	27.6	9.9	11.1	16.6
87.5°	18.8	23.2	24.3	23.2	19.9	17.7	15.5	13.3	4.4	0.0	2.2
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: P637491

CATALOG NUMBER: GWS-SA4C-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2	484.2
2.5°	513.0	516.3	516.3	511.8	508.5	499.7	490.8	482.0	479.8	478.7
5°	513.0	526.2	532.9	531.7	524.0	509.6	490.8	470.9	465.4	463.2
7.5°	505.2	530.6	550.5	553.9	539.5	514.1	479.8	449.9	442.2	438.9
10°	522.9	572.6	612.4	618.0	601.4	551.6	496.4	445.5	433.4	425.6
12.5°	618.0	699.8	748.4	771.6	739.6	676.6	584.8	494.2	466.5	454.4
15°	810.3	926.4	1019.3	1019.3	989.4	877.8	761.7	614.7	577.1	543.9
17.5°	1056.9	1202.8	1284.6	1275.7	1230.4	1151.9	1012.6	801.5	725.2	690.9
20°	1337.7	1425.0	1443.8	1438.3	1418.4	1373.0	1276.9	1050.2	947.4	894.4
22.5°	1580.9	1557.7	1530.0	1507.9	1502.4	1515.6	1502.4	1327.7	1247.0	1153.0
25°	1745.6	1614.0	1531.1	1491.3	1510.1	1586.4	1669.3	1604.1	1540.0	1442.7
27.5°	1835.1	1607.4	1488.0	1447.1	1479.2	1587.5	1767.7	1878.2	1811.9	1765.5
30°	1883.8	1601.9	1460.4	1420.6	1469.2	1605.2	1836.2	2134.7	2136.9	2062.9
32.5°	1953.4	1637.2	1465.9	1429.4	1494.6	1658.3	1922.5	2395.6	2459.7	2419.9
35°	2031.9	1691.4	1491.3	1458.2	1538.9	1729.0	2018.6	2658.7	2792.5	2779.2
37.5°	2106.0	1752.2	1551.0	1519.0	1606.3	1789.8	2111.5	2917.4	3103.1	3149.6
40°	2183.4	1837.3	1734.5	1765.5	1814.1	1886.0	2194.4	3141.8	3444.7	3514.4
42.5°	2365.8	2132.5	2289.5	2348.1	2354.7	2206.6	2375.7	3429.3	3780.8	3863.7
45°	2772.6	2657.6	3107.6	3190.5	3147.4	2698.5	2812.4	3843.8	4250.7	4292.7
47.5°	3286.7	3339.7	4227.4	4513.8	4255.1	3278.9	3341.9	4716.1	5110.7	5095.3
50°	3885.8	4136.8	5498.8	6174.2	5555.1	4032.9	3952.2	5788.4	6267.1	6219.5
52.5°	4594.5	5063.2	7026.6	7986.1	7400.2	4880.8	4847.6	7209.0	7500.8	7349.4
55°	5486.6	5957.5	8784.3	10125.3	9291.7	5915.5	6029.4	8856.2	8912.6	8431.7
57.5°	6817.6	7123.8	10856.0	12578.4	11266.2	7321.7	8147.5	11048.4	10374.0	9463.1
60°	9234.3	8624.0	12858.1	15087.9	13366.6	9299.5	10941.1	12347.3	10860.4	9604.6
62.5°	10075.5	9897.6	14111.7	16149.2	14779.4	10923.5	11667.5	11611.1	10230.3	9069.5
65°	8800.9	9580.3	13887.3	15588.7	14598.1	10655.9	10470.2	10798.5	9520.6	8257.0
67.5°	8129.9	8835.2	13037.2	14042.1	13593.2	9748.3	9332.6	9243.1	7992.8	6986.8
70°	7453.3	8152.0	11804.5	11929.5	11720.5	8269.1	7723.0	7122.7	5974.1	5099.7
72.5°	6639.6	7024.4	10094.3	9501.8	9265.2	6494.8	6379.8	5363.9	4478.4	3727.7
75°	5790.6	5679.0	7870.1	6521.4	6698.2	5053.2	5388.2	3938.9	3281.1	2683.1
77.5°	4212.0	4129.0	5271.0	3961.0	4386.6	3309.9	2973.8	1572.0	1496.8	1291.2
80°	2350.3	2833.4	2846.7	2219.8	2769.3	2157.9	744.0	52.0	33.2	48.6
82.5°	1092.2	1218.3	1543.3	1029.2	1579.8	1069.0	153.7	0.0	0.0	0.0
85°	353.8	517.4	433.4	151.5	382.5	361.5	25.4	0.0	0.0	0.0
87.5°	21.0	43.1	11.1	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

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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

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			

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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

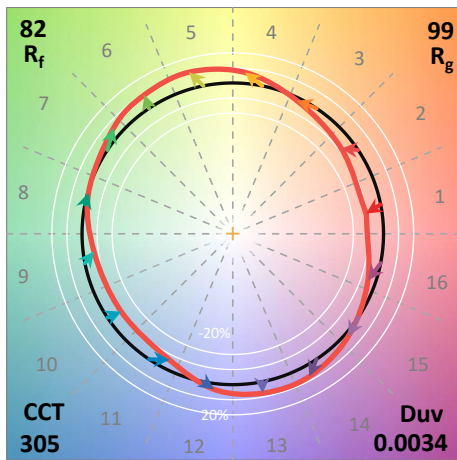
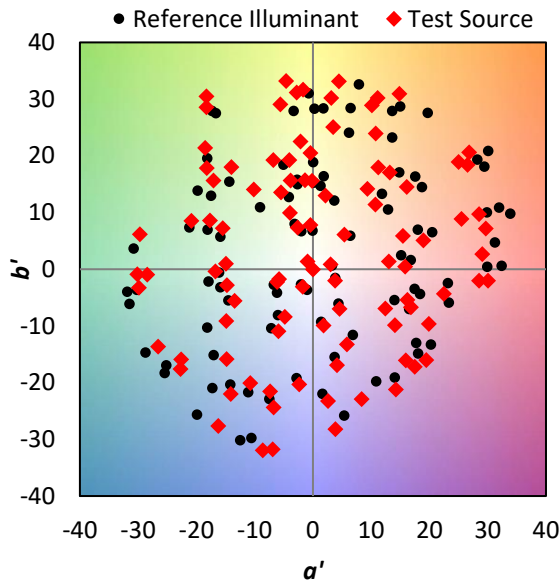
λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	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

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$

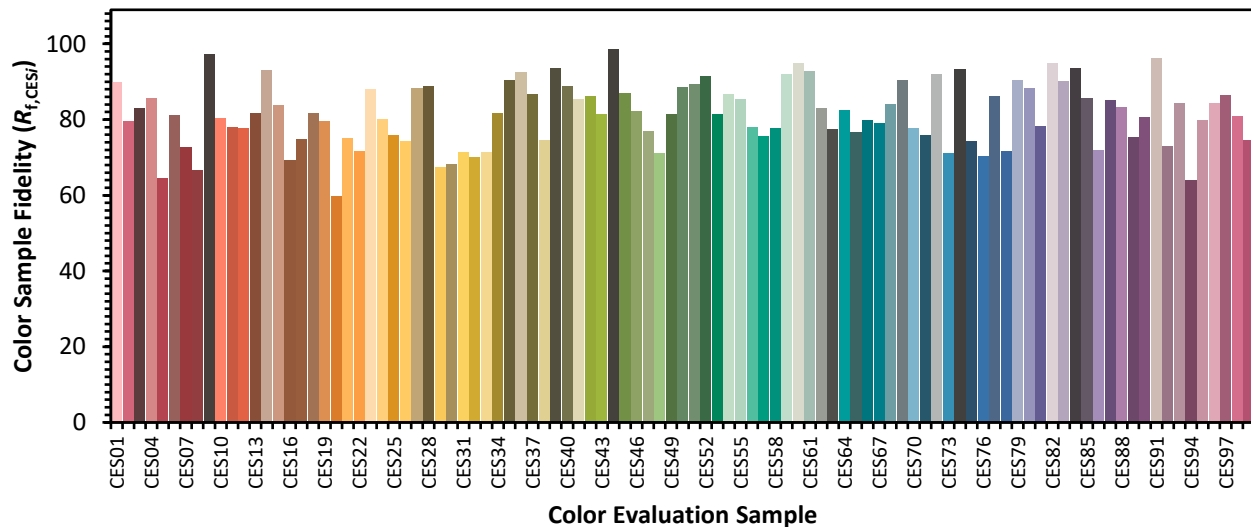


Color Vector Graphics



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)