

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: P631551

Luminaire Tested: GWS-SA1F-830-U-SLL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631551
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-SA1F-830-U-SLL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4052.2 lumens
Efficiency: N/A
Efficacy: 60.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

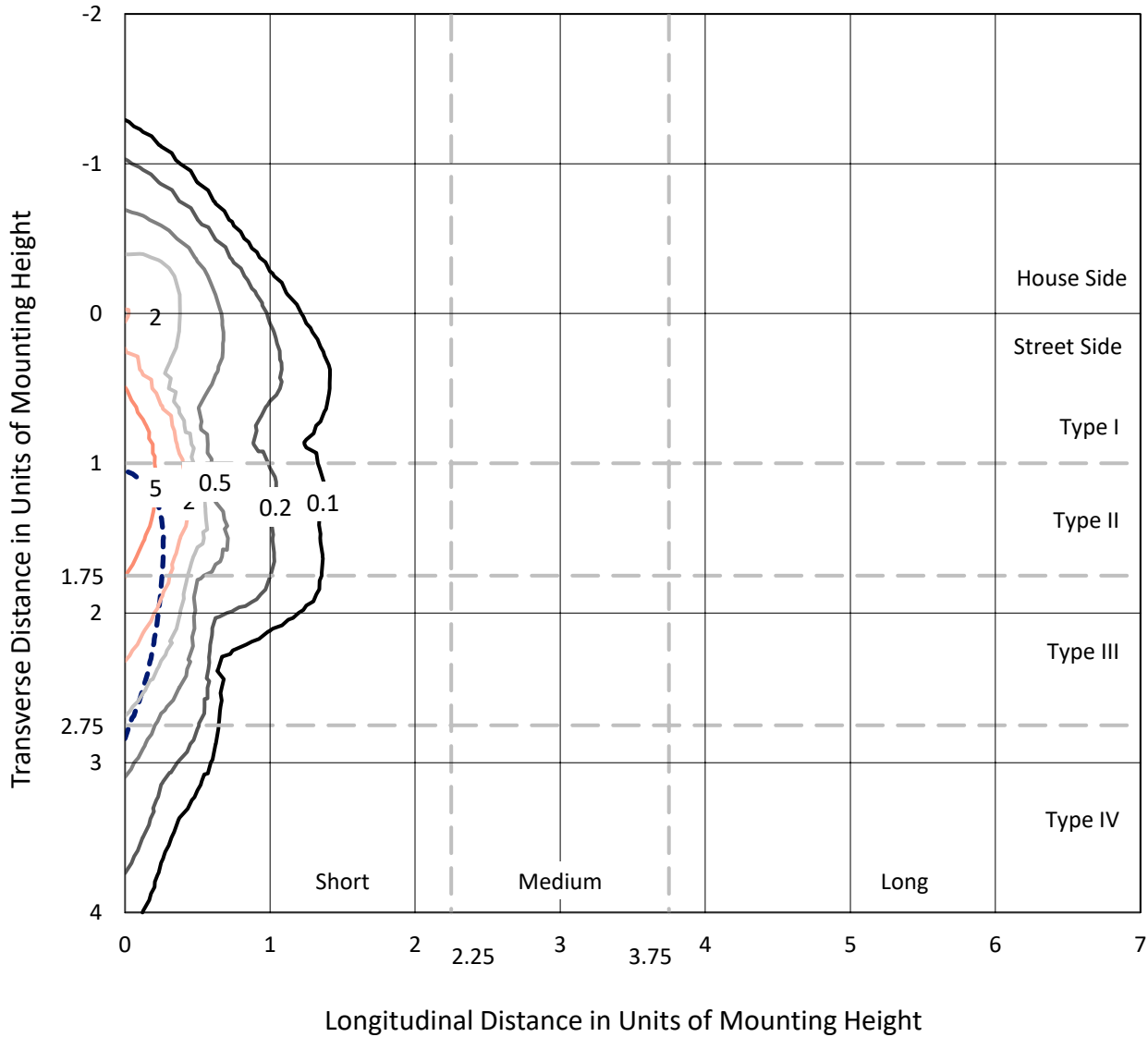
Input Watts (W): 67.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P631551
 CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

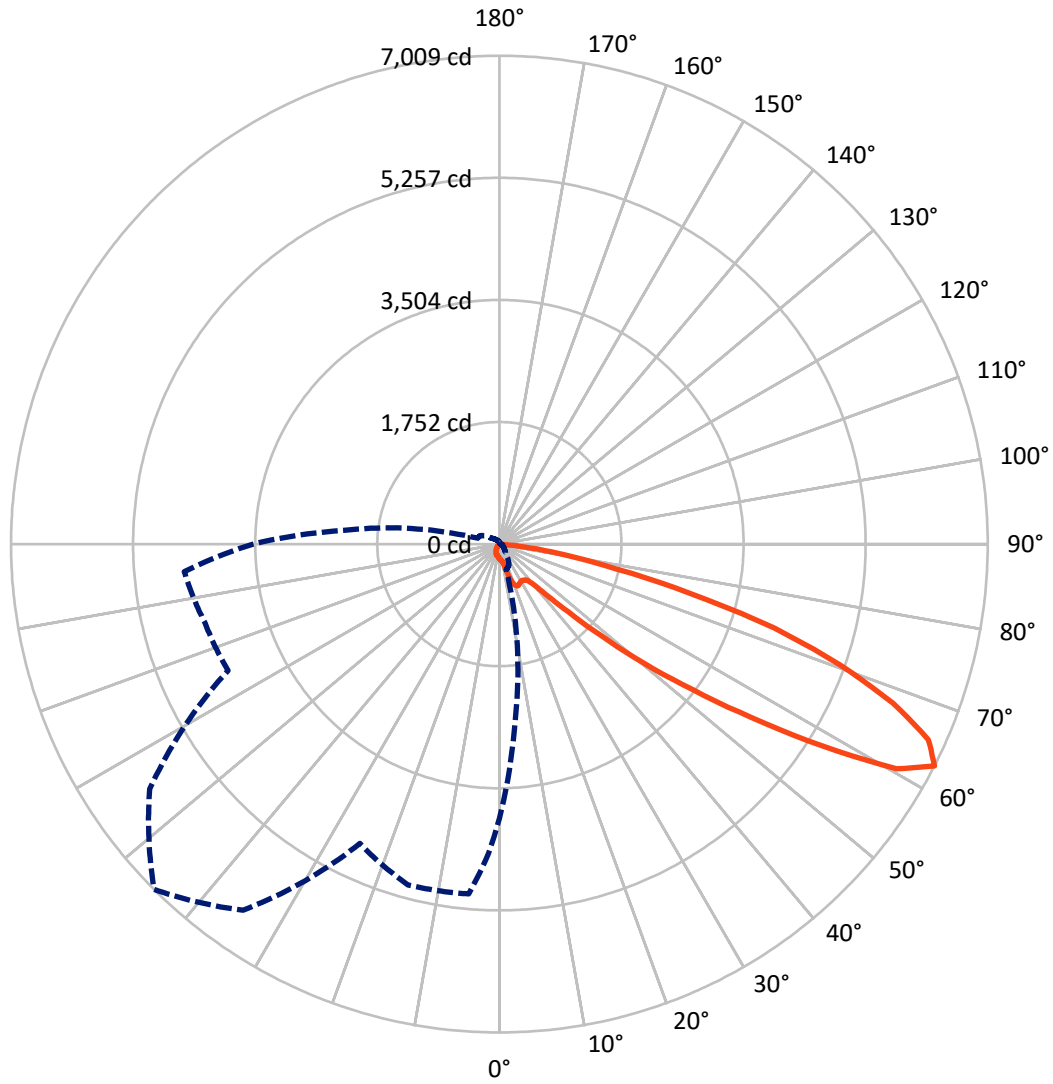
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Short - N/A

REPORT NUMBER: P631551
CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P631551
 CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	470.8	0.0	470.8
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	3581.4	0.0	3581.4
	% Fixture	88.4	0.0	88.4
Total	Lumens	4052.2	0.0	4052.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.1	0.4
10°-20°	62.2	1.5
20°-30°	140.5	3.5
30°-40°	242.1	6.0
40°-50°	456.6	11.3
50°-60°	1019.6	25.2
60°-70°	1363.7	33.7
70°-80°	683.8	16.9
80°-90°	65.5	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°	4052.2	100.0
0°-180°	4052.2	100.0

Coefficient of Utilization



REPORT NUMBER: P631551

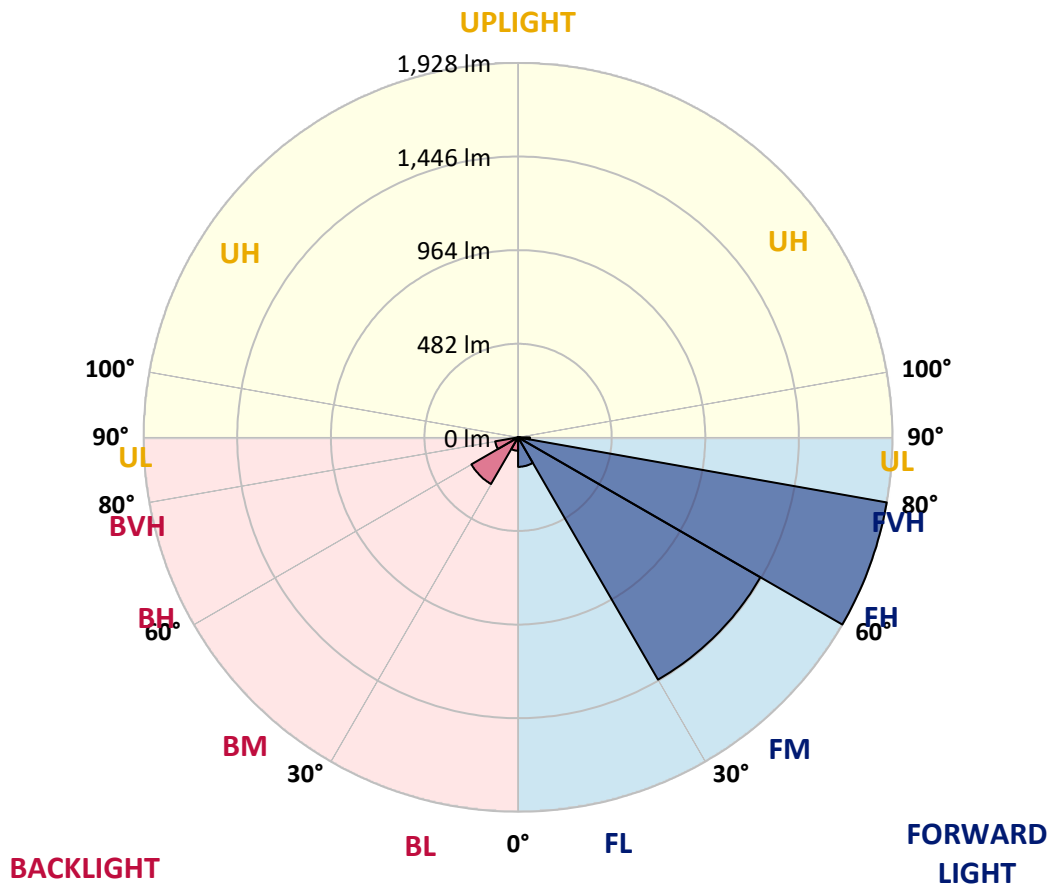
CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	151.8	3.7			
FM (30°-60°)	1440.7	35.6			
FH (60°-80°)	1927.8	47.6			G2/5000
FVH (80°-90°)	61.2	1.5			G1/100
BL (0°-30°)	69.1	1.7	B0/110		
BM (30°-60°)	277.6	6.9	B1/1000		
BH (60°-80°)	119.7	3.0	B1/500		G1/500
BVH (80°-90°)	4.4	0.1			G0/10
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





REPORT NUMBER: P631551
 CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2
2.5°	207.8	207.3	206.3	203.4	201.0	199.6	196.7	196.7	196.2	195.3	193.4
5°	201.0	199.1	197.2	191.9	186.2	182.8	179.0	178.5	178.5	177.5	177.0
7.5°	190.5	188.6	186.2	177.5	172.2	168.9	165.5	165.1	163.6	163.6	163.6
10°	184.7	181.8	178.0	168.4	163.1	160.3	157.9	156.4	155.5	154.0	153.5
12.5°	197.2	191.9	183.8	166.5	159.3	155.5	152.6	151.6	148.7	146.8	145.4
15°	236.1	223.1	206.8	170.8	157.9	152.1	148.3	146.3	143.9	140.6	138.2
17.5°	299.9	281.2	253.8	184.7	156.4	149.2	144.4	141.1	137.7	133.9	131.0
20°	388.2	360.3	327.7	210.2	156.4	145.9	140.1	135.8	131.0	126.7	123.3
22.5°	500.4	472.6	416.9	253.3	158.3	141.5	134.8	129.1	123.3	119.5	115.6
25°	626.1	586.8	535.0	305.6	163.6	135.8	128.6	122.8	117.6	112.8	108.4
27.5°	766.2	723.5	654.4	380.0	175.1	130.0	121.9	116.6	111.8	107.0	101.2
30°	895.3	869.9	799.3	469.2	193.8	126.2	116.6	111.8	107.0	100.8	95.5
32.5°	1050.3	1005.2	947.1	571.0	218.8	122.3	112.3	105.6	101.7	96.0	90.2
35°	1206.2	1167.8	1091.5	696.2	246.6	118.5	107.0	100.8	97.4	90.7	84.4
37.5°	1367.0	1358.3	1283.0	834.9	274.0	114.2	100.8	96.9	93.6	85.9	78.7
40°	1525.3	1509.5	1439.9	993.2	290.8	109.4	95.5	93.1	89.2	80.6	72.4
42.5°	1676.9	1664.9	1597.3	1144.8	288.4	105.1	90.2	87.3	84.4	75.8	65.7
45°	1863.1	1843.4	1758.0	1257.1	263.9	109.9	84.9	80.1	79.6	71.5	59.0
47.5°	2211.4	2146.6	2001.7	1343.4	239.4	122.3	79.2	73.4	76.8	67.2	52.3
50°	2699.4	2623.1	2413.4	1410.6	238.9	138.7	78.2	67.2	74.4	63.8	46.5
52.5°	3189.7	3055.4	2800.6	1446.6	256.7	150.7	86.8	60.9	71.5	60.5	42.2
55°	3659.4	3380.7	2962.8	1327.6	270.6	163.6	102.7	57.6	66.2	56.6	39.8
57.5°	4107.1	3642.2	3033.3	1050.3	317.1	168.9	112.3	59.0	58.5	51.8	37.9
60°	4168.5	3629.7	2890.8	610.8	349.8	159.8	108.4	65.7	51.3	46.1	34.5
62.5°	3936.3	3388.4	2566.0	381.0	324.8	156.4	96.4	74.8	46.5	40.8	30.2
65°	3583.6	3009.8	2139.4	245.7	246.1	173.7	84.4	73.4	43.7	36.0	25.9
67.5°	3032.3	2519.0	1685.5	164.6	139.1	148.3	73.9	50.4	42.7	30.7	20.2
70°	2213.3	1793.0	1097.3	109.9	83.0	118.5	61.9	36.0	40.3	25.4	14.4
72.5°	1617.9	1204.8	612.7	72.0	47.0	69.1	45.6	25.9	31.2	18.7	10.1
75°	1164.5	829.1	349.8	46.1	31.2	37.9	29.7	17.8	20.2	14.9	9.1
77.5°	560.4	404.0	158.8	25.4	21.1	19.2	15.8	11.0	12.5	13.4	8.2
80°	21.1	15.8	12.0	12.5	13.4	8.6	7.2	5.8	7.2	9.1	4.3
82.5°	0.0	0.0	0.0	1.4	1.9	2.4	2.9	2.4	2.9	3.4	0.5
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



REPORT NUMBER: P631551
 CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2
2.5°	194.8	193.8	194.8	195.8	196.7	197.7	196.2	197.2	198.2	195.8	196.7
5°	179.4	179.0	181.8	183.3	185.2	186.2	185.2	185.2	184.7	181.8	181.8
7.5°	166.0	166.5	168.9	172.2	174.6	176.1	175.1	174.6	173.2	168.9	168.9
10°	155.9	155.9	159.8	162.7	166.0	167.5	166.5	165.1	163.6	159.3	158.8
12.5°	147.8	147.8	150.7	155.5	159.3	161.2	160.7	158.8	156.4	152.1	151.6
15°	140.1	139.6	143.9	148.3	153.5	155.9	155.0	153.5	149.2	145.4	144.4
17.5°	132.4	131.9	135.8	141.5	147.3	150.7	150.2	146.8	143.0	138.2	137.2
20°	124.7	123.8	128.6	134.3	140.1	143.5	142.5	139.6	134.8	130.0	129.1
22.5°	117.1	116.6	120.0	124.7	130.0	132.9	132.4	130.0	125.2	120.9	120.9
25°	108.4	108.4	110.8	114.2	118.0	119.5	120.0	119.0	116.1	113.7	113.7
27.5°	101.2	99.8	100.8	101.7	103.6	106.0	106.0	107.0	107.5	106.5	107.0
30°	95.5	93.1	91.6	89.7	88.8	89.7	90.7	94.0	97.4	99.3	100.3
32.5°	88.8	85.9	82.0	76.8	73.4	72.4	75.3	81.6	87.8	92.1	94.5
35°	82.0	78.2	71.0	63.3	59.0	57.6	60.9	68.1	77.2	84.9	88.3
37.5°	75.3	70.1	60.0	50.9	46.1	45.1	48.5	56.1	66.7	77.2	81.6
40°	67.7	61.4	49.4	39.8	36.0	35.0	37.9	45.6	56.6	68.6	75.3
42.5°	60.0	52.3	39.8	31.7	27.8	27.8	31.7	37.4	47.5	60.5	68.6
45°	52.3	44.1	32.6	25.4	23.0	23.5	25.9	31.7	39.8	53.3	60.9
47.5°	45.1	37.9	26.9	21.1	19.2	19.7	22.6	27.3	34.1	46.1	54.2
50°	38.9	32.1	23.5	17.8	16.3	17.3	20.2	24.5	30.2	40.8	47.5
52.5°	35.0	28.8	21.6	15.4	14.4	15.4	18.2	22.1	27.3	36.0	42.7
55°	33.1	28.3	21.6	13.9	12.5	13.4	16.3	20.2	24.5	32.6	38.4
57.5°	32.6	29.3	23.0	12.5	10.6	11.5	14.4	18.2	22.6	29.7	34.5
60°	30.7	27.8	22.6	10.1	8.2	9.6	12.0	15.8	20.6	27.8	32.1
62.5°	26.9	24.5	19.7	8.2	6.2	7.2	10.1	13.9	18.7	25.4	30.2
65°	22.1	19.7	15.4	5.3	3.8	4.8	7.7	12.0	16.3	23.0	27.3
67.5°	16.3	13.9	10.6	3.4	1.9	3.4	6.2	10.1	14.9	20.6	24.9
70°	10.1	8.2	5.8	1.9	1.4	2.9	5.8	9.6	13.4	19.2	23.5
72.5°	5.8	3.8	2.4	1.0	1.4	2.9	5.8	9.6	13.0	18.2	22.1
75°	4.3	2.4	1.0	0.5	1.0	2.4	5.3	8.6	12.5	17.3	21.1
77.5°	2.9	1.4	0.5	0.0	0.5	1.9	4.8	8.2	11.5	16.3	20.2
80°	0.5	0.0	0.0	0.0	0.0	1.4	4.3	7.2	10.6	14.4	17.8
82.5°	0.0	0.0	0.0	0.0	0.0	0.5	3.4	6.2	9.1	12.0	14.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	4.8	7.2	9.1	10.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	4.8	5.8	6.7
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: P631551
 CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2
2.5°	196.2	199.1	199.1	201.0	203.4	207.8	210.2	213.5	215.9	218.3	219.3
5°	181.4	181.8	182.3	183.3	186.2	191.0	195.3	200.6	206.8	211.6	214.5
7.5°	168.9	168.9	168.9	170.3	173.2	176.6	180.9	188.1	195.3	201.0	205.8
10°	158.3	159.8	160.3	162.7	166.0	170.3	175.1	181.4	189.5	197.2	205.8
12.5°	151.6	153.1	155.5	157.9	161.2	166.0	171.3	179.4	196.2	212.1	230.3
15°	145.4	147.3	150.2	153.5	157.4	162.7	168.4	185.2	224.5	254.3	283.1
17.5°	138.7	141.5	145.4	148.7	153.5	159.3	166.5	199.1	276.4	325.8	374.7
20°	130.0	133.9	138.2	143.5	149.2	155.9	166.5	227.9	351.2	422.2	487.0
22.5°	121.9	125.7	131.0	137.7	144.4	151.1	168.9	271.6	447.7	537.4	619.4
25°	115.2	120.0	125.2	131.0	138.7	146.3	174.6	333.0	563.8	679.4	737.5
27.5°	108.9	114.7	120.0	124.7	131.5	140.1	187.6	415.0	701.0	818.5	864.1
30°	102.7	109.4	114.7	119.5	126.2	135.3	207.3	519.6	853.6	967.8	972.6
32.5°	97.4	103.6	109.9	114.7	120.9	131.5	234.6	642.0	1010.0	1120.3	1075.2
35°	91.6	98.8	104.6	109.9	116.6	128.1	266.3	773.9	1167.8	1260.4	1177.4
37.5°	85.9	94.0	101.2	105.1	111.8	124.7	289.3	911.6	1329.0	1397.2	1267.2
40°	80.6	89.7	97.9	101.7	105.1	120.4	292.7	1052.7	1492.7	1532.0	1351.6
42.5°	74.8	84.9	92.1	97.4	100.3	117.6	272.5	1171.7	1629.9	1666.3	1462.0
45°	68.6	80.6	86.4	90.2	96.0	119.5	246.6	1263.8	1786.8	1849.6	1643.8
47.5°	62.4	75.8	80.6	83.5	91.2	131.0	237.0	1325.2	2045.4	2175.9	1950.4
50°	56.6	71.5	76.8	76.3	90.2	145.9	247.6	1371.8	2434.0	2587.6	2370.7
52.5°	50.4	66.7	72.9	71.0	97.4	157.4	268.7	1408.7	2732.9	3070.2	2935.4
55°	45.1	61.4	67.2	66.7	110.8	166.0	285.0	1213.9	2856.7	3518.9	3571.6
57.5°	41.3	55.7	60.5	68.6	119.5	166.0	329.6	861.7	2859.1	3849.0	4416.1
60°	37.9	50.4	53.7	75.3	116.1	157.4	326.3	527.8	2635.1	3826.4	4865.2
62.5°	35.0	45.6	49.9	77.2	102.7	155.9	294.6	327.2	2247.4	3535.2	4539.4
65°	32.6	41.7	48.0	71.0	93.1	167.0	198.6	235.1	1822.8	3203.2	4165.6
67.5°	30.2	38.4	50.9	58.1	84.4	149.2	143.5	167.0	1430.8	2839.0	3822.6
70°	28.3	36.5	53.7	47.5	73.9	116.6	101.7	126.7	1095.4	2368.8	3339.4
72.5°	26.9	34.1	45.1	37.4	60.0	90.2	71.0	92.1	715.9	1849.2	2722.4
75°	25.4	31.2	33.1	30.2	44.6	59.0	53.7	61.9	426.5	1351.6	2065.5
77.5°	24.9	29.3	26.9	24.5	30.2	35.0	40.8	41.7	208.2	676.0	1082.4
80°	22.1	26.4	23.0	20.2	20.6	23.0	30.2	27.8	47.5	171.8	288.8
82.5°	17.3	20.6	19.2	16.8	16.8	16.8	20.2	18.7	15.4	77.2	130.5
85°	12.0	14.4	14.4	13.4	13.0	13.0	12.5	12.0	4.3	4.8	7.2
87.5°	8.2	10.1	10.6	10.1	8.6	7.7	6.7	5.8	1.9	0.0	1.0
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: P631551

CATALOG NUMBER: GWS-SA1F-830-U-SLL-W-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2
2.5°	222.6	224.1	224.1	222.1	220.7	216.9	213.0	209.2	208.2	207.8
5°	222.6	228.4	231.3	230.8	227.4	221.2	213.0	204.4	202.0	201.0
7.5°	219.3	230.3	238.9	240.4	234.1	223.1	208.2	195.3	191.9	190.5
10°	226.9	248.5	265.8	268.2	261.0	239.4	215.4	193.4	188.1	184.7
12.5°	268.2	303.7	324.8	334.9	321.0	293.6	253.8	214.5	202.5	197.2
15°	351.7	402.1	442.4	442.4	429.4	381.0	330.6	266.8	250.5	236.1
17.5°	458.7	522.0	557.5	553.7	534.0	500.0	439.5	347.9	314.7	299.9
20°	580.6	618.5	626.6	624.2	615.6	595.9	554.2	455.8	411.2	388.2
22.5°	686.1	676.0	664.0	654.4	652.0	657.8	652.0	576.2	541.2	500.4
25°	757.6	700.5	664.5	647.3	655.4	688.5	724.5	696.2	668.4	626.1
27.5°	796.5	697.6	645.8	628.1	642.0	689.0	767.2	815.2	786.4	766.2
30°	817.6	695.2	633.8	616.5	637.7	696.7	796.9	926.5	927.5	895.3
32.5°	847.8	710.6	636.2	620.4	648.7	719.7	834.4	1039.7	1067.6	1050.3
35°	881.9	734.1	647.3	632.9	667.9	750.4	876.1	1153.9	1212.0	1206.2
37.5°	914.0	760.5	673.2	659.2	697.2	776.8	916.4	1266.2	1346.8	1367.0
40°	947.6	797.4	752.8	766.2	787.4	818.5	952.4	1363.6	1495.1	1525.3
42.5°	1026.8	925.5	993.7	1019.1	1022.0	957.7	1031.1	1488.3	1640.9	1676.9
45°	1203.3	1153.4	1348.7	1384.7	1366.0	1171.2	1220.6	1668.3	1844.8	1863.1
47.5°	1426.4	1449.5	1834.8	1959.0	1846.8	1423.1	1450.4	2046.8	2218.1	2211.4
50°	1686.5	1795.4	2386.5	2679.7	2411.0	1750.3	1715.3	2512.2	2720.0	2699.4
52.5°	1994.1	2197.5	3049.6	3466.1	3211.8	2118.3	2103.9	3128.8	3255.5	3189.7
55°	2381.3	2585.6	3812.5	4394.5	4032.7	2567.4	2616.8	3843.7	3868.2	3659.4
57.5°	2958.9	3091.8	4711.6	5459.2	4889.7	3177.7	3536.1	4795.1	4502.5	4107.1
60°	4007.8	3742.9	5580.6	6548.3	5801.3	4036.1	4748.6	5358.9	4713.6	4168.5
62.5°	4372.9	4295.7	6124.7	7008.9	6414.5	4740.9	5063.8	5039.4	4440.1	3936.3
65°	3819.7	4158.0	6027.3	6765.7	6335.8	4624.8	4544.2	4686.7	4132.0	3583.6
67.5°	3528.5	3834.6	5658.3	6094.4	5899.6	4230.9	4050.5	4011.6	3469.0	3032.3
70°	3234.8	3538.1	5123.3	5177.5	5086.9	3588.9	3351.9	3091.4	2592.8	2213.3
72.5°	2881.7	3048.7	4381.1	4123.9	4021.2	2818.8	2768.9	2328.0	1943.7	1617.9
75°	2513.2	2464.7	3415.7	2830.3	2907.1	2193.2	2338.6	1709.5	1424.0	1164.5
77.5°	1828.0	1792.1	2287.7	1719.1	1903.9	1436.5	1290.7	682.3	649.7	560.4
80°	1020.1	1229.7	1235.5	963.4	1201.9	936.6	322.9	22.6	14.4	21.1
82.5°	474.0	528.7	669.8	446.7	685.6	464.0	66.7	0.0	0.0	0.0
85°	153.5	224.5	188.1	65.7	166.0	156.9	11.0	0.0	0.0	0.0
87.5°	9.1	18.7	4.8	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

REPORT NUMBER: SP1-2408-195-9

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 ($R_{f,i}$)

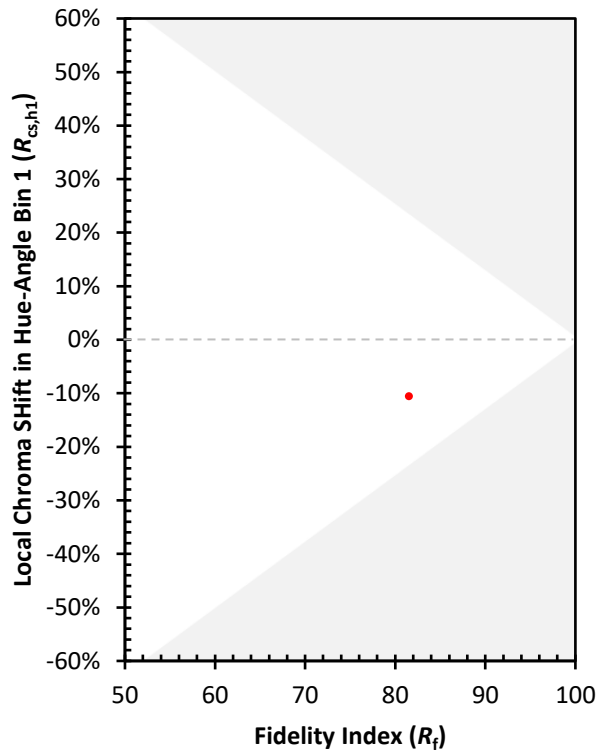
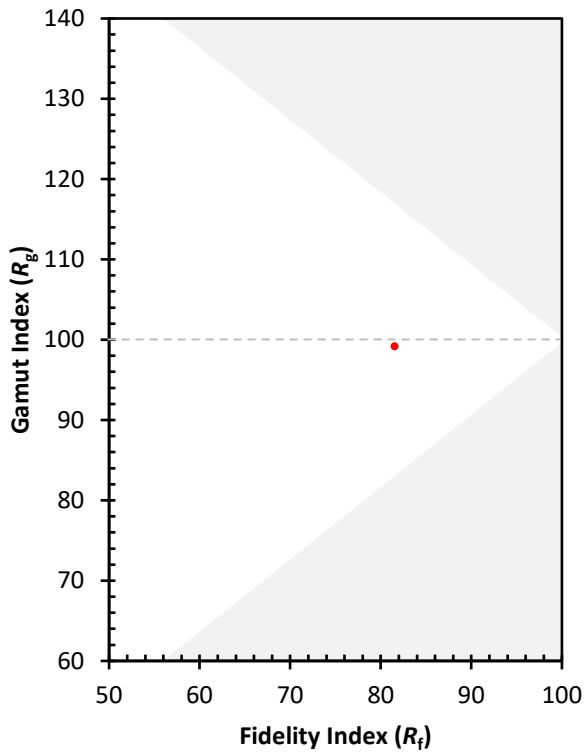
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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