

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: P632047

Luminaire Tested: GWS-SA2B-830-U-SLL-W

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P632047  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-37)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2B-830-U-SLL-W  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR LEFT OPTICS  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

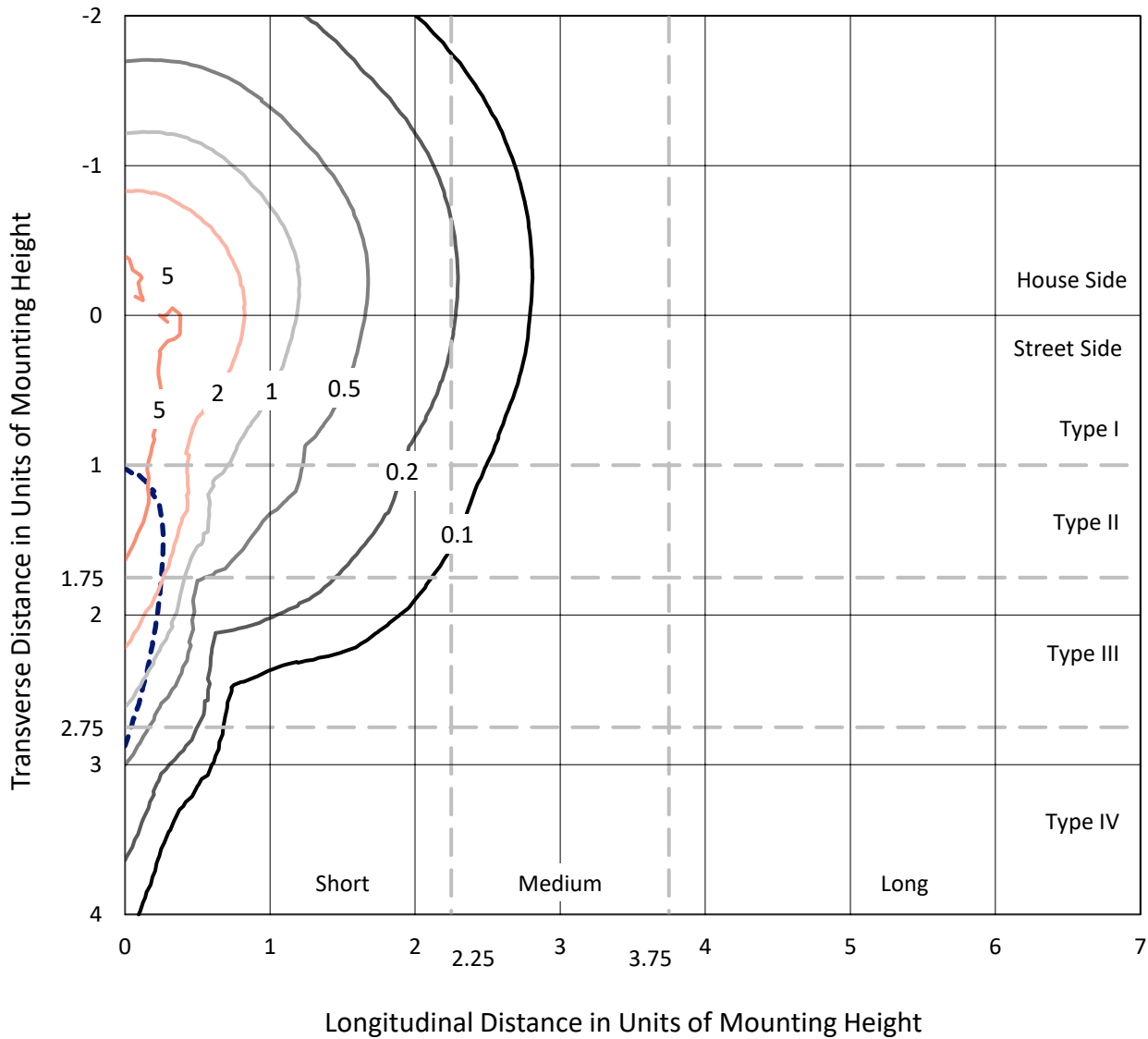
Lumens per Lamp: N/A  
Luminaire Lumens: 5138.2 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 46.4  
Input Voltage (V): 120  
Input Current (Ain): 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

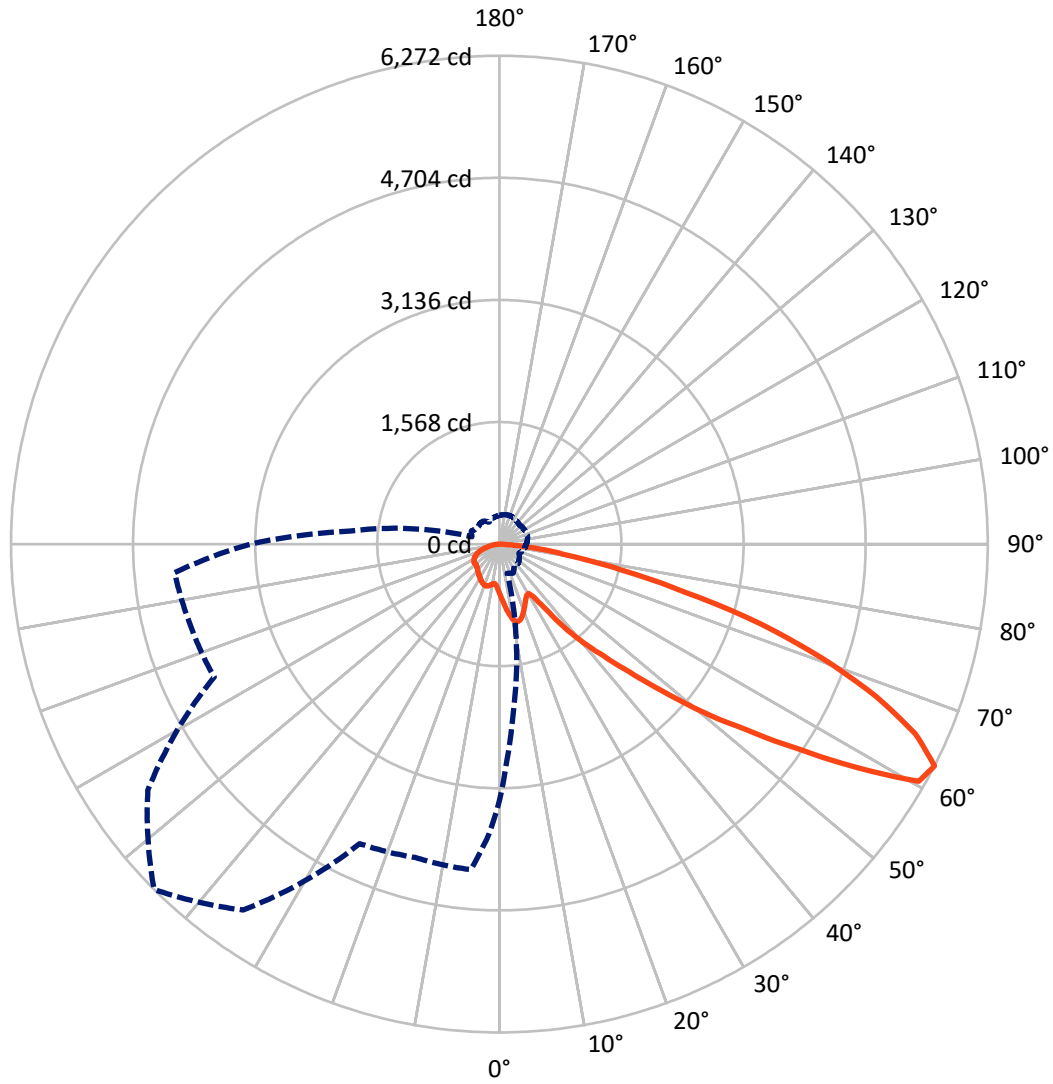
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 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
<b>House Side</b>	Lumens	1228.5	0.0	1228.5
	% Fixture	23.9	0.0	23.9
<b>Street Side</b>	Lumens	3909.7	0.0	3909.7
	% Fixture	76.1	0.0	76.1
<b>Total</b>	Lumens	5138.2	0.0	5138.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.1	1.2
10°-20°	205.1	4.0
20°-30°	322.9	6.3
30°-40°	442.6	8.6
40°-50°	690.6	13.4
50°-60°	1190.7	23.2
60°-70°	1379.8	26.9
70°-80°	728.3	14.2
80°-90°	115.1	2.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5138.2	100.0
0°-180°	5138.2	100.0

**Coefficient of Utilization**



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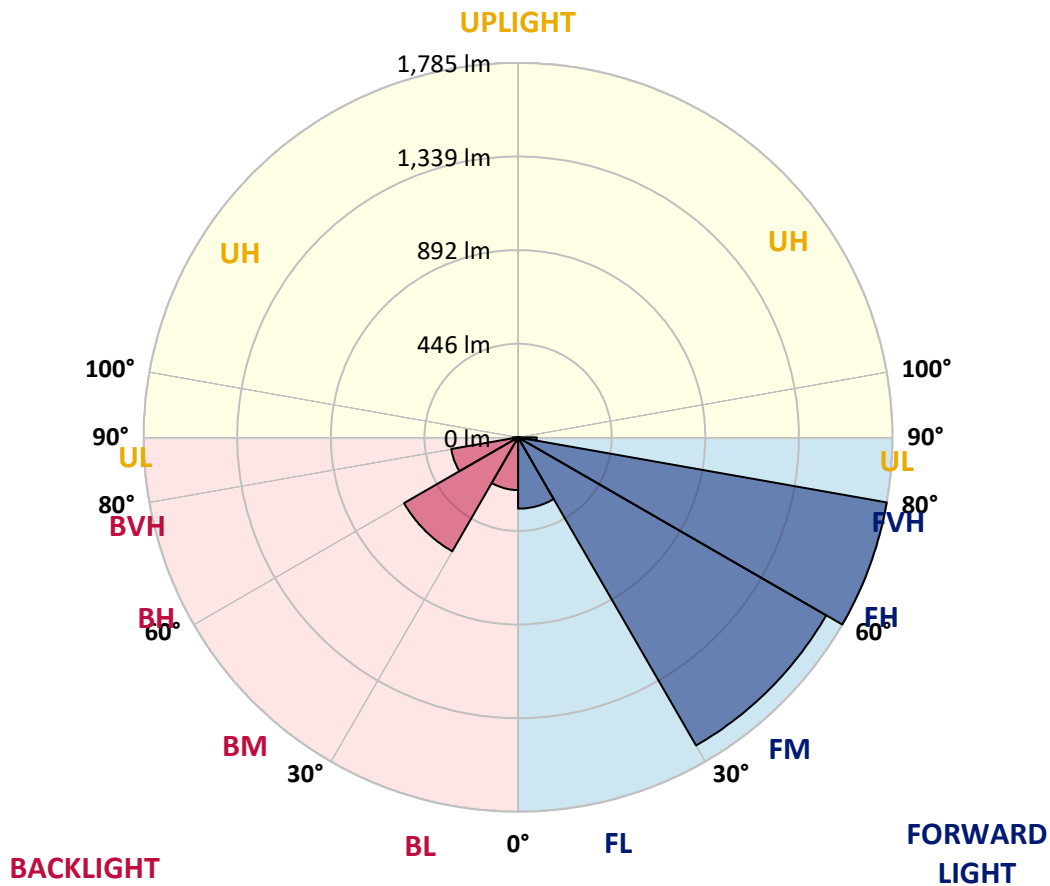
CATALOG NUMBER: GWS-SA2B-830-U-SLL-W

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	339.8	6.6			
FM (30°-60°)	1696.3	33.0			
FH (60°-80°)	1784.7	34.7			G1/1800
FVH (80°-90°)	88.8	1.7			G1/100
BL (0°-30°)	251.3	4.9	B1/500		
BM (30°-60°)	627.5	12.2	B1/1000		
BH (60°-80°)	323.5	6.3	B1/500		G1/500
BVH (80°-90°)	26.3	0.5			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6
2.5°	696.0	693.3	689.4	676.0	667.7	658.3	648.5	637.1	624.1	615.1	606.0
5°	755.0	750.7	741.2	709.4	687.4	663.4	643.4	620.6	598.2	582.9	567.5
7.5°	811.6	806.1	791.5	742.8	707.0	672.5	642.2	609.2	575.8	553.0	534.9
10°	868.2	856.8	838.3	774.6	727.5	687.4	652.8	612.3	567.9	536.9	517.6
12.5°	911.4	900.8	880.8	803.7	747.9	697.6	658.7	621.4	583.6	550.6	531.0
15°	951.9	938.1	915.4	830.9	764.8	697.2	646.9	614.3	608.8	600.5	575.0
17.5°	981.0	968.4	944.8	852.9	774.3	685.0	614.3	595.0	619.8	645.0	620.6
20°	1006.5	992.0	968.0	868.2	776.2	657.9	574.6	575.0	613.9	648.5	642.6
22.5°	1028.1	1012.0	990.8	885.5	775.4	620.2	540.0	563.6	602.5	629.6	630.4
25°	1054.9	1041.5	1023.8	911.0	775.4	581.7	514.9	549.8	583.2	606.0	605.3
27.5°	1087.5	1078.5	1063.9	949.9	782.5	549.4	500.7	532.2	558.5	578.1	577.7
30°	1124.0	1115.8	1104.8	991.2	794.7	525.5	492.9	510.1	529.4	545.1	545.1
32.5°	1161.4	1158.2	1146.4	1024.2	785.3	518.0	486.2	488.1	498.4	511.3	510.1
35°	1213.3	1210.1	1195.2	1049.8	744.4	507.4	475.6	465.7	466.9	475.2	477.9
37.5°	1289.1	1284.4	1262.4	1079.6	682.7	480.7	458.3	442.2	438.6	442.2	447.3
40°	1380.7	1373.6	1343.7	1120.1	611.5	444.5	431.1	417.8	411.9	413.1	419.0
42.5°	1495.5	1480.5	1437.7	1163.0	541.2	412.7	400.9	392.6	385.9	385.2	396.6
45°	1681.7	1640.9	1572.9	1201.1	481.8	395.8	373.8	367.9	362.4	365.5	378.9
47.5°	2007.2	1931.7	1799.3	1233.7	445.7	396.2	352.1	345.9	345.5	351.8	366.7
50°	2454.4	2345.6	2141.2	1255.7	426.8	400.9	339.2	329.0	336.4	342.7	356.9
52.5°	2882.8	2716.6	2473.3	1255.3	418.6	401.7	342.7	313.2	336.4	338.0	351.4
55°	3248.7	2947.7	2562.9	1126.4	406.8	398.5	356.5	301.1	332.1	338.0	348.6
57.5°	3539.6	3094.7	2556.2	909.8	442.5	381.2	364.7	298.3	319.5	338.8	351.0
60°	3507.3	3027.5	2391.5	558.5	439.0	350.6	363.5	303.4	298.3	328.2	348.2
62.5°	3293.1	2786.5	2108.2	387.5	412.3	332.9	344.3	312.5	278.7	312.8	334.9
65°	2993.3	2475.7	1756.8	297.1	341.5	333.7	311.7	306.2	261.4	288.5	312.1
67.5°	2596.7	2090.1	1387.0	235.4	238.2	288.9	283.0	272.0	245.2	266.9	288.1
70°	1952.1	1525.3	954.3	189.4	180.4	241.3	254.3	244.5	229.5	235.8	258.2
72.5°	1375.6	995.9	522.7	150.1	139.1	185.5	220.9	219.3	202.8	207.5	229.5
75°	1022.3	704.7	326.6	118.7	113.2	132.8	185.1	189.8	176.1	181.6	198.5
77.5°	680.3	456.3	181.6	88.0	88.0	97.1	138.0	160.0	149.7	154.1	165.9
80°	375.3	232.3	90.8	57.8	59.3	66.8	100.6	115.2	115.5	126.2	129.3
82.5°	118.7	73.9	40.5	33.8	31.8	38.1	64.8	82.5	77.0	98.3	90.4
85°	27.1	17.3	7.5	7.5	8.3	12.6	24.8	44.0	56.2	67.6	49.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	17.3	25.5	22.8
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°	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6
2.5°	600.5	592.7	590.3	583.6	582.9	576.6	574.2	574.2	577.0	577.0	579.7
5°	561.2	551.4	545.9	538.0	536.1	531.4	528.2	528.6	532.2	534.5	539.2
7.5°	526.7	520.0	516.0	512.5	511.7	510.9	507.4	507.0	508.2	511.7	515.3
10°	512.1	507.4	508.6	511.3	515.6	518.0	514.9	513.3	512.1	514.5	517.6
12.5°	526.3	521.5	523.9	528.6	534.5	536.9	535.7	535.3	536.5	545.5	552.2
15°	557.3	548.3	545.1	547.1	551.8	554.2	553.0	554.6	562.0	585.6	602.5
17.5°	595.8	573.8	561.2	557.7	559.7	561.6	561.6	565.6	578.5	613.1	634.3
20°	616.7	588.0	566.7	558.1	558.9	560.8	560.8	566.3	580.9	617.8	631.6
22.5°	611.2	584.8	558.9	549.4	549.8	551.4	551.4	556.1	569.1	601.7	608.0
25°	589.5	566.3	540.8	532.5	533.3	536.1	535.3	538.0	547.9	574.6	578.1
27.5°	563.6	543.2	518.0	511.7	515.3	520.8	516.0	516.4	525.5	547.9	548.3
30°	535.7	518.8	496.4	491.7	498.4	501.1	496.8	496.8	505.8	521.1	520.8
32.5°	505.4	494.8	478.7	473.6	481.1	485.4	479.9	480.7	487.7	498.0	494.0
35°	477.1	471.6	464.2	460.6	465.3	469.3	465.7	467.3	474.0	476.7	471.2
37.5°	450.0	449.2	450.0	450.0	451.2	452.4	450.0	453.9	459.8	456.3	450.0
40°	426.4	429.6	437.0	435.1	433.9	435.1	433.5	440.2	446.1	439.8	432.3
42.5°	406.8	412.7	424.1	424.1	421.7	422.5	421.7	430.0	434.3	425.6	417.4
45°	389.9	398.5	413.1	415.0	411.1	411.1	412.7	422.9	424.5	412.7	404.0
47.5°	378.1	388.7	405.2	408.7	402.8	402.5	406.8	417.8	417.8	404.0	394.2
50°	369.8	381.6	401.3	406.0	400.1	398.5	405.6	416.2	413.9	397.3	387.5
52.5°	364.3	376.5	400.9	407.6	403.6	402.1	409.1	416.6	410.7	393.0	382.8
55°	360.8	374.2	402.1	407.6	403.2	400.5	407.6	414.2	411.1	390.7	380.8
57.5°	362.8	376.1	400.5	403.2	398.1	393.4	401.7	411.1	409.9	391.5	381.6
60°	359.6	371.8	391.8	392.6	384.0	376.5	388.7	402.8	402.8	388.7	380.1
62.5°	345.1	357.3	374.9	375.7	365.9	357.7	371.8	388.7	388.3	376.9	367.9
65°	321.1	332.5	352.5	354.5	344.7	336.0	350.6	366.3	367.5	357.3	349.4
67.5°	294.8	305.0	319.9	327.8	319.5	310.5	323.9	338.8	338.4	326.2	318.0
70°	263.3	272.8	286.5	293.2	288.1	279.4	291.6	299.5	295.9	290.1	284.5
72.5°	232.3	241.3	254.3	254.3	248.8	240.5	244.1	258.2	262.5	258.2	254.7
75°	199.7	207.5	216.6	218.5	206.3	191.4	207.9	220.1	225.2	223.2	218.9
77.5°	166.2	172.1	185.5	182.0	159.2	151.3	164.7	182.8	186.3	185.1	179.2
80°	128.1	131.7	145.8	138.7	121.1	115.9	121.8	136.0	136.8	132.8	125.4
82.5°	86.1	90.8	100.2	86.5	86.1	81.4	76.6	78.2	85.3	84.5	79.4
85°	44.0	46.4	55.4	51.9	44.4	38.5	36.6	38.9	35.0	31.8	27.5
87.5°	18.5	20.0	27.5	15.3	4.7	0.0	0.0	2.4	3.5	5.1	5.5
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°	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6
2.5°	586.0	590.3	600.9	614.3	627.3	640.6	655.2	664.2	675.2	689.4	689.8
5°	545.1	554.9	570.3	590.7	611.9	636.3	664.6	688.2	716.5	738.9	747.9
7.5°	520.0	534.1	553.4	579.3	607.2	637.5	674.4	714.1	760.5	790.4	808.1
10°	522.3	543.9	563.2	585.2	610.4	643.0	690.5	743.2	800.2	839.5	861.5
12.5°	564.4	587.2	583.6	582.5	599.4	639.1	703.5	772.7	842.2	881.6	907.9
15°	617.4	626.1	592.7	567.5	577.7	624.9	710.6	799.0	877.2	925.2	951.1
17.5°	644.6	627.3	586.8	549.1	546.3	603.3	714.1	825.7	916.5	964.5	992.0
20°	632.0	606.8	572.6	536.9	517.2	573.8	712.2	847.0	952.3	1005.7	1028.1
22.5°	604.9	582.9	556.1	521.9	493.6	541.6	707.0	868.2	984.1	1038.0	1057.6
25°	575.4	558.9	536.9	507.0	480.3	513.3	703.5	896.5	1020.7	1072.2	1084.7
27.5°	545.9	533.7	515.6	492.5	477.1	493.6	704.7	933.4	1067.8	1116.6	1111.5
30°	516.8	506.2	493.6	483.4	476.7	488.9	701.5	972.7	1119.7	1164.9	1134.7
32.5°	489.3	479.5	471.6	473.2	477.1	490.9	685.4	1008.5	1167.3	1205.8	1159.8
35°	465.7	455.5	455.5	461.0	475.6	484.2	643.8	1036.4	1219.9	1258.5	1195.6
37.5°	443.7	434.7	440.6	449.6	463.4	466.1	590.3	1063.5	1296.6	1332.7	1251.0
40°	424.5	415.4	426.0	437.4	444.5	443.3	536.1	1101.2	1387.0	1424.3	1324.5
42.5°	409.1	400.9	410.3	424.9	426.0	427.2	496.4	1137.4	1491.9	1539.5	1451.0
45°	396.6	390.7	395.4	409.9	409.9	428.0	471.6	1167.7	1649.9	1734.0	1683.3
47.5°	386.7	383.2	385.6	390.3	398.1	442.2	455.9	1190.9	1937.6	2102.7	2051.6
50°	381.2	377.7	380.8	371.0	394.6	449.2	450.8	1208.5	2316.9	2575.5	2512.2
52.5°	376.5	375.3	377.3	354.5	402.5	444.5	446.9	1185.0	2571.2	3040.8	3103.3
55°	374.9	375.7	366.3	342.3	411.9	428.8	435.1	1016.4	2640.3	3442.1	3830.0
57.5°	375.7	373.4	349.4	343.5	412.3	397.3	452.0	725.1	2539.7	3616.6	4541.0
60°	373.0	361.2	329.0	354.1	394.2	360.4	439.8	472.8	2274.4	3482.6	4582.3
62.5°	360.8	343.5	311.3	360.0	362.0	338.4	399.3	364.3	1920.7	3195.7	4184.5
65°	343.1	319.9	296.3	347.8	329.4	328.2	300.3	292.0	1544.6	2854.1	3807.2
67.5°	314.0	290.8	285.3	319.9	296.3	290.8	241.3	242.1	1232.5	2490.2	3427.9
70°	281.0	257.8	262.1	289.3	263.7	241.7	195.3	201.6	935.0	2074.8	2916.6
72.5°	259.4	228.3	228.7	254.7	231.9	195.7	160.7	166.2	593.5	1563.8	2318.8
75°	218.9	201.2	192.6	206.3	196.9	152.5	135.2	134.0	351.8	1120.9	1736.4
77.5°	182.8	169.0	164.7	170.2	147.0	112.8	108.9	106.9	199.3	718.1	1137.8
80°	132.4	128.9	128.5	131.3	113.2	82.9	82.9	83.3	107.3	389.9	641.4
82.5°	84.1	92.0	81.4	90.4	77.0	59.0	55.0	62.5	61.7	166.2	270.4
85°	35.0	47.9	44.8	47.6	36.6	32.2	34.6	37.3	35.8	64.1	105.3
87.5°	6.7	7.9	8.6	8.3	8.3	10.2	11.4	13.8	13.8	18.5	31.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P632047  
 CATALOG NUMBER: GWS-SA2B-830-U-SLL-W

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	358°	360°
0°	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6	640.6
2.5°	704.7	716.1	713.7	718.8	712.2	714.5	701.2	697.6	695.3	696.0
5°	777.0	800.2	804.5	813.2	807.3	807.3	783.7	766.0	759.7	755.0
7.5°	850.5	883.9	905.9	908.3	905.1	898.8	864.7	832.8	821.4	811.6
10°	915.7	955.8	980.6	992.4	986.5	976.7	934.2	890.6	876.8	868.2
12.5°	965.7	1001.0	1017.5	1025.4	1024.6	1021.1	986.5	939.3	924.8	911.4
15°	997.9	1015.6	1009.3	1008.9	1014.4	1028.5	1017.9	981.0	964.1	951.9
17.5°	1018.7	1001.8	973.9	960.9	972.7	1006.1	1030.5	1009.7	994.3	981.0
20°	1026.2	966.1	925.6	901.6	915.4	963.7	1023.8	1030.5	1017.5	1006.5
22.5°	1017.5	922.4	867.4	839.1	852.5	910.2	1004.2	1047.4	1038.8	1028.1
25°	996.3	876.8	810.8	785.3	799.8	858.8	969.2	1063.1	1063.5	1054.9
27.5°	970.0	834.8	771.1	747.1	761.3	816.3	935.0	1076.9	1090.6	1087.5
30°	943.3	809.6	752.2	735.3	746.0	794.7	900.0	1091.0	1118.5	1124.0
32.5°	931.1	821.8	796.7	804.1	790.4	807.3	887.4	1111.1	1152.3	1161.4
35°	947.2	929.9	993.6	1023.0	974.3	910.2	903.6	1141.3	1199.9	1213.3
37.5°	1025.4	1161.4	1256.5	1360.3	1275.8	1134.7	983.3	1192.8	1267.9	1289.1
40°	1195.6	1363.4	1535.1	1669.2	1541.4	1351.6	1135.0	1269.5	1361.4	1380.7
42.5°	1355.9	1552.8	1789.4	1962.8	1796.9	1528.9	1298.5	1398.4	1484.8	1495.5
45°	1513.1	1738.7	2097.2	2338.1	2112.9	1697.5	1465.6	1616.1	1681.4	1681.7
47.5°	1697.5	1948.2	2483.1	2826.2	2532.2	1884.2	1622.4	1960.8	2051.6	2007.2
50°	1918.0	2156.5	2880.5	3394.1	3043.6	2113.7	1821.7	2380.9	2504.7	2454.4
52.5°	2213.1	2386.0	3318.3	3947.9	3600.9	2375.0	2110.5	2935.9	2976.8	2882.8
55°	2628.5	2717.4	3880.3	4631.8	4223.0	2696.9	2533.0	3632.3	3517.9	3248.7
57.5°	3574.5	3241.7	4601.9	5411.9	4926.9	3281.7	3459.0	4400.3	3993.5	3539.6
60°	4366.1	3878.3	5269.6	6186.2	5530.2	3926.3	4328.4	4533.9	3975.8	3507.3
62.5°	4099.2	4040.7	5510.6	6271.5	5736.2	4243.5	4166.8	4197.1	3716.4	3293.1
65°	3596.6	3727.4	5295.6	5867.0	5507.8	3959.3	3769.1	3885.8	3419.7	2993.3
67.5°	3299.8	3396.1	4913.2	5219.7	5092.8	3652.0	3459.8	3375.3	2959.1	2596.7
70°	2996.4	3076.2	4376.3	4407.4	4445.5	3141.0	2829.0	2577.4	2205.6	1952.1
72.5°	2589.2	2593.6	3697.6	3517.6	3589.9	2458.0	2277.2	1927.0	1605.5	1375.6
75°	2172.2	2053.5	2926.8	2458.8	2603.8	1912.1	1890.8	1452.2	1210.9	1022.3
77.5°	1656.2	1517.5	2138.0	1616.9	1828.7	1273.4	1421.6	984.9	852.1	680.3
80°	1111.9	1025.4	1181.4	912.6	1196.4	877.6	927.1	558.1	483.8	375.3
82.5°	586.4	500.7	730.2	541.2	721.6	482.2	347.8	172.5	147.0	118.7
85°	227.2	262.9	358.0	192.6	279.8	172.1	100.6	42.8	35.8	27.1
87.5°	44.0	68.0	37.3	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**



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

Point lies inside the ANSI 3000K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

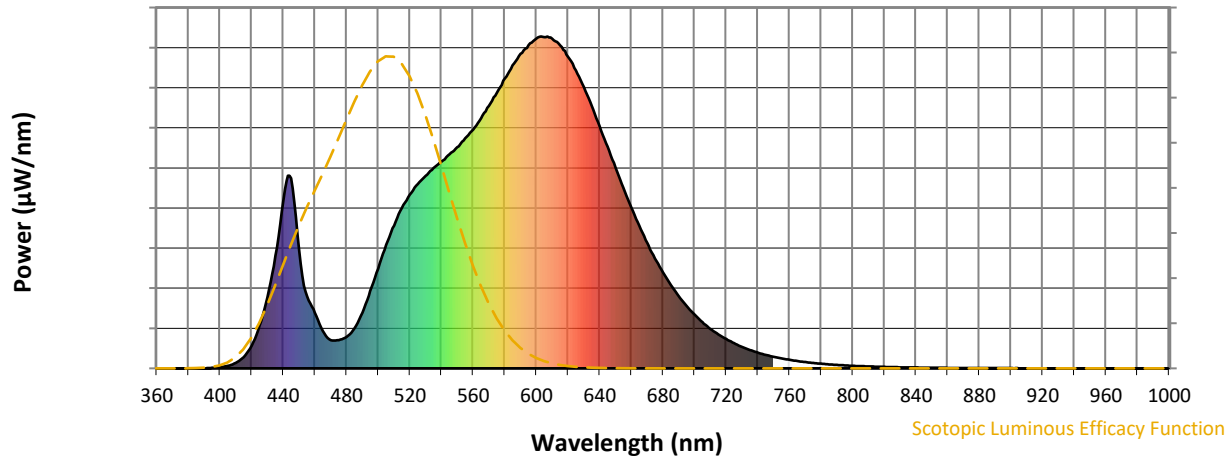


**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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)