

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: P635511

Luminaire Tested: GWS-SA3D-830-U-SLL-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P635511  
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-SA3D-830-U-SLL-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (48) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

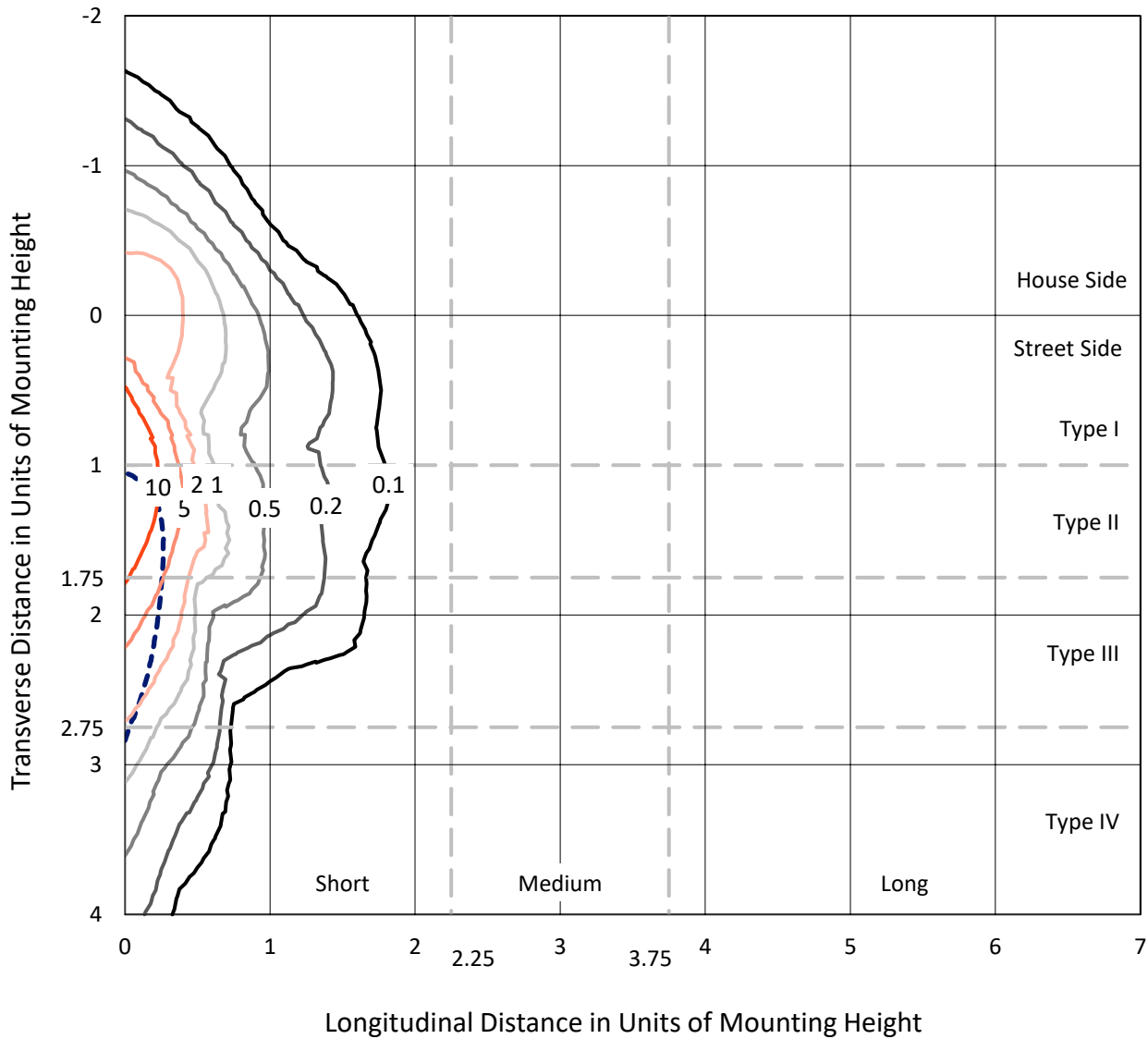
Lumens per Lamp: N/A  
Luminaire Lumens: 8464.3 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 120.8  
Input Voltage (V): 120  
Input Current (Ain): 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

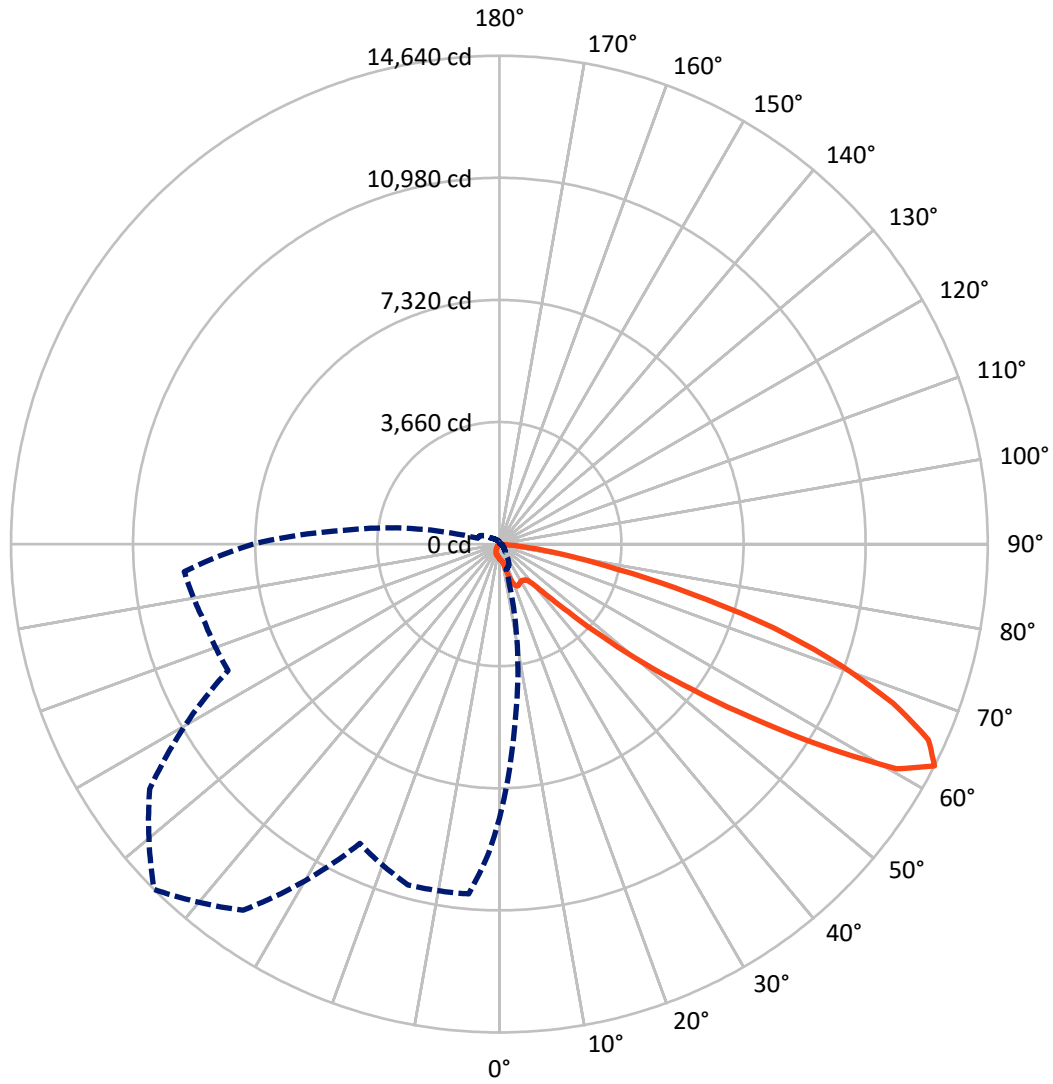
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.1 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	983.4	0.0	983.4
	% Fixture	11.6	0.0	11.6
<b>Street Side</b>	Lumens	7480.9	0.0	7480.9
	% Fixture	88.4	0.0	88.4
<b>Total</b>	Lumens	8464.3	0.0	8464.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.9	0.4
10°-20°	129.9	1.5
20°-30°	293.5	3.5
30°-40°	505.7	6.0
40°-50°	953.9	11.3
50°-60°	2129.7	25.2
60°-70°	2848.4	33.7
70°-80°	1428.4	16.9
80°-90°	136.9	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°	8464.3	100.0
0°-180°	8464.3	100.0

**Coefficient of Utilization**



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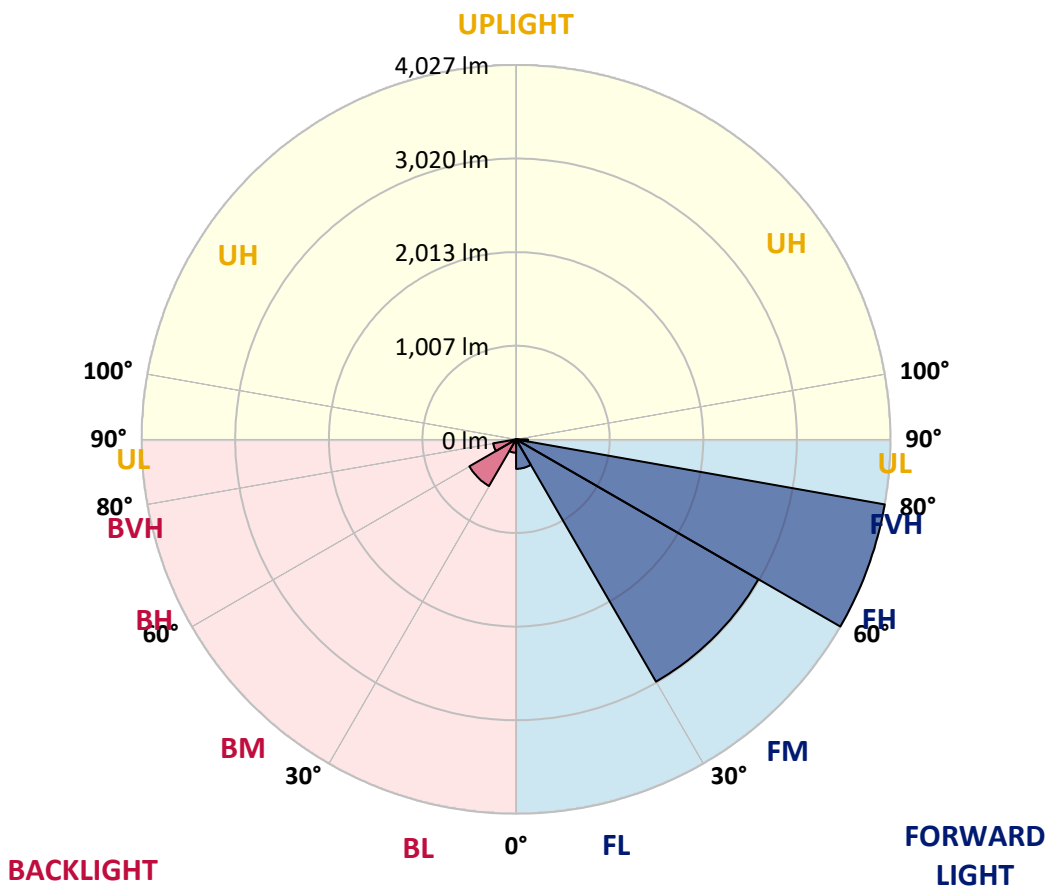
CATALOG NUMBER: GWS-SA3D-830-U-SLL-W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	317.0	3.7			
FM (30°-60°)	3009.3	35.6			
FH (60°-80°)	4026.7	47.6			G2/5000
FVH (80°-90°)	127.8	1.5			G2/225
BL (0°-30°)	144.4	1.7	B1/500		
BM (30°-60°)	579.9	6.9	B1/1000		
BH (60°-80°)	250.1	3.0	B1/500		G1/500
BVH (80°-90°)	9.1	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0
2.5°	434.0	433.0	431.0	424.9	419.9	416.9	410.9	410.9	409.9	407.9	403.9
5°	419.9	415.9	411.9	400.9	388.9	381.8	373.8	372.8	372.8	370.8	369.8
7.5°	397.9	393.9	388.9	370.8	359.8	352.8	345.8	344.8	341.8	341.8	341.8
10°	385.9	379.8	371.8	351.8	340.8	334.7	329.7	326.7	324.7	321.7	320.7
12.5°	411.9	400.9	383.8	347.8	332.7	324.7	318.7	316.7	310.7	306.7	303.7
15°	493.1	466.0	432.0	356.8	329.7	317.7	309.7	305.7	300.7	293.6	288.6
17.5°	626.4	587.3	530.2	385.9	326.7	311.7	301.7	294.7	287.6	279.6	273.6
20°	810.8	752.7	684.5	439.0	326.7	304.7	292.6	283.6	273.6	264.6	257.6
22.5°	1045.3	987.2	870.9	529.2	330.7	295.7	281.6	269.6	257.6	249.6	241.5
25°	1307.9	1225.7	1117.5	638.4	341.8	283.6	268.6	256.6	245.5	235.5	226.5
27.5°	1600.5	1511.3	1367.0	793.8	365.8	271.6	254.6	243.5	233.5	223.5	211.5
30°	1870.1	1817.0	1669.7	980.2	404.9	263.6	243.5	233.5	223.5	210.5	199.4
32.5°	2193.9	2099.6	1978.4	1192.6	457.0	255.6	234.5	220.5	212.5	200.4	188.4
35°	2519.6	2439.4	2280.0	1454.2	515.1	247.5	223.5	210.5	203.4	189.4	176.4
37.5°	2855.3	2837.3	2679.9	1743.9	572.3	238.5	210.5	202.4	195.4	179.4	164.4
40°	3186.0	3153.0	3007.7	2074.6	607.3	228.5	199.4	194.4	186.4	168.4	151.3
42.5°	3502.7	3477.7	3336.4	2391.3	602.3	219.5	188.4	182.4	176.4	158.4	137.3
45°	3891.6	3850.5	3672.1	2625.8	551.2	229.5	177.4	167.4	166.4	149.3	123.3
47.5°	4619.2	4483.9	4181.2	2806.2	500.1	255.6	165.4	153.3	160.4	140.3	109.2
50°	5638.5	5479.1	5041.1	2946.5	499.1	289.6	163.4	140.3	155.3	133.3	97.2
52.5°	6662.7	6382.1	5849.9	3021.7	536.2	314.7	181.4	127.3	149.3	126.3	88.2
55°	7643.9	7061.6	6188.7	2773.1	565.3	341.8	214.5	120.3	138.3	118.3	83.2
57.5°	8579.0	7607.8	6336.0	2193.9	662.5	352.8	234.5	123.3	122.3	108.2	79.2
60°	8707.3	7581.8	6038.4	1275.8	730.6	333.7	226.5	137.3	107.2	96.2	72.2
62.5°	8222.2	7077.7	5359.9	795.8	678.5	326.7	201.4	156.3	97.2	85.2	63.1
65°	7485.6	6286.9	4468.9	513.1	514.1	362.8	176.4	153.3	91.2	75.2	54.1
67.5°	6334.0	5261.6	3520.8	343.8	290.6	309.7	154.3	105.2	89.2	64.1	42.1
70°	4623.2	3745.3	2292.1	229.5	173.4	247.5	129.3	75.2	84.2	53.1	30.1
72.5°	3379.5	2516.6	1279.8	150.3	98.2	144.3	95.2	54.1	65.1	39.1	21.0
75°	2432.4	1731.8	730.6	96.2	65.1	79.2	62.1	37.1	42.1	31.1	19.0
77.5°	1170.6	843.9	331.7	53.1	44.1	40.1	33.1	23.1	26.1	28.1	17.0
80°	44.1	33.1	25.1	26.1	28.1	18.0	15.0	12.0	15.0	19.0	9.0
82.5°	0.0	0.0	0.0	3.0	4.0	5.0	6.0	5.0	6.0	7.0	1.0
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°	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0
2.5°	406.9	404.9	406.9	408.9	410.9	412.9	409.9	411.9	413.9	408.9	410.9
5°	374.8	373.8	379.8	382.8	386.9	388.9	386.9	386.9	385.9	379.8	379.8
7.5°	346.8	347.8	352.8	359.8	364.8	367.8	365.8	364.8	361.8	352.8	352.8
10°	325.7	325.7	333.7	339.8	346.8	349.8	347.8	344.8	341.8	332.7	331.7
12.5°	308.7	308.7	314.7	324.7	332.7	336.7	335.7	331.7	326.7	317.7	316.7
15°	292.6	291.6	300.7	309.7	320.7	325.7	323.7	320.7	311.7	303.7	301.7
17.5°	276.6	275.6	283.6	295.7	307.7	314.7	313.7	306.7	298.7	288.6	286.6
20°	260.6	258.6	268.6	280.6	292.6	299.7	297.7	291.6	281.6	271.6	269.6
22.5°	244.5	243.5	250.6	260.6	271.6	277.6	276.6	271.6	261.6	252.6	252.6
25°	226.5	226.5	231.5	238.5	246.5	249.6	250.6	248.5	242.5	237.5	237.5
27.5°	211.5	208.5	210.5	212.5	216.5	221.5	221.5	223.5	224.5	222.5	223.5
30°	199.4	194.4	191.4	187.4	185.4	187.4	189.4	196.4	203.4	207.5	209.5
32.5°	185.4	179.4	171.4	160.4	153.3	151.3	157.3	170.4	183.4	192.4	197.4
35°	171.4	163.4	148.3	132.3	123.3	120.3	127.3	142.3	161.4	177.4	184.4
37.5°	157.3	146.3	125.3	106.2	96.2	94.2	101.2	117.3	139.3	161.4	170.4
40°	141.3	128.3	103.2	83.2	75.2	73.2	79.2	95.2	118.3	143.3	157.3
42.5°	125.3	109.2	83.2	66.1	58.1	58.1	66.1	78.2	99.2	126.3	143.3
45°	109.2	92.2	68.2	53.1	48.1	49.1	54.1	66.1	83.2	111.2	127.3
47.5°	94.2	79.2	56.1	44.1	40.1	41.1	47.1	57.1	71.2	96.2	113.3
50°	81.2	67.1	49.1	37.1	34.1	36.1	42.1	51.1	63.1	85.2	99.2
52.5°	73.2	60.1	45.1	32.1	30.1	32.1	38.1	46.1	57.1	75.2	89.2
55°	69.2	59.1	45.1	29.1	26.1	28.1	34.1	42.1	51.1	68.2	80.2
57.5°	68.2	61.1	48.1	26.1	22.0	24.1	30.1	38.1	47.1	62.1	72.2
60°	64.1	58.1	47.1	21.0	17.0	20.0	25.1	33.1	43.1	58.1	67.1
62.5°	56.1	51.1	41.1	17.0	13.0	15.0	21.0	29.1	39.1	53.1	63.1
65°	46.1	41.1	32.1	11.0	8.0	10.0	16.0	25.1	34.1	48.1	57.1
67.5°	34.1	29.1	22.0	7.0	4.0	7.0	13.0	21.0	31.1	43.1	52.1
70°	21.0	17.0	12.0	4.0	3.0	6.0	12.0	20.0	28.1	40.1	49.1
72.5°	12.0	8.0	5.0	2.0	3.0	6.0	12.0	20.0	27.1	38.1	46.1
75°	9.0	5.0	2.0	1.0	2.0	5.0	11.0	18.0	26.1	36.1	44.1
77.5°	6.0	3.0	1.0	0.0	1.0	4.0	10.0	17.0	24.1	34.1	42.1
80°	1.0	0.0	0.0	0.0	0.0	3.0	9.0	15.0	22.0	30.1	37.1
82.5°	0.0	0.0	0.0	0.0	0.0	1.0	7.0	13.0	19.0	25.1	30.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	4.0	10.0	15.0	19.0	21.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	10.0	12.0	14.0
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°	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0
2.5°	409.9	415.9	415.9	419.9	424.9	434.0	439.0	446.0	451.0	456.0	458.0
5°	378.8	379.8	380.8	382.8	388.9	398.9	407.9	418.9	432.0	442.0	448.0
7.5°	352.8	352.8	352.8	355.8	361.8	368.8	377.8	392.9	407.9	419.9	430.0
10°	330.7	333.7	334.7	339.8	346.8	355.8	365.8	378.8	395.9	411.9	430.0
12.5°	316.7	319.7	324.7	329.7	336.7	346.8	357.8	374.8	409.9	443.0	481.1
15°	303.7	307.7	313.7	320.7	328.7	339.8	351.8	386.9	469.0	531.2	591.3
17.5°	289.6	295.7	303.7	310.7	320.7	332.7	347.8	415.9	577.3	680.5	782.7
20°	271.6	279.6	288.6	299.7	311.7	325.7	347.8	476.1	733.6	882.0	1017.2
22.5°	254.6	262.6	273.6	287.6	301.7	315.7	352.8	567.3	935.1	1122.5	1293.9
25°	240.5	250.6	261.6	273.6	289.6	305.7	364.8	695.5	1177.6	1419.1	1540.4
27.5°	227.5	239.5	250.6	260.6	274.6	292.6	391.9	866.9	1464.2	1709.8	1805.0
30°	214.5	228.5	239.5	249.6	263.6	282.6	433.0	1085.4	1782.9	2021.5	2031.5
32.5°	203.4	216.5	229.5	239.5	252.6	274.6	490.1	1341.0	2109.7	2340.2	2246.0
35°	191.4	206.5	218.5	229.5	243.5	267.6	556.2	1616.6	2439.4	2632.8	2459.4
37.5°	179.4	196.4	211.5	219.5	233.5	260.6	604.3	1904.2	2776.1	2918.5	2646.9
40°	168.4	187.4	204.5	212.5	219.5	251.6	611.4	2198.9	3117.9	3200.1	2823.2
42.5°	156.3	177.4	192.4	203.4	209.5	245.5	569.3	2447.4	3404.5	3480.7	3053.8
45°	143.3	168.4	180.4	188.4	200.4	249.6	515.1	2639.8	3732.3	3863.5	3433.6
47.5°	130.3	158.4	168.4	174.4	190.4	273.6	495.1	2768.1	4272.4	4545.1	4074.0
50°	118.3	149.3	160.4	159.4	188.4	304.7	517.1	2865.3	5084.2	5405.0	4952.0
52.5°	105.2	139.3	152.3	148.3	203.4	328.7	561.2	2942.5	5708.6	6413.2	6131.6
55°	94.2	128.3	140.3	139.3	231.5	346.8	595.3	2535.6	5967.2	7350.3	7460.5
57.5°	86.2	116.3	126.3	143.3	249.6	346.8	688.5	1800.0	5972.2	8039.8	9224.4
60°	79.2	105.2	112.2	157.3	242.5	328.7	681.5	1102.4	5504.2	7992.7	10162.5
62.5°	73.2	95.2	104.2	161.4	214.5	325.7	615.4	683.5	4694.4	7384.3	9482.0
65°	68.2	87.2	100.2	148.3	194.4	348.8	414.9	491.1	3807.4	6690.8	8701.2
67.5°	63.1	80.2	106.2	121.3	176.4	311.7	299.7	348.8	2988.6	5930.1	7984.7
70°	59.1	76.2	112.2	99.2	154.3	243.5	212.5	264.6	2288.1	4947.9	6975.4
72.5°	56.1	71.2	94.2	78.2	125.3	188.4	148.3	192.4	1495.3	3862.5	5686.6
75°	53.1	65.1	69.2	63.1	93.2	123.3	112.2	129.3	891.0	2823.2	4314.5
77.5°	52.1	61.1	56.1	51.1	63.1	73.2	85.2	87.2	435.0	1412.1	2261.0
80°	46.1	55.1	48.1	42.1	43.1	48.1	63.1	58.1	99.2	358.8	603.3
82.5°	36.1	43.1	40.1	35.1	35.1	35.1	42.1	39.1	32.1	161.4	272.6
85°	25.1	30.1	30.1	28.1	27.1	27.1	26.1	25.1	9.0	10.0	15.0
87.5°	17.0	21.0	22.0	21.0	18.0	16.0	14.0	12.0	4.0	0.0	2.0
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°	358°	360°
0°	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0	439.0
2.5°	465.0	468.0	468.0	464.0	461.0	453.0	445.0	437.0	435.0	434.0
5°	465.0	477.1	483.1	482.1	475.1	462.0	445.0	426.9	421.9	419.9
7.5°	458.0	481.1	499.1	502.1	489.1	466.0	435.0	407.9	400.9	397.9
10°	474.0	519.1	555.2	560.2	545.2	500.1	450.0	403.9	392.9	385.9
12.5°	560.2	634.4	678.5	699.5	670.5	613.4	530.2	448.0	422.9	411.9
15°	734.6	839.9	924.0	924.0	897.0	795.8	690.5	557.2	523.2	493.1
17.5°	958.1	1090.4	1164.6	1156.6	1115.5	1044.3	918.0	726.6	657.5	626.4
20°	1212.7	1291.9	1308.9	1303.9	1285.8	1244.8	1157.6	952.1	858.9	810.8
22.5°	1433.2	1412.1	1387.1	1367.0	1362.0	1374.0	1362.0	1203.7	1130.5	1045.3
25°	1582.5	1463.2	1388.1	1352.0	1369.0	1438.2	1513.3	1454.2	1396.1	1307.9
27.5°	1663.7	1457.2	1349.0	1311.9	1341.0	1439.2	1602.5	1702.8	1642.6	1600.5
30°	1707.8	1452.2	1323.9	1287.8	1331.9	1455.2	1664.7	1935.3	1937.3	1870.1
32.5°	1770.9	1484.3	1328.9	1295.9	1355.0	1503.3	1742.9	2171.8	2229.9	2193.9
35°	1842.1	1533.4	1352.0	1321.9	1395.1	1567.5	1830.0	2410.3	2531.6	2519.6
37.5°	1909.2	1588.5	1406.1	1377.0	1456.2	1622.6	1914.2	2644.8	2813.2	2855.3
40°	1979.4	1665.7	1572.5	1600.5	1644.6	1709.8	1989.4	2848.3	3122.9	3186.0
42.5°	2144.7	1933.3	2075.6	2128.7	2134.7	2000.4	2153.8	3108.9	3427.6	3502.7
45°	2513.6	2409.3	2817.2	2892.4	2853.3	2446.4	2549.6	3484.7	3853.5	3891.6
47.5°	2979.6	3027.7	3832.5	4092.0	3857.5	2972.6	3029.7	4275.5	4633.2	4619.2
50°	3522.8	3750.3	4985.0	5597.4	5036.1	3656.1	3582.9	5247.6	5681.6	5638.5
52.5°	4165.2	4590.2	6370.1	7240.0	6708.8	4424.8	4394.7	6535.5	6800.0	6662.7
55°	4974.0	5400.9	7963.6	9179.3	8423.6	5362.9	5466.1	8028.8	8079.9	7643.9
57.5°	6180.7	6458.3	9841.8	11403.2	10213.6	6637.7	7386.3	10016.2	9404.8	8579.0
60°	8371.5	7818.3	11656.8	13678.2	12117.8	8430.6	9918.9	11193.8	9845.8	8707.3
62.5°	9134.2	8972.8	12793.3	14640.4	13398.6	9902.9	10577.4	10526.3	9274.5	8222.2
65°	7978.6	8685.2	12589.8	14132.3	13234.3	9660.4	9492.0	9789.6	8631.1	7485.6
67.5°	7370.3	8009.7	11819.1	12730.2	12323.3	8837.5	8460.7	8379.5	7246.0	6334.0
70°	6756.9	7390.3	10701.7	10814.9	10625.5	7496.6	7001.5	6457.3	5416.0	4623.2
72.5°	6019.3	6368.1	9151.2	8614.0	8399.6	5888.0	5783.8	4862.8	4060.0	3379.5
75°	5249.6	5148.4	7134.8	5912.1	6072.4	4581.1	4884.8	3570.9	2974.6	2432.4
77.5°	3818.4	3743.3	4778.6	3590.9	3976.8	3000.6	2696.0	1425.2	1357.0	1170.6
80°	2130.7	2568.7	2580.7	2012.5	2510.6	1956.3	674.5	47.1	30.1	44.1
82.5°	990.2	1104.4	1399.1	933.1	1432.2	969.1	139.3	0.0	0.0	0.0
85°	320.7	469.0	392.9	137.3	346.8	327.7	23.1	0.0	0.0	0.0
87.5°	19.0	39.1	10.0	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

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**



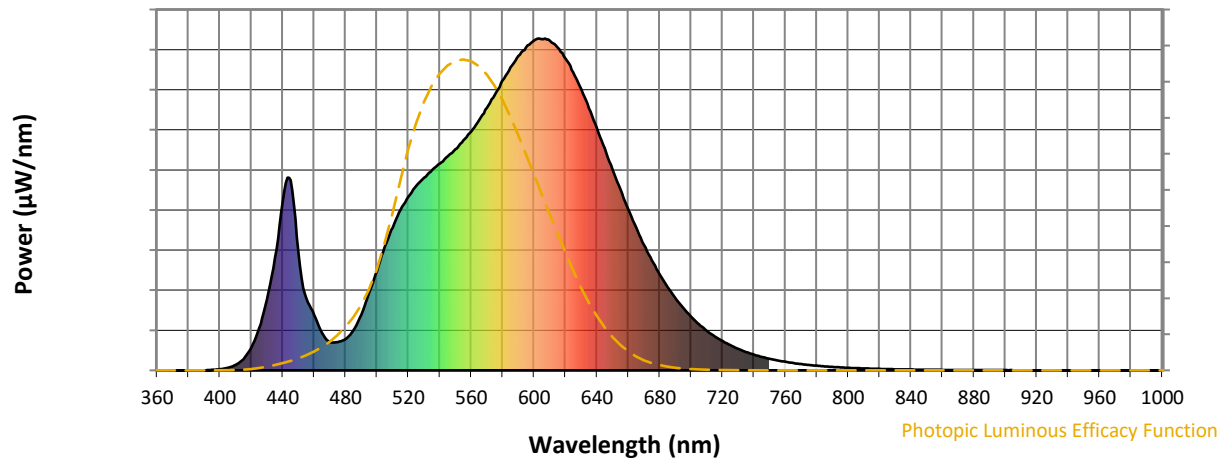
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

$\lambda$ (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			

REPORT NUMBER: SP1-2408-195-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

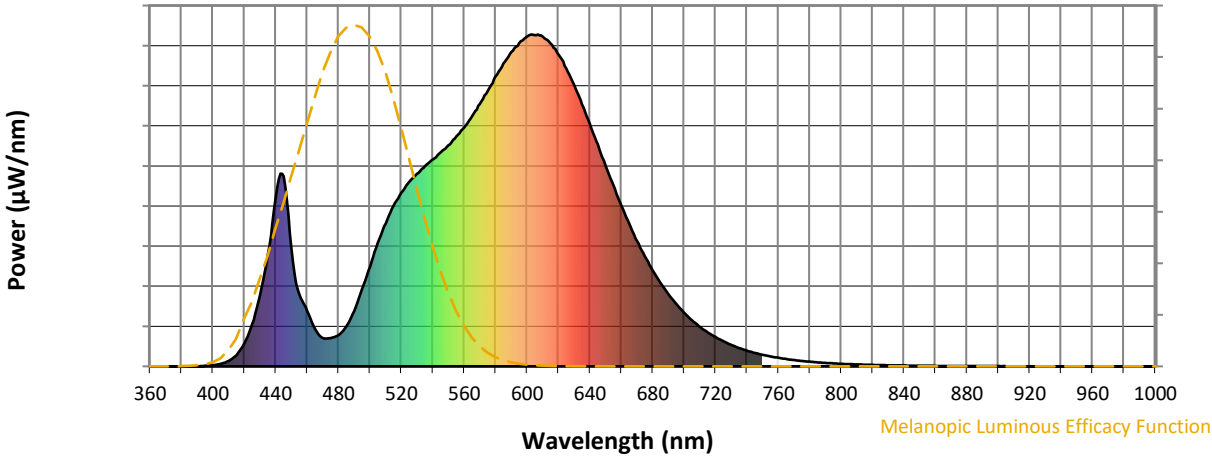
**S/P: 1.27**

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			



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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

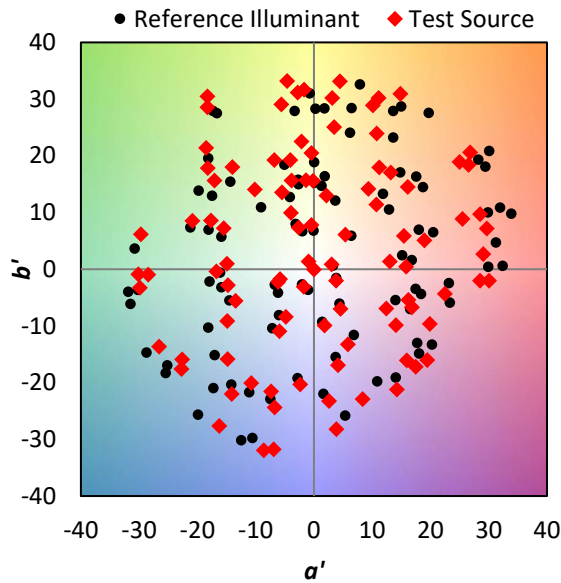
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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**

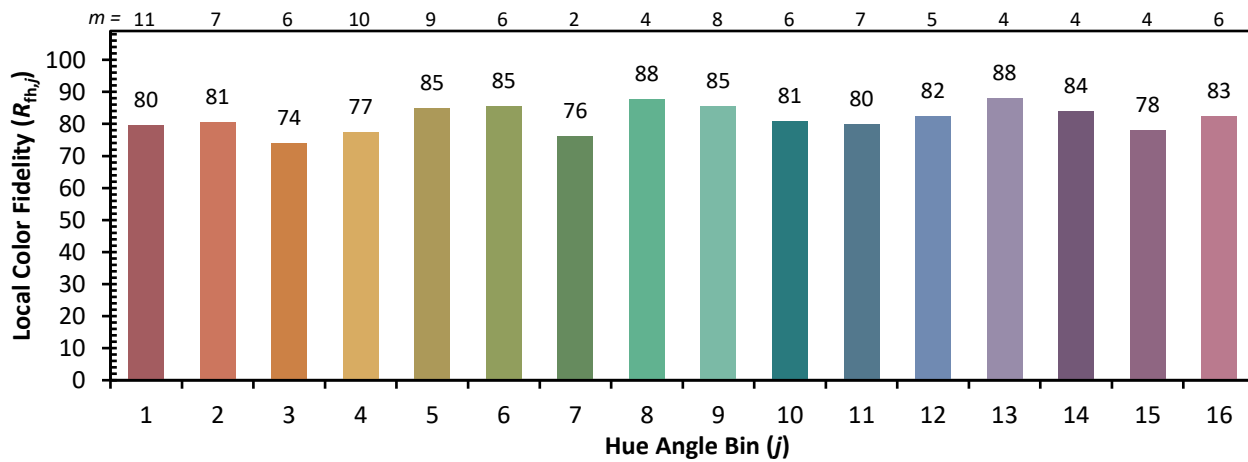
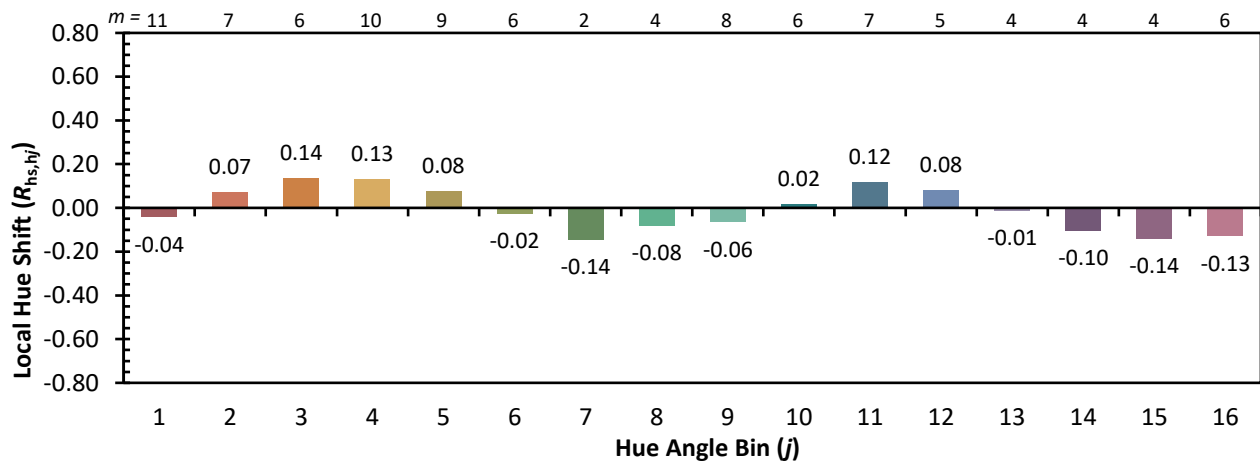
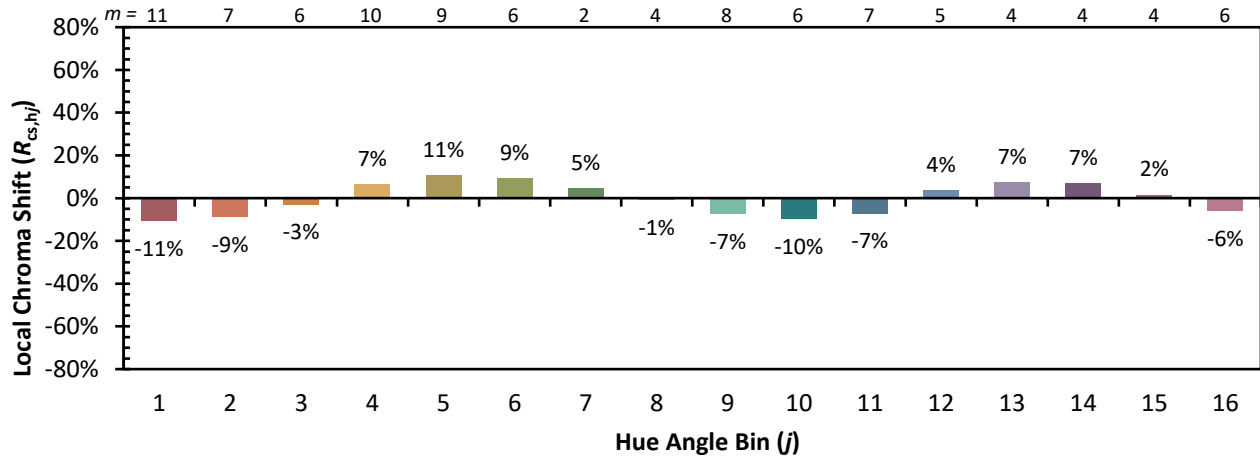


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)