

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P438111

Luminaire Tested: **IST-SA1A-830-U-SLR-HSS**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-23)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1A-830-U-SLR-HSS
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1643 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

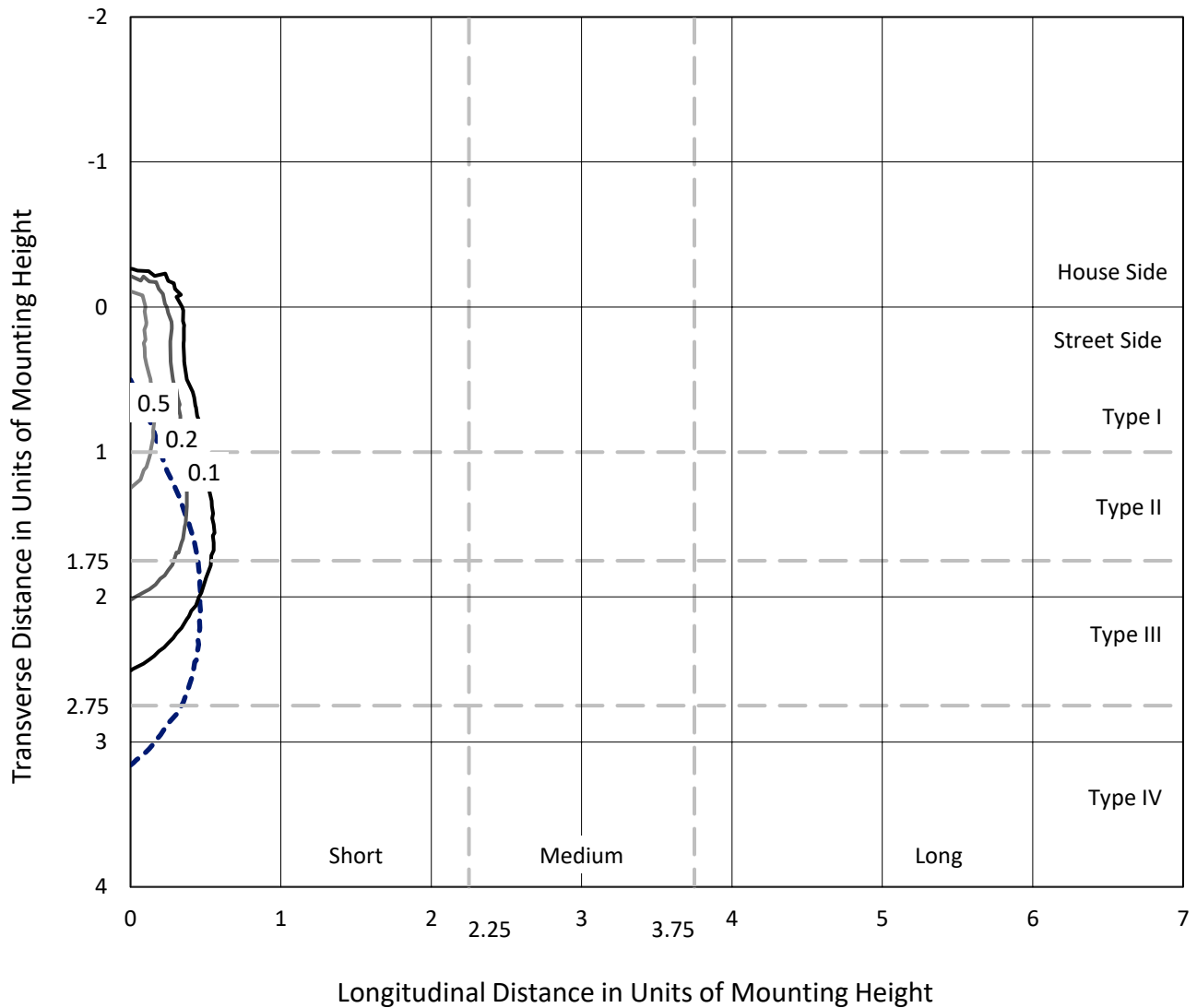
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

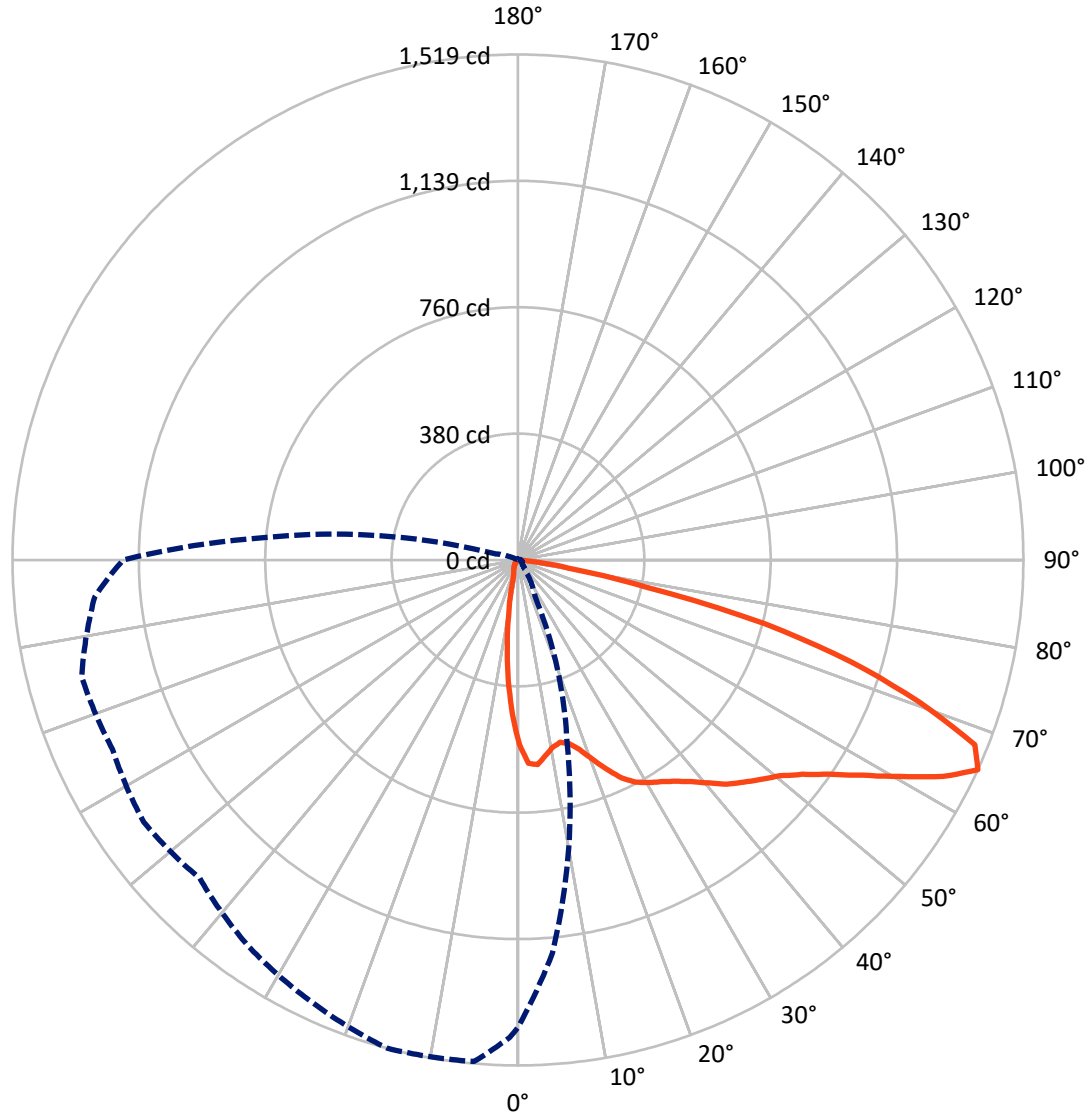
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 345-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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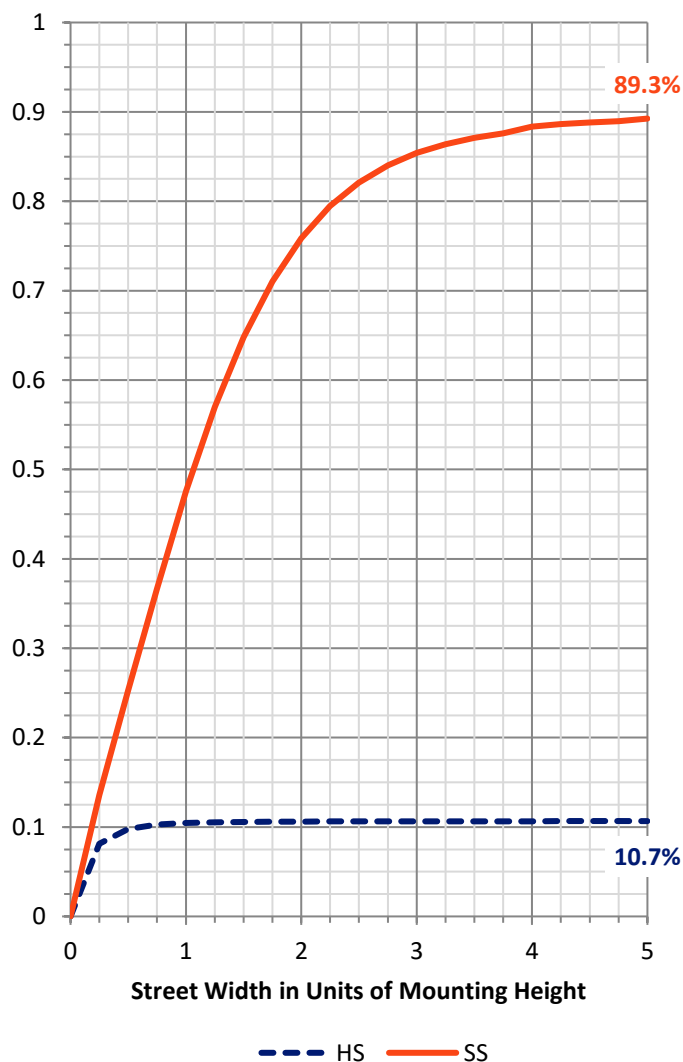
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	177.1	0.0	177.1
	% Fixture	10.8	0.0	10.8
Street Side	Lumens	1465.9	0.0	1465.9
	% Fixture	89.2	0.0	89.2
Total	Lumens	1643.0	0.0	1643.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	2.5
10°-20°	80.1	4.9
20°-30°	116.8	7.1
30°-40°	173.7	10.6
40°-50°	254.6	15.5
50°-60°	366.4	22.3
60°-70°	411.0	25.0
70°-80°	180.3	11.0
80°-90°	19.0	1.2
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°	1643.0	100.0
0°-180°	1643.0	100.0

Coefficient of Utilization

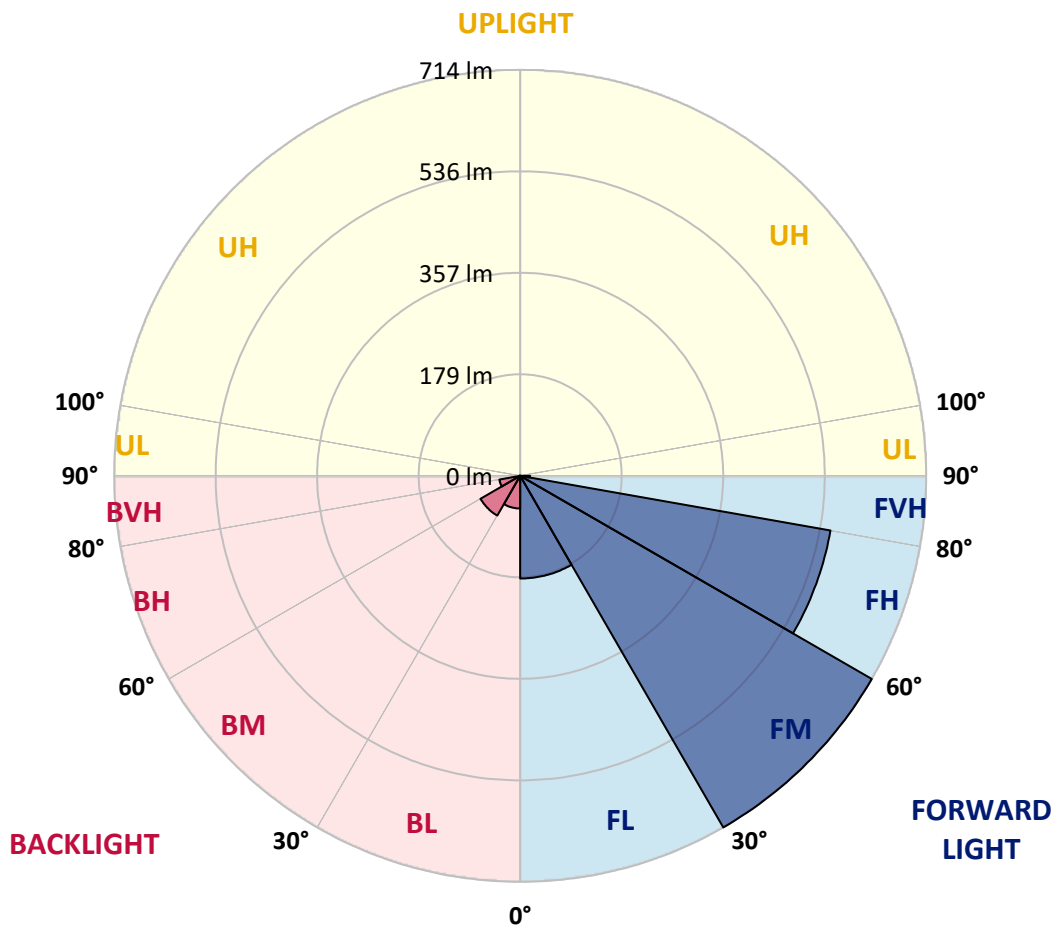


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.7	11.0			
FM (30°-60°)	714.0	43.5			
FH (60°-80°)	554.1	33.7			G0/660
FVH (80°-90°)	17.1	1.0			G1/100
BL (0°-30°)	57.5	3.5	B0/110		
BM (30°-60°)	80.6	4.9	B0/220		
BH (60°-80°)	37.2	2.3	B0/110		G0/110
BVH (80°-90°)	1.8	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5
2.5°	586.8	586.8	578.1	557.6	538.7	515.8	503.2	491.4	478.8	470.1	456.7
5°	559.2	553.7	541.1	503.2	463.0	436.2	415.7	379.4	362.0	349.4	343.9
7.5°	513.5	510.3	489.8	445.6	397.5	354.1	326.5	296.6	272.9	263.4	246.9
10°	481.9	478.8	452.7	392.8	336.8	305.2	283.1	261.9	239.0	216.1	198.8
12.5°	466.1	459.8	434.6	366.8	318.6	287.9	262.6	236.6	208.2	183.0	162.5
15°	470.1	459.8	431.4	362.0	305.2	267.4	235.0	197.2	168.8	138.8	119.9
17.5°	497.7	486.6	451.9	366.0	287.9	239.8	197.2	154.6	116.7	89.1	79.7
20°	548.9	537.1	489.8	374.6	276.8	212.2	152.2	106.5	77.3	64.7	59.2
22.5°	614.4	598.6	542.6	388.8	264.2	184.6	115.2	75.7	59.2	51.3	47.3
25°	683.0	667.3	604.9	410.1	256.3	160.9	89.1	59.2	48.1	43.4	41.0
27.5°	745.3	725.6	660.9	441.7	246.9	139.6	74.1	51.3	43.4	37.9	36.3
30°	802.1	779.3	716.9	468.5	233.5	120.7	63.9	47.3	40.2	35.5	33.1
32.5°	850.2	832.1	762.7	487.4	222.4	110.4	56.8	41.8	34.7	30.8	29.2
35°	907.8	890.5	806.9	503.2	215.3	105.7	52.1	39.4	32.3	28.4	25.2
37.5°	985.9	960.7	855.8	517.4	207.4	101.7	48.1	37.1	30.8	26.0	23.7
40°	1056.1	1028.5	912.5	527.7	203.5	98.6	47.3	35.5	29.2	24.5	22.1
42.5°	1118.4	1093.2	958.3	531.6	200.3	93.1	46.5	34.7	29.2	23.7	20.5
45°	1157.8	1135.0	1012.7	541.8	200.3	89.1	43.4	34.7	28.4	22.9	19.7
47.5°	1194.1	1172.0	1060.0	552.9	197.2	86.0	39.4	37.9	28.4	22.1	18.1
50°	1247.0	1229.6	1120.0	586.0	191.7	81.2	35.5	37.1	29.2	21.3	18.1
52.5°	1314.0	1306.1	1208.3	631.0	183.8	72.6	31.5	34.7	29.2	20.5	17.4
55°	1388.1	1385.0	1300.6	672.0	174.3	62.3	29.2	31.5	28.4	18.9	15.8
57.5°	1433.1	1433.1	1360.5	694.9	166.4	49.7	26.0	26.0	27.6	17.4	14.2
60°	1449.7	1432.3	1353.4	692.5	153.0	41.0	23.7	21.3	29.2	15.0	12.6
62.5°	1448.1	1410.2	1287.2	654.6	134.9	37.9	20.5	18.1	21.3	13.4	11.0
65°	1405.5	1359.7	1186.2	570.2	121.5	37.9	17.4	15.0	14.2	11.8	8.7
67.5°	1288.0	1260.4	1038.7	483.5	112.0	37.9	15.0	12.6	11.0	9.5	7.9
70°	1094.0	1057.7	836.8	373.1	104.9	37.9	12.6	11.0	10.3	7.9	6.3
72.5°	713.0	692.5	511.9	256.3	86.0	37.1	11.0	10.3	9.5	7.1	5.5
75°	388.0	358.9	281.6	91.5	61.5	26.8	9.5	8.7	7.1	6.3	4.7
77.5°	168.0	161.7	143.5	24.5	18.1	7.9	5.5	5.5	4.7	4.7	3.2
80°	22.1	16.6	18.9	7.1	6.3	3.9	3.2	2.4	2.4	2.4	1.6
82.5°	0.8	0.8	0.0	0.8	2.4	1.6	0.0	0.0	0.8	0.8	0.8
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°	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5
2.5°	463.0	453.5	446.4	446.4	455.9	450.4	456.7	452.7	463.8	469.3	467.7
5°	332.1	336.0	332.1	338.4	348.6	354.1	357.3	365.2	364.4	367.5	373.1
7.5°	240.6	240.6	242.1	240.6	250.0	260.3	265.8	263.4	261.9	258.7	264.2
10°	193.2	184.6	174.3	174.3	175.9	181.4	182.2	178.3	172.7	162.5	165.6
12.5°	151.4	145.1	138.8	125.4	124.6	121.5	120.7	109.6	101.0	97.8	97.8
15°	111.2	107.3	100.2	93.9	87.5	84.4	78.9	65.5	56.8	56.0	56.8
17.5°	74.1	71.8	69.4	69.4	67.0	61.5	56.0	47.3	43.4	41.8	42.6
20°	55.2	54.4	52.1	52.8	52.8	48.1	42.6	38.6	37.1	37.1	37.9
22.5°	45.7	45.0	42.6	42.6	42.6	40.2	36.3	33.9	33.1	33.1	33.1
25°	39.4	38.6	37.1	36.3	36.3	34.7	31.5	30.0	29.2	29.2	29.2
27.5°	35.5	34.7	33.1	31.5	31.5	30.0	28.4	26.0	26.0	26.0	26.0
30°	31.5	30.8	30.0	28.4	27.6	26.0	24.5	23.7	22.9	22.9	22.9
32.5°	28.4	27.6	26.8	26.0	24.5	22.9	21.3	20.5	19.7	19.7	19.7
35°	24.5	22.9	22.1	22.9	22.1	19.7	18.9	17.4	16.6	16.6	16.6
37.5°	22.1	20.5	18.9	18.1	18.1	18.1	16.6	15.0	14.2	13.4	14.2
40°	20.5	18.9	17.4	15.8	15.0	15.8	14.2	12.6	11.8	11.0	11.8
42.5°	18.9	17.4	15.0	13.4	11.8	13.4	11.8	10.3	9.5	8.7	9.5
45°	18.1	16.6	14.2	11.8	10.3	10.3	10.3	8.7	7.1	7.1	7.1
47.5°	17.4	15.8	12.6	10.3	8.7	7.9	7.9	6.3	5.5	4.7	4.7
50°	16.6	15.0	11.8	8.7	7.1	6.3	6.3	4.7	3.9	3.9	3.9
52.5°	15.8	14.2	11.0	7.9	6.3	4.7	3.9	3.2	3.2	2.4	2.4
55°	14.2	12.6	9.5	7.1	5.5	3.9	3.2	2.4	2.4	1.6	2.4
57.5°	13.4	11.8	8.7	6.3	4.7	3.2	2.4	1.6	1.6	1.6	1.6
60°	11.8	10.3	7.1	4.7	3.2	2.4	1.6	1.6	1.6	0.8	0.8
62.5°	9.5	8.7	6.3	3.9	2.4	1.6	0.8	0.8	0.8	0.8	0.8
65°	8.7	7.9	5.5	3.2	1.6	0.8	0.8	0.8	0.8	0.8	0.8
67.5°	7.1	6.3	3.9	2.4	0.8	0.8	0.0	0.8	0.8	0.0	0.0
70°	5.5	5.5	3.2	1.6	0.8	0.0	0.0	0.8	0.8	0.0	0.0
72.5°	4.7	4.7	3.2	0.8	0.0	0.0	0.0	0.8	0.8	0.8	0.0
75°	3.9	3.9	3.2	1.6	0.0	0.0	0.0	0.8	0.8	0.8	0.8
77.5°	3.2	2.4	1.6	0.8	0.0	0.0	0.0	0.8	0.8	0.8	0.8
80°	1.6	1.6	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6	0.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6	1.6	1.6
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°	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5
2.5°	471.7	484.3	498.5	507.1	526.1	542.6	562.4	579.7	600.2	611.3	615.2
5°	378.6	385.7	403.8	427.5	448.8	478.8	513.5	552.1	593.9	613.6	627.8
7.5°	261.1	267.4	293.4	315.5	351.0	389.6	436.9	489.8	544.2	571.8	597.1
10°	170.4	179.0	201.1	231.9	276.8	324.2	372.3	427.5	490.6	522.9	556.8
12.5°	98.6	108.8	135.7	175.9	220.1	270.5	320.2	381.0	451.1	486.6	521.3
15°	56.8	60.7	76.5	112.0	161.7	223.2	281.6	347.0	429.1	468.5	509.5
17.5°	42.6	45.0	49.7	64.7	103.3	171.2	253.2	336.8	431.4	484.3	520.6
20°	37.9	39.4	41.8	47.3	65.5	121.5	218.5	329.7	454.3	522.1	566.3
22.5°	33.9	35.5	37.9	41.8	49.7	82.0	182.2	328.9	492.2	578.1	627.8
25°	30.0	31.5	33.9	37.9	44.2	59.2	141.2	326.5	539.5	639.6	702.0
27.5°	26.0	27.6	30.0	33.9	39.4	48.9	107.3	319.4	596.3	705.9	772.2
30°	22.9	24.5	26.8	30.0	35.5	42.6	82.0	307.6	645.2	765.1	819.5
32.5°	19.7	21.3	23.7	26.8	31.5	37.1	66.3	282.4	683.0	811.6	858.1
35°	16.6	18.1	20.5	23.7	27.6	31.5	54.4	241.3	721.7	859.7	904.7
37.5°	14.2	15.8	17.4	20.5	24.5	28.4	45.0	215.3	750.1	919.6	963.8
40°	11.8	13.4	15.8	18.1	21.3	26.8	36.3	180.6	778.5	977.2	1018.2
42.5°	9.5	11.0	13.4	16.6	19.7	23.7	29.2	149.1	806.9	1029.3	1067.9
45°	7.1	8.7	11.0	15.0	19.7	20.5	23.7	127.0	814.0	1078.2	1111.3
47.5°	5.5	6.3	8.7	12.6	18.9	18.1	19.7	110.4	827.4	1116.8	1153.9
50°	3.9	4.7	7.1	11.8	16.6	15.0	17.4	104.1	846.3	1146.8	1166.5
52.5°	3.2	3.9	5.5	10.3	13.4	13.4	15.8	110.4	870.7	1182.3	1198.9
55°	2.4	3.2	4.7	7.1	10.3	11.8	15.0	119.1	918.1	1244.6	1241.4
57.5°	1.6	2.4	3.9	5.5	7.9	10.3	14.2	132.5	966.2	1314.8	1317.9
60°	1.6	2.4	3.2	4.7	7.1	8.7	12.6	134.1	958.3	1325.0	1371.6
62.5°	0.8	1.6	3.2	3.9	5.5	7.1	11.0	112.8	882.6	1275.4	1343.2
65°	0.8	1.6	2.4	3.9	4.7	6.3	8.7	71.8	768.2	1187.0	1276.9
67.5°	0.8	1.6	2.4	3.2	3.9	5.5	7.1	37.1	651.5	1095.5	1182.3
70°	0.8	1.6	2.4	3.2	3.9	4.7	6.3	18.1	493.7	923.6	1035.6
72.5°	0.8	1.6	2.4	3.2	3.2	3.9	5.5	12.6	317.1	694.1	802.1
75°	0.8	1.6	1.6	2.4	3.2	3.9	4.7	8.7	205.1	466.9	608.1
77.5°	0.8	1.6	1.6	2.4	3.2	3.9	5.5	7.9	149.9	320.2	420.4
80°	0.8	1.6	1.6	2.4	3.2	3.2	3.9	5.5	80.4	212.2	267.4
82.5°	1.6	1.6	2.4	2.4	2.4	3.2	3.9	3.9	41.8	135.7	180.6
85°	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.9	18.1	56.8	89.9
87.5°	1.6	2.4	2.4	2.4	3.2	3.2	3.2	3.2	2.4	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5	554.5
2.5°	627.0	637.3	642.0	638.1	634.9	625.5	612.0	598.6	587.6	586.8
5°	660.2	682.2	699.6	690.9	679.1	651.5	617.6	579.7	565.5	559.2
7.5°	653.1	701.2	730.4	722.5	698.8	646.7	593.9	544.2	521.3	513.5
10°	620.7	685.4	724.0	721.7	699.6	638.1	572.6	512.7	488.2	481.9
12.5°	590.7	654.6	691.7	693.3	685.4	628.6	562.4	498.5	469.3	466.1
15°	575.0	629.4	651.5	656.2	659.4	627.8	571.8	507.9	477.2	470.1
17.5°	578.1	604.2	609.7	605.7	627.0	628.6	598.6	541.1	506.4	497.7
20°	597.1	587.6	569.5	573.4	597.1	631.8	638.9	599.4	560.0	548.9
22.5°	633.3	586.8	550.5	547.4	578.1	637.3	682.2	661.7	620.7	614.4
25°	687.0	598.6	542.6	536.3	563.1	642.8	726.4	727.2	694.9	683.0
27.5°	739.0	617.6	541.8	535.5	563.1	649.9	756.4	791.9	758.0	745.3
30°	769.0	639.6	554.5	542.6	573.4	656.2	776.1	843.1	813.2	802.1
32.5°	796.6	663.3	567.9	553.7	593.1	673.6	794.2	889.7	863.6	850.2
35°	819.5	690.9	593.1	571.0	622.3	698.8	816.3	940.9	924.4	907.8
37.5°	841.6	718.5	628.6	616.0	671.2	735.1	845.5	994.6	1002.5	985.9
40°	873.1	750.1	689.3	679.1	743.0	790.3	881.0	1048.2	1074.2	1056.1
42.5°	903.1	790.3	750.9	760.3	829.7	854.2	921.2	1097.1	1126.3	1118.4
45°	930.7	840.0	840.0	862.9	923.6	924.4	952.0	1131.0	1161.8	1157.8
47.5°	967.0	901.5	932.3	995.4	1027.7	985.1	985.1	1163.4	1205.2	1194.1
50°	1002.5	983.5	1054.5	1112.1	1140.5	1058.5	1019.0	1206.7	1256.4	1247.0
52.5°	1041.1	1063.2	1168.9	1225.7	1242.2	1142.1	1070.3	1250.1	1314.0	1314.0
55°	1103.4	1131.0	1289.6	1336.9	1360.5	1211.5	1135.8	1311.6	1384.2	1388.1
57.5°	1167.3	1196.5	1357.4	1417.3	1448.1	1314.0	1220.1	1393.7	1433.9	1433.1
60°	1234.3	1265.1	1410.2	1469.4	1514.3	1418.9	1320.3	1468.6	1457.5	1449.7
62.5°	1317.2	1317.2	1429.9	1457.5	1512.0	1485.2	1433.1	1511.2	1466.2	1448.1
65°	1357.4	1344.8	1373.2	1352.7	1415.0	1466.2	1519.1	1512.8	1435.5	1405.5
67.5°	1336.1	1259.6	1210.7	1179.9	1193.3	1281.7	1481.2	1437.8	1310.8	1288.0
70°	1190.2	1007.2	961.4	912.5	886.5	978.0	1280.1	1269.8	1115.2	1094.0
72.5°	970.1	727.2	616.8	666.5	641.2	744.5	1049.0	896.0	731.9	713.0
75°	805.3	541.1	402.2	403.0	407.0	489.0	766.6	532.4	402.2	388.0
77.5°	582.9	381.0	325.0	291.0	294.2	312.3	399.1	227.2	185.3	168.0
80°	355.7	235.8	262.6	233.5	225.6	173.5	171.9	33.1	22.1	22.1
82.5°	194.0	149.9	139.6	50.5	78.1	94.6	78.1	1.6	0.8	0.8
85°	98.6	59.9	28.4	8.7	10.3	8.7	1.6	0.0	0.0	0.0
87.5°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	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

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Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



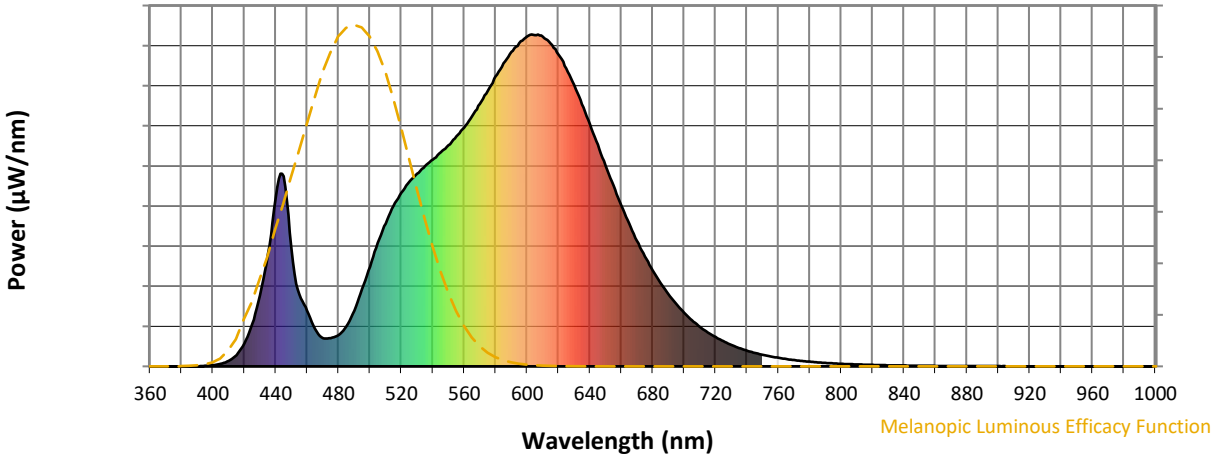
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

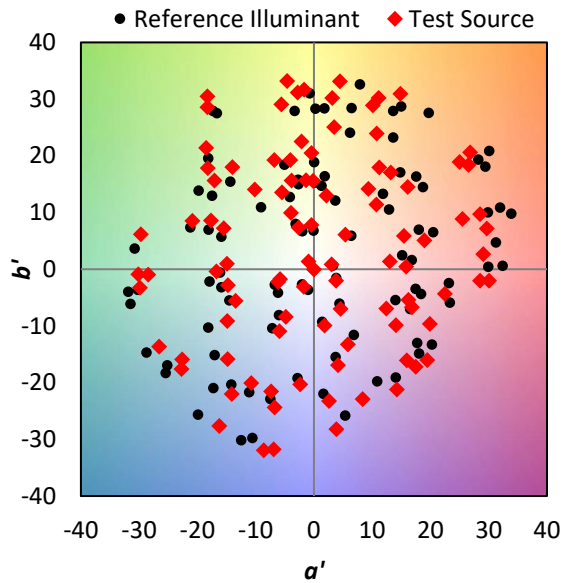
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	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

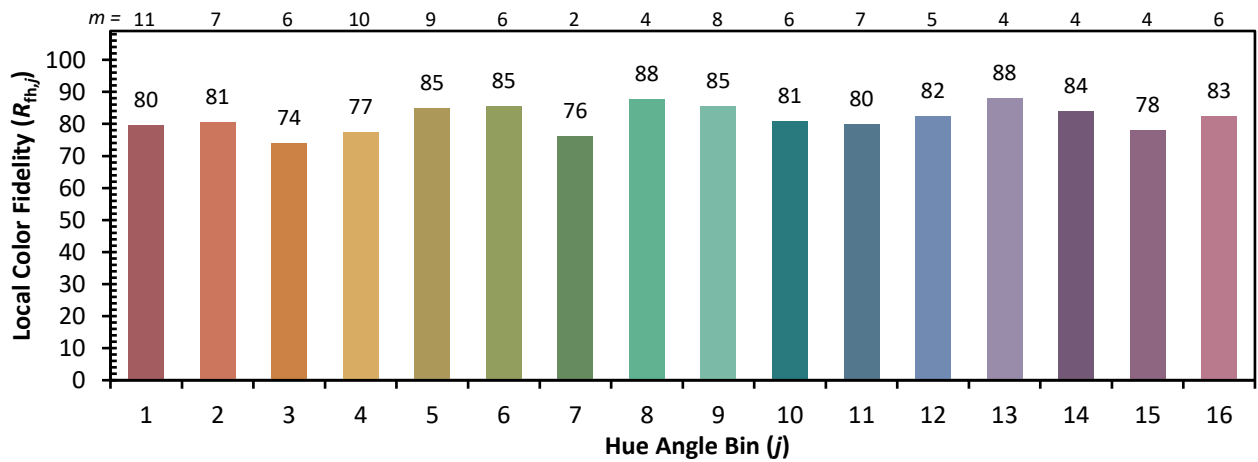
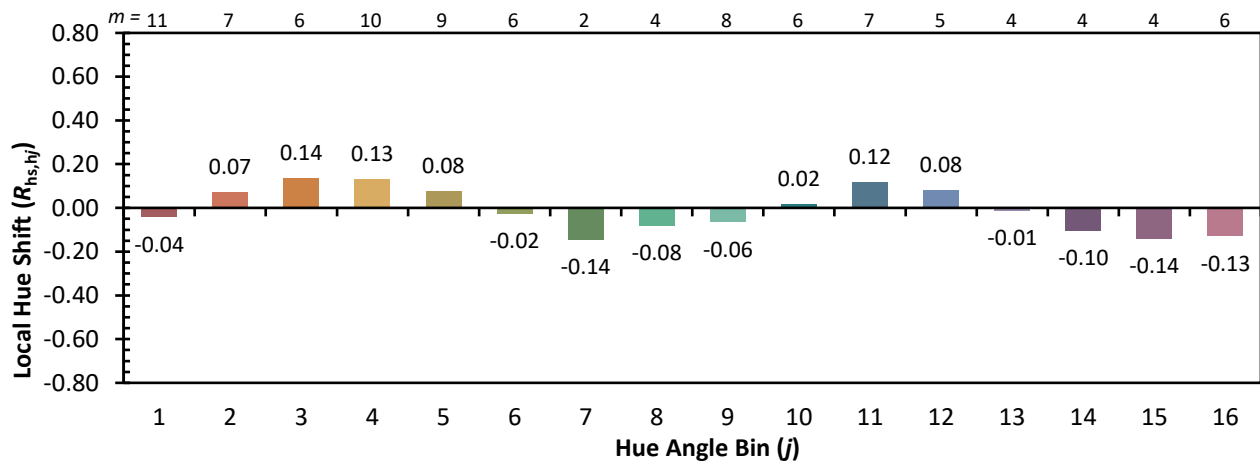
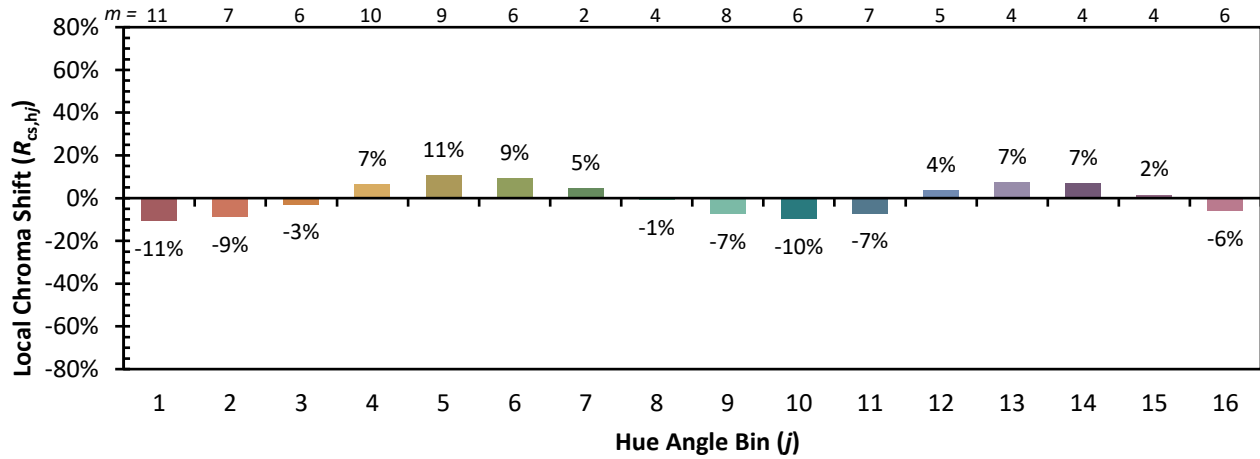


Individual Sample Fidelity Index ($R_{f,i}$)

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)