

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: LUMARK

Report Number: P1068101

Luminaire Tested: **NAV-SA5A-835-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068101
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5A-835-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 615mA 5xLight Square PACKAGE
80CRI 3500K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (70) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13434.1 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G3

Input Watts (W): 137.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

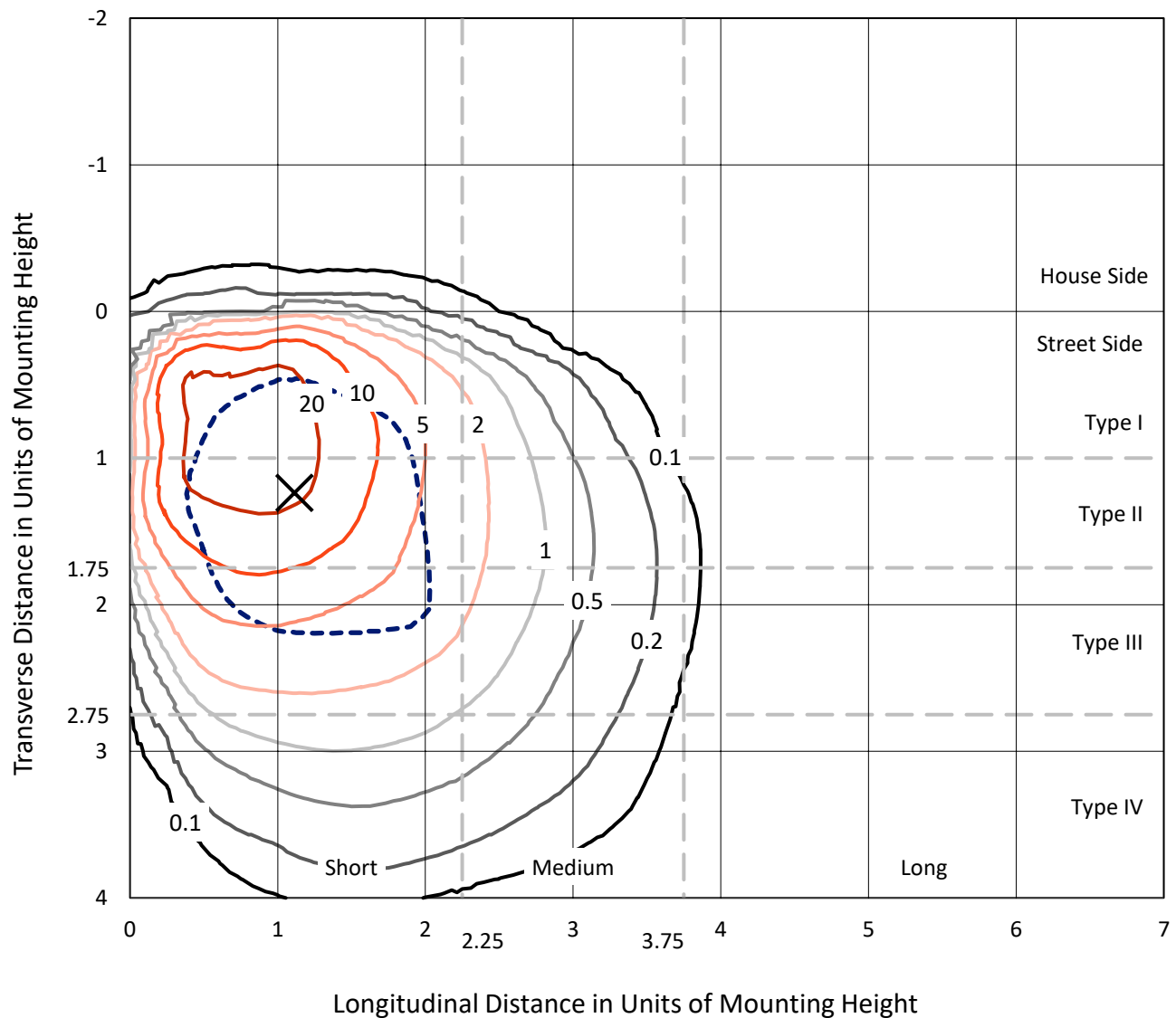


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

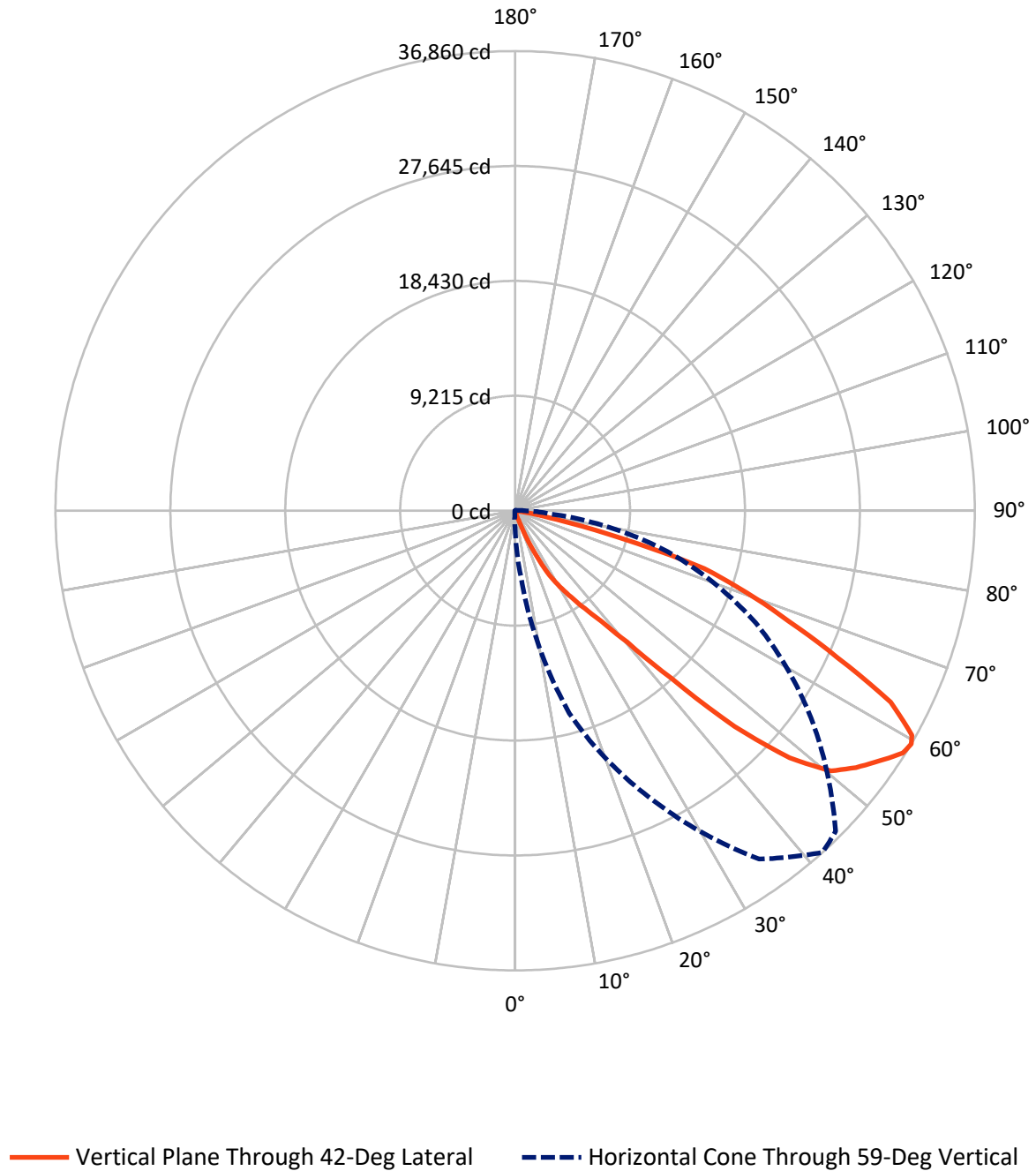


Based on 15 foot mounting height. Maximum calculated value = 39.9 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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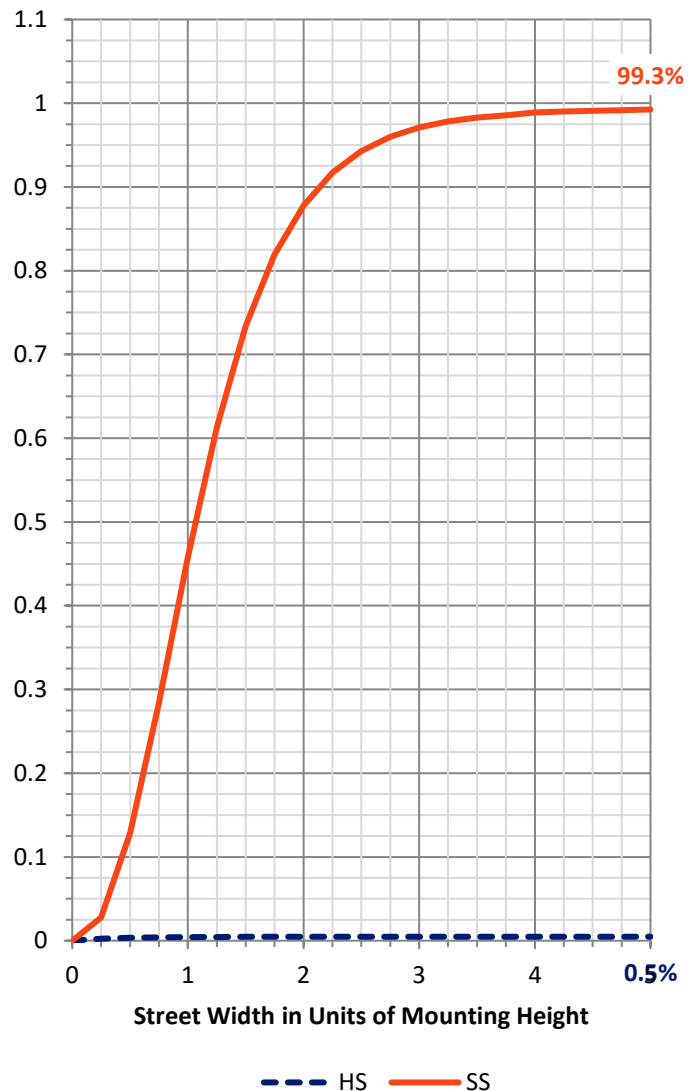
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	64.7	0.0	64.7
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	13369.3	0.0	13369.3
	% Fixture	99.5	0.0	99.5
Total	Lumens	13434.1	0.0	13434.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.9	0.0
10°-20°	19.6	0.1
20°-30°	250.6	1.9
30°-40°	844.8	6.3
40°-50°	2551.8	19.0
50°-60°	4504.5	33.5
60°-70°	3966.3	29.5
70°-80°	1262.5	9.4
80°-90°	30.2	0.2
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°	13434.1	100.0
0°-180°	13434.1	100.0



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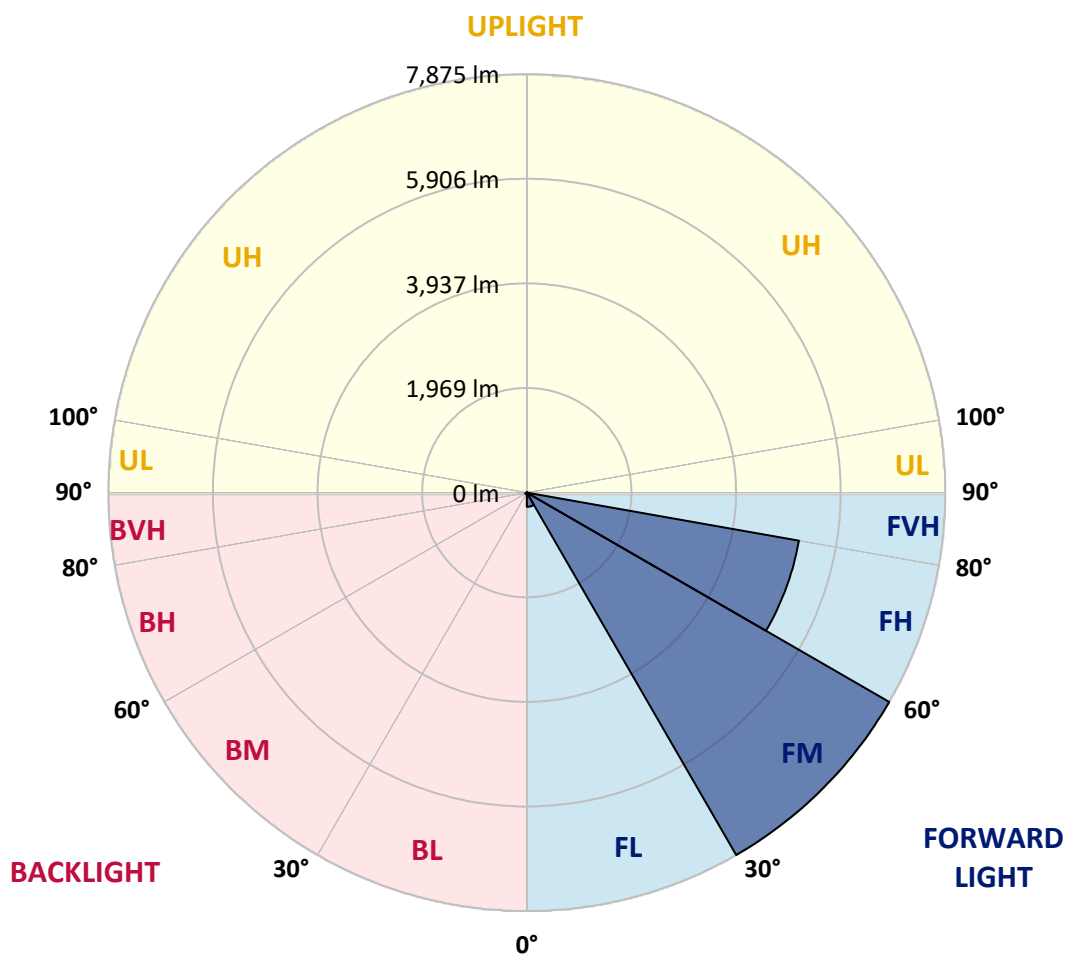
CATALOG NUMBER: NAV-SA5A-835-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	266.9	2.0			
FM	(30°-60°)	7874.6	58.6			
FH	(60°-80°)	5199.1	38.7			G3/7500
FVH	(80°-90°)	28.7	0.2			G1/100
BL	(0°-30°)	7.2	0.1	B0/110		
BM	(30°-60°)	26.4	0.2	B0/220		
BH	(60°-80°)	29.6	0.2	B0/110		G0/110
BVH	(80°-90°)	1.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	59.0	59.0	54.8	50.5	46.3	42.1	42.1	42.1	37.9	37.9	33.7
5°	67.4	67.4	63.2	59.0	59.0	54.8	54.8	50.5	46.3	46.3	42.1
7.5°	71.6	71.6	71.6	71.6	67.4	67.4	67.4	63.2	59.0	54.8	50.5
10°	75.8	80.0	84.2	84.2	84.2	84.2	84.2	80.0	71.6	67.4	59.0
12.5°	84.2	88.5	96.9	105.3	105.3	109.5	105.3	101.1	92.7	80.0	67.4
15°	92.7	101.1	113.7	130.6	147.4	151.6	151.6	139.0	122.1	96.9	80.0
17.5°	105.3	117.9	151.6	206.4	265.4	311.7	311.7	278.0	193.8	126.4	92.7
20°	113.7	139.0	244.3	497.0	758.2	951.9	914.0	808.7	433.8	198.0	101.1
22.5°	126.4	176.9	518.1	1305.7	2021.8	2375.6	2291.3	1739.6	973.0	353.8	122.1
25°	143.2	256.9	1027.7	2447.2	3757.1	4140.4	4085.7	3247.5	1773.3	593.9	155.8
27.5°	176.9	379.1	1646.9	3710.8	5543.0	5871.6	5850.5	4755.4	2834.7	956.1	202.2
30°	223.2	551.8	2443.0	5041.8	6726.6	7059.4	6954.1	5858.9	3824.5	1461.6	261.1
32.5°	278.0	770.8	3163.2	6023.2	7817.5	8255.6	8129.2	6819.3	4620.6	1891.2	387.5
35°	362.2	985.6	3875.1	6890.9	9076.9	9632.9	9422.3	7809.1	5307.2	2375.6	467.5
37.5°	404.4	1112.0	4527.9	7834.4	10492.2	11250.3	11090.3	9060.1	6006.4	2994.8	572.8
40°	408.6	1263.6	5206.1	9064.3	12492.9	13844.9	13558.5	11208.2	7307.9	3790.8	737.1
42.5°	421.2	1491.1	6086.4	11161.9	16422.7	18364.5	18040.1	15159.1	10260.5	5387.2	1044.6
45°	480.2	1920.7	7880.7	15083.3	21818.3	24665.7	24290.8	20664.2	14384.1	8390.4	1781.7
47.5°	686.6	2889.5	11027.1	19316.4	27336.1	29606.4	29513.7	25002.6	18120.2	11469.4	3020.0
50°	1103.6	4435.3	14607.3	22875.5	30848.9	32799.1	32567.4	26813.8	20251.4	13571.2	3870.9
52.5°	1474.2	5913.7	16856.5	24185.5	31897.7	34222.8	33940.5	27475.1	20811.6	14190.3	4106.7
55°	1566.9	6448.6	17526.3	24589.8	32592.7	35427.4	35018.8	27917.3	20883.3	13748.1	3715.0
57.5°	1520.5	5943.2	17092.4	24985.8	33561.5	36665.7	36122.4	28780.8	21123.3	12998.3	3091.6
59°	1440.5	5319.8	16822.9	25301.7	34096.4	36859.5	36349.8	28970.3	21283.4	12657.2	2712.5
60°	1347.8	4898.6	16612.3	25508.1	34062.7	36556.2	36029.7	28881.9	21346.6	12362.3	2531.4
62.5°	1040.4	3908.8	16309.0	25360.6	31935.6	33788.9	33489.9	26716.9	20419.9	11418.8	1996.5
65°	808.7	2990.5	15197.0	22618.6	27176.0	28422.8	28330.1	22622.8	17185.1	9843.5	1440.5
67.5°	640.2	2181.8	12850.9	18318.1	21864.7	23637.9	23570.5	18364.5	13044.7	7522.7	1036.2
70°	522.3	1554.2	8811.6	13811.2	17488.4	19720.7	19623.9	14780.0	9666.6	4772.2	754.0
72.5°	442.3	994.0	5345.1	10412.1	14594.7	15870.9	15588.7	11924.3	7029.9	2598.8	598.1
75°	374.9	610.7	2649.4	6490.7	8693.6	8685.2	8403.0	6313.8	3774.0	1272.0	476.0
77.5°	303.3	429.6	1040.4	1781.7	2742.0	3394.9	3340.1	2236.6	1128.8	370.7	294.8
80°	198.0	202.2	278.0	488.6	754.0	834.0	947.7	682.3	328.5	176.9	122.1
82.5°	88.5	96.9	126.4	160.1	160.1	147.4	130.6	96.9	71.6	59.0	29.5
85°	21.1	29.5	21.1	25.3	21.1	16.8	16.8	8.4	0.0	0.0	0.0
87.5°	4.2	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°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	33.7	33.7	33.7	29.5	29.5	29.5	25.3	25.3	25.3	21.1	21.1
5°	42.1	37.9	33.7	33.7	29.5	29.5	25.3	21.1	21.1	21.1	16.8
7.5°	46.3	42.1	37.9	33.7	29.5	25.3	25.3	21.1	16.8	16.8	16.8
10°	54.8	50.5	42.1	33.7	29.5	25.3	21.1	21.1	16.8	12.6	12.6
12.5°	63.2	54.8	46.3	37.9	29.5	25.3	21.1	21.1	16.8	12.6	8.4
15°	71.6	63.2	50.5	37.9	29.5	25.3	21.1	21.1	12.6	8.4	4.2
17.5°	80.0	67.4	50.5	42.1	29.5	25.3	21.1	16.8	8.4	4.2	0.0
20°	84.2	71.6	54.8	42.1	29.5	25.3	21.1	12.6	4.2	0.0	0.0
22.5°	92.7	80.0	59.0	42.1	29.5	21.1	12.6	4.2	0.0	0.0	0.0
25°	109.5	84.2	59.0	42.1	29.5	21.1	8.4	0.0	0.0	0.0	0.0
27.5°	122.1	92.7	59.0	42.1	29.5	16.8	4.2	0.0	0.0	0.0	0.0
30°	143.2	101.1	63.2	42.1	29.5	12.6	4.2	0.0	0.0	0.0	0.0
32.5°	176.9	109.5	63.2	42.1	25.3	12.6	0.0	0.0	0.0	0.0	0.0
35°	214.8	126.4	63.2	42.1	25.3	12.6	0.0	0.0	0.0	0.0	0.0
37.5°	219.0	134.8	63.2	42.1	25.3	8.4	0.0	0.0	0.0	0.0	0.0
40°	227.4	126.4	67.4	42.1	25.3	8.4	0.0	0.0	0.0	0.0	0.0
42.5°	261.1	117.9	71.6	42.1	25.3	8.4	0.0	0.0	0.0	0.0	0.0
45°	387.5	122.1	71.6	46.3	25.3	12.6	0.0	0.0	0.0	0.0	0.0
47.5°	673.9	126.4	67.4	46.3	25.3	12.6	0.0	0.0	0.0	0.0	0.0
50°	863.5	147.4	67.4	50.5	29.5	8.4	0.0	0.0	0.0	0.0	0.0
52.5°	918.2	172.7	67.4	54.8	37.9	4.2	0.0	0.0	0.0	0.0	0.0
55°	893.0	202.2	71.6	59.0	46.3	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	825.6	219.0	75.8	63.2	50.5	0.0	0.0	0.0	0.0	0.0	0.0
59°	754.0	231.7	88.5	67.4	50.5	0.0	0.0	0.0	0.0	0.0	0.0
60°	695.0	244.3	92.7	71.6	50.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	560.2	261.1	101.1	84.2	42.1	0.0	0.0	0.0	0.0	0.0	0.0
65°	488.6	273.8	105.3	92.7	37.9	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	446.5	282.2	113.7	96.9	33.7	0.0	0.0	0.0	0.0	0.0	0.0
70°	412.8	278.0	122.1	92.7	29.5	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	374.9	265.4	147.4	84.2	25.3	0.0	0.0	0.0	0.0	0.0	0.0
75°	337.0	240.1	160.1	75.8	16.8	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	244.3	202.2	147.4	67.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0
80°	105.3	109.5	105.3	50.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	21.1	25.3	21.1	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	21.1	21.1	21.1	21.1	25.3	25.3	33.7	42.1	50.5	54.8	54.8
5°	16.8	16.8	16.8	16.8	16.8	21.1	25.3	33.7	46.3	50.5	50.5
7.5°	12.6	12.6	12.6	12.6	12.6	12.6	21.1	29.5	42.1	46.3	50.5
10°	12.6	8.4	8.4	4.2	4.2	8.4	12.6	25.3	37.9	42.1	46.3
12.5°	8.4	4.2	4.2	0.0	0.0	4.2	8.4	21.1	33.7	37.9	42.1
15°	4.2	0.0	0.0	0.0	0.0	0.0	4.2	16.8	29.5	33.7	42.1
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	25.3	33.7	37.9
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	21.1	29.5	33.7
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	16.8	25.3	29.5
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	16.8	21.1
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	12.6	16.8
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	12.6	16.8
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4	12.6
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4	12.6
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4	8.4
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.2
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°	318°	325°	335°	345°	355°	360°
0°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
2.5°	59.0	59.0	54.8	50.5	50.5	50.5	54.8	59.0	59.0	59.0
5°	54.8	54.8	50.5	50.5	50.5	50.5	54.8	63.2	67.4	67.4
7.5°	54.8	54.8	50.5	50.5	50.5	50.5	54.8	63.2	67.4	71.6
10°	50.5	50.5	50.5	50.5	46.3	50.5	54.8	63.2	75.8	75.8
12.5°	50.5	50.5	50.5	50.5	46.3	50.5	59.0	67.4	80.0	84.2
15°	50.5	50.5	50.5	46.3	46.3	50.5	59.0	71.6	84.2	92.7
17.5°	46.3	50.5	50.5	46.3	46.3	50.5	59.0	71.6	92.7	105.3
20°	42.1	46.3	50.5	46.3	46.3	46.3	59.0	71.6	96.9	113.7
22.5°	37.9	42.1	46.3	46.3	42.1	46.3	59.0	75.8	105.3	126.4
25°	33.7	37.9	37.9	42.1	42.1	46.3	59.0	75.8	109.5	143.2
27.5°	25.3	29.5	33.7	37.9	37.9	46.3	59.0	80.0	117.9	176.9
30°	21.1	25.3	29.5	33.7	37.9	46.3	59.0	80.0	126.4	223.2
32.5°	21.1	25.3	29.5	33.7	37.9	42.1	59.0	84.2	139.0	278.0
35°	16.8	21.1	25.3	33.7	33.7	42.1	59.0	84.2	151.6	362.2
37.5°	16.8	21.1	25.3	33.7	33.7	42.1	59.0	84.2	185.3	404.4
40°	12.6	16.8	21.1	33.7	33.7	42.1	63.2	88.5	189.5	408.6
42.5°	12.6	16.8	21.1	29.5	33.7	42.1	63.2	88.5	176.9	421.2
45°	12.6	16.8	21.1	33.7	37.9	46.3	63.2	92.7	172.7	480.2
47.5°	12.6	16.8	21.1	33.7	42.1	46.3	63.2	92.7	176.9	686.6
50°	12.6	16.8	21.1	33.7	46.3	46.3	63.2	92.7	193.8	1103.6
52.5°	8.4	12.6	16.8	29.5	37.9	50.5	67.4	88.5	206.4	1474.2
55°	8.4	8.4	12.6	25.3	33.7	54.8	71.6	88.5	240.1	1566.9
57.5°	8.4	8.4	12.6	21.1	29.5	59.0	75.8	88.5	278.0	1520.5
59°	8.4	8.4	8.4	21.1	25.3	59.0	75.8	92.7	282.2	1440.5
60°	8.4	8.4	8.4	16.8	25.3	59.0	80.0	96.9	286.4	1347.8
62.5°	4.2	4.2	4.2	16.8	21.1	59.0	88.5	117.9	294.8	1040.4
65°	8.4	8.4	4.2	12.6	21.1	50.5	101.1	126.4	299.1	808.7
67.5°	8.4	8.4	8.4	16.8	21.1	50.5	105.3	130.6	299.1	640.2
70°	8.4	8.4	8.4	16.8	25.3	50.5	105.3	134.8	294.8	522.3
72.5°	8.4	8.4	8.4	16.8	25.3	46.3	96.9	139.0	282.2	442.3
75°	8.4	8.4	8.4	12.6	21.1	42.1	92.7	151.6	256.9	374.9
77.5°	8.4	8.4	8.4	8.4	16.8	33.7	84.2	168.5	227.4	303.3
80°	12.6	8.4	8.4	8.4	12.6	29.5	80.0	164.3	189.5	198.0
82.5°	12.6	8.4	8.4	4.2	8.4	21.1	63.2	126.4	96.9	88.5
85°	8.4	8.4	8.4	4.2	4.2	12.6	29.5	37.9	29.5	21.1
87.5°	8.4	8.4	8.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-10

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-835-U-5WQ

Data in this report applies to families of products including GSS-SB1A-835-U-5WQ

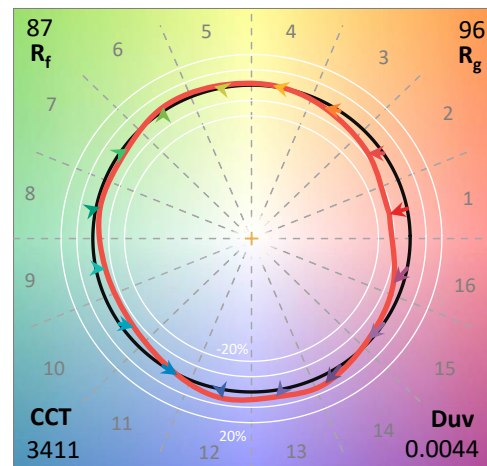
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-10
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGraw-Edison
 Catalog Number: **GSS-SB1A-835-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3500K CCT 26 LEDS

Spectral Parameters

CCT (K): 3411
 CIE u' : 0.2360
 CIE v' : 0.5189
 Duv: 0.0044
 CIE x: 0.4154
 CIE y: 0.4059
 CIE z: 0.1787
 Peak Wavelength (nm): 601
 Dominant Wavelength (nm): 579
 Purity: 46.51914
 R_f: 86.6
 R_g: 95.9

CRI (Ra): 83.5
 R1: 81.1
 R2: 88.9
 R3: 97.2
 R4: 83.8
 R5: 81.7
 R6: 86.9
 R7: 86.1
 R8: 62.2
 R9: 6.3
 R10: 75.4
 R11: 84.1
 R12: 69.7
 R13: 82.8
 R14: 98.5
 R15: 72.6



Test Conditions

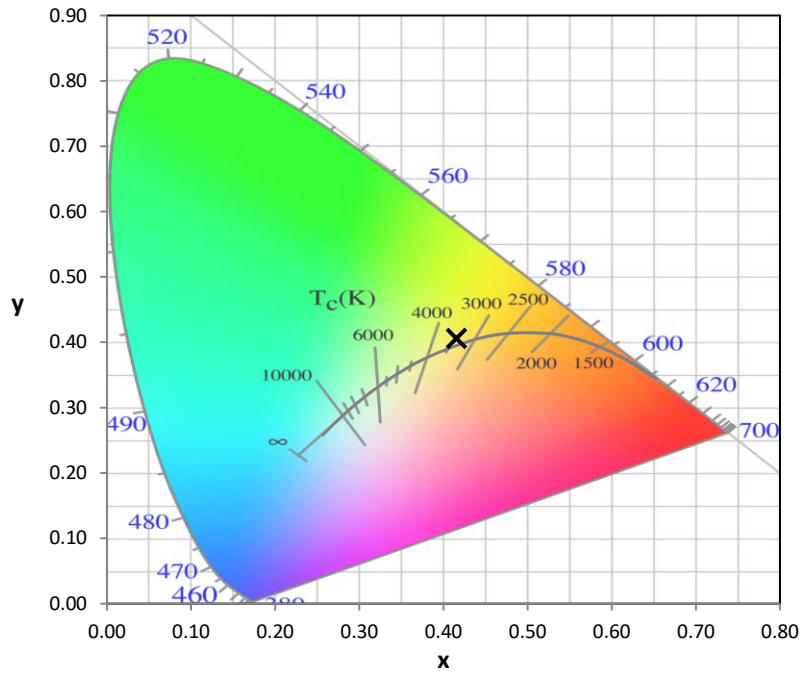
Stabilization Time: 35M
 Operation Time: 1H 35M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-10

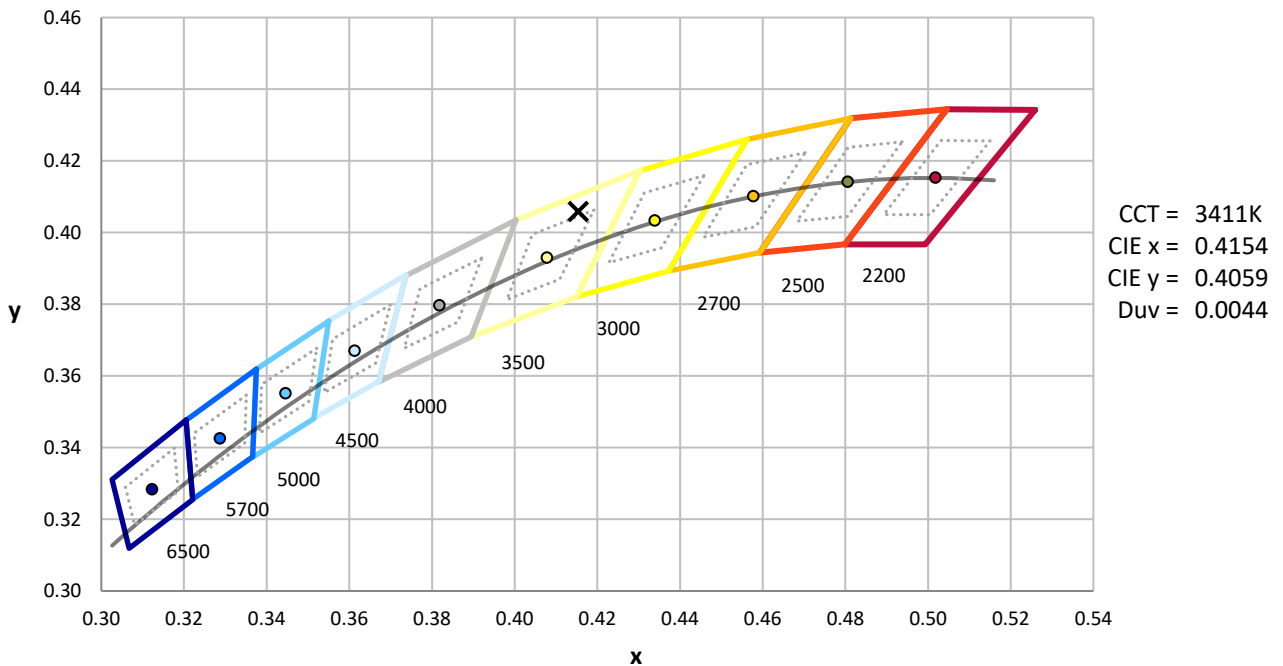
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



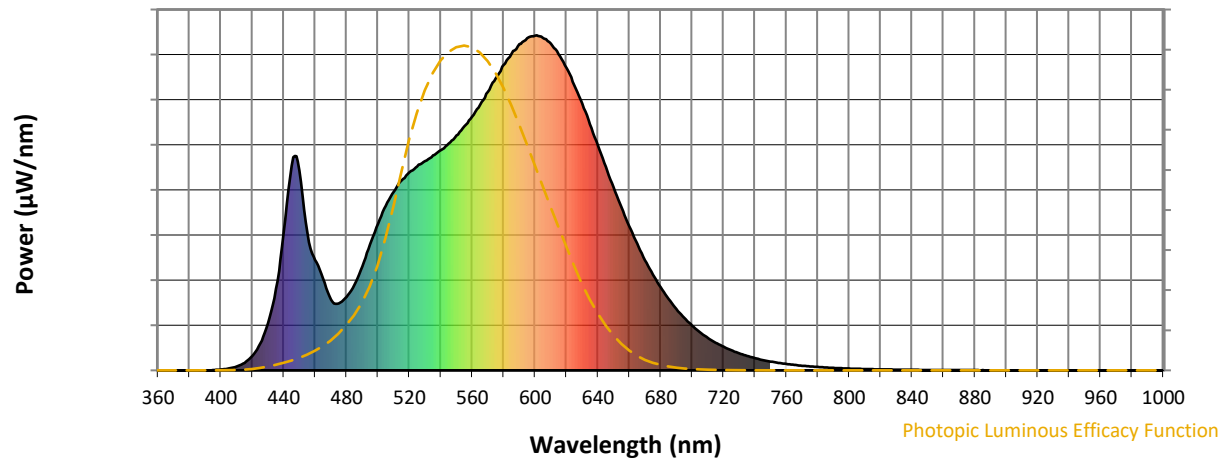
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-10

Photopic Flux vs. Wavelength

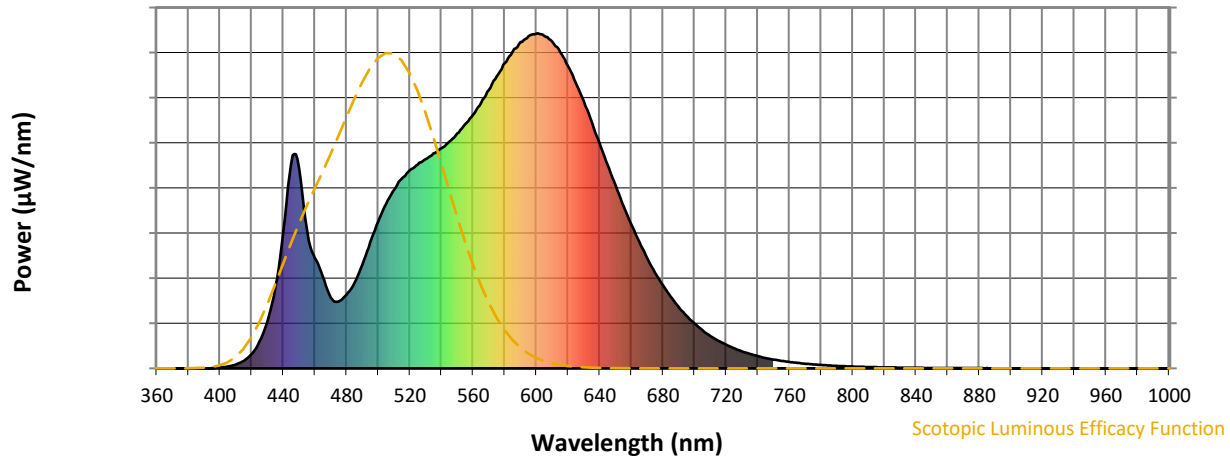


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	311	NR	620	903	NR	750	26	NR	880	1	NR
365	0	NR	495	376	NR	625	851	NR	755	22	NR	885	1	NR
370	0	NR	500	438	NR	630	797	NR	760	19	NR	890	0	NR
375	0	NR	505	491	NR	635	735	NR	765	16	NR	895	0	NR
380	0	NR	510	533	NR	640	672	NR	770	14	NR	900	0	NR
385	0	NR	515	566	NR	645	607	NR	775	12	NR	905	0	NR
390	0	NR	520	592	NR	650	546	NR	780	10	NR	910	0	NR
395	1	NR	525	608	NR	655	487	NR	785	9	NR	915	0	NR
400	3	NR	530	625	NR	660	429	NR	790	7	NR	920	0	NR
405	6	NR	535	642	NR	665	378	NR	795	6	NR	925	0	NR
410	12	NR	540	657	NR	670	329	NR	800	5	NR	930	0	NR
415	22	NR	545	677	NR	675	286	NR	805	5	NR	935	0	NR
420	43	NR	550	701	NR	680	248	NR	810	4	NR	940	0	NR
425	80	NR	555	728	NR	685	213	NR	815	3	NR	945	0	NR
430	140	NR	560	757	NR	690	184	NR	820	3	NR	950	0	NR
435	243	NR	565	793	NR	695	156	NR	825	3	NR	955	0	NR
440	412	NR	570	831	NR	700	134	NR	830	2	NR	960	0	NR
445	610	NR	575	872	NR	705	114	NR	835	2	NR	965	0	NR
450	597	NR	580	911	NR	710	97	NR	840	2	NR	970	0	NR
455	412	NR	585	944	NR	715	83	NR	845	1	NR	975	0	NR
460	330	NR	590	974	NR	720	70	NR	850	1	NR	980	0	NR
465	274	NR	595	992	NR	725	60	NR	855	1	NR	985	0	NR
470	211	NR	600	999	NR	730	51	NR	860	1	NR	990	0	NR
475	200	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	220	NR	610	975	NR	740	36	NR	870	1	NR	1000	0	NR
485	255	NR	615	944	NR	745	31	NR	875	1	NR			

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Scotopic Flux vs. Wavelength

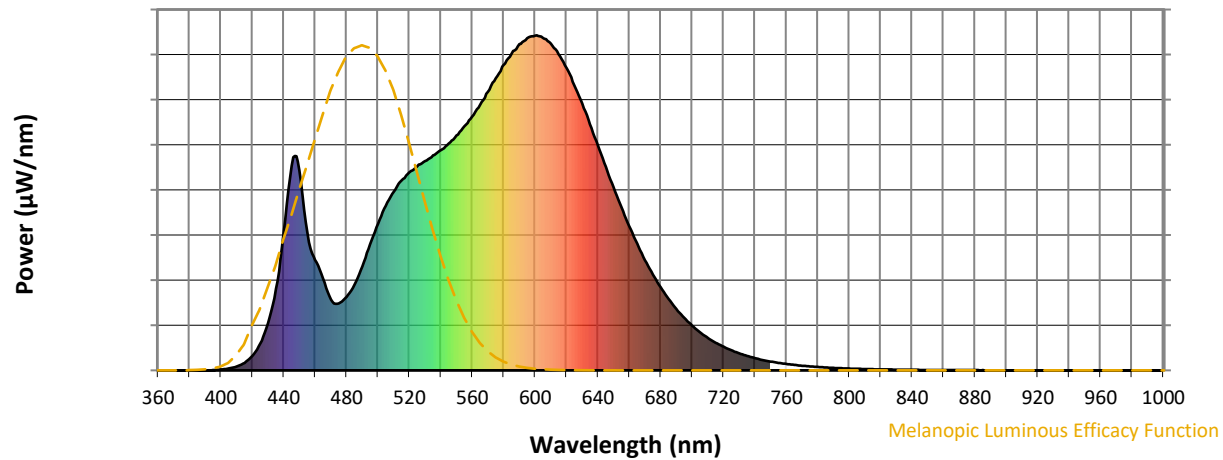


Scotopic Lumens: NR

S/P: 1.48

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	311	NR	620	903	NR	750	26	NR	880	1	NR
365	0	NR	495	376	NR	625	851	NR	755	22	NR	885	1	NR
370	0	NR	500	438	NR	630	797	NR	760	19	NR	890	0	NR
375	0	NR	505	491	NR	635	735	NR	765	16	NR	895	0	NR
380	0	NR	510	533	NR	640	672	NR	770	14	NR	900	0	NR
385	0	NR	515	566	NR	645	607	NR	775	12	NR	905	0	NR
390	0	NR	520	592	NR	650	546	NR	780	10	NR	910	0	NR
395	1	NR	525	608	NR	655	487	NR	785	9	NR	915	0	NR
400	3	NR	530	625	NR	660	429	NR	790	7	NR	920	0	NR
405	6	NR	535	642	NR	665	378	NR	795	6	NR	925	0	NR
410	12	NR	540	657	NR	670	329	NR	800	5	NR	930	0	NR
415	22	NR	545	677	NR	675	286	NR	805	5	NR	935	0	NR
420	43	NR	550	701	NR	680	248	NR	810	4	NR	940	0	NR
425	80	NR	555	728	NR	685	213	NR	815	3	NR	945	0	NR
430	140	NR	560	757	NR	690	184	NR	820	3	NR	950	0	NR
435	243	NR	565	793	NR	695	156	NR	825	3	NR	955	0	NR
440	412	NR	570	831	NR	700	134	NR	830	2	NR	960	0	NR
445	610	NR	575	872	NR	705	114	NR	835	2	NR	965	0	NR
450	597	NR	580	911	NR	710	97	NR	840	2	NR	970	0	NR
455	412	NR	585	944	NR	715	83	NR	845	1	NR	975	0	NR
460	330	NR	590	974	NR	720	70	NR	850	1	NR	980	0	NR
465	274	NR	595	992	NR	725	60	NR	855	1	NR	985	0	NR
470	211	NR	600	999	NR	730	51	NR	860	1	NR	990	0	NR
475	200	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	220	NR	610	975	NR	740	36	NR	870	1	NR	1000	0	NR
485	255	NR	615	944	NR	745	31	NR	875	1	NR			

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Melanopic Flux vs. Wavelength

Melanopic Lumens: NR
M/P: 2.88

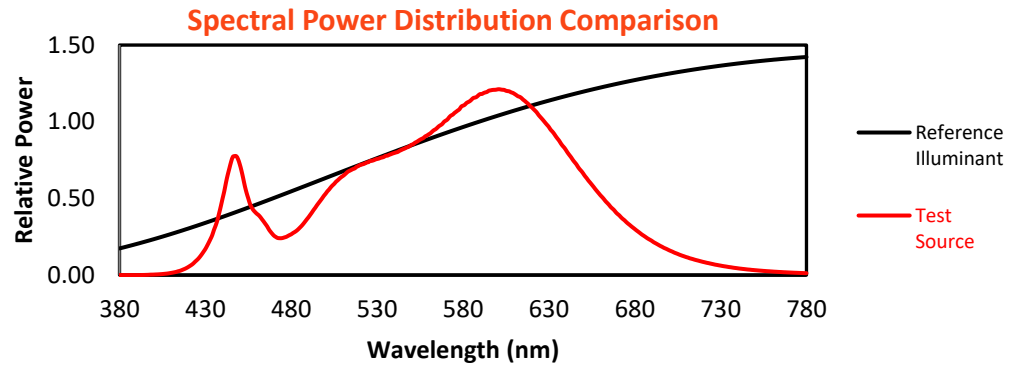
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	311	NR	620	903	NR	750	26	NR	880	1	NR
365	0	NR	495	376	NR	625	851	NR	755	22	NR	885	1	NR
370	0	NR	500	438	NR	630	797	NR	760	19	NR	890	0	NR
375	0	NR	505	491	NR	635	735	NR	765	16	NR	895	0	NR
380	0	NR	510	533	NR	640	672	NR	770	14	NR	900	0	NR
385	0	NR	515	566	NR	645	607	NR	775	12	NR	905	0	NR
390	0	NR	520	592	NR	650	546	NR	780	10	NR	910	0	NR
395	1	NR	525	608	NR	655	487	NR	785	9	NR	915	0	NR
400	3	NR	530	625	NR	660	429	NR	790	7	NR	920	0	NR
405	6	NR	535	642	NR	665	378	NR	795	6	NR	925	0	NR
410	12	NR	540	657	NR	670	329	NR	800	5	NR	930	0	NR
415	22	NR	545	677	NR	675	286	NR	805	5	NR	935	0	NR
420	43	NR	550	701	NR	680	248	NR	810	4	NR	940	0	NR
425	80	NR	555	728	NR	685	213	NR	815	3	NR	945	0	NR
430	140	NR	560	757	NR	690	184	NR	820	3	NR	950	0	NR
435	243	NR	565	793	NR	695	156	NR	825	3	NR	955	0	NR
440	412	NR	570	831	NR	700	134	NR	830	2	NR	960	0	NR
445	610	NR	575	872	NR	705	114	NR	835	2	NR	965	0	NR
450	597	NR	580	911	NR	710	97	NR	840	2	NR	970	0	NR
455	412	NR	585	944	NR	715	83	NR	845	1	NR	975	0	NR
460	330	NR	590	974	NR	720	70	NR	850	1	NR	980	0	NR
465	274	NR	595	992	NR	725	60	NR	855	1	NR	985	0	NR
470	211	NR	600	999	NR	730	51	NR	860	1	NR	990	0	NR
475	200	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	220	NR	610	975	NR	740	36	NR	870	1	NR	1000	0	NR
485	255	NR	615	944	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-184-10

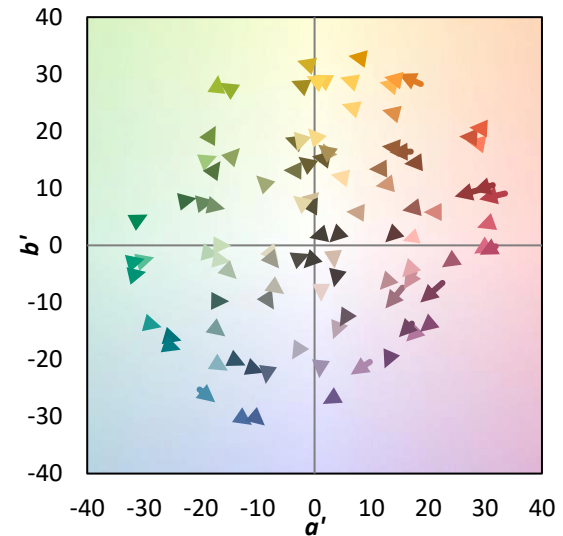
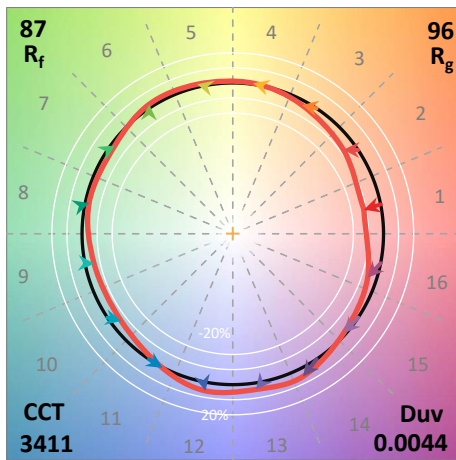
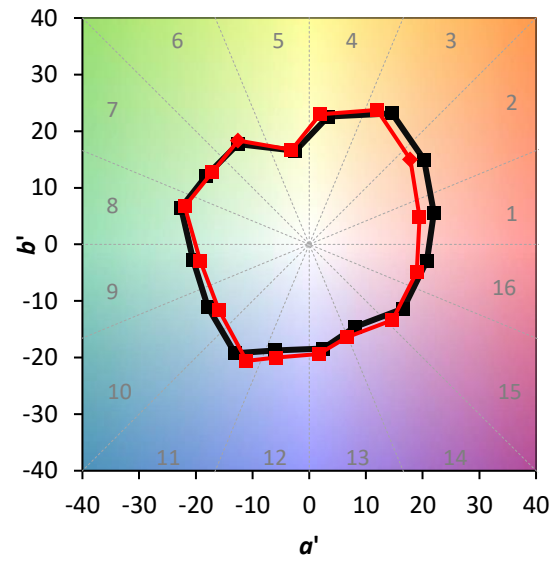
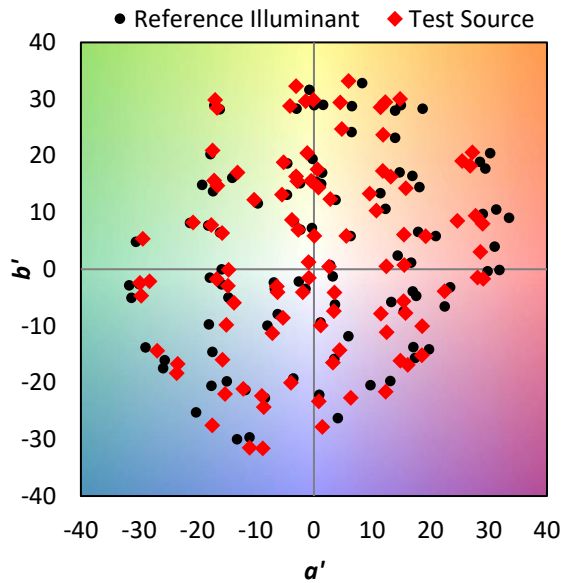
TM-30-18

Summary

$R_f = 86.6$
 $R_g = 95.9$
 $CIE R_a = 83.5$
 $R_9 = 6.3$

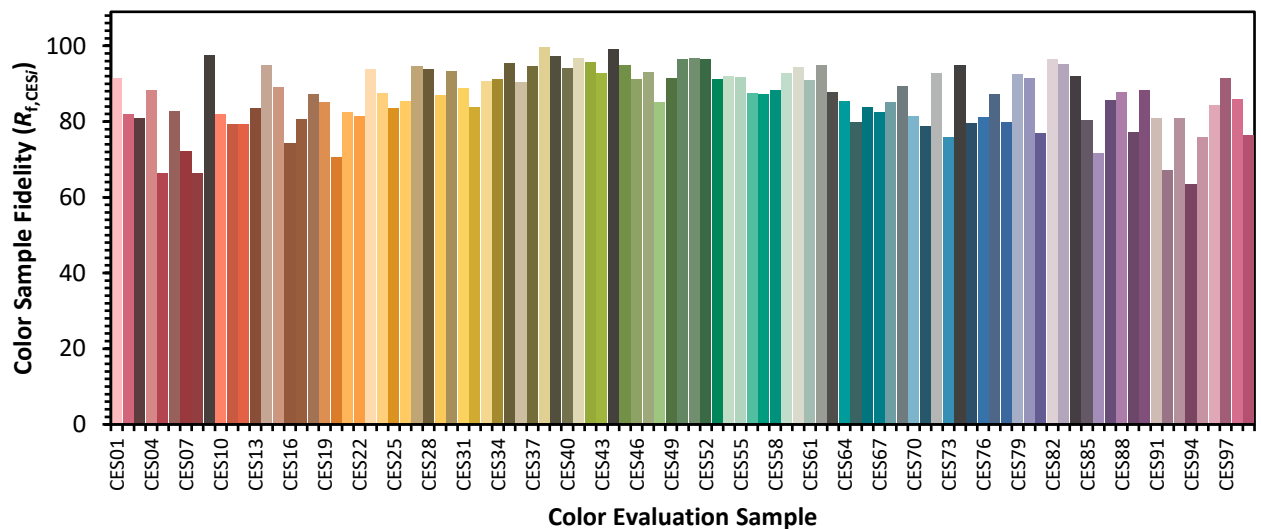


Color Vector Graphics

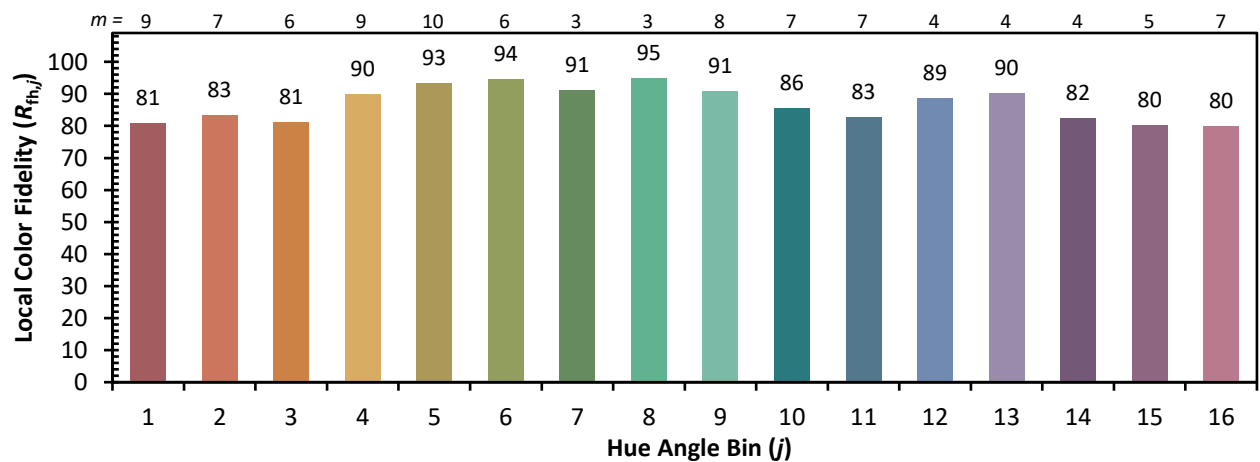
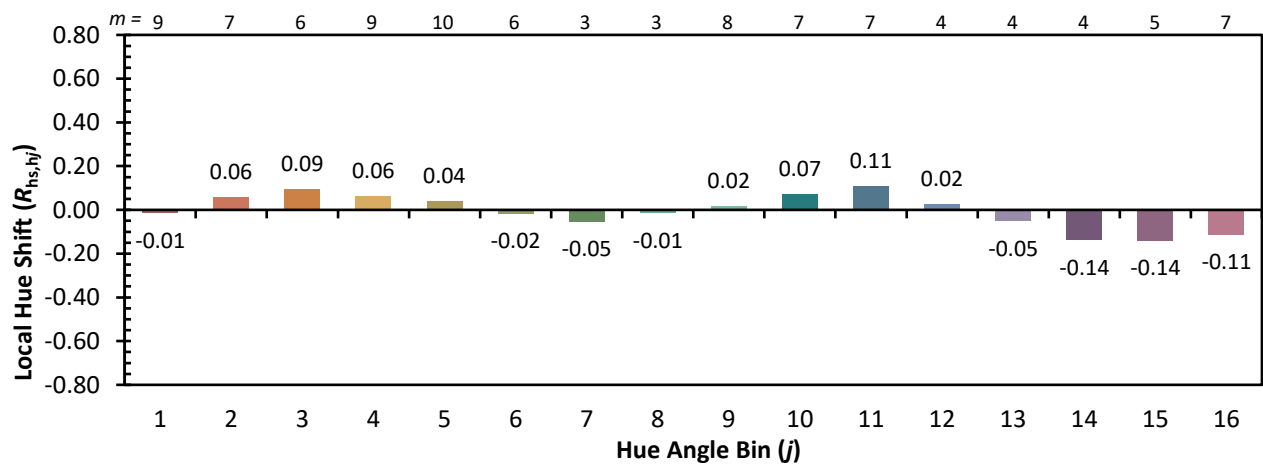
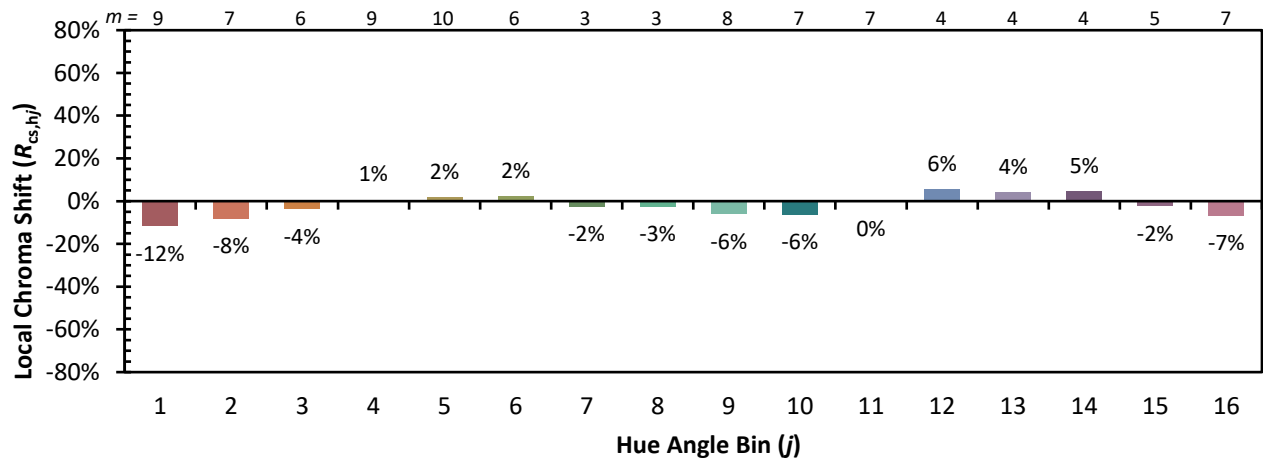


Individual Sample Fidelity Index ($R_{f,i}$)

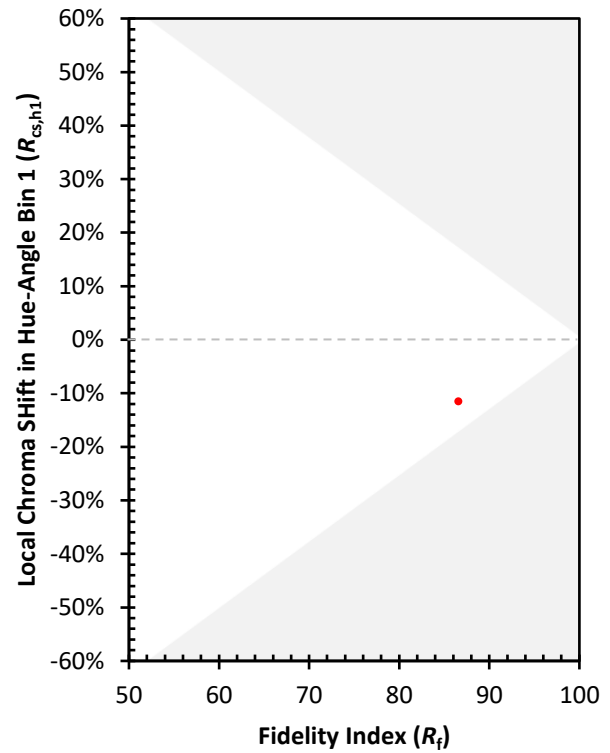
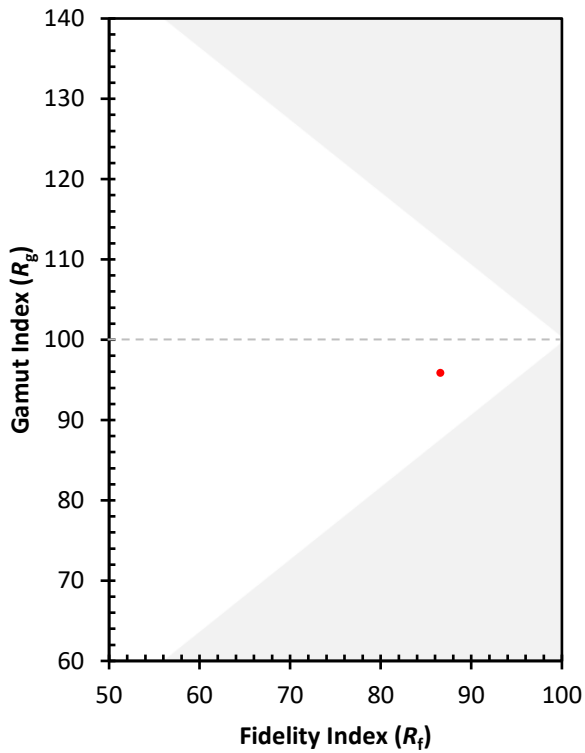
CES01 = 86	CES26 = 85	CES51 = 97	CES76 = 81
CES02 = 62	CES27 = 95	CES52 = 96	CES77 = 87
CES03 = 31	CES28 = 94	CES53 = 91	CES78 = 80
CES04 = 70	CES29 = 87	CES54 = 92	CES79 = 93
CES05 = 49	CES30 = 93	CES55 = 92	CES80 = 91
CES06 = 51	CES31 = 89	CES56 = 88	CES81 = 77
CES07 = 41	CES32 = 84	CES57 = 87	CES82 = 96
CES08 = 40	CES33 = 91	CES58 = 88	CES83 = 95
CES09 = 29	CES34 = 91	CES59 = 93	CES84 = 92
CES10 = 75	CES35 = 95	CES60 = 94	CES85 = 80
CES11 = 58	CES36 = 90	CES61 = 91	CES86 = 72
CES12 = 64	CES37 = 95	CES62 = 95	CES87 = 86
CES13 = 43	CES38 = 100	CES63 = 88	CES88 = 88
CES14 = 74	CES39 = 97	CES64 = 85	CES89 = 77
CES15 = 71	CES40 = 94	CES65 = 80	CES90 = 88
CES16 = 47	CES41 = 97	CES66 = 84	CES91 = 81
CES17 = 49	CES42 = 96	CES67 = 82	CES92 = 67
CES18 = 56	CES43 = 93	CES68 = 85	CES93 = 81
CES19 = 72	CES44 = 99	CES69 = 89	CES94 = 63
CES20 = 66	CES45 = 95	CES70 = 81	CES95 = 76
CES21 = 86	CES46 = 91	CES71 = 79	CES96 = 84
CES22 = 78	CES47 = 93	CES72 = 93	CES97 = 92
CES23 = 91	CES48 = 85	CES73 = 76	CES98 = 86
CES24 = 90	CES49 = 92	CES74 = 95	CES99 = 77
CES25 = 72	CES50 = 96	CES75 = 80	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)