

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: P1067907

Luminaire Tested: **NAV-SA4C-722-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067907
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4C-722-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1050mA 4xLight Square PACKAGE
70CRI 2200K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (56) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13949 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G3

Input Watts (W): 190.4
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



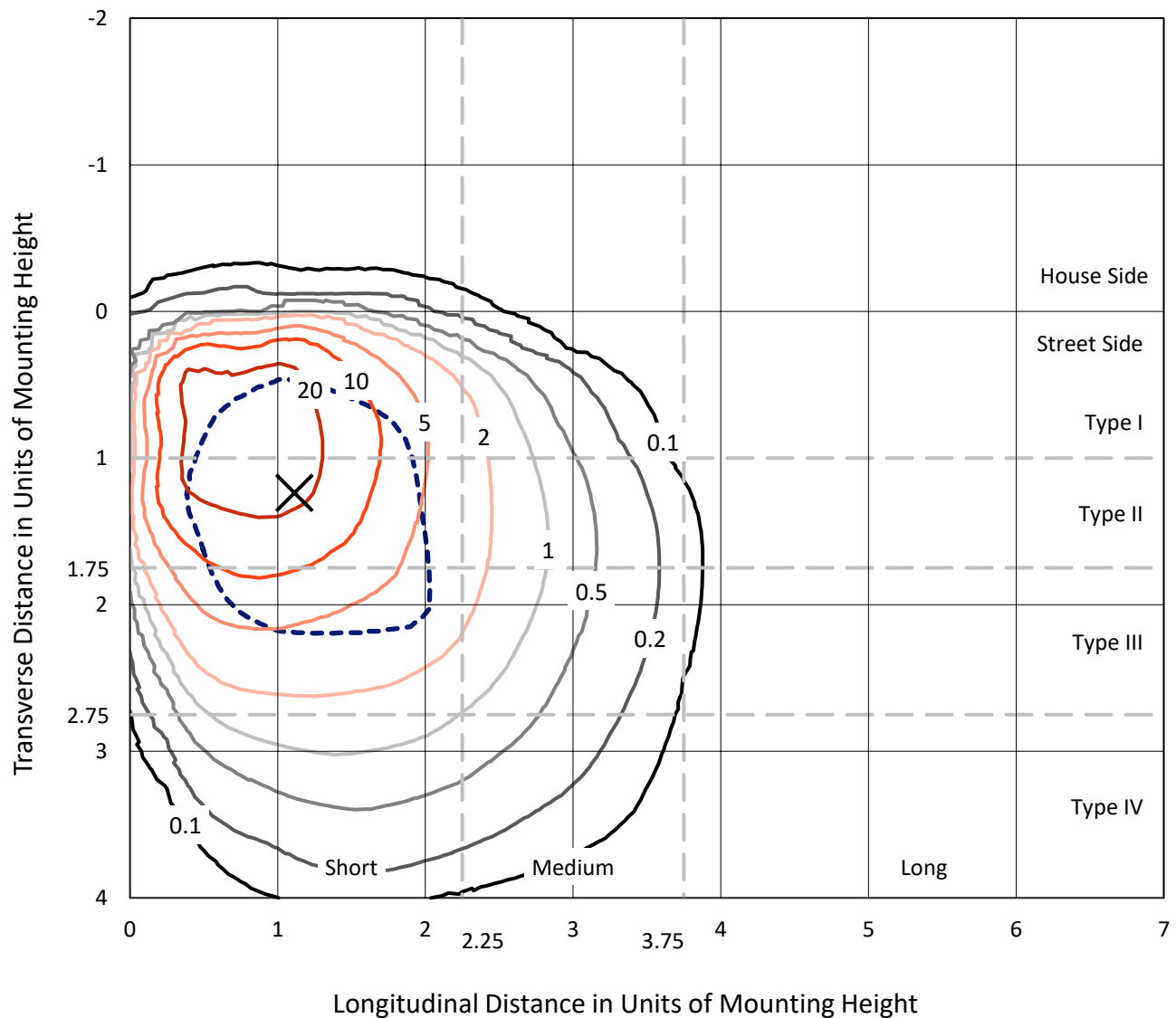
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

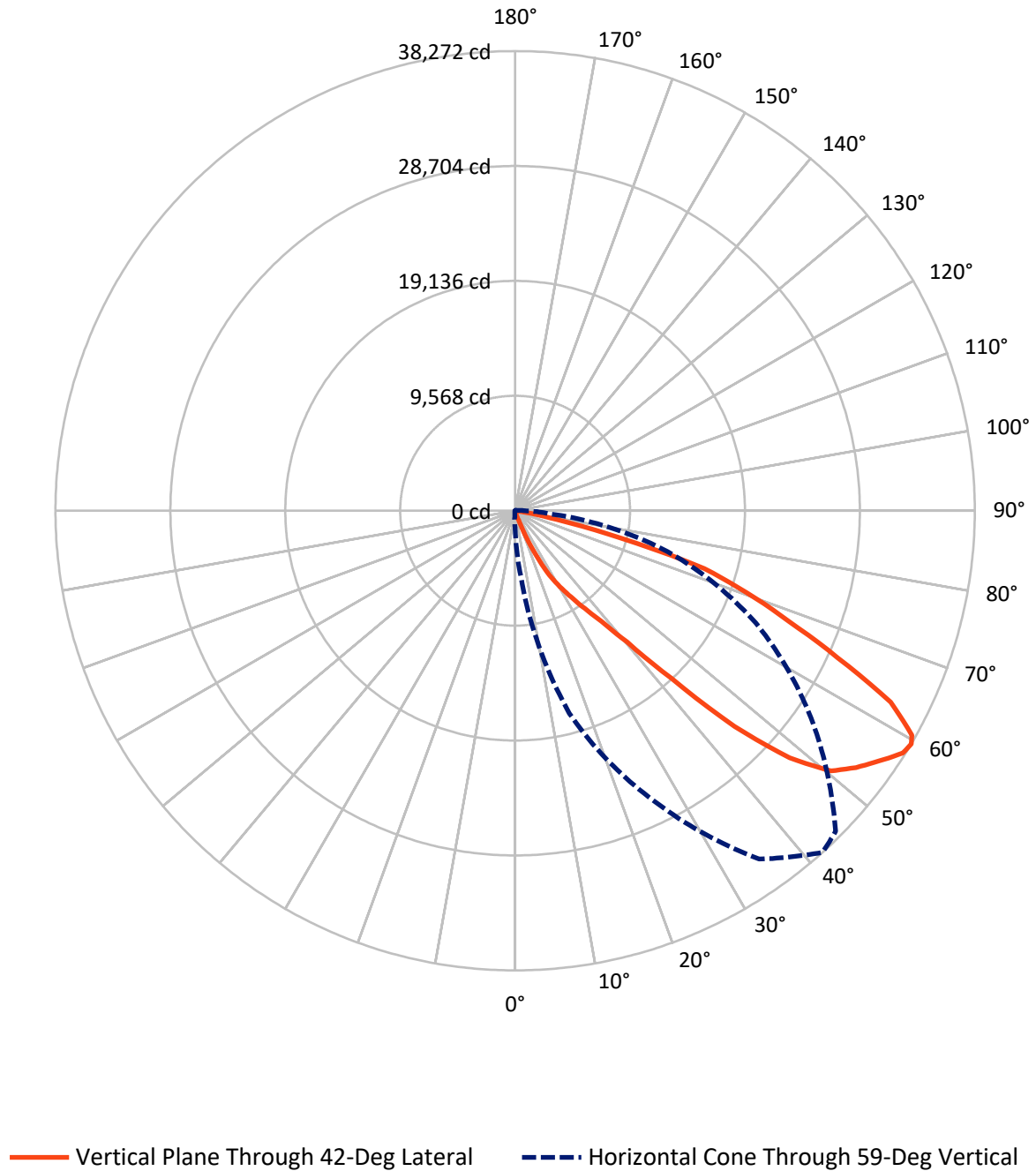


Based on 15 foot mounting height. Maximum calculated value = 41.4 fc
Type III - Short - N/A

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Luminous Intensity Polar Plot



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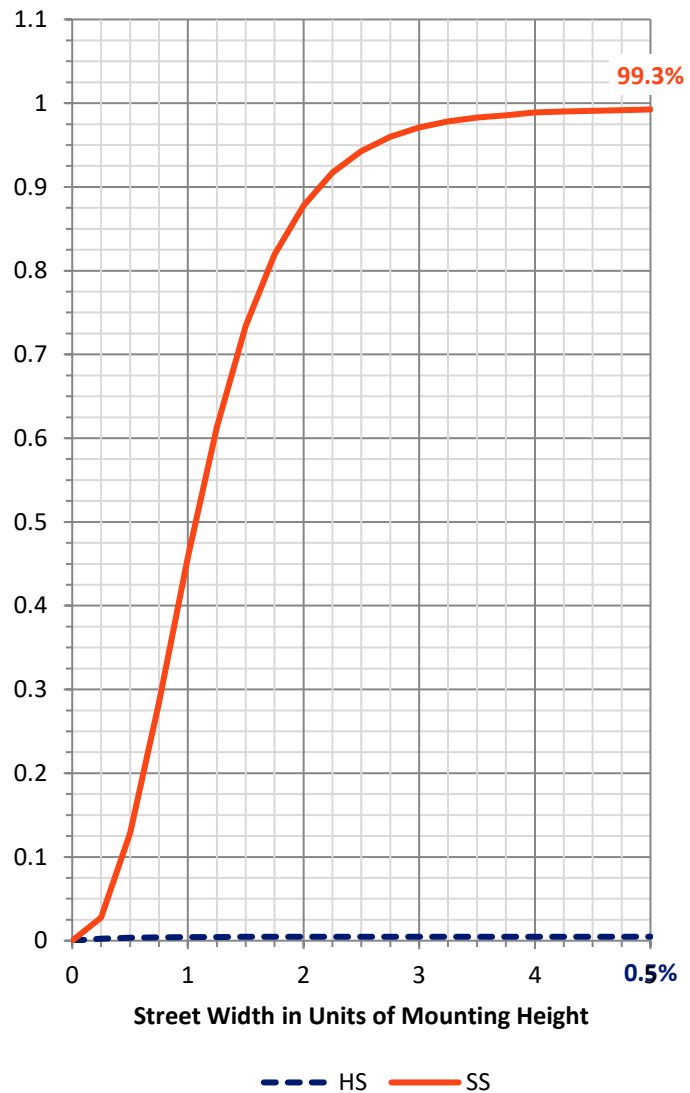
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	67.2	0.0	67.2
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	13881.8	0.0	13881.8
	% Fixture	99.5	0.0	99.5
Total	Lumens	13949.0	0.0	13949.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.1	0.0
10°-20°	20.3	0.1
20°-30°	260.2	1.9
30°-40°	877.2	6.3
40°-50°	2649.6	19.0
50°-60°	4677.1	33.5
60°-70°	4118.3	29.5
70°-80°	1310.8	9.4
80°-90°	31.4	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°	13949.0	100.0
0°-180°	13949.0	100.0



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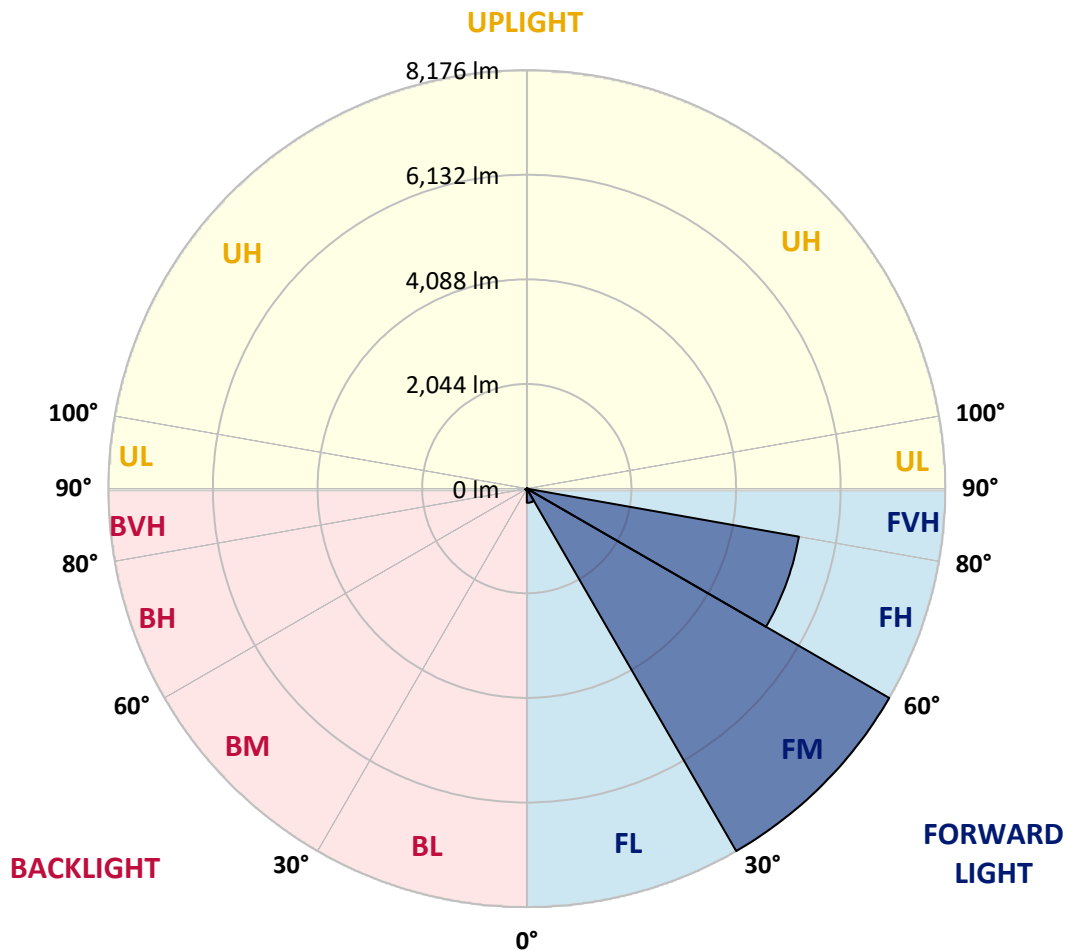
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	277.1	2.0			
FM	(30°-60°)	8176.4	58.6			
FH	(60°-80°)	5398.4	38.7			G3/7500
FVH	(80°-90°)	29.8	0.2			G1/100
BL	(0°-30°)	7.5	0.1	B0/110		
BM	(30°-60°)	27.5	0.2	B0/220		
BH	(60°-80°)	30.7	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°	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
2.5°	61.2	61.2	56.9	52.5	48.1	43.7	43.7	43.7	39.4	39.4	35.0
5°	70.0	70.0	65.6	61.2	61.2	56.9	56.9	52.5	48.1	48.1	43.7
7.5°	74.3	74.3	74.3	74.3	70.0	70.0	70.0	65.6	61.2	56.9	52.5
10°	78.7	83.1	87.5	87.5	87.5	87.5	87.5	83.1	74.3	70.0	61.2
12.5°	87.5	91.8	100.6	109.3	109.3	113.7	109.3	105.0	96.2	83.1	70.0
15°	96.2	105.0	118.1	135.6	153.1	157.4	157.4	144.3	126.8	100.6	83.1
17.5°	109.3	122.5	157.4	214.3	275.5	323.6	323.6	288.6	201.2	131.2	96.2
20°	118.1	144.3	253.7	516.1	787.2	988.4	949.0	839.7	450.5	205.6	105.0
22.5°	131.2	183.7	537.9	1355.8	2099.3	2466.6	2379.2	1806.2	1010.3	367.4	126.8
25°	148.7	266.8	1067.1	2541.0	3901.1	4299.1	4242.3	3371.9	1841.2	616.7	161.8
27.5°	183.7	393.6	1710.0	3853.0	5755.5	6096.6	6074.8	4937.7	2943.3	992.8	209.9
30°	231.8	572.9	2536.6	5235.0	6984.4	7329.9	7220.6	6083.5	3971.1	1517.6	271.2
32.5°	288.6	800.3	3284.5	6254.1	8117.2	8572.0	8440.8	7080.7	4797.7	1963.7	402.4
35°	376.1	1023.4	4023.6	7155.0	9424.8	10002.1	9783.5	8108.4	5510.6	2466.6	485.5
37.5°	419.9	1154.6	4701.5	8134.7	10894.3	11681.5	11515.4	9407.3	6236.6	3109.5	594.8
40°	424.2	1312.0	5405.6	9411.7	12971.7	14375.6	14078.2	11637.8	7588.0	3936.1	765.4
42.5°	437.3	1548.2	6319.7	11589.7	17052.2	19068.3	18731.6	15740.1	10653.8	5593.7	1084.6
45°	498.6	1994.3	8182.8	15661.4	22654.6	25611.1	25221.8	21456.3	14935.4	8712.0	1850.0
47.5°	712.9	3000.2	11449.8	20056.7	28383.8	30741.1	30644.9	25960.9	18814.7	11909.0	3135.8
50°	1145.8	4605.3	15167.2	23752.3	32031.3	34056.2	33815.7	27841.5	21027.7	14091.3	4019.2
52.5°	1530.7	6140.4	17502.6	25112.5	33120.3	35534.5	35241.4	28528.2	21609.3	14734.2	4264.1
55°	1626.9	6695.8	18198.0	25532.3	33841.9	36785.3	36361.0	28987.4	21683.7	14275.0	3857.4
57.5°	1578.8	6171.0	17747.6	25943.4	34847.8	38071.1	37506.9	29883.9	21933.0	13496.5	3210.1
59°	1495.7	5523.7	17467.6	26271.4	35403.3	38272.3	37743.1	30080.7	22099.2	13142.3	2816.5
60°	1399.5	5086.3	17249.0	26485.7	35368.3	37957.4	37410.7	29988.9	22164.8	12836.1	2628.5
62.5°	1080.2	4058.6	16934.1	26332.7	33159.7	35084.0	34773.5	27740.9	21202.6	11856.5	2073.0
65°	839.7	3105.2	15779.5	23485.5	28217.6	29512.2	29416.0	23489.9	17843.8	10220.8	1495.7
67.5°	664.8	2265.5	13343.5	19020.2	22702.7	24543.9	24474.0	19068.3	13544.6	7811.0	1075.9
70°	542.3	1613.8	9149.3	14340.6	18158.7	20476.6	20376.0	15346.5	10037.1	4955.1	782.9
72.5°	459.2	1032.1	5549.9	10811.2	15154.1	16479.2	16186.2	12381.3	7299.3	2698.4	621.0
75°	389.2	634.2	2750.9	6739.5	9026.8	9018.1	8725.1	6555.8	3918.6	1320.8	494.2
77.5°	314.9	446.1	1080.2	1850.0	2847.1	3525.0	3468.2	2322.3	1172.1	384.9	306.1
80°	205.6	209.9	288.6	507.3	782.9	865.9	984.0	708.5	341.1	183.7	126.8
82.5°	91.8	100.6	131.2	166.2	166.2	153.1	135.6	100.6	74.3	61.2	30.6
85°	21.9	30.6	21.9	26.2	21.9	17.5	17.5	8.7	0.0	0.0	0.0
87.5°	4.4	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°	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
2.5°	35.0	35.0	35.0	30.6	30.6	30.6	26.2	26.2	26.2	21.9	21.9
5°	43.7	39.4	35.0	35.0	30.6	30.6	26.2	21.9	21.9	21.9	17.5
7.5°	48.1	43.7	39.4	35.0	30.6	26.2	26.2	21.9	17.5	17.5	17.5
10°	56.9	52.5	43.7	35.0	30.6	26.2	21.9	21.9	17.5	13.1	13.1
12.5°	65.6	56.9	48.1	39.4	30.6	26.2	21.9	21.9	17.5	13.1	8.7
15°	74.3	65.6	52.5	39.4	30.6	26.2	21.9	21.9	13.1	8.7	4.4
17.5°	83.1	70.0	52.5	43.7	30.6	26.2	21.9	17.5	8.7	4.4	0.0
20°	87.5	74.3	56.9	43.7	30.6	26.2	21.9	13.1	4.4	0.0	0.0
22.5°	96.2	83.1	61.2	43.7	30.6	21.9	13.1	4.4	0.0	0.0	0.0
25°	113.7	87.5	61.2	43.7	30.6	21.9	8.7	0.0	0.0	0.0	0.0
27.5°	126.8	96.2	61.2	43.7	30.6	17.5	4.4	0.0	0.0	0.0	0.0
30°	148.7	105.0	65.6	43.7	30.6	13.1	4.4	0.0	0.0	0.0	0.0
32.5°	183.7	113.7	65.6	43.7	26.2	13.1	0.0	0.0	0.0	0.0	0.0
35°	223.0	131.2	65.6	43.7	26.2	13.1	0.0	0.0	0.0	0.0	0.0
37.5°	227.4	140.0	65.6	43.7	26.2	8.7	0.0	0.0	0.0	0.0	0.0
40°	236.2	131.2	70.0	43.7	26.2	8.7	0.0	0.0	0.0	0.0	0.0
42.5°	271.2	122.5	74.3	43.7	26.2	8.7	0.0	0.0	0.0	0.0	0.0
45°	402.4	126.8	74.3	48.1	26.2	13.1	0.0	0.0	0.0	0.0	0.0
47.5°	699.8	131.2	70.0	48.1	26.2	13.1	0.0	0.0	0.0	0.0	0.0
50°	896.6	153.1	70.0	52.5	30.6	8.7	0.0	0.0	0.0	0.0	0.0
52.5°	953.4	179.3	70.0	56.9	39.4	4.4	0.0	0.0	0.0	0.0	0.0
55°	927.2	209.9	74.3	61.2	48.1	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	857.2	227.4	78.7	65.6	52.5	0.0	0.0	0.0	0.0	0.0	0.0
59°	782.9	240.5	91.8	70.0	52.5	0.0	0.0	0.0	0.0	0.0	0.0
60°	721.6	253.7	96.2	74.3	52.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	581.7	271.2	105.0	87.5	43.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	507.3	284.3	109.3	96.2	39.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	463.6	293.0	118.1	100.6	35.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	428.6	288.6	126.8	96.2	30.6	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	389.2	275.5	153.1	87.5	26.2	0.0	0.0	0.0	0.0	0.0	0.0
75°	349.9	249.3	166.2	78.7	17.5	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	253.7	209.9	153.1	70.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	109.3	113.7	109.3	52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	21.9	26.2	21.9	13.1	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°	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
2.5°	21.9	21.9	21.9	21.9	26.2	26.2	35.0	43.7	52.5	56.9	56.9
5°	17.5	17.5	17.5	17.5	17.5	21.9	26.2	35.0	48.1	52.5	52.5
7.5°	13.1	13.1	13.1	13.1	13.1	13.1	21.9	30.6	43.7	48.1	52.5
10°	13.1	8.7	8.7	4.4	4.4	8.7	13.1	26.2	39.4	43.7	48.1
12.5°	8.7	4.4	4.4	0.0	0.0	4.4	8.7	21.9	35.0	39.4	43.7
15°	4.4	0.0	0.0	0.0	0.0	0.0	4.4	17.5	30.6	35.0	43.7
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	26.2	35.0	39.4
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	21.9	30.6	35.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	17.5	26.2	30.6
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	17.5	21.9
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	13.1	17.5
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	13.1	17.5
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7	13.1
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7	13.1
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7	8.7
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4
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°	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
2.5°	61.2	61.2	56.9	52.5	52.5	52.5	56.9	61.2	61.2	61.2
5°	56.9	56.9	52.5	52.5	52.5	52.5	56.9	65.6	70.0	70.0
7.5°	56.9	56.9	52.5	52.5	52.5	52.5	56.9	65.6	70.0	74.3
10°	52.5	52.5	52.5	52.5	48.1	52.5	56.9	65.6	78.7	78.7
12.5°	52.5	52.5	52.5	52.5	48.1	52.5	61.2	70.0	83.1	87.5
15°	52.5	52.5	52.5	48.1	48.1	52.5	61.2	74.3	87.5	96.2
17.5°	48.1	52.5	52.5	48.1	48.1	52.5	61.2	74.3	96.2	109.3
20°	43.7	48.1	52.5	48.1	48.1	48.1	61.2	74.3	100.6	118.1
22.5°	39.4	43.7	48.1	48.1	43.7	48.1	61.2	78.7	109.3	131.2
25°	35.0	39.4	39.4	43.7	43.7	48.1	61.2	78.7	113.7	148.7
27.5°	26.2	30.6	35.0	39.4	39.4	48.1	61.2	83.1	122.5	183.7
30°	21.9	26.2	30.6	35.0	39.4	48.1	61.2	83.1	131.2	231.8
32.5°	21.9	26.2	30.6	35.0	39.4	43.7	61.2	87.5	144.3	288.6
35°	17.5	21.9	26.2	35.0	35.0	43.7	61.2	87.5	157.4	376.1
37.5°	17.5	21.9	26.2	35.0	35.0	43.7	61.2	87.5	192.4	419.9
40°	13.1	17.5	21.9	35.0	35.0	43.7	65.6	91.8	196.8	424.2
42.5°	13.1	17.5	21.9	30.6	35.0	43.7	65.6	91.8	183.7	437.3
45°	13.1	17.5	21.9	35.0	39.4	48.1	65.6	96.2	179.3	498.6
47.5°	13.1	17.5	21.9	35.0	43.7	48.1	65.6	96.2	183.7	712.9
50°	13.1	17.5	21.9	35.0	48.1	48.1	65.6	96.2	201.2	1145.8
52.5°	8.7	13.1	17.5	30.6	39.4	52.5	70.0	91.8	214.3	1530.7
55°	8.7	8.7	13.1	26.2	35.0	56.9	74.3	91.8	249.3	1626.9
57.5°	8.7	8.7	13.1	21.9	30.6	61.2	78.7	91.8	288.6	1578.8
59°	8.7	8.7	8.7	21.9	26.2	61.2	78.7	96.2	293.0	1495.7
60°	8.7	8.7	8.7	17.5	26.2	61.2	83.1	100.6	297.4	1399.5
62.5°	4.4	4.4	4.4	17.5	21.9	61.2	91.8	122.5	306.1	1080.2
65°	8.7	8.7	4.4	13.1	21.9	52.5	105.0	131.2	310.5	839.7
67.5°	8.7	8.7	8.7	17.5	21.9	52.5	109.3	135.6	310.5	664.8
70°	8.7	8.7	8.7	17.5	26.2	52.5	109.3	140.0	306.1	542.3
72.5°	8.7	8.7	8.7	17.5	26.2	48.1	100.6	144.3	293.0	459.2
75°	8.7	8.7	8.7	13.1	21.9	43.7	96.2	157.4	266.8	389.2
77.5°	8.7	8.7	8.7	8.7	17.5	35.0	87.5	174.9	236.2	314.9
80°	13.1	8.7	8.7	8.7	13.1	30.6	83.1	170.6	196.8	205.6
82.5°	13.1	8.7	8.7	4.4	8.7	21.9	65.6	131.2	100.6	91.8
85°	8.7	8.7	8.7	4.4	4.4	13.1	30.6	39.4	30.6	21.9
87.5°	8.7	8.7	8.7	4.4	4.4	4.4	4.4	4.4	4.4	4.4
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: SP1-2407-184-2

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-722-U-5WQ

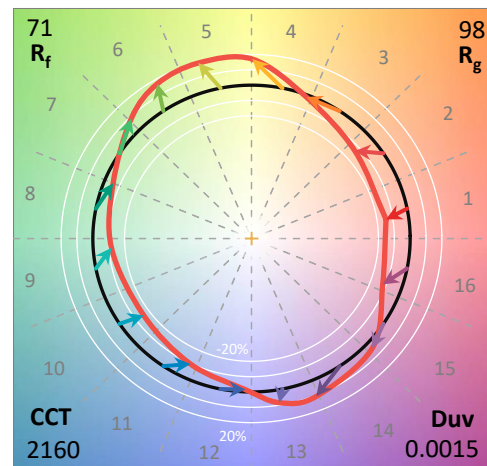
Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-2
 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-722-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI
 2200K CCT 26 LEDS

Spectral Parameters

CCT (K):	2160	CRI (Ra):	71.9		
CIE u':	0.2927	R1:	68.7	R9:	-17.8
CIE v':	0.5388	R2:	82.6	R10:	60.5
Duv:	0.0015	R3:	95.5	R11:	60.2
CIE x:	0.5130	R4:	66.4	R12:	48.2
CIE y:	0.4197	R5:	65.4	R13:	70.7
CIE z:	0.0674	R6:	75.9	R14:	96.8
Peak Wavelength (nm):	609	R7:	77.2	R15:	61.8
Dominant Wavelength (nm):	587	R8:	43.5		
Purity:	79.96089				
Rf:	70.6				
Rg:	97.6				



Test Conditions

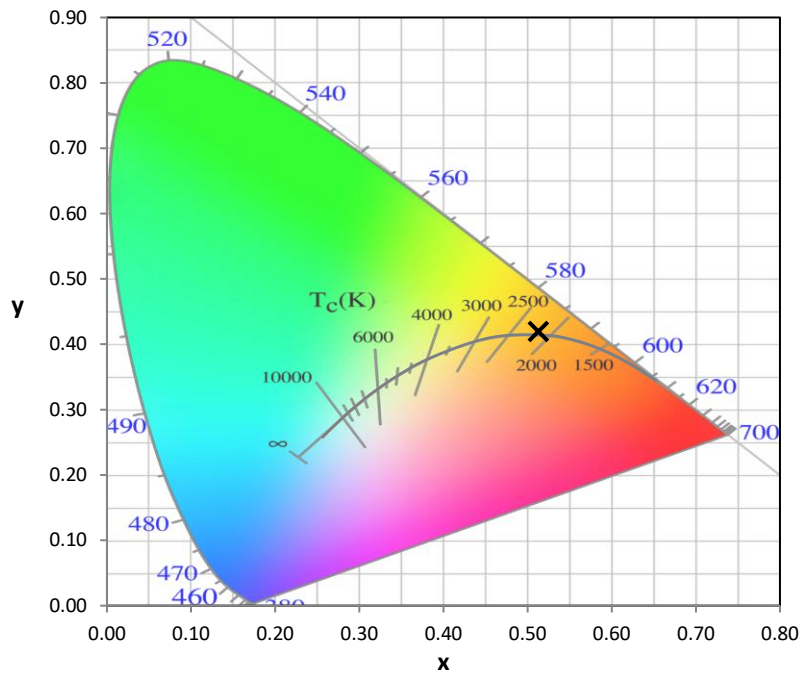
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-2

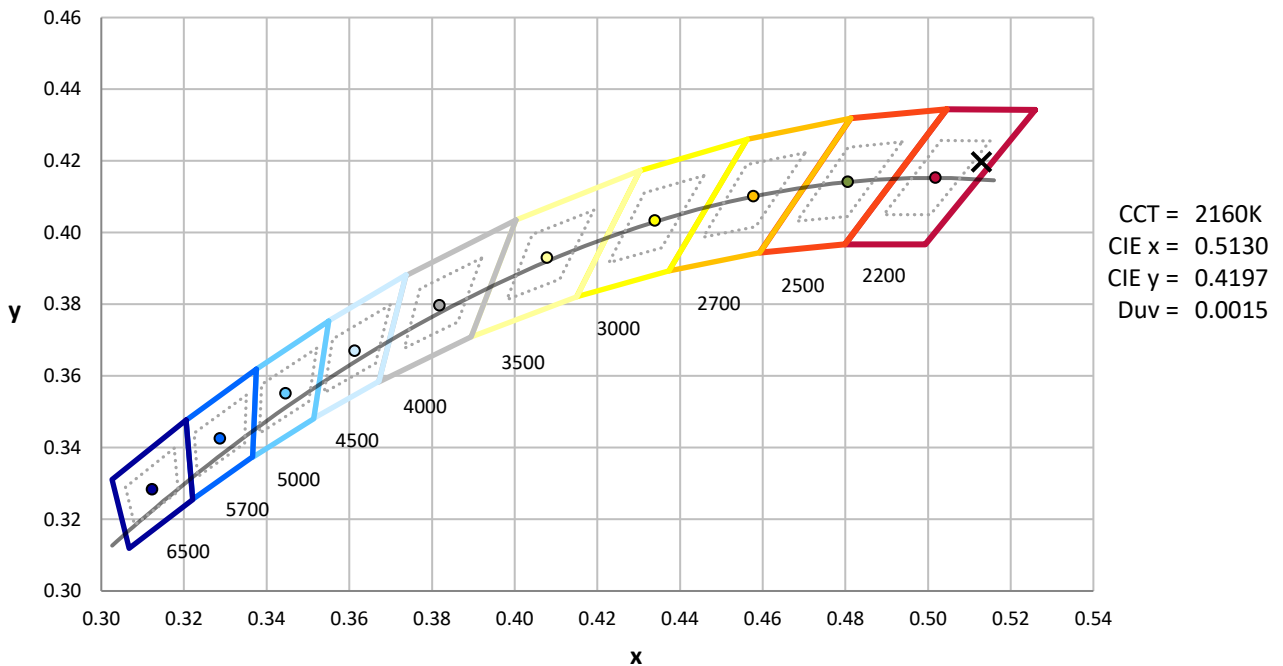
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



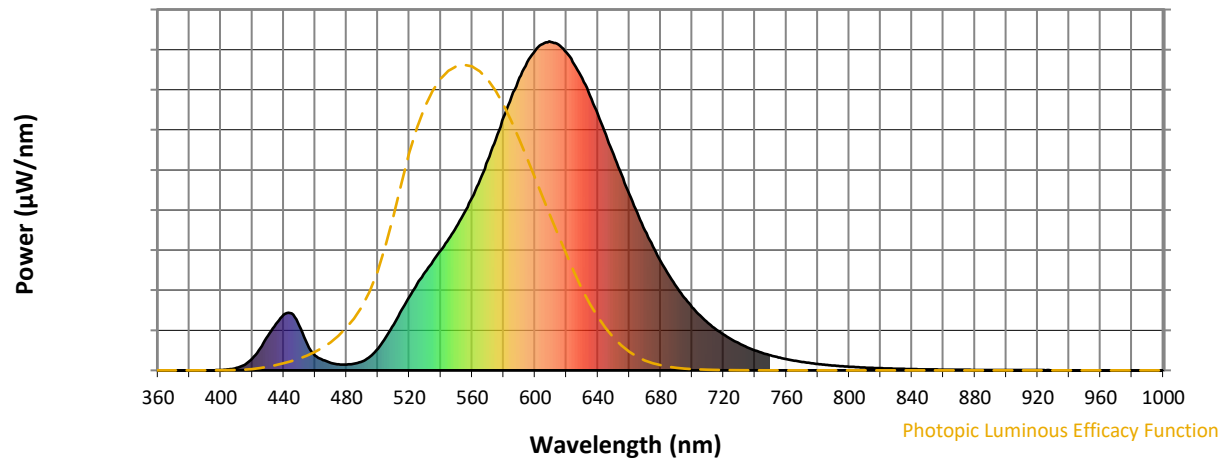
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-2

Photopic Flux vs. Wavelength

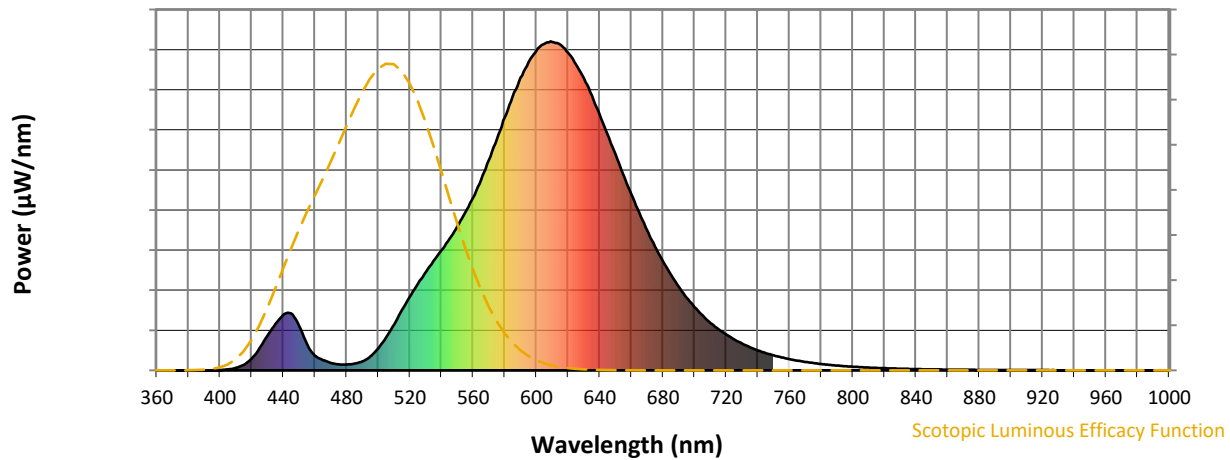


Photopic Lumens: NR

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	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

REPORT NUMBER: SP1-2407-184-2

Scotopic Flux vs. Wavelength



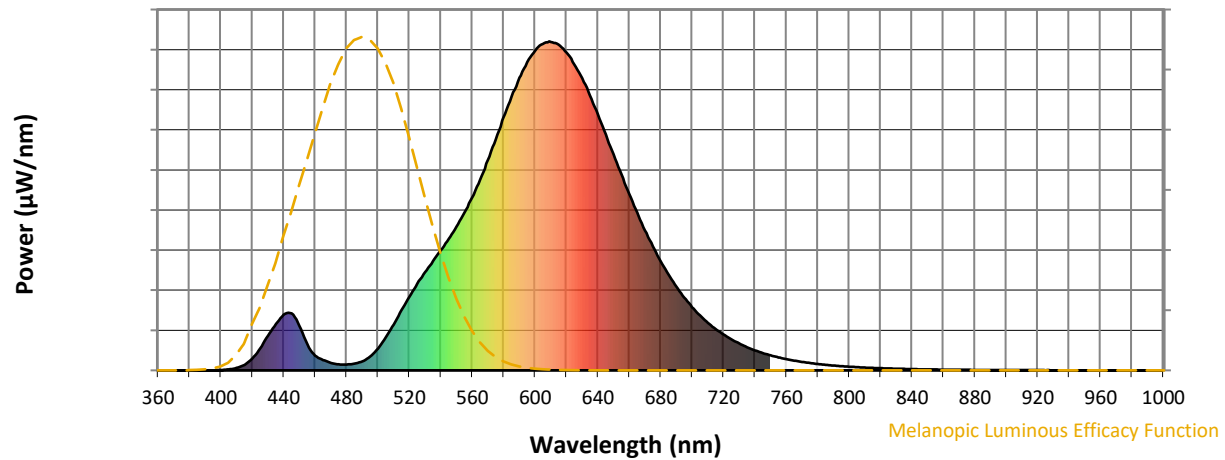
Scotopic Lumens: NR

S/P: 0.8

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	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.21

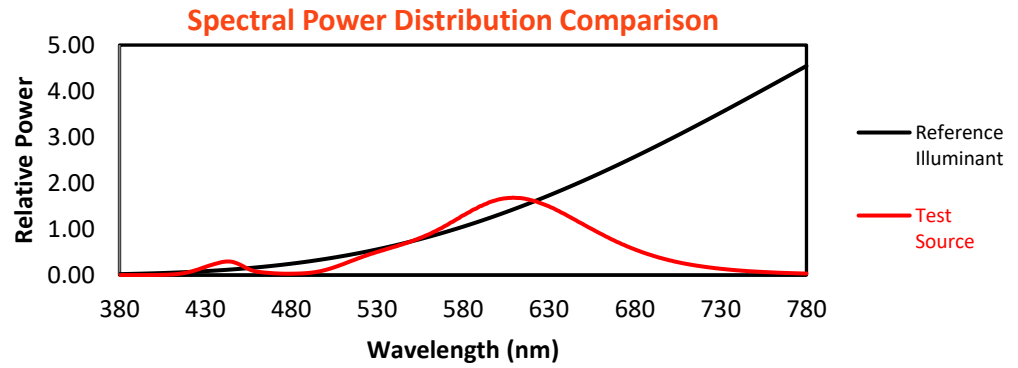
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

REPORT NUMBER: SP1-2407-184-2

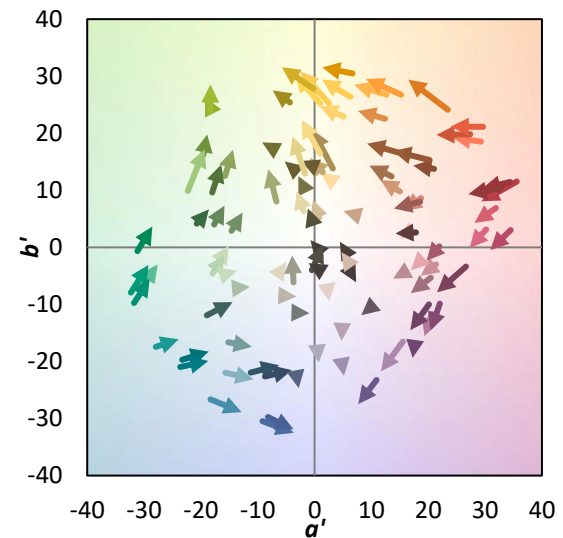
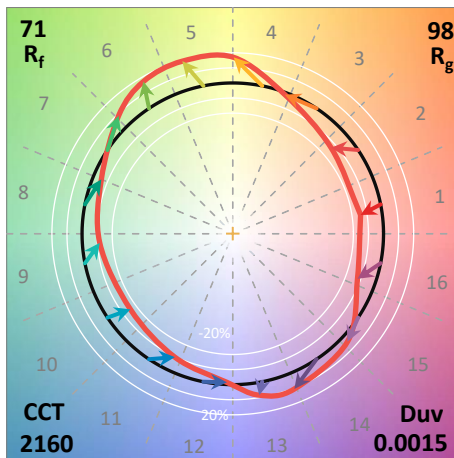
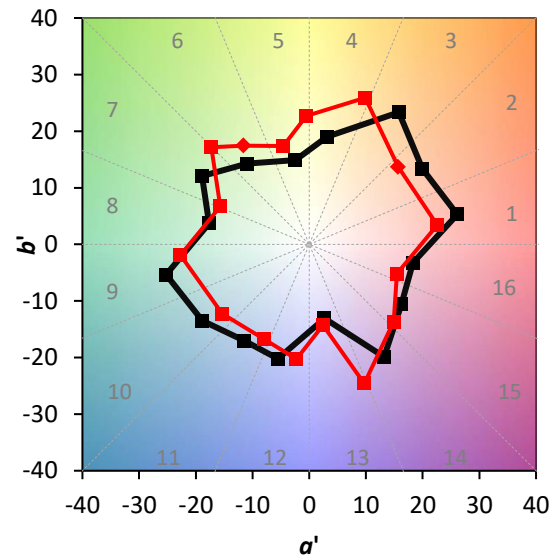
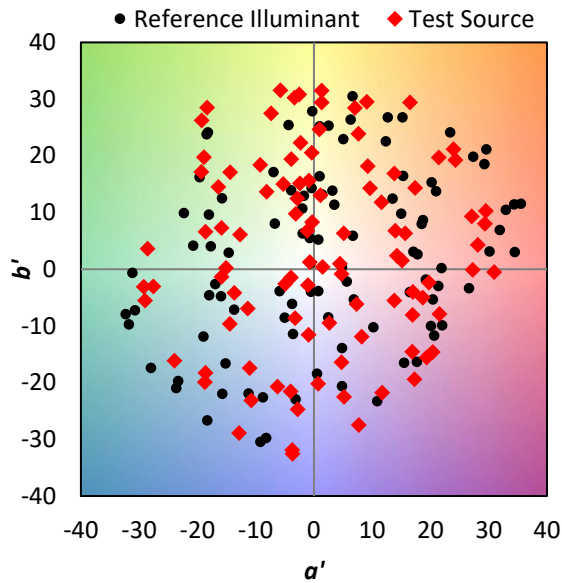
TM-30-18

Summary

$R_f = 70.6$
 $R_g = 97.6$
 $CIE R_a = 71.9$
 $R_g = -17.8$

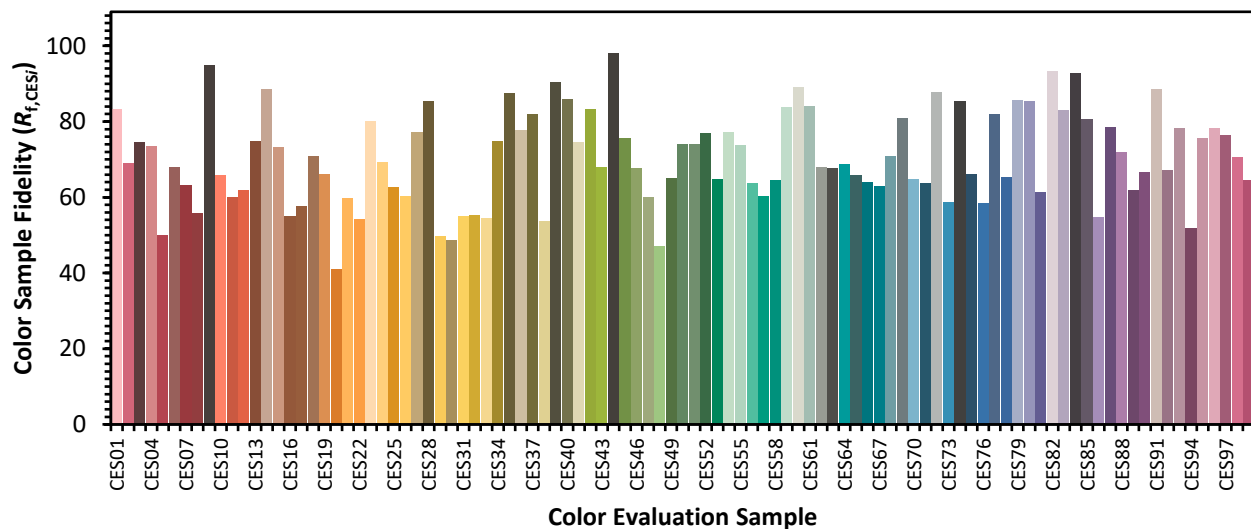


Color Vector Graphics

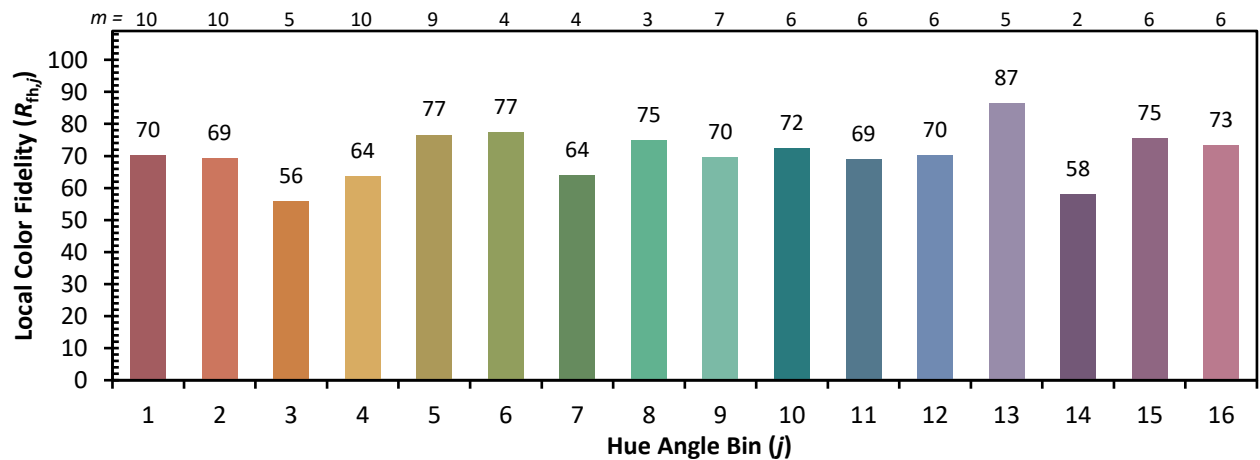
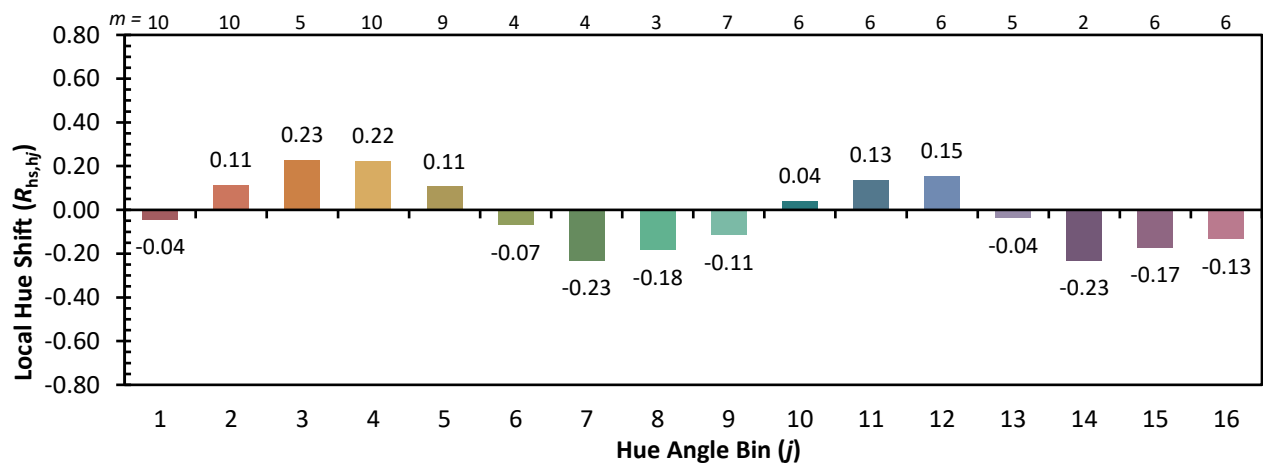
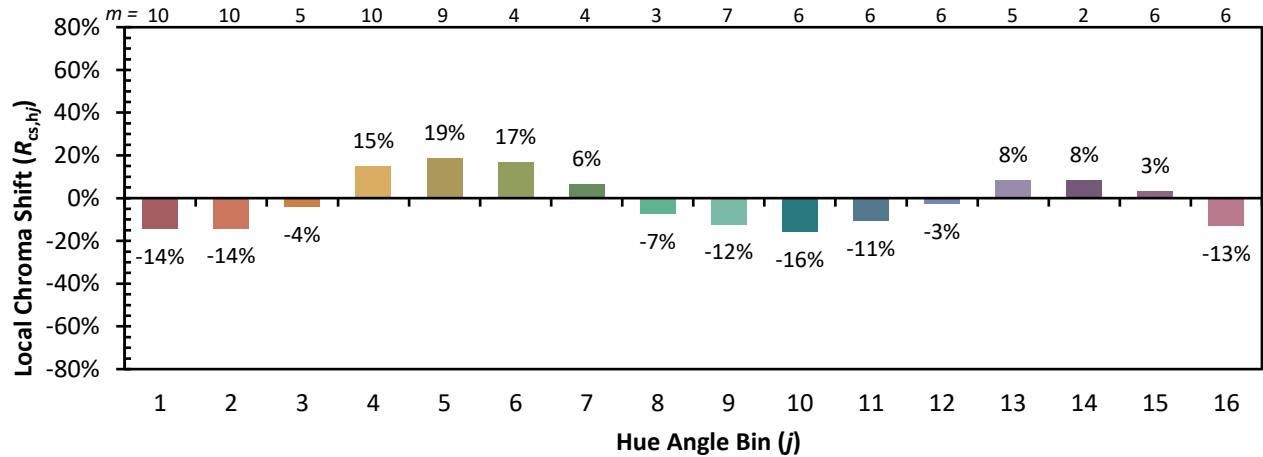


Individual Sample Fidelity Index ($R_{f,i}$)

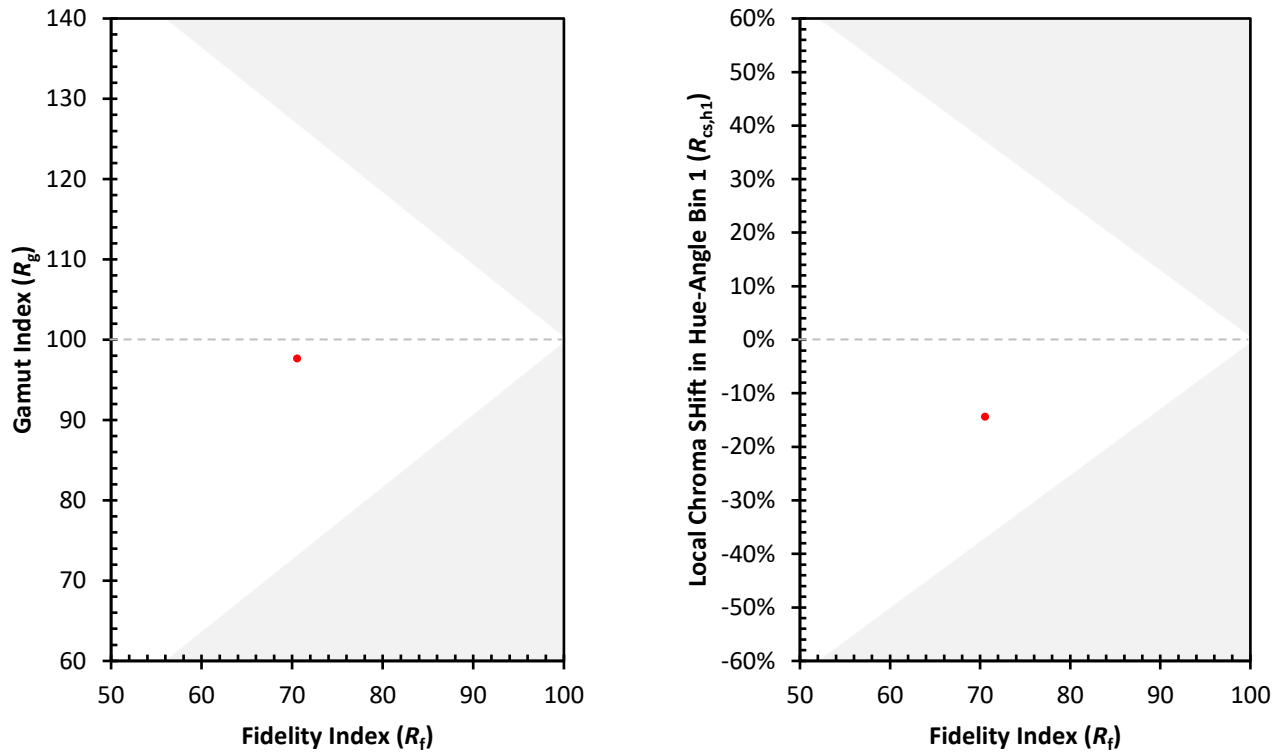
CES01 = 87	CES26 = 60	CES51 = 74	CES76 = 58
CES02 = 65	CES27 = 77	CES52 = 77	CES77 = 82
CES03 = 32	CES28 = 85	CES53 = 65	CES78 = 65
CES04 = 72	CES29 = 50	CES54 = 77	CES79 = 86
CES05 = 52	CES30 = 49	CES55 = 74	CES80 = 85
CES06 = 53	CES31 = 55	CES56 = 64	CES81 = 61
CES07 = 44	CES32 = 55	CES57 = 60	CES82 = 93
CES08 = 43	CES33 = 55	CES58 = 64	CES83 = 83
CES09 = 29	CES34 = 75	CES59 = 84	CES84 = 93
CES10 = 79	CES35 = 88	CES60 = 89	CES85 = 81
CES11 = 62	CES36 = 78	CES61 = 84	CES86 = 55
CES12 = 68	CES37 = 82	CES62 = 68	CES87 = 79
CES13 = 45	CES38 = 54	CES63 = 68	CES88 = 72
CES14 = 75	CES39 = 90	CES64 = 69	CES89 = 62
CES15 = 72	CES40 = 86	CES65 = 66	CES90 = 67
CES16 = 49	CES41 = 75	CES66 = 64	CES91 = 89
CES17 = 51	CES42 = 83	CES67 = 63	CES92 = 67
CES18 = 57	CES43 = 68	CES68 = 71	CES93 = 78
CES19 = 74	CES44 = 98	CES69 = 81	CES94 = 52
CES20 = 68	CES45 = 76	CES70 = 65	CES95 = 76
CES21 = 89	CES46 = 68	CES71 = 64	CES96 = 78
CES22 = 81	CES47 = 60	CES72 = 88	CES97 = 76
CES23 = 92	CES48 = 47	CES73 = 59	CES98 = 71
CES24 = 92	CES49 = 65	CES74 = 85	CES99 = 65
CES25 = 74	CES50 = 74	CES75 = 66	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)