

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: P1067906

Luminaire Tested: **NAV-SA4B-722-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067906
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4B-722-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 800mA 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: 11179.8 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G2

Input Watts (W): 144.1
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

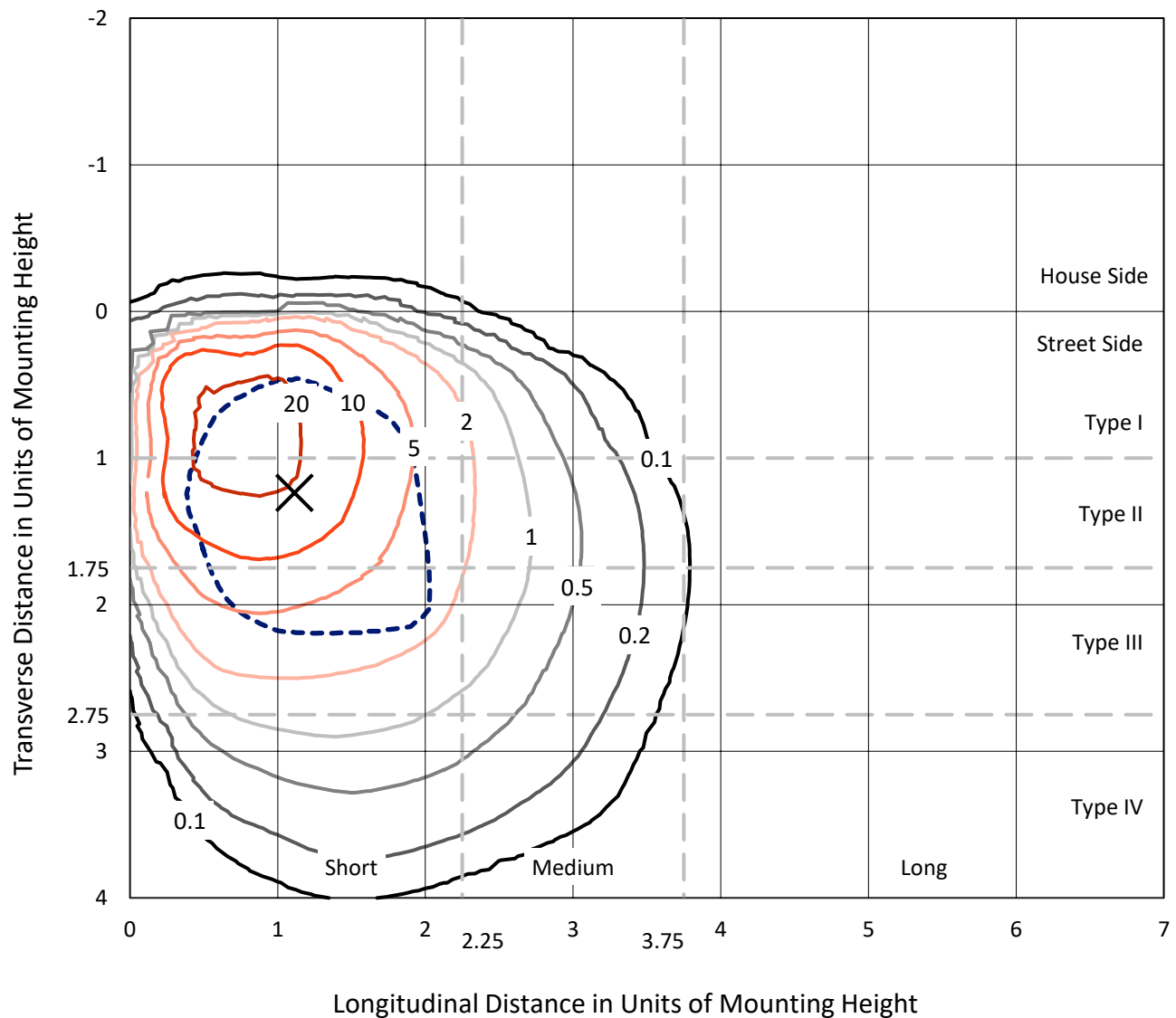


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

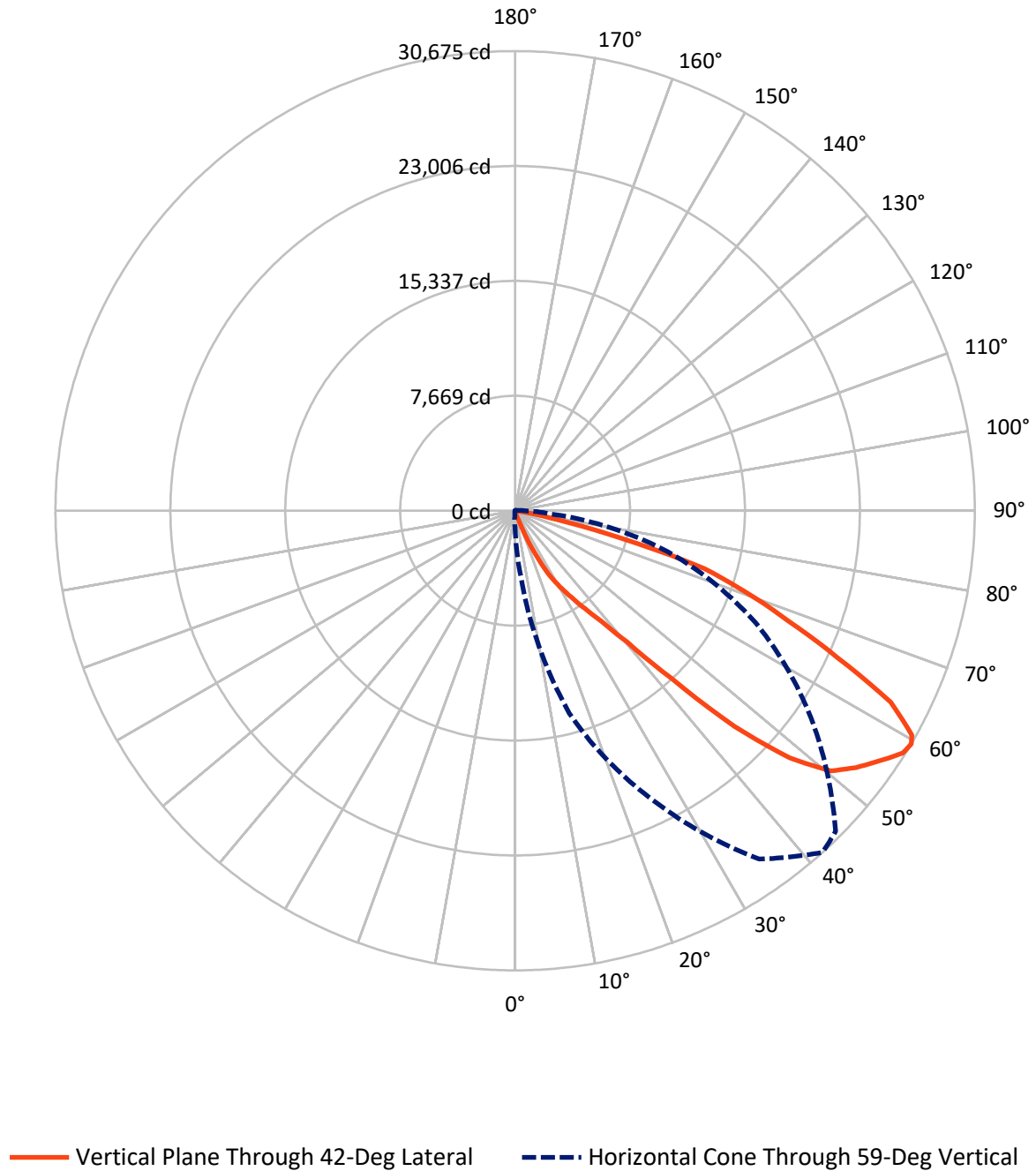


Based on 15 foot mounting height. Maximum calculated value = 33.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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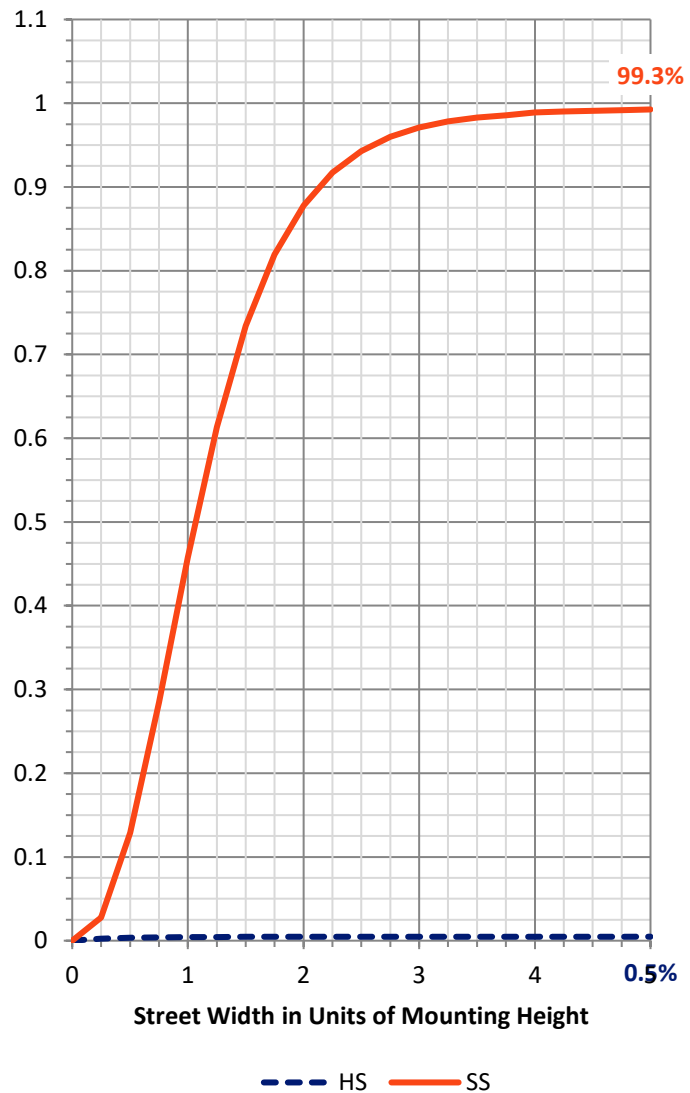
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	53.9	0.0	53.9
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	11126.0	0.0	11126.0
	% Fixture	99.5	0.0	99.5
Total	Lumens	11179.8	0.0	11179.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.3	0.0
10°-20°	16.3	0.1
20°-30°	208.5	1.9
30°-40°	703.1	6.3
40°-50°	2123.6	19.0
50°-60°	3748.6	33.5
60°-70°	3300.7	29.5
70°-80°	1050.6	9.4
80°-90°	25.1	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°	11179.8	100.0
0°-180°	11179.8	100.0



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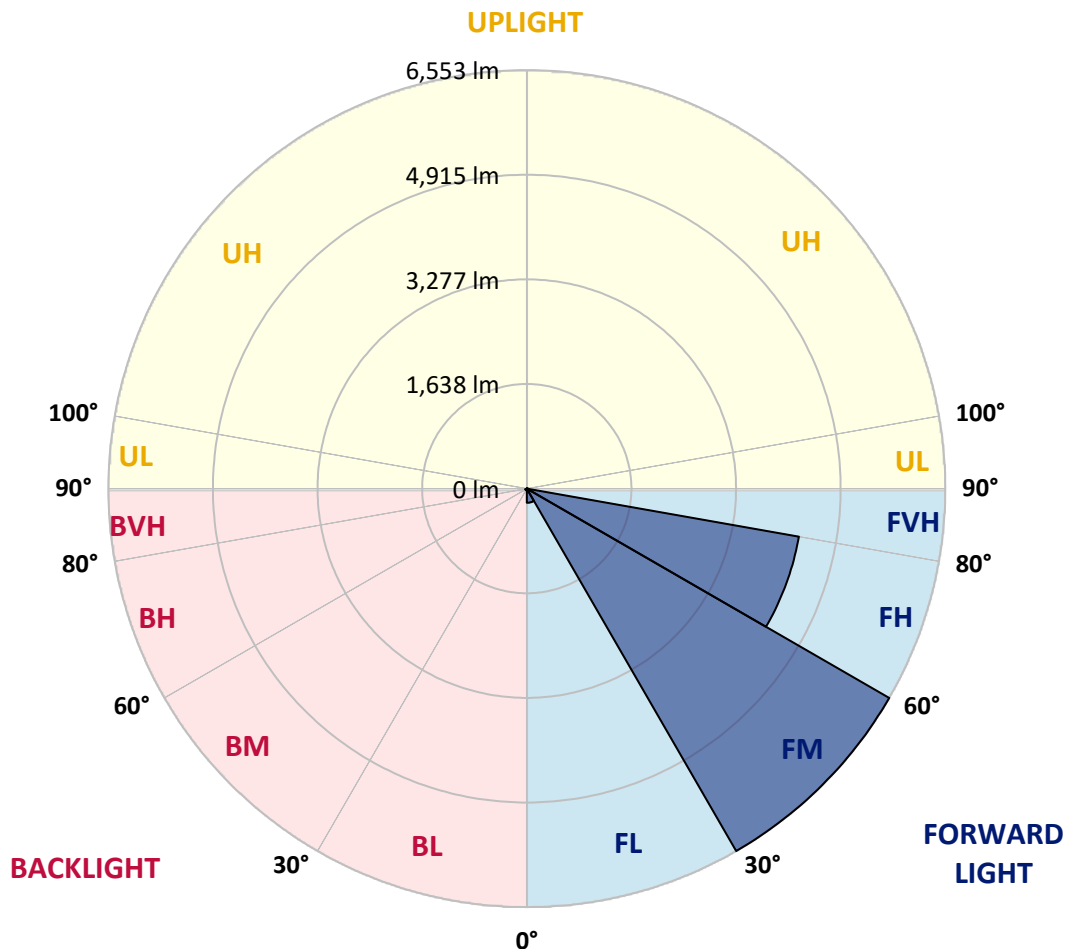
CATALOG NUMBER: NAV-SA4B-722-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	222.1	2.0			
FM	(30°-60°)	6553.2	58.6			
FH	(60°-80°)	4326.7	38.7			G2/5000
FVH	(80°-90°)	23.9	0.2			G1/100
BL	(0°-30°)	6.0	0.1	B0/110		
BM	(30°-60°)	22.0	0.2	B0/220		
BH	(60°-80°)	24.6	0.2	B0/110		G0/110
BVH	(80°-90°)	1.2	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-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
2.5°	49.1	49.1	45.6	42.1	38.6	35.1	35.1	35.1	31.5	31.5	28.0
5°	56.1	56.1	52.6	49.1	49.1	45.6	45.6	42.1	38.6	38.6	35.1
7.5°	59.6	59.6	59.6	59.6	56.1	56.1	56.1	52.6	49.1	45.6	42.1
10°	63.1	66.6	70.1	70.1	70.1	70.1	70.1	66.6	59.6	56.1	49.1
12.5°	70.1	73.6	80.6	87.6	87.6	91.1	87.6	84.1	77.1	66.6	56.1
15°	77.1	84.1	94.6	108.7	122.7	126.2	126.2	115.7	101.7	80.6	66.6
17.5°	87.6	98.1	126.2	171.8	220.8	259.4	259.4	231.3	161.2	105.2	77.1
20°	94.6	115.7	203.3	413.6	630.9	792.2	760.6	673.0	361.0	164.7	84.1
22.5°	105.2	147.2	431.1	1086.6	1682.5	1977.0	1906.9	1447.7	809.7	294.4	101.7
25°	119.2	213.8	855.3	2036.6	3126.7	3445.7	3400.1	2702.6	1475.7	494.2	129.7
27.5°	147.2	315.5	1370.6	3088.1	4612.9	4886.3	4868.8	3957.4	2359.0	795.7	168.3
30°	185.8	459.2	2033.0	4195.8	5597.9	5874.8	5787.2	4875.8	3182.8	1216.3	217.3
32.5°	231.3	641.5	2632.4	5012.5	6505.8	6870.3	6765.1	5675.0	3845.3	1573.9	322.5
35°	301.5	820.2	3224.8	5734.6	7553.8	8016.5	7841.3	6498.7	4416.6	1977.0	389.1
37.5°	336.5	925.4	3768.2	6519.8	8731.6	9362.5	9229.3	7539.8	4998.5	2492.2	476.7
40°	340.0	1051.6	4332.5	7543.3	10396.6	11521.8	11283.4	9327.5	6081.6	3154.7	613.4
42.5°	350.5	1240.9	5065.1	9288.9	13667.0	15282.9	15013.0	12615.4	8538.8	4483.2	869.3
45°	399.6	1598.4	6558.3	12552.3	18157.2	20526.8	20214.8	17196.8	11970.5	6982.5	1482.7
47.5°	571.4	2404.6	9176.8	16075.1	22749.1	24638.5	24561.3	20807.2	15079.6	9544.8	2513.3
50°	918.4	3691.0	12156.2	19037.1	25672.5	27295.4	27102.7	22314.5	16853.3	11293.9	3221.3
52.5°	1226.8	4921.4	14028.0	20127.2	26545.3	28480.2	28245.4	22864.8	17319.5	11809.2	3417.6
55°	1304.0	5366.6	14585.4	20463.7	27123.7	29482.7	29142.7	23232.9	17379.1	11441.2	3091.6
57.5°	1265.4	4945.9	14224.3	20793.2	27929.9	30513.3	30061.1	23951.4	17578.9	10817.2	2572.9
59°	1198.8	4427.1	14000.0	21056.1	28375.1	30674.5	30250.4	24109.2	17712.1	10533.3	2257.4
60°	1121.7	4076.6	13824.7	21227.8	28347.0	30422.1	29984.0	24035.6	17764.7	10287.9	2106.7
62.5°	865.8	3252.9	13572.4	21105.2	26576.9	28119.2	27870.3	22233.9	16993.5	9502.8	1661.5
65°	673.0	2488.7	12647.0	18823.2	22615.9	23653.5	23576.4	18826.7	14301.5	8191.8	1198.8
67.5°	532.8	1815.7	10694.5	15244.4	18195.8	19671.5	19615.4	15282.9	10855.8	6260.4	862.3
70°	434.7	1293.4	7333.0	11493.7	14553.8	16411.6	16331.0	12300.0	8044.6	3971.5	627.4
72.5°	368.1	827.2	4448.2	8665.0	12145.7	13207.8	12973.0	9923.4	5850.3	2162.7	497.7
75°	312.0	508.3	2204.8	5401.6	7234.9	7227.8	6993.0	5254.4	3140.7	1058.6	396.1
77.5°	252.4	357.5	865.8	1482.7	2281.9	2825.2	2779.7	1861.3	939.4	308.5	245.4
80°	164.7	168.3	231.3	406.6	627.4	694.0	788.7	567.9	273.4	147.2	101.7
82.5°	73.6	80.6	105.2	133.2	133.2	122.7	108.7	80.6	59.6	49.1	24.5
85°	17.5	24.5	17.5	21.0	17.5	14.0	14.0	7.0	0.0	0.0	0.0
87.5°	3.5	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°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
2.5°	28.0	28.0	28.0	24.5	24.5	24.5	21.0	21.0	21.0	17.5	17.5
5°	35.1	31.5	28.0	28.0	24.5	24.5	21.0	17.5	17.5	17.5	14.0
7.5°	38.6	35.1	31.5	28.0	24.5	21.0	21.0	17.5	14.0	14.0	14.0
10°	45.6	42.1	35.1	28.0	24.5	21.0	17.5	17.5	14.0	10.5	10.5
12.5°	52.6	45.6	38.6	31.5	24.5	21.0	17.5	17.5	14.0	10.5	7.0
15°	59.6	52.6	42.1	31.5	24.5	21.0	17.5	17.5	10.5	7.0	3.5
17.5°	66.6	56.1	42.1	35.1	24.5	21.0	17.5	14.0	7.0	3.5	0.0
20°	70.1	59.6	45.6	35.1	24.5	21.0	17.5	10.5	3.5	0.0	0.0
22.5°	77.1	66.6	49.1	35.1	24.5	17.5	10.5	3.5	0.0	0.0	0.0
25°	91.1	70.1	49.1	35.1	24.5	17.5	7.0	0.0	0.0	0.0	0.0
27.5°	101.7	77.1	49.1	35.1	24.5	14.0	3.5	0.0	0.0	0.0	0.0
30°	119.2	84.1	52.6	35.1	24.5	10.5	3.5	0.0	0.0	0.0	0.0
32.5°	147.2	91.1	52.6	35.1	21.0	10.5	0.0	0.0	0.0	0.0	0.0
35°	178.8	105.2	52.6	35.1	21.0	10.5	0.0	0.0	0.0	0.0	0.0
37.5°	182.3	112.2	52.6	35.1	21.0	7.0	0.0	0.0	0.0	0.0	0.0
40°	189.3	105.2	56.1	35.1	21.0	7.0	0.0	0.0	0.0	0.0	0.0
42.5°	217.3	98.1	59.6	35.1	21.0	7.0	0.0	0.0	0.0	0.0	0.0
45°	322.5	101.7	59.6	38.6	21.0	10.5	0.0	0.0	0.0	0.0	0.0
47.5°	560.8	105.2	56.1	38.6	21.0	10.5	0.0	0.0	0.0	0.0	0.0
50°	718.6	122.7	56.1	42.1	24.5	7.0	0.0	0.0	0.0	0.0	0.0
52.5°	764.1	143.7	56.1	45.6	31.5	3.5	0.0	0.0	0.0	0.0	0.0
55°	743.1	168.3	59.6	49.1	38.6	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	687.0	182.3	63.1	52.6	42.1	0.0	0.0	0.0	0.0	0.0	0.0
59°	627.4	192.8	73.6	56.1	42.1	0.0	0.0	0.0	0.0	0.0	0.0
60°	578.4	203.3	77.1	59.6	42.1	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	466.2	217.3	84.1	70.1	35.1	0.0	0.0	0.0	0.0	0.0	0.0
65°	406.6	227.8	87.6	77.1	31.5	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	371.6	234.9	94.6	80.6	28.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	343.5	231.3	101.7	77.1	24.5	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	312.0	220.8	122.7	70.1	21.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	280.4	199.8	133.2	63.1	14.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	203.3	168.3	122.7	56.1	7.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	87.6	91.1	87.6	42.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	17.5	21.0	17.5	10.5	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°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
2.5°	17.5	17.5	17.5	17.5	21.0	21.0	28.0	35.1	42.1	45.6	45.6
5°	14.0	14.0	14.0	14.0	14.0	17.5	21.0	28.0	38.6	42.1	42.1
7.5°	10.5	10.5	10.5	10.5	10.5	10.5	17.5	24.5	35.1	38.6	42.1
10°	10.5	7.0	7.0	3.5	3.5	7.0	10.5	21.0	31.5	35.1	38.6
12.5°	7.0	3.5	3.5	0.0	0.0	3.5	7.0	17.5	28.0	31.5	35.1
15°	3.5	0.0	0.0	0.0	0.0	0.0	3.5	14.0	24.5	28.0	35.1
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	21.0	28.0	31.5
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	17.5	24.5	28.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	14.0	21.0	24.5
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	14.0	17.5
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	10.5	14.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	10.5	14.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0	10.5
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0	10.5
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0	7.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	318°	325°	335°	345°	355°	360°
0°	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
2.5°	49.1	49.1	45.6	42.1	42.1	42.1	45.6	49.1	49.1	49.1
5°	45.6	45.6	42.1	42.1	42.1	42.1	45.6	52.6	56.1	56.1
7.5°	45.6	45.6	42.1	42.1	42.1	42.1	45.6	52.6	56.1	59.6
10°	42.1	42.1	42.1	42.1	38.6	42.1	45.6	52.6	63.1	63.1
12.5°	42.1	42.1	42.1	42.1	38.6	42.1	49.1	56.1	66.6	70.1
15°	42.1	42.1	42.1	38.6	38.6	42.1	49.1	59.6	70.1	77.1
17.5°	38.6	42.1	42.1	38.6	38.6	42.1	49.1	59.6	77.1	87.6
20°	35.1	38.6	42.1	38.6	38.6	38.6	49.1	59.6	80.6	94.6
22.5°	31.5	35.1	38.6	38.6	35.1	38.6	49.1	63.1	87.6	105.2
25°	28.0	31.5	31.5	35.1	35.1	38.6	49.1	63.1	91.1	119.2
27.5°	21.0	24.5	28.0	31.5	31.5	38.6	49.1	66.6	98.1	147.2
30°	17.5	21.0	24.5	28.0	31.5	38.6	49.1	66.6	105.2	185.8
32.5°	17.5	21.0	24.5	28.0	31.5	35.1	49.1	70.1	115.7	231.3
35°	14.0	17.5	21.0	28.0	28.0	35.1	49.1	70.1	126.2	301.5
37.5°	14.0	17.5	21.0	28.0	28.0	35.1	49.1	70.1	154.2	336.5
40°	10.5	14.0	17.5	28.0	28.0	35.1	52.6	73.6	157.7	340.0
42.5°	10.5	14.0	17.5	24.5	28.0	35.1	52.6	73.6	147.2	350.5
45°	10.5	14.0	17.5	28.0	31.5	38.6	52.6	77.1	143.7	399.6
47.5°	10.5	14.0	17.5	28.0	35.1	38.6	52.6	77.1	147.2	571.4
50°	10.5	14.0	17.5	28.0	38.6	38.6	52.6	77.1	161.2	918.4
52.5°	7.0	10.5	14.0	24.5	31.5	42.1	56.1	73.6	171.8	1226.8
55°	7.0	7.0	10.5	21.0	28.0	45.6	59.6	73.6	199.8	1304.0
57.5°	7.0	7.0	10.5	17.5	24.5	49.1	63.1	73.6	231.3	1265.4
59°	7.0	7.0	7.0	17.5	21.0	49.1	63.1	77.1	234.9	1198.8
60°	7.0	7.0	7.0	14.0	21.0	49.1	66.6	80.6	238.4	1121.7
62.5°	3.5	3.5	3.5	14.0	17.5	49.1	73.6	98.1	245.4	865.8
65°	7.0	7.0	3.5	10.5	17.5	42.1	84.1	105.2	248.9	673.0
67.5°	7.0	7.0	7.0	14.0	17.5	42.1	87.6	108.7	248.9	532.8
70°	7.0	7.0	7.0	14.0	21.0	42.1	87.6	112.2	245.4	434.7
72.5°	7.0	7.0	7.0	14.0	21.0	38.6	80.6	115.7	234.9	368.1
75°	7.0	7.0	7.0	10.5	17.5	35.1	77.1	126.2	213.8	312.0
77.5°	7.0	7.0	7.0	7.0	14.0	28.0	70.1	140.2	189.3	252.4
80°	10.5	7.0	7.0	7.0	10.5	24.5	66.6	136.7	157.7	164.7
82.5°	10.5	7.0	7.0	3.5	7.0	17.5	52.6	105.2	80.6	73.6
85°	7.0	7.0	7.0	3.5	3.5	10.5	24.5	31.5	24.5	17.5
87.5°	7.0	7.0	7.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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: SP1-2407-184-2

Test Date: 10/09/2024

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

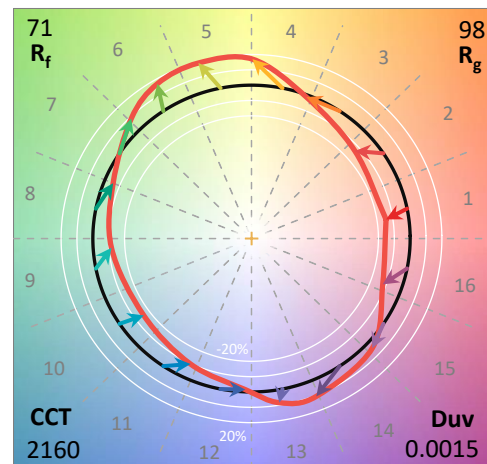
Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

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

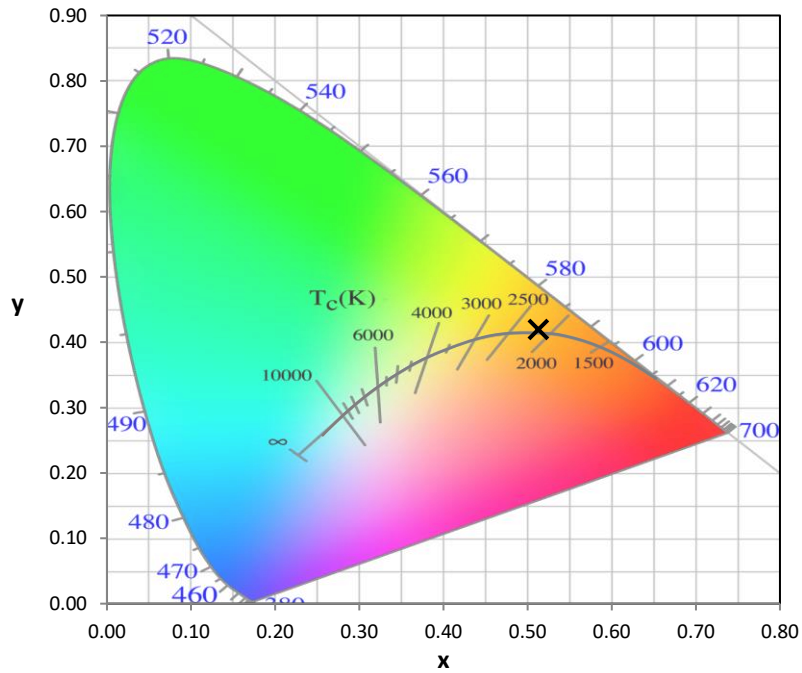
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-2

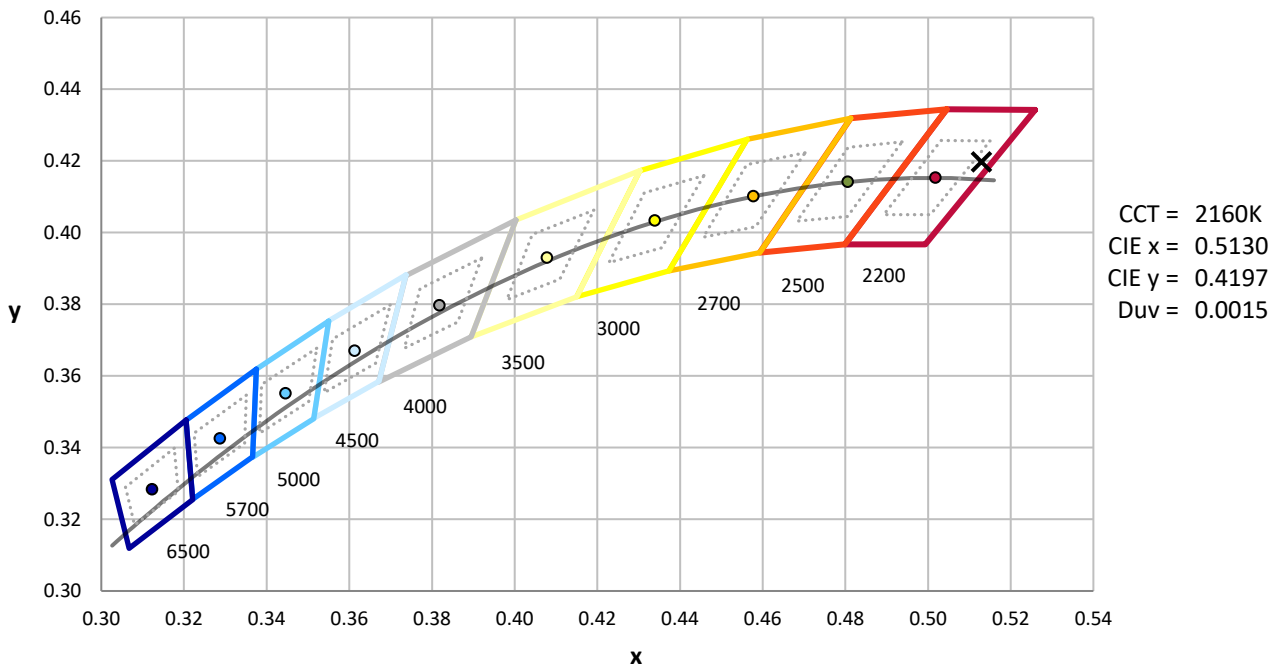
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



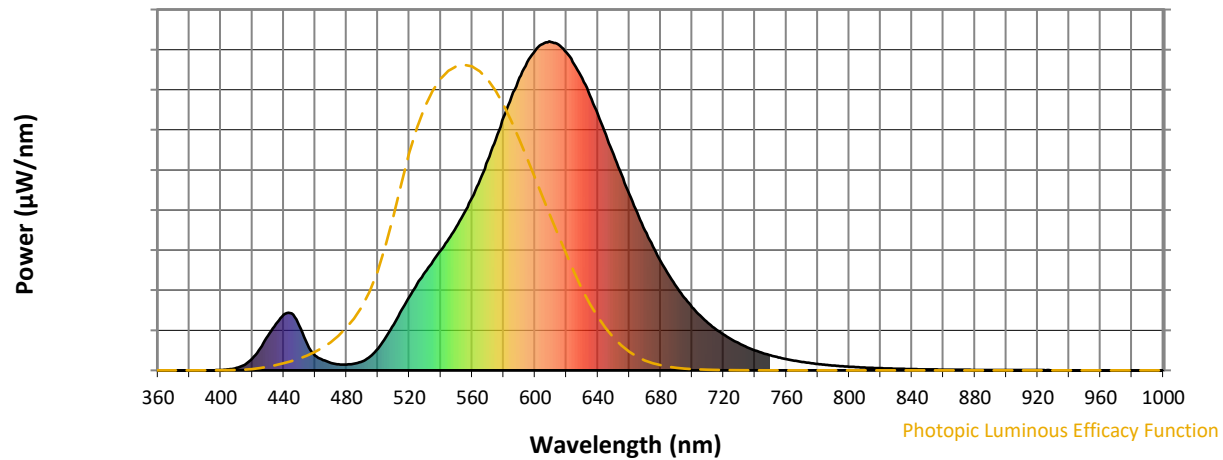
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-2

Photopic Flux vs. Wavelength

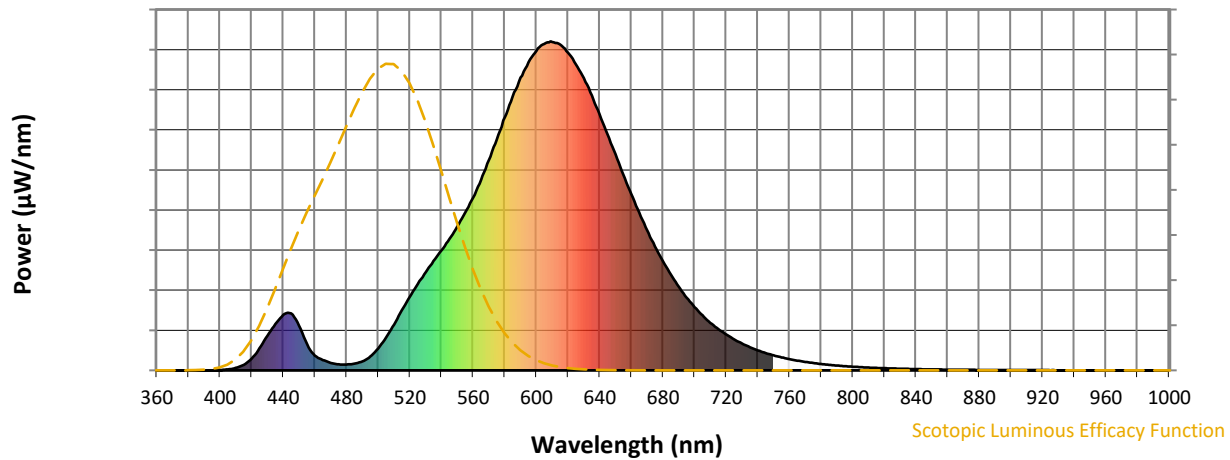


Photopic Lumens: NR

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



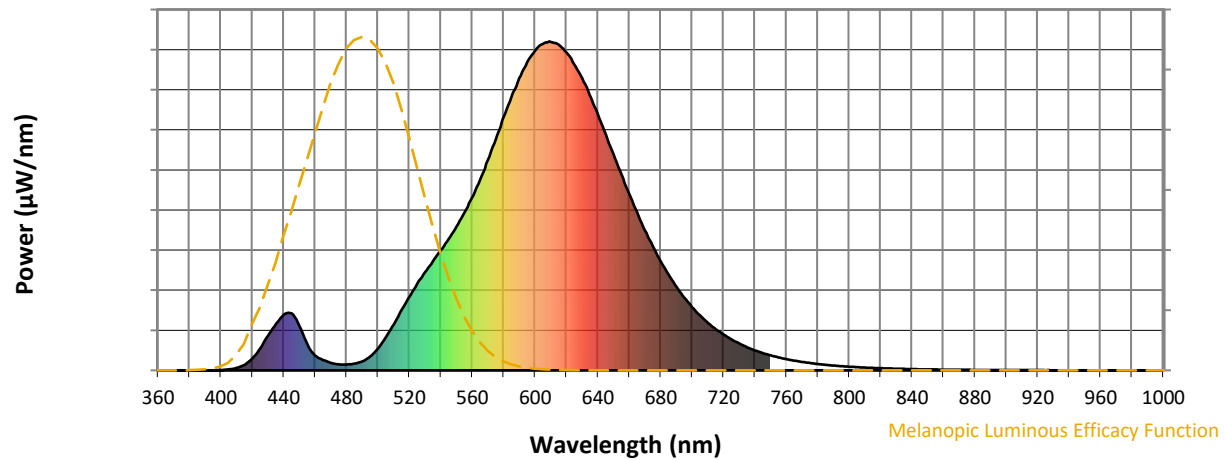
Scotopic Lumens: NR

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			

REPORT NUMBER: SP1-2407-184-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.21

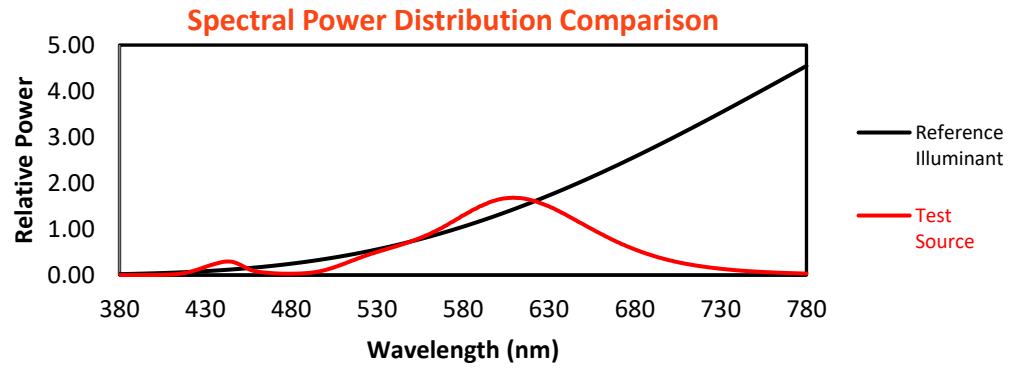
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	27	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

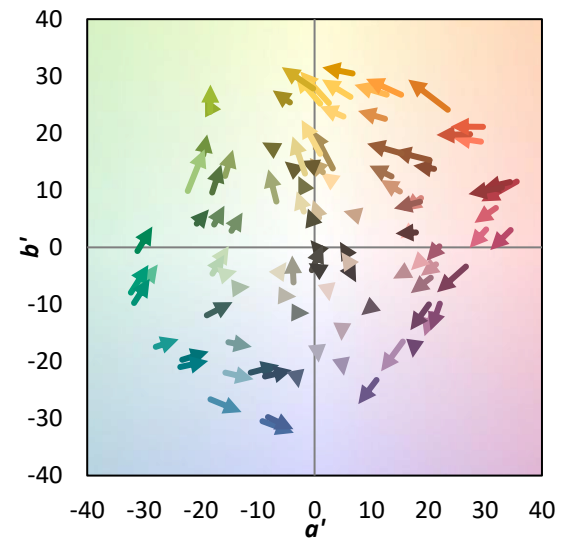
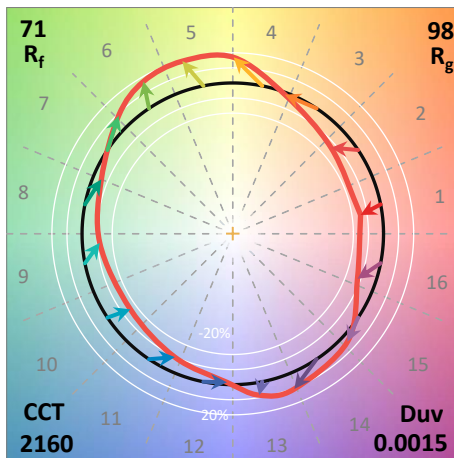
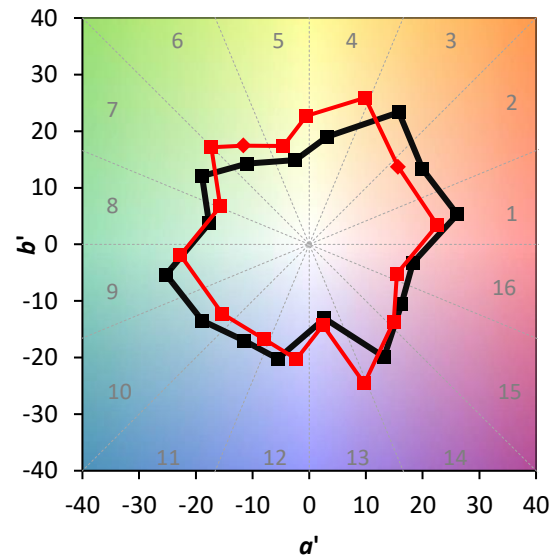
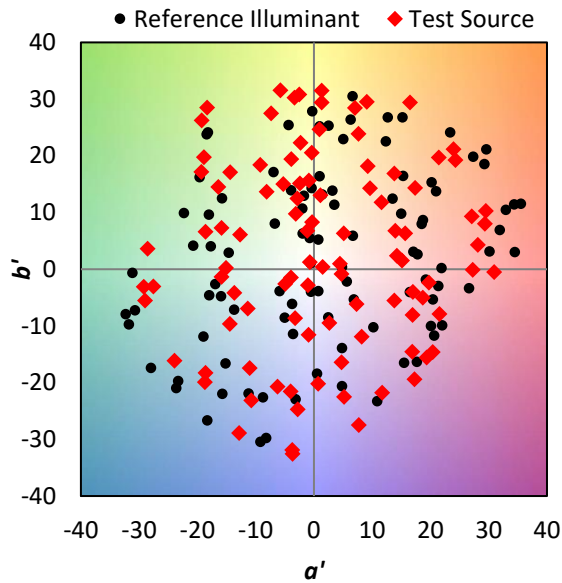
TM-30-18

Summary

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

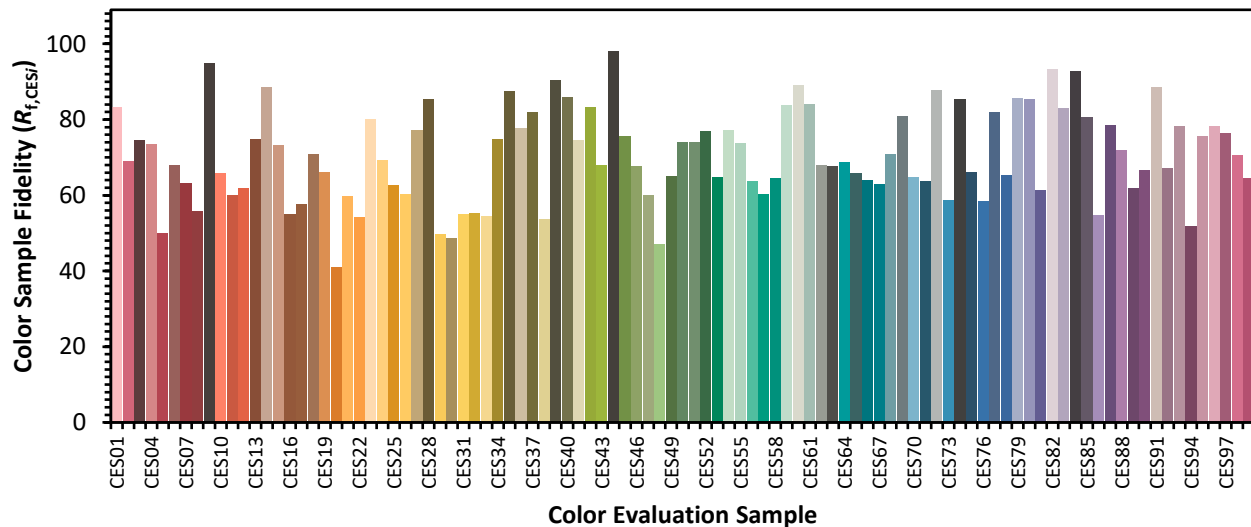


Color Vector Graphics

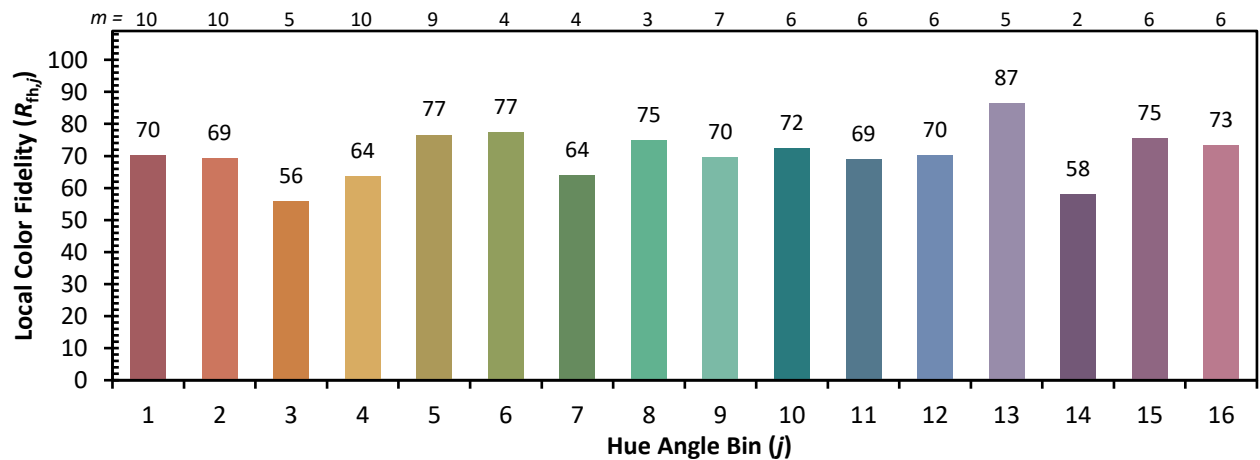
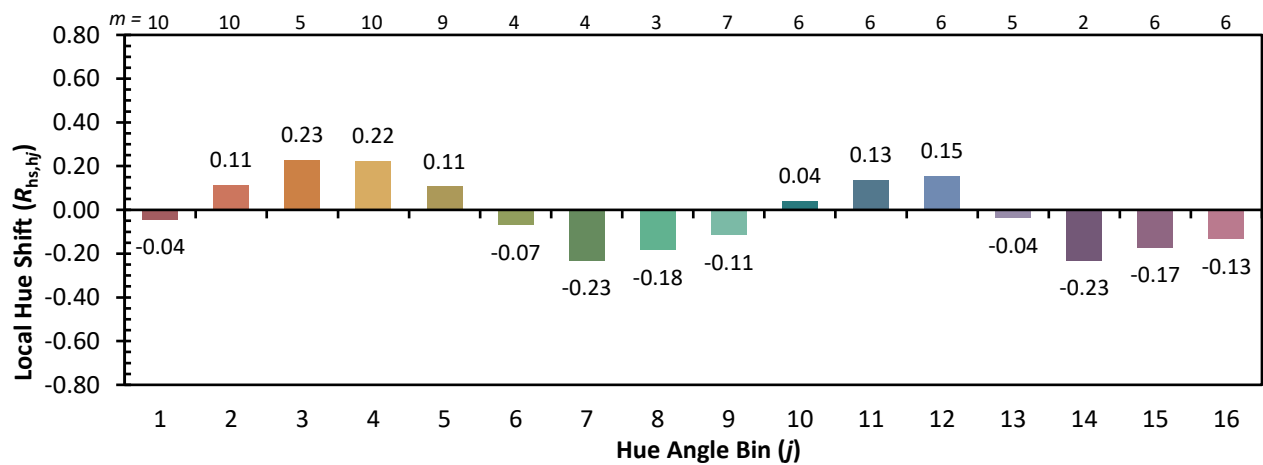
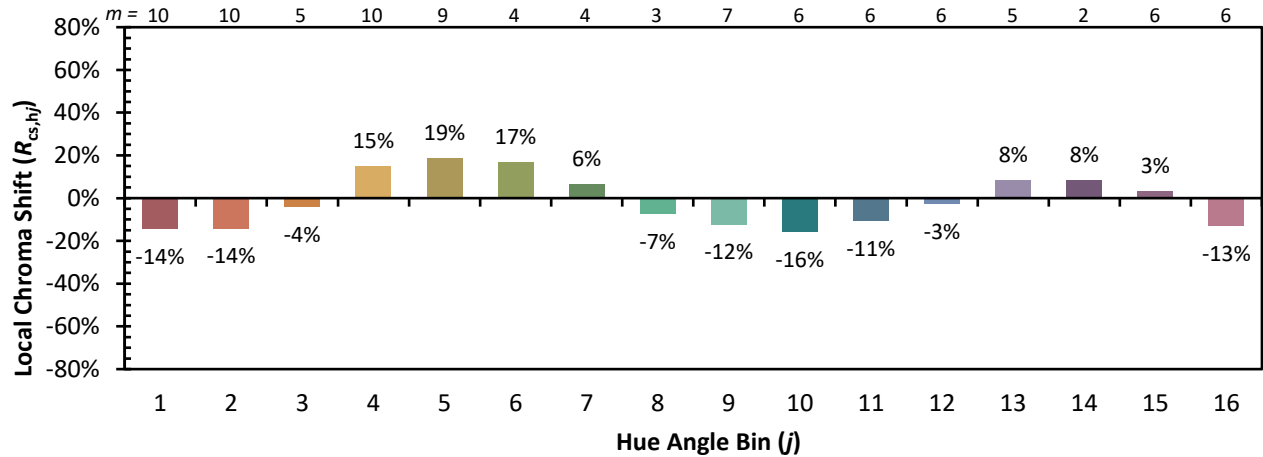


Individual Sample Fidelity Index ($R_{f,i}$)

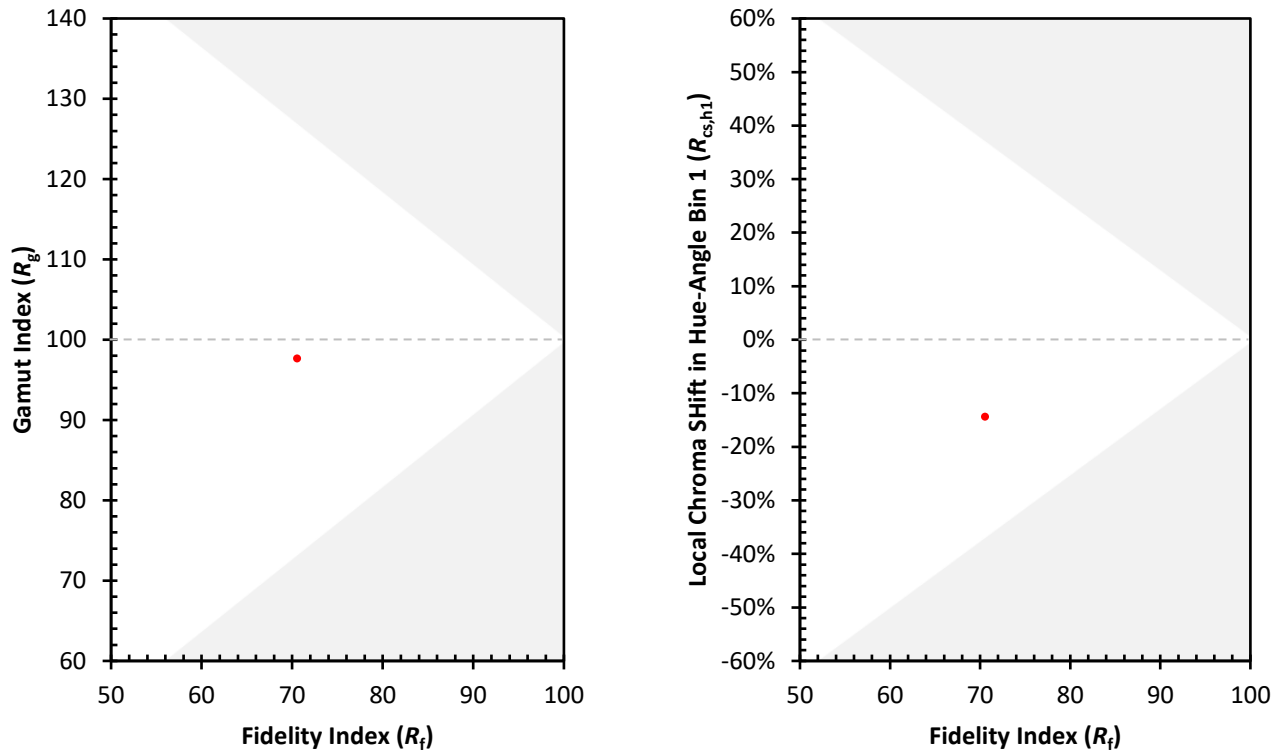
CES01 = 87	CES26 = 60	CES51 = 74	CES76 = 58
CES02 = 65	CES27 = 77	CES52 = 77	CES77 = 82
CES03 = 32	CES28 = 85	CES53 = 65	CES78 = 65
CES04 = 72	CES29 = 50	CES54 = 77	CES79 = 86
CES05 = 52	CES30 = 49	CES55 = 74	CES80 = 85
CES06 = 53	CES31 = 55	CES56 = 64	CES81 = 61
CES07 = 44	CES32 = 55	CES57 = 60	CES82 = 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)