

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: P1068004

Luminaire Tested: **NAV-SA4D-750-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068004
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4D-750-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 4xLight Square PACKAGE
70CRI 5000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (56) 5000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20948.4 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G4

Input Watts (W): 218.9
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

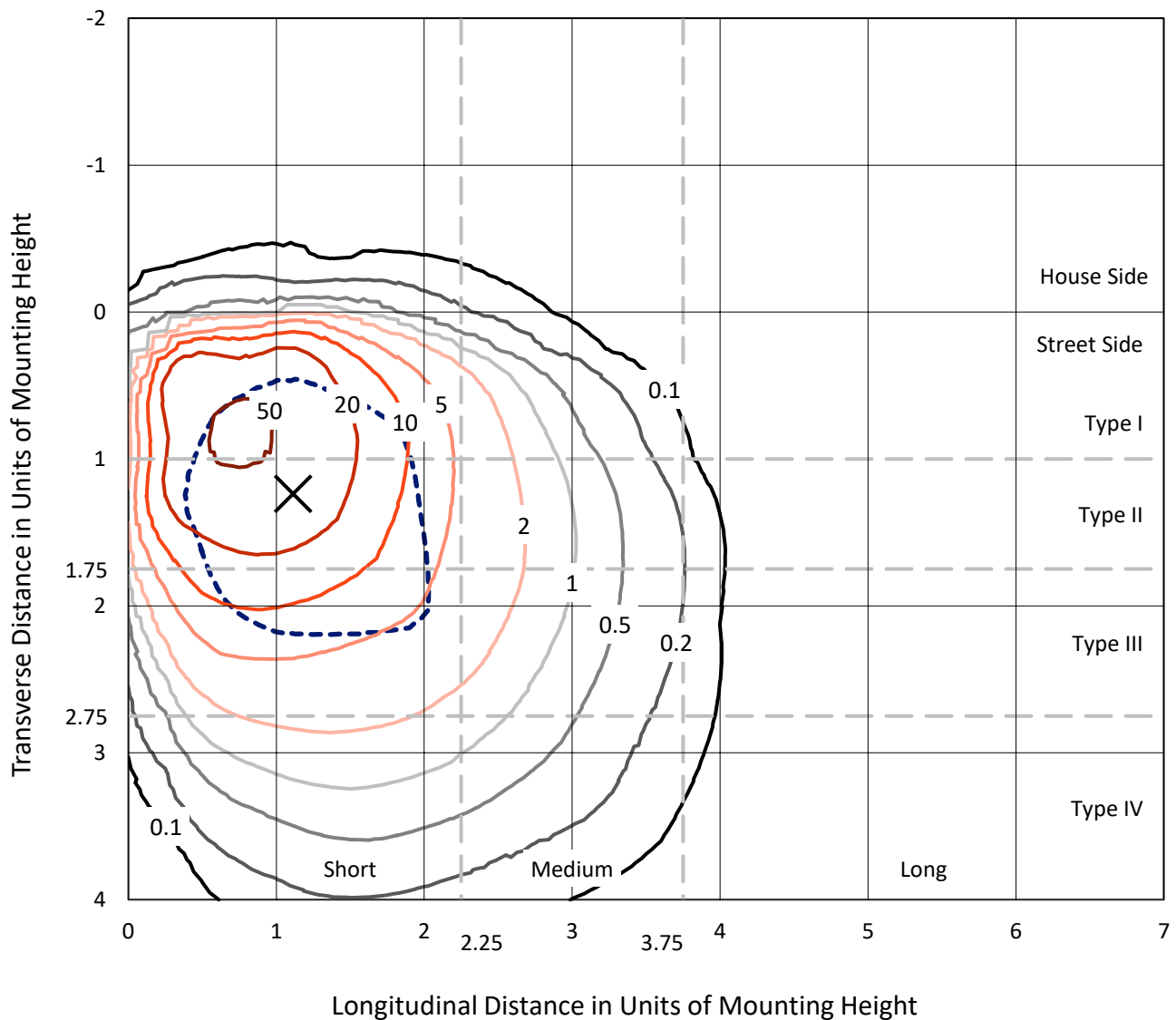


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

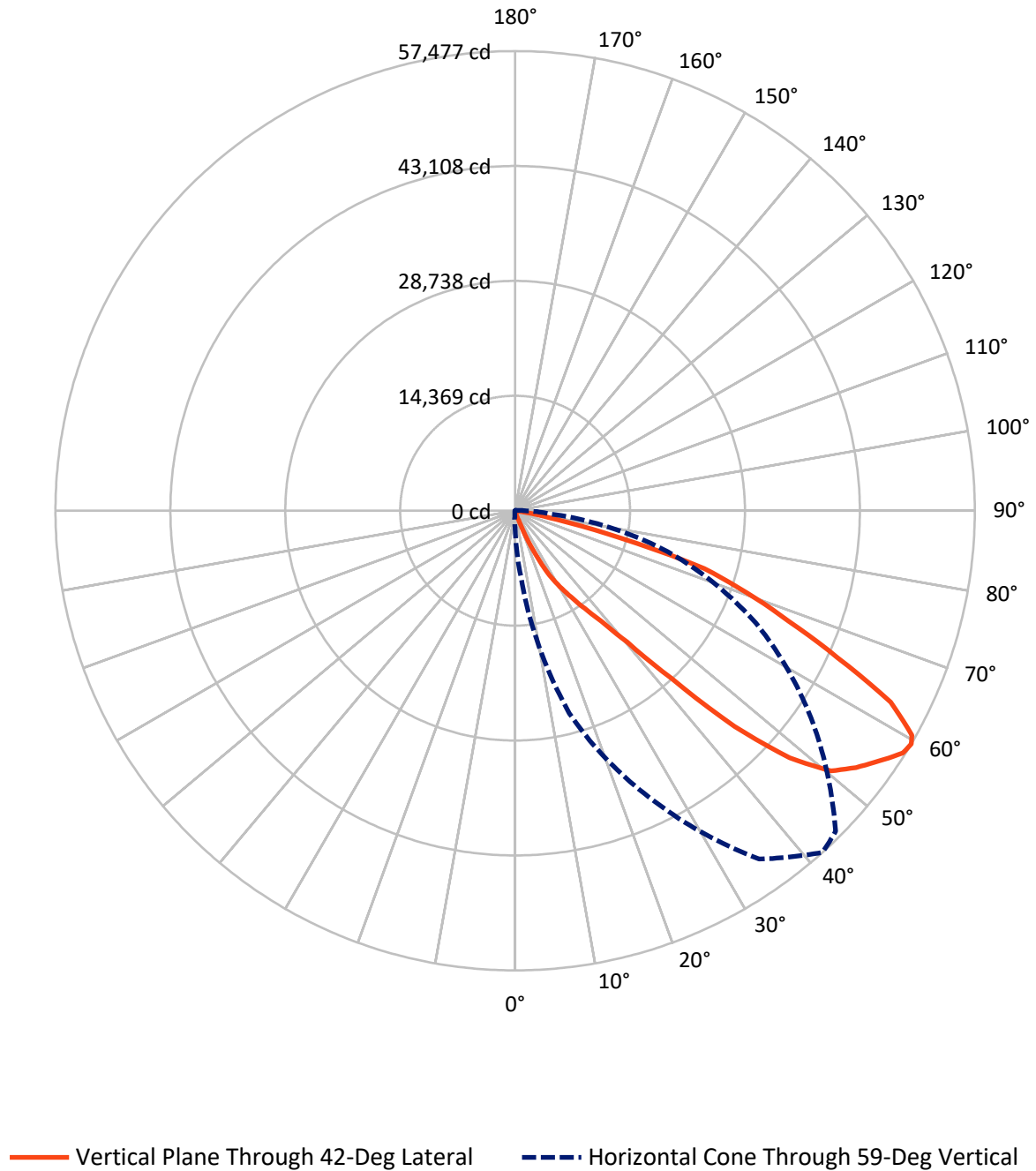


Based on 15 foot mounting height. Maximum calculated value = 62.2 fc
Type III - Short - N/A

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Luminous Intensity Polar Plot



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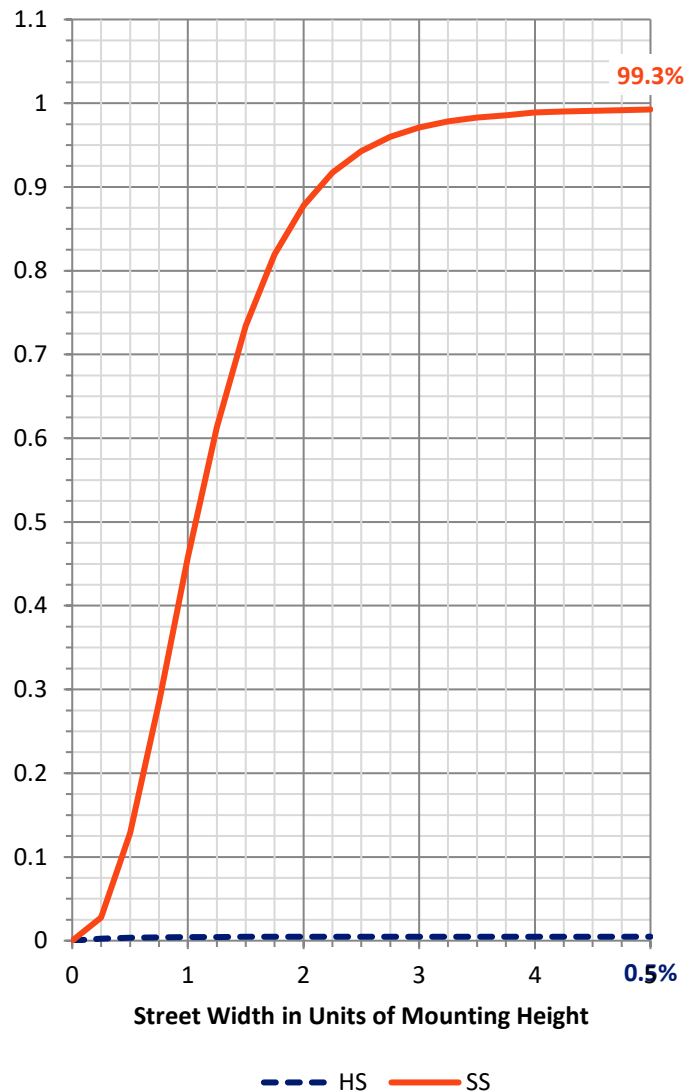
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	100.9	0.0	100.9
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	20847.5	0.0	20847.5
	% Fixture	99.5	0.0	99.5
Total	Lumens	20948.4	0.0	20948.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.1	0.0
10°-20°	30.5	0.1
20°-30°	390.7	1.9
30°-40°	1317.4	6.3
40°-50°	3979.1	19.0
50°-60°	7024.0	33.5
60°-70°	6184.8	29.5
70°-80°	1968.6	9.4
80°-90°	47.1	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°	20948.4	100.0
0°-180°	20948.4	100.0



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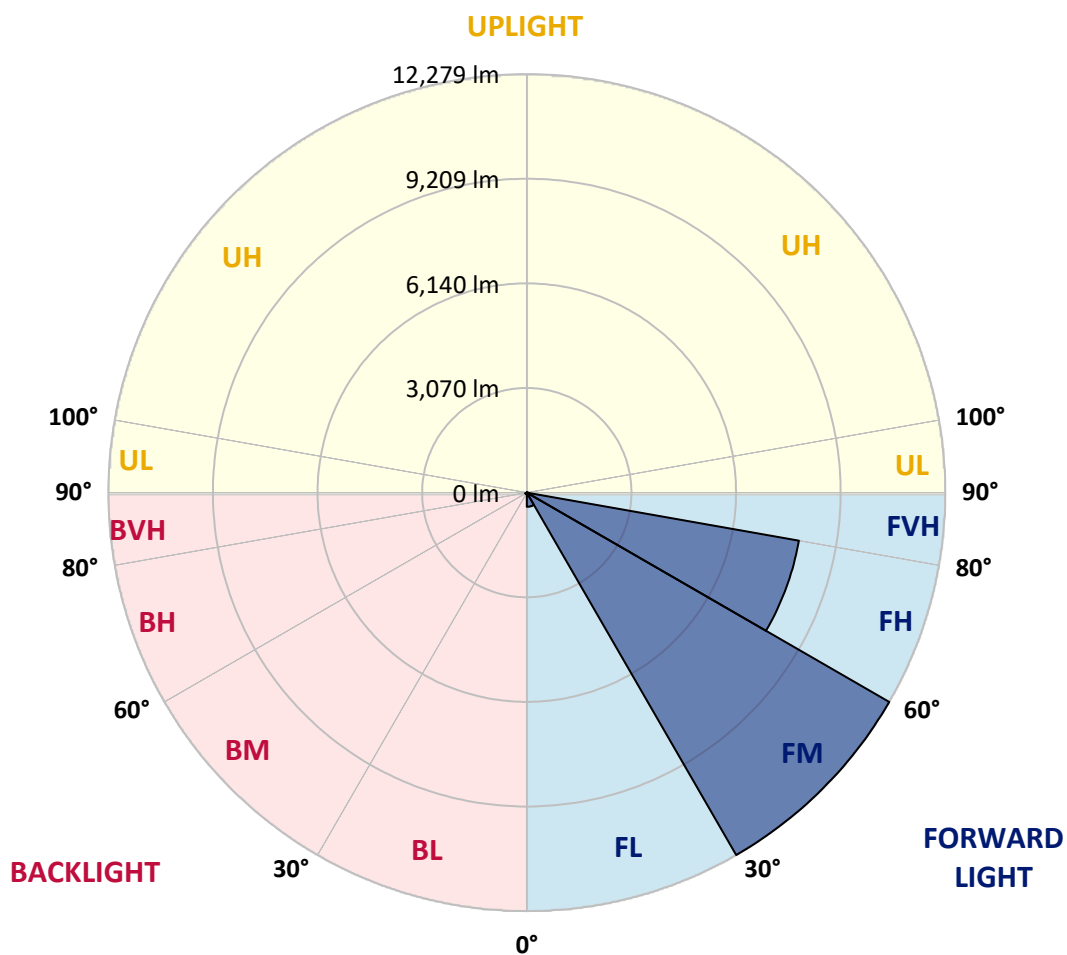
CATALOG NUMBER: NAV-SA4D-750-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	416.2	2.0			
FM	(30°-60°)	12279.2	58.6			
FH	(60°-80°)	8107.2	38.7			G4/12000
FVH	(80°-90°)	44.8	0.2			G1/100
BL	(0°-30°)	11.3	0.1	B0/110		
BM	(30°-60°)	41.2	0.2	B0/220		
BH	(60°-80°)	46.2	0.2	B0/110		G0/110
BVH	(80°-90°)	2.3	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-G4

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
2.5°	92.0	92.0	85.4	78.8	72.2	65.7	65.7	65.7	59.1	59.1	52.5
5°	105.1	105.1	98.5	92.0	92.0	85.4	85.4	78.8	72.2	72.2	65.7
7.5°	111.7	111.7	111.7	111.7	105.1	105.1	105.1	98.5	92.0	85.4	78.8
10°	118.2	124.8	131.4	131.4	131.4	131.4	131.4	124.8	111.7	105.1	92.0
12.5°	131.4	137.9	151.1	164.2	164.2	170.8	164.2	157.6	144.5	124.8	105.1
15°	144.5	157.6	177.3	203.6	229.9	236.4	236.4	216.7	190.5	151.1	124.8
17.5°	164.2	183.9	236.4	321.8	413.8	486.0	486.0	433.5	302.1	197.0	144.5
20°	177.3	216.7	380.9	775.0	1182.2	1484.4	1425.3	1261.1	676.5	308.7	157.6
22.5°	197.0	275.9	807.9	2036.1	3152.7	3704.4	3573.0	2712.6	1517.2	551.7	190.5
25°	223.3	400.6	1602.6	3816.0	5858.7	6456.4	6371.0	5063.9	2765.1	926.1	243.0
27.5°	275.9	591.1	2568.1	5786.4	8643.5	9155.8	9123.0	7415.3	4420.3	1490.9	315.3
30°	348.1	860.4	3809.5	7861.9	10489.1	11008.0	10843.8	9136.1	5963.8	2279.1	407.2
32.5°	433.5	1201.9	4932.6	9392.3	12190.3	12873.3	12676.3	10633.6	7205.1	2949.0	604.3
35°	564.9	1536.9	6042.6	10745.3	14154.1	15021.1	14692.7	12177.1	8275.7	3704.4	729.1
37.5°	630.5	1734.0	7060.6	12216.5	16360.9	17543.2	17293.6	14127.8	9366.0	4669.9	893.3
40°	637.1	1970.4	8118.1	14134.4	19480.8	21589.1	21142.5	17477.5	11395.5	5911.2	1149.4
42.5°	656.8	2325.1	9490.8	17405.3	25608.7	28636.6	28130.8	23638.3	15999.7	8400.5	1628.9
45°	748.8	2995.0	12288.8	23520.1	34022.4	38462.3	37877.8	32222.7	22429.8	13083.5	2778.3
47.5°	1070.6	4505.7	17195.1	30121.0	42626.5	46166.6	46022.1	38987.8	28255.6	17884.7	4709.3
50°	1720.8	6916.1	22777.9	35670.9	48104.2	51145.2	50784.0	41812.0	31579.1	21162.2	6036.0
52.5°	2298.8	9221.5	26285.2	37713.6	49739.6	53365.2	52925.1	42843.2	32452.6	22127.7	6403.8
55°	2443.3	10055.6	27329.5	38344.1	50823.4	55243.7	54606.6	43532.9	32564.3	21438.0	5793.0
57.5°	2371.1	9267.5	26653.0	38961.5	52334.0	57174.7	56327.4	44879.3	32938.6	20268.9	4820.9
59°	2246.3	8295.4	26232.7	39454.1	53168.2	57476.8	56682.0	45174.9	33188.2	19736.9	4229.8
60°	2101.8	7638.6	25904.3	39776.0	53115.6	57003.9	56182.9	45036.9	33286.7	19277.2	3947.4
62.5°	1622.3	6095.1	25431.4	39546.1	49798.8	52688.7	52222.4	41661.0	31841.8	17805.9	3113.2
65°	1261.1	4663.3	23697.4	35270.3	42376.9	44321.0	44176.5	35276.9	26797.5	15349.5	2246.3
67.5°	998.3	3402.2	20039.0	28564.3	34094.6	36859.8	36754.7	28636.6	20341.2	11730.5	1615.7
70°	814.4	2423.6	13740.3	21536.6	27270.4	30751.5	30600.4	23047.2	15073.6	7441.6	1175.7
72.5°	689.6	1550.1	8334.8	16236.2	22758.2	24748.3	24308.3	18594.1	10962.0	4052.5	932.7
75°	584.6	952.4	4131.3	10121.3	13556.4	13543.3	13103.2	9845.5	5884.9	1983.5	742.2
77.5°	472.9	669.9	1622.3	2778.3	4275.8	5293.8	5208.4	3487.6	1760.2	578.0	459.8
80°	308.7	315.3	433.5	761.9	1175.7	1300.5	1477.8	1064.0	512.3	275.9	190.5
82.5°	137.9	151.1	197.0	249.6	249.6	229.9	203.6	151.1	111.7	92.0	46.0
85°	32.8	46.0	32.8	39.4	32.8	26.3	26.3	13.1	0.0	0.0	0.0
87.5°	6.6	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°	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
2.5°	52.5	52.5	52.5	46.0	46.0	46.0	39.4	39.4	39.4	32.8	32.8
5°	65.7	59.1	52.5	52.5	46.0	46.0	39.4	32.8	32.8	32.8	26.3
7.5°	72.2	65.7	59.1	52.5	46.0	39.4	39.4	32.8	26.3	26.3	26.3
10°	85.4	78.8	65.7	52.5	46.0	39.4	32.8	32.8	26.3	19.7	19.7
12.5°	98.5	85.4	72.2	59.1	46.0	39.4	32.8	32.8	26.3	19.7	13.1
15°	111.7	98.5	78.8	59.1	46.0	39.4	32.8	32.8	19.7	13.1	6.6
17.5°	124.8	105.1	78.8	65.7	46.0	39.4	32.8	26.3	13.1	6.6	0.0
20°	131.4	111.7	85.4	65.7	46.0	39.4	32.8	19.7	6.6	0.0	0.0
22.5°	144.5	124.8	92.0	65.7	46.0	32.8	19.7	6.6	0.0	0.0	0.0
25°	170.8	131.4	92.0	65.7	46.0	32.8	13.1	0.0	0.0	0.0	0.0
27.5°	190.5	144.5	92.0	65.7	46.0	26.3	6.6	0.0	0.0	0.0	0.0
30°	223.3	157.6	98.5	65.7	46.0	19.7	6.6	0.0	0.0	0.0	0.0
32.5°	275.9	170.8	98.5	65.7	39.4	19.7	0.0	0.0	0.0	0.0	0.0
35°	335.0	197.0	98.5	65.7	39.4	19.7	0.0	0.0	0.0	0.0	0.0
37.5°	341.5	210.2	98.5	65.7	39.4	13.1	0.0	0.0	0.0	0.0	0.0
40°	354.7	197.0	105.1	65.7	39.4	13.1	0.0	0.0	0.0	0.0	0.0
42.5°	407.2	183.9	111.7	65.7	39.4	13.1	0.0	0.0	0.0	0.0	0.0
45°	604.3	190.5	111.7	72.2	39.4	19.7	0.0	0.0	0.0	0.0	0.0
47.5°	1050.9	197.0	105.1	72.2	39.4	19.7	0.0	0.0	0.0	0.0	0.0
50°	1346.4	229.9	105.1	78.8	46.0	13.1	0.0	0.0	0.0	0.0	0.0
52.5°	1431.8	269.3	105.1	85.4	59.1	6.6	0.0	0.0	0.0	0.0	0.0
55°	1392.4	315.3	111.7	92.0	72.2	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	1287.3	341.5	118.2	98.5	78.8	0.0	0.0	0.0	0.0	0.0	0.0
59°	1175.7	361.2	137.9	105.1	78.8	0.0	0.0	0.0	0.0	0.0	0.0
60°	1083.7	380.9	144.5	111.7	78.8	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	873.5	407.2	157.6	131.4	65.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	761.9	426.9	164.2	144.5	59.1	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	696.2	440.1	177.3	151.1	52.5	0.0	0.0	0.0	0.0	0.0	0.0
70°	643.7	433.5	190.5	144.5	46.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	584.6	413.8	229.9	131.4	39.4	0.0	0.0	0.0	0.0	0.0	0.0
75°	525.4	374.4	249.6	118.2	26.3	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	380.9	315.3	229.9	105.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	164.2	170.8	164.2	78.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	32.8	39.4	32.8	19.7	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°	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
2.5°	32.8	32.8	32.8	32.8	39.4	39.4	52.5	65.7	78.8	85.4	85.4
5°	26.3	26.3	26.3	26.3	26.3	32.8	39.4	52.5	72.2	78.8	78.8
7.5°	19.7	19.7	19.7	19.7	19.7	19.7	32.8	46.0	65.7	72.2	78.8
10°	19.7	13.1	13.1	6.6	6.6	13.1	19.7	39.4	59.1	65.7	72.2
12.5°	13.1	6.6	6.6	0.0	0.0	6.6	13.1	32.8	52.5	59.1	65.7
15°	6.6	0.0	0.0	0.0	0.0	0.0	6.6	26.3	46.0	52.5	65.7
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	39.4	52.5	59.1
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	32.8	46.0	52.5
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	26.3	39.4	46.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.7	26.3	32.8
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	19.7	26.3
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	19.7	26.3
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1	19.7
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1	19.7
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1	13.1
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	13.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	6.6
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):

	285°	295°	305°	315°	318°	325°	335°	345°	355°	360°
0°	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1	59.1
2.5°	92.0	92.0	85.4	78.8	78.8	78.8	85.4	92.0	92.0	92.0
5°	85.4	85.4	78.8	78.8	78.8	78.8	85.4	98.5	105.1	105.1
7.5°	85.4	85.4	78.8	78.8	78.8	78.8	85.4	98.5	105.1	111.7
10°	78.8	78.8	78.8	78.8	72.2	78.8	85.4	98.5	118.2	118.2
12.5°	78.8	78.8	78.8	78.8	72.2	78.8	92.0	105.1	124.8	131.4
15°	78.8	78.8	78.8	72.2	72.2	78.8	92.0	111.7	131.4	144.5
17.5°	72.2	78.8	78.8	72.2	72.2	78.8	92.0	111.7	144.5	164.2
20°	65.7	72.2	78.8	72.2	72.2	72.2	92.0	111.7	151.1	177.3
22.5°	59.1	65.7	72.2	72.2	65.7	72.2	92.0	118.2	164.2	197.0
25°	52.5	59.1	59.1	65.7	65.7	72.2	92.0	118.2	170.8	223.3
27.5°	39.4	46.0	52.5	59.1	59.1	72.2	92.0	124.8	183.9	275.9
30°	32.8	39.4	46.0	52.5	59.1	72.2	92.0	124.8	197.0	348.1
32.5°	32.8	39.4	46.0	52.5	59.1	65.7	92.0	131.4	216.7	433.5
35°	26.3	32.8	39.4	52.5	52.5	65.7	92.0	131.4	236.4	564.9
37.5°	26.3	32.8	39.4	52.5	52.5	65.7	92.0	131.4	289.0	630.5
40°	19.7	26.3	32.8	52.5	52.5	65.7	98.5	137.9	295.6	637.1
42.5°	19.7	26.3	32.8	46.0	52.5	65.7	98.5	137.9	275.9	656.8
45°	19.7	26.3	32.8	52.5	59.1	72.2	98.5	144.5	269.3	748.8
47.5°	19.7	26.3	32.8	52.5	65.7	72.2	98.5	144.5	275.9	1070.6
50°	19.7	26.3	32.8	52.5	72.2	72.2	98.5	144.5	302.1	1720.8
52.5°	13.1	19.7	26.3	46.0	59.1	78.8	105.1	137.9	321.8	2298.8
55°	13.1	13.1	19.7	39.4	52.5	85.4	111.7	137.9	374.4	2443.3
57.5°	13.1	13.1	19.7	32.8	46.0	92.0	118.2	137.9	433.5	2371.1
59°	13.1	13.1	13.1	26.3	39.4	92.0	118.2	144.5	440.1	2246.3
60°	13.1	13.1	13.1	26.3	39.4	92.0	124.8	151.1	446.6	2101.8
62.5°	6.6	6.6	6.6	26.3	32.8	92.0	137.9	183.9	459.8	1622.3
65°	13.1	13.1	6.6	19.7	32.8	78.8	157.6	197.0	466.3	1261.1
67.5°	13.1	13.1	13.1	26.3	32.8	78.8	164.2	203.6	466.3	998.3
70°	13.1	13.1	13.1	26.3	39.4	78.8	164.2	210.2	459.8	814.4
72.5°	13.1	13.1	13.1	26.3	39.4	72.2	151.1	216.7	440.1	689.6
75°	13.1	13.1	13.1	19.7	32.8	65.7	144.5	236.4	400.6	584.6
77.5°	13.1	13.1	13.1	13.1	26.3	52.5	131.4	262.7	354.7	472.9
80°	19.7	13.1	13.1	13.1	19.7	46.0	124.8	256.2	295.6	308.7
82.5°	19.7	13.1	13.1	6.6	13.1	32.8	98.5	197.0	151.1	137.9
85°	13.1	13.1	13.1	6.6	6.6	19.7	46.0	59.1	46.0	32.8
87.5°	13.1	13.1	13.1	6.6	6.6	6.6	6.6	6.6	6.6	6.6
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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

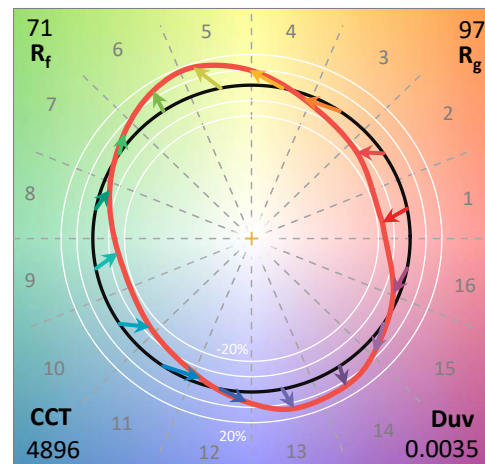
Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-6
 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-750-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI
 5000K CCT 26 LEDS

Spectral Parameters

CCT (K):	4896	CRI (Ra):	70.2		
CIE u':	0.2101	R1:	68.1	R9:	-35.1
CIE v':	0.4901	R2:	73.9	R10:	39.3
Duv:	0.0035	R3:	79.4	R11:	71.1
CIE x:	0.3489	R4:	72.1	R12:	43.8
CIE y:	0.3618	R5:	69.2	R13:	68.1
CIE z:	0.2893	R6:	65.7	R14:	88.4
Peak Wavelength (nm):	443	R7:	78.1	R15:	59.7
Dominant Wavelength (nm):	570	R8:	55.3		
Purity:	13.25435				
Rf:	70.7				
Rg:	96.8				



Test Conditions

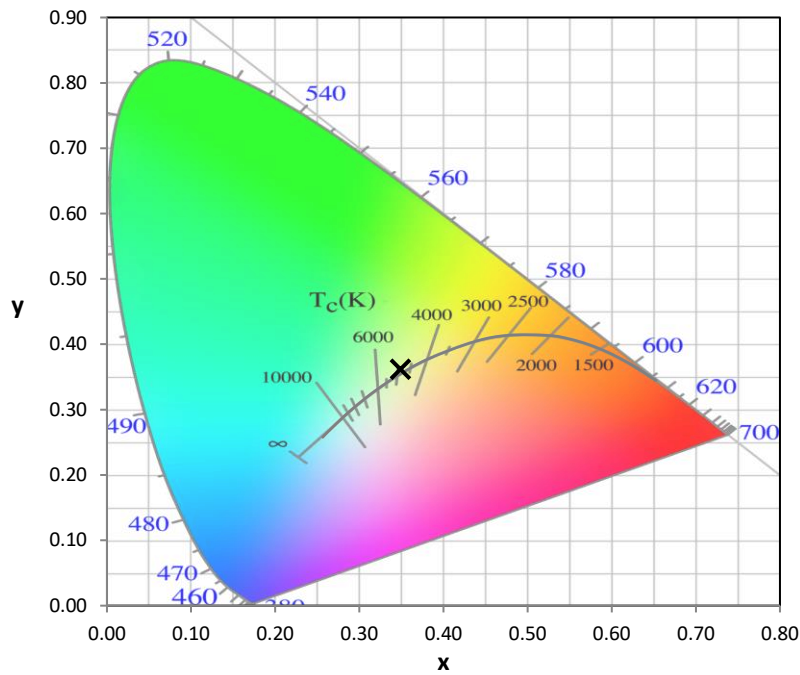
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-6

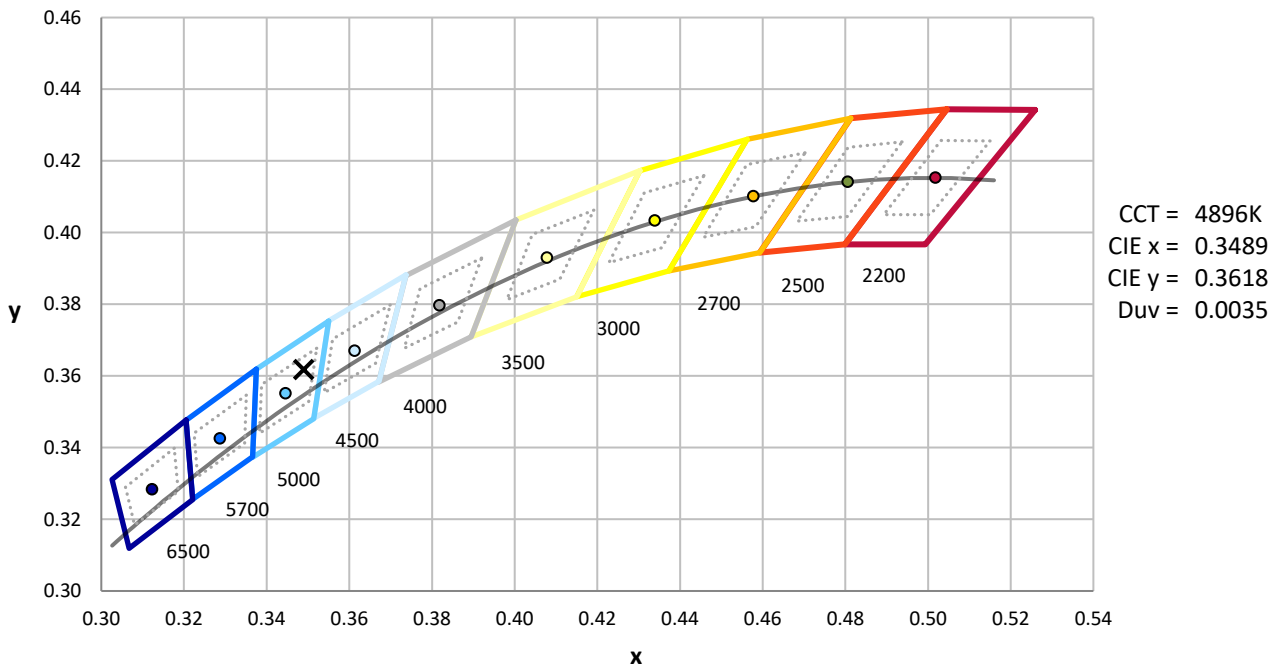
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



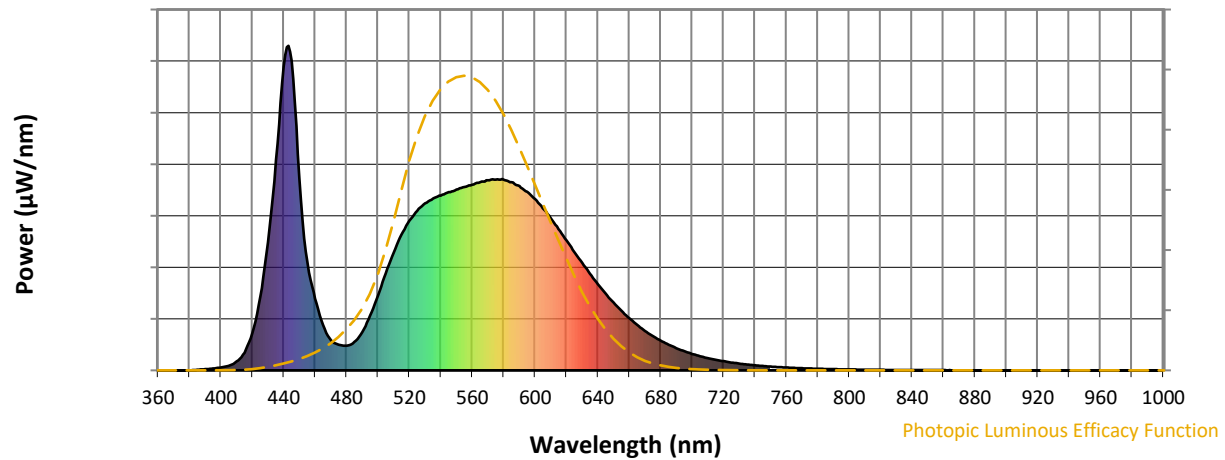
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-6

Photopic Flux vs. Wavelength

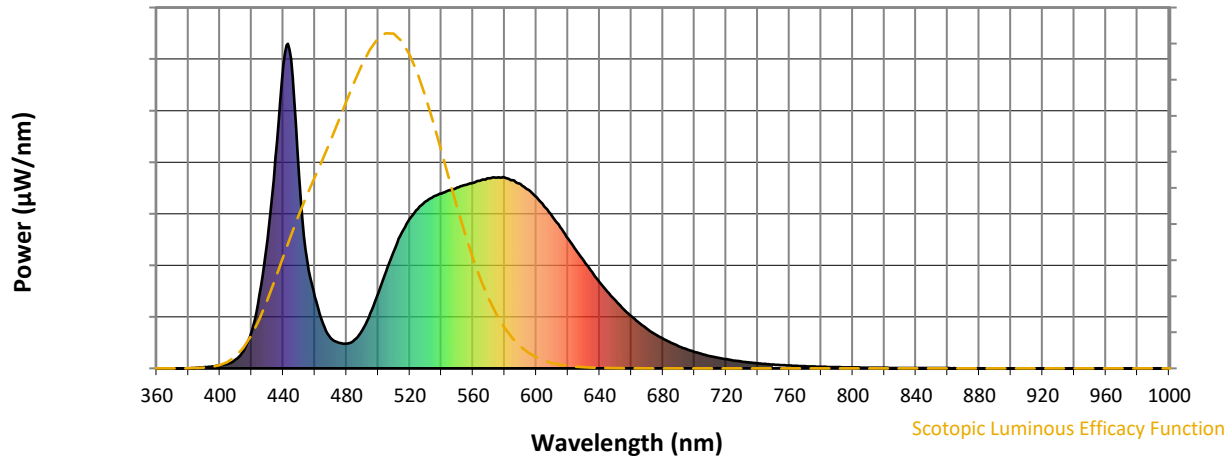


Photopic Lumens: NR

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	118	NR	620	401	NR	750	12	NR	880	0	NR
365	0	NR	495	168	NR	625	365	NR	755	10	NR	885	0	NR
370	0	NR	500	230	NR	630	331	NR	760	9	NR	890	0	NR
375	0	NR	505	299	NR	635	298	NR	765	8	NR	895	0	NR
380	0	NR	510	362	NR	640	266	NR	770	6	NR	900	0	NR
385	2	NR	515	418	NR	645	236	NR	775	6	NR	905	0	NR
390	4	NR	520	461	NR	650	209	NR	780	5	NR	910	0	NR
395	6	NR	525	491	NR	655	184	NR	785	4	NR	915	0	NR
400	9	NR	530	514	NR	660	160	NR	790	4	NR	920	0	NR
405	14	NR	535	530	NR	665	140	NR	795	3	NR	925	0	NR
410	27	NR	540	539	NR	670	122	NR	800	3	NR	930	0	NR
415	55	NR	545	549	NR	675	106	NR	805	2	NR	935	0	NR
420	115	NR	550	557	NR	680	92	NR	810	2	NR	940	0	NR
425	226	NR	555	565	NR	685	79	NR	815	2	NR	945	0	NR
430	395	NR	560	572	NR	690	68	NR	820	2	NR	950	0	NR
435	648	NR	565	580	NR	695	59	NR	825	1	NR	955	0	NR
440	937	NR	570	586	NR	700	51	NR	830	1	NR	960	0	NR
445	953	NR	575	588	NR	705	44	NR	835	1	NR	965	0	NR
450	591	NR	580	588	NR	710	38	NR	840	1	NR	970	0	NR
455	334	NR	585	580	NR	715	32	NR	845	1	NR	975	0	NR
460	221	NR	590	568	NR	720	28	NR	850	1	NR	980	0	NR
465	140	NR	595	550	NR	725	24	NR	855	1	NR	985	0	NR
470	93	NR	600	527	NR	730	21	NR	860	1	NR	990	0	NR
475	79	NR	605	499	NR	735	18	NR	865	0	NR	995	0	NR
480	76	NR	610	469	NR	740	15	NR	870	0	NR	1000	0	NR
485	87	NR	615	435	NR	745	13	NR	875	0	NR			

REPORT NUMBER: SP1-2407-184-6

Scotopic Flux vs. Wavelength



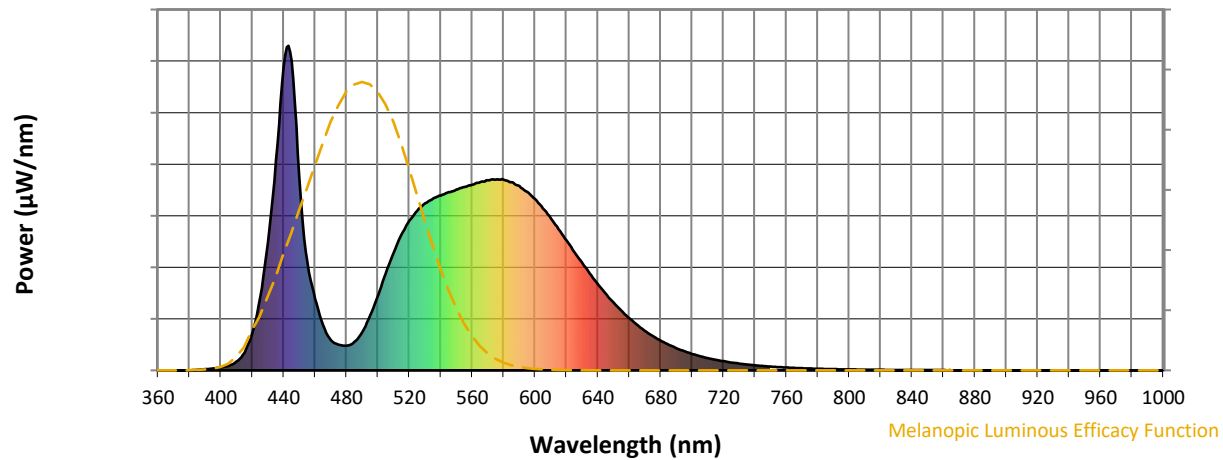
Scotopic Lumens: NR

S/P: 1.7

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	118	NR	620	401	NR	750	12	NR	880	0	NR
365	0	NR	495	168	NR	625	365	NR	755	10	NR	885	0	NR
370	0	NR	500	230	NR	630	331	NR	760	9	NR	890	0	NR
375	0	NR	505	299	NR	635	298	NR	765	8	NR	895	0	NR
380	0	NR	510	362	NR	640	266	NR	770	6	NR	900	0	NR
385	2	NR	515	418	NR	645	236	NR	775	6	NR	905	0	NR
390	4	NR	520	461	NR	650	209	NR	780	5	NR	910	0	NR
395	6	NR	525	491	NR	655	184	NR	785	4	NR	915	0	NR
400	9	NR	530	514	NR	660	160	NR	790	4	NR	920	0	NR
405	14	NR	535	530	NR	665	140	NR	795	3	NR	925	0	NR
410	27	NR	540	539	NR	670	122	NR	800	3	NR	930	0	NR
415	55	NR	545	549	NR	675	106	NR	805	2	NR	935	0	NR
420	115	NR	550	557	NR	680	92	NR	810	2	NR	940	0	NR
425	226	NR	555	565	NR	685	79	NR	815	2	NR	945	0	NR
430	395	NR	560	572	NR	690	68	NR	820	2	NR	950	0	NR
435	648	NR	565	580	NR	695	59	NR	825	1	NR	955	0	NR
440	937	NR	570	586	NR	700	51	NR	830	1	NR	960	0	NR
445	953	NR	575	588	NR	705	44	NR	835	1	NR	965	0	NR
450	591	NR	580	588	NR	710	38	NR	840	1	NR	970	0	NR
455	334	NR	585	580	NR	715	32	NR	845	1	NR	975	0	NR
460	221	NR	590	568	NR	720	28	NR	850	1	NR	980	0	NR
465	140	NR	595	550	NR	725	24	NR	855	1	NR	985	0	NR
470	93	NR	600	527	NR	730	21	NR	860	1	NR	990	0	NR
475	79	NR	605	499	NR	735	18	NR	865	0	NR	995	0	NR
480	76	NR	610	469	NR	740	15	NR	870	0	NR	1000	0	NR
485	87	NR	615	435	NR	745	13	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.37

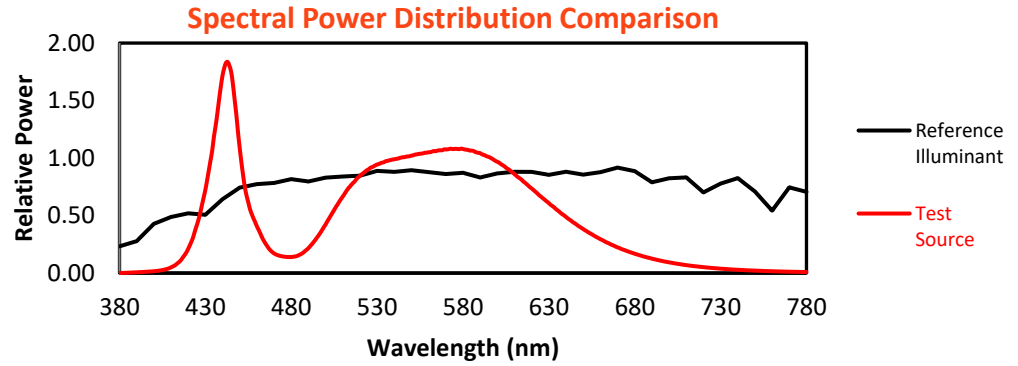
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	118	NR	620	401	NR	750	12	NR	880	0	NR
365	0	NR	495	168	NR	625	365	NR	755	10	NR	885	0	NR
370	0	NR	500	230	NR	630	331	NR	760	9	NR	890	0	NR
375	0	NR	505	299	NR	635	298	NR	765	8	NR	895	0	NR
380	0	NR	510	362	NR	640	266	NR	770	6	NR	900	0	NR
385	2	NR	515	418	NR	645	236	NR	775	6	NR	905	0	NR
390	4	NR	520	461	NR	650	209	NR	780	5	NR	910	0	NR
395	6	NR	525	491	NR	655	184	NR	785	4	NR	915	0	NR
400	9	NR	530	514	NR	660	160	NR	790	4	NR	920	0	NR
405	14	NR	535	530	NR	665	140	NR	795	3	NR	925	0	NR
410	27	NR	540	539	NR	670	122	NR	800	3	NR	930	0	NR
415	55	NR	545	549	NR	675	106	NR	805	2	NR	935	0	NR
420	115	NR	550	557	NR	680	92	NR	810	2	NR	940	0	NR
425	226	NR	555	565	NR	685	79	NR	815	2	NR	945	0	NR
430	395	NR	560	572	NR	690	68	NR	820	2	NR	950	0	NR
435	648	NR	565	580	NR	695	59	NR	825	1	NR	955	0	NR
440	937	NR	570	586	NR	700	51	NR	830	1	NR	960	0	NR
445	953	NR	575	588	NR	705	44	NR	835	1	NR	965	0	NR
450	591	NR	580	588	NR	710	38	NR	840	1	NR	970	0	NR
455	334	NR	585	580	NR	715	32	NR	845	1	NR	975	0	NR
460	221	NR	590	568	NR	720	28	NR	850	1	NR	980	0	NR
465	140	NR	595	550	NR	725	24	NR	855	1	NR	985	0	NR
470	93	NR	600	527	NR	730	21	NR	860	1	NR	990	0	NR
475	79	NR	605	499	NR	735	18	NR	865	0	NR	995	0	NR
480	76	NR	610	469	NR	740	15	NR	870	0	NR	1000	0	NR
485	87	NR	615	435	NR	745	13	NR	875	0	NR			

REPORT NUMBER: SP1-2407-184-6

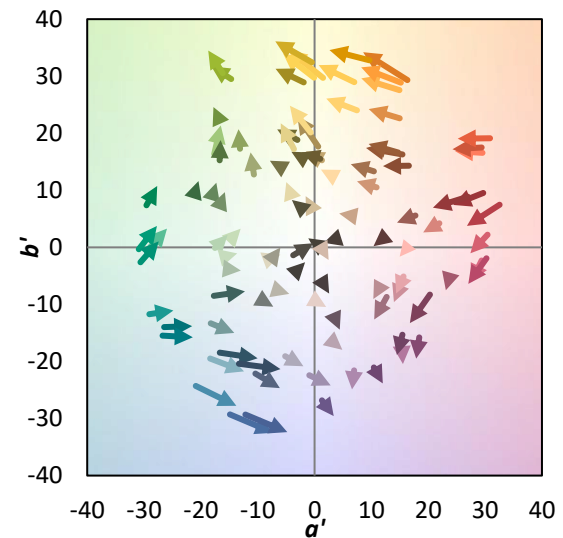
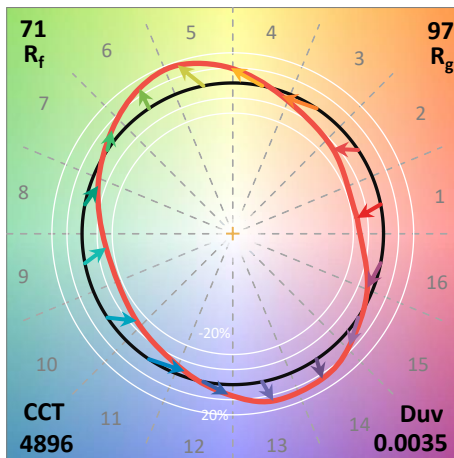
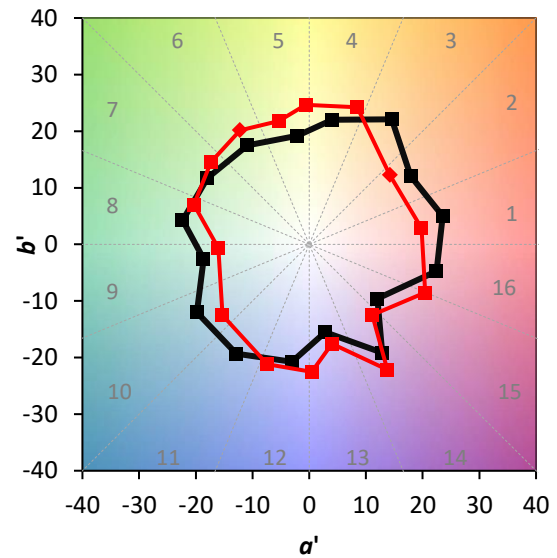
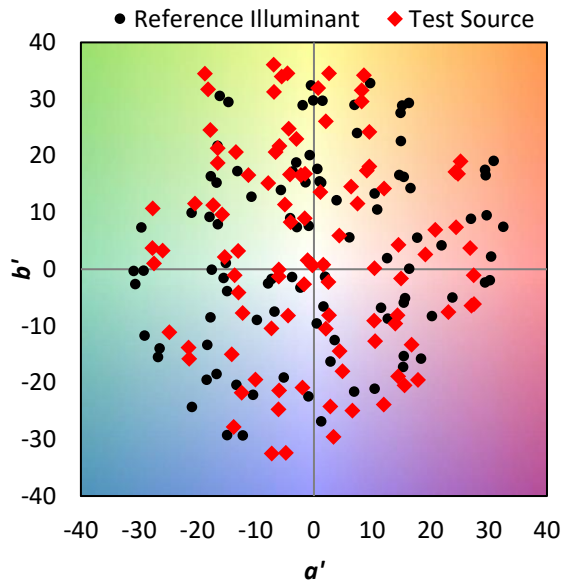
TM-30-18

Summary

$R_f = 70.7$
 $R_g = 96.8$
 $CIE R_a = 70.2$
 $R_g = -35.1$

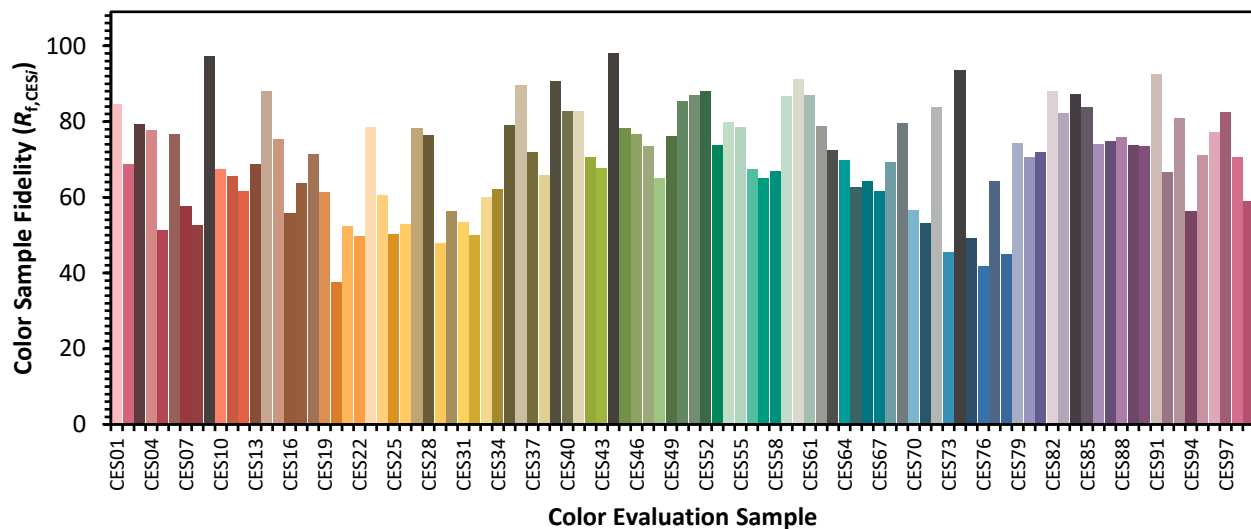


Color Vector Graphics

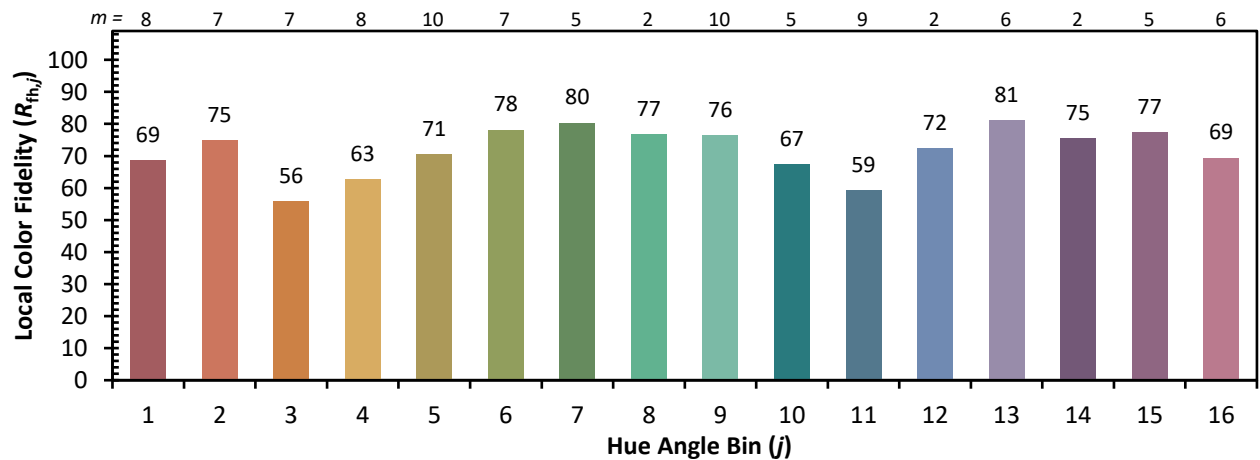
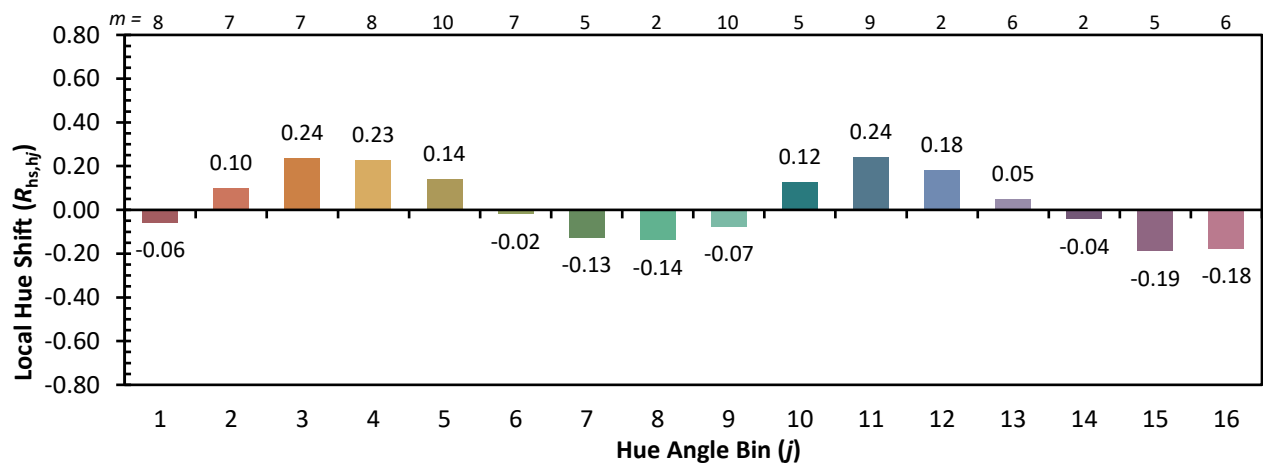
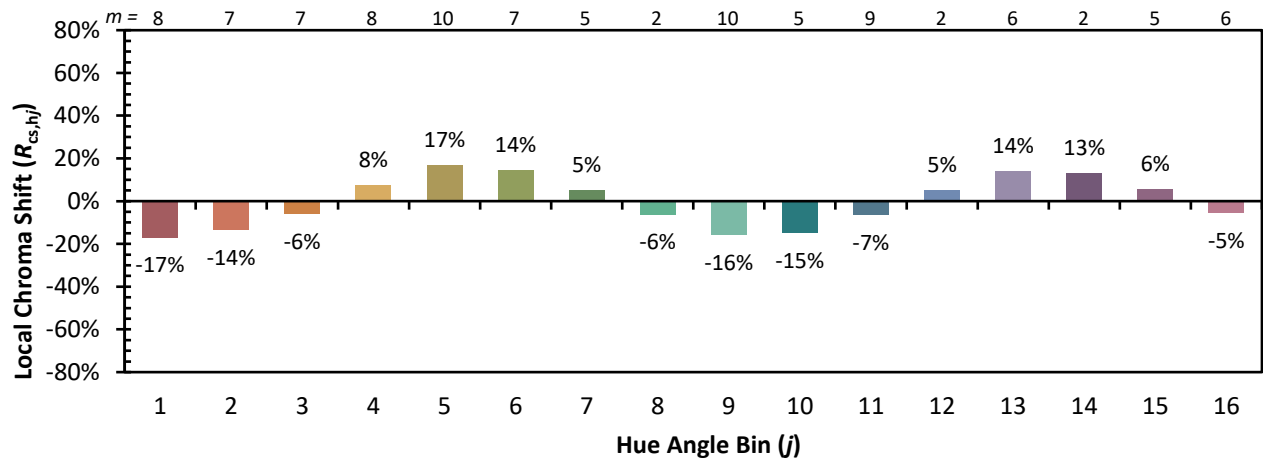


Individual Sample Fidelity Index ($R_{f,i}$)

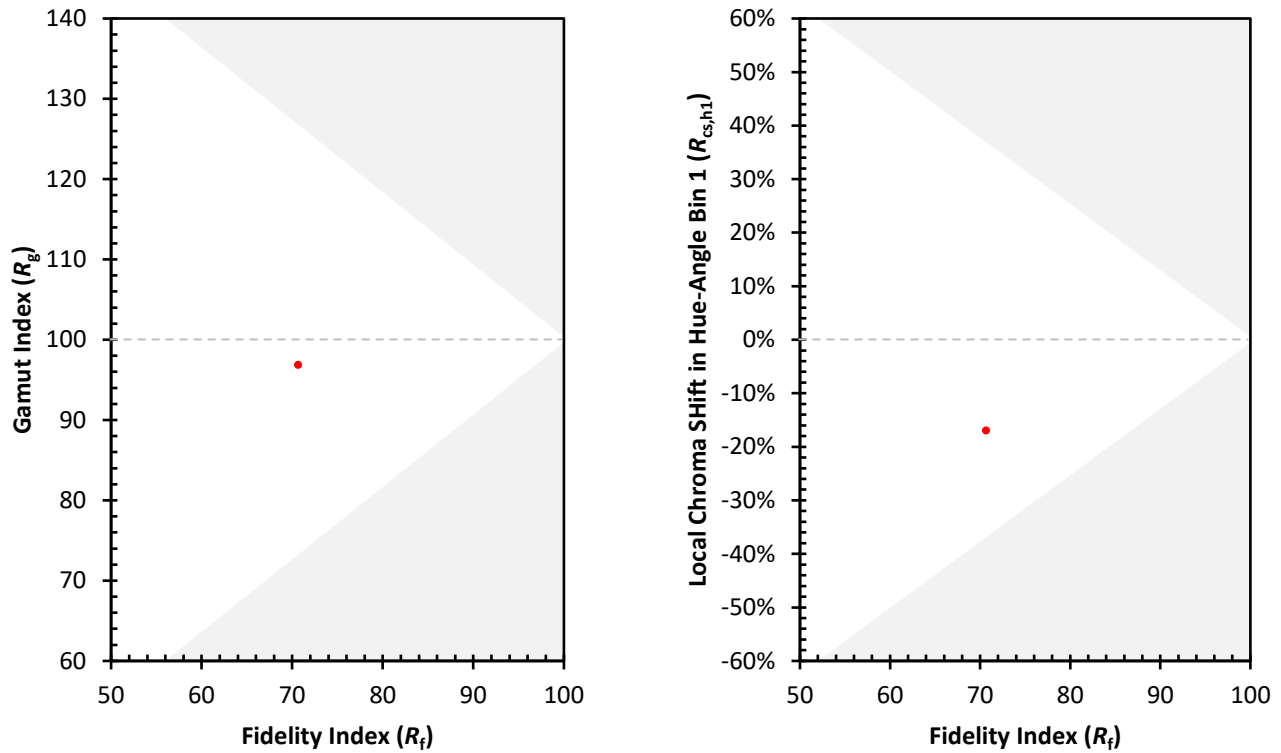
CES01 = 85	CES26 = 53	CES51 = 87	CES76 = 42
CES02 = 59	CES27 = 78	CES52 = 88	CES77 = 64
CES03 = 30	CES28 = 76	CES53 = 74	CES78 = 45
CES04 = 69	CES29 = 48	CES54 = 80	CES79 = 74
CES05 = 46	CES30 = 56	CES55 = 79	CES80 = 71
CES06 = 50	CES31 = 54	CES56 = 68	CES81 = 72
CES07 = 39	CES32 = 50	CES57 = 65	CES82 = 88
CES08 = 38	CES33 = 60	CES58 = 67	CES83 = 82
CES09 = 29	CES34 = 62	CES59 = 87	CES84 = 87
CES10 = 72	CES35 = 79	CES60 = 91	CES85 = 84
CES11 = 56	CES36 = 90	CES61 = 87	CES86 = 74
CES12 = 61	CES37 = 72	CES62 = 79	CES87 = 75
CES13 = 41	CES38 = 66	CES63 = 72	CES88 = 76
CES14 = 74	CES39 = 91	CES64 = 70	CES89 = 74
CES15 = 70	CES40 = 83	CES65 = 63	CES90 = 73
CES16 = 46	CES41 = 83	CES66 = 64	CES91 = 92
CES17 = 49	CES42 = 70	CES67 = 62	CES92 = 67
CES18 = 55	CES43 = 68	CES68 = 69	CES93 = 81
CES19 = 71	CES44 = 98	CES69 = 80	CES94 = 56
CES20 = 64	CES45 = 78	CES70 = 56	CES95 = 71
CES21 = 85	CES46 = 77	CES71 = 53	CES96 = 77
CES22 = 77	CES47 = 73	CES72 = 84	CES97 = 82
CES23 = 91	CES48 = 65	CES73 = 46	CES98 = 71
CES24 = 90	CES49 = 76	CES74 = 94	CES99 = 59
CES25 = 71	CES50 = 85	CES75 = 49	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)