

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: P1068078

Luminaire Tested: **NAV-SA5B-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068078
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5B-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 800mA 5xLight Square PACKAGE
80CRI 3000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (70) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15246.8 lumens
Efficiency: N/A
Efficacy: 85.3 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): 178.8
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



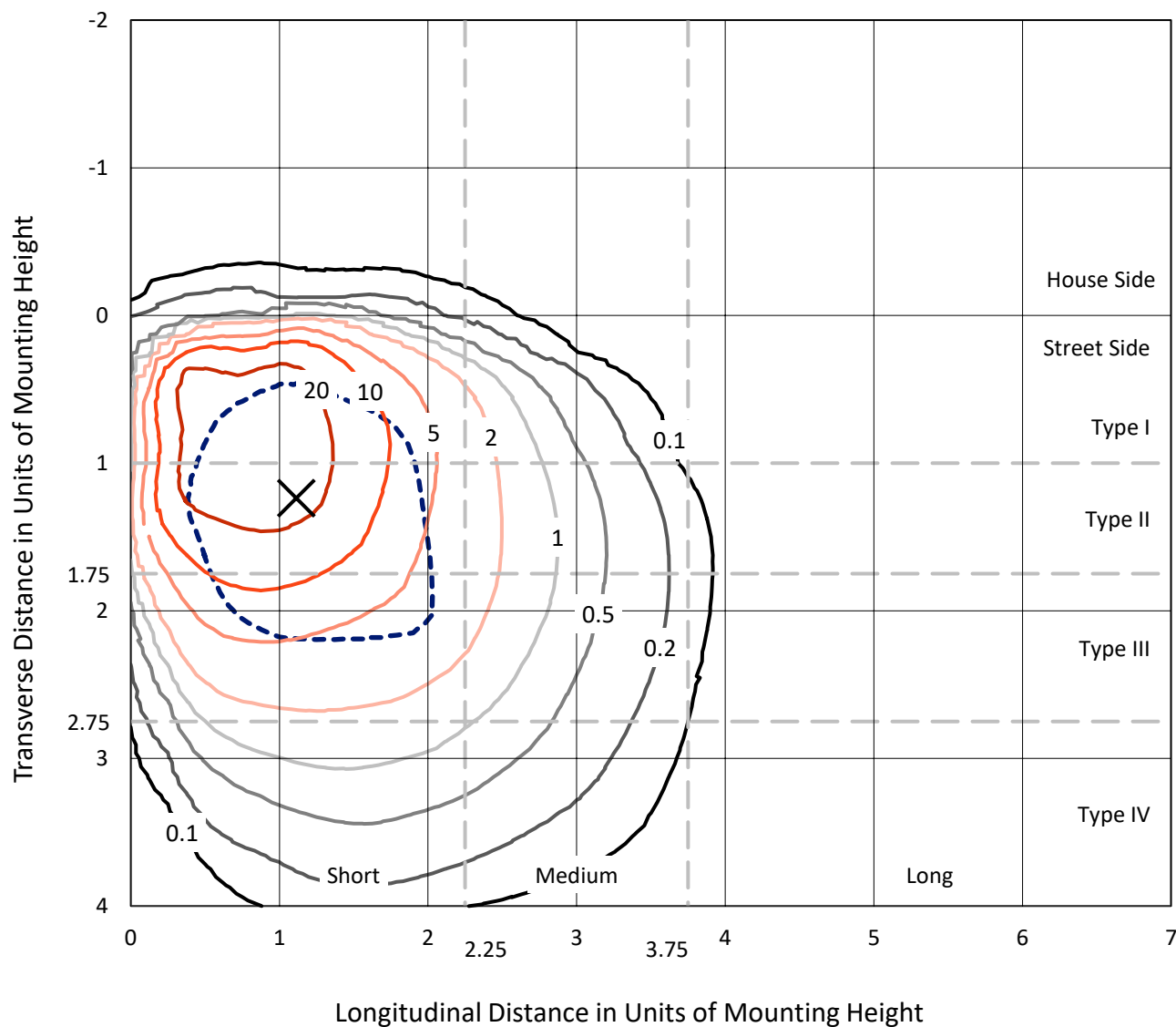
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

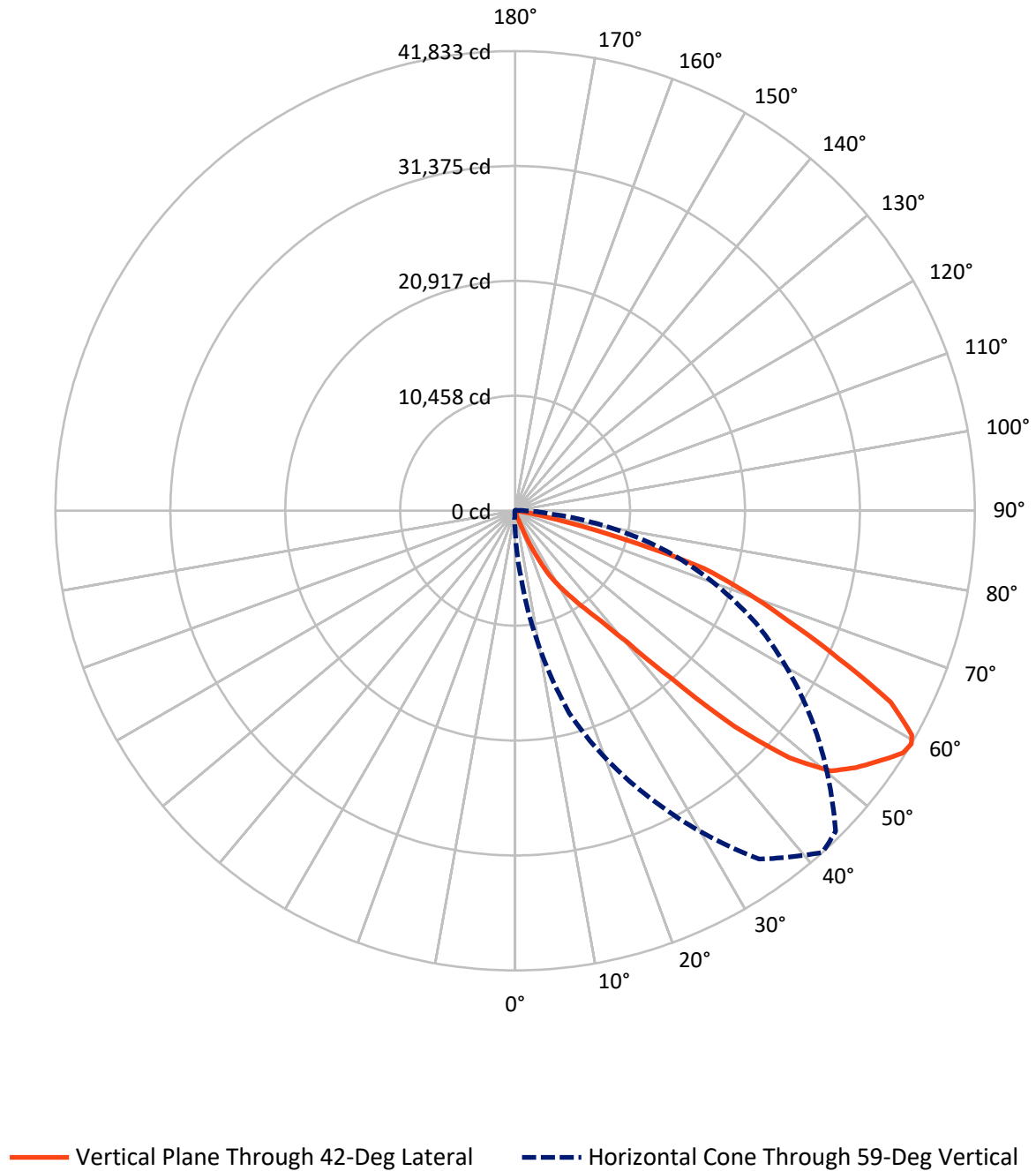


Based on 15 foot mounting height. Maximum calculated value = 45.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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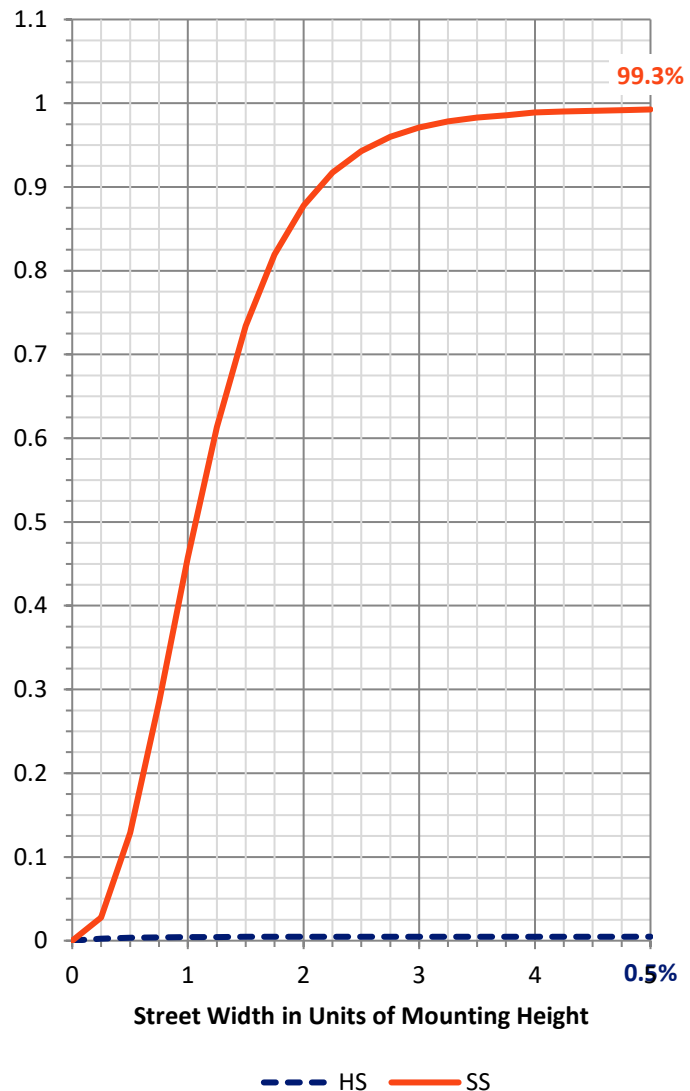
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	73.5	0.0	73.5
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	15173.4	0.0	15173.4
	% Fixture	99.5	0.0	99.5
Total	Lumens	15246.8	0.0	15246.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.5	0.0
10°-20°	22.2	0.1
20°-30°	284.4	1.9
30°-40°	958.8	6.3
40°-50°	2896.1	19.0
50°-60°	5112.3	33.5
60°-70°	4501.4	29.5
70°-80°	1432.8	9.4
80°-90°	34.3	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°	15246.8	100.0
0°-180°	15246.8	100.0



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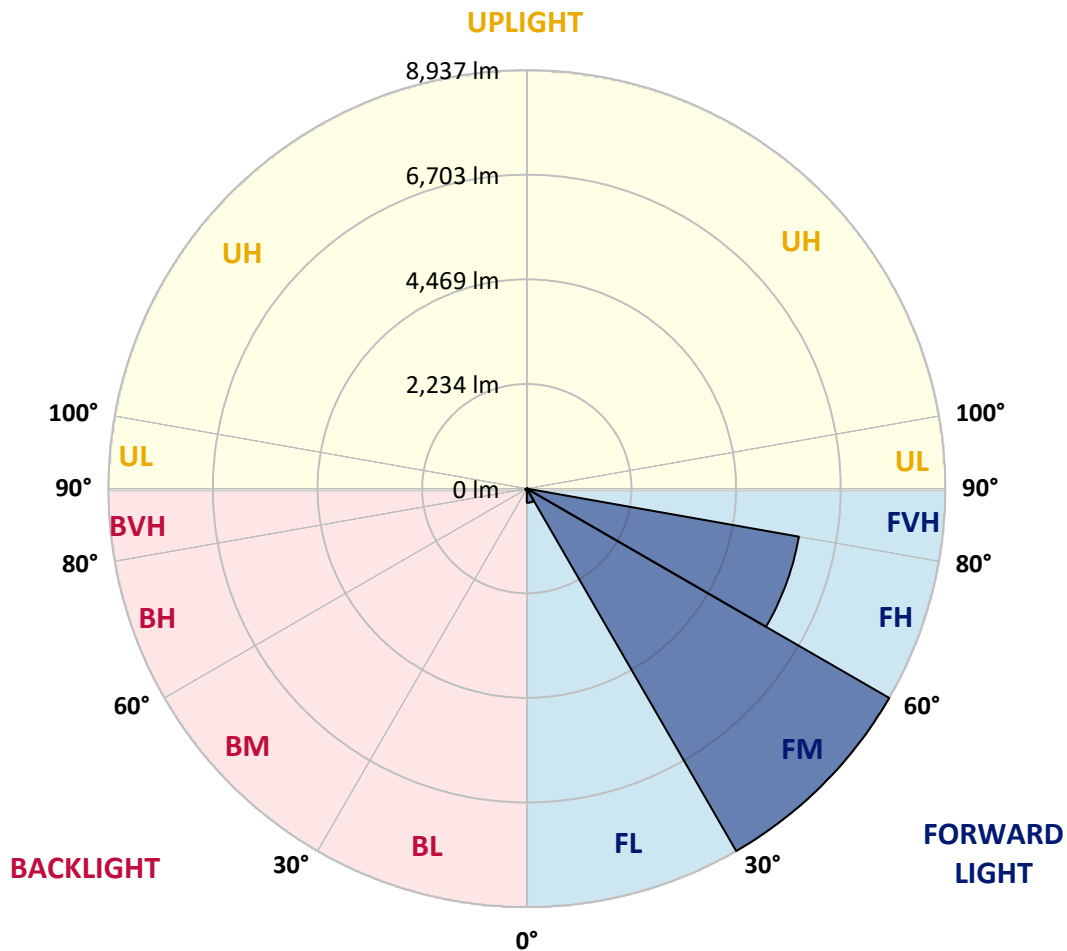
CATALOG NUMBER: NAV-SA5B-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	302.9	2.0			
FM	(30°-60°)	8937.2	58.6			
FH	(60°-80°)	5900.7	38.7			G3/7500
FVH	(80°-90°)	32.6	0.2			G1/100
BL	(0°-30°)	8.2	0.1	B0/110		
BM	(30°-60°)	30.0	0.2	B0/220		
BH	(60°-80°)	33.6	0.2	B0/110		G0/110
BVH	(80°-90°)	1.7	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°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	66.9	66.9	62.1	57.4	52.6	47.8	47.8	47.8	43.0	43.0	38.2
5°	76.5	76.5	71.7	66.9	66.9	62.1	62.1	57.4	52.6	52.6	47.8
7.5°	81.3	81.3	81.3	81.3	76.5	76.5	76.5	71.7	66.9	62.1	57.4
10°	86.0	90.8	95.6	95.6	95.6	95.6	95.6	90.8	81.3	76.5	66.9
12.5°	95.6	100.4	109.9	119.5	119.5	124.3	119.5	114.7	105.2	90.8	76.5
15°	105.2	114.7	129.1	148.2	167.3	172.1	172.1	157.8	138.6	109.9	90.8
17.5°	119.5	133.9	172.1	234.2	301.2	353.7	353.7	315.5	219.9	143.4	105.2
20°	129.1	157.8	277.3	564.1	860.5	1080.4	1037.3	917.8	492.4	224.7	114.7
22.5°	143.4	200.8	588.0	1481.9	2294.6	2696.1	2600.5	1974.3	1104.3	401.6	138.6
25°	162.5	291.6	1166.4	2777.4	4264.1	4699.1	4637.0	3685.7	2012.5	674.0	176.9
27.5°	200.8	430.2	1869.1	4211.5	6291.0	6663.9	6640.0	5397.1	3217.2	1085.1	229.5
30°	253.4	626.2	2772.6	5722.1	7634.3	8011.9	7892.4	6649.5	4340.6	1658.8	296.4
32.5°	315.5	874.8	3590.1	6835.9	8872.4	9369.6	9226.1	7739.4	5244.1	2146.4	439.8
35°	411.1	1118.6	4398.0	7820.7	10301.7	10932.7	10693.7	8862.8	6023.3	2696.1	530.6
37.5°	458.9	1262.0	5138.9	8891.5	11907.9	12768.4	12586.7	10282.6	6816.8	3398.9	650.1
40°	463.7	1434.1	5908.6	10287.4	14178.6	15713.1	15388.1	12720.6	8294.0	4302.3	836.6
42.5°	478.0	1692.3	6907.7	12668.0	18638.7	20842.5	20474.4	17204.6	11645.0	6114.1	1185.5
45°	545.0	2179.9	8944.1	17118.6	24762.4	27993.9	27568.5	23452.6	16325.0	9522.5	2022.1
47.5°	779.2	3279.3	12515.0	21922.8	31024.7	33601.3	33496.1	28376.4	20565.2	13017.0	3427.5
50°	1252.5	5033.7	16578.4	25962.3	35011.5	37224.8	36961.9	30431.9	22984.1	15402.4	4393.2
52.5°	1673.1	6711.7	19131.1	27449.0	36201.8	38840.6	38520.3	31182.4	23619.9	16105.1	4660.9
55°	1778.3	7318.8	19891.2	27907.9	36990.6	40207.8	39744.1	31684.4	23701.1	15603.2	4216.3
57.5°	1725.7	6745.1	19398.8	28357.2	38090.1	41613.2	40996.6	32664.4	23973.6	14752.3	3508.8
59°	1634.9	6037.6	19092.8	28715.8	38697.2	41833.1	41254.7	32879.5	24155.3	14365.1	3078.6
60°	1529.7	5559.6	18853.8	28950.0	38659.0	41488.9	40891.4	32779.1	24227.0	14030.4	2873.0
62.5°	1180.8	4436.2	18509.6	28782.7	36244.9	38348.2	38008.8	30322.0	23175.3	12959.6	2265.9
65°	917.8	3394.1	17247.6	25670.7	30843.0	32258.0	32152.9	25675.4	19504.0	11171.8	1634.9
67.5°	726.6	2476.2	14584.9	20789.9	24815.0	26827.5	26751.0	20842.5	14804.8	8537.8	1176.0
70°	592.8	1764.0	10000.6	15674.9	19848.1	22381.8	22271.8	16774.4	10971.0	5416.2	855.7
72.5°	501.9	1128.2	6066.3	11817.1	16564.0	18012.5	17692.2	13533.3	7978.5	2949.5	678.8
75°	425.5	693.2	3006.9	7366.6	9866.7	9857.1	9536.9	7165.8	4283.2	1443.7	540.2
77.5°	344.2	487.6	1180.8	2022.1	3112.0	3853.0	3790.8	2538.4	1281.1	420.7	334.6
80°	224.7	229.5	315.5	554.5	855.7	946.5	1075.6	774.4	372.9	200.8	138.6
82.5°	100.4	109.9	143.4	181.7	181.7	167.3	148.2	109.9	81.3	66.9	33.5
85°	23.9	33.5	23.9	28.7	23.9	19.1	19.1	9.6	0.0	0.0	0.0
87.5°	4.8	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°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	38.2	38.2	38.2	33.5	33.5	33.5	28.7	28.7	28.7	23.9	23.9
5°	47.8	43.0	38.2	38.2	33.5	33.5	28.7	23.9	23.9	23.9	19.1
7.5°	52.6	47.8	43.0	38.2	33.5	28.7	28.7	23.9	19.1	19.1	19.1
10°	62.1	57.4	47.8	38.2	33.5	28.7	23.9	23.9	19.1	14.3	14.3
12.5°	71.7	62.1	52.6	43.0	33.5	28.7	23.9	23.9	19.1	14.3	9.6
15°	81.3	71.7	57.4	43.0	33.5	28.7	23.9	23.9	14.3	9.6	4.8
17.5°	90.8	76.5	57.4	47.8	33.5	28.7	23.9	19.1	9.6	4.8	0.0
20°	95.6	81.3	62.1	47.8	33.5	28.7	23.9	14.3	4.8	0.0	0.0
22.5°	105.2	90.8	66.9	47.8	33.5	23.9	14.3	4.8	0.0	0.0	0.0
25°	124.3	95.6	66.9	47.8	33.5	23.9	9.6	0.0	0.0	0.0	0.0
27.5°	138.6	105.2	66.9	47.8	33.5	19.1	4.8	0.0	0.0	0.0	0.0
30°	162.5	114.7	71.7	47.8	33.5	14.3	4.8	0.0	0.0	0.0	0.0
32.5°	200.8	124.3	71.7	47.8	28.7	14.3	0.0	0.0	0.0	0.0	0.0
35°	243.8	143.4	71.7	47.8	28.7	14.3	0.0	0.0	0.0	0.0	0.0
37.5°	248.6	153.0	71.7	47.8	28.7	9.6	0.0	0.0	0.0	0.0	0.0
40°	258.1	143.4	76.5	47.8	28.7	9.6	0.0	0.0	0.0	0.0	0.0
42.5°	296.4	133.9	81.3	47.8	28.7	9.6	0.0	0.0	0.0	0.0	0.0
45°	439.8	138.6	81.3	52.6	28.7	14.3	0.0	0.0	0.0	0.0	0.0
47.5°	764.9	143.4	76.5	52.6	28.7	14.3	0.0	0.0	0.0	0.0	0.0
50°	980.0	167.3	76.5	57.4	33.5	9.6	0.0	0.0	0.0	0.0	0.0
52.5°	1042.1	196.0	76.5	62.1	43.0	4.8	0.0	0.0	0.0	0.0	0.0
55°	1013.4	229.5	81.3	66.9	52.6	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	937.0	248.6	86.0	71.7	57.4	0.0	0.0	0.0	0.0	0.0	0.0
59°	855.7	262.9	100.4	76.5	57.4	0.0	0.0	0.0	0.0	0.0	0.0
60°	788.8	277.3	105.2	81.3	57.4	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	635.8	296.4	114.7	95.6	47.8	0.0	0.0	0.0	0.0	0.0	0.0
65°	554.5	310.7	119.5	105.2	43.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	506.7	320.3	129.1	109.9	38.2	0.0	0.0	0.0	0.0	0.0	0.0
70°	468.5	315.5	138.6	105.2	33.5	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	425.5	301.2	167.3	95.6	28.7	0.0	0.0	0.0	0.0	0.0	0.0
75°	382.4	272.5	181.7	86.0	19.1	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	277.3	229.5	167.3	76.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0
80°	119.5	124.3	119.5	57.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	23.9	28.7	23.9	14.3	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°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	23.9	23.9	23.9	23.9	28.7	28.7	38.2	47.8	57.4	62.1	62.1
5°	19.1	19.1	19.1	19.1	19.1	23.9	28.7	38.2	52.6	57.4	57.4
7.5°	14.3	14.3	14.3	14.3	14.3	14.3	23.9	33.5	47.8	52.6	57.4
10°	14.3	9.6	9.6	4.8	4.8	9.6	14.3	28.7	43.0	47.8	52.6
12.5°	9.6	4.8	4.8	0.0	0.0	4.8	9.6	23.9	38.2	43.0	47.8
15°	4.8	0.0	0.0	0.0	0.0	0.0	4.8	19.1	33.5	38.2	47.8
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	28.7	38.2	43.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	23.9	33.5	38.2
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	19.1	28.7	33.5
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	19.1	23.9
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	14.3	19.1
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	14.3	19.1
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6	14.3
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6	14.3
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6	9.6
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	9.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.8
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°	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
2.5°	66.9	66.9	62.1	57.4	57.4	57.4	62.1	66.9	66.9	66.9
5°	62.1	62.1	57.4	57.4	57.4	57.4	62.1	71.7	76.5	76.5
7.5°	62.1	62.1	57.4	57.4	57.4	57.4	62.1	71.7	76.5	81.3
10°	57.4	57.4	57.4	57.4	52.6	57.4	62.1	71.7	86.0	86.0
12.5°	57.4	57.4	57.4	57.4	52.6	57.4	66.9	76.5	90.8	95.6
15°	57.4	57.4	57.4	52.6	52.6	57.4	66.9	81.3	95.6	105.2
17.5°	52.6	57.4	57.4	52.6	52.6	57.4	66.9	81.3	105.2	119.5
20°	47.8	52.6	57.4	52.6	52.6	52.6	66.9	81.3	109.9	129.1
22.5°	43.0	47.8	52.6	52.6	47.8	52.6	66.9	86.0	119.5	143.4
25°	38.2	43.0	43.0	47.8	47.8	52.6	66.9	86.0	124.3	162.5
27.5°	28.7	33.5	38.2	43.0	43.0	52.6	66.9	90.8	133.9	200.8
30°	23.9	28.7	33.5	38.2	43.0	52.6	66.9	90.8	143.4	253.4
32.5°	23.9	28.7	33.5	38.2	43.0	47.8	66.9	95.6	157.8	315.5
35°	19.1	23.9	28.7	38.2	38.2	47.8	66.9	95.6	172.1	411.1
37.5°	19.1	23.9	28.7	38.2	38.2	47.8	66.9	95.6	210.3	458.9
40°	14.3	19.1	23.9	38.2	38.2	47.8	71.7	100.4	215.1	463.7
42.5°	14.3	19.1	23.9	33.5	38.2	47.8	71.7	100.4	200.8	478.0
45°	14.3	19.1	23.9	38.2	43.0	52.6	71.7	105.2	196.0	545.0
47.5°	14.3	19.1	23.9	38.2	47.8	52.6	71.7	105.2	200.8	779.2
50°	14.3	19.1	23.9	38.2	52.6	52.6	71.7	105.2	219.9	1252.5
52.5°	9.6	14.3	19.1	33.5	43.0	57.4	76.5	100.4	234.2	1673.1
55°	9.6	9.6	14.3	28.7	38.2	62.1	81.3	100.4	272.5	1778.3
57.5°	9.6	9.6	14.3	23.9	33.5	66.9	86.0	100.4	315.5	1725.7
59°	9.6	9.6	9.6	23.9	28.7	66.9	86.0	105.2	320.3	1634.9
60°	9.6	9.6	9.6	19.1	28.7	66.9	90.8	109.9	325.1	1529.7
62.5°	4.8	4.8	4.8	19.1	23.9	66.9	100.4	133.9	334.6	1180.8
65°	9.6	9.6	4.8	14.3	23.9	57.4	114.7	143.4	339.4	917.8
67.5°	9.6	9.6	9.6	19.1	23.9	57.4	119.5	148.2	339.4	726.6
70°	9.6	9.6	9.6	19.1	28.7	57.4	119.5	153.0	334.6	592.8
72.5°	9.6	9.6	9.6	19.1	28.7	52.6	109.9	157.8	320.3	501.9
75°	9.6	9.6	9.6	14.3	23.9	47.8	105.2	172.1	291.6	425.5
77.5°	9.6	9.6	9.6	9.6	19.1	38.2	95.6	191.2	258.1	344.2
80°	14.3	9.6	9.6	9.6	14.3	33.5	90.8	186.4	215.1	224.7
82.5°	14.3	9.6	9.6	4.8	9.6	23.9	71.7	143.4	109.9	100.4
85°	9.6	9.6	9.6	4.8	4.8	14.3	33.5	43.0	33.5	23.9
87.5°	9.6	9.6	9.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8
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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

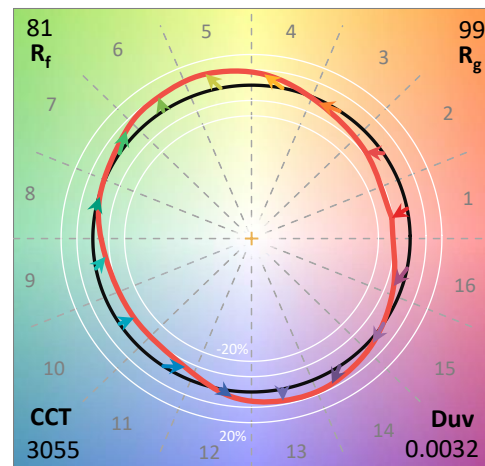
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-9
 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-830-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI
 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 3055
 CIE u' : 0.2475
 CIE v' : 0.5247
 Duv: 0.0032
 CIE x: 0.4377
 CIE y: 0.4124
 CIE z: 0.1499
 Peak Wavelength (nm): 604
 Dominant Wavelength (nm): 581
 Purity: 55.16339
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 80.9
 R1: 79.5
 R2: 85.6
 R3: 92.1
 R4: 82.4
 R5: 78.9
 R6: 81.7
 R7: 85.1
 R8: 61.9
 R9: 6.8
 R10: 67.1
 R11: 82.5
 R12: 63.4
 R13: 80.2
 R14: 95.1
 R15: 71.7



Test Conditions

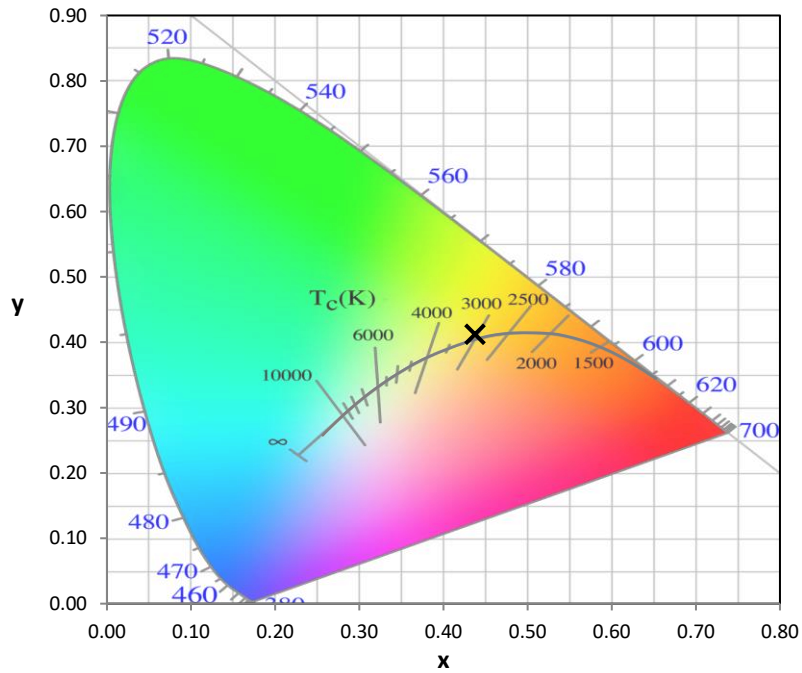
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

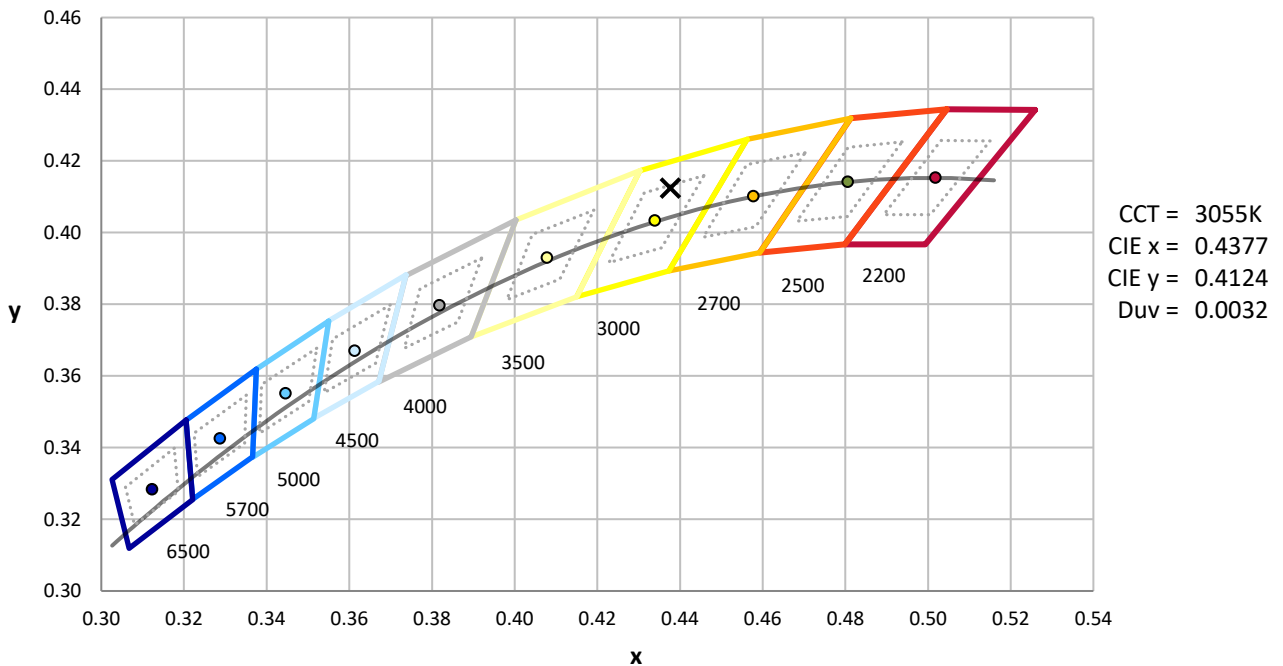
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-184-9

CIE 1931 Chromaticity Diagram



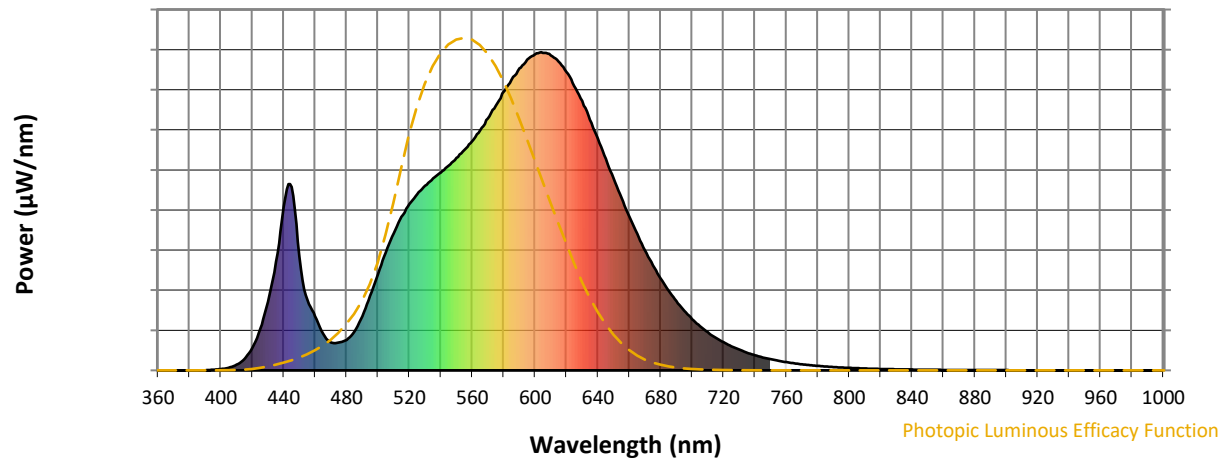
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-9

Photopic Flux vs. Wavelength

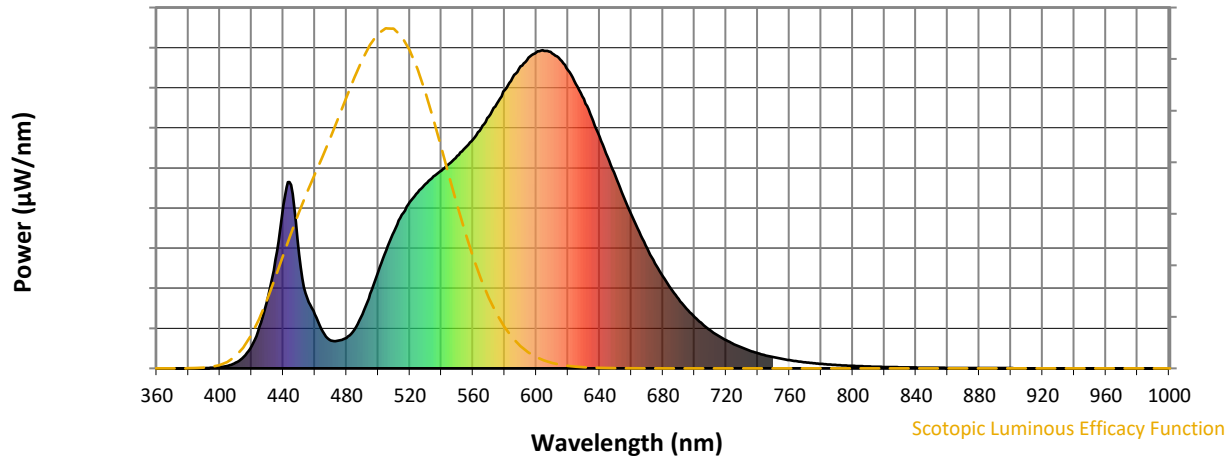


Photopic Lumens: NR

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	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2407-184-9

Scotopic Flux vs. Wavelength



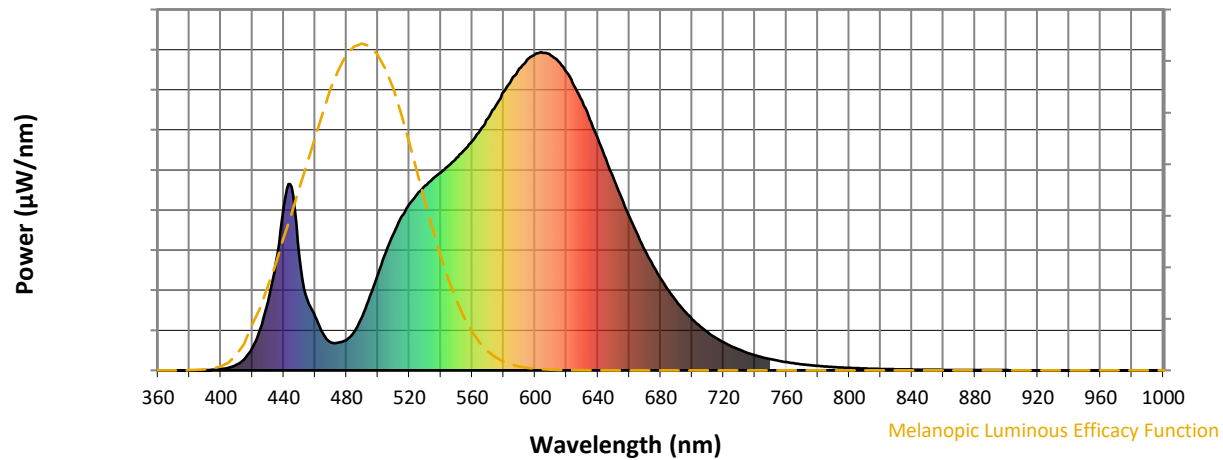
Scotopic Lumens: NR

S/P: 1.28

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	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.33

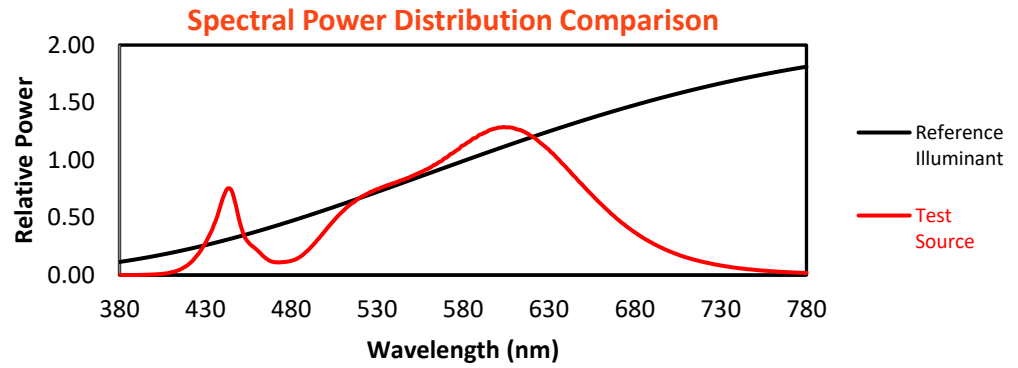
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	371	NR	635	788	NR	765	22	NR	895	1	NR
380	0	NR	510	431	NR	640	728	NR	770	19	NR	900	1	NR
385	0	NR	515	482	NR	645	665	NR	775	16	NR	905	1	NR
390	0	NR	520	523	NR	650	603	NR	780	14	NR	910	0	NR
395	2	NR	525	553	NR	655	542	NR	785	12	NR	915	0	NR
400	4	NR	530	580	NR	660	484	NR	790	11	NR	920	0	NR
405	8	NR	535	603	NR	665	430	NR	795	9	NR	925	0	NR
410	18	NR	540	622	NR	670	377	NR	800	8	NR	930	0	NR
415	36	NR	545	644	NR	675	330	NR	805	7	NR	935	0	NR
420	71	NR	550	668	NR	680	289	NR	810	6	NR	940	0	NR
425	131	NR	555	693	NR	685	250	NR	815	5	NR	945	0	NR
430	215	NR	560	720	NR	690	218	NR	820	4	NR	950	0	NR
435	341	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	514	NR	570	792	NR	700	161	NR	830	3	NR	960	0	NR
445	576	NR	575	832	NR	705	139	NR	835	3	NR	965	0	NR
450	358	NR	580	875	NR	710	119	NR	840	3	NR	970	0	NR
455	222	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	170	NR	590	950	NR	720	88	NR	850	2	NR	980	0	NR
465	115	NR	595	977	NR	725	76	NR	855	2	NR	985	0	NR
470	88	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	87	NR	605	997	NR	735	56	NR	865	1	NR	995	0	NR
480	96	NR	610	990	NR	740	47	NR	870	1	NR	1000	0	NR
485	122	NR	615	971	NR	745	41	NR	875	1	NR			

REPORT NUMBER: SP1-2407-184-9

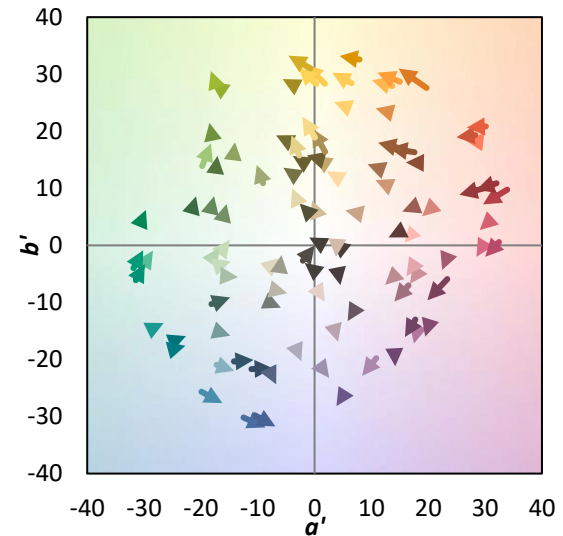
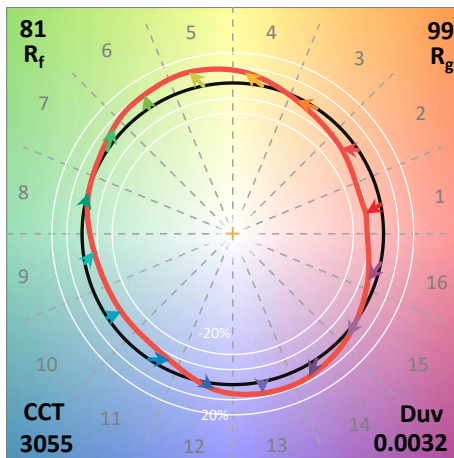
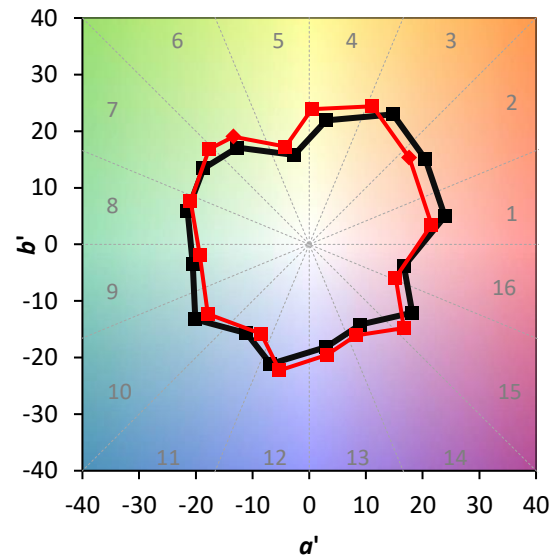
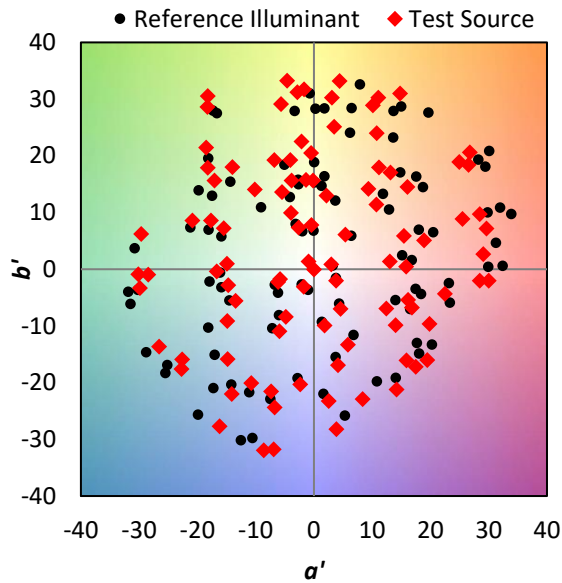
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 80.9$
 $R_9 = 6.8$

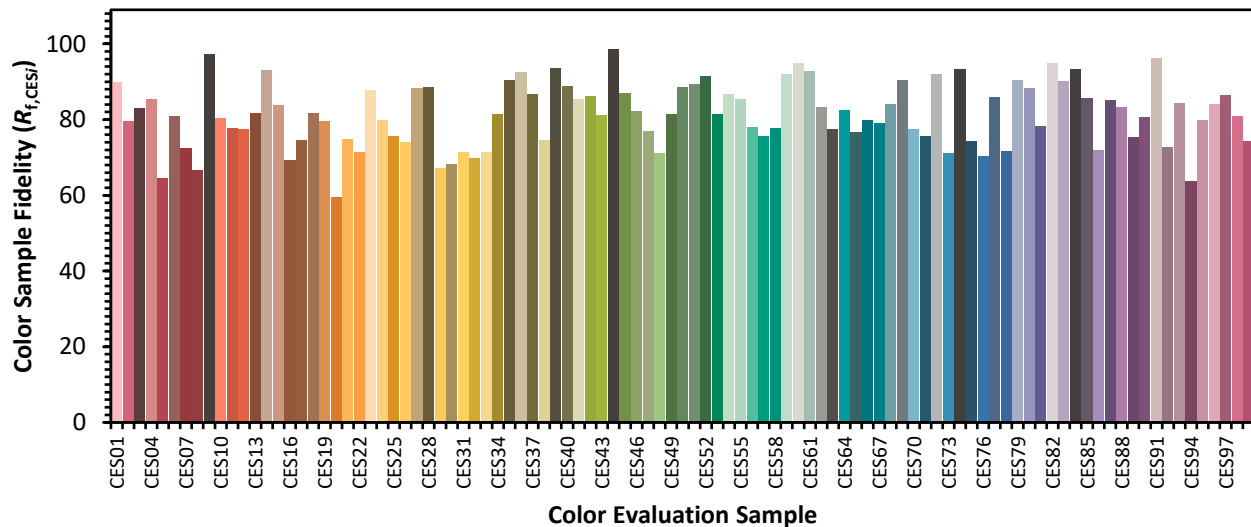


Color Vector Graphics

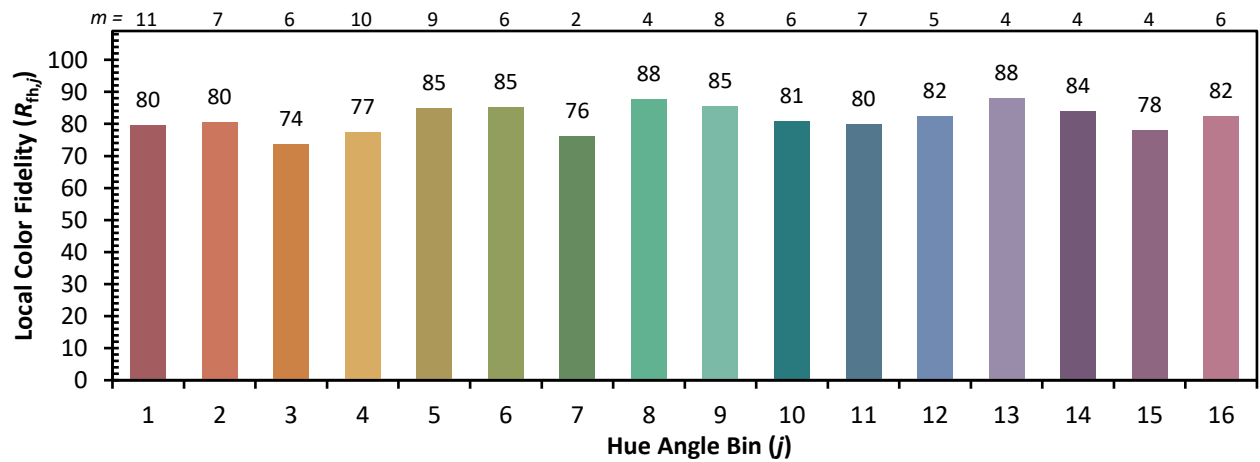
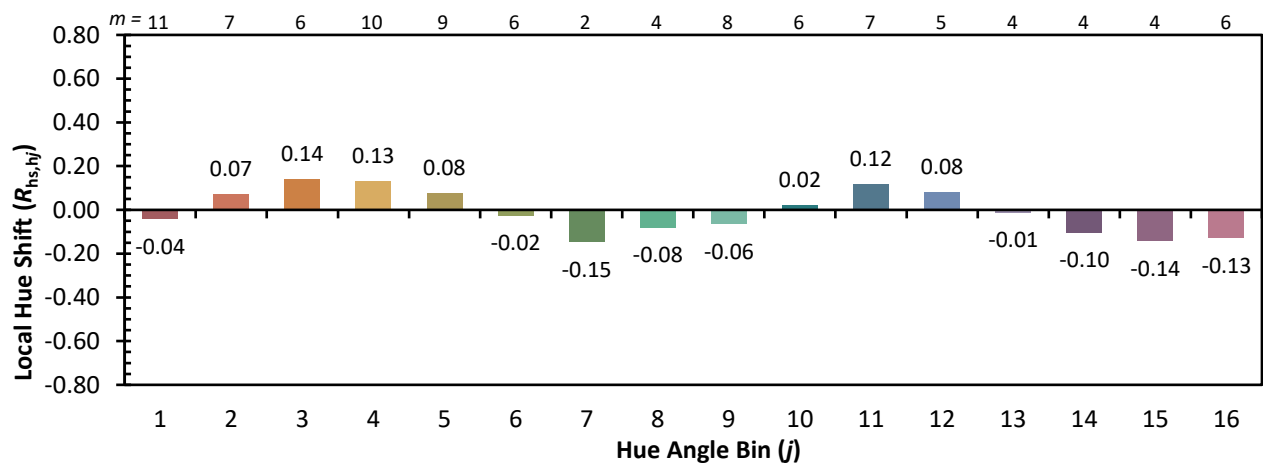
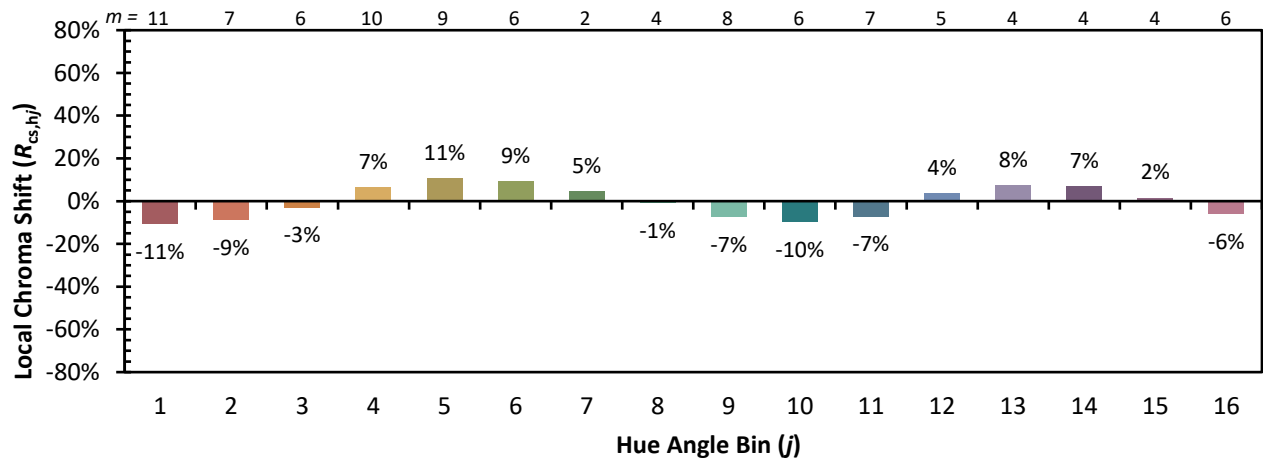


Individual Sample Fidelity Index ($R_{f,i}$)

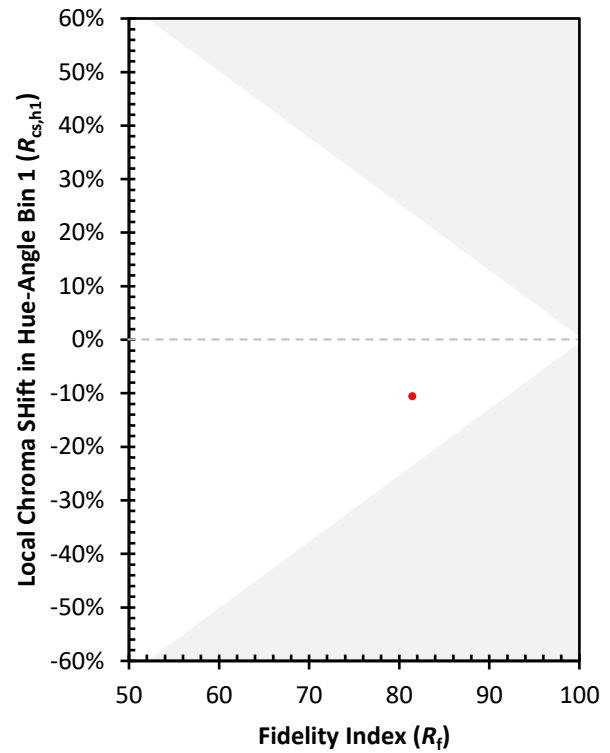
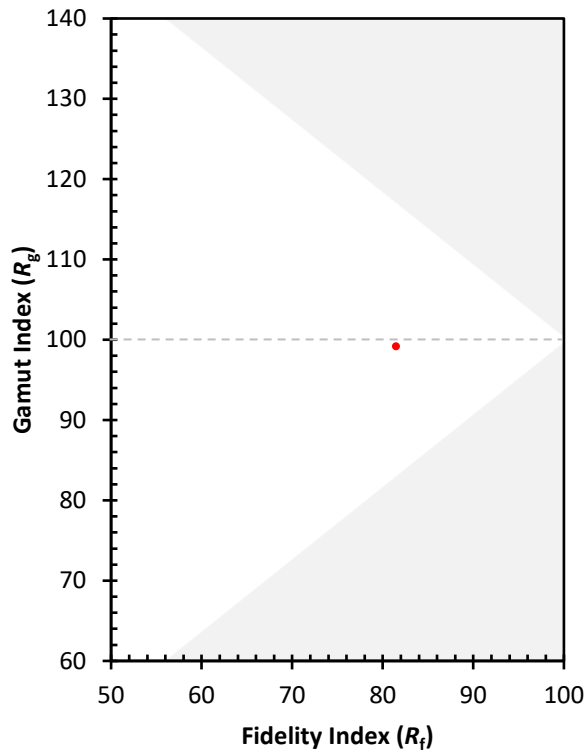
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 91	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 93
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 90	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 77	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)