

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: P1068077

Luminaire Tested: **NAV-SA5A-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068077
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5A-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 615mA 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: 12178 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G2

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

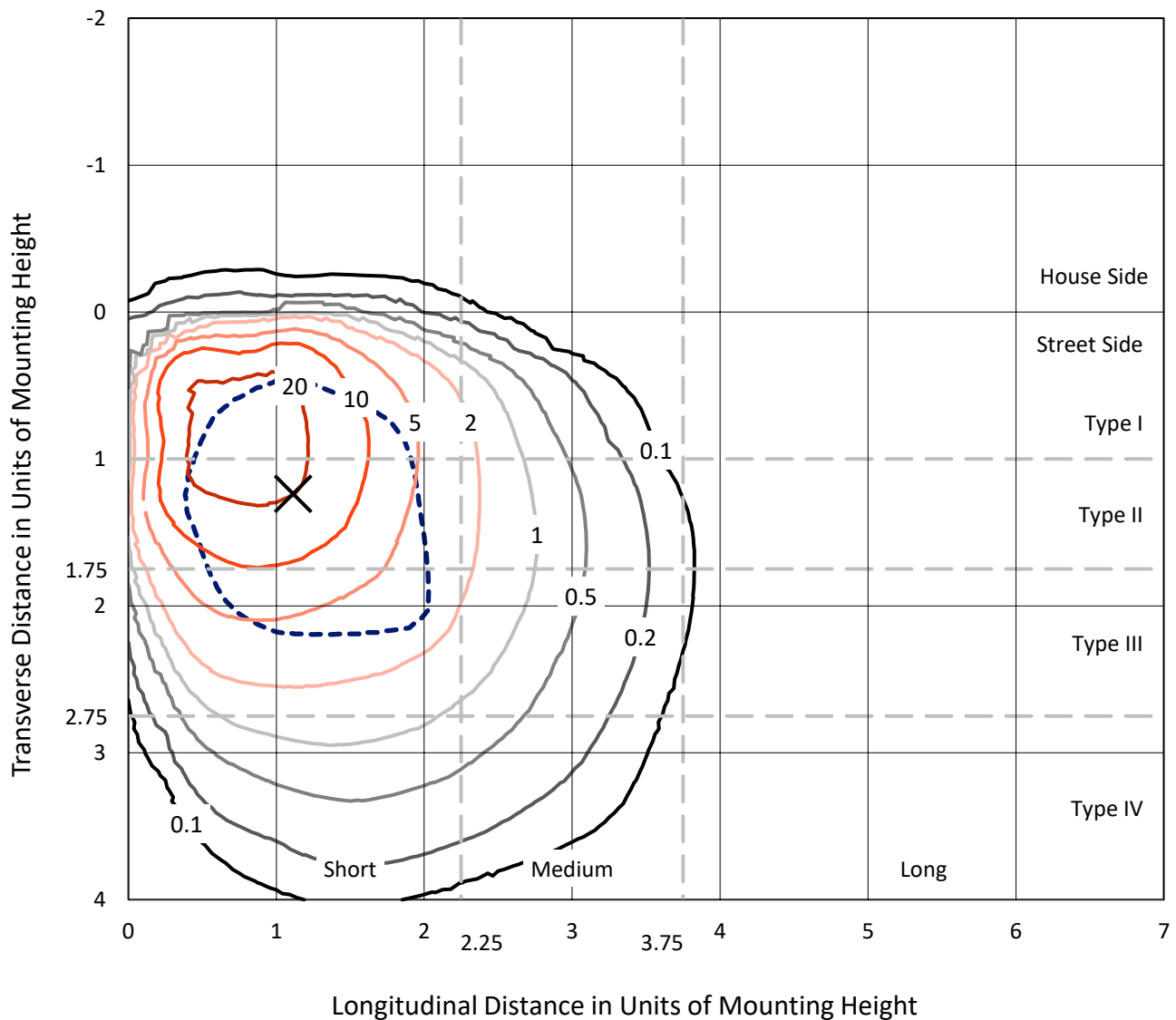


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

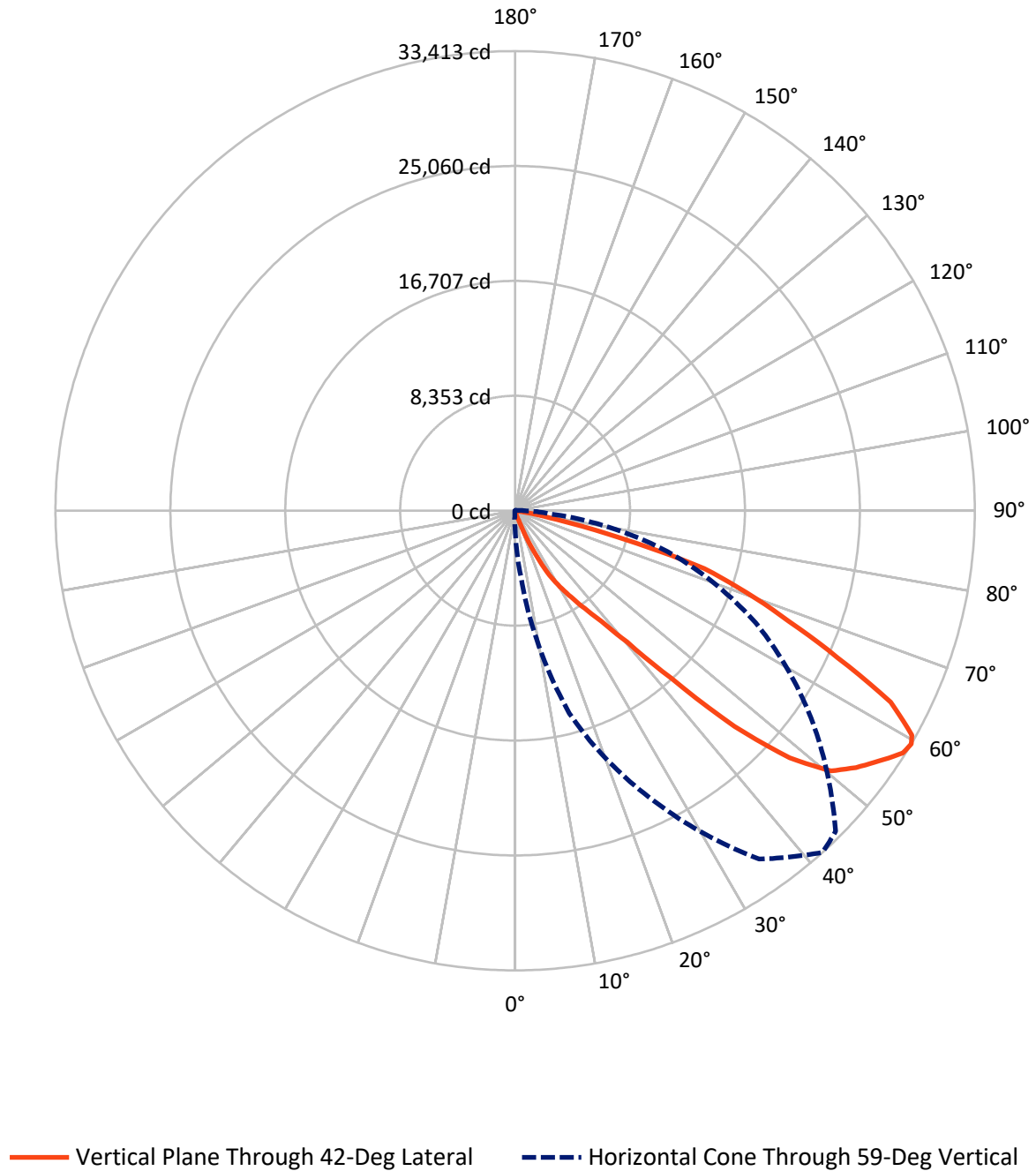


Based on 15 foot mounting height. Maximum calculated value = 36.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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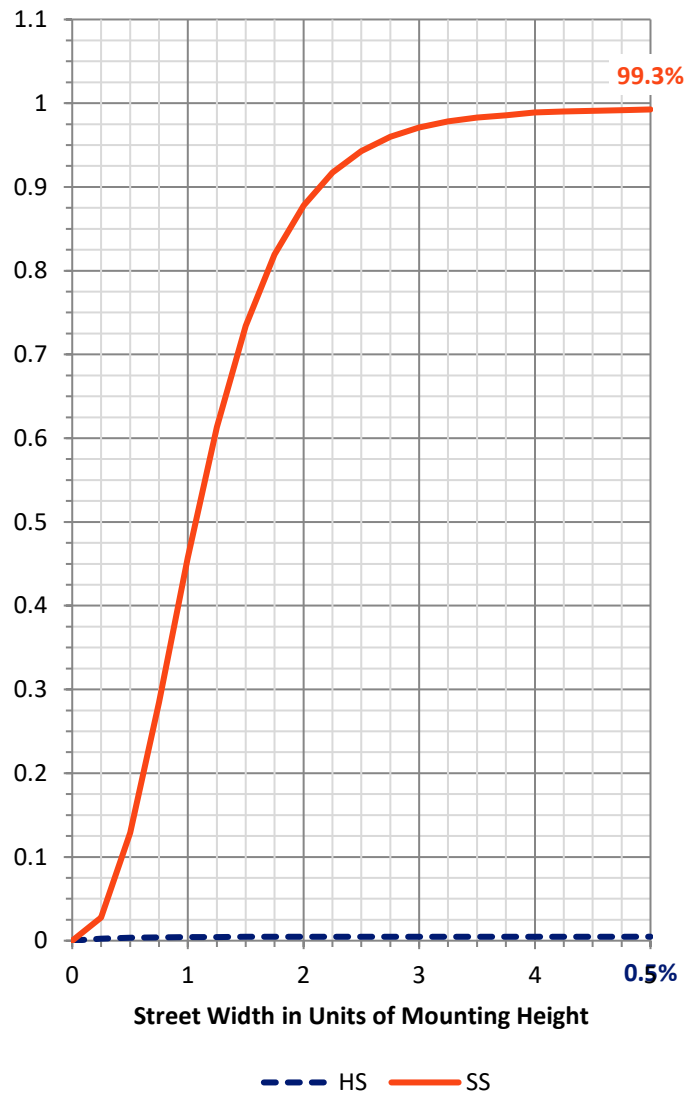
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	58.7	0.0	58.7
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	12119.3	0.0	12119.3
	% Fixture	99.5	0.0	99.5
Total	Lumens	12178.0	0.0	12178.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.6	0.0
10°-20°	17.8	0.1
20°-30°	227.2	1.9
30°-40°	765.8	6.3
40°-50°	2313.2	19.0
50°-60°	4083.3	33.5
60°-70°	3595.4	29.5
70°-80°	1144.4	9.4
80°-90°	27.4	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°	12178.0	100.0
0°-180°	12178.0	100.0



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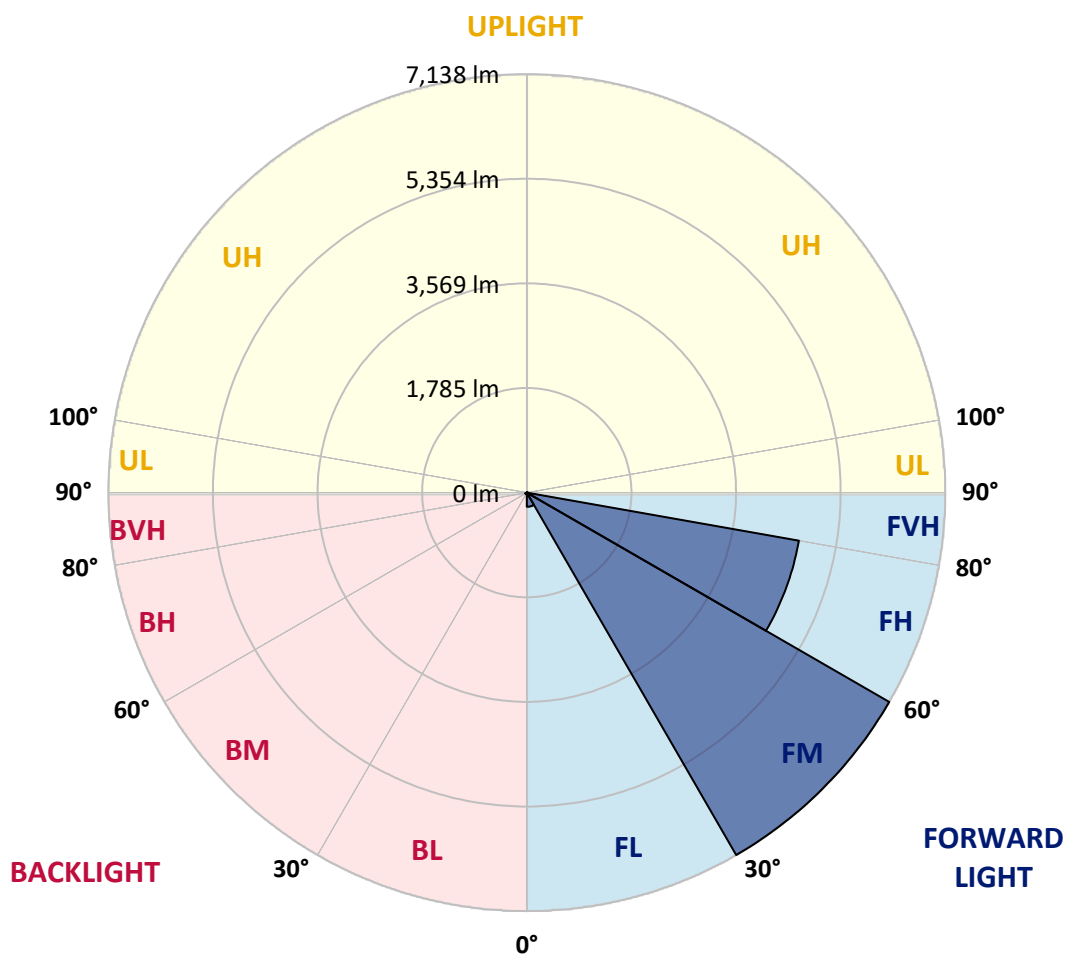
CATALOG NUMBER: NAV-SA5A-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	241.9	2.0			
FM	(30°-60°)	7138.3	58.6			
FH	(60°-80°)	4713.0	38.7			G2/5000
FVH	(80°-90°)	26.1	0.2			G1/100
BL	(0°-30°)	6.5	0.1	B0/110		
BM	(30°-60°)	24.0	0.2	B0/220		
BH	(60°-80°)	26.8	0.2	B0/110		G0/110
BVH	(80°-90°)	1.3	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
2.5°	53.5	53.5	49.6	45.8	42.0	38.2	38.2	38.2	34.4	34.4	30.5
5°	61.1	61.1	57.3	53.5	53.5	49.6	49.6	45.8	42.0	42.0	38.2
7.5°	64.9	64.9	64.9	64.9	61.1	61.1	61.1	57.3	53.5	49.6	45.8
10°	68.7	72.5	76.4	76.4	76.4	76.4	76.4	72.5	64.9	61.1	53.5
12.5°	76.4	80.2	87.8	95.5	95.5	99.3	95.5	91.6	84.0	72.5	61.1
15°	84.0	91.6	103.1	118.4	133.6	137.5	137.5	126.0	110.7	87.8	72.5
17.5°	95.5	106.9	137.5	187.1	240.5	282.5	282.5	252.0	175.6	114.5	84.0
20°	103.1	126.0	221.5	450.5	687.3	862.9	828.6	733.1	393.3	179.5	91.6
22.5°	114.5	160.4	469.6	1183.6	1832.7	2153.5	2077.1	1576.9	882.0	320.7	110.7
25°	129.8	232.9	931.6	2218.4	3405.8	3753.3	3703.7	2943.8	1607.5	538.4	141.3
27.5°	160.4	343.6	1492.9	3363.8	5024.8	5322.6	5303.5	4310.8	2569.7	866.7	183.3
30°	202.4	500.2	2214.6	4570.4	6097.7	6399.3	6303.9	5311.1	3466.9	1324.9	236.7
32.5°	252.0	698.7	2867.5	5460.0	7086.6	7483.7	7369.1	6181.7	4188.6	1714.4	351.3
35°	328.4	893.5	3512.7	6246.6	8228.2	8732.2	8541.3	7078.9	4810.9	2153.5	423.8
37.5°	366.5	1008.0	4104.6	7101.9	9511.1	10198.4	10053.3	8213.0	5444.8	2714.7	519.3
40°	370.4	1145.5	4719.3	8216.8	11324.8	12550.4	12290.8	10160.2	6624.6	3436.4	668.2
42.5°	381.8	1351.6	5517.3	10118.2	14887.2	16647.4	16353.4	13741.7	9301.1	4883.5	946.9
45°	435.3	1741.1	7143.9	13673.0	19778.3	22359.4	22019.6	18732.1	13039.2	7605.9	1615.1
47.5°	622.4	2619.3	9996.1	17510.3	24780.1	26838.2	26754.2	22664.9	16425.9	10397.0	2737.7
50°	1000.4	4020.6	13241.5	20736.7	27964.5	29732.4	29522.4	24306.7	18357.9	12302.3	3508.9
52.5°	1336.4	5360.8	15280.5	21924.1	28915.3	31022.9	30767.1	24906.1	18865.7	12863.5	3722.7
55°	1420.4	5845.7	15887.5	22290.7	29545.3	32114.9	31744.5	25307.1	18930.7	12462.6	3367.7
57.5°	1378.4	5387.5	15494.3	22649.6	30423.4	33237.5	32744.9	26089.8	19148.3	11783.0	2802.6
59°	1305.8	4822.4	15249.9	22936.0	30908.4	33413.1	32951.1	26261.6	19293.4	11473.7	2458.9
60°	1221.8	4440.6	15059.0	23123.0	30877.8	33138.2	32660.9	26181.4	19350.7	11206.4	2294.7
62.5°	943.1	3543.3	14784.1	22989.4	28949.6	30629.6	30358.5	24218.9	18510.7	10351.2	1809.8
65°	733.1	2710.9	13776.1	20503.8	24635.1	25765.2	25681.2	20507.6	15578.3	8923.1	1305.8
67.5°	580.4	1977.8	11649.3	16605.4	19820.3	21427.8	21366.7	16647.4	11825.0	6819.3	939.3
70°	473.5	1408.9	7987.7	12519.9	15853.2	17876.8	17789.0	13398.1	8762.8	4326.0	683.5
72.5°	400.9	901.1	4845.3	9438.6	13230.1	14387.0	14131.2	10809.3	6372.6	2355.8	542.2
75°	339.8	553.6	2401.7	5883.9	7880.8	7873.1	7617.3	5723.5	3421.1	1153.1	431.5
77.5°	274.9	389.5	943.1	1615.1	2485.7	3077.5	3027.8	2027.5	1023.3	336.0	267.3
80°	179.5	183.3	252.0	442.9	683.5	756.0	859.1	618.5	297.8	160.4	110.7
82.5°	80.2	87.8	114.5	145.1	145.1	133.6	118.4	87.8	64.9	53.5	26.7
85°	19.1	26.7	19.1	22.9	19.1	15.3	15.3	7.6	0.0	0.0	0.0
87.5°	3.8	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°	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
2.5°	30.5	30.5	30.5	26.7	26.7	26.7	22.9	22.9	22.9	19.1	19.1
5°	38.2	34.4	30.5	30.5	26.7	26.7	22.9	19.1	19.1	19.1	15.3
7.5°	42.0	38.2	34.4	30.5	26.7	22.9	22.9	19.1	15.3	15.3	15.3
10°	49.6	45.8	38.2	30.5	26.7	22.9	19.1	19.1	15.3	11.5	11.5
12.5°	57.3	49.6	42.0	34.4	26.7	22.9	19.1	19.1	15.3	11.5	7.6
15°	64.9	57.3	45.8	34.4	26.7	22.9	19.1	19.1	11.5	7.6	3.8
17.5°	72.5	61.1	45.8	38.2	26.7	22.9	19.1	15.3	7.6	3.8	0.0
20°	76.4	64.9	49.6	38.2	26.7	22.9	19.1	11.5	3.8	0.0	0.0
22.5°	84.0	72.5	53.5	38.2	26.7	19.1	11.5	3.8	0.0	0.0	0.0
25°	99.3	76.4	53.5	38.2	26.7	19.1	7.6	0.0	0.0	0.0	0.0
27.5°	110.7	84.0	53.5	38.2	26.7	15.3	3.8	0.0	0.0	0.0	0.0
30°	129.8	91.6	57.3	38.2	26.7	11.5	3.8	0.0	0.0	0.0	0.0
32.5°	160.4	99.3	57.3	38.2	22.9	11.5	0.0	0.0	0.0	0.0	0.0
35°	194.7	114.5	57.3	38.2	22.9	11.5	0.0	0.0	0.0	0.0	0.0
37.5°	198.5	122.2	57.3	38.2	22.9	7.6	0.0	0.0	0.0	0.0	0.0
40°	206.2	114.5	61.1	38.2	22.9	7.6	0.0	0.0	0.0	0.0	0.0
42.5°	236.7	106.9	64.9	38.2	22.9	7.6	0.0	0.0	0.0	0.0	0.0
45°	351.3	110.7	64.9	42.0	22.9	11.5	0.0	0.0	0.0	0.0	0.0
47.5°	610.9	114.5	61.1	42.0	22.9	11.5	0.0	0.0	0.0	0.0	0.0
50°	782.7	133.6	61.1	45.8	26.7	7.6	0.0	0.0	0.0	0.0	0.0
52.5°	832.4	156.5	61.1	49.6	34.4	3.8	0.0	0.0	0.0	0.0	0.0
55°	809.5	183.3	64.9	53.5	42.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	748.4	198.5	68.7	57.3	45.8	0.0	0.0	0.0	0.0	0.0	0.0
59°	683.5	210.0	80.2	61.1	45.8	0.0	0.0	0.0	0.0	0.0	0.0
60°	630.0	221.5	84.0	64.9	45.8	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	507.8	236.7	91.6	76.4	38.2	0.0	0.0	0.0	0.0	0.0	0.0
65°	442.9	248.2	95.5	84.0	34.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	404.7	255.8	103.1	87.8	30.5	0.0	0.0	0.0	0.0	0.0	0.0
70°	374.2	252.0	110.7	84.0	26.7	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	339.8	240.5	133.6	76.4	22.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	305.5	217.6	145.1	68.7	15.3	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	221.5	183.3	133.6	61.1	7.6	0.0	0.0	0.0	0.0	0.0	0.0
80°	95.5	99.3	95.5	45.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	19.1	22.9	19.1	11.5	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°	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
2.5°	19.1	19.1	19.1	19.1	22.9	22.9	30.5	38.2	45.8	49.6	49.6
5°	15.3	15.3	15.3	15.3	15.3	19.1	22.9	30.5	42.0	45.8	45.8
7.5°	11.5	11.5	11.5	11.5	11.5	11.5	19.1	26.7	38.2	42.0	45.8
10°	11.5	7.6	7.6	3.8	3.8	7.6	11.5	22.9	34.4	38.2	42.0
12.5°	7.6	3.8	3.8	0.0	0.0	3.8	7.6	19.1	30.5	34.4	38.2
15°	3.8	0.0	0.0	0.0	0.0	0.0	3.8	15.3	26.7	30.5	38.2
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	22.9	30.5	34.4
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	19.1	26.7	30.5
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.3	22.9	26.7
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	15.3	19.1
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	11.5	15.3
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	11.5	15.3
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6	11.5
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6	11.5
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6	7.6
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8
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°	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4
2.5°	53.5	53.5	49.6	45.8	45.8	45.8	49.6	53.5	53.5	53.5
5°	49.6	49.6	45.8	45.8	45.8	45.8	49.6	57.3	61.1	61.1
7.5°	49.6	49.6	45.8	45.8	45.8	45.8	49.6	57.3	61.1	64.9
10°	45.8	45.8	45.8	45.8	42.0	45.8	49.6	57.3	68.7	68.7
12.5°	45.8	45.8	45.8	45.8	42.0	45.8	53.5	61.1	72.5	76.4
15°	45.8	45.8	45.8	42.0	42.0	45.8	53.5	64.9	76.4	84.0
17.5°	42.0	45.8	45.8	42.0	42.0	45.8	53.5	64.9	84.0	95.5
20°	38.2	42.0	45.8	42.0	42.0	42.0	53.5	64.9	87.8	103.1
22.5°	34.4	38.2	42.0	42.0	38.2	42.0	53.5	68.7	95.5	114.5
25°	30.5	34.4	34.4	38.2	38.2	42.0	53.5	68.7	99.3	129.8
27.5°	22.9	26.7	30.5	34.4	34.4	42.0	53.5	72.5	106.9	160.4
30°	19.1	22.9	26.7	30.5	34.4	42.0	53.5	72.5	114.5	202.4
32.5°	19.1	22.9	26.7	30.5	34.4	38.2	53.5	76.4	126.0	252.0
35°	15.3	19.1	22.9	30.5	30.5	38.2	53.5	76.4	137.5	328.4
37.5°	15.3	19.1	22.9	30.5	30.5	38.2	53.5	76.4	168.0	366.5
40°	11.5	15.3	19.1	30.5	30.5	38.2	57.3	80.2	171.8	370.4
42.5°	11.5	15.3	19.1	26.7	30.5	38.2	57.3	80.2	160.4	381.8
45°	11.5	15.3	19.1	30.5	34.4	42.0	57.3	84.0	156.5	435.3
47.5°	11.5	15.3	19.1	30.5	38.2	42.0	57.3	84.0	160.4	622.4
50°	11.5	15.3	19.1	30.5	42.0	42.0	57.3	84.0	175.6	1000.4
52.5°	7.6	11.5	15.3	26.7	34.4	45.8	61.1	80.2	187.1	1336.4
55°	7.6	7.6	11.5	22.9	30.5	49.6	64.9	80.2	217.6	1420.4
57.5°	7.6	7.6	11.5	19.1	26.7	53.5	68.7	80.2	252.0	1378.4
59°	7.6	7.6	7.6	19.1	22.9	53.5	68.7	84.0	255.8	1305.8
60°	7.6	7.6	7.6	15.3	22.9	53.5	72.5	87.8	259.6	1221.8
62.5°	3.8	3.8	3.8	15.3	19.1	53.5	80.2	106.9	267.3	943.1
65°	7.6	7.6	3.8	11.5	19.1	45.8	91.6	114.5	271.1	733.1
67.5°	7.6	7.6	7.6	15.3	19.1	45.8	95.5	118.4	271.1	580.4
70°	7.6	7.6	7.6	15.3	22.9	45.8	95.5	122.2	267.3	473.5
72.5°	7.6	7.6	7.6	15.3	22.9	42.0	87.8	126.0	255.8	400.9
75°	7.6	7.6	7.6	11.5	19.1	38.2	84.0	137.5	232.9	339.8
77.5°	7.6	7.6	7.6	7.6	15.3	30.5	76.4	152.7	206.2	274.9
80°	11.5	7.6	7.6	7.6	11.5	26.7	72.5	148.9	171.8	179.5
82.5°	11.5	7.6	7.6	3.8	7.6	19.1	57.3	114.5	87.8	80.2
85°	7.6	7.6	7.6	3.8	3.8	11.5	26.7	34.4	26.7	19.1
87.5°	7.6	7.6	7.6	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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

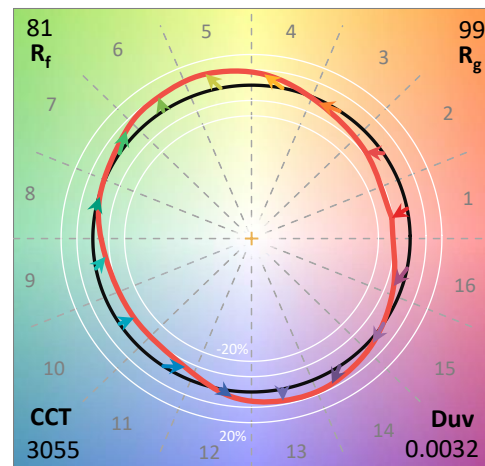
Test Information

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

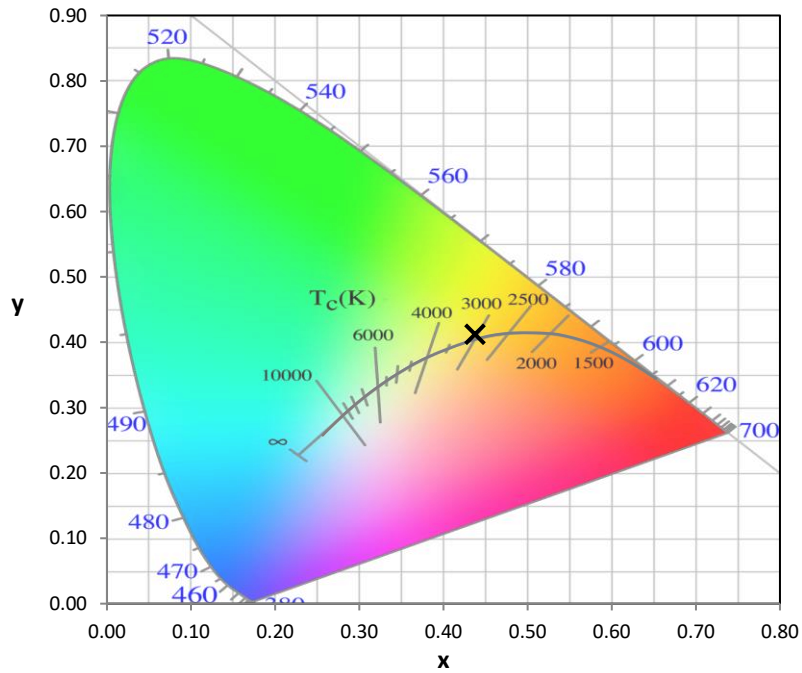
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

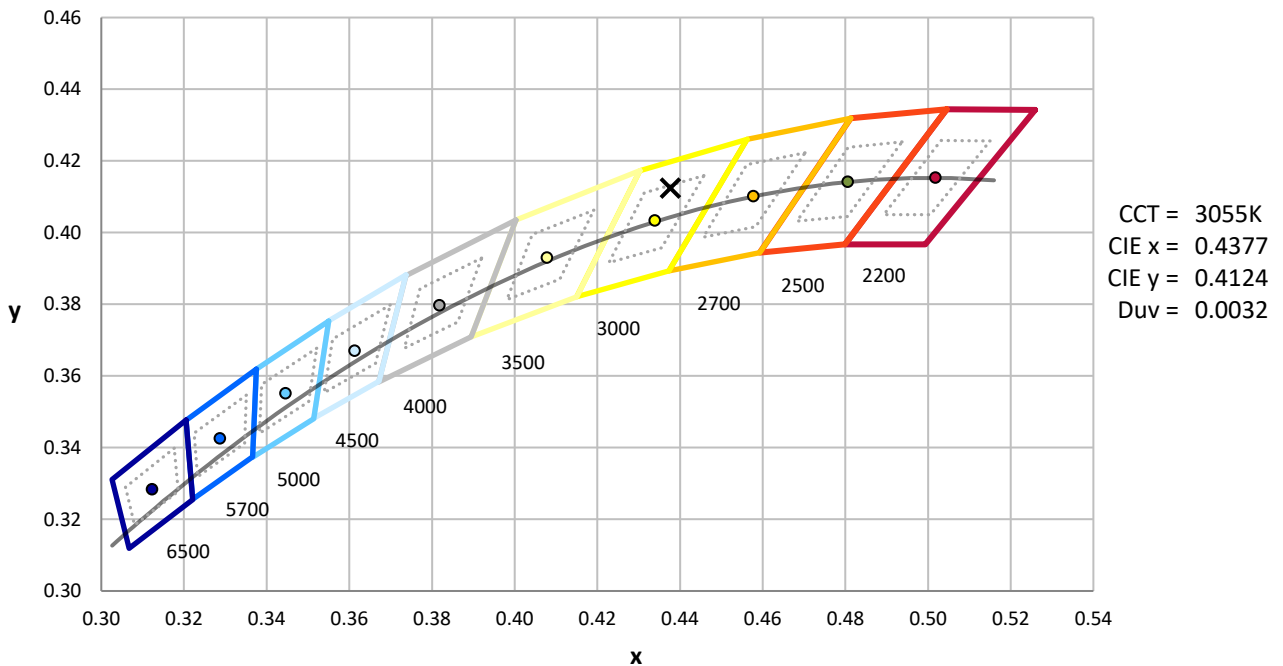
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



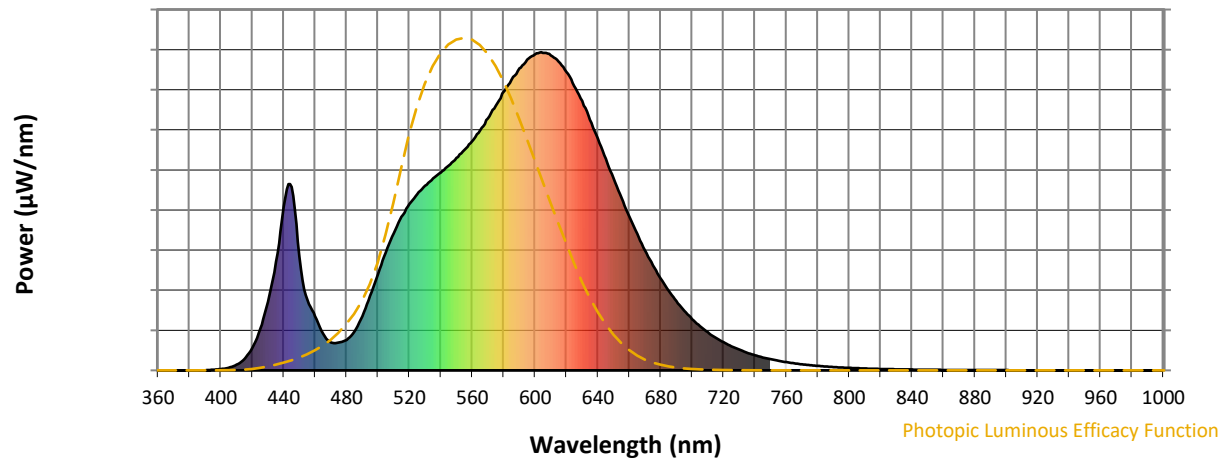
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-9

Photopic Flux vs. Wavelength

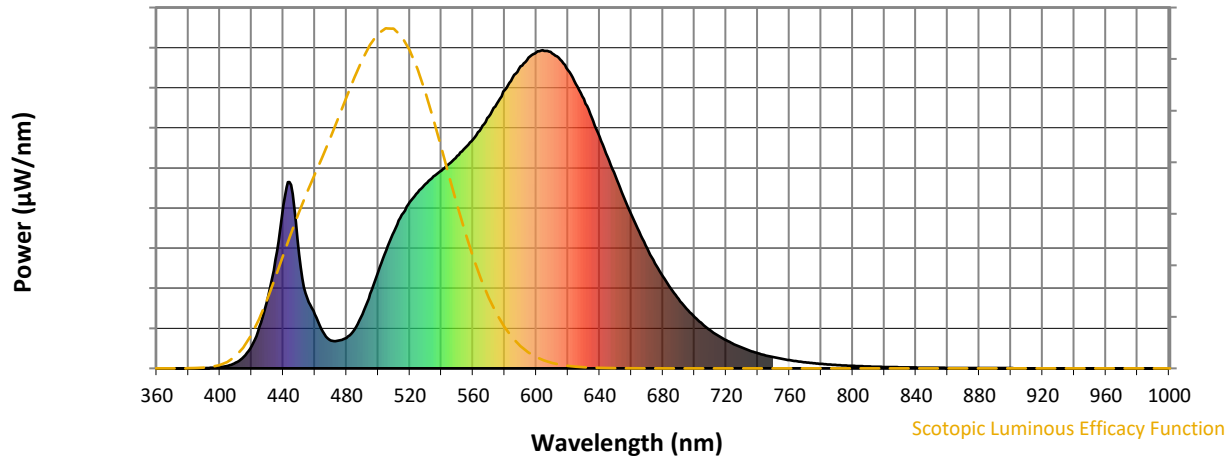


Photopic Lumens: NR

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	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



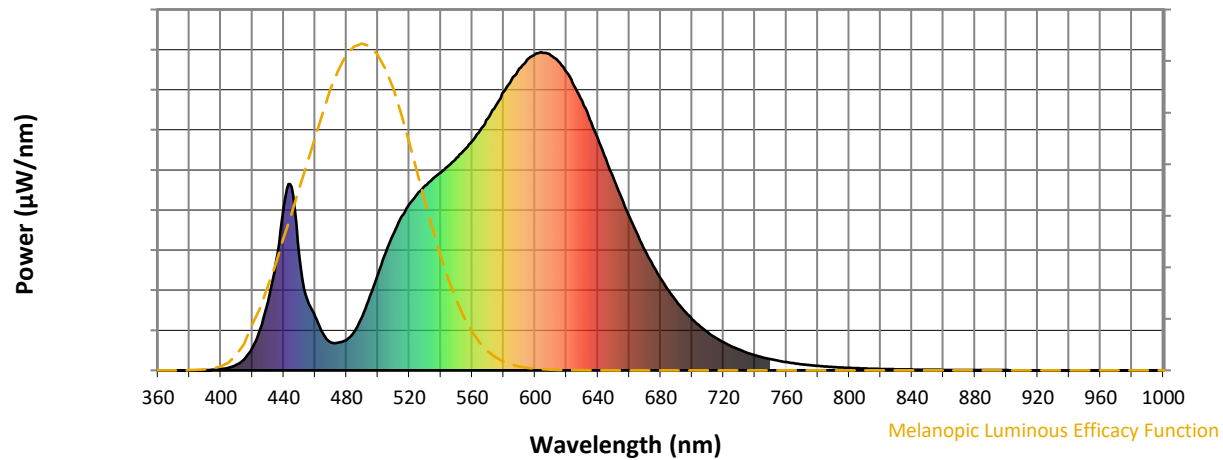
Scotopic Lumens: NR

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

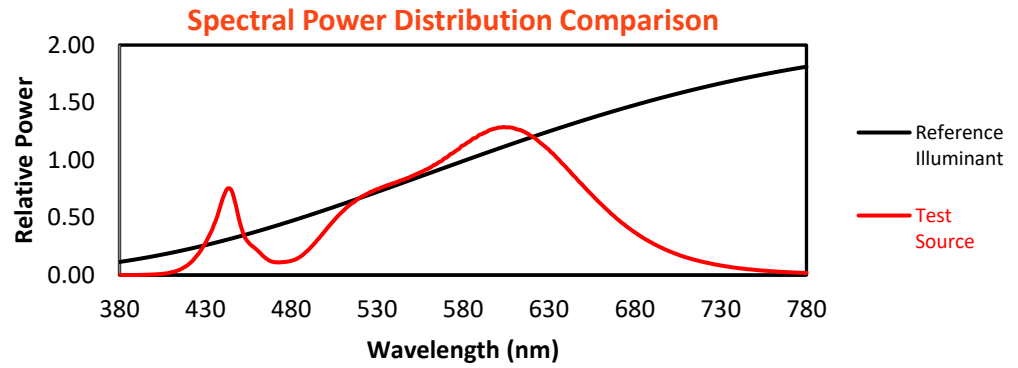
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	170	NR	620	938	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

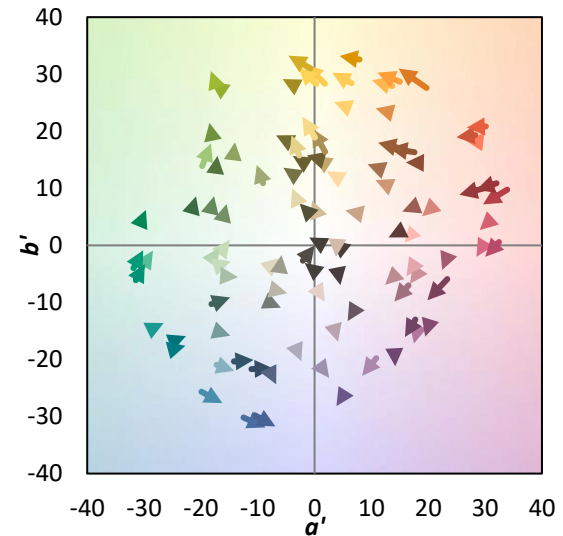
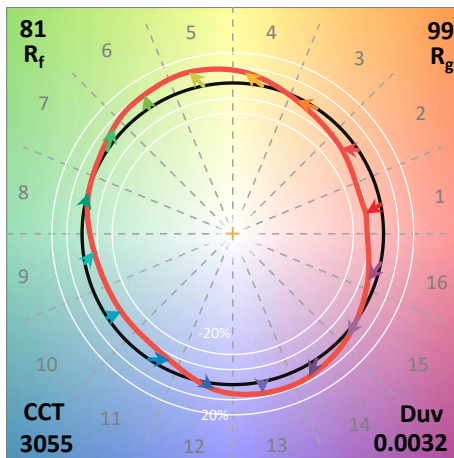
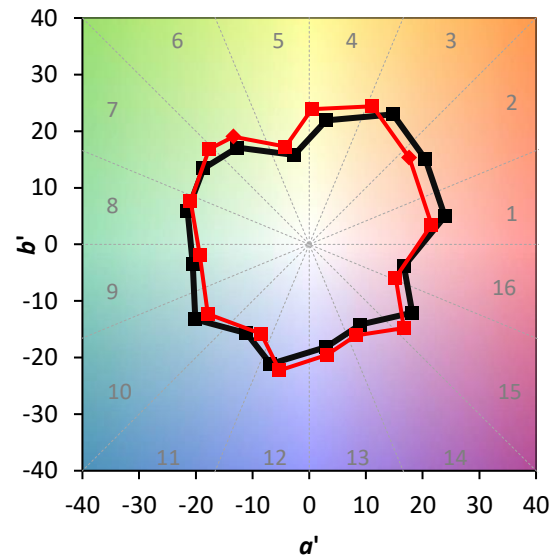
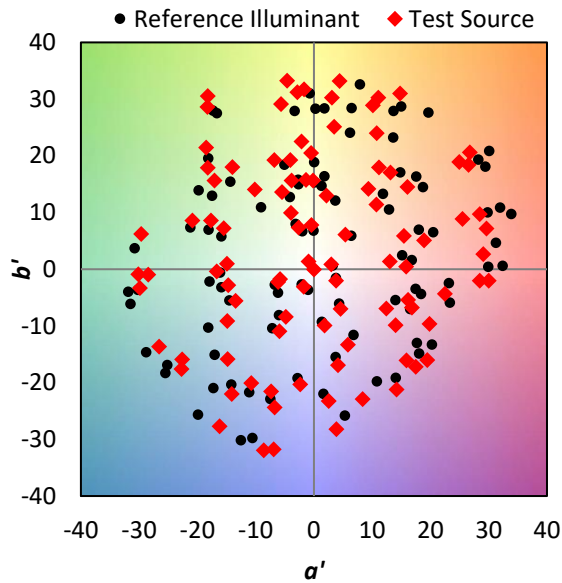
TM-30-18

Summary

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

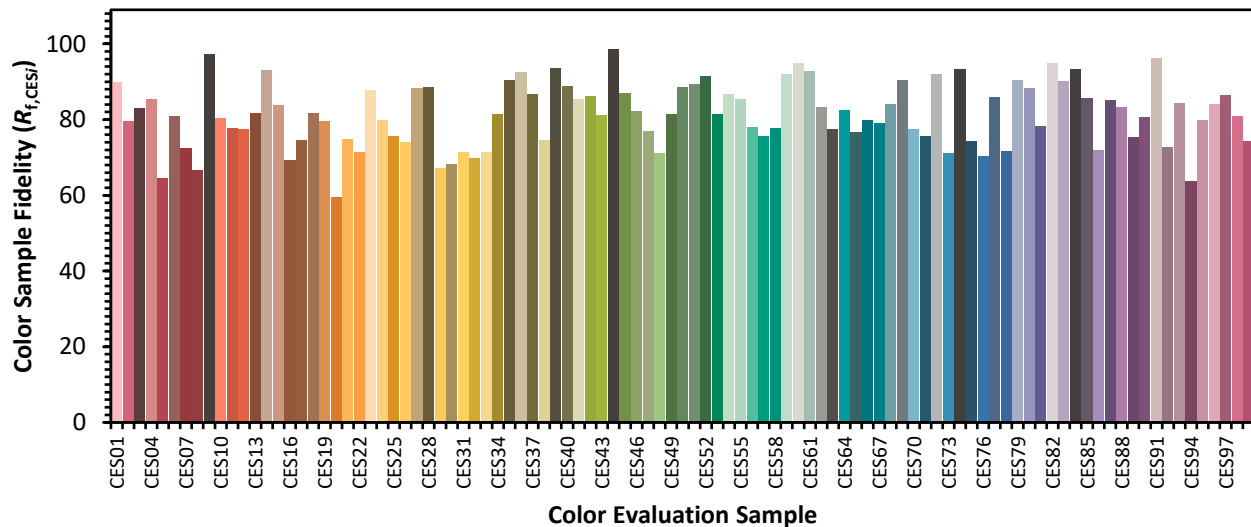


Color Vector Graphics

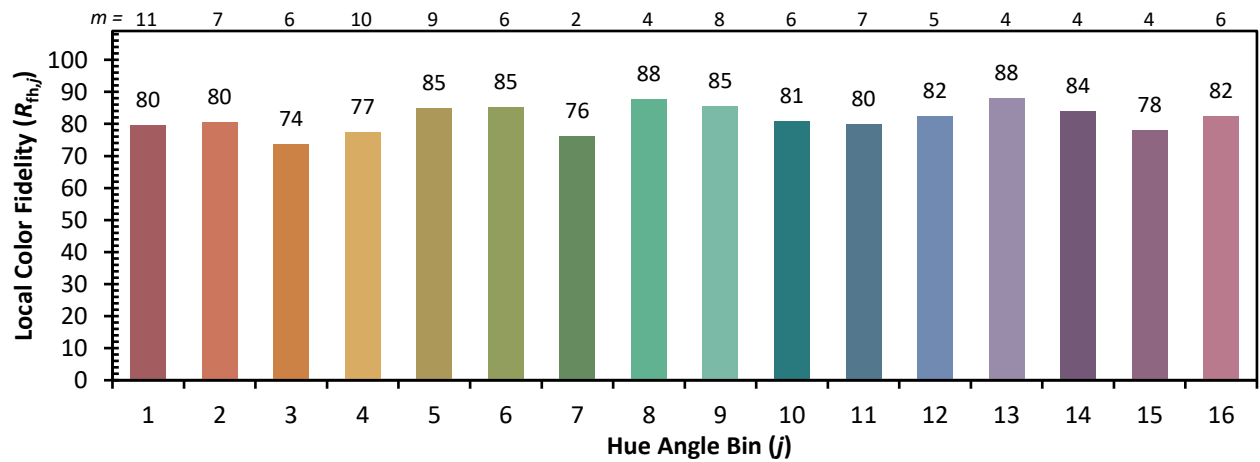
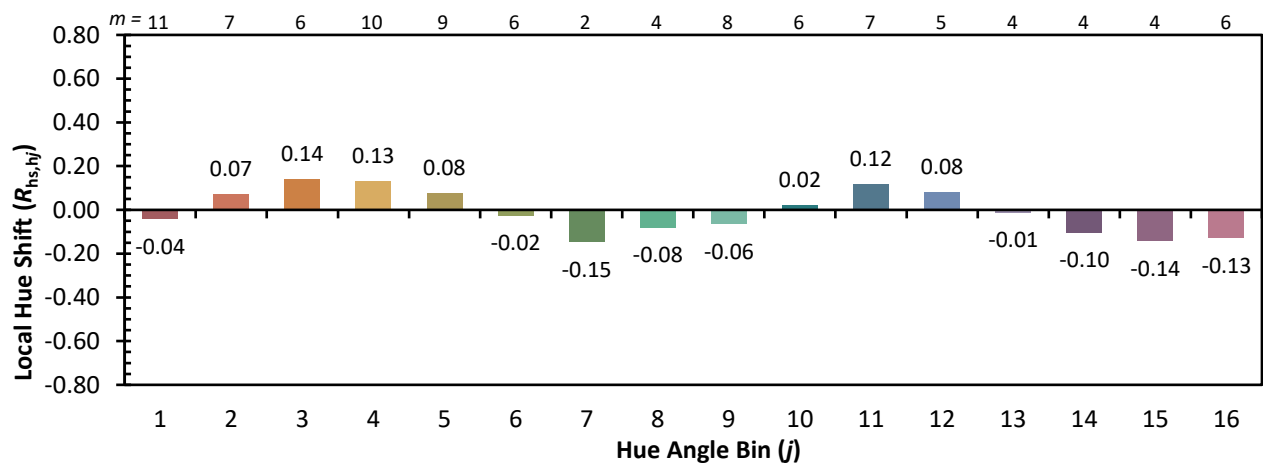
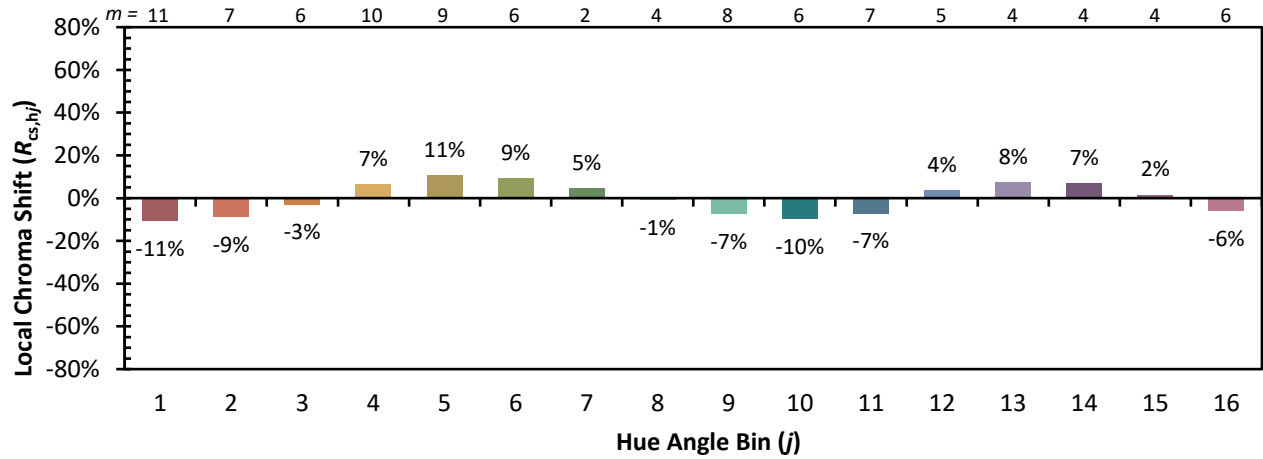


Individual Sample Fidelity Index ($R_{f,i}$)

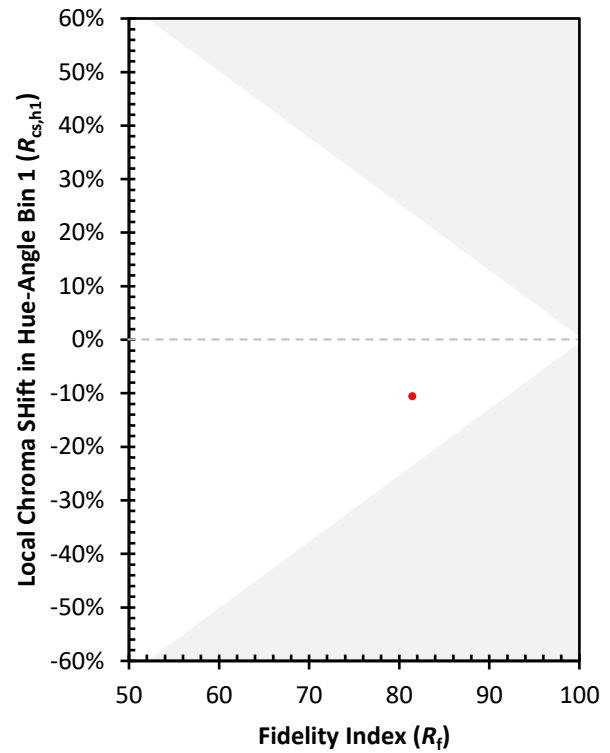
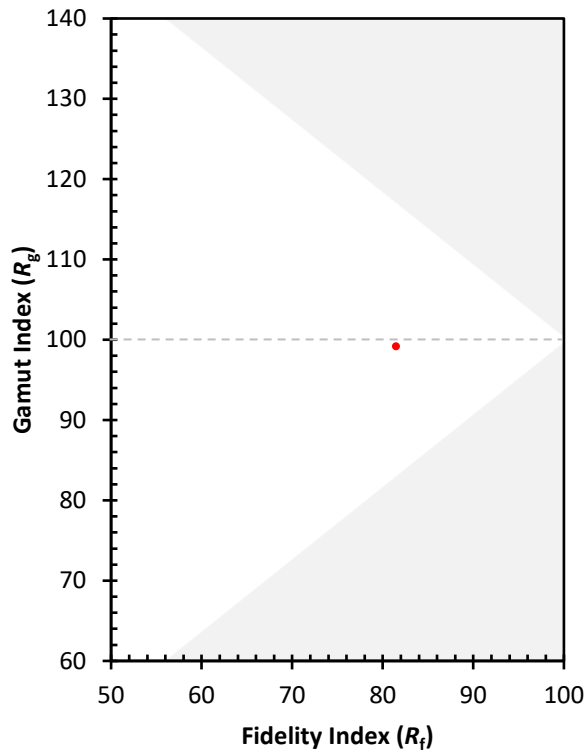
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 91	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)