

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: P1068065

Luminaire Tested: **NAV-SA2A-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068065
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA2A-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 615mA 2xLight Square PACKAGE
80CRI 3000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (28) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4946.2 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G2

Input Watts (W): 55.3
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

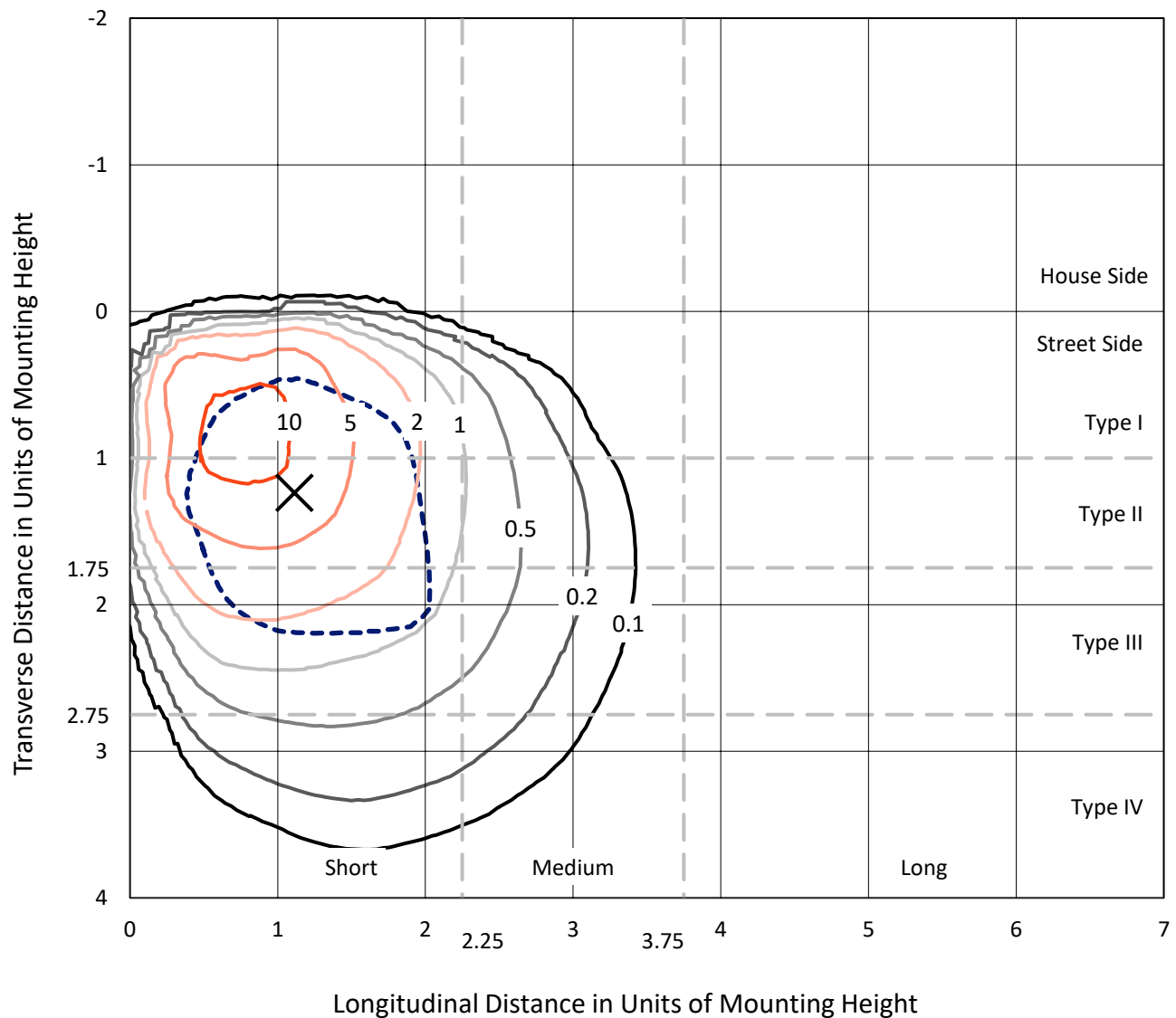


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Iso-Footcandle Lines of Horizontal Illumination

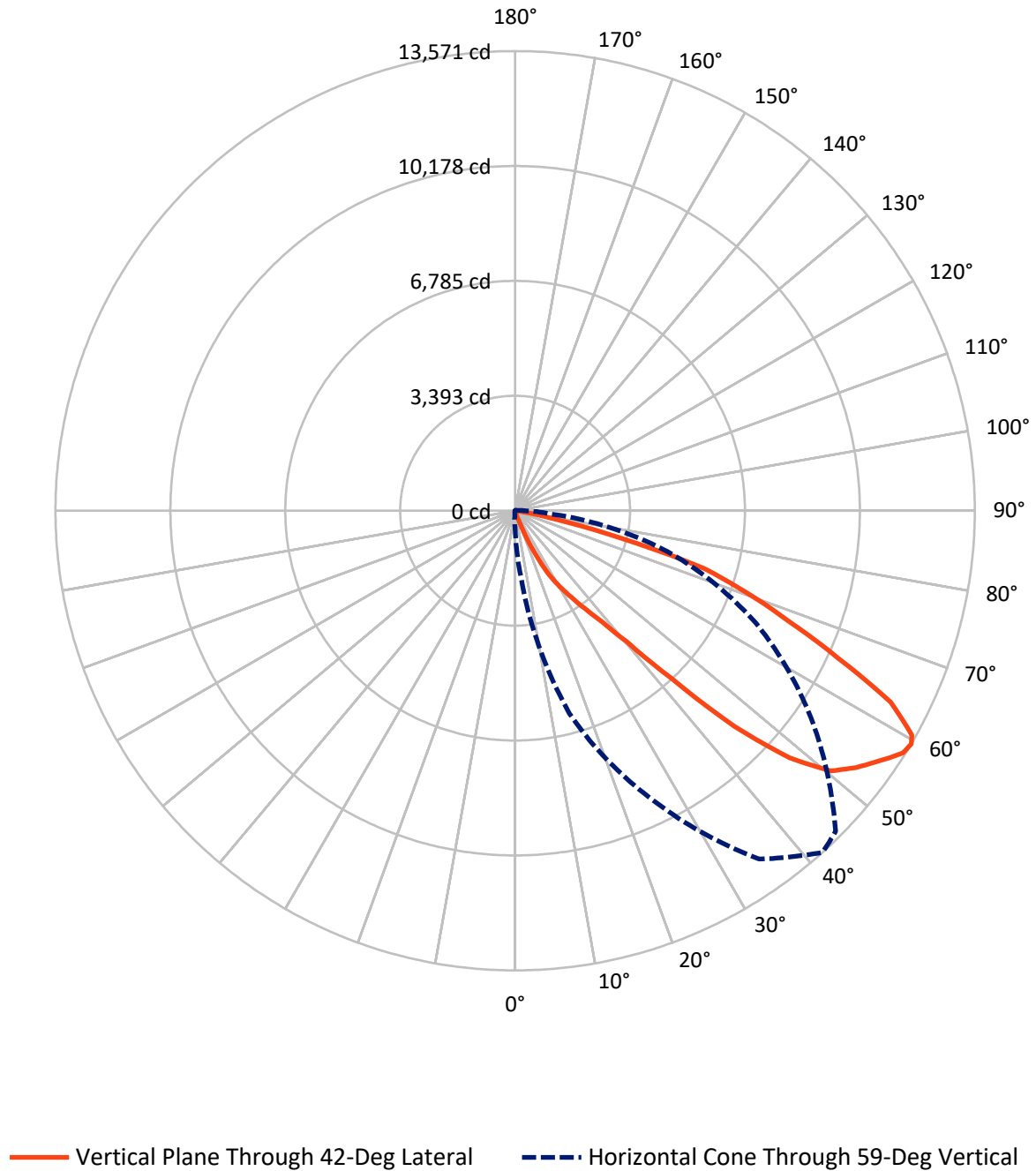
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 14.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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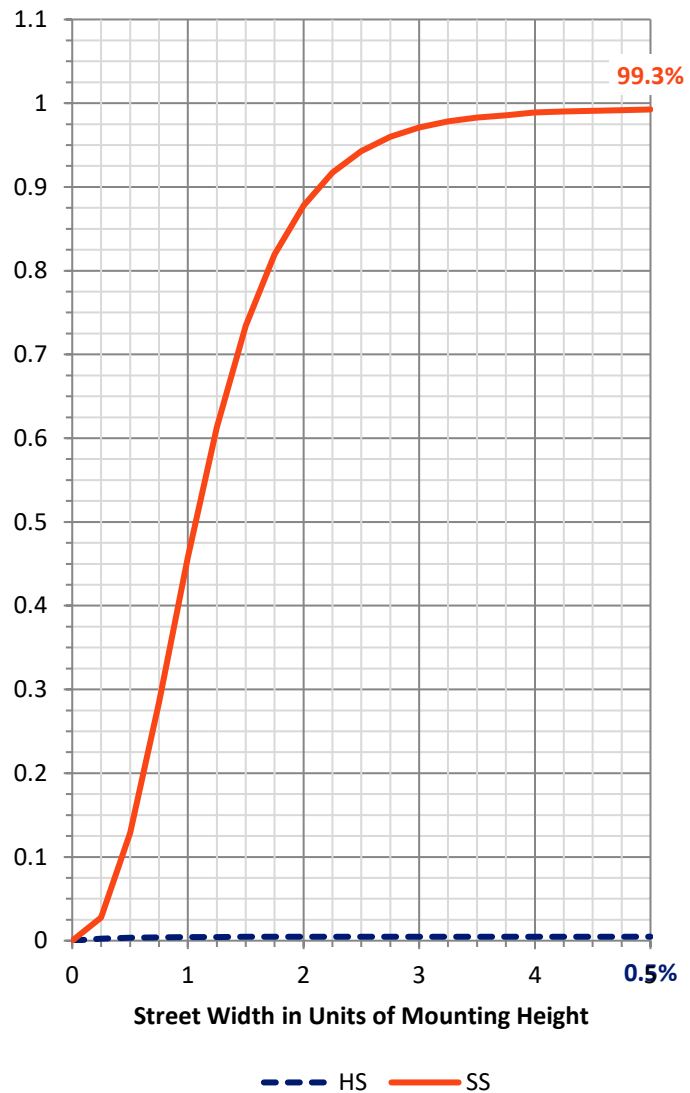
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	23.8	0.0	23.8
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	4922.3	0.0	4922.3
	% Fixture	99.5	0.0	99.5
Total	Lumens	4946.2	0.0	4946.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.4	0.0
10°-20°	7.2	0.1
20°-30°	92.3	1.9
30°-40°	311.1	6.3
40°-50°	939.5	19.0
50°-60°	1658.5	33.5
60°-70°	1460.3	29.5
70°-80°	464.8	9.4
80°-90°	11.1	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°	4946.2	100.0
0°-180°	4946.2	100.0



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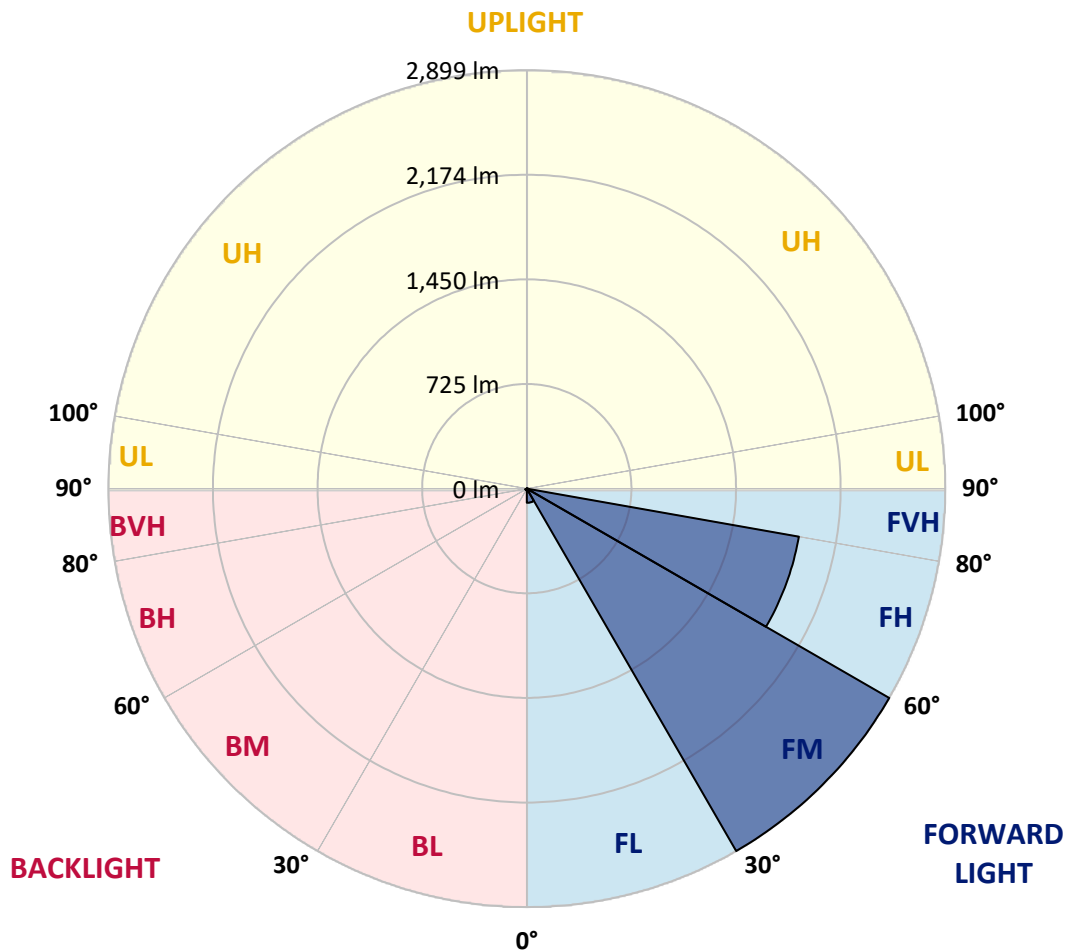
CATALOG NUMBER: NAV-SA2A-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	98.3	2.0			
FM	(30°-60°)	2899.3	58.6			
FH	(60°-80°)	1914.2	38.7			G2/5000
FVH	(80°-90°)	10.6	0.2			G1/100
BL	(0°-30°)	2.7	0.1	B0/110		
BM	(30°-60°)	9.7	0.2	B0/220		
BH	(60°-80°)	10.9	0.2	B0/110		G0/110
BVH	(80°-90°)	0.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	21.7	21.7	20.2	18.6	17.1	15.5	15.5	15.5	14.0	14.0	12.4
5°	24.8	24.8	23.3	21.7	21.7	20.2	20.2	18.6	17.1	17.1	15.5
7.5°	26.4	26.4	26.4	26.4	24.8	24.8	24.8	23.3	21.7	20.2	18.6
10°	27.9	29.5	31.0	31.0	31.0	31.0	31.0	29.5	26.4	24.8	21.7
12.5°	31.0	32.6	35.7	38.8	38.8	40.3	38.8	37.2	34.1	29.5	24.8
15°	34.1	37.2	41.9	48.1	54.3	55.8	55.8	51.2	45.0	35.7	29.5
17.5°	38.8	43.4	55.8	76.0	97.7	114.8	114.8	102.4	71.3	46.5	34.1
20°	41.9	51.2	89.9	183.0	279.1	350.5	336.5	297.8	159.7	72.9	37.2
22.5°	46.5	65.1	190.7	480.7	744.4	874.6	843.6	640.5	358.2	130.3	45.0
25°	52.7	94.6	378.4	901.0	1383.3	1524.4	1504.3	1195.7	652.9	218.7	57.4
27.5°	65.1	139.6	606.4	1366.2	2040.8	2161.8	2154.0	1750.8	1043.7	352.0	74.4
30°	82.2	203.2	899.5	1856.3	2476.6	2599.1	2560.3	2157.1	1408.1	538.1	96.1
32.5°	102.4	283.8	1164.6	2217.6	2878.3	3039.5	2993.0	2510.7	1701.2	696.3	142.7
35°	133.4	362.9	1426.7	2537.1	3341.9	3546.6	3469.1	2875.2	1954.0	874.6	172.1
37.5°	148.9	409.4	1667.1	2884.5	3863.0	4142.1	4083.2	3335.7	2211.4	1102.6	210.9
40°	150.4	465.2	1916.8	3337.3	4599.6	5097.4	4992.0	4126.6	2690.6	1395.7	271.4
42.5°	155.1	549.0	2240.9	4109.6	6046.5	6761.4	6642.0	5581.3	3777.7	1983.5	384.6
45°	176.8	707.2	2901.5	5553.4	8033.1	9081.4	8943.4	7608.1	5295.9	3089.2	656.0
47.5°	252.8	1063.8	4060.0	7111.9	10064.6	10900.5	10866.3	9205.5	6671.5	4222.8	1111.9
50°	406.3	1633.0	5378.1	8422.3	11357.9	12076.0	11990.7	9872.3	7456.2	4996.6	1425.2
52.5°	542.8	2177.3	6206.2	8904.6	11744.1	12600.1	12496.2	10115.8	7662.4	5224.6	1512.0
55°	576.9	2374.3	6452.8	9053.5	12000.0	13043.6	12893.2	10278.6	7688.8	5061.8	1367.8
57.5°	559.8	2188.2	6293.1	9199.3	12356.7	13499.6	13299.5	10596.5	7777.2	4785.7	1138.3
59°	530.4	1958.6	6193.8	9315.6	12553.6	13570.9	13383.3	10666.3	7836.1	4660.1	998.7
60°	496.3	1803.6	6116.3	9391.6	12541.2	13459.3	13265.4	10633.7	7859.4	4551.6	932.0
62.5°	383.0	1439.1	6004.6	9337.3	11758.0	12440.4	12330.3	9836.6	7518.2	4204.2	735.1
65°	297.8	1101.1	5595.2	8327.7	10005.7	10464.7	10430.6	8329.3	6327.2	3624.2	530.4
67.5°	235.7	803.3	4731.4	6744.4	8050.1	8703.0	8678.2	6761.4	4802.8	2769.7	381.5
70°	192.3	572.2	3244.2	5085.0	6438.9	7260.8	7225.1	5441.7	3559.1	1757.0	277.6
72.5°	162.8	366.0	1967.9	3833.5	5373.5	5843.4	5739.5	4390.3	2588.3	956.8	220.2
75°	138.0	224.9	975.4	2389.8	3200.8	3197.7	3093.8	2324.6	1389.5	468.3	175.2
77.5°	111.7	158.2	383.0	656.0	1009.6	1249.9	1229.8	823.5	415.6	136.5	108.6
80°	72.9	74.4	102.4	179.9	277.6	307.1	348.9	251.2	121.0	65.1	45.0
82.5°	32.6	35.7	46.5	58.9	58.9	54.3	48.1	35.7	26.4	21.7	10.9
85°	7.8	10.9	7.8	9.3	7.8	6.2	6.2	3.1	0.0	0.0	0.0
87.5°	1.6	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°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	12.4	12.4	12.4	10.9	10.9	10.9	9.3	9.3	9.3	7.8	7.8
5°	15.5	14.0	12.4	12.4	10.9	10.9	9.3	7.8	7.8	7.8	6.2
7.5°	17.1	15.5	14.0	12.4	10.9	9.3	9.3	7.8	6.2	6.2	6.2
10°	20.2	18.6	15.5	12.4	10.9	9.3	7.8	7.8	6.2	4.7	4.7
12.5°	23.3	20.2	17.1	14.0	10.9	9.3	7.8	7.8	6.2	4.7	3.1
15°	26.4	23.3	18.6	14.0	10.9	9.3	7.8	7.8	4.7	3.1	1.6
17.5°	29.5	24.8	18.6	15.5	10.9	9.3	7.8	6.2	3.1	1.6	0.0
20°	31.0	26.4	20.2	15.5	10.9	9.3	7.8	4.7	1.6	0.0	0.0
22.5°	34.1	29.5	21.7	15.5	10.9	7.8	4.7	1.6	0.0	0.0	0.0
25°	40.3	31.0	21.7	15.5	10.9	7.8	3.1	0.0	0.0	0.0	0.0
27.5°	45.0	34.1	21.7	15.5	10.9	6.2	1.6	0.0	0.0	0.0	0.0
30°	52.7	37.2	23.3	15.5	10.9	4.7	1.6	0.0	0.0	0.0	0.0
32.5°	65.1	40.3	23.3	15.5	9.3	4.7	0.0	0.0	0.0	0.0	0.0
35°	79.1	46.5	23.3	15.5	9.3	4.7	0.0	0.0	0.0	0.0	0.0
37.5°	80.6	49.6	23.3	15.5	9.3	3.1	0.0	0.0	0.0	0.0	0.0
40°	83.7	46.5	24.8	15.5	9.3	3.1	0.0	0.0	0.0	0.0	0.0
42.5°	96.1	43.4	26.4	15.5	9.3	3.1	0.0	0.0	0.0	0.0	0.0
45°	142.7	45.0	26.4	17.1	9.3	4.7	0.0	0.0	0.0	0.0	0.0
47.5°	248.1	46.5	24.8	17.1	9.3	4.7	0.0	0.0	0.0	0.0	0.0
50°	317.9	54.3	24.8	18.6	10.9	3.1	0.0	0.0	0.0	0.0	0.0
52.5°	338.1	63.6	24.8	20.2	14.0	1.6	0.0	0.0	0.0	0.0	0.0
55°	328.8	74.4	26.4	21.7	17.1	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	304.0	80.6	27.9	23.3	18.6	0.0	0.0	0.0	0.0	0.0	0.0
59°	277.6	85.3	32.6	24.8	18.6	0.0	0.0	0.0	0.0	0.0	0.0
60°	255.9	89.9	34.1	26.4	18.6	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	206.3	96.1	37.2	31.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0
65°	179.9	100.8	38.8	34.1	14.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	164.4	103.9	41.9	35.7	12.4	0.0	0.0	0.0	0.0	0.0	0.0
70°	152.0	102.4	45.0	34.1	10.9	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	138.0	97.7	54.3	31.0	9.3	0.0	0.0	0.0	0.0	0.0	0.0
75°	124.1	88.4	58.9	27.9	6.2	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	89.9	74.4	54.3	24.8	3.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	38.8	40.3	38.8	18.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	7.8	9.3	7.8	4.7	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°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	7.8	7.8	7.8	7.8	9.3	9.3	12.4	15.5	18.6	20.2	20.2
5°	6.2	6.2	6.2	6.2	6.2	7.8	9.3	12.4	17.1	18.6	18.6
7.5°	4.7	4.7	4.7	4.7	4.7	4.7	7.8	10.9	15.5	17.1	18.6
10°	4.7	3.1	3.1	1.6	1.6	3.1	4.7	9.3	14.0	15.5	17.1
12.5°	3.1	1.6	1.6	0.0	0.0	1.6	3.1	7.8	12.4	14.0	15.5
15°	1.6	0.0	0.0	0.0	0.0	0.0	1.6	6.2	10.9	12.4	15.5
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	9.3	12.4	14.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.8	10.9	12.4
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	6.2	9.3	10.9
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	6.2	7.8
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.7	6.2
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	4.7	6.2
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.7
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	3.1
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
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°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2.5°	21.7	21.7	20.2	18.6	18.6	18.6	20.2	21.7	21.7	21.7
5°	20.2	20.2	18.6	18.6	18.6	18.6	20.2	23.3	24.8	24.8
7.5°	20.2	20.2	18.6	18.6	18.6	18.6	20.2	23.3	24.8	26.4
10°	18.6	18.6	18.6	18.6	17.1	18.6	20.2	23.3	27.9	27.9
12.5°	18.6	18.6	18.6	18.6	17.1	18.6	21.7	24.8	29.5	31.0
15°	18.6	18.6	18.6	17.1	17.1	18.6	21.7	26.4	31.0	34.1
17.5°	17.1	18.6	18.6	17.1	17.1	18.6	21.7	26.4	34.1	38.8
20°	15.5	17.1	18.6	17.1	17.1	17.1	21.7	26.4	35.7	41.9
22.5°	14.0	15.5	17.1	17.1	15.5	17.1	21.7	27.9	38.8	46.5
25°	12.4	14.0	14.0	15.5	15.5	17.1	21.7	27.9	40.3	52.7
27.5°	9.3	10.9	12.4	14.0	14.0	17.1	21.7	29.5	43.4	65.1
30°	7.8	9.3	10.9	12.4	14.0	17.1	21.7	29.5	46.5	82.2
32.5°	7.8	9.3	10.9	12.4	14.0	15.5	21.7	31.0	51.2	102.4
35°	6.2	7.8	9.3	12.4	12.4	15.5	21.7	31.0	55.8	133.4
37.5°	6.2	7.8	9.3	12.4	12.4	15.5	21.7	31.0	68.2	148.9
40°	4.7	6.2	7.8	12.4	12.4	15.5	23.3	32.6	69.8	150.4
42.5°	4.7	6.2	7.8	10.9	12.4	15.5	23.3	32.6	65.1	155.1
45°	4.7	6.2	7.8	12.4	14.0	17.1	23.3	34.1	63.6	176.8
47.5°	4.7	6.2	7.8	12.4	15.5	17.1	23.3	34.1	65.1	252.8
50°	4.7	6.2	7.8	12.4	17.1	17.1	23.3	34.1	71.3	406.3
52.5°	3.1	4.7	6.2	10.9	14.0	18.6	24.8	32.6	76.0	542.8
55°	3.1	3.1	4.7	9.3	12.4	20.2	26.4	32.6	88.4	576.9
57.5°	3.1	3.1	4.7	7.8	10.9	21.7	27.9	32.6	102.4	559.8
59°	3.1	3.1	3.1	7.8	9.3	21.7	27.9	34.1	103.9	530.4
60°	3.1	3.1	3.1	6.2	9.3	21.7	29.5	35.7	105.5	496.3
62.5°	1.6	1.6	1.6	6.2	7.8	21.7	32.6	43.4	108.6	383.0
65°	3.1	3.1	1.6	4.7	7.8	18.6	37.2	46.5	110.1	297.8
67.5°	3.1	3.1	3.1	6.2	7.8	18.6	38.8	48.1	110.1	235.7
70°	3.1	3.1	3.1	6.2	9.3	18.6	38.8	49.6	108.6	192.3
72.5°	3.1	3.1	3.1	6.2	9.3	17.1	35.7	51.2	103.9	162.8
75°	3.1	3.1	3.1	4.7	7.8	15.5	34.1	55.8	94.6	138.0
77.5°	3.1	3.1	3.1	3.1	6.2	12.4	31.0	62.0	83.7	111.7
80°	4.7	3.1	3.1	3.1	4.7	10.9	29.5	60.5	69.8	72.9
82.5°	4.7	3.1	3.1	1.6	3.1	7.8	23.3	46.5	35.7	32.6
85°	3.1	3.1	3.1	1.6	1.6	4.7	10.9	14.0	10.9	7.8
87.5°	3.1	3.1	3.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: SP1-2407-184-9

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

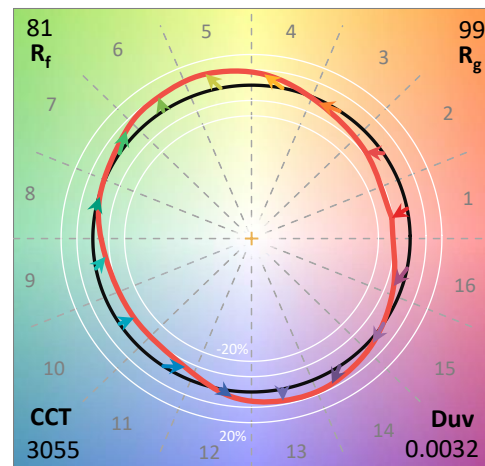
Test Information

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

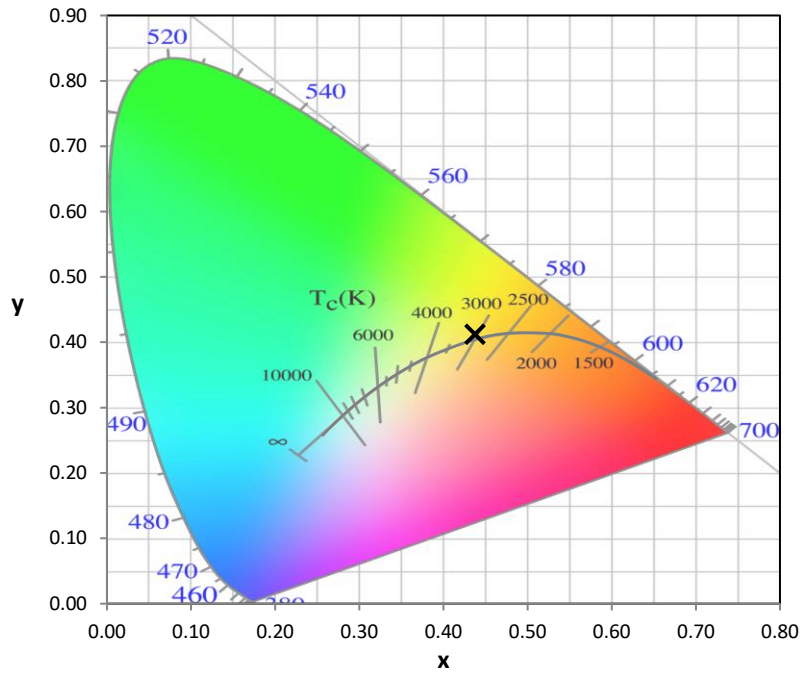
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

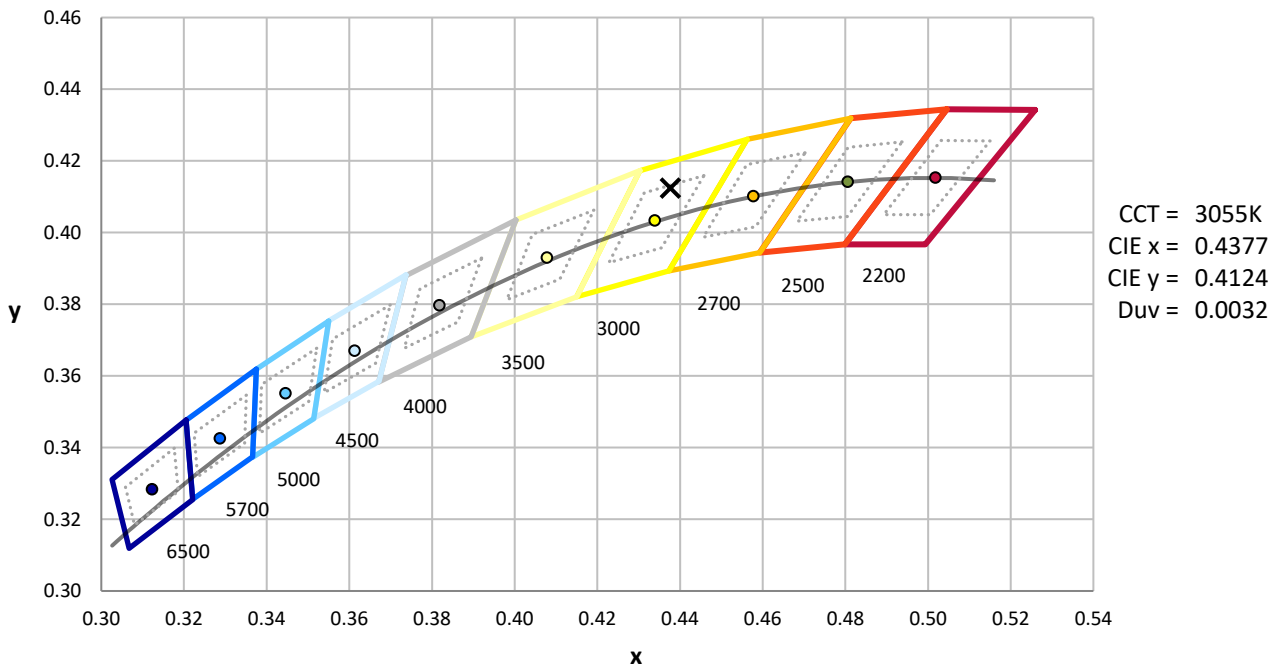
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



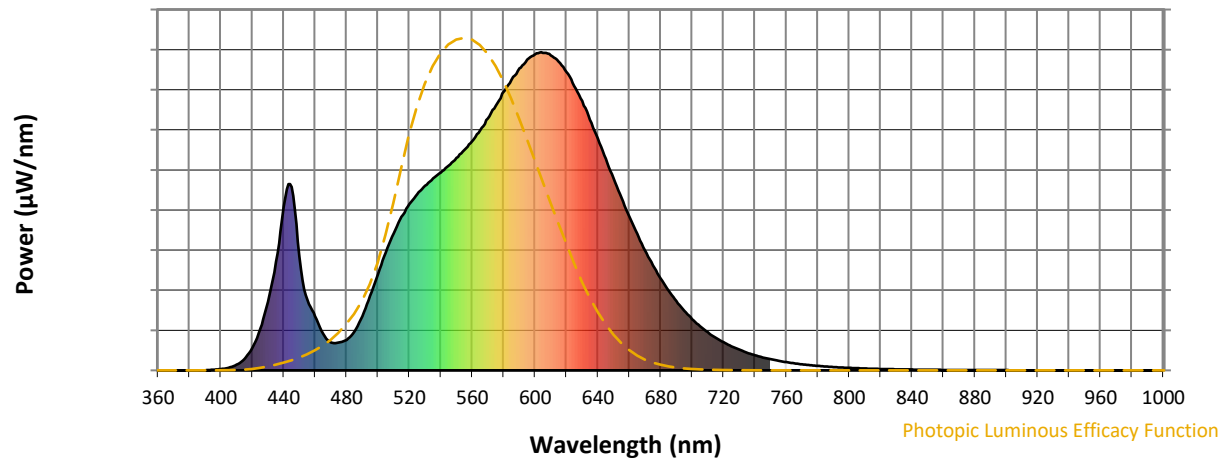
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

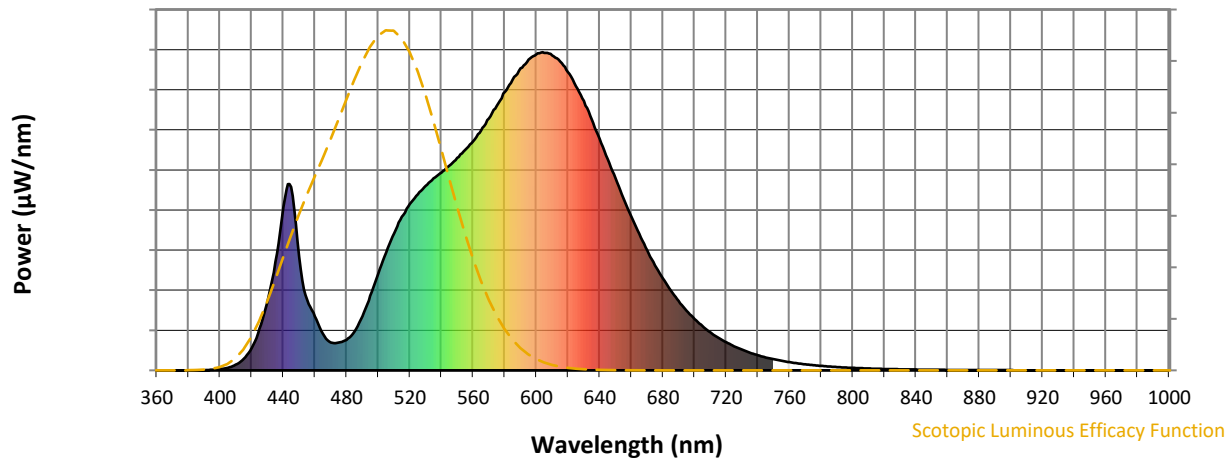


Photopic Lumens: NR

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



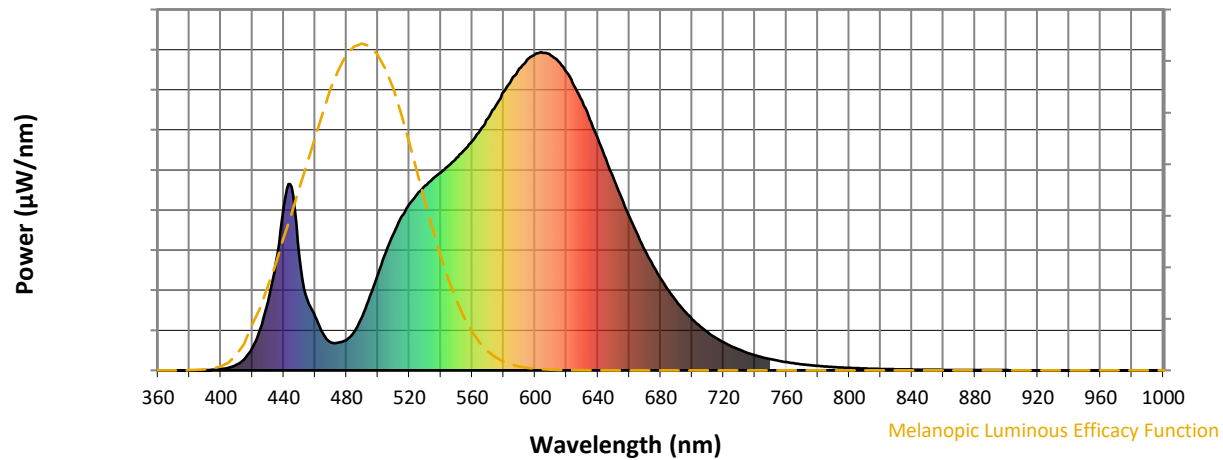
Scotopic Lumens: NR

S/P: 1.28

λ (nm)	Power W ^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			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.33

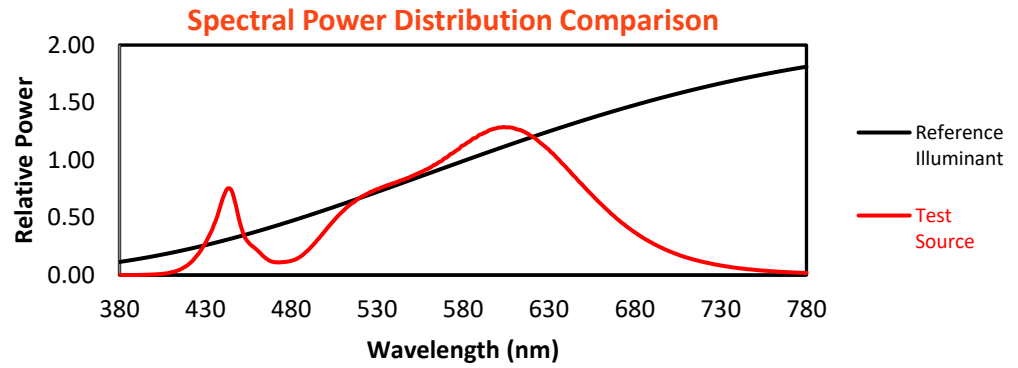
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	170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

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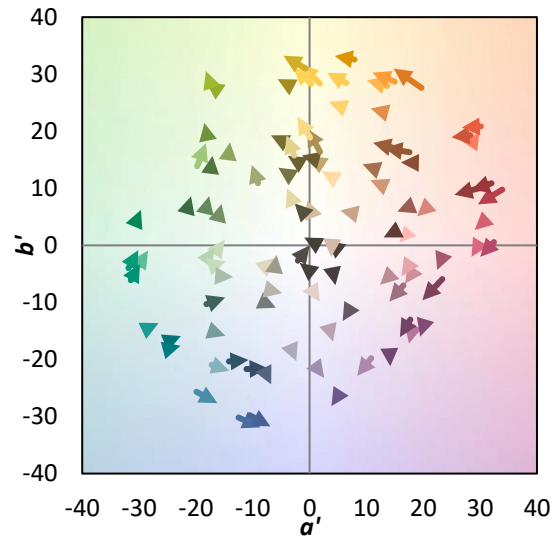
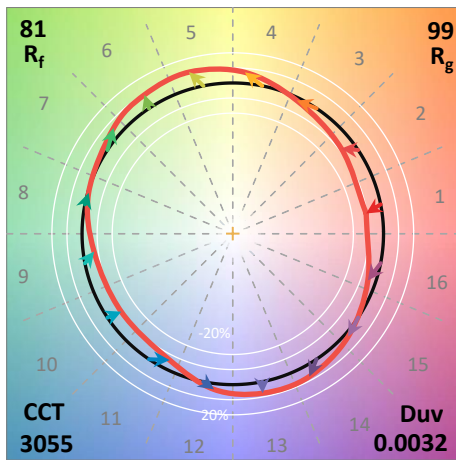
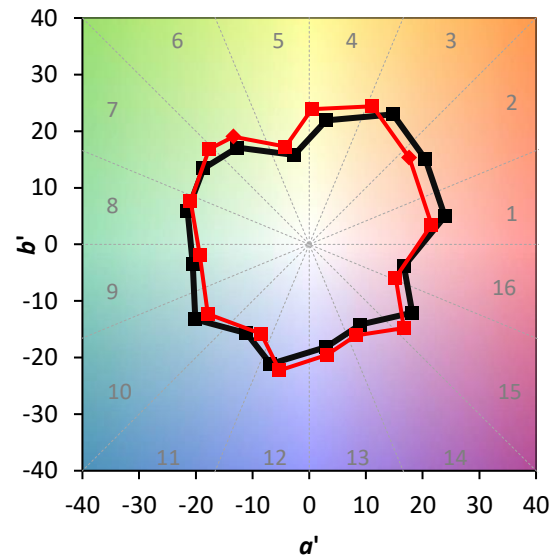
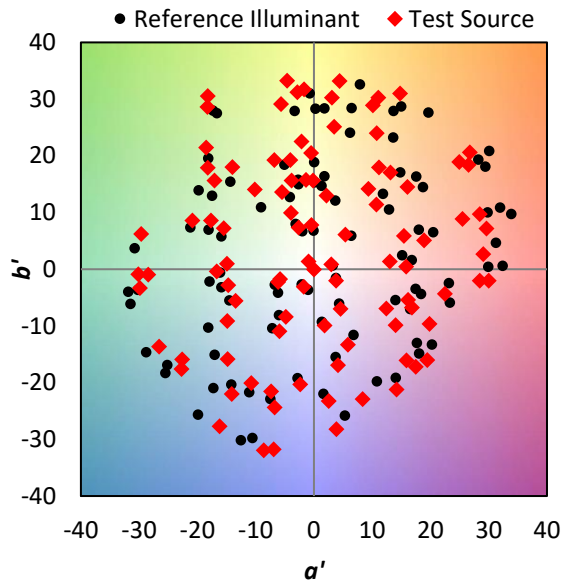
TM-30-18

Summary

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

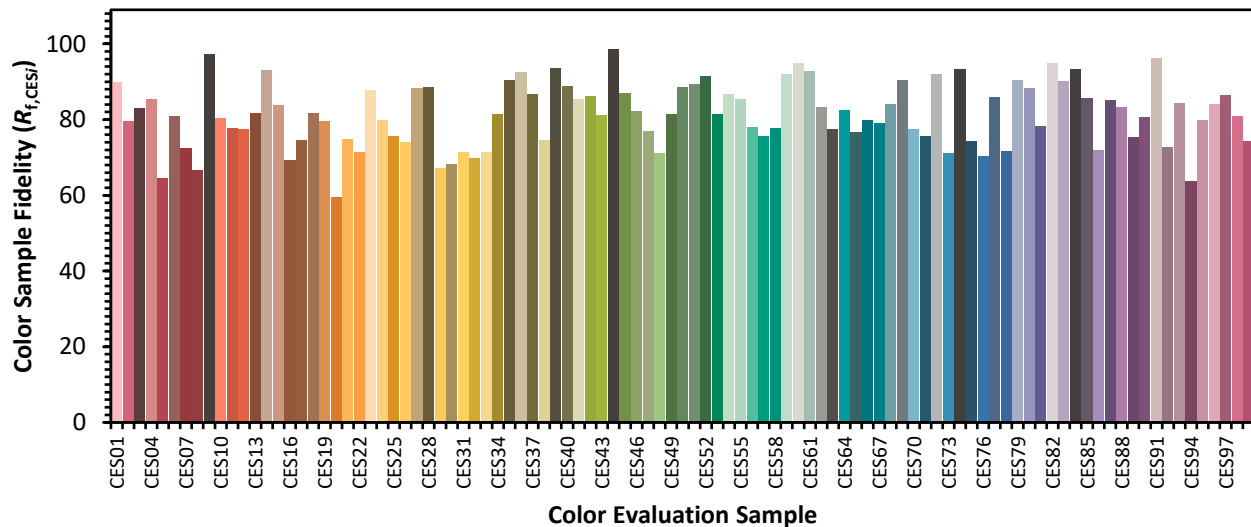


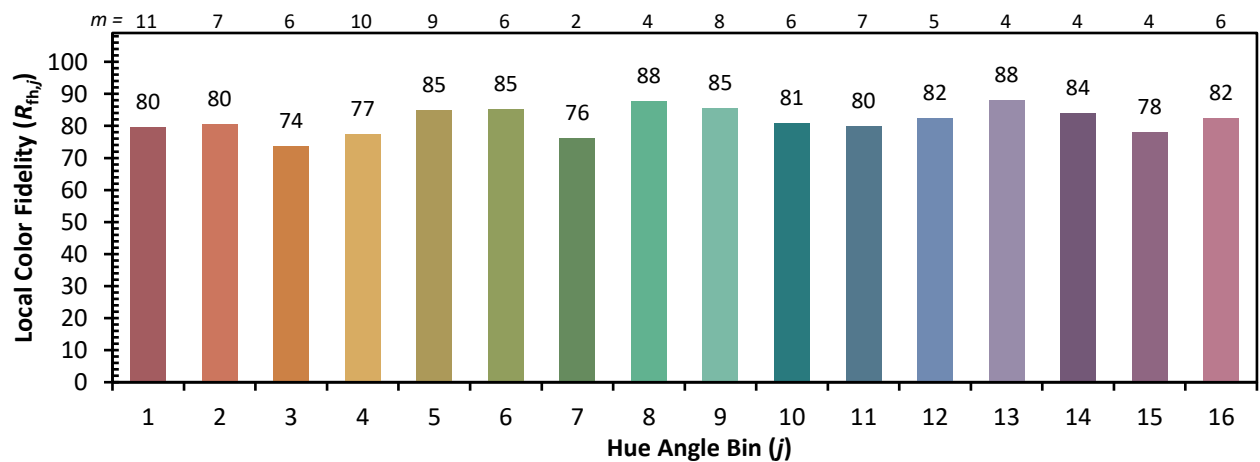
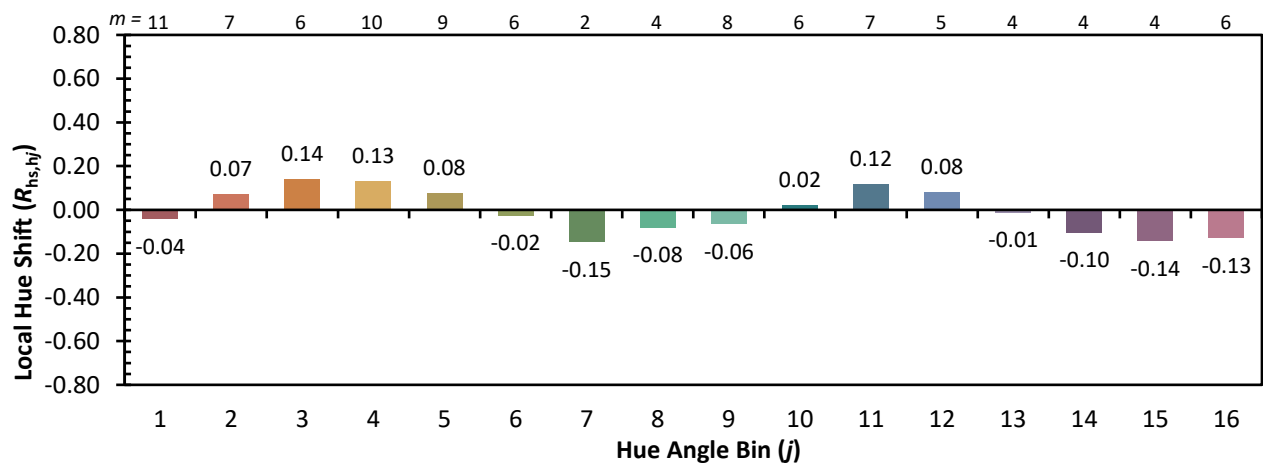
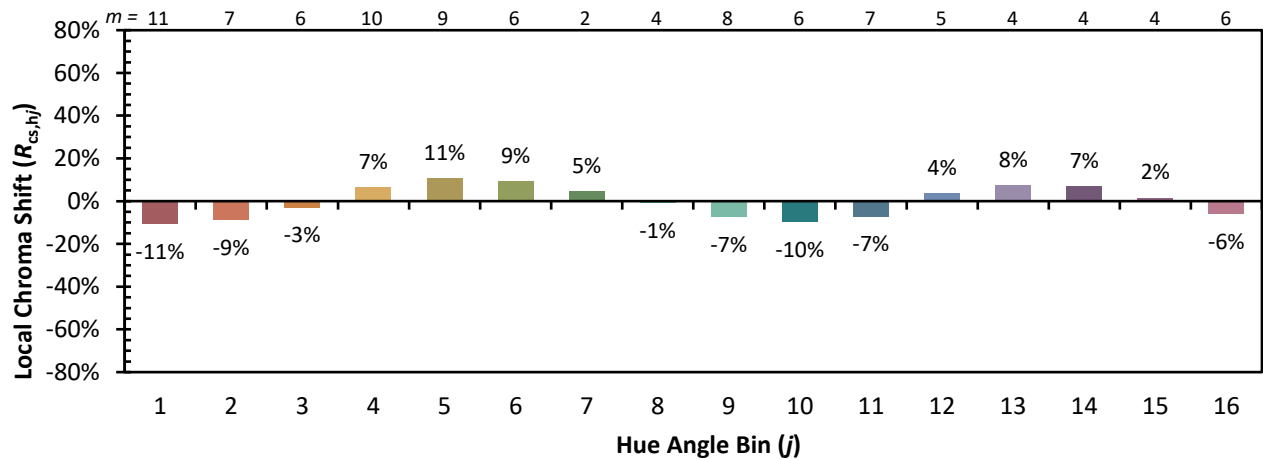
Color Vector Graphics



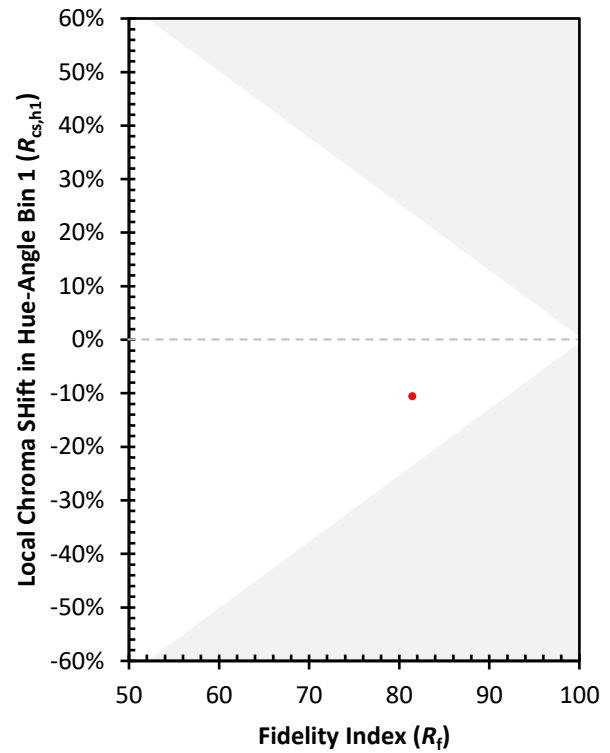
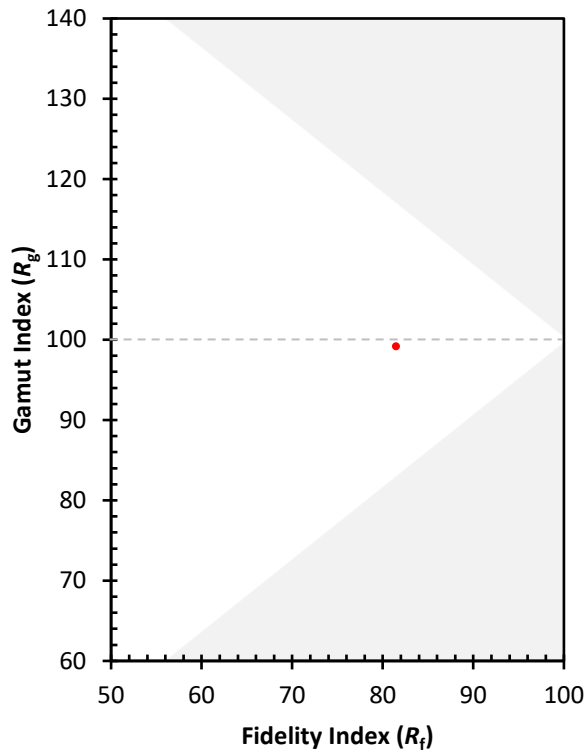
Individual Sample Fidelity Index ($R_{f,i}$)

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)