

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: P1068064

Luminaire Tested: **NAV-SA1D-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068064
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA1D-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 1xLight Square PACKAGE
80CRI 3000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (14) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4366.8 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

Input Watts (W): 56.5
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

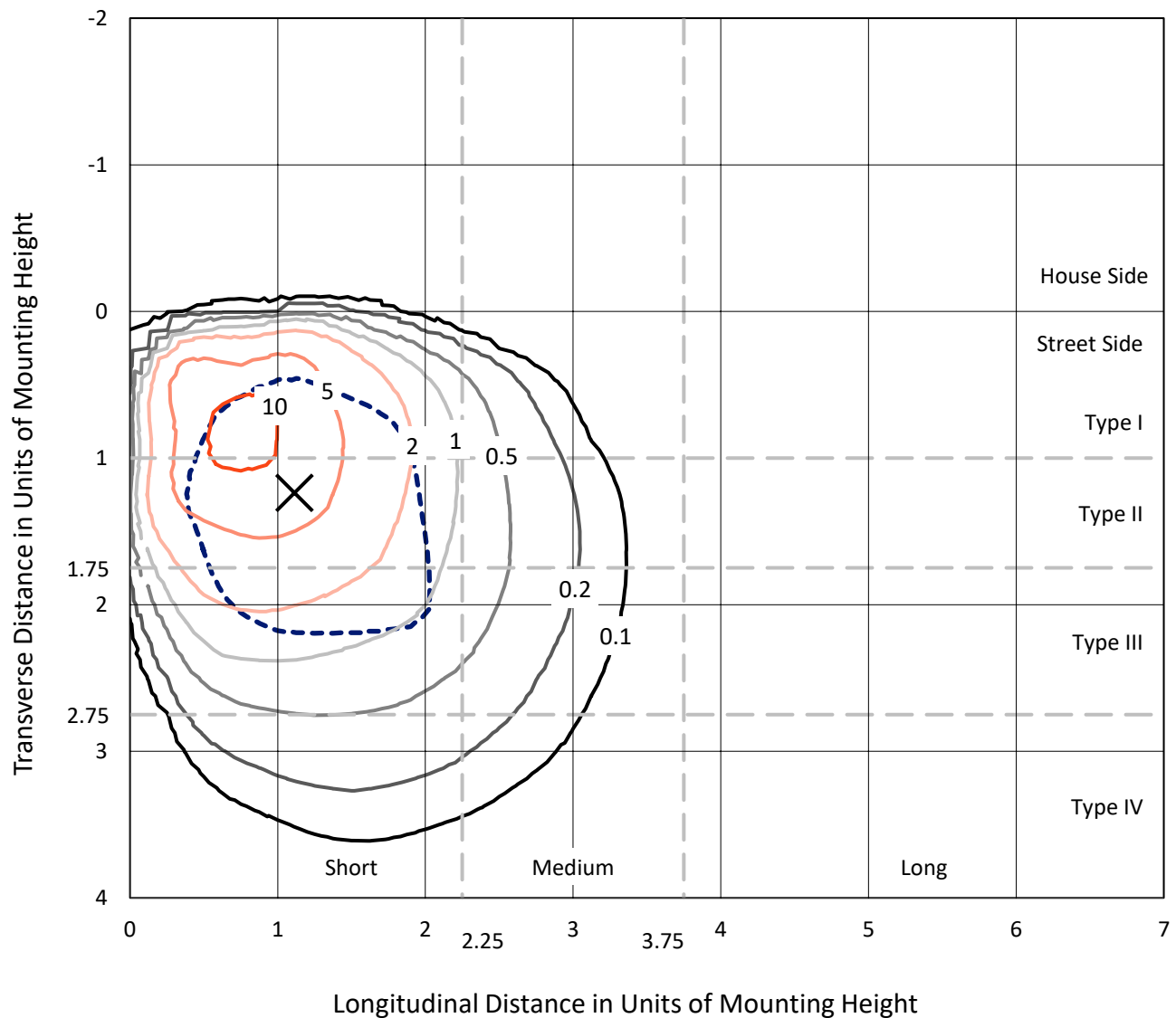


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

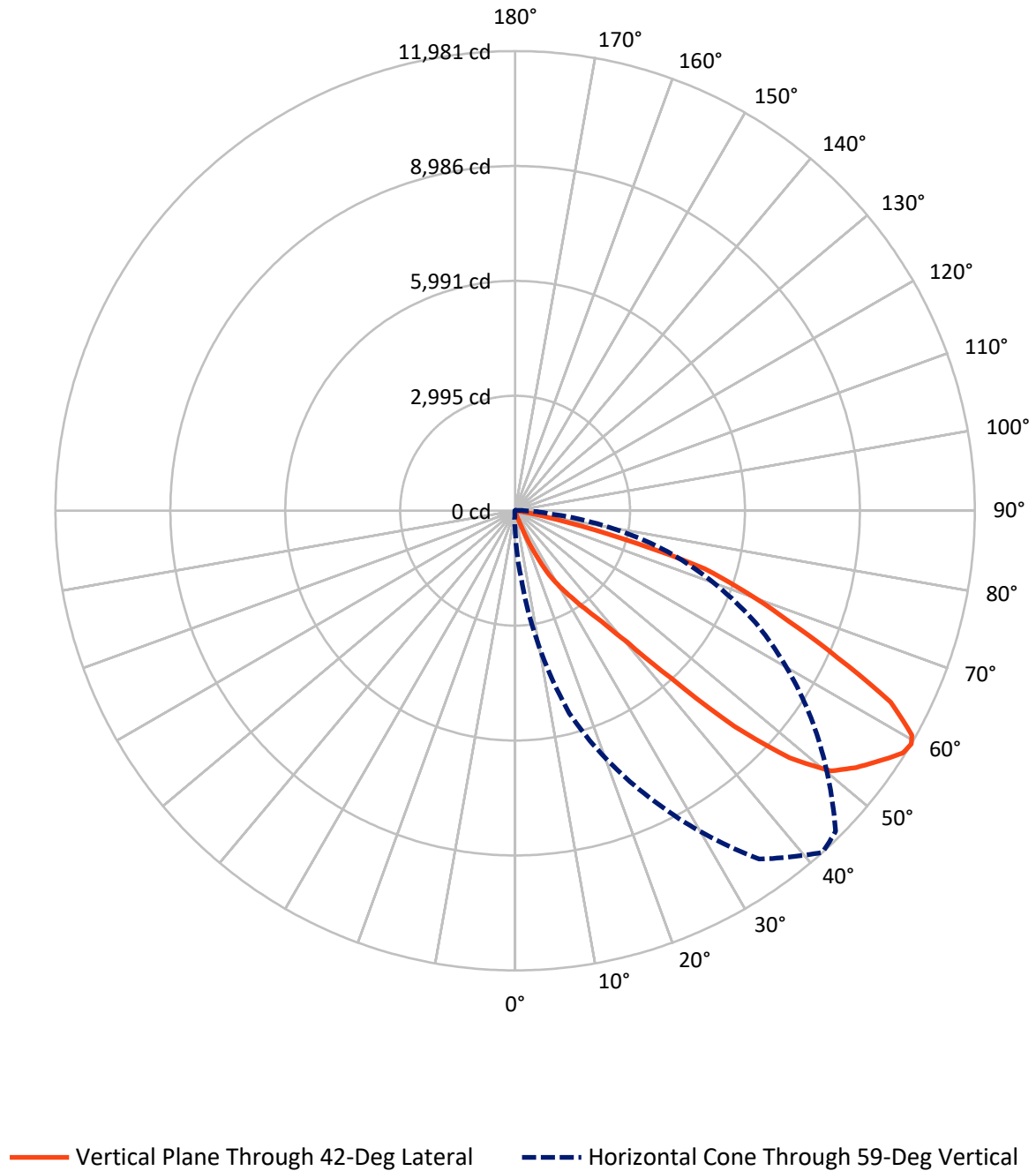


Based on 15 foot mounting height. Maximum calculated value = 13 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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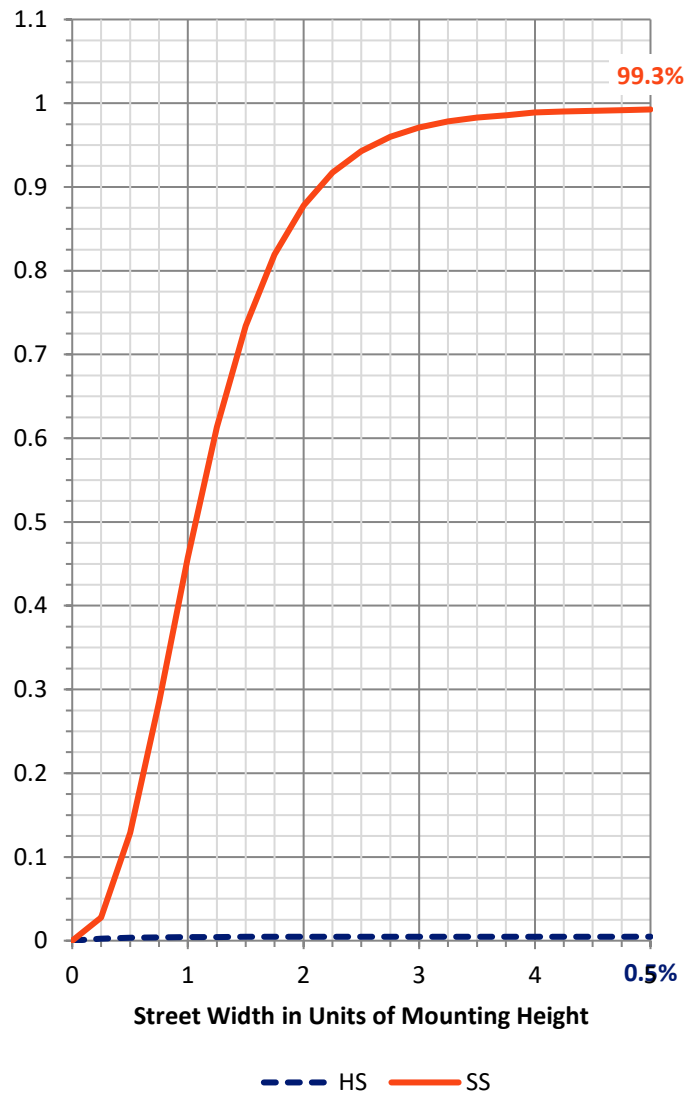
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	21.0	0.0	21.0
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	4345.8	0.0	4345.8
	% Fixture	99.5	0.0	99.5
Total	Lumens	4366.8	0.0	4366.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.3	0.0
10°-20°	6.4	0.1
20°-30°	81.5	1.9
30°-40°	274.6	6.3
40°-50°	829.5	19.0
50°-60°	1464.2	33.5
60°-70°	1289.3	29.5
70°-80°	410.4	9.4
80°-90°	9.8	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°	4366.8	100.0
0°-180°	4366.8	100.0



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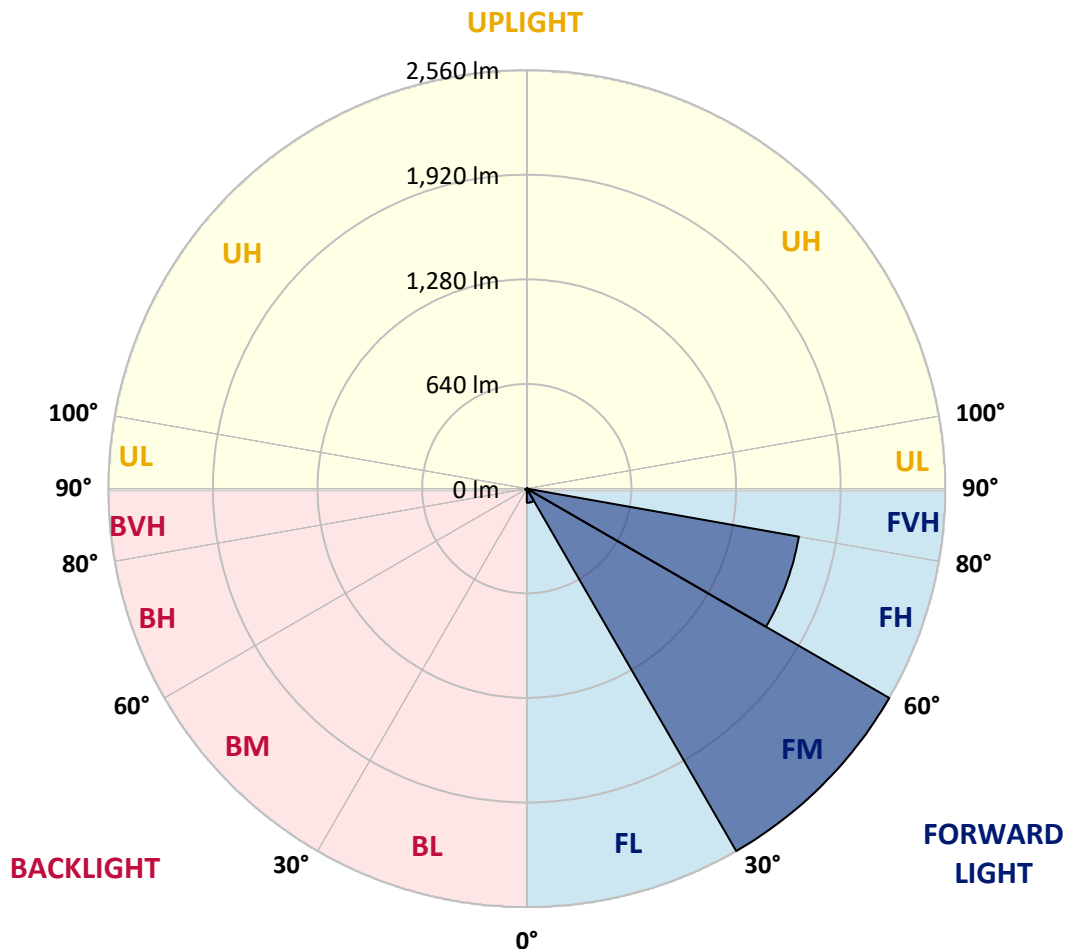
CATALOG NUMBER: NAV-SA1D-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	86.8	2.0			
FM	(30°-60°)	2559.7	58.6			
FH	(60°-80°)	1690.0	38.7			G1/1800
FVH	(80°-90°)	9.3	0.2			G0/10
BL	(0°-30°)	2.3	0.1	B0/110		
BM	(30°-60°)	8.6	0.2	B0/220		
BH	(60°-80°)	9.6	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	19.2	19.2	17.8	16.4	15.1	13.7	13.7	13.7	12.3	12.3	11.0
5°	21.9	21.9	20.5	19.2	19.2	17.8	17.8	16.4	15.1	15.1	13.7
7.5°	23.3	23.3	23.3	23.3	21.9	21.9	21.9	20.5	19.2	17.8	16.4
10°	24.6	26.0	27.4	27.4	27.4	27.4	27.4	26.0	23.3	21.9	19.2
12.5°	27.4	28.8	31.5	34.2	34.2	35.6	34.2	32.9	30.1	26.0	21.9
15°	30.1	32.9	37.0	42.4	47.9	49.3	49.3	45.2	39.7	31.5	26.0
17.5°	34.2	38.3	49.3	67.1	86.3	101.3	101.3	90.4	63.0	41.1	30.1
20°	37.0	45.2	79.4	161.6	246.4	309.4	297.1	262.9	141.0	64.4	32.9
22.5°	41.1	57.5	168.4	424.4	657.2	772.2	744.8	565.5	316.3	115.0	39.7
25°	46.6	83.5	334.1	795.5	1221.3	1345.9	1328.1	1055.6	576.4	193.1	50.7
27.5°	57.5	123.2	535.3	1206.2	1801.8	1908.6	1901.8	1545.8	921.4	310.8	65.7
30°	72.6	179.4	794.1	1638.9	2186.5	2294.7	2260.5	1904.5	1243.2	475.1	84.9
32.5°	90.4	250.6	1028.2	1957.9	2541.1	2683.5	2642.5	2216.7	1502.0	614.7	126.0
35°	117.7	320.4	1259.6	2239.9	2950.5	3131.3	3062.8	2538.4	1725.1	772.2	152.0
37.5°	131.4	361.5	1471.8	2546.6	3410.6	3657.0	3605.0	2945.0	1952.4	973.5	186.2
40°	132.8	410.7	1692.3	2946.4	4060.9	4500.4	4407.3	3643.3	2375.5	1232.2	239.6
42.5°	136.9	484.7	1978.4	3628.3	5338.3	5969.5	5864.1	4927.6	3335.3	1751.1	339.5
45°	156.1	624.3	2561.7	4902.9	7092.2	8017.8	7895.9	6717.1	4675.7	2727.4	579.2
47.5°	223.2	939.2	3584.4	6278.9	8885.8	9623.8	9593.6	8127.3	5890.1	3728.2	981.7
50°	358.7	1441.7	4748.2	7435.9	10027.7	10661.6	10586.3	8716.0	6582.9	4411.4	1258.3
52.5°	479.2	1922.3	5479.3	7861.7	10368.6	11124.4	11032.6	8931.0	6765.0	4612.7	1334.9
55°	509.3	2096.2	5697.0	7993.1	10594.5	11515.9	11383.1	9074.7	6788.3	4468.9	1207.6
57.5°	494.3	1931.9	5556.0	8121.8	10909.4	11918.5	11741.8	9355.4	6866.3	4225.2	1005.0
59°	468.2	1729.2	5468.4	8224.5	11083.3	11981.4	11815.8	9417.0	6918.3	4114.3	881.7
60°	438.1	1592.3	5399.9	8291.6	11072.3	11882.9	11711.7	9388.3	6938.9	4018.5	822.9
62.5°	338.2	1270.6	5301.4	8243.7	10380.9	10983.3	10886.1	8684.5	6637.6	3711.8	649.0
65°	262.9	972.1	4939.9	7352.3	8833.8	9239.0	9208.9	7353.7	5586.1	3199.7	468.2
67.5°	208.1	709.2	4177.3	5954.4	7107.3	7683.7	7661.8	5969.5	4240.3	2445.3	336.8
70°	169.8	505.2	2864.3	4489.4	5684.7	6410.4	6378.9	4804.4	3142.2	1551.2	245.1
72.5°	143.8	323.1	1737.5	3384.5	4744.1	5159.0	5067.2	3876.1	2285.1	844.8	194.4
75°	121.9	198.5	861.2	2109.9	2825.9	2823.2	2731.5	2052.4	1226.8	413.5	154.7
77.5°	98.6	139.7	338.2	579.2	891.3	1103.5	1085.7	727.0	366.9	120.5	95.8
80°	64.4	65.7	90.4	158.8	245.1	271.1	308.1	221.8	106.8	57.5	39.7
82.5°	28.8	31.5	41.1	52.0	52.0	47.9	42.4	31.5	23.3	19.2	9.6
85°	6.8	9.6	6.8	8.2	6.8	5.5	5.5	2.7	0.0	0.0	0.0
87.5°	1.4	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°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	11.0	11.0	11.0	9.6	9.6	9.6	8.2	8.2	8.2	6.8	6.8
5°	13.7	12.3	11.0	11.0	9.6	9.6	8.2	6.8	6.8	6.8	5.5
7.5°	15.1	13.7	12.3	11.0	9.6	8.2	8.2	6.8	5.5	5.5	5.5
10°	17.8	16.4	13.7	11.0	9.6	8.2	6.8	6.8	5.5	4.1	4.1
12.5°	20.5	17.8	15.1	12.3	9.6	8.2	6.8	6.8	5.5	4.1	2.7
15°	23.3	20.5	16.4	12.3	9.6	8.2	6.8	6.8	4.1	2.7	1.4
17.5°	26.0	21.9	16.4	13.7	9.6	8.2	6.8	5.5	2.7	1.4	0.0
20°	27.4	23.3	17.8	13.7	9.6	8.2	6.8	4.1	1.4	0.0	0.0
22.5°	30.1	26.0	19.2	13.7	9.6	6.8	4.1	1.4	0.0	0.0	0.0
25°	35.6	27.4	19.2	13.7	9.6	6.8	2.7	0.0	0.0	0.0	0.0
27.5°	39.7	30.1	19.2	13.7	9.6	5.5	1.4	0.0	0.0	0.0	0.0
30°	46.6	32.9	20.5	13.7	9.6	4.1	1.4	0.0	0.0	0.0	0.0
32.5°	57.5	35.6	20.5	13.7	8.2	4.1	0.0	0.0	0.0	0.0	0.0
35°	69.8	41.1	20.5	13.7	8.2	4.1	0.0	0.0	0.0	0.0	0.0
37.5°	71.2	43.8	20.5	13.7	8.2	2.7	0.0	0.0	0.0	0.0	0.0
40°	73.9	41.1	21.9	13.7	8.2	2.7	0.0	0.0	0.0	0.0	0.0
42.5°	84.9	38.3	23.3	13.7	8.2	2.7	0.0	0.0	0.0	0.0	0.0
45°	126.0	39.7	23.3	15.1	8.2	4.1	0.0	0.0	0.0	0.0	0.0
47.5°	219.1	41.1	21.9	15.1	8.2	4.1	0.0	0.0	0.0	0.0	0.0
50°	280.7	47.9	21.9	16.4	9.6	2.7	0.0	0.0	0.0	0.0	0.0
52.5°	298.5	56.1	21.9	17.8	12.3	1.4	0.0	0.0	0.0	0.0	0.0
55°	290.3	65.7	23.3	19.2	15.1	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	268.4	71.2	24.6	20.5	16.4	0.0	0.0	0.0	0.0	0.0	0.0
59°	245.1	75.3	28.8	21.9	16.4	0.0	0.0	0.0	0.0	0.0	0.0
60°	225.9	79.4	30.1	23.3	16.4	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	182.1	84.9	32.9	27.4	13.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	158.8	89.0	34.2	30.1	12.3	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	145.1	91.7	37.0	31.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	134.2	90.4	39.7	30.1	9.6	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	121.9	86.3	47.9	27.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0
75°	109.5	78.0	52.0	24.6	5.5	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	79.4	65.7	47.9	21.9	2.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	34.2	35.6	34.2	16.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	6.8	8.2	6.8	4.1	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°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	6.8	6.8	6.8	6.8	8.2	8.2	11.0	13.7	16.4	17.8	17.8
5°	5.5	5.5	5.5	5.5	5.5	6.8	8.2	11.0	15.1	16.4	16.4
7.5°	4.1	4.1	4.1	4.1	4.1	4.1	6.8	9.6	13.7	15.1	16.4
10°	4.1	2.7	2.7	1.4	1.4	2.7	4.1	8.2	12.3	13.7	15.1
12.5°	2.7	1.4	1.4	0.0	0.0	1.4	2.7	6.8	11.0	12.3	13.7
15°	1.4	0.0	0.0	0.0	0.0	0.0	1.4	5.5	9.6	11.0	13.7
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	8.2	11.0	12.3
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	6.8	9.6	11.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	5.5	8.2	9.6
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	5.5	6.8
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.1	5.5
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	4.1	5.5
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7	4.1
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7	4.1
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7	2.7
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4
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°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
2.5°	19.2	19.2	17.8	16.4	16.4	16.4	17.8	19.2	19.2	19.2
5°	17.8	17.8	16.4	16.4	16.4	16.4	17.8	20.5	21.9	21.9
7.5°	17.8	17.8	16.4	16.4	16.4	16.4	17.8	20.5	21.9	23.3
10°	16.4	16.4	16.4	16.4	15.1	16.4	17.8	20.5	24.6	24.6
12.5°	16.4	16.4	16.4	16.4	15.1	16.4	19.2	21.9	26.0	27.4
15°	16.4	16.4	16.4	15.1	15.1	16.4	19.2	23.3	27.4	30.1
17.5°	15.1	16.4	16.4	15.1	15.1	16.4	19.2	23.3	30.1	34.2
20°	13.7	15.1	16.4	15.1	15.1	15.1	19.2	23.3	31.5	37.0
22.5°	12.3	13.7	15.1	15.1	13.7	15.1	19.2	24.6	34.2	41.1
25°	11.0	12.3	12.3	13.7	13.7	15.1	19.2	24.6	35.6	46.6
27.5°	8.2	9.6	11.0	12.3	12.3	15.1	19.2	26.0	38.3	57.5
30°	6.8	8.2	9.6	11.0	12.3	15.1	19.2	26.0	41.1	72.6
32.5°	6.8	8.2	9.6	11.0	12.3	13.7	19.2	27.4	45.2	90.4
35°	5.5	6.8	8.2	11.0	11.0	13.7	19.2	27.4	49.3	117.7
37.5°	5.5	6.8	8.2	11.0	11.0	13.7	19.2	27.4	60.2	131.4
40°	4.1	5.5	6.8	11.0	11.0	13.7	20.5	28.8	61.6	132.8
42.5°	4.1	5.5	6.8	9.6	11.0	13.7	20.5	28.8	57.5	136.9
45°	4.1	5.5	6.8	11.0	12.3	15.1	20.5	30.1	56.1	156.1
47.5°	4.1	5.5	6.8	11.0	13.7	15.1	20.5	30.1	57.5	223.2
50°	4.1	5.5	6.8	11.0	15.1	15.1	20.5	30.1	63.0	358.7
52.5°	2.7	4.1	5.5	9.6	12.3	16.4	21.9	28.8	67.1	479.2
55°	2.7	2.7	4.1	8.2	11.0	17.8	23.3	28.8	78.0	509.3
57.5°	2.7	2.7	4.1	6.8	9.6	19.2	24.6	28.8	90.4	494.3
59°	2.7	2.7	2.7	6.8	8.2	19.2	24.6	30.1	91.7	468.2
60°	2.7	2.7	2.7	5.5	8.2	19.2	26.0	31.5	93.1	438.1
62.5°	1.4	1.4	1.4	5.5	6.8	19.2	28.8	38.3	95.8	338.2
65°	2.7	2.7	1.4	4.1	6.8	16.4	32.9	41.1	97.2	262.9
67.5°	2.7	2.7	2.7	5.5	6.8	16.4	34.2	42.4	97.2	208.1
70°	2.7	2.7	2.7	5.5	8.2	16.4	34.2	43.8	95.8	169.8
72.5°	2.7	2.7	2.7	5.5	8.2	15.1	31.5	45.2	91.7	143.8
75°	2.7	2.7	2.7	4.1	6.8	13.7	30.1	49.3	83.5	121.9
77.5°	2.7	2.7	2.7	2.7	5.5	11.0	27.4	54.8	73.9	98.6
80°	4.1	2.7	2.7	2.7	4.1	9.6	26.0	53.4	61.6	64.4
82.5°	4.1	2.7	2.7	1.4	2.7	6.8	20.5	41.1	31.5	28.8
85°	2.7	2.7	2.7	1.4	1.4	4.1	9.6	12.3	9.6	6.8
87.5°	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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

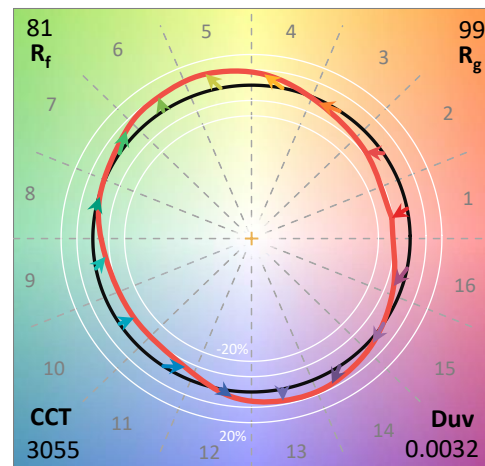
Test Information

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

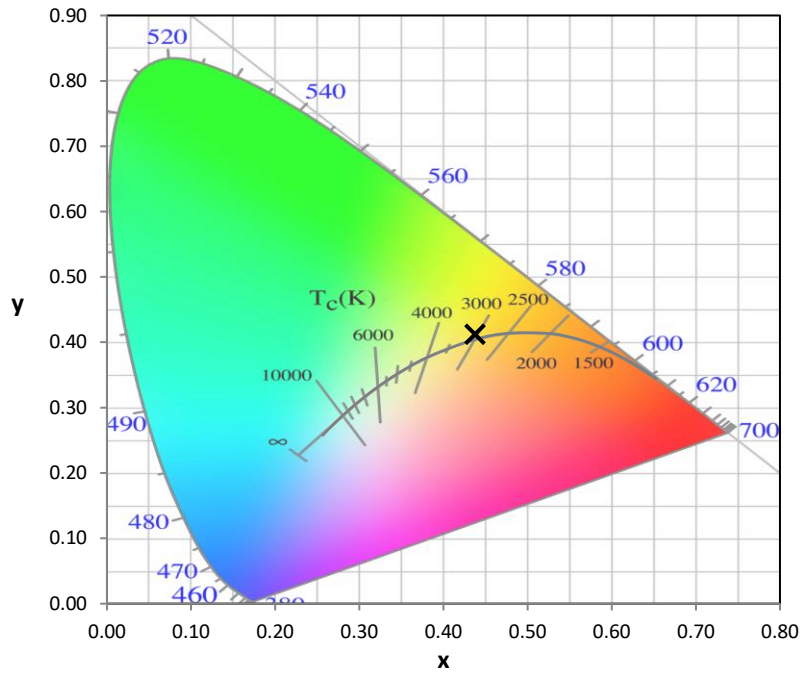
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

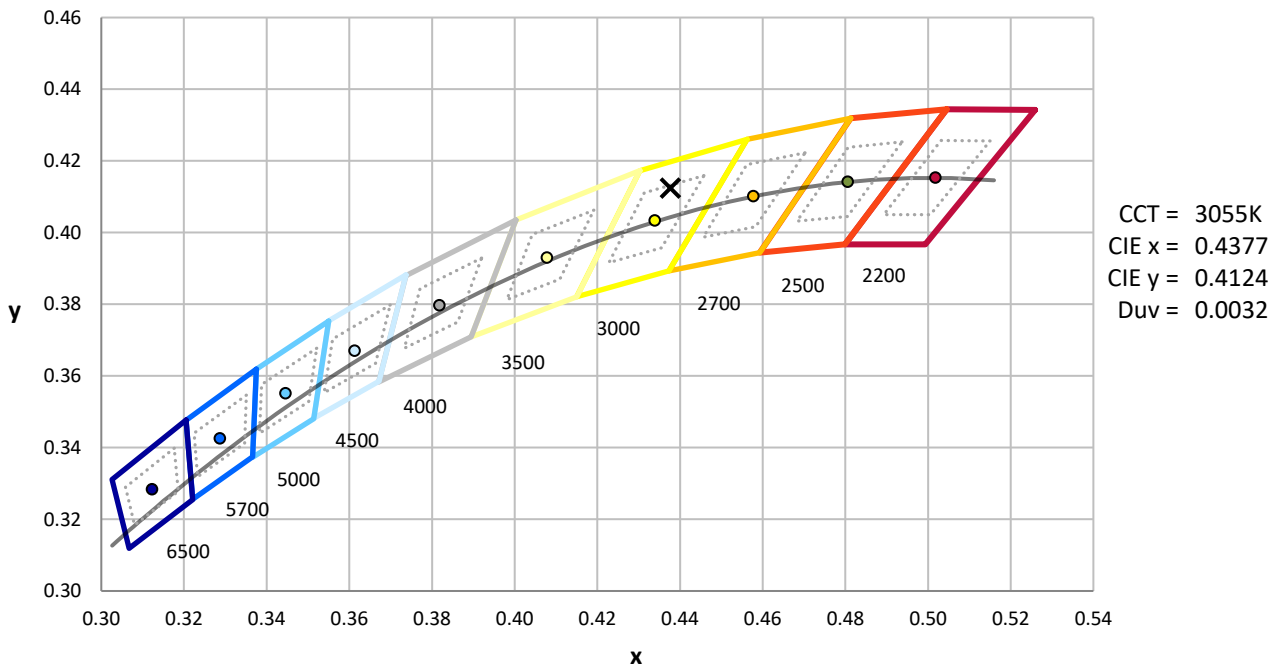
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



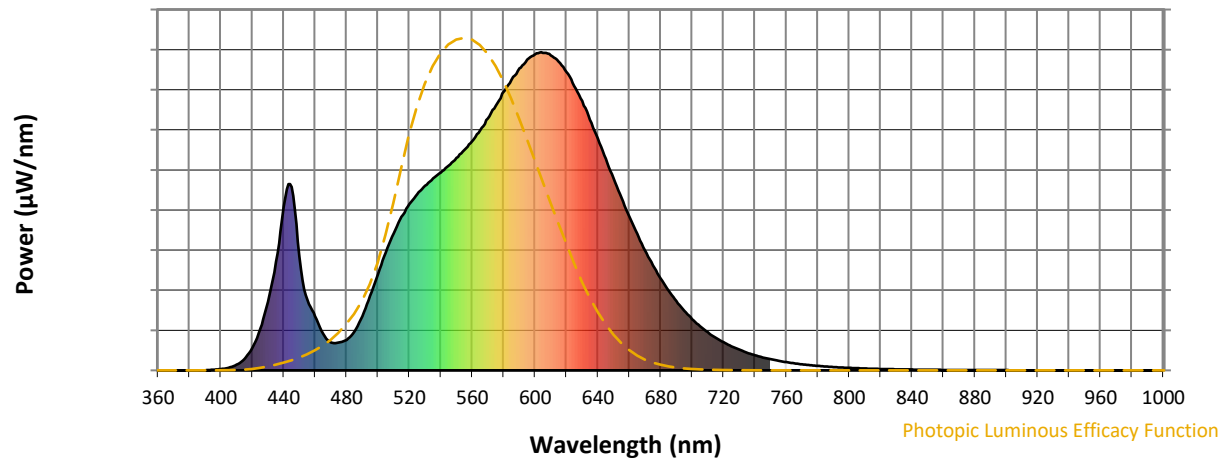
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-9

Photopic Flux vs. Wavelength

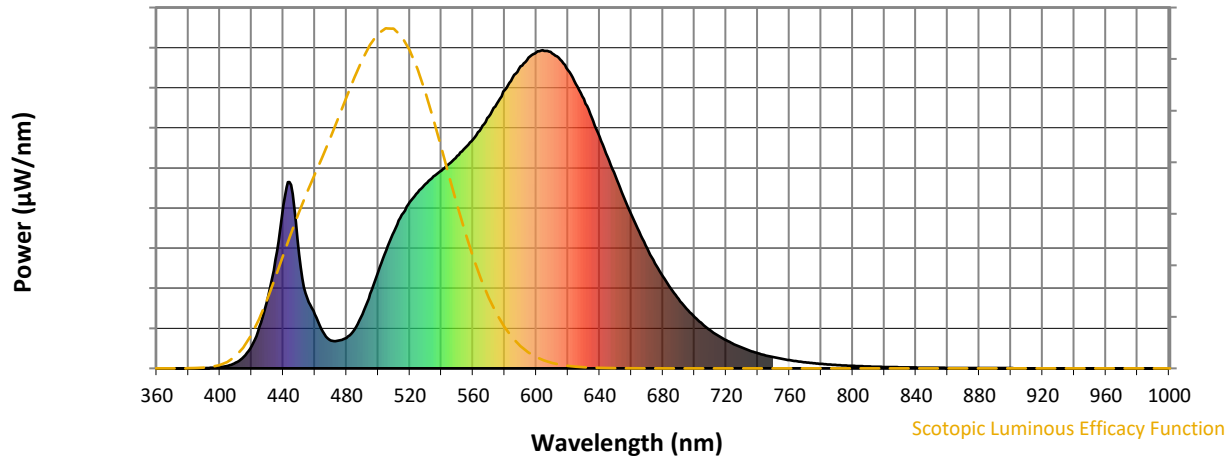


Photopic Lumens: NR

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



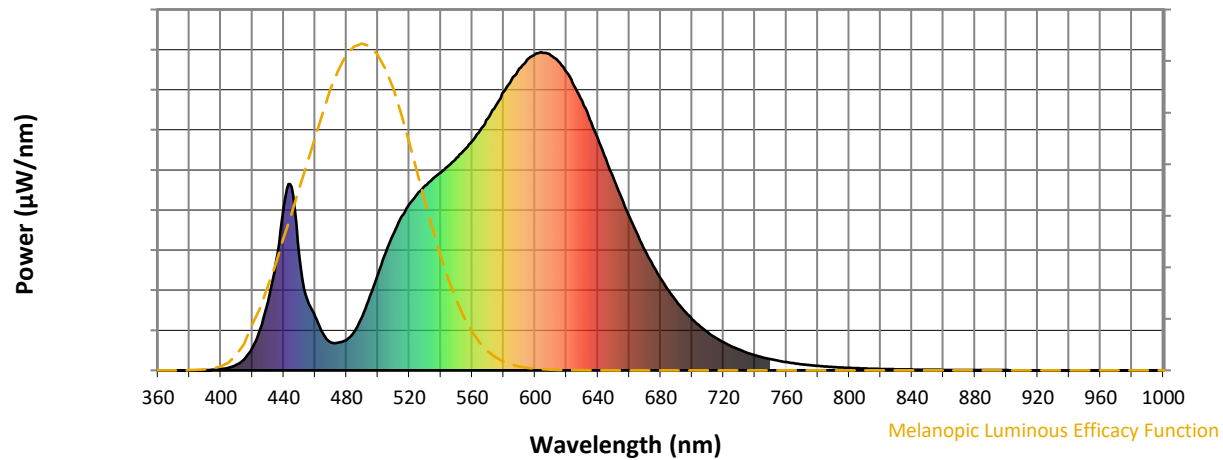
Scotopic Lumens: NR

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

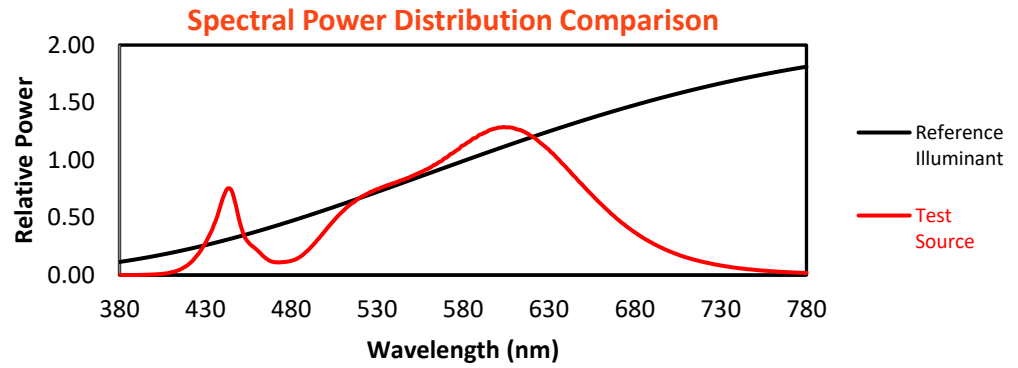
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630	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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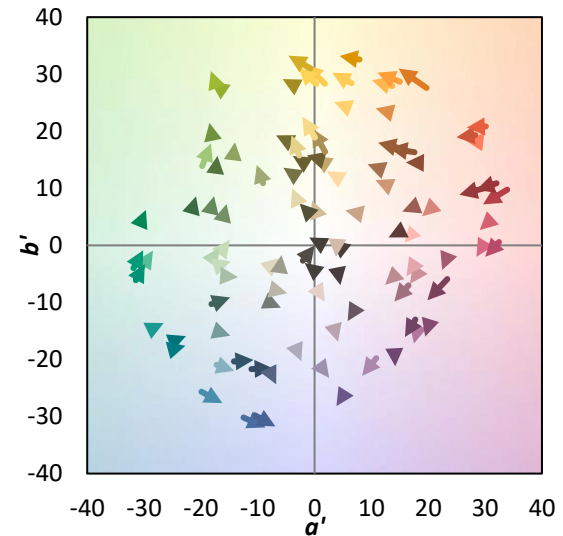
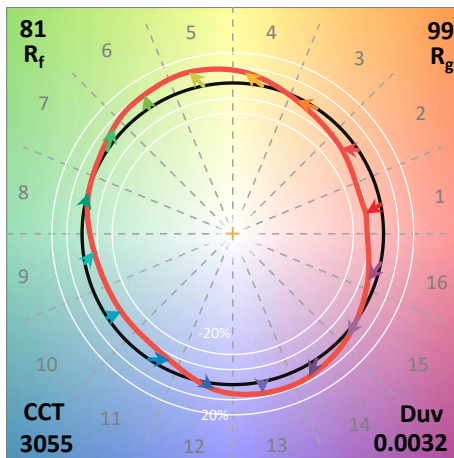
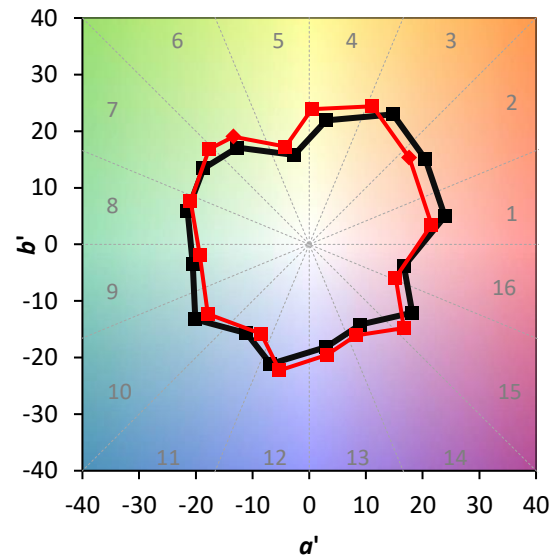
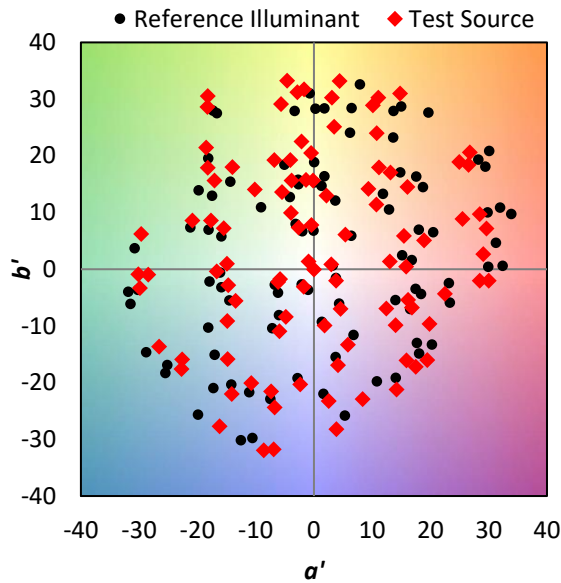
TM-30-18

Summary

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

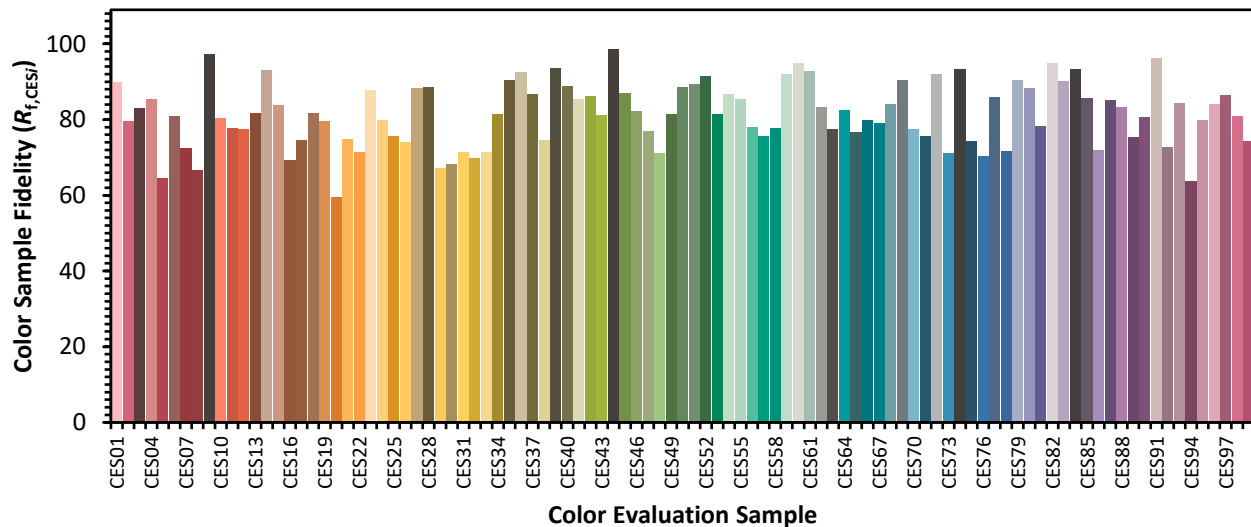


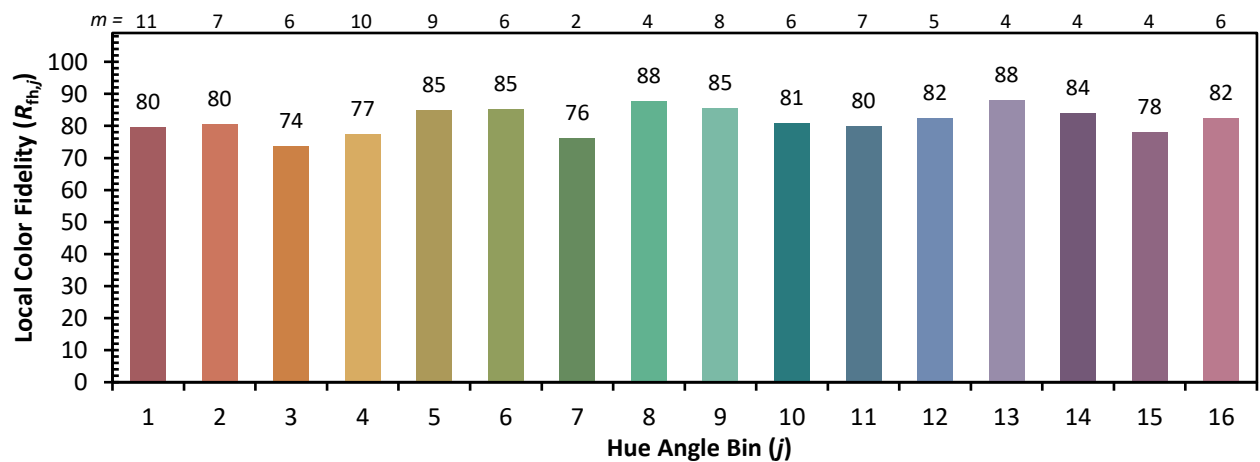
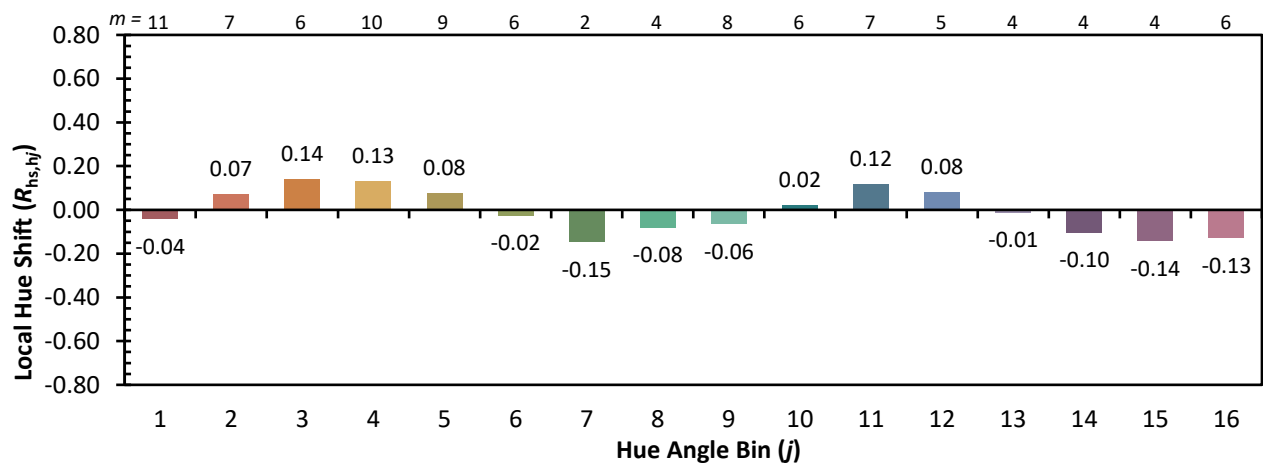
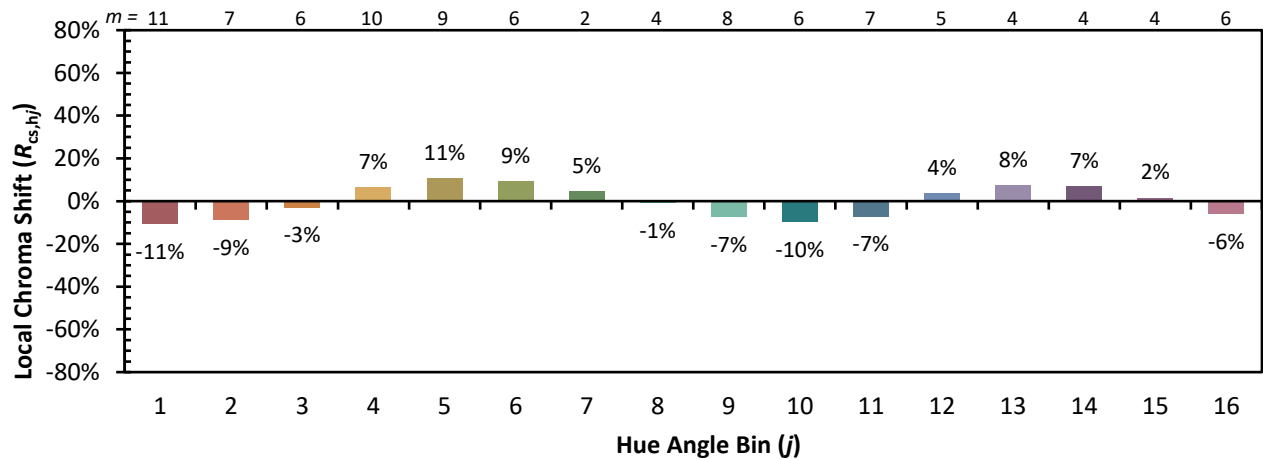
Color Vector Graphics



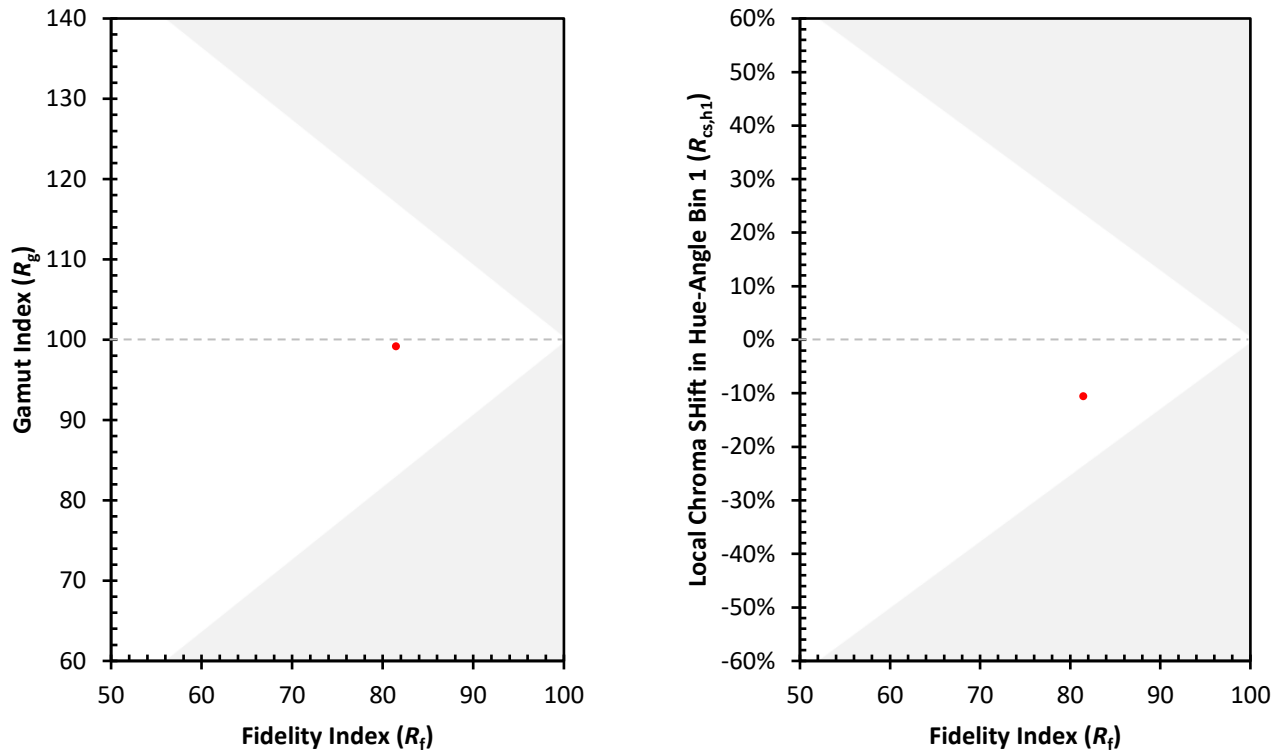
Individual Sample Fidelity Index ($R_{f,i}$)

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)