

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: P1068068

Luminaire Tested: **NAV-SA2D-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068068
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA2D-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 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: 8427.3 lumens
Efficiency: N/A
Efficacy: 78.8 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): 107
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



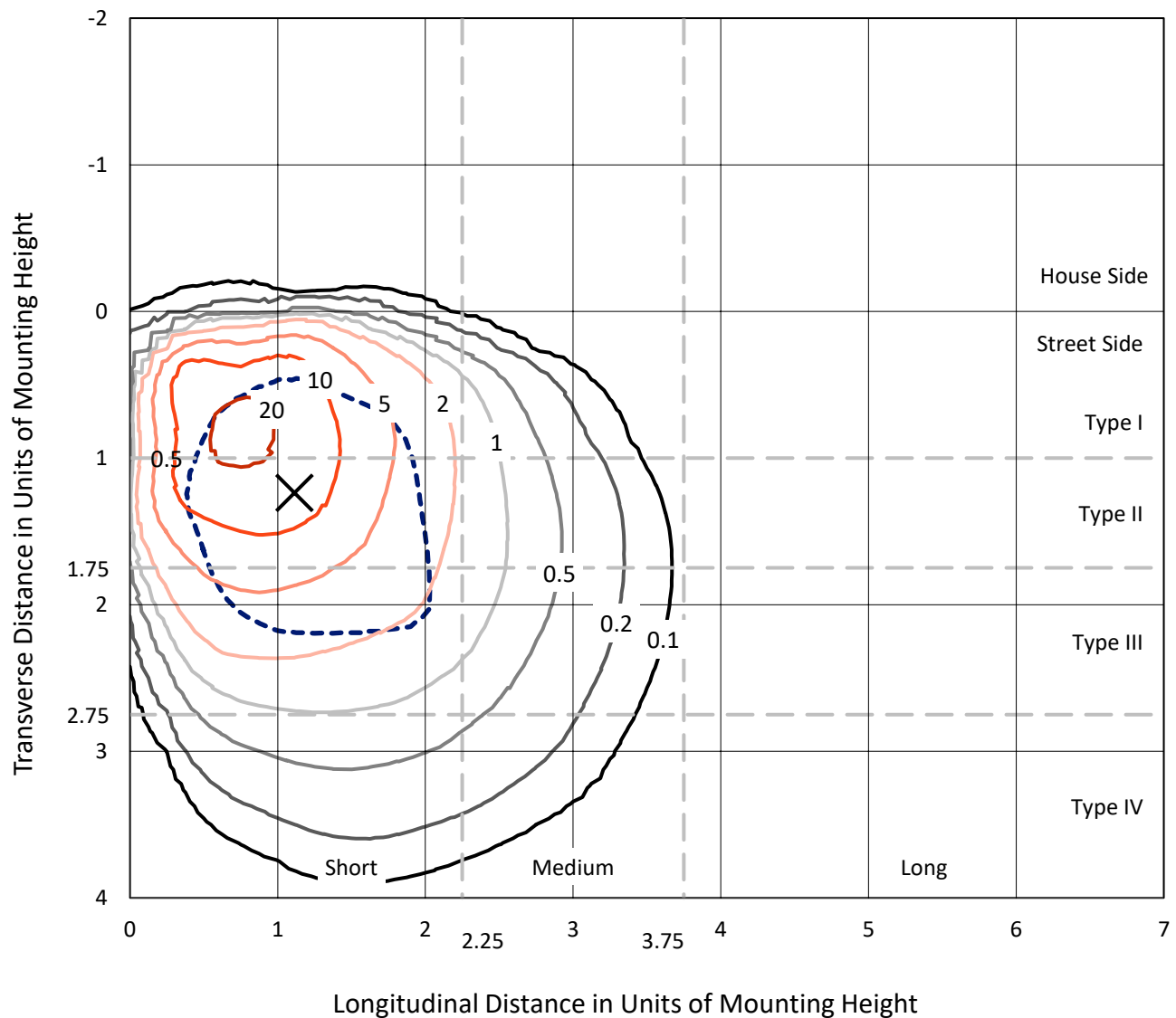
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

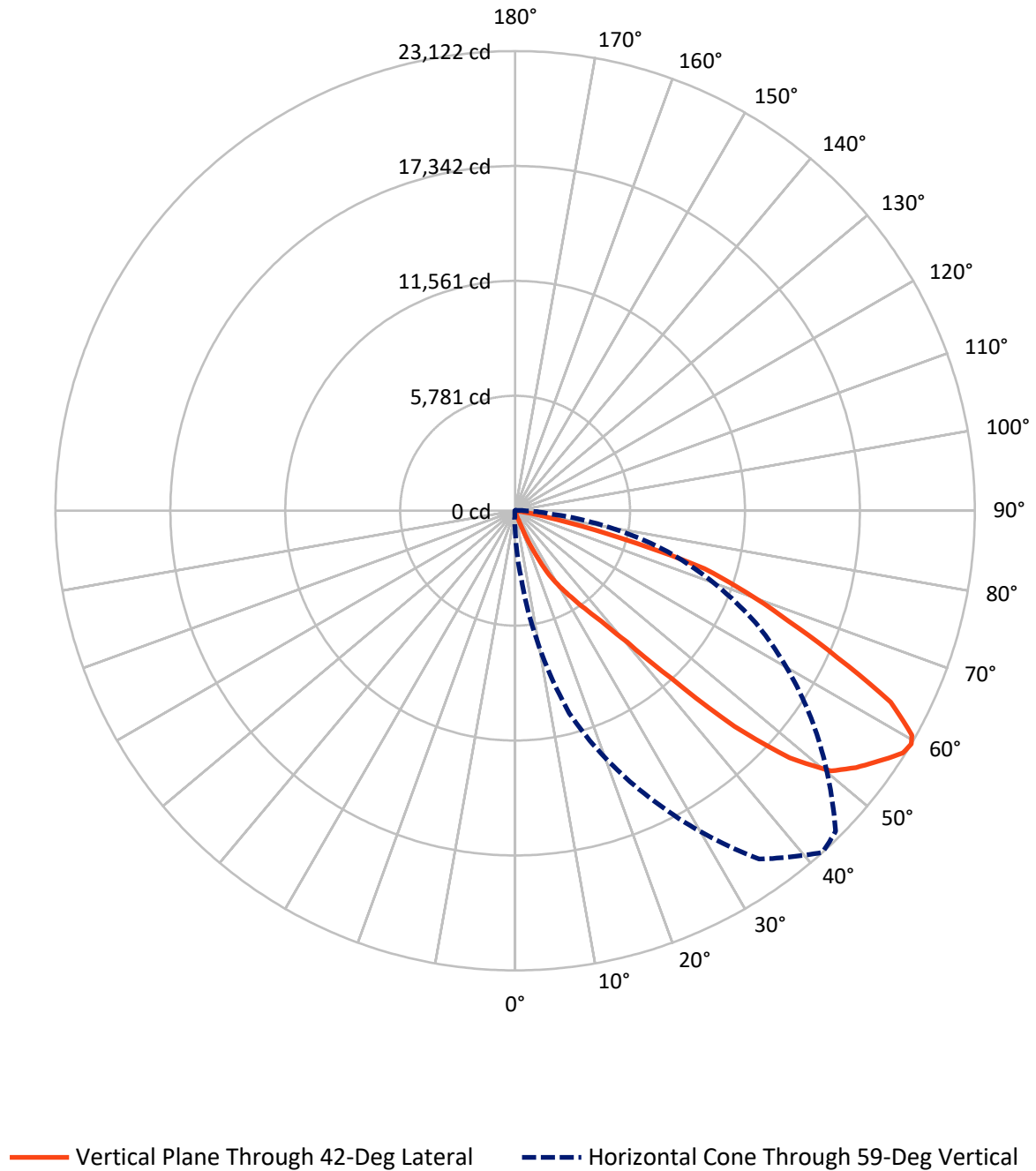


Based on 15 foot mounting height. Maximum calculated value = 25 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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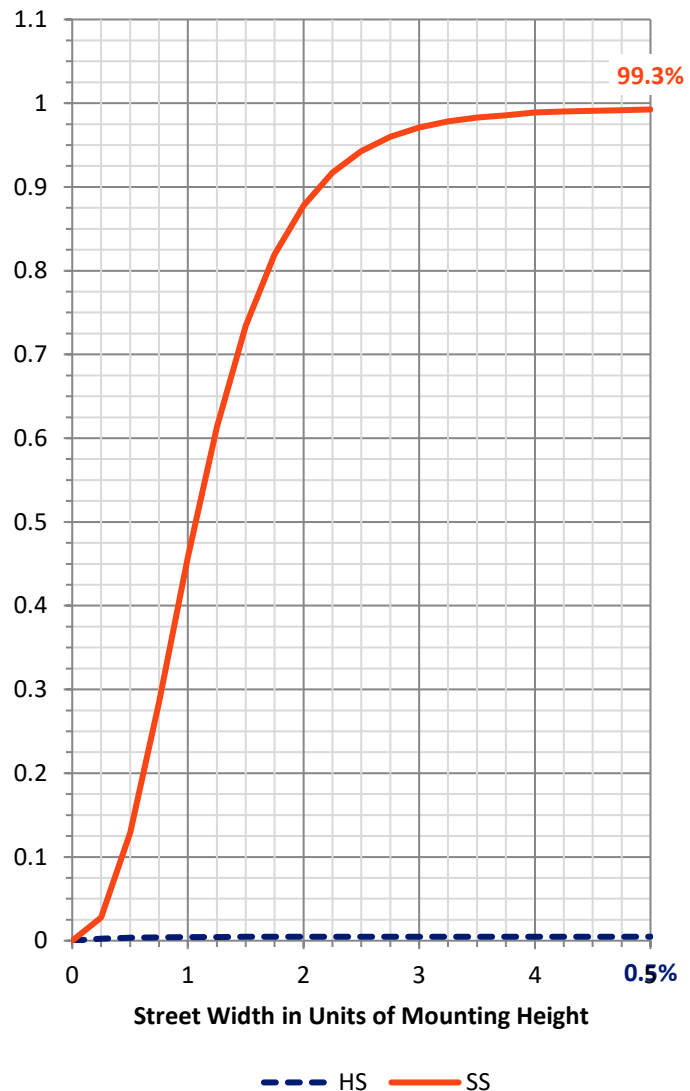
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	40.6	0.0	40.6
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	8386.7	0.0	8386.7
	% Fixture	99.5	0.0	99.5
Total	Lumens	8427.3	0.0	8427.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.5	0.0
10°-20°	12.3	0.1
20°-30°	157.2	1.9
30°-40°	530.0	6.3
40°-50°	1600.7	19.0
50°-60°	2825.7	33.5
60°-70°	2488.1	29.5
70°-80°	792.0	9.4
80°-90°	18.9	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°	8427.3	100.0
0°-180°	8427.3	100.0



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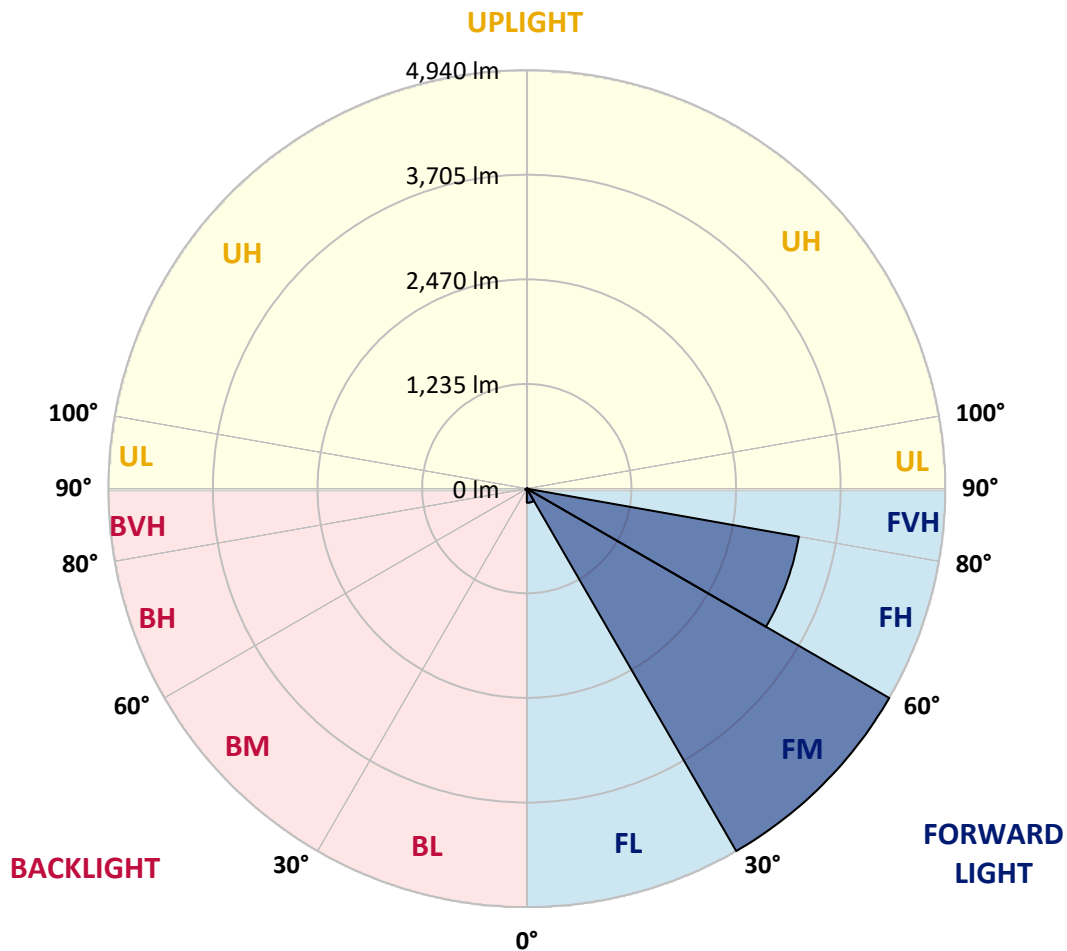
CATALOG NUMBER: NAV-SA2D-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	167.4	2.0			
FM	(30°-60°)	4939.8	58.6			
FH	(60°-80°)	3261.4	38.7			G2/5000
FVH	(80°-90°)	18.0	0.2			G1/100
BL	(0°-30°)	4.5	0.1	B0/110		
BM	(30°-60°)	16.6	0.2	B0/220		
BH	(60°-80°)	18.6	0.2	B0/110		G0/110
BVH	(80°-90°)	0.9	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°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
2.5°	37.0	37.0	34.3	31.7	29.1	26.4	26.4	26.4	23.8	23.8	21.1
5°	42.3	42.3	39.6	37.0	37.0	34.3	34.3	31.7	29.1	29.1	26.4
7.5°	44.9	44.9	44.9	44.9	42.3	42.3	42.3	39.6	37.0	34.3	31.7
10°	47.6	50.2	52.8	52.8	52.8	52.8	52.8	50.2	44.9	42.3	37.0
12.5°	52.8	55.5	60.8	66.1	66.1	68.7	66.1	63.4	58.1	50.2	42.3
15°	58.1	63.4	71.3	81.9	92.5	95.1	95.1	87.2	76.6	60.8	50.2
17.5°	66.1	74.0	95.1	129.5	166.5	195.5	195.5	174.4	121.5	79.3	58.1
20°	71.3	87.2	153.2	311.8	475.6	597.1	573.4	507.3	272.1	124.2	63.4
22.5°	79.3	111.0	325.0	819.1	1268.3	1490.2	1437.4	1091.2	610.4	221.9	76.6
25°	89.8	161.2	644.7	1535.1	2356.9	2597.3	2563.0	2037.2	1112.4	372.6	97.8
27.5°	111.0	237.8	1033.1	2327.8	3477.2	3683.3	3670.1	2983.1	1778.2	599.8	126.8
30°	140.0	346.1	1532.5	3162.7	4219.6	4428.4	4362.3	3675.3	2399.1	916.9	163.8
32.5°	174.4	483.5	1984.3	3778.4	4904.0	5178.8	5099.5	4277.8	2898.5	1186.4	243.1
35°	227.2	618.3	2430.9	4322.7	5694.0	6042.8	5910.7	4898.7	3329.2	1490.2	293.3
37.5°	253.7	697.5	2840.4	4914.5	6581.8	7057.4	6957.0	5683.4	3767.8	1878.6	359.3
40°	256.3	792.7	3265.8	5686.1	7836.9	8685.0	8505.3	7031.0	4584.3	2378.0	462.4
42.5°	264.2	935.3	3818.0	7001.9	10302.1	11520.1	11316.7	9509.4	6436.5	3379.4	655.3
45°	301.2	1204.9	4943.6	9461.8	13686.8	15472.9	15237.7	12962.8	9023.2	5263.3	1117.7
47.5°	430.7	1812.6	6917.4	12117.3	17148.1	18572.2	18514.1	15684.3	11366.9	7194.8	1894.5
50°	692.3	2782.3	9163.3	14350.0	19351.7	20575.0	20429.7	16820.4	12703.8	8513.3	2428.2
52.5°	924.8	3709.7	10574.2	15171.7	20009.6	21468.1	21291.1	17235.3	13055.3	8901.7	2576.2
55°	982.9	4045.3	10994.3	15425.3	20445.6	22223.8	21967.5	17512.7	13100.2	8624.2	2330.4
57.5°	953.8	3728.2	10722.2	15673.7	21053.3	23000.6	22659.8	18054.4	13250.8	8153.9	1939.4
59°	903.6	3337.1	10553.1	15871.9	21388.9	23122.2	22802.4	18173.3	13351.2	7939.9	1701.6
60°	845.5	3072.9	10421.0	16001.3	21367.7	22931.9	22601.6	18117.8	13390.8	7754.9	1588.0
62.5°	652.6	2452.0	10230.7	15908.9	20033.4	21196.0	21008.4	16759.7	12809.5	7163.1	1252.4
65°	507.3	1876.0	9533.2	14188.8	17047.7	17829.8	17771.6	14191.4	10780.3	6174.9	903.6
67.5°	401.6	1368.7	8061.4	11491.1	13715.8	14828.2	14785.9	11520.1	8183.0	4719.0	650.0
70°	327.6	975.0	5527.5	8663.9	10970.5	12370.9	12310.1	9271.6	6063.9	2993.6	473.0
72.5°	277.4	623.6	3353.0	6531.6	9155.3	9955.9	9778.9	7480.2	4409.9	1630.3	375.2
75°	235.2	383.1	1662.0	4071.7	5453.6	5448.3	5271.2	3960.7	2367.4	798.0	298.6
77.5°	190.2	269.5	652.6	1117.7	1720.1	2129.6	2095.3	1403.0	708.1	232.5	185.0
80°	124.2	126.8	174.4	306.5	473.0	523.2	594.5	428.0	206.1	111.0	76.6
82.5°	55.5	60.8	79.3	100.4	100.4	92.5	81.9	60.8	44.9	37.0	18.5
85°	13.2	18.5	13.2	15.9	13.2	10.6	10.6	5.3	0.0	0.0	0.0
87.5°	2.6	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°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
2.5°	21.1	21.1	21.1	18.5	18.5	18.5	15.9	15.9	15.9	13.2	13.2
5°	26.4	23.8	21.1	21.1	18.5	18.5	15.9	13.2	13.2	13.2	10.6
7.5°	29.1	26.4	23.8	21.1	18.5	15.9	15.9	13.2	10.6	10.6	10.6
10°	34.3	31.7	26.4	21.1	18.5	15.9	13.2	13.2	10.6	7.9	7.9
12.5°	39.6	34.3	29.1	23.8	18.5	15.9	13.2	13.2	10.6	7.9	5.3
15°	44.9	39.6	31.7	23.8	18.5	15.9	13.2	13.2	7.9	5.3	2.6
17.5°	50.2	42.3	31.7	26.4	18.5	15.9	13.2	10.6	5.3	2.6	0.0
20°	52.8	44.9	34.3	26.4	18.5	15.9	13.2	7.9	2.6	0.0	0.0
22.5°	58.1	50.2	37.0	26.4	18.5	13.2	7.9	2.6	0.0	0.0	0.0
25°	68.7	52.8	37.0	26.4	18.5	13.2	5.3	0.0	0.0	0.0	0.0
27.5°	76.6	58.1	37.0	26.4	18.5	10.6	2.6	0.0	0.0	0.0	0.0
30°	89.8	63.4	39.6	26.4	18.5	7.9	2.6	0.0	0.0	0.0	0.0
32.5°	111.0	68.7	39.6	26.4	15.9	7.9	0.0	0.0	0.0	0.0	0.0
35°	134.8	79.3	39.6	26.4	15.9	7.9	0.0	0.0	0.0	0.0	0.0
37.5°	137.4	84.6	39.6	26.4	15.9	5.3	0.0	0.0	0.0	0.0	0.0
40°	142.7	79.3	42.3	26.4	15.9	5.3	0.0	0.0	0.0	0.0	0.0
42.5°	163.8	74.0	44.9	26.4	15.9	5.3	0.0	0.0	0.0	0.0	0.0
45°	243.1	76.6	44.9	29.1	15.9	7.9	0.0	0.0	0.0	0.0	0.0
47.5°	422.8	79.3	42.3	29.1	15.9	7.9	0.0	0.0	0.0	0.0	0.0
50°	541.7	92.5	42.3	31.7	18.5	5.3	0.0	0.0	0.0	0.0	0.0
52.5°	576.0	108.3	42.3	34.3	23.8	2.6	0.0	0.0	0.0	0.0	0.0
55°	560.2	126.8	44.9	37.0	29.1	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	517.9	137.4	47.6	39.6	31.7	0.0	0.0	0.0	0.0	0.0	0.0
59°	473.0	145.3	55.5	42.3	31.7	0.0	0.0	0.0	0.0	0.0	0.0
60°	436.0	153.2	58.1	44.9	31.7	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	351.4	163.8	63.4	52.8	26.4	0.0	0.0	0.0	0.0	0.0	0.0
65°	306.5	171.7	66.1	58.1	23.8	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	280.1	177.0	71.3	60.8	21.1	0.0	0.0	0.0	0.0	0.0	0.0
70°	258.9	174.4	76.6	58.1	18.5	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	235.2	166.5	92.5	52.8	15.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	211.4	150.6	100.4	47.6	10.6	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	153.2	126.8	92.5	42.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0
80°	66.1	68.7	66.1	31.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	13.2	15.9	13.2	7.9	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°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
2.5°	13.2	13.2	13.2	13.2	15.9	15.9	21.1	26.4	31.7	34.3	34.3
5°	10.6	10.6	10.6	10.6	10.6	13.2	15.9	21.1	29.1	31.7	31.7
7.5°	7.9	7.9	7.9	7.9	7.9	7.9	13.2	18.5	26.4	29.1	31.7
10°	7.9	5.3	5.3	2.6	2.6	5.3	7.9	15.9	23.8	26.4	29.1
12.5°	5.3	2.6	2.6	0.0	0.0	2.6	5.3	13.2	21.1	23.8	26.4
15°	2.6	0.0	0.0	0.0	0.0	0.0	2.6	10.6	18.5	21.1	26.4
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	15.9	21.1	23.8
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	13.2	18.5	21.1
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	10.6	15.9	18.5
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	10.6	13.2
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	7.9	10.6
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	7.9	10.6
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3	7.9
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3	7.9
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3	5.3
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6
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°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
2.5°	37.0	37.0	34.3	31.7	31.7	31.7	34.3	37.0	37.0	37.0
5°	34.3	34.3	31.7	31.7	31.7	31.7	34.3	39.6	42.3	42.3
7.5°	34.3	34.3	31.7	31.7	31.7	31.7	34.3	39.6	42.3	44.9
10°	31.7	31.7	31.7	31.7	29.1	31.7	34.3	39.6	47.6	47.6
12.5°	31.7	31.7	31.7	31.7	29.1	31.7	37.0	42.3	50.2	52.8
15°	31.7	31.7	31.7	29.1	29.1	31.7	37.0	44.9	52.8	58.1
17.5°	29.1	31.7	31.7	29.1	29.1	31.7	37.0	44.9	58.1	66.1
20°	26.4	29.1	31.7	29.1	29.1	29.1	37.0	44.9	60.8	71.3
22.5°	23.8	26.4	29.1	29.1	26.4	29.1	37.0	47.6	66.1	79.3
25°	21.1	23.8	23.8	26.4	26.4	29.1	37.0	47.6	68.7	89.8
27.5°	15.9	18.5	21.1	23.8	23.8	29.1	37.0	50.2	74.0	111.0
30°	13.2	15.9	18.5	21.1	23.8	29.1	37.0	50.2	79.3	140.0
32.5°	13.2	15.9	18.5	21.1	23.8	26.4	37.0	52.8	87.2	174.4
35°	10.6	13.2	15.9	21.1	21.1	26.4	37.0	52.8	95.1	227.2
37.5°	10.6	13.2	15.9	21.1	21.1	26.4	37.0	52.8	116.3	253.7
40°	7.9	10.6	13.2	21.1	21.1	26.4	39.6	55.5	118.9	256.3
42.5°	7.9	10.6	13.2	18.5	21.1	26.4	39.6	55.5	111.0	264.2
45°	7.9	10.6	13.2	21.1	23.8	29.1	39.6	58.1	108.3	301.2
47.5°	7.9	10.6	13.2	21.1	26.4	29.1	39.6	58.1	111.0	430.7
50°	7.9	10.6	13.2	21.1	29.1	29.1	39.6	58.1	121.5	692.3
52.5°	5.3	7.9	10.6	18.5	23.8	31.7	42.3	55.5	129.5	924.8
55°	5.3	5.3	7.9	15.9	21.1	34.3	44.9	55.5	150.6	982.9
57.5°	5.3	5.3	7.9	13.2	18.5	37.0	47.6	55.5	174.4	953.8
59°	5.3	5.3	5.3	13.2	15.9	37.0	47.6	58.1	177.0	903.6
60°	5.3	5.3	5.3	10.6	15.9	37.0	50.2	60.8	179.7	845.5
62.5°	2.6	2.6	2.6	10.6	13.2	37.0	55.5	74.0	185.0	652.6
65°	5.3	5.3	2.6	7.9	13.2	31.7	63.4	79.3	187.6	507.3
67.5°	5.3	5.3	5.3	10.6	13.2	31.7	66.1	81.9	187.6	401.6
70°	5.3	5.3	5.3	10.6	15.9	31.7	66.1	84.6	185.0	327.6
72.5°	5.3	5.3	5.3	10.6	15.9	29.1	60.8	87.2	177.0	277.4
75°	5.3	5.3	5.3	7.9	13.2	26.4	58.1	95.1	161.2	235.2
77.5°	5.3	5.3	5.3	5.3	10.6	21.1	52.8	105.7	142.7	190.2
80°	7.9	5.3	5.3	5.3	7.9	18.5	50.2	103.0	118.9	124.2
82.5°	7.9	5.3	5.3	2.6	5.3	13.2	39.6	79.3	60.8	55.5
85°	5.3	5.3	5.3	2.6	2.6	7.9	18.5	23.8	18.5	13.2
87.5°	5.3	5.3	5.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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

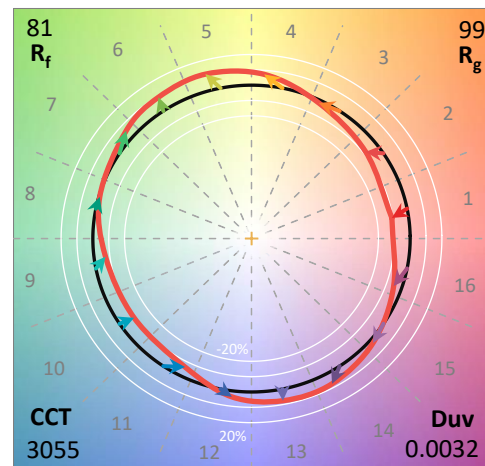
Test Information

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

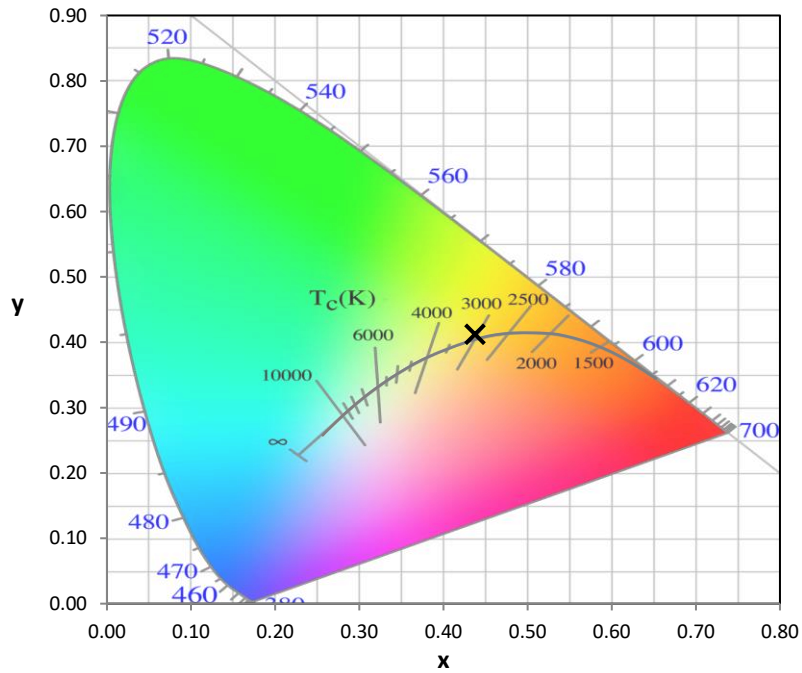
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-9

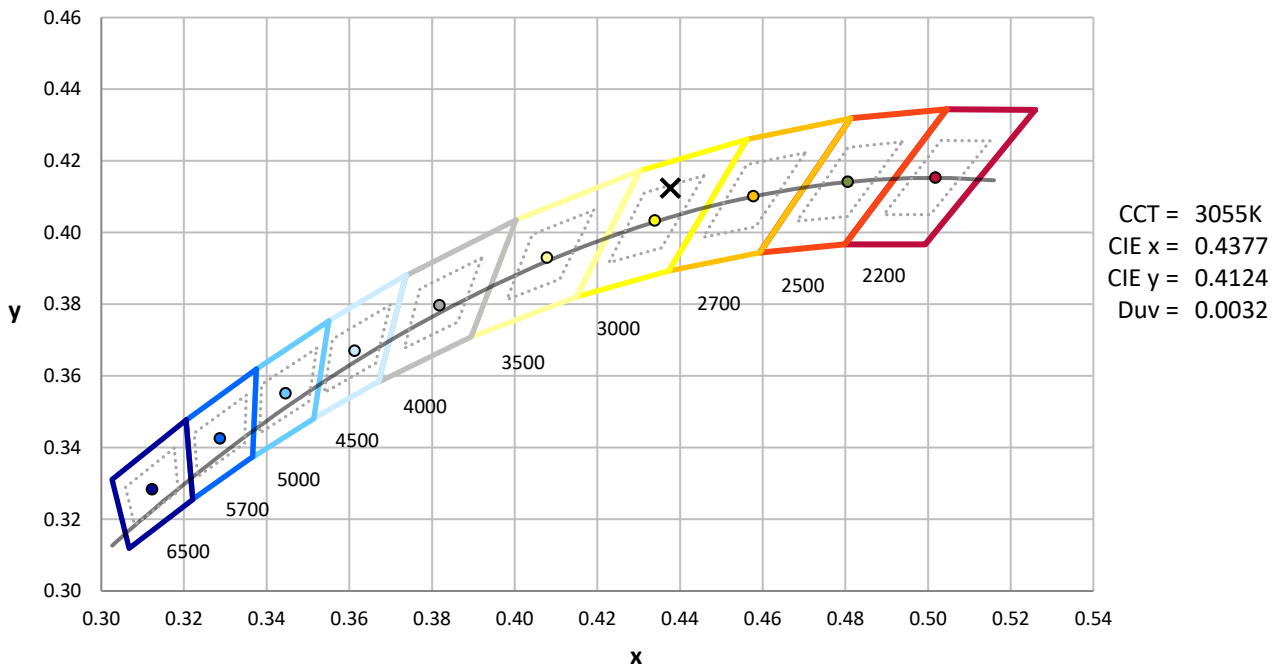
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

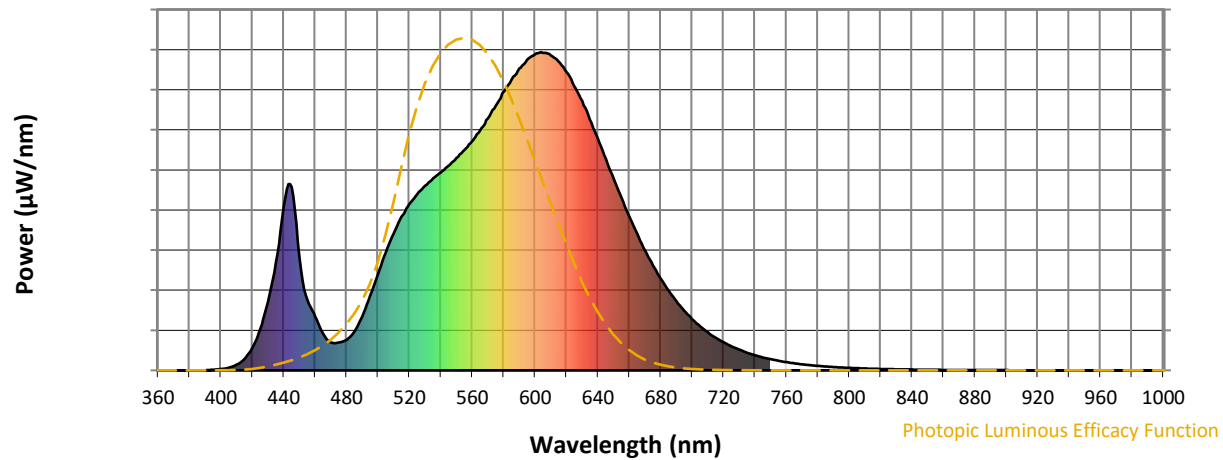


CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



REPORT NUMBER: SP1-2407-184-9

Photopic Flux vs. Wavelength

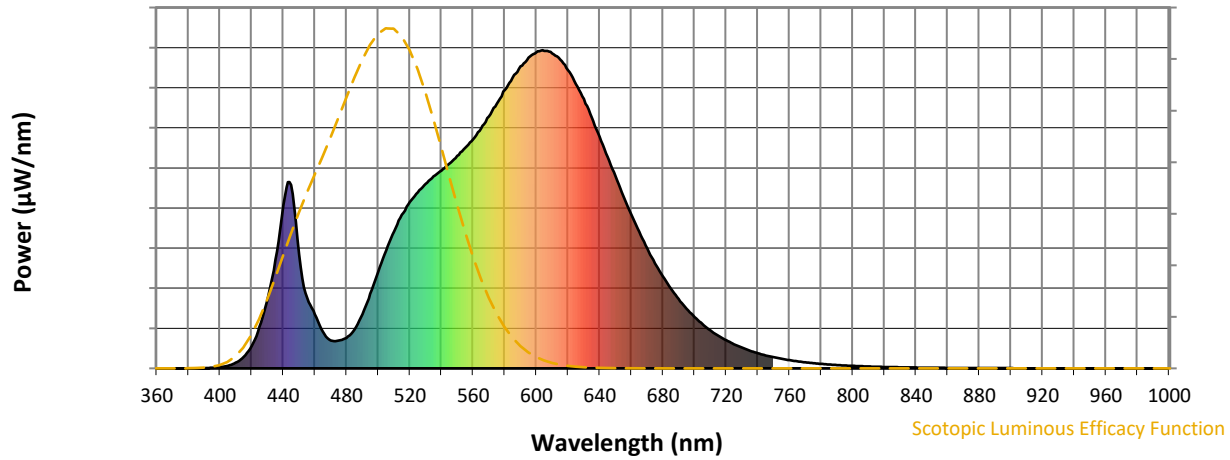


Photopic Lumens: NR

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

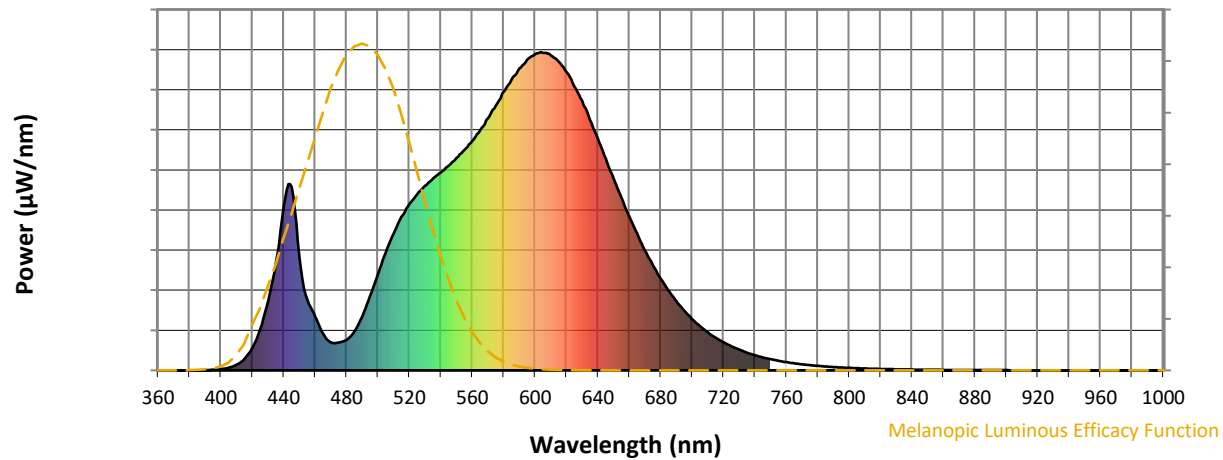
Scotopic Flux vs. Wavelength


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			

REPORT NUMBER: SP1-2407-184-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.33

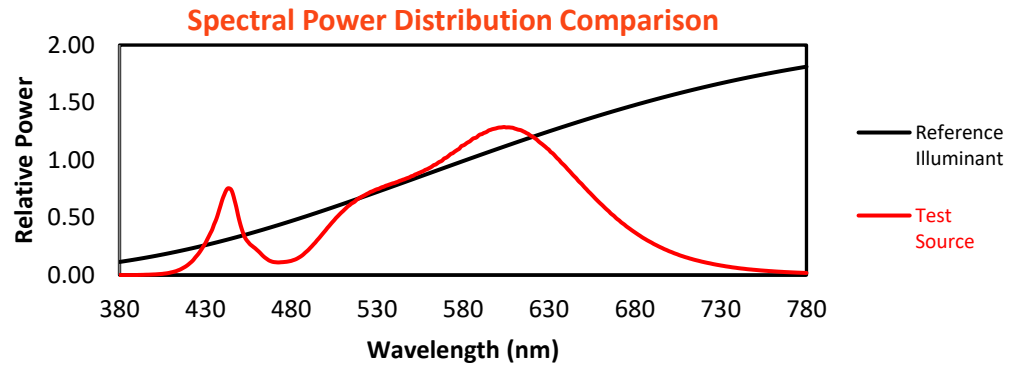
λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	170	NR	620	938	NR	750	35	NR	880	1	NR
365	0	NR	495	234	NR	625	894	NR	755	30	NR	885	1	NR
370	0	NR	500	302	NR	630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

REPORT NUMBER: SP1-2407-184-9

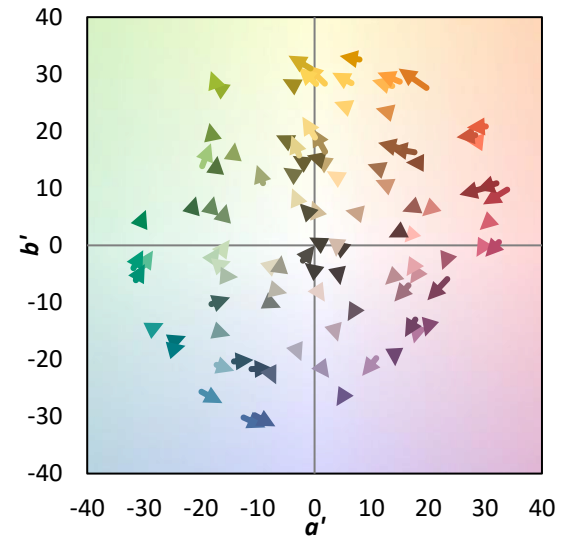
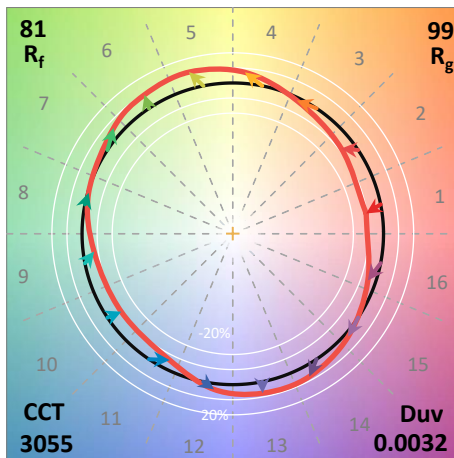
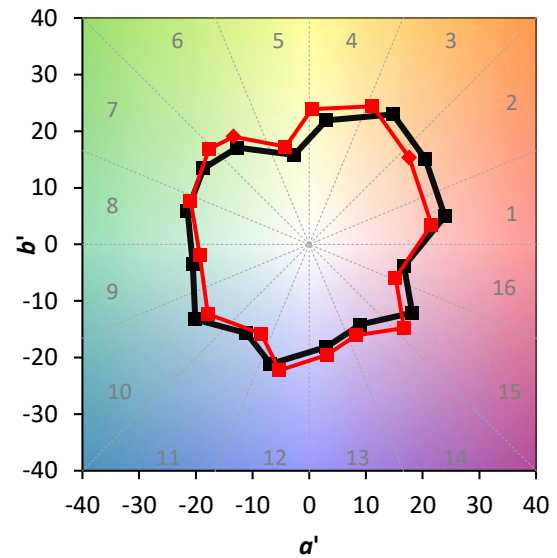
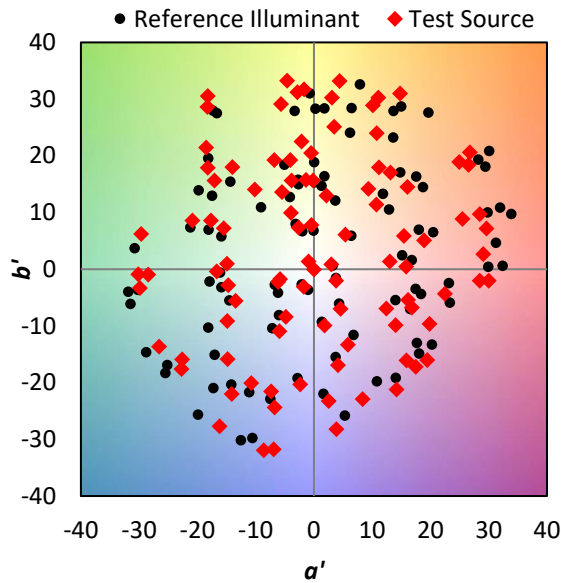
TM-30-18

Summary

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

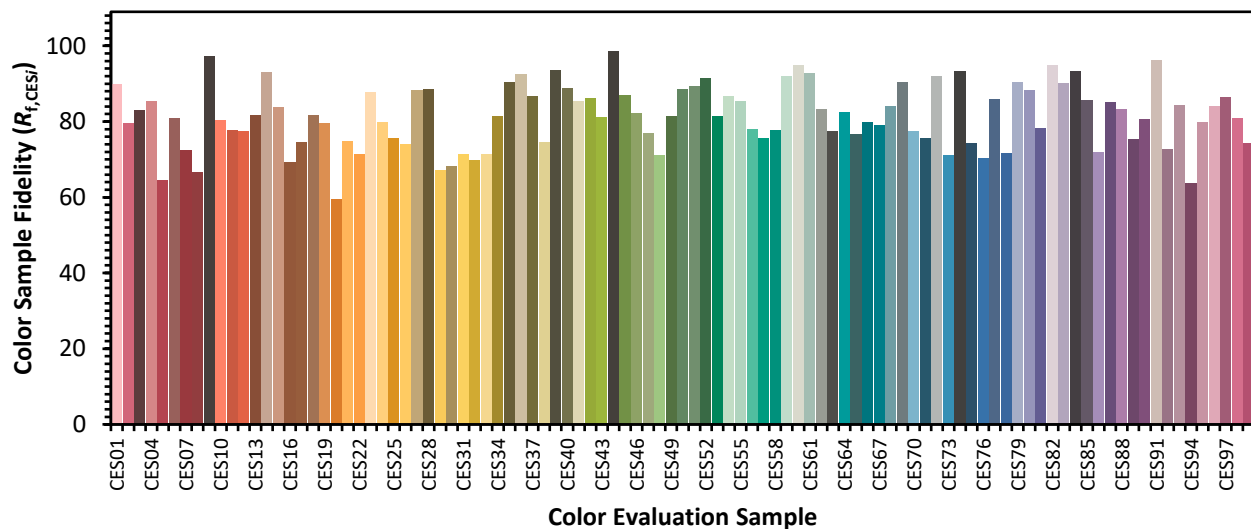


Color Vector Graphics

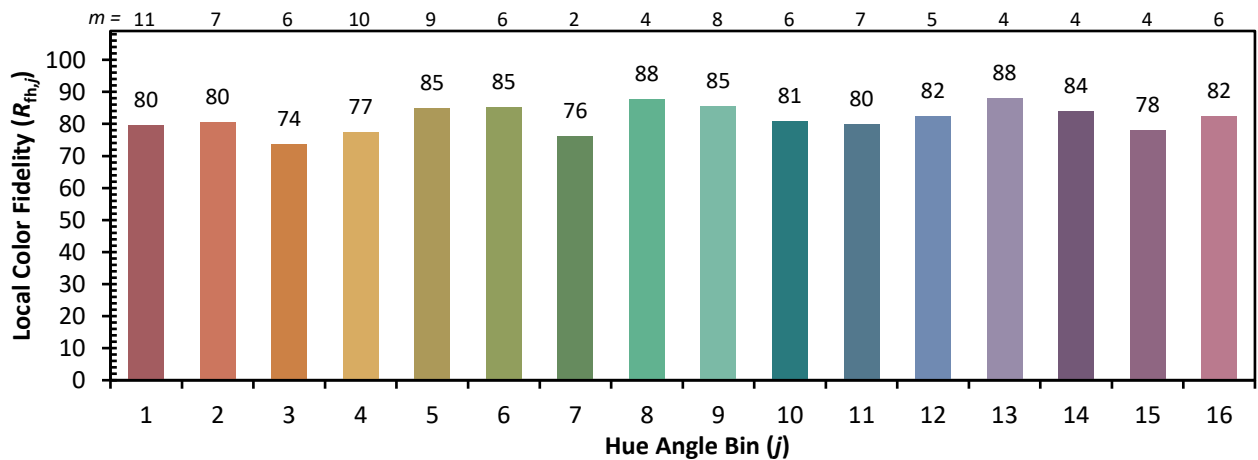
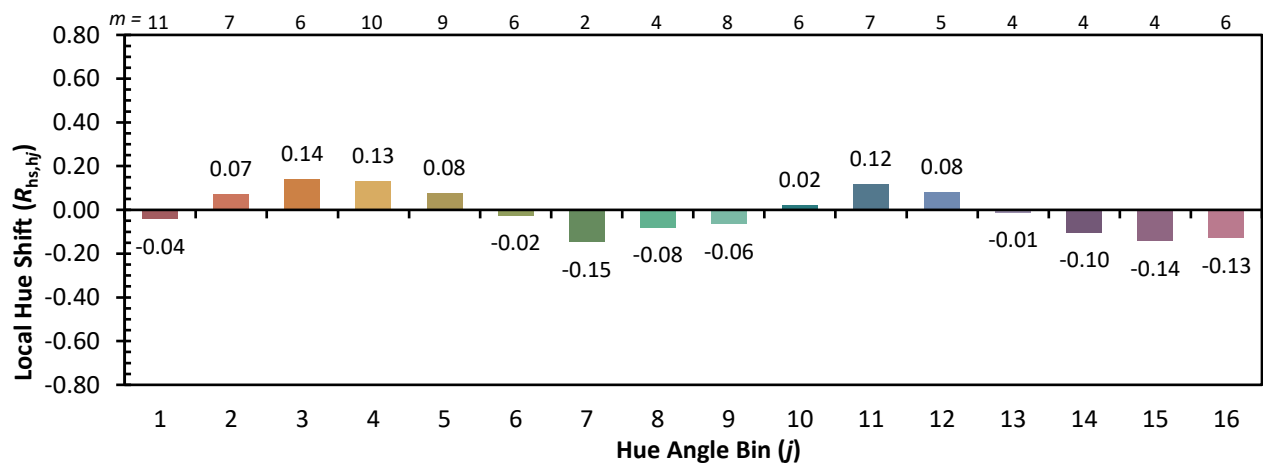
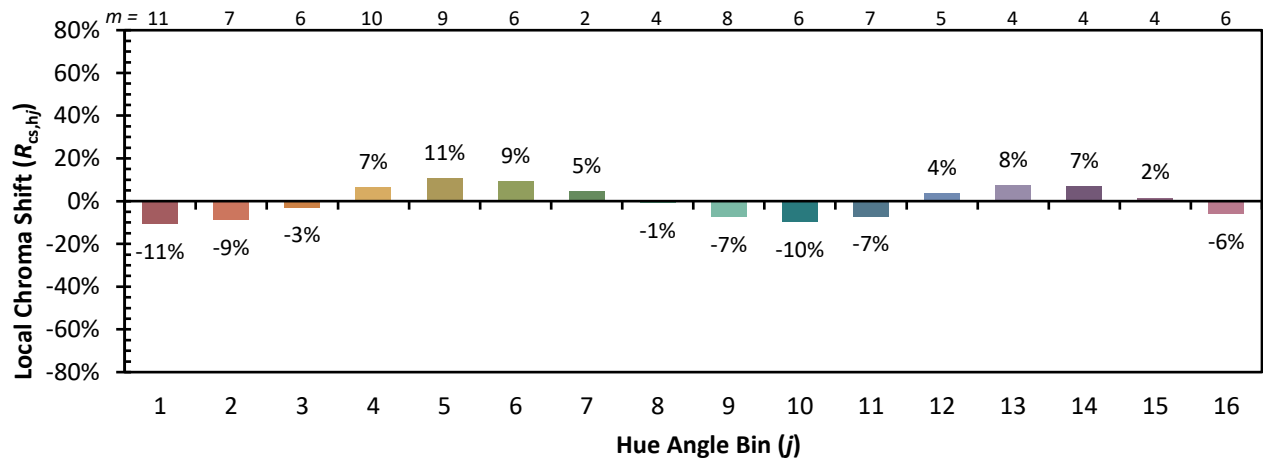


Individual Sample Fidelity Index ($R_{f,i}$)

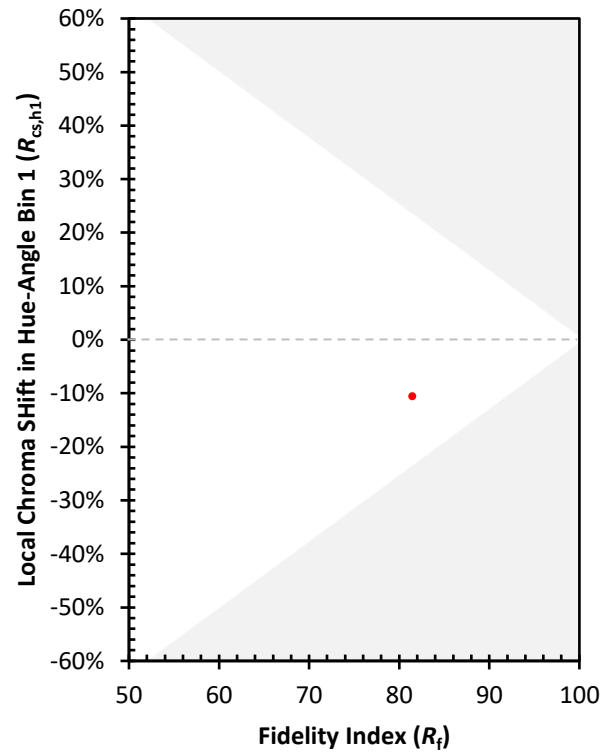
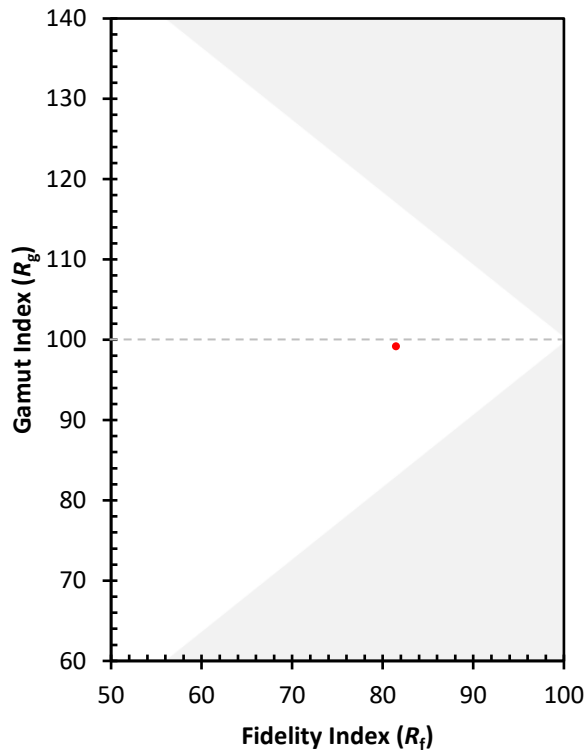
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 91	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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