

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: P1068066

Luminaire Tested: **NAV-SA2B-830-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1068066
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA2B-830-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 800mA 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: 6190.2 lumens
Efficiency: N/A
Efficacy: 85.0 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): 72.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



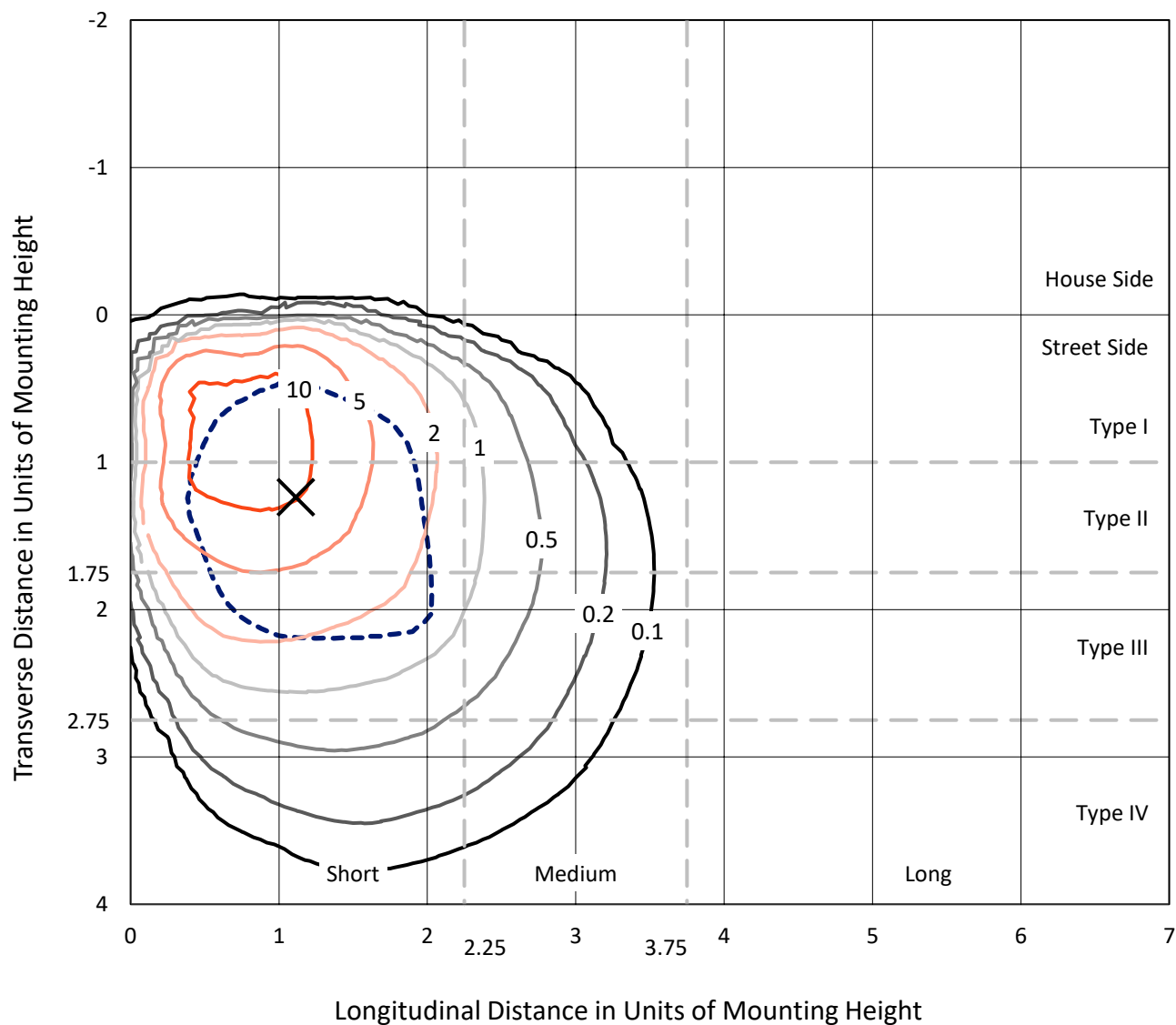
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

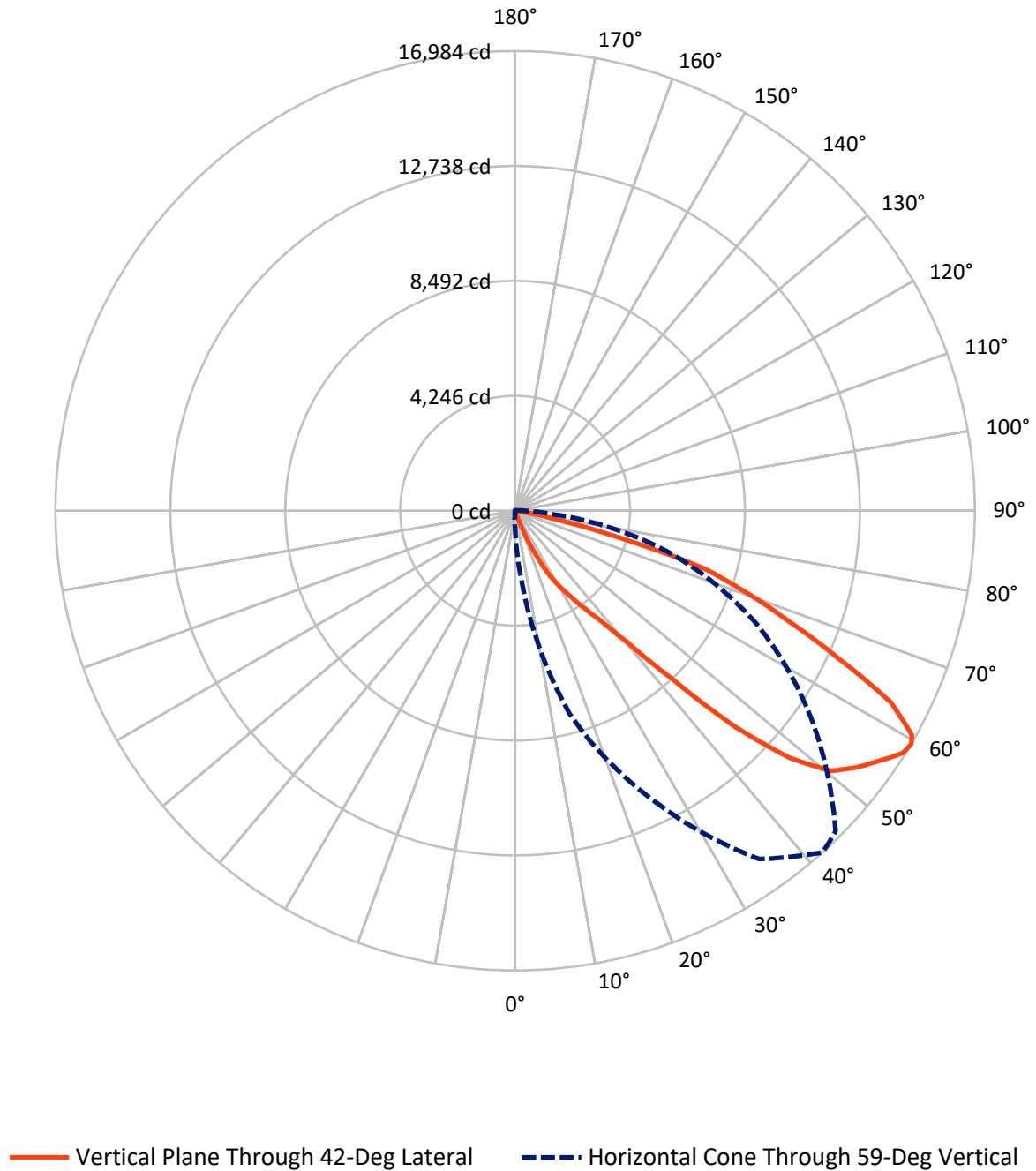


Based on 15 foot mounting height. Maximum calculated value = 18.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	29.8	0.0	29.8
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	6160.4	0.0	6160.4
	% Fixture	99.5	0.0	99.5
Total	Lumens	6190.2	0.0	6190.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.8	0.0
10°-20°	9.0	0.1
20°-30°	115.5	1.9
30°-40°	389.3	6.3
40°-50°	1175.8	19.0
50°-60°	2075.6	33.5
60°-70°	1827.6	29.5
70°-80°	581.7	9.4
80°-90°	13.9	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°	6190.2	100.0
0°-180°	6190.2	100.0



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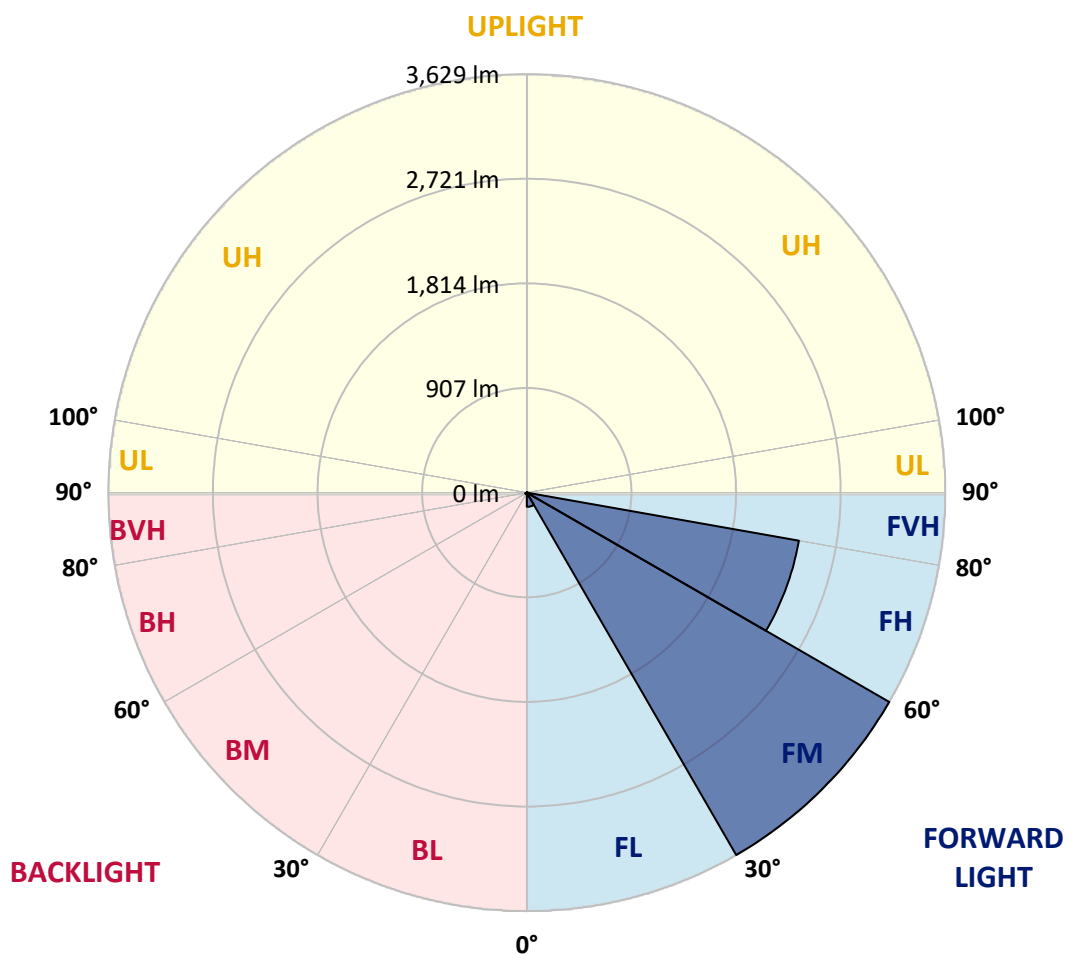
CATALOG NUMBER: NAV-SA2B-830-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	123.0	2.0			
FM	(30°-60°)	3628.5	58.6			
FH	(60°-80°)	2395.7	38.7			G2/5000
FVH	(80°-90°)	13.2	0.2			G1/100
BL	(0°-30°)	3.3	0.1	B0/110		
BM	(30°-60°)	12.2	0.2	B0/220		
BH	(60°-80°)	13.6	0.2	B0/110		G0/110
BVH	(80°-90°)	0.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	27.2	27.2	25.2	23.3	21.3	19.4	19.4	19.4	17.5	17.5	15.5
5°	31.1	31.1	29.1	27.2	27.2	25.2	25.2	23.3	21.3	21.3	19.4
7.5°	33.0	33.0	33.0	33.0	31.1	31.1	31.1	29.1	27.2	25.2	23.3
10°	34.9	36.9	38.8	38.8	38.8	38.8	38.8	36.9	33.0	31.1	27.2
12.5°	38.8	40.8	44.6	48.5	48.5	50.5	48.5	46.6	42.7	36.9	31.1
15°	42.7	46.6	52.4	60.2	67.9	69.9	69.9	64.0	56.3	44.6	36.9
17.5°	48.5	54.3	69.9	95.1	122.3	143.6	143.6	128.1	89.3	58.2	42.7
20°	52.4	64.0	112.6	229.0	349.4	438.6	421.2	372.6	199.9	91.2	46.6
22.5°	58.2	81.5	238.7	601.7	931.6	1094.6	1055.8	801.6	448.3	163.0	56.3
25°	66.0	118.4	473.6	1127.6	1731.2	1907.9	1882.6	1496.4	817.1	273.7	71.8
27.5°	81.5	174.7	758.9	1709.9	2554.2	2705.5	2695.8	2191.2	1306.2	440.6	93.2
30°	102.9	254.3	1125.7	2323.2	3099.5	3252.9	3204.3	2699.7	1762.3	673.5	120.3
32.5°	128.1	355.2	1457.6	2775.4	3602.2	3804.1	3745.8	3142.2	2129.1	871.4	178.6
35°	166.9	454.2	1785.6	3175.2	4182.5	4438.7	4341.7	3598.3	2445.5	1094.6	215.4
37.5°	186.3	512.4	2086.4	3610.0	4834.7	5184.0	5110.3	4174.8	2767.7	1379.9	264.0
40°	188.3	582.3	2398.9	4176.7	5756.6	6379.6	6247.6	5164.6	3367.4	1746.8	339.6
42.5°	194.1	687.1	2804.5	5143.3	7567.4	8462.1	8312.7	6985.1	4727.9	2482.3	481.3
45°	221.3	885.0	3631.3	6950.2	10053.6	11365.6	11192.9	9521.8	6628.0	3866.2	821.0
47.5°	316.4	1331.4	5081.1	8900.7	12596.1	13642.2	13599.5	11520.9	8349.5	5284.9	1391.6
50°	508.5	2043.7	6730.9	10540.8	14214.8	15113.4	15006.7	12355.5	9331.6	6253.4	1783.6
52.5°	679.3	2725.0	7767.3	11144.4	14698.1	15769.4	15639.4	12660.2	9589.7	6538.7	1892.3
55°	722.0	2971.4	8075.9	11330.7	15018.3	16324.5	16136.2	12864.0	9622.7	6334.9	1711.8
57.5°	700.6	2738.5	7876.0	11513.1	15464.7	16895.1	16644.7	13261.8	9733.4	5989.5	1424.6
59°	663.8	2451.3	7751.8	11658.7	15711.2	16984.4	16749.5	13349.2	9807.1	5832.3	1249.9
60°	621.1	2257.2	7654.7	11753.8	15695.7	16844.7	16602.0	13308.4	9836.2	5696.4	1166.5
62.5°	479.4	1801.1	7515.0	11685.9	14715.5	15569.5	15431.7	12310.8	9409.2	5261.6	920.0
65°	372.6	1378.0	7002.6	10422.4	12522.4	13096.9	13054.2	10424.3	7918.7	4535.8	663.8
67.5°	295.0	1005.4	5921.5	8440.8	10075.0	10892.1	10861.0	8462.1	6010.8	3466.4	477.4
70°	240.7	716.2	4060.3	6364.1	8058.4	9087.1	9042.4	6810.4	4454.3	2199.0	347.4
72.5°	203.8	458.0	2462.9	4797.8	6725.1	7313.1	7183.1	5494.6	3239.3	1197.5	275.6
75°	172.7	281.4	1220.8	2990.9	4005.9	4002.0	3872.0	2909.3	1739.0	586.1	219.3
77.5°	139.7	198.0	479.4	821.0	1263.5	1564.3	1539.1	1030.6	520.1	170.8	135.9
80°	91.2	93.2	128.1	225.1	347.4	384.3	436.7	314.4	151.4	81.5	56.3
82.5°	40.8	44.6	58.2	73.8	73.8	67.9	60.2	44.6	33.0	27.2	13.6
85°	9.7	13.6	9.7	11.6	9.7	7.8	7.8	3.9	0.0	0.0	0.0
87.5°	1.9	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°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	15.5	15.5	15.5	13.6	13.6	13.6	11.6	11.6	11.6	9.7	9.7
5°	19.4	17.5	15.5	15.5	13.6	13.6	11.6	9.7	9.7	9.7	7.8
7.5°	21.3	19.4	17.5	15.5	13.6	11.6	11.6	9.7	7.8	7.8	7.8
10°	25.2	23.3	19.4	15.5	13.6	11.6	9.7	9.7	7.8	5.8	5.8
12.5°	29.1	25.2	21.3	17.5	13.6	11.6	9.7	9.7	7.8	5.8	3.9
15°	33.0	29.1	23.3	17.5	13.6	11.6	9.7	9.7	5.8	3.9	1.9
17.5°	36.9	31.1	23.3	19.4	13.6	11.6	9.7	7.8	3.9	1.9	0.0
20°	38.8	33.0	25.2	19.4	13.6	11.6	9.7	5.8	1.9	0.0	0.0
22.5°	42.7	36.9	27.2	19.4	13.6	9.7	5.8	1.9	0.0	0.0	0.0
25°	50.5	38.8	27.2	19.4	13.6	9.7	3.9	0.0	0.0	0.0	0.0
27.5°	56.3	42.7	27.2	19.4	13.6	7.8	1.9	0.0	0.0	0.0	0.0
30°	66.0	46.6	29.1	19.4	13.6	5.8	1.9	0.0	0.0	0.0	0.0
32.5°	81.5	50.5	29.1	19.4	11.6	5.8	0.0	0.0	0.0	0.0	0.0
35°	99.0	58.2	29.1	19.4	11.6	5.8	0.0	0.0	0.0	0.0	0.0
37.5°	100.9	62.1	29.1	19.4	11.6	3.9	0.0	0.0	0.0	0.0	0.0
40°	104.8	58.2	31.1	19.4	11.6	3.9	0.0	0.0	0.0	0.0	0.0
42.5°	120.3	54.3	33.0	19.4	11.6	3.9	0.0	0.0	0.0	0.0	0.0
45°	178.6	56.3	33.0	21.3	11.6	5.8	0.0	0.0	0.0	0.0	0.0
47.5°	310.5	58.2	31.1	21.3	11.6	5.8	0.0	0.0	0.0	0.0	0.0
50°	397.9	67.9	31.1	23.3	13.6	3.9	0.0	0.0	0.0	0.0	0.0
52.5°	423.1	79.6	31.1	25.2	17.5	1.9	0.0	0.0	0.0	0.0	0.0
55°	411.5	93.2	33.0	27.2	21.3	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	380.4	100.9	34.9	29.1	23.3	0.0	0.0	0.0	0.0	0.0	0.0
59°	347.4	106.7	40.8	31.1	23.3	0.0	0.0	0.0	0.0	0.0	0.0
60°	320.2	112.6	42.7	33.0	23.3	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	258.1	120.3	46.6	38.8	19.4	0.0	0.0	0.0	0.0	0.0	0.0
65°	225.1	126.2	48.5	42.7	17.5	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	205.7	130.0	52.4	44.6	15.5	0.0	0.0	0.0	0.0	0.0	0.0
70°	190.2	128.1	56.3	42.7	13.6	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	172.7	122.3	67.9	38.8	11.6	0.0	0.0	0.0	0.0	0.0	0.0
75°	155.3	110.6	73.8	34.9	7.8	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	112.6	93.2	67.9	31.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0
80°	48.5	50.5	48.5	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	9.7	11.6	9.7	5.8	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°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	9.7	9.7	9.7	9.7	11.6	11.6	15.5	19.4	23.3	25.2	25.2
5°	7.8	7.8	7.8	7.8	7.8	9.7	11.6	15.5	21.3	23.3	23.3
7.5°	5.8	5.8	5.8	5.8	5.8	5.8	9.7	13.6	19.4	21.3	23.3
10°	5.8	3.9	3.9	1.9	1.9	3.9	5.8	11.6	17.5	19.4	21.3
12.5°	3.9	1.9	1.9	0.0	0.0	1.9	3.9	9.7	15.5	17.5	19.4
15°	1.9	0.0	0.0	0.0	0.0	0.0	1.9	7.8	13.6	15.5	19.4
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	11.6	15.5	17.5
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	9.7	13.6	15.5
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.8	11.6	13.6
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	7.8	9.7
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	5.8	7.8
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	5.8	7.8
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	5.8
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	5.8
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	3.9
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9
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°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
2.5°	27.2	27.2	25.2	23.3	23.3	23.3	25.2	27.2	27.2	27.2
5°	25.2	25.2	23.3	23.3	23.3	23.3	25.2	29.1	31.1	31.1
7.5°	25.2	25.2	23.3	23.3	23.3	23.3	25.2	29.1	31.1	33.0
10°	23.3	23.3	23.3	23.3	21.3	23.3	25.2	29.1	34.9	34.9
12.5°	23.3	23.3	23.3	23.3	21.3	23.3	27.2	31.1	36.9	38.8
15°	23.3	23.3	23.3	21.3	21.3	23.3	27.2	33.0	38.8	42.7
17.5°	21.3	23.3	23.3	21.3	21.3	23.3	27.2	33.0	42.7	48.5
20°	19.4	21.3	23.3	21.3	21.3	21.3	27.2	33.0	44.6	52.4
22.5°	17.5	19.4	21.3	21.3	19.4	21.3	27.2	34.9	48.5	58.2
25°	15.5	17.5	17.5	19.4	19.4	21.3	27.2	34.9	50.5	66.0
27.5°	11.6	13.6	15.5	17.5	17.5	21.3	27.2	36.9	54.3	81.5
30°	9.7	11.6	13.6	15.5	17.5	21.3	27.2	36.9	58.2	102.9
32.5°	9.7	11.6	13.6	15.5	17.5	19.4	27.2	38.8	64.0	128.1
35°	7.8	9.7	11.6	15.5	15.5	19.4	27.2	38.8	69.9	166.9
37.5°	7.8	9.7	11.6	15.5	15.5	19.4	27.2	38.8	85.4	186.3
40°	5.8	7.8	9.7	15.5	15.5	19.4	29.1	40.8	87.3	188.3
42.5°	5.8	7.8	9.7	13.6	15.5	19.4	29.1	40.8	81.5	194.1
45°	5.8	7.8	9.7	15.5	17.5	21.3	29.1	42.7	79.6	221.3
47.5°	5.8	7.8	9.7	15.5	19.4	21.3	29.1	42.7	81.5	316.4
50°	5.8	7.8	9.7	15.5	21.3	21.3	29.1	42.7	89.3	508.5
52.5°	3.9	5.8	7.8	13.6	17.5	23.3	31.1	40.8	95.1	679.3
55°	3.9	3.9	5.8	11.6	15.5	25.2	33.0	40.8	110.6	722.0
57.5°	3.9	3.9	5.8	9.7	13.6	27.2	34.9	40.8	128.1	700.6
59°	3.9	3.9	3.9	9.7	11.6	27.2	34.9	42.7	130.0	663.8
60°	3.9	3.9	3.9	7.8	11.6	27.2	36.9	44.6	132.0	621.1
62.5°	1.9	1.9	1.9	7.8	9.7	27.2	40.8	54.3	135.9	479.4
65°	3.9	3.9	1.9	5.8	9.7	23.3	46.6	58.2	137.8	372.6
67.5°	3.9	3.9	3.9	7.8	9.7	23.3	48.5	60.2	137.8	295.0
70°	3.9	3.9	3.9	7.8	11.6	23.3	48.5	62.1	135.9	240.7
72.5°	3.9	3.9	3.9	7.8	11.6	21.3	44.6	64.0	130.0	203.8
75°	3.9	3.9	3.9	5.8	9.7	19.4	42.7	69.9	118.4	172.7
77.5°	3.9	3.9	3.9	3.9	7.8	15.5	38.8	77.6	104.8	139.7
80°	5.8	3.9	3.9	3.9	5.8	13.6	36.9	75.7	87.3	91.2
82.5°	5.8	3.9	3.9	1.9	3.9	9.7	29.1	58.2	44.6	40.8
85°	3.9	3.9	3.9	1.9	1.9	5.8	13.6	17.5	13.6	9.7
87.5°	3.9	3.9	3.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-9

Test Date: 10/10/2024

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

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

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGraw-Edison
 Catalog Number: **GSS-SB1A-830-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI
 3000K CCT 26 LEDS

Spectral Parameters

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

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



Test Conditions

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

REPORT NUMBER: SP1-2407-184-9

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

REPORT NUMBER: SP1-2407-184-9

CIE 1931 Chromaticity Diagram



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



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Photopic Flux vs. Wavelength

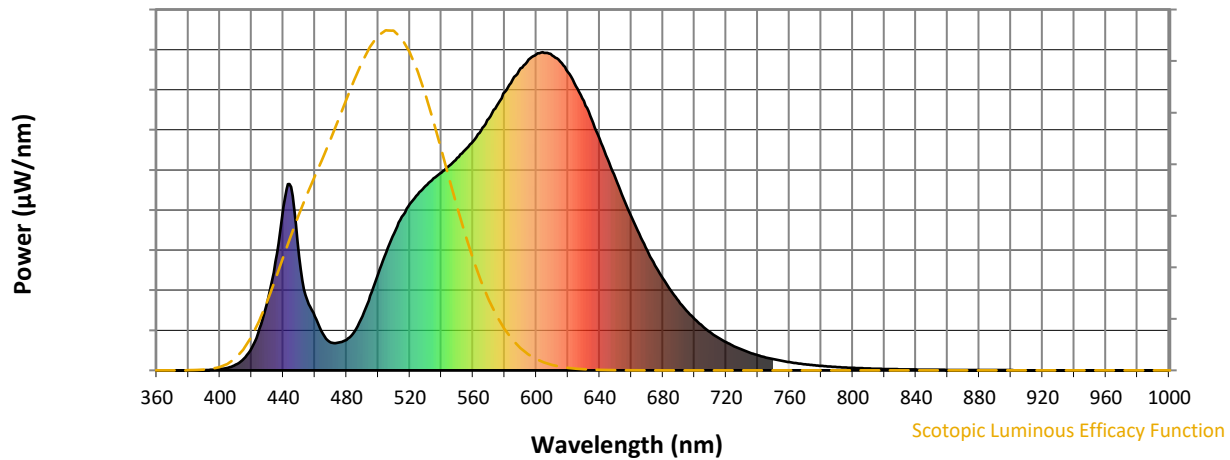


Photopic Lumens: NR

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



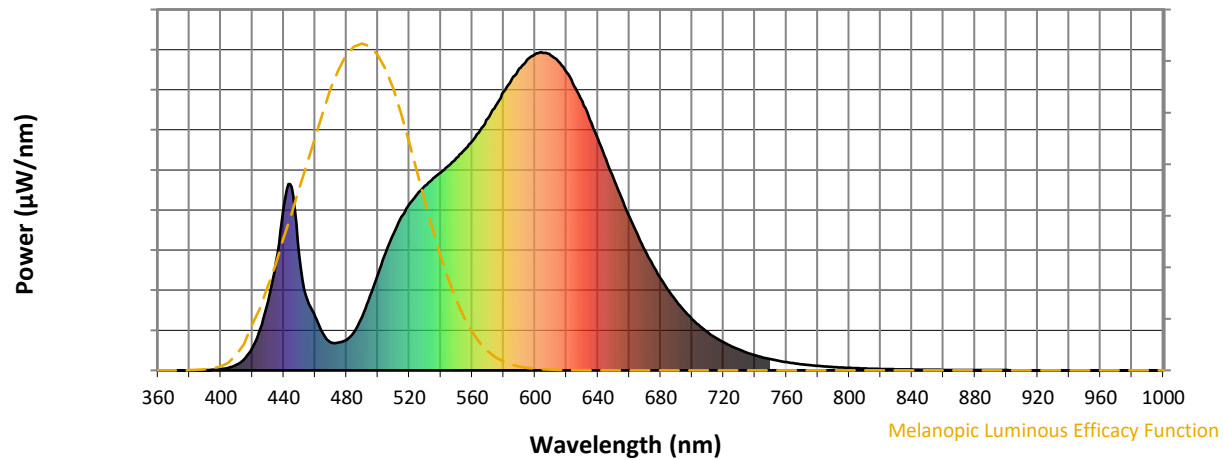
Scotopic Lumens: NR

S/P: 1.28

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

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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 2.33

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

REPORT NUMBER: SP1-2407-184-9

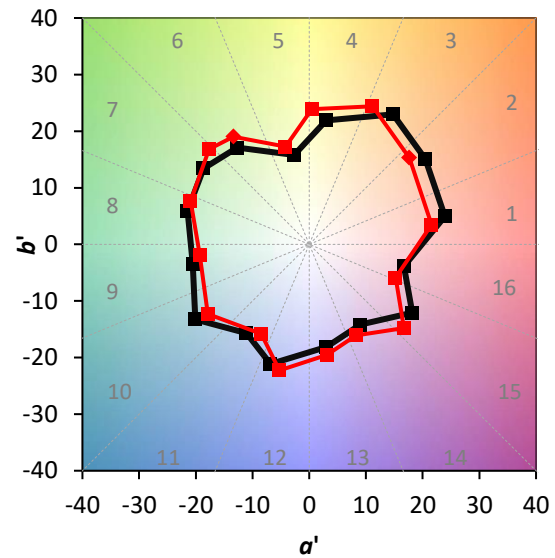
TM-30-18

Summary

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

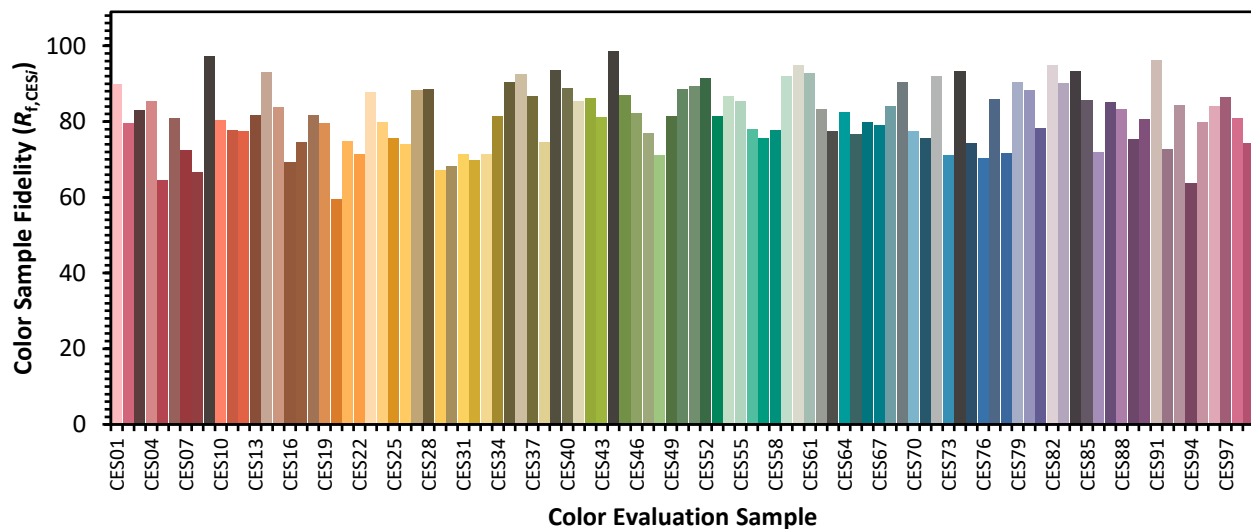


Color Vector Graphics

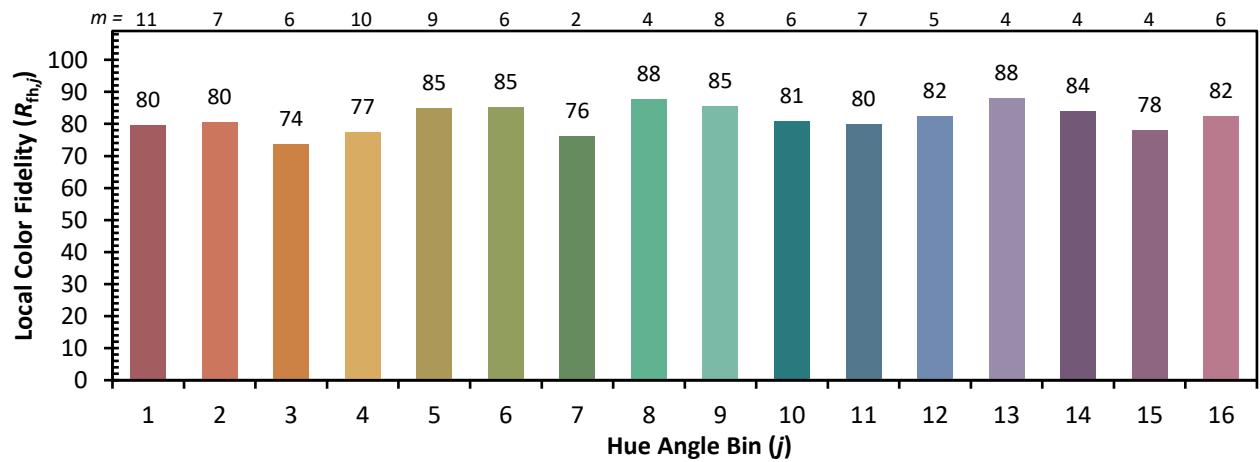
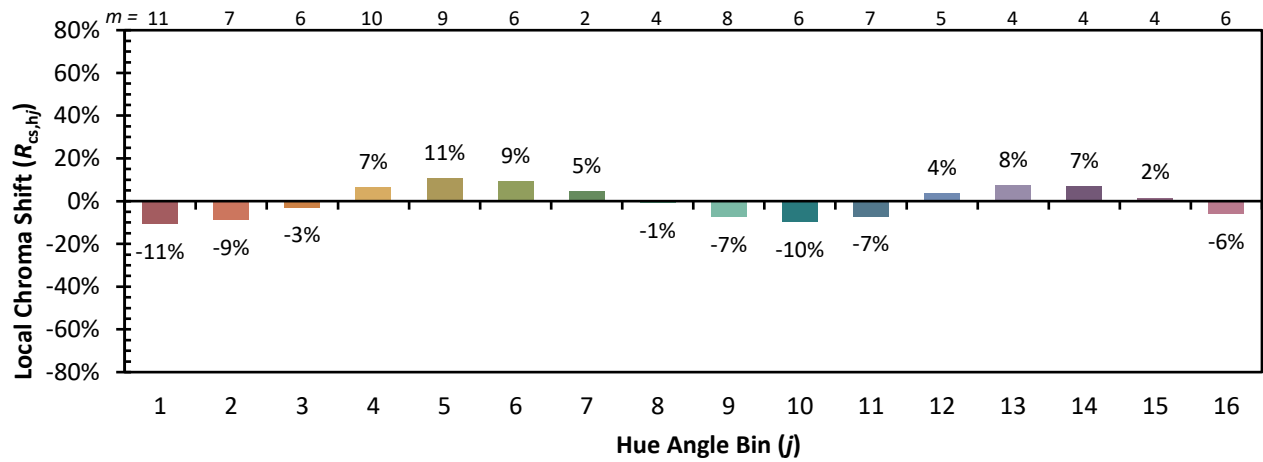


Individual Sample Fidelity Index ($R_{f,i}$)

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)