

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: P1067932

Luminaire Tested: **NAV-SA4D-727-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067932
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4D-727-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 4xLight Square PACKAGE
70CRI 2700K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (56) 2700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17512.9 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G3

Input Watts (W): 218.9
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



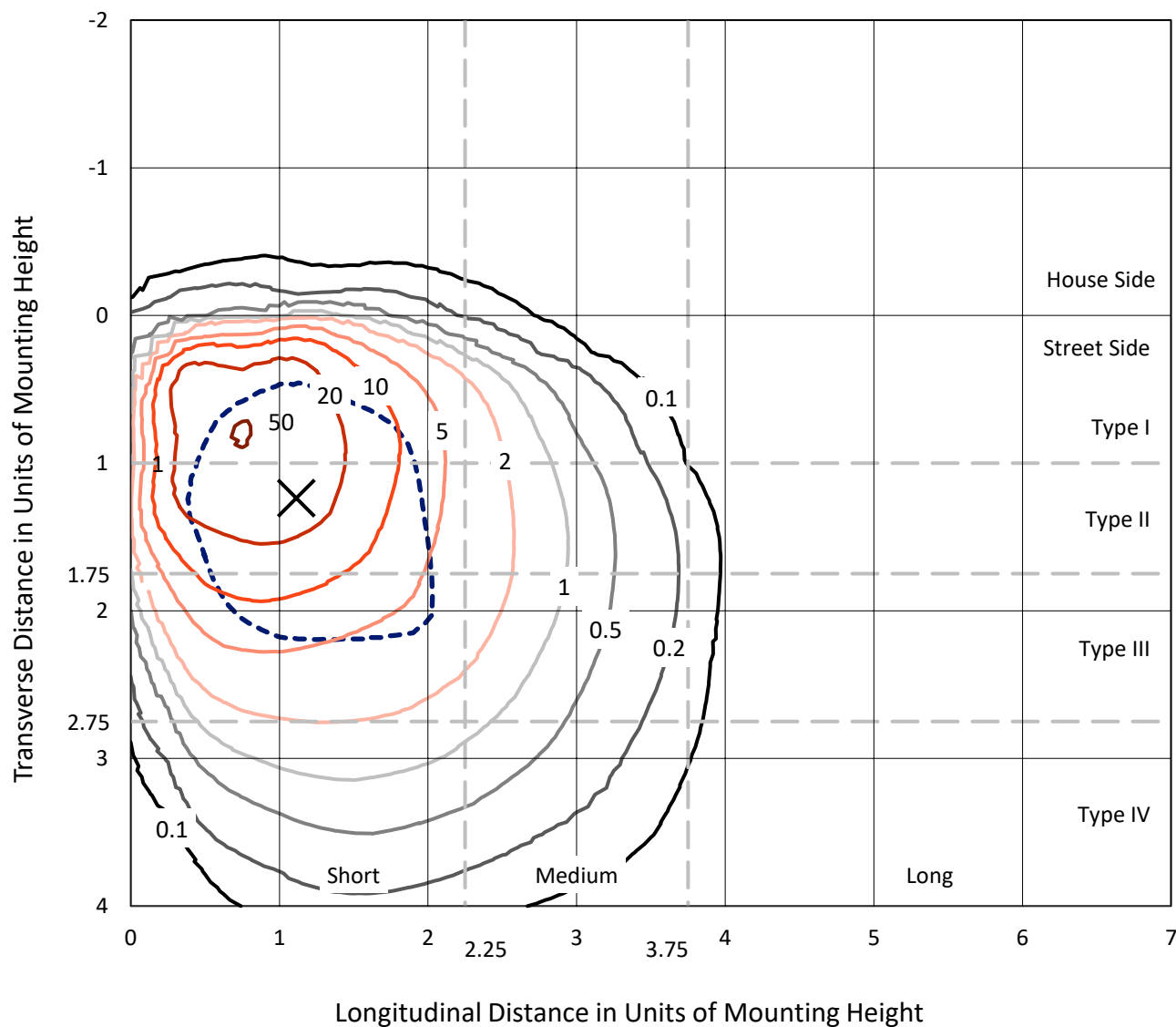
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

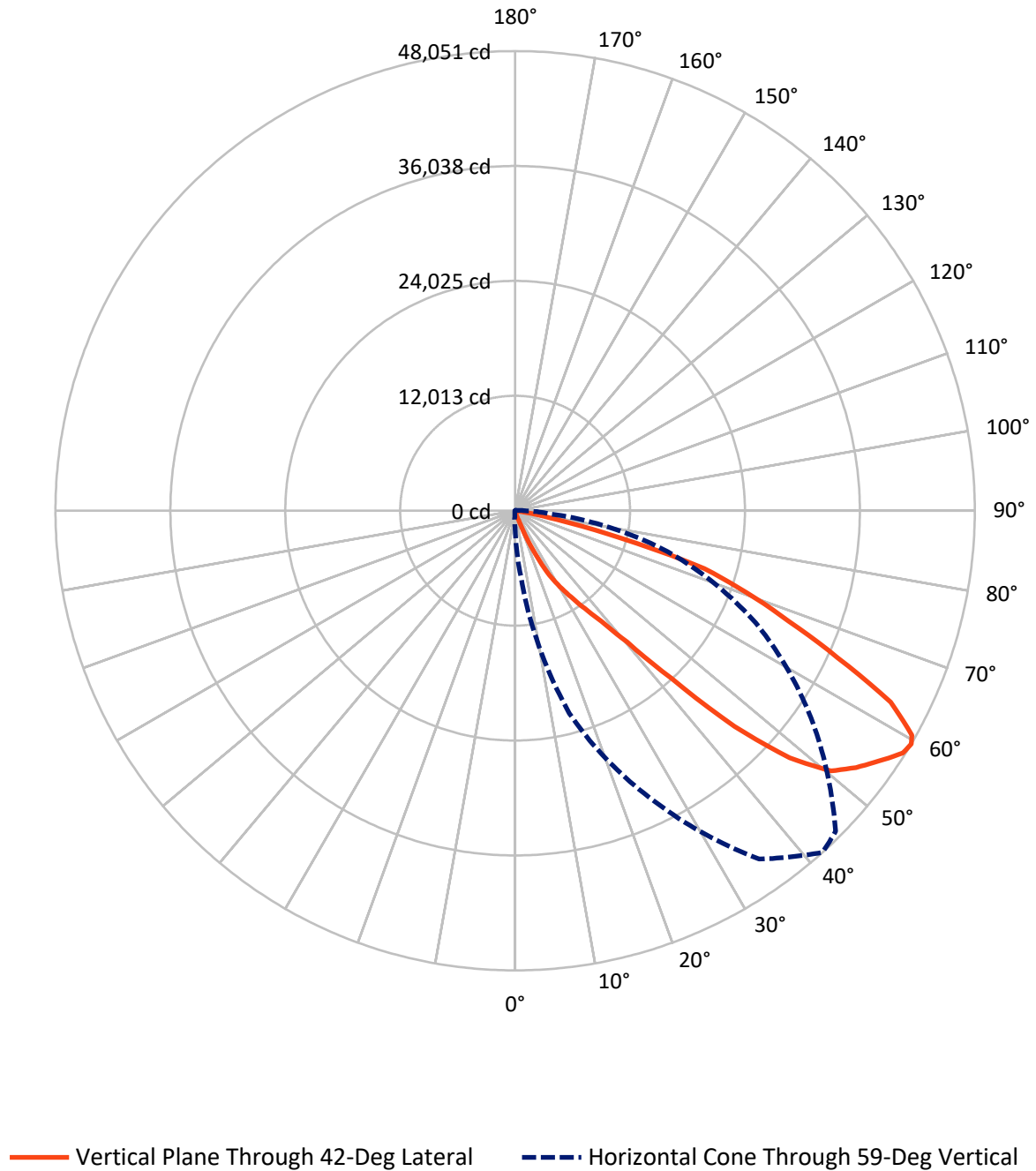


Based on 15 foot mounting height. Maximum calculated value = 52 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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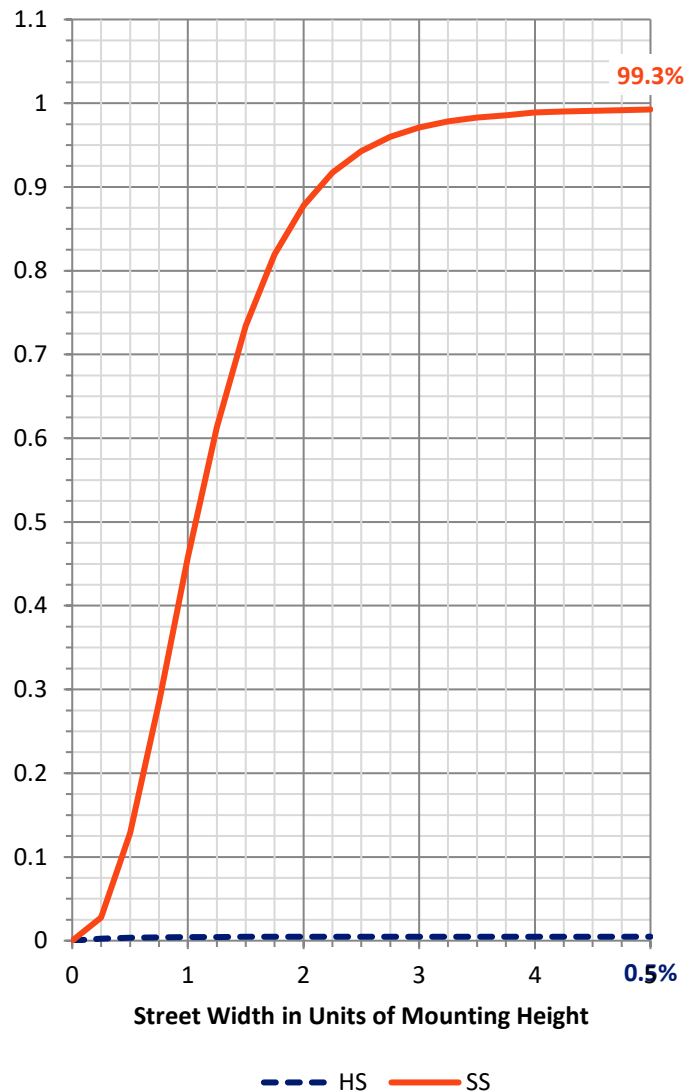
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	84.4	0.0	84.4
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	17428.5	0.0	17428.5
	% Fixture	99.5	0.0	99.5
Total	Lumens	17512.9	0.0	17512.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	0.0
10°-20°	25.5	0.1
20°-30°	326.7	1.9
30°-40°	1101.3	6.3
40°-50°	3326.5	19.0
50°-60°	5872.1	33.5
60°-70°	5170.5	29.5
70°-80°	1645.8	9.4
80°-90°	39.4	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	17512.9	100.0
0°-180°	17512.9	100.0



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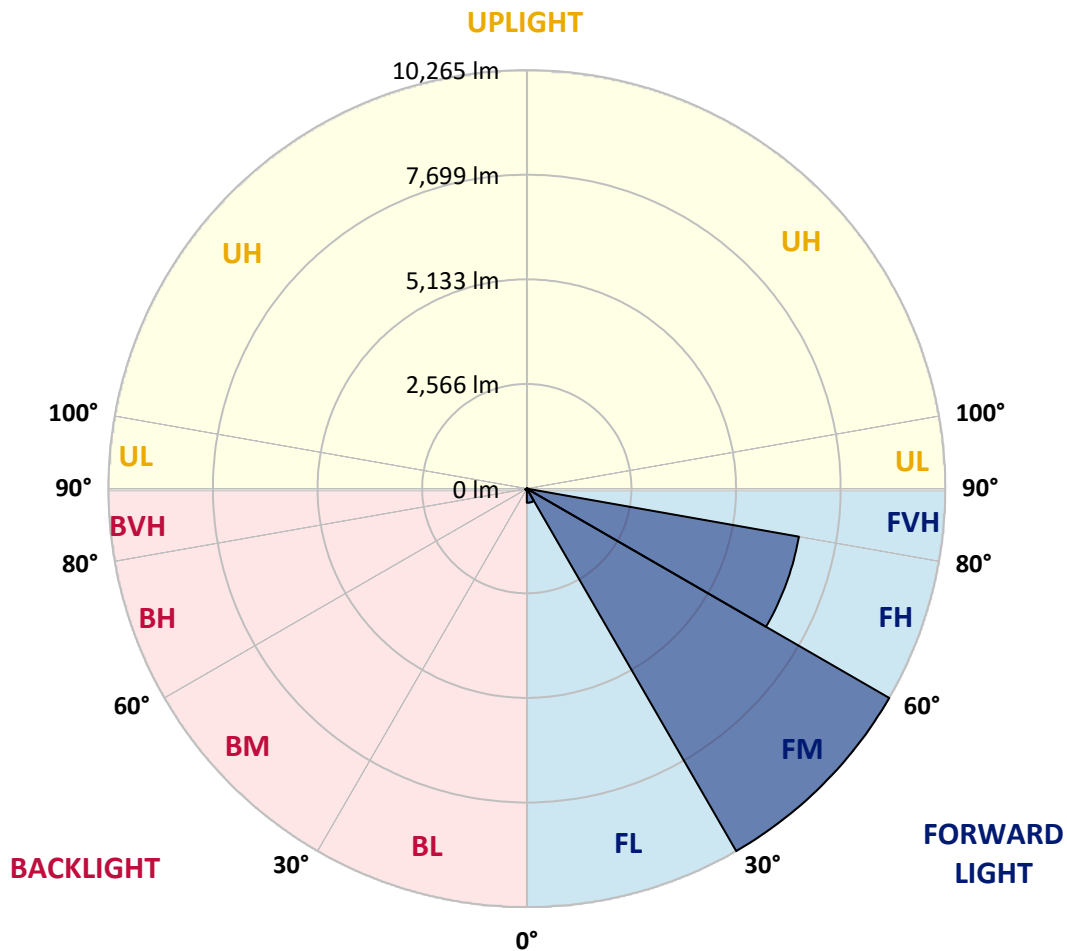
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	347.9	2.0			
FM	(30°-60°)	10265.5	58.6			
FH	(60°-80°)	6777.7	38.7			G3/7500
FVH	(80°-90°)	37.5	0.2			G1/100
BL	(0°-30°)	9.4	0.1	B0/110		
BM	(30°-60°)	34.5	0.2	B0/220		
BH	(60°-80°)	38.6	0.2	B0/110		G0/110
BVH	(80°-90°)	1.9	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-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	42°	45°	55°	65°	75°	85°
0°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	76.9	76.9	71.4	65.9	60.4	54.9	54.9	54.9	49.4	49.4	43.9
5°	87.9	87.9	82.4	76.9	76.9	71.4	71.4	65.9	60.4	60.4	54.9
7.5°	93.3	93.3	93.3	93.3	87.9	87.9	87.9	82.4	76.9	71.4	65.9
10°	98.8	104.3	109.8	109.8	109.8	109.8	109.8	104.3	93.3	87.9	76.9
12.5°	109.8	115.3	126.3	137.3	137.3	142.8	137.3	131.8	120.8	104.3	87.9
15°	120.8	131.8	148.3	170.2	192.2	197.7	197.7	181.2	159.2	126.3	104.3
17.5°	137.3	153.7	197.7	269.1	345.9	406.3	406.3	362.4	252.6	164.7	120.8
20°	148.3	181.2	318.5	647.9	988.4	1240.9	1191.5	1054.2	565.6	258.1	131.8
22.5°	164.7	230.6	675.4	1702.2	2635.6	3096.8	2987.0	2267.7	1268.4	461.2	159.2
25°	186.7	334.9	1339.8	3190.2	4897.9	5397.5	5326.1	4233.5	2311.7	774.2	203.2
27.5°	230.6	494.2	2146.9	4837.5	7226.0	7654.3	7626.8	6199.2	3695.4	1246.4	263.6
30°	291.0	719.3	3184.7	6572.6	8768.9	9202.7	9065.4	7637.8	4985.7	1905.3	340.4
32.5°	362.4	1004.8	4123.6	7851.9	10191.1	10762.1	10597.4	8889.7	6023.5	2465.4	505.2
35°	472.2	1284.9	5051.6	8983.1	11832.8	12557.6	12283.1	10180.1	6918.5	3096.8	609.5
37.5°	527.1	1449.6	5902.7	10213.0	13677.8	14666.1	14457.5	11810.9	7830.0	3904.0	746.8
40°	532.6	1647.3	6786.7	11816.3	16285.9	18048.5	17675.1	14611.2	9526.7	4941.8	960.9
42.5°	549.1	1943.8	7934.3	14550.8	21408.9	23940.2	23517.4	19761.6	13375.8	7022.8	1361.7
45°	626.0	2503.8	10273.4	19662.8	28442.7	32154.5	31665.8	26938.2	18751.3	10937.8	2322.6
47.5°	895.0	3766.7	14375.1	25181.1	35635.7	38595.3	38474.5	32593.8	23621.7	14951.6	3937.0
50°	1438.6	5781.9	19042.3	29820.9	40215.1	42757.4	42455.4	34954.9	26400.1	17691.6	5046.1
52.5°	1921.8	7709.2	21974.5	31528.6	41582.3	44613.3	44245.4	35816.9	27130.4	18498.7	5353.6
55°	2042.6	8406.5	22847.5	32055.7	42488.3	46183.7	45651.1	36393.5	27223.7	17922.2	4842.9
57.5°	1982.2	7747.6	22281.9	32571.8	43751.2	47798.0	47089.7	37519.1	27536.7	16944.8	4030.3
59°	1877.9	6935.0	21930.5	32983.6	44448.6	48050.6	47386.2	37766.2	27745.4	16500.1	3536.1
60°	1757.1	6385.9	21656.0	33252.7	44404.7	47655.2	46968.9	37650.9	27827.7	16115.7	3300.0
62.5°	1356.2	5095.5	21260.6	33060.5	41631.8	44047.7	43657.9	34828.6	26619.7	14885.7	2602.7
65°	1054.2	3898.5	19811.1	29486.0	35427.1	37052.4	36931.6	29491.5	22402.7	12832.2	1877.9
67.5°	834.6	2844.3	16752.6	23879.8	28503.1	30814.8	30726.9	23940.2	17005.2	9806.7	1350.8
70°	680.9	2026.1	11486.9	18004.6	22798.1	25708.2	25582.0	19267.5	12601.5	6221.2	982.9
72.5°	576.5	1295.8	6967.9	13573.4	19025.9	20689.6	20321.7	15544.6	9164.3	3387.9	779.7
75°	488.7	796.2	3453.8	8461.4	11333.2	11322.2	10954.3	8230.8	4919.8	1658.2	620.5
77.5°	395.3	560.1	1356.2	2322.6	3574.6	4425.6	4354.3	2915.7	1471.6	483.2	384.4
80°	258.1	263.6	362.4	636.9	982.9	1087.2	1235.4	889.5	428.3	230.6	159.2
82.5°	115.3	126.3	164.7	208.7	208.7	192.2	170.2	126.3	93.3	76.9	38.4
85°	27.5	38.4	27.5	32.9	27.5	22.0	22.0	11.0	0.0	0.0	0.0
87.5°	5.5	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°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	43.9	43.9	43.9	38.4	38.4	38.4	32.9	32.9	32.9	27.5	27.5
5°	54.9	49.4	43.9	43.9	38.4	38.4	32.9	27.5	27.5	27.5	22.0
7.5°	60.4	54.9	49.4	43.9	38.4	32.9	32.9	27.5	22.0	22.0	22.0
10°	71.4	65.9	54.9	43.9	38.4	32.9	27.5	27.5	22.0	16.5	16.5
12.5°	82.4	71.4	60.4	49.4	38.4	32.9	27.5	27.5	22.0	16.5	11.0
15°	93.3	82.4	65.9	49.4	38.4	32.9	27.5	27.5	16.5	11.0	5.5
17.5°	104.3	87.9	65.9	54.9	38.4	32.9	27.5	22.0	11.0	5.5	0.0
20°	109.8	93.3	71.4	54.9	38.4	32.9	27.5	16.5	5.5	0.0	0.0
22.5°	120.8	104.3	76.9	54.9	38.4	27.5	16.5	5.5	0.0	0.0	0.0
25°	142.8	109.8	76.9	54.9	38.4	27.5	11.0	0.0	0.0	0.0	0.0
27.5°	159.2	120.8	76.9	54.9	38.4	22.0	5.5	0.0	0.0	0.0	0.0
30°	186.7	131.8	82.4	54.9	38.4	16.5	5.5	0.0	0.0	0.0	0.0
32.5°	230.6	142.8	82.4	54.9	32.9	16.5	0.0	0.0	0.0	0.0	0.0
35°	280.0	164.7	82.4	54.9	32.9	16.5	0.0	0.0	0.0	0.0	0.0
37.5°	285.5	175.7	82.4	54.9	32.9	11.0	0.0	0.0	0.0	0.0	0.0
40°	296.5	164.7	87.9	54.9	32.9	11.0	0.0	0.0	0.0	0.0	0.0
42.5°	340.4	153.7	93.3	54.9	32.9	11.0	0.0	0.0	0.0	0.0	0.0
45°	505.2	159.2	93.3	60.4	32.9	16.5	0.0	0.0	0.0	0.0	0.0
47.5°	878.5	164.7	87.9	60.4	32.9	16.5	0.0	0.0	0.0	0.0	0.0
50°	1125.6	192.2	87.9	65.9	38.4	11.0	0.0	0.0	0.0	0.0	0.0
52.5°	1197.0	225.1	87.9	71.4	49.4	5.5	0.0	0.0	0.0	0.0	0.0
55°	1164.1	263.6	93.3	76.9	60.4	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	1076.2	285.5	98.8	82.4	65.9	0.0	0.0	0.0	0.0	0.0	0.0
59°	982.9	302.0	115.3	87.9	65.9	0.0	0.0	0.0	0.0	0.0	0.0
60°	906.0	318.5	120.8	93.3	65.9	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	730.3	340.4	131.8	109.8	54.9	0.0	0.0	0.0	0.0	0.0	0.0
65°	636.9	356.9	137.3	120.8	49.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	582.0	367.9	148.3	126.3	43.9	0.0	0.0	0.0	0.0	0.0	0.0
70°	538.1	362.4	159.2	120.8	38.4	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	488.7	345.9	192.2	109.8	32.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	439.3	313.0	208.7	98.8	22.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	318.5	263.6	192.2	87.9	11.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	137.3	142.8	137.3	65.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	27.5	32.9	27.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	27.5	27.5	27.5	27.5	32.9	32.9	43.9	54.9	65.9	71.4	71.4
5°	22.0	22.0	22.0	22.0	22.0	27.5	32.9	43.9	60.4	65.9	65.9
7.5°	16.5	16.5	16.5	16.5	16.5	16.5	27.5	38.4	54.9	60.4	65.9
10°	16.5	11.0	11.0	5.5	5.5	11.0	16.5	32.9	49.4	54.9	60.4
12.5°	11.0	5.5	5.5	0.0	0.0	5.5	11.0	27.5	43.9	49.4	54.9
15°	5.5	0.0	0.0	0.0	0.0	0.0	5.5	22.0	38.4	43.9	54.9
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	32.9	43.9	49.4
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	27.5	38.4	43.9
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	22.0	32.9	38.4
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	22.0	27.5
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	16.5	22.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	16.5	22.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0	16.5
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0	16.5
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0	11.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	11.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	5.5
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°	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4	49.4
2.5°	76.9	76.9	71.4	65.9	65.9	65.9	71.4	76.9	76.9	76.9
5°	71.4	71.4	65.9	65.9	65.9	65.9	71.4	82.4	87.9	87.9
7.5°	71.4	71.4	65.9	65.9	65.9	65.9	71.4	82.4	87.9	93.3
10°	65.9	65.9	65.9	65.9	60.4	65.9	71.4	82.4	98.8	98.8
12.5°	65.9	65.9	65.9	65.9	60.4	65.9	76.9	87.9	104.3	109.8
15°	65.9	65.9	65.9	60.4	60.4	65.9	76.9	93.3	109.8	120.8
17.5°	60.4	65.9	65.9	60.4	60.4	65.9	76.9	93.3	120.8	137.3
20°	54.9	60.4	65.9	60.4	60.4	60.4	76.9	93.3	126.3	148.3
22.5°	49.4	54.9	60.4	60.4	54.9	60.4	76.9	98.8	137.3	164.7
25°	43.9	49.4	49.4	54.9	54.9	60.4	76.9	98.8	142.8	186.7
27.5°	32.9	38.4	43.9	49.4	49.4	60.4	76.9	104.3	153.7	230.6
30°	27.5	32.9	38.4	43.9	49.4	60.4	76.9	104.3	164.7	291.0
32.5°	27.5	32.9	38.4	43.9	49.4	54.9	76.9	109.8	181.2	362.4
35°	22.0	27.5	32.9	43.9	43.9	54.9	76.9	109.8	197.7	472.2
37.5°	22.0	27.5	32.9	43.9	43.9	54.9	76.9	109.8	241.6	527.1
40°	16.5	22.0	27.5	43.9	43.9	54.9	82.4	115.3	247.1	532.6
42.5°	16.5	22.0	27.5	38.4	43.9	54.9	82.4	115.3	230.6	549.1
45°	16.5	22.0	27.5	43.9	49.4	60.4	82.4	120.8	225.1	626.0
47.5°	16.5	22.0	27.5	43.9	54.9	60.4	82.4	120.8	230.6	895.0
50°	16.5	22.0	27.5	43.9	60.4	60.4	82.4	120.8	252.6	1438.6
52.5°	11.0	16.5	22.0	38.4	49.4	65.9	87.9	115.3	269.1	1921.8
55°	11.0	11.0	16.5	32.9	43.9	71.4	93.3	115.3	313.0	2042.6
57.5°	11.0	11.0	16.5	27.5	38.4	76.9	98.8	115.3	362.4	1982.2
59°	11.0	11.0	11.0	22.0	32.9	76.9	104.3	126.3	373.4	1757.1
60°	11.0	11.0	11.0	22.0	32.9	76.9	104.3	126.3	373.4	1757.1
62.5°	5.5	5.5	5.5	22.0	27.5	76.9	115.3	153.7	384.4	1356.2
65°	11.0	11.0	5.5	16.5	27.5	65.9	131.8	164.7	389.9	1054.2
67.5°	11.0	11.0	11.0	22.0	27.5	65.9	137.3	170.2	389.9	834.6
70°	11.0	11.0	11.0	22.0	32.9	65.9	137.3	175.7	384.4	680.9
72.5°	11.0	11.0	11.0	22.0	32.9	60.4	126.3	181.2	367.9	576.5
75°	11.0	11.0	11.0	16.5	27.5	54.9	120.8	197.7	334.9	488.7
77.5°	11.0	11.0	11.0	11.0	22.0	43.9	109.8	219.6	296.5	395.3
80°	16.5	11.0	11.0	11.0	16.5	38.4	104.3	214.1	247.1	258.1
82.5°	16.5	11.0	11.0	5.5	11.0	27.5	82.4	164.7	126.3	115.3
85°	11.0	11.0	11.0	5.5	5.5	16.5	38.4	49.4	38.4	27.5
87.5°	11.0	11.0	11.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5
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: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

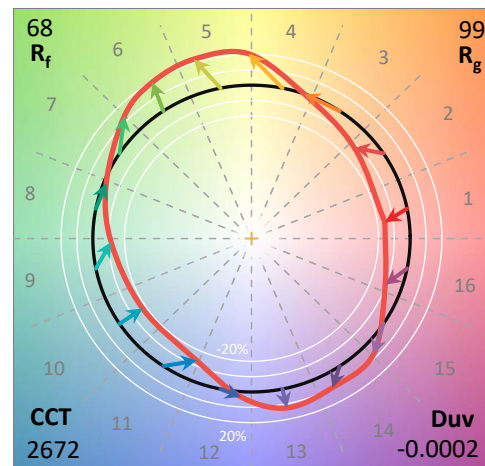
Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-3
 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-727-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI
 2700K CCT 26 LEDS

Spectral Parameters

CCT (K):	2672	CRI (Ra):	71.1		
CIE u':	0.2638	R1:	68.3	R9:	-27.8
CIE v':	0.5276	R2:	79.8	R10:	54.4
Duv:	-0.0002	R3:	91.2	R11:	65.8
CIE x:	0.4619	R4:	69.4	R12:	45.6
CIE y:	0.4106	R5:	66.5	R13:	69.8
CIE z:	0.1275	R6:	72.6	R14:	94.5
Peak Wavelength (nm):	601	R7:	77.0	R15:	60.1
Dominant Wavelength (nm):	584	R8:	44.1		
Purity:	61.88407				
Rf:	67.9				
Rg:	98.6				



Test Conditions

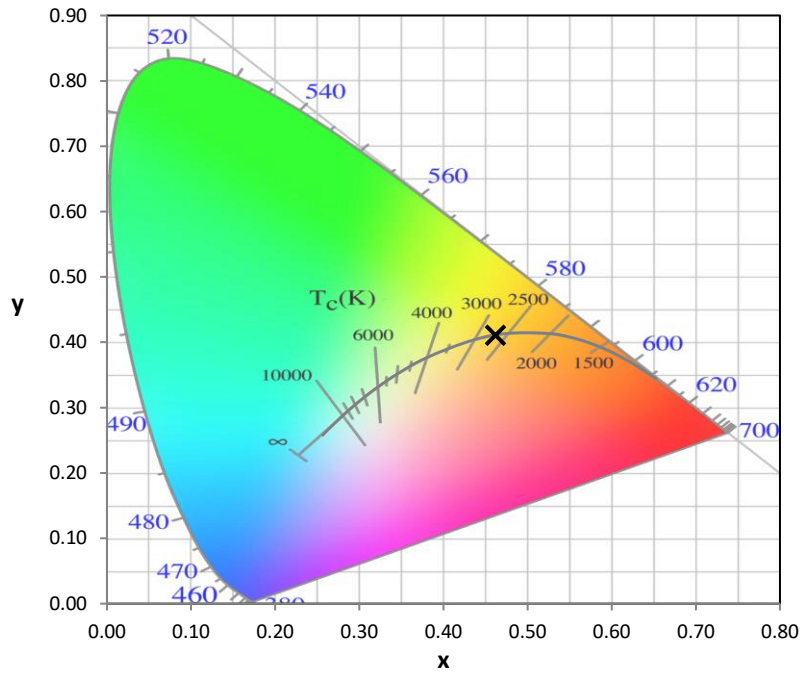
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-3

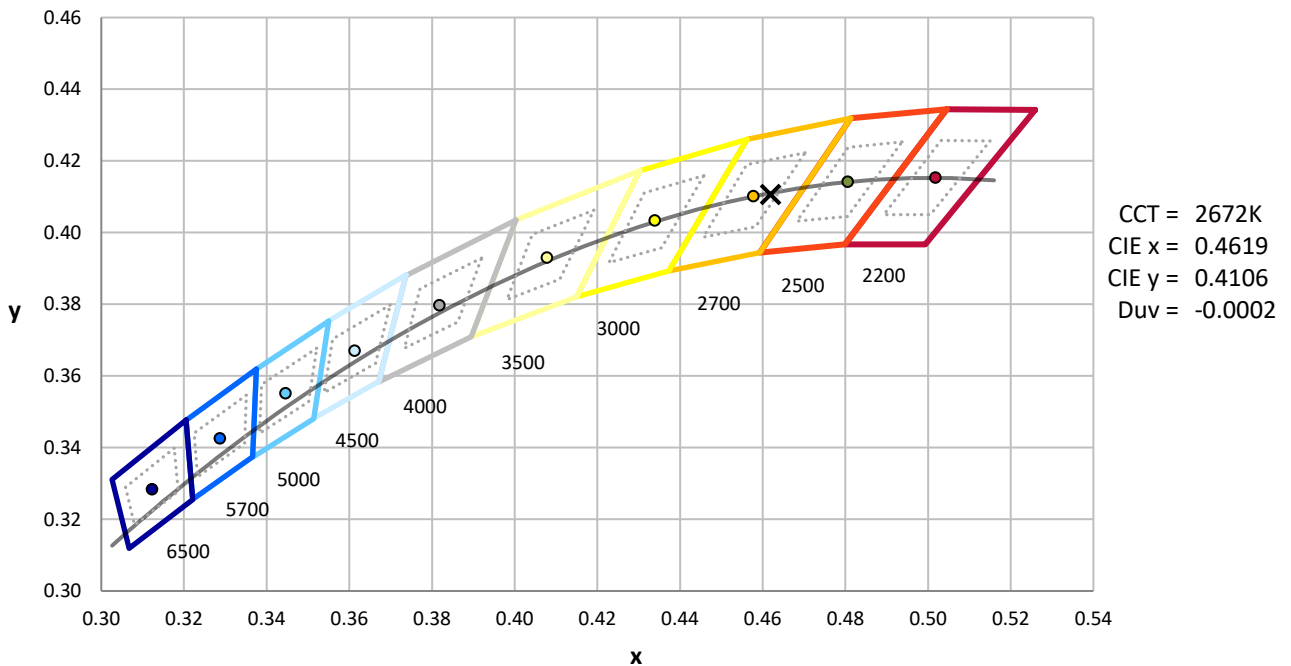
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram

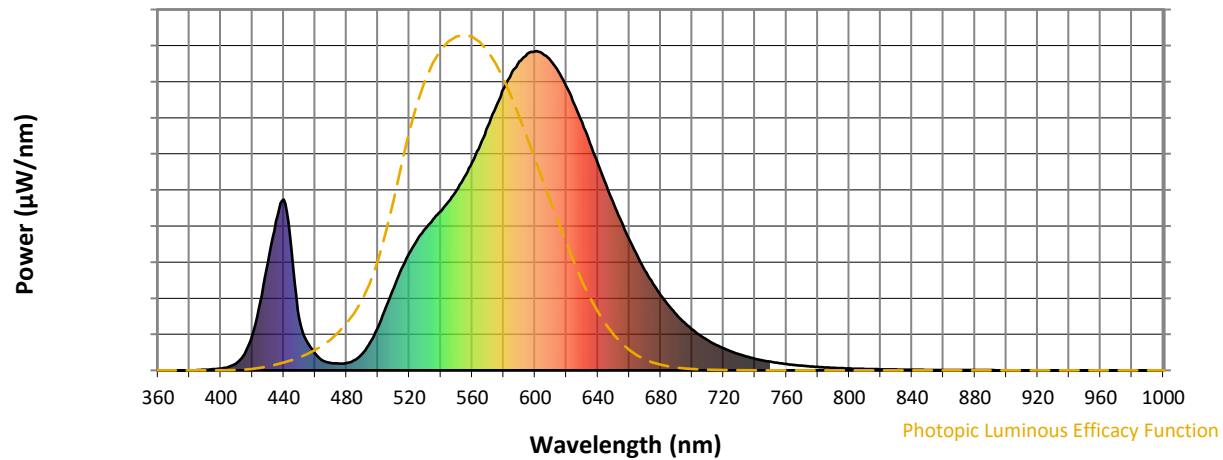


CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



REPORT NUMBER: SP1-2407-184-3

Photopic Flux vs. Wavelength

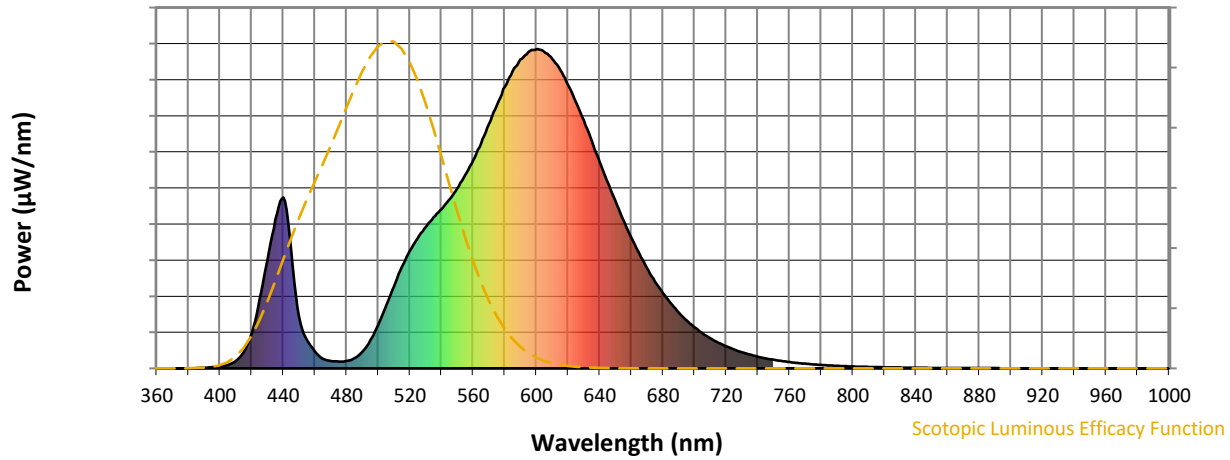


Photopic Lumens: NR

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	52	NR	620	888	NR	750	27	NR	880	1	NR
365	0	NR	495	87	NR	625	834	NR	755	23	NR	885	1	NR
370	0	NR	500	135	NR	630	776	NR	760	20	NR	890	1	NR
375	0	NR	505	196	NR	635	712	NR	765	17	NR	895	0	NR
380	0	NR	510	258	NR	640	648	NR	770	15	NR	900	0	NR
385	1	NR	515	317	NR	645	583	NR	775	12	NR	905	0	NR
390	2	NR	520	368	NR	650	523	NR	780	11	NR	910	0	NR
395	4	NR	525	408	NR	655	465	NR	785	9	NR	915	0	NR
400	6	NR	530	443	NR	660	410	NR	790	8	NR	920	0	NR
405	11	NR	535	473	NR	665	360	NR	795	7	NR	925	0	NR
410	23	NR	540	498	NR	670	313	NR	800	6	NR	930	0	NR
415	51	NR	545	530	NR	675	272	NR	805	5	NR	935	0	NR
420	111	NR	550	563	NR	680	236	NR	810	4	NR	940	0	NR
425	214	NR	555	605	NR	685	203	NR	815	4	NR	945	0	NR
430	339	NR	560	651	NR	690	175	NR	820	3	NR	950	0	NR
435	467	NR	565	705	NR	695	150	NR	825	3	NR	955	0	NR
440	535	NR	570	765	NR	700	128	NR	830	3	NR	960	0	NR
445	372	NR	575	824	NR	705	110	NR	835	2	NR	965	0	NR
450	160	NR	580	882	NR	710	94	NR	840	2	NR	970	0	NR
455	89	NR	585	930	NR	715	80	NR	845	2	NR	975	0	NR
460	53	NR	590	968	NR	720	69	NR	850	1	NR	980	0	NR
465	31	NR	595	991	NR	725	59	NR	855	1	NR	985	0	NR
470	23	NR	600	999	NR	730	50	NR	860	1	NR	990	0	NR
475	21	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	23	NR	610	969	NR	740	36	NR	870	1	NR	1000	0	NR
485	32	NR	615	935	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-184-3

Scotopic Flux vs. Wavelength



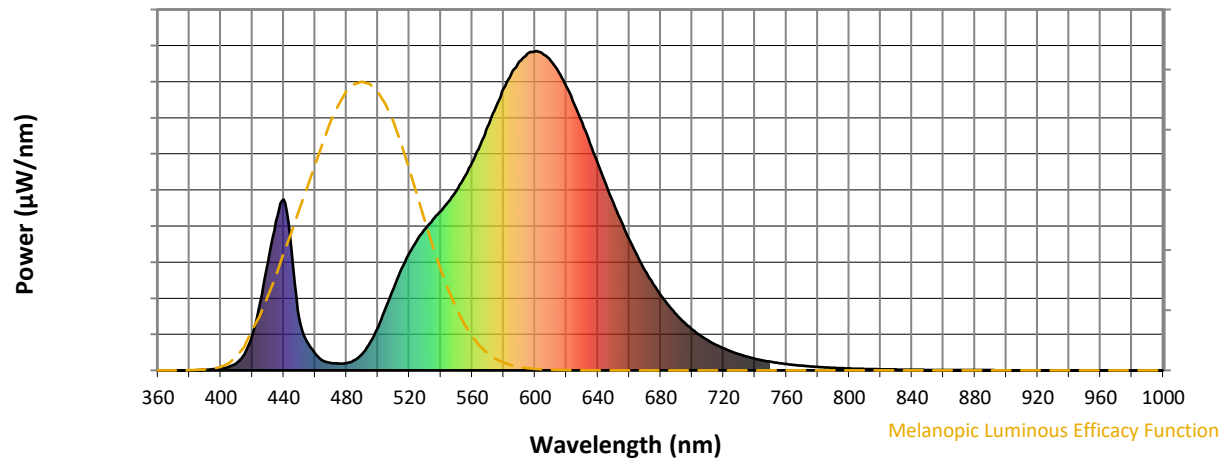
Scotopic Lumens: NR

S/P: 1.02

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	52	NR	620	888	NR	750	27	NR	880	1	NR
365	0	NR	495	87	NR	625	834	NR	755	23	NR	885	1	NR
370	0	NR	500	135	NR	630	776	NR	760	20	NR	890	1	NR
375	0	NR	505	196	NR	635	712	NR	765	17	NR	895	0	NR
380	0	NR	510	258	NR	640	648	NR	770	15	NR	900	0	NR
385	1	NR	515	317	NR	645	583	NR	775	12	NR	905	0	NR
390	2	NR	520	368	NR	650	523	NR	780	11	NR	910	0	NR
395	4	NR	525	408	NR	655	465	NR	785	9	NR	915	0	NR
400	6	NR	530	443	NR	660	410	NR	790	8	NR	920	0	NR
405	11	NR	535	473	NR	665	360	NR	795	7	NR	925	0	NR
410	23	NR	540	498	NR	670	313	NR	800	6	NR	930	0	NR
415	51	NR	545	530	NR	675	272	NR	805	5	NR	935	0	NR
420	111	NR	550	563	NR	680	236	NR	810	4	NR	940	0	NR
425	214	NR	555	605	NR	685	203	NR	815	4	NR	945	0	NR
430	339	NR	560	651	NR	690	175	NR	820	3	NR	950	0	NR
435	467	NR	565	705	NR	695	150	NR	825	3	NR	955	0	NR
440	535	NR	570	765	NR	700	128	NR	830	3	NR	960	0	NR
445	372	NR	575	824	NR	705	110	NR	835	2	NR	965	0	NR
450	160	NR	580	882	NR	710	94	NR	840	2	NR	970	0	NR
455	89	NR	585	930	NR	715	80	NR	845	2	NR	975	0	NR
460	53	NR	590	968	NR	720	69	NR	850	1	NR	980	0	NR
465	31	NR	595	991	NR	725	59	NR	855	1	NR	985	0	NR
470	23	NR	600	999	NR	730	50	NR	860	1	NR	990	0	NR
475	21	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	23	NR	610	969	NR	740	36	NR	870	1	NR	1000	0	NR
485	32	NR	615	935	NR	745	31	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.71

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	52	NR	620	888	NR	750	27	NR	880	1	NR
365	0	NR	495	87	NR	625	834	NR	755	23	NR	885	1	NR
370	0	NR	500	135	NR	630	776	NR	760	20	NR	890	1	NR
375	0	NR	505	196	NR	635	712	NR	765	17	NR	895	0	NR
380	0	NR	510	258	NR	640	648	NR	770	15	NR	900	0	NR
385	1	NR	515	317	NR	645	583	NR	775	12	NR	905	0	NR
390	2	NR	520	368	NR	650	523	NR	780	11	NR	910	0	NR
395	4	NR	525	408	NR	655	465	NR	785	9	NR	915	0	NR
400	6	NR	530	443	NR	660	410	NR	790	8	NR	920	0	NR
405	11	NR	535	473	NR	665	360	NR	795	7	NR	925	0	NR
410	23	NR	540	498	NR	670	313	NR	800	6	NR	930	0	NR
415	51	NR	545	530	NR	675	272	NR	805	5	NR	935	0	NR
420	111	NR	550	563	NR	680	236	NR	810	4	NR	940	0	NR
425	214	NR	555	605	NR	685	203	NR	815	4	NR	945	0	NR
430	339	NR	560	651	NR	690	175	NR	820	3	NR	950	0	NR
435	467	NR	565	705	NR	695	150	NR	825	3	NR	955	0	NR
440	535	NR	570	765	NR	700	128	NR	830	3	NR	960	0	NR
445	372	NR	575	824	NR	705	110	NR	835	2	NR	965	0	NR
450	160	NR	580	882	NR	710	94	NR	840	2	NR	970	0	NR
455	89	NR	585	930	NR	715	80	NR	845	2	NR	975	0	NR
460	53	NR	590	968	NR	720	69	NR	850	1	NR	980	0	NR
465	31	NR	595	991	NR	725	59	NR	855	1	NR	985	0	NR
470	23	NR	600	999	NR	730	50	NR	860	1	NR	990	0	NR
475	21	NR	605	992	NR	735	43	NR	865	1	NR	995	0	NR
480	23	NR	610	969	NR	740	36	NR	870	1	NR	1000	0	NR
485	32	NR	615	935	NR	745	31	NR	875	1	NR			

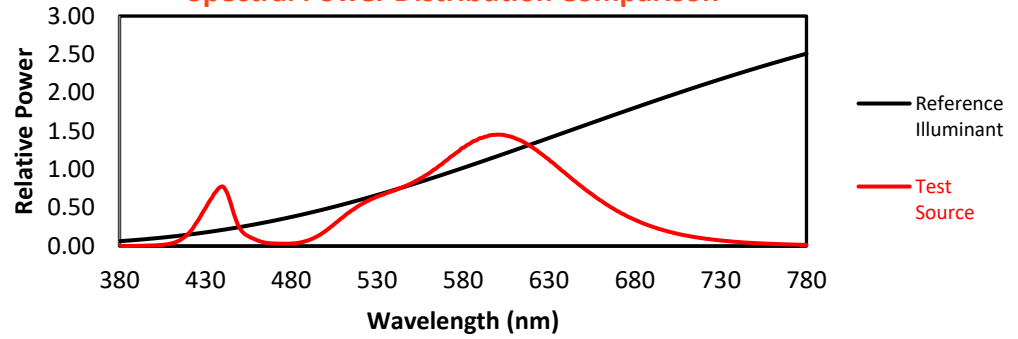
REPORT NUMBER: SP1-2407-184-3

TM-30-18

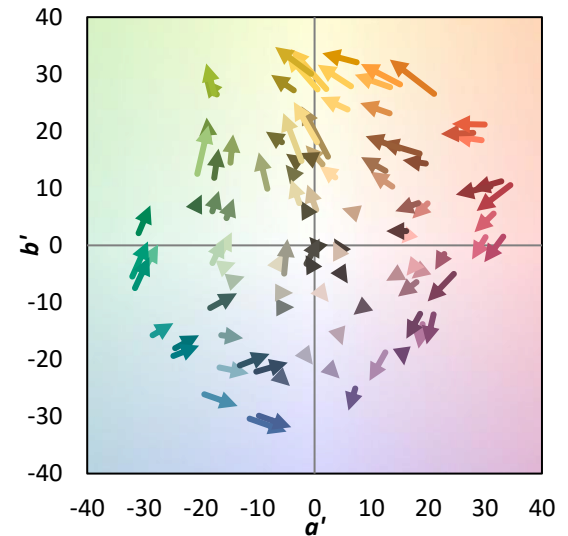
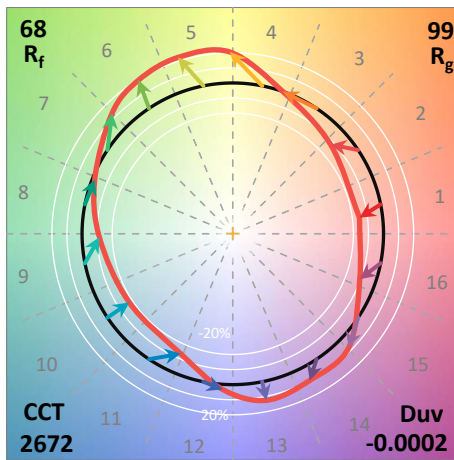
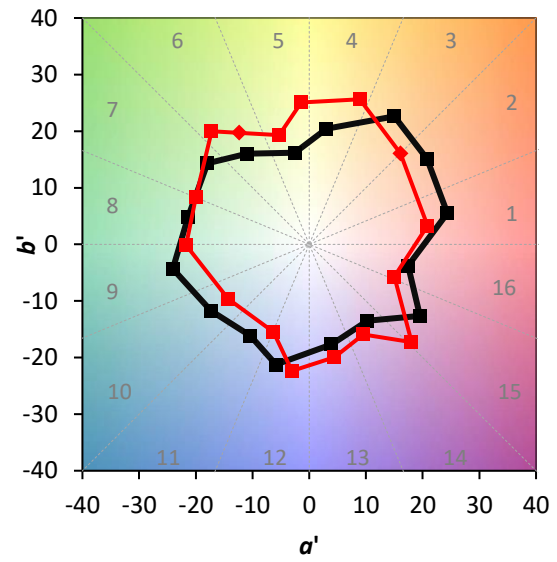
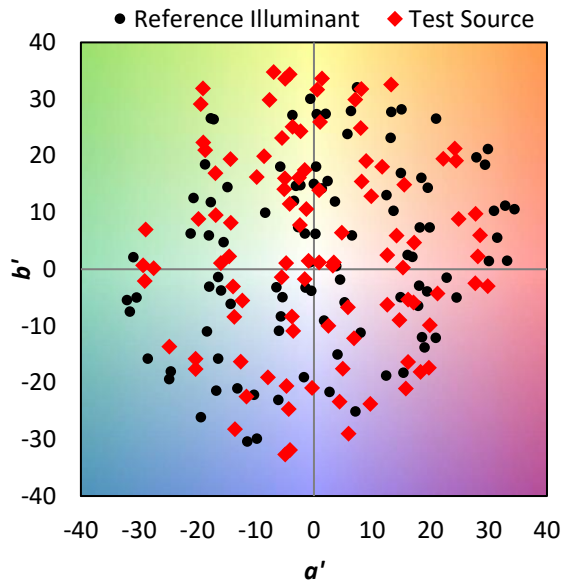
Summary

$R_f = 67.9$
 $R_g = 98.6$
 $CIE R_a = 71.1$
 $R_g = -27.8$

Spectral Power Distribution Comparison

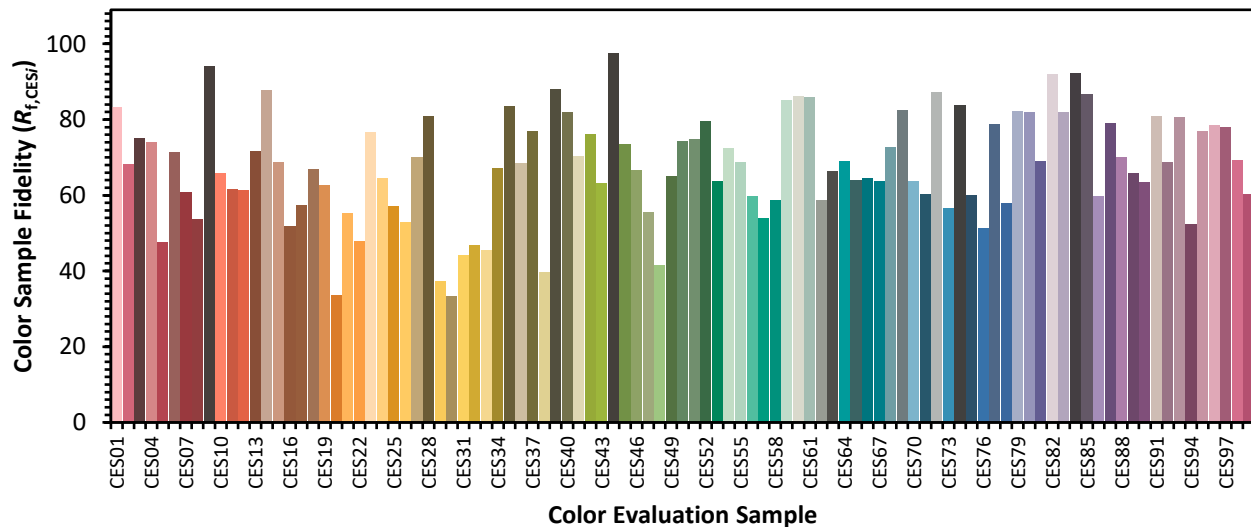


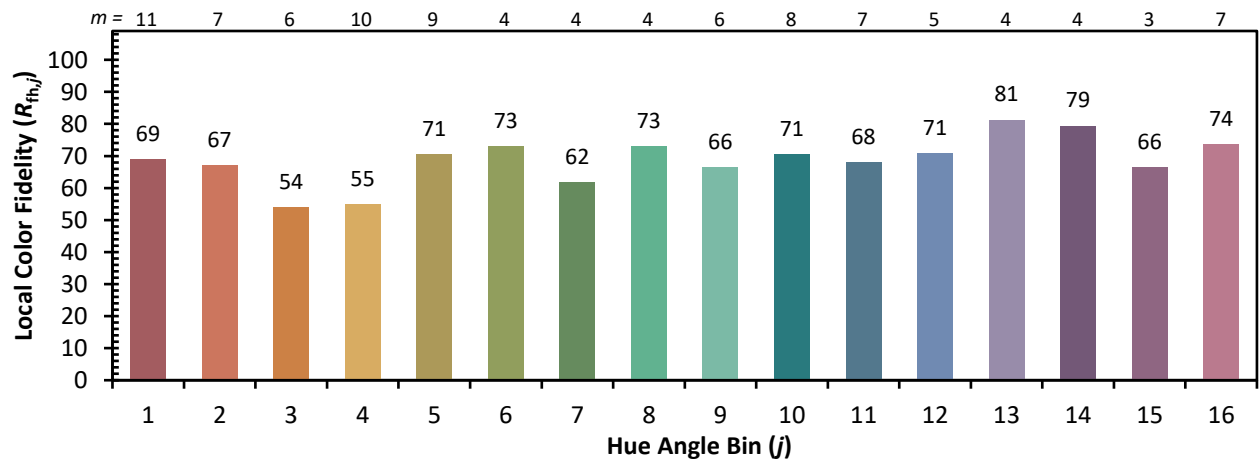
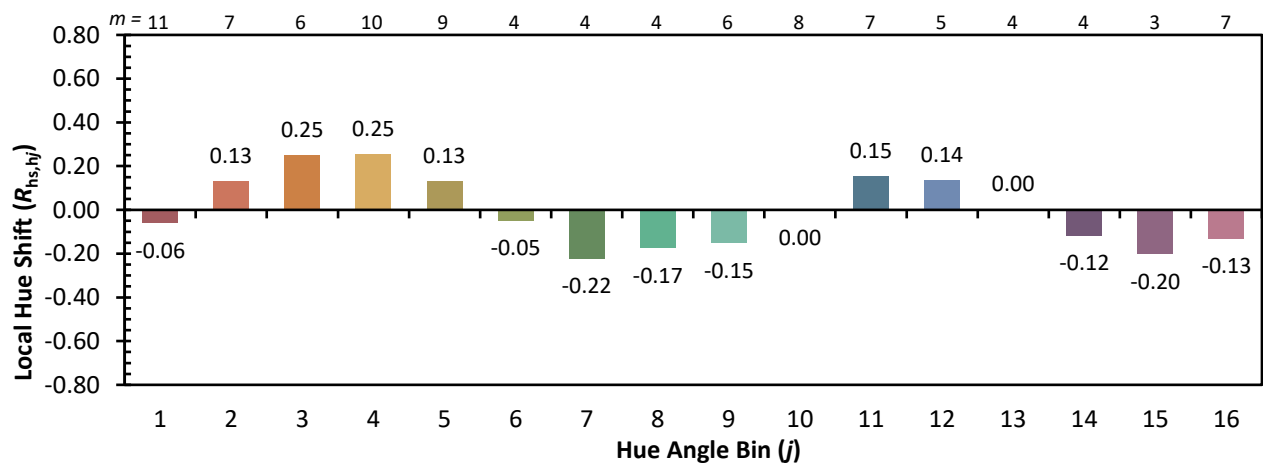
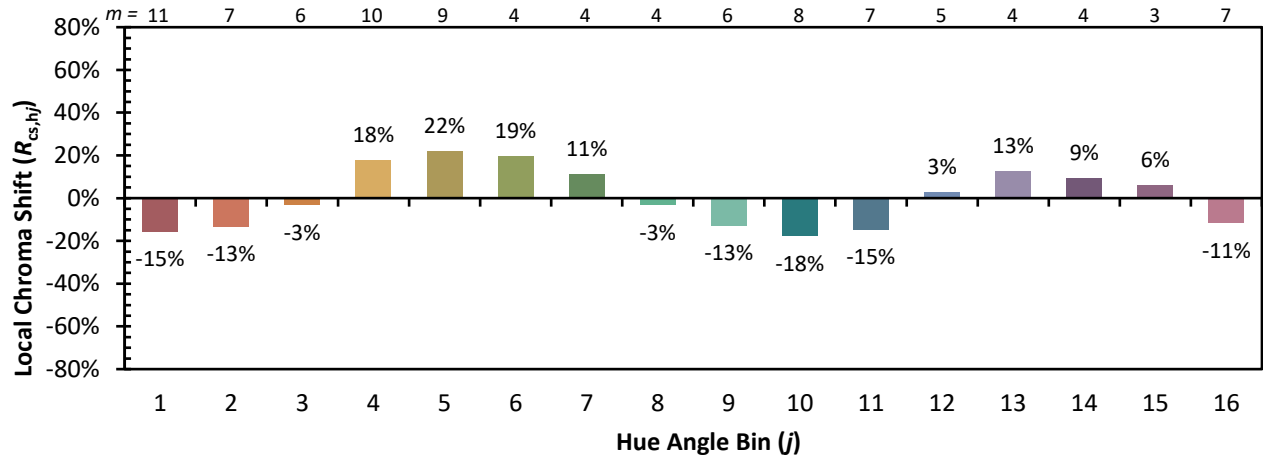
Color Vector Graphics



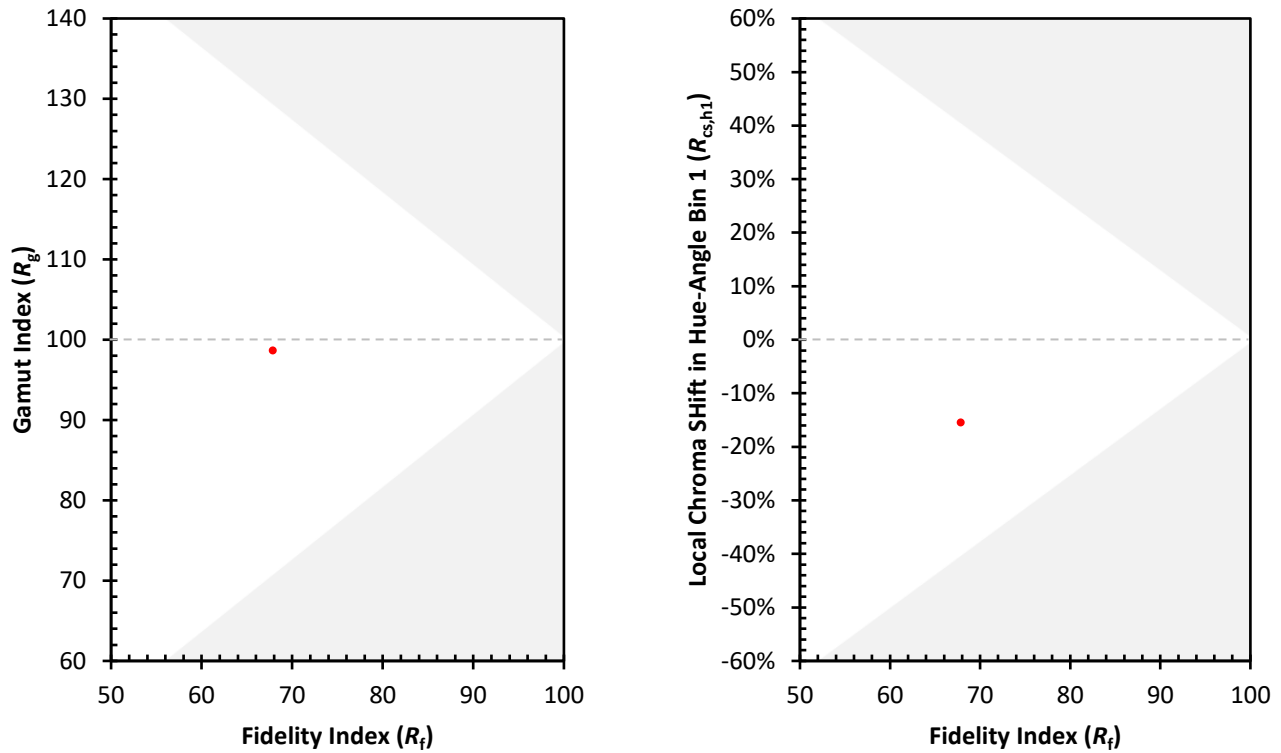
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 53	CES51 = 75	CES76 = 51
CES02 = 63	CES27 = 70	CES52 = 80	CES77 = 79
CES03 = 31	CES28 = 81	CES53 = 64	CES78 = 58
CES04 = 71	CES29 = 37	CES54 = 73	CES79 = 82
CES05 = 50	CES30 = 33	CES55 = 69	CES80 = 82
CES06 = 52	CES31 = 44	CES56 = 60	CES81 = 69
CES07 = 42	CES32 = 47	CES57 = 54	CES82 = 92
CES08 = 41	CES33 = 45	CES58 = 59	CES83 = 82
CES09 = 29	CES34 = 67	CES59 = 85	CES84 = 92
CES10 = 77	CES35 = 84	CES60 = 86	CES85 = 87
CES11 = 60	CES36 = 68	CES61 = 86	CES86 = 60
CES12 = 66	CES37 = 77	CES62 = 59	CES87 = 79
CES13 = 44	CES38 = 40	CES63 = 66	CES88 = 70
CES14 = 74	CES39 = 88	CES64 = 69	CES89 = 66
CES15 = 72	CES40 = 82	CES65 = 64	CES90 = 64
CES16 = 48	CES41 = 70	CES66 = 65	CES91 = 81
CES17 = 51	CES42 = 76	CES67 = 64	CES92 = 69
CES18 = 57	CES43 = 63	CES68 = 73	CES93 = 81
CES19 = 73	CES44 = 97	CES69 = 83	CES94 = 53
CES20 = 67	CES45 = 74	CES70 = 64	CES95 = 77
CES21 = 88	CES46 = 67	CES71 = 60	CES96 = 79
CES22 = 80	CES47 = 55	CES72 = 87	CES97 = 78
CES23 = 92	CES48 = 42	CES73 = 57	CES98 = 69
CES24 = 92	CES49 = 65	CES74 = 84	CES99 = 60
CES25 = 73	CES50 = 74	CES75 = 60	



Color Rendition by Hue-Angle Bin


Measure Comparisons



(END OF REPORT)