

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: P1067896

Luminaire Tested: **NAV-SA1D-722-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067896
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA1D-722-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 1xLight Square PACKAGE
70CRI 2200K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (14) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4037.3 lumens
Efficiency: N/A
Efficacy: 71.5 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



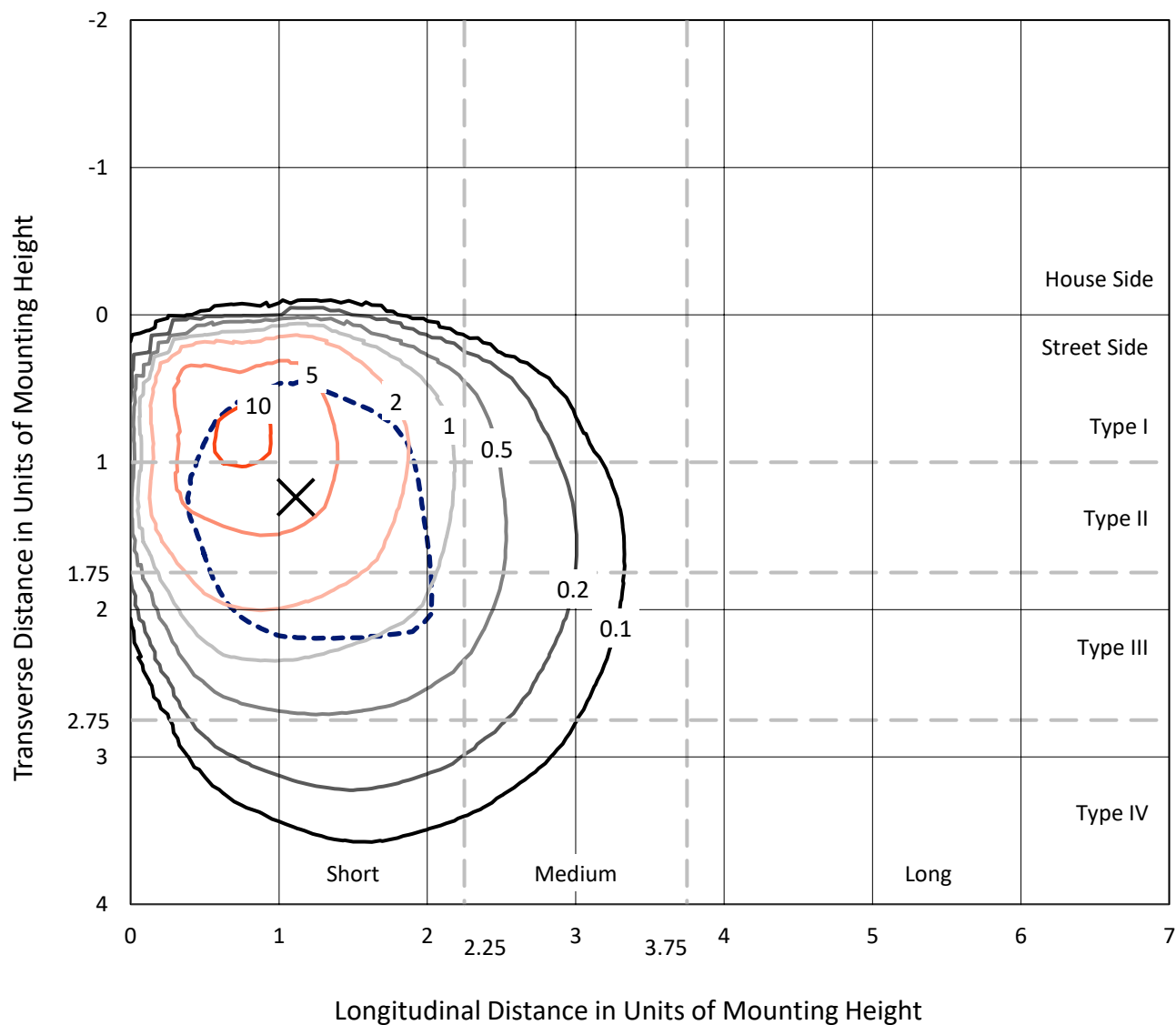
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

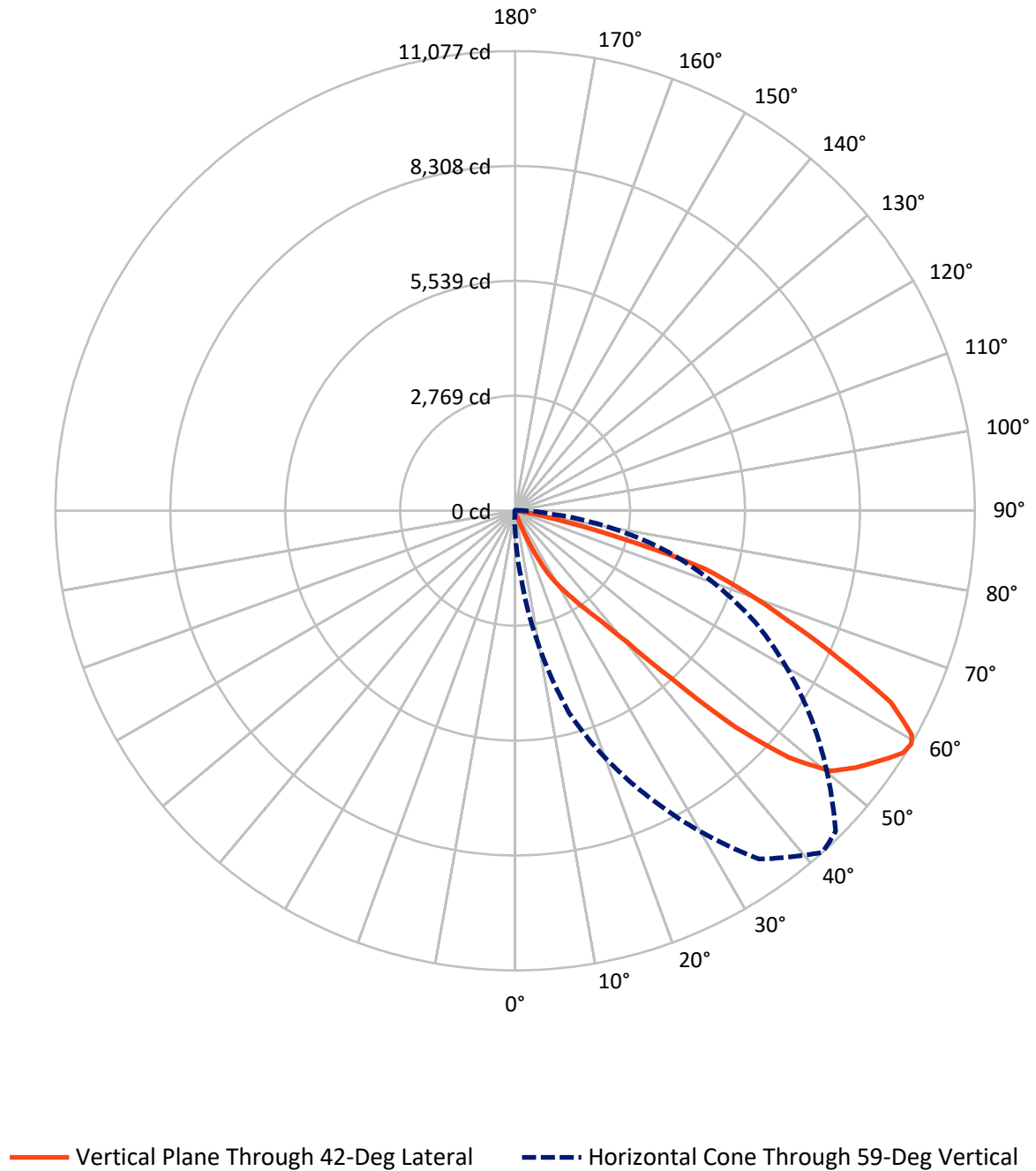


Based on 15 foot mounting height. Maximum calculated value = 12 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	19.5	0.0	19.5
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	4017.8	0.0	4017.8
	% Fixture	99.5	0.0	99.5
Total	Lumens	4037.3	0.0	4037.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1.2	0.0
10°-20°	5.9	0.1
20°-30°	75.3	1.9
30°-40°	253.9	6.3
40°-50°	766.9	19.0
50°-60°	1353.7	33.5
60°-70°	1192.0	29.5
70°-80°	379.4	9.4
80°-90°	9.1	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	4037.3	100.0
0°-180°	4037.3	100.0



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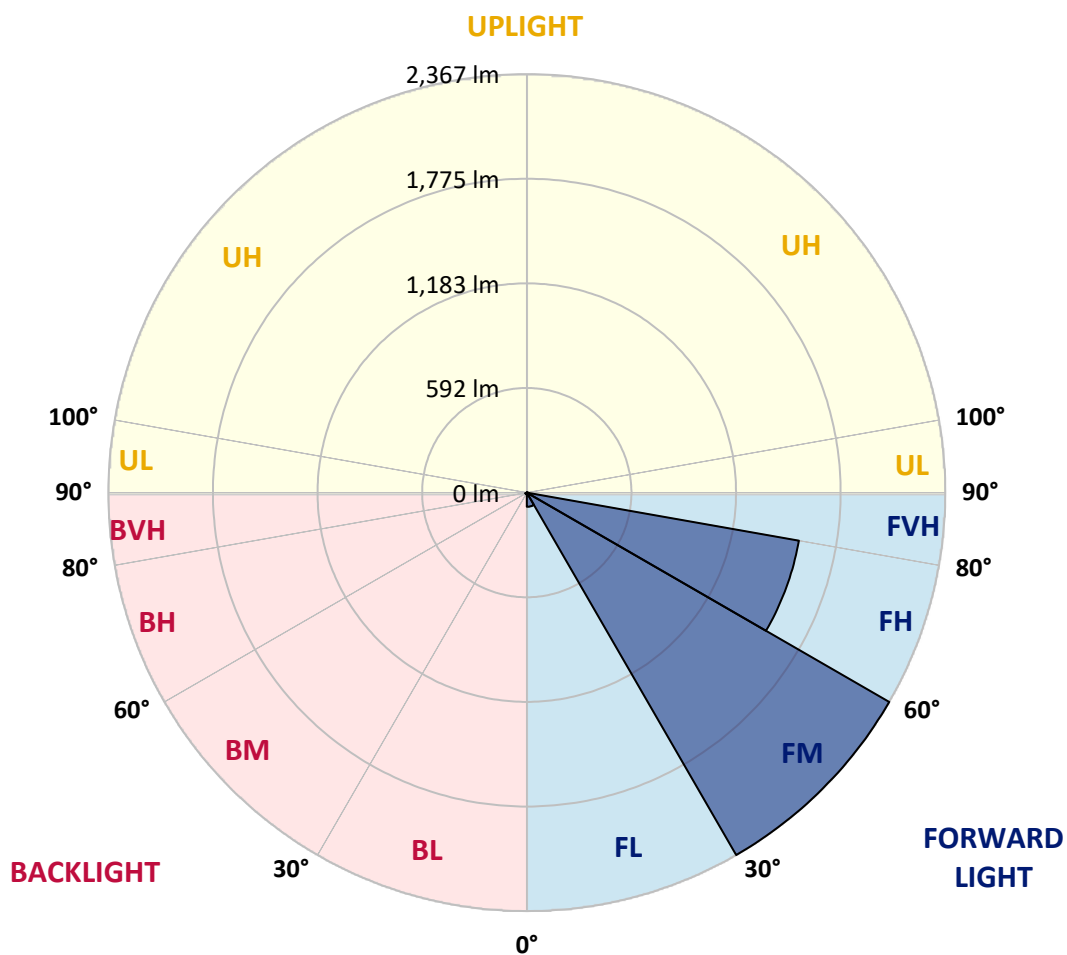
CATALOG NUMBER: NAV-SA1D-722-U-LBC

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	80.2	2.0			
FM	(30°-60°)	2366.5	58.6			
FH	(60°-80°)	1562.5	38.7			G1/1800
FVH	(80°-90°)	8.6	0.2			G0/10
BL	(0°-30°)	2.2	0.1	B0/110		
BM	(30°-60°)	7.9	0.2	B0/220		
BH	(60°-80°)	8.9	0.2	B0/110		G0/110
BVH	(80°-90°)	0.4	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°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	17.7	17.7	16.5	15.2	13.9	12.7	12.7	12.7	11.4	11.4	10.1
5°	20.3	20.3	19.0	17.7	17.7	16.5	16.5	15.2	13.9	13.9	12.7
7.5°	21.5	21.5	21.5	21.5	20.3	20.3	20.3	19.0	17.7	16.5	15.2
10°	22.8	24.1	25.3	25.3	25.3	25.3	25.3	24.1	21.5	20.3	17.7
12.5°	25.3	26.6	29.1	31.6	31.6	32.9	31.6	30.4	27.8	24.1	20.3
15°	27.8	30.4	34.2	39.2	44.3	45.6	45.6	41.8	36.7	29.1	24.1
17.5°	31.6	35.4	45.6	62.0	79.7	93.7	93.7	83.5	58.2	38.0	27.8
20°	34.2	41.8	73.4	149.4	227.8	286.1	274.7	243.0	130.4	59.5	30.4
22.5°	38.0	53.2	155.7	392.4	607.6	713.9	688.6	522.8	292.4	106.3	36.7
25°	43.0	77.2	308.9	735.4	1129.1	1244.3	1227.8	975.9	532.9	178.5	46.8
27.5°	53.2	113.9	494.9	1115.2	1665.8	1764.6	1758.2	1429.1	851.9	287.3	60.8
30°	67.1	165.8	734.2	1515.2	2021.5	2121.5	2089.9	1760.8	1149.4	439.2	78.5
32.5°	83.5	231.6	950.6	1810.1	2349.4	2481.0	2443.0	2049.4	1388.6	568.4	116.5
35°	108.9	296.2	1164.6	2070.9	2727.8	2894.9	2831.6	2346.8	1594.9	713.9	140.5
37.5°	121.5	334.2	1360.8	2354.4	3153.2	3381.0	3332.9	2722.8	1805.1	900.0	172.2
40°	122.8	379.7	1564.6	2724.0	3754.4	4160.7	4074.7	3368.3	2196.2	1139.2	221.5
42.5°	126.6	448.1	1829.1	3354.4	4935.4	5519.0	5421.5	4555.7	3083.5	1619.0	313.9
45°	144.3	577.2	2368.3	4532.9	6556.9	7412.6	7300.0	6210.1	4322.8	2521.5	535.4
47.5°	206.3	868.4	3313.9	5805.0	8215.2	8897.4	8869.6	7513.9	5445.6	3446.8	907.6
50°	331.6	1332.9	4389.9	6874.7	9270.9	9856.9	9787.3	8058.2	6086.1	4078.5	1163.3
52.5°	443.0	1777.2	5065.8	7268.3	9586.1	10284.8	10200.0	8256.9	6254.4	4264.5	1234.2
55°	470.9	1938.0	5267.1	7389.9	9794.9	10646.8	10524.0	8389.9	6275.9	4131.6	1116.5
57.5°	457.0	1786.1	5136.7	7508.8	10086.1	11019.0	10855.7	8649.3	6348.1	3906.3	929.1
59°	432.9	1598.7	5055.7	7603.8	10246.8	11077.2	10924.0	8706.3	6396.2	3803.8	815.2
60°	405.1	1472.1	4992.4	7665.8	10236.7	10986.0	10827.8	8679.7	6415.2	3715.2	760.8
62.5°	312.7	1174.7	4901.3	7621.5	9597.4	10154.4	10064.5	8029.1	6136.7	3431.6	600.0
65°	243.0	898.7	4567.1	6797.5	8167.1	8541.8	8513.9	6798.7	5164.5	2958.2	432.9
67.5°	192.4	655.7	3862.0	5505.0	6570.9	7103.8	7083.5	5519.0	3920.2	2260.8	311.4
70°	157.0	467.1	2648.1	4150.6	5255.7	5926.6	5897.5	4441.8	2905.1	1434.2	226.6
72.5°	132.9	298.7	1606.3	3129.1	4386.1	4769.6	4684.8	3583.5	2112.7	781.0	179.7
75°	112.7	183.5	796.2	1950.6	2612.7	2610.1	2525.3	1897.5	1134.2	382.3	143.0
77.5°	91.1	129.1	312.7	535.4	824.0	1020.3	1003.8	672.2	339.2	111.4	88.6
80°	59.5	60.8	83.5	146.8	226.6	250.6	284.8	205.1	98.7	53.2	36.7
82.5°	26.6	29.1	38.0	48.1	48.1	44.3	39.2	29.1	21.5	17.7	8.9
85°	6.3	8.9	6.3	7.6	6.3	5.1	5.1	2.5	0.0	0.0	0.0
87.5°	1.3	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°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	10.1	10.1	10.1	8.9	8.9	8.9	7.6	7.6	7.6	6.3	6.3
5°	12.7	11.4	10.1	10.1	8.9	8.9	7.6	6.3	6.3	6.3	5.1
7.5°	13.9	12.7	11.4	10.1	8.9	7.6	7.6	6.3	5.1	5.1	5.1
10°	16.5	15.2	12.7	10.1	8.9	7.6	6.3	6.3	5.1	3.8	3.8
12.5°	19.0	16.5	13.9	11.4	8.9	7.6	6.3	6.3	5.1	3.8	2.5
15°	21.5	19.0	15.2	11.4	8.9	7.6	6.3	6.3	3.8	2.5	1.3
17.5°	24.1	20.3	15.2	12.7	8.9	7.6	6.3	5.1	2.5	1.3	0.0
20°	25.3	21.5	16.5	12.7	8.9	7.6	6.3	3.8	1.3	0.0	0.0
22.5°	27.8	24.1	17.7	12.7	8.9	6.3	3.8	1.3	0.0	0.0	0.0
25°	32.9	25.3	17.7	12.7	8.9	6.3	2.5	0.0	0.0	0.0	0.0
27.5°	36.7	27.8	17.7	12.7	8.9	5.1	1.3	0.0	0.0	0.0	0.0
30°	43.0	30.4	19.0	12.7	8.9	3.8	1.3	0.0	0.0	0.0	0.0
32.5°	53.2	32.9	19.0	12.7	7.6	3.8	0.0	0.0	0.0	0.0	0.0
35°	64.6	38.0	19.0	12.7	7.6	3.8	0.0	0.0	0.0	0.0	0.0
37.5°	65.8	40.5	19.0	12.7	7.6	2.5	0.0	0.0	0.0	0.0	0.0
40°	68.4	38.0	20.3	12.7	7.6	2.5	0.0	0.0	0.0	0.0	0.0
42.5°	78.5	35.4	21.5	12.7	7.6	2.5	0.0	0.0	0.0	0.0	0.0
45°	116.5	36.7	21.5	13.9	7.6	3.8	0.0	0.0	0.0	0.0	0.0
47.5°	202.5	38.0	20.3	13.9	7.6	3.8	0.0	0.0	0.0	0.0	0.0
50°	259.5	44.3	20.3	15.2	8.9	2.5	0.0	0.0	0.0	0.0	0.0
52.5°	275.9	51.9	20.3	16.5	11.4	1.3	0.0	0.0	0.0	0.0	0.0
55°	268.4	60.8	21.5	17.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	248.1	65.8	22.8	19.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0
59°	226.6	69.6	26.6	20.3	15.2	0.0	0.0	0.0	0.0	0.0	0.0
60°	208.9	73.4	27.8	21.5	15.2	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	168.4	78.5	30.4	25.3	12.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	146.8	82.3	31.6	27.8	11.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	134.2	84.8	34.2	29.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0
70°	124.1	83.5	36.7	27.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	112.7	79.7	44.3	25.3	7.6	0.0	0.0	0.0	0.0	0.0	0.0
75°	101.3	72.2	48.1	22.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	73.4	60.8	44.3	20.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0
80°	31.6	32.9	31.6	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	6.3	7.6	6.3	3.8	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°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	6.3	6.3	6.3	6.3	7.6	7.6	10.1	12.7	15.2	16.5	16.5
5°	5.1	5.1	5.1	5.1	5.1	6.3	7.6	10.1	13.9	15.2	15.2
7.5°	3.8	3.8	3.8	3.8	3.8	3.8	6.3	8.9	12.7	13.9	15.2
10°	3.8	2.5	2.5	1.3	1.3	2.5	3.8	7.6	11.4	12.7	13.9
12.5°	2.5	1.3	1.3	0.0	0.0	1.3	2.5	6.3	10.1	11.4	12.7
15°	1.3	0.0	0.0	0.0	0.0	0.0	1.3	5.1	8.9	10.1	12.7
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.6	10.1	11.4
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	6.3	8.9	10.1
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.1	7.6	8.9
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	5.1	6.3
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.8	5.1
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.8	5.1
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	3.8
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	3.8
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5	2.5
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
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°	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
2.5°	17.7	17.7	16.5	15.2	15.2	15.2	16.5	17.7	17.7	17.7
5°	16.5	16.5	15.2	15.2	15.2	15.2	16.5	19.0	20.3	20.3
7.5°	16.5	16.5	15.2	15.2	15.2	15.2	16.5	19.0	20.3	21.5
10°	15.2	15.2	15.2	15.2	13.9	15.2	16.5	19.0	22.8	22.8
12.5°	15.2	15.2	15.2	15.2	13.9	15.2	17.7	20.3	24.1	25.3
15°	15.2	15.2	15.2	13.9	13.9	15.2	17.7	21.5	25.3	27.8
17.5°	13.9	15.2	15.2	13.9	13.9	15.2	17.7	21.5	27.8	31.6
20°	12.7	13.9	15.2	13.9	13.9	13.9	17.7	21.5	29.1	34.2
22.5°	11.4	12.7	13.9	13.9	12.7	13.9	17.7	22.8	31.6	38.0
25°	10.1	11.4	11.4	12.7	12.7	13.9	17.7	22.8	32.9	43.0
27.5°	7.6	8.9	10.1	11.4	11.4	13.9	17.7	24.1	35.4	53.2
30°	6.3	7.6	8.9	10.1	11.4	13.9	17.7	24.1	38.0	67.1
32.5°	6.3	7.6	8.9	10.1	11.4	12.7	17.7	25.3	41.8	83.5
35°	5.1	6.3	7.6	10.1	10.1	12.7	17.7	25.3	45.6	108.9
37.5°	5.1	6.3	7.6	10.1	10.1	12.7	17.7	25.3	55.7	121.5
40°	3.8	5.1	6.3	10.1	10.1	12.7	19.0	26.6	57.0	122.8
42.5°	3.8	5.1	6.3	8.9	10.1	12.7	19.0	26.6	53.2	126.6
45°	3.8	5.1	6.3	10.1	11.4	13.9	19.0	27.8	51.9	144.3
47.5°	3.8	5.1	6.3	10.1	12.7	13.9	19.0	27.8	53.2	206.3
50°	3.8	5.1	6.3	10.1	13.9	13.9	19.0	27.8	58.2	331.6
52.5°	2.5	3.8	5.1	8.9	11.4	15.2	20.3	26.6	62.0	443.0
55°	2.5	2.5	3.8	7.6	10.1	16.5	21.5	26.6	72.2	470.9
57.5°	2.5	2.5	3.8	6.3	8.9	17.7	22.8	26.6	83.5	457.0
59°	2.5	2.5	2.5	6.3	7.6	17.7	22.8	27.8	84.8	432.9
60°	2.5	2.5	2.5	5.1	7.6	17.7	24.1	29.1	86.1	405.1
62.5°	1.3	1.3	1.3	5.1	6.3	17.7	26.6	35.4	88.6	312.7
65°	2.5	2.5	1.3	3.8	6.3	15.2	30.4	38.0	89.9	243.0
67.5°	2.5	2.5	2.5	5.1	6.3	15.2	31.6	39.2	89.9	192.4
70°	2.5	2.5	2.5	5.1	7.6	15.2	31.6	40.5	88.6	157.0
72.5°	2.5	2.5	2.5	5.1	7.6	13.9	29.1	41.8	84.8	132.9
75°	2.5	2.5	2.5	3.8	6.3	12.7	27.8	45.6	77.2	112.7
77.5°	2.5	2.5	2.5	2.5	5.1	10.1	25.3	50.6	68.4	91.1
80°	3.8	2.5	2.5	2.5	3.8	8.9	24.1	49.4	57.0	59.5
82.5°	3.8	2.5	2.5	1.3	2.5	6.3	19.0	38.0	29.1	26.6
85°	2.5	2.5	2.5	1.3	1.3	3.8	8.9	11.4	8.9	6.3
87.5°	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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: SP1-2407-184-2

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-722-U-5WQ

Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-2
 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-722-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI
 2200K CCT 26 LEDS

Spectral Parameters

CCT (K):	2160	CRI (Ra):	71.9		
CIE u':	0.2927	R1:	68.7	R9:	-17.8
CIE v':	0.5388	R2:	82.6	R10:	60.5
Duv:	0.0015	R3:	95.5	R11:	60.2
CIE x:	0.5130	R4:	66.4	R12:	48.2
CIE y:	0.4197	R5:	65.4	R13:	70.7
CIE z:	0.0674	R6:	75.9	R14:	96.8
Peak Wavelength (nm):	609	R7:	77.2	R15:	61.8
Dominant Wavelength (nm):	587	R8:	43.5		
Purity:	79.96089				
Rf:	70.6				
Rg:	97.6				



Test Conditions

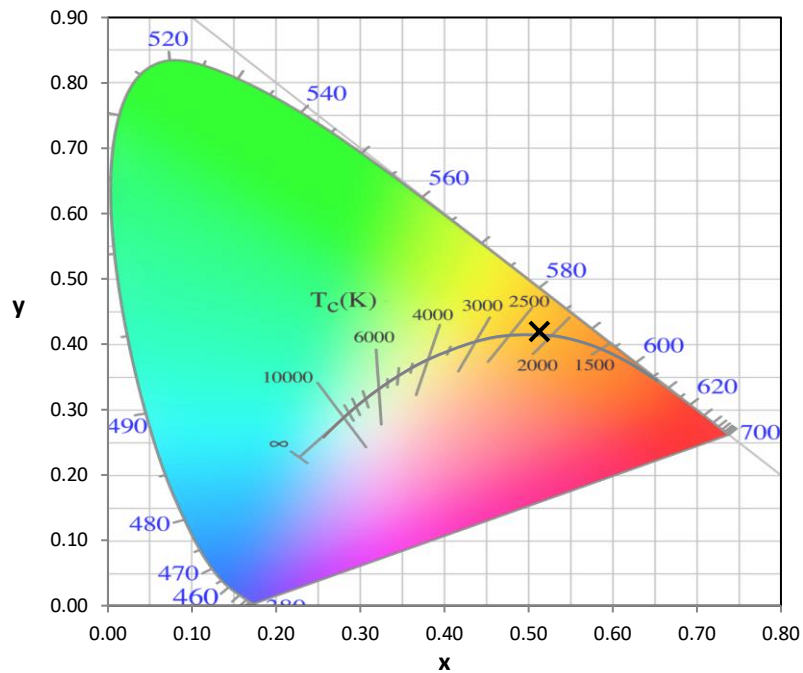
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-2

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 2200K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-2

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	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

REPORT NUMBER: SP1-2407-184-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 0.8

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	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

REPORT NUMBER: SP1-2407-184-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.21

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	27	NR	620	966	NR	750	46	NR	880	1	NR
365	0	NR	495	42	NR	625	930	NR	755	39	NR	885	1	NR
370	0	NR	500	67	NR	630	888	NR	760	34	NR	890	1	NR
375	0	NR	505	101	NR	635	835	NR	765	30	NR	895	1	NR
380	0	NR	510	139	NR	640	778	NR	770	26	NR	900	1	NR
385	0	NR	515	183	NR	645	717	NR	775	22	NR	905	1	NR
390	0	NR	520	224	NR	650	656	NR	780	19	NR	910	1	NR
395	0	NR	525	262	NR	655	595	NR	785	17	NR	915	1	NR
400	1	NR	530	299	NR	660	536	NR	790	15	NR	920	1	NR
405	3	NR	535	332	NR	665	480	NR	795	13	NR	925	1	NR
410	7	NR	540	365	NR	670	425	NR	800	11	NR	930	1	NR
415	17	NR	545	400	NR	675	376	NR	805	10	NR	935	0	NR
420	36	NR	550	437	NR	680	332	NR	810	8	NR	940	0	NR
425	67	NR	555	479	NR	685	291	NR	815	8	NR	945	0	NR
430	105	NR	560	525	NR	690	255	NR	820	7	NR	950	0	NR
435	141	NR	565	579	NR	695	221	NR	825	6	NR	955	0	NR
440	169	NR	570	639	NR	700	192	NR	830	5	NR	960	0	NR
445	173	NR	575	703	NR	705	167	NR	835	4	NR	965	0	NR
450	136	NR	580	769	NR	710	144	NR	840	4	NR	970	0	NR
455	80	NR	585	832	NR	715	125	NR	845	3	NR	975	0	NR
460	45	NR	590	890	NR	720	109	NR	850	3	NR	980	0	NR
465	32	NR	595	937	NR	725	94	NR	855	3	NR	985	0	NR
470	23	NR	600	972	NR	730	81	NR	860	2	NR	990	0	NR
475	18	NR	605	992	NR	735	70	NR	865	2	NR	995	0	NR
480	18	NR	610	998	NR	740	61	NR	870	2	NR	1000	0	NR
485	20	NR	615	990	NR	745	53	NR	875	2	NR			

REPORT NUMBER: SP1-2407-184-2

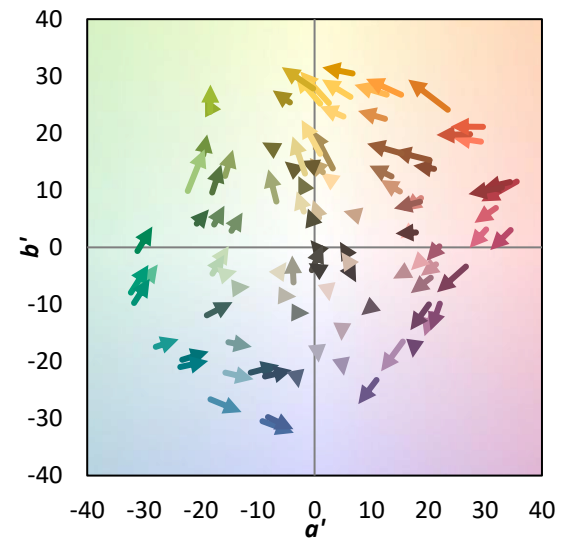
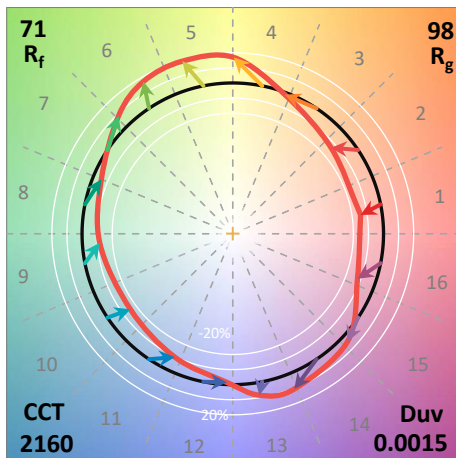
TM-30-18

Summary

$R_f = 70.6$
 $R_g = 97.6$
 $CIE\ R_a = 71.9$
 $R_g = -17.8$



Color Vector Graphics



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

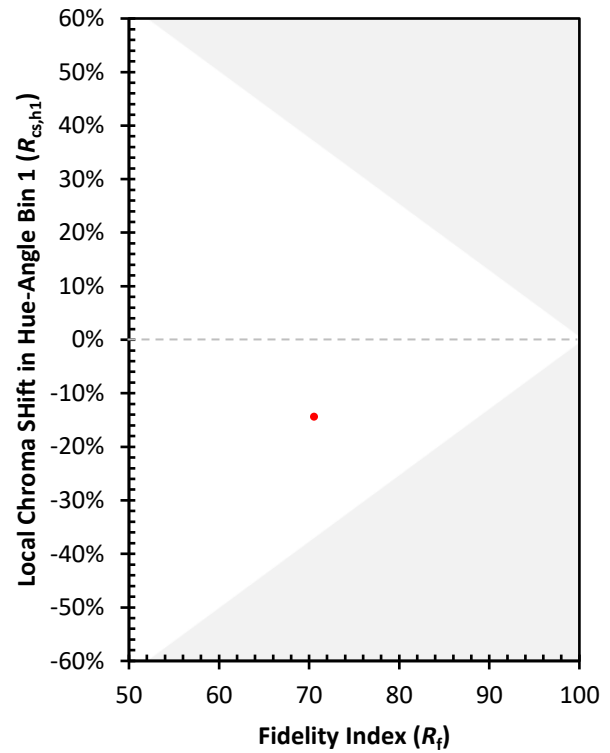
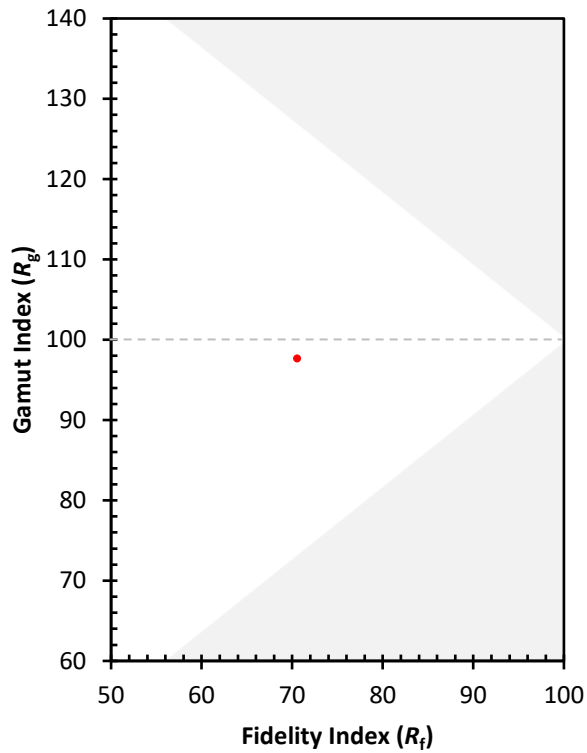
CES01 = 87	CES26 = 60	CES51 = 74	CES76 = 58
CES02 = 65	CES27 = 77	CES52 = 77	CES77 = 82
CES03 = 32	CES28 = 85	CES53 = 65	CES78 = 65
CES04 = 72	CES29 = 50	CES54 = 77	CES79 = 86
CES05 = 52	CES30 = 49	CES55 = 74	CES80 = 85
CES06 = 53	CES31 = 55	CES56 = 64	CES81 = 61
CES07 = 44	CES32 = 55	CES57 = 60	CES82 = 93
CES08 = 43	CES33 = 55	CES58 = 64	CES83 = 83
CES09 = 29	CES34 = 75	CES59 = 84	CES84 = 93
CES10 = 79	CES35 = 88	CES60 = 89	CES85 = 81
CES11 = 62	CES36 = 78	CES61 = 84	CES86 = 55
CES12 = 68	CES37 = 82	CES62 = 68	CES87 = 79
CES13 = 45	CES38 = 54	CES63 = 68	CES88 = 72
CES14 = 75	CES39 = 90	CES64 = 69	CES89 = 62
CES15 = 72	CES40 = 86	CES65 = 66	CES90 = 67
CES16 = 49	CES41 = 75	CES66 = 64	CES91 = 89
CES17 = 51	CES42 = 83	CES67 = 63	CES92 = 67
CES18 = 57	CES43 = 68	CES68 = 71	CES93 = 78
CES19 = 74	CES44 = 98	CES69 = 81	CES94 = 52
CES20 = 68	CES45 = 76	CES70 = 65	CES95 = 76
CES21 = 89	CES46 = 68	CES71 = 64	CES96 = 78
CES22 = 81	CES47 = 60	CES72 = 88	CES97 = 76
CES23 = 92	CES48 = 47	CES73 = 59	CES98 = 71
CES24 = 92	CES49 = 65	CES74 = 85	CES99 = 65
CES25 = 74	CES50 = 74	CES75 = 66	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)