

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: P1067912

Luminaire Tested: **NAV-SA5D-722-U-LBC**

Issue Date: 08/07/2025

Test Information

Test Method: LM-79-08
Report Number: P1067912
Test Lab: INNOVATION CENTER(G3)
Issue Date: 08/07/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5D-722-U-LBC
Description: Navion AREA AND ROADWAY LUMINAIRE 1200mA 5xLight Square PACKAGE
70CRI 2200K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL
Light Source: (70) 2200K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19320.7 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G3

Input Watts (W): 269.7
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

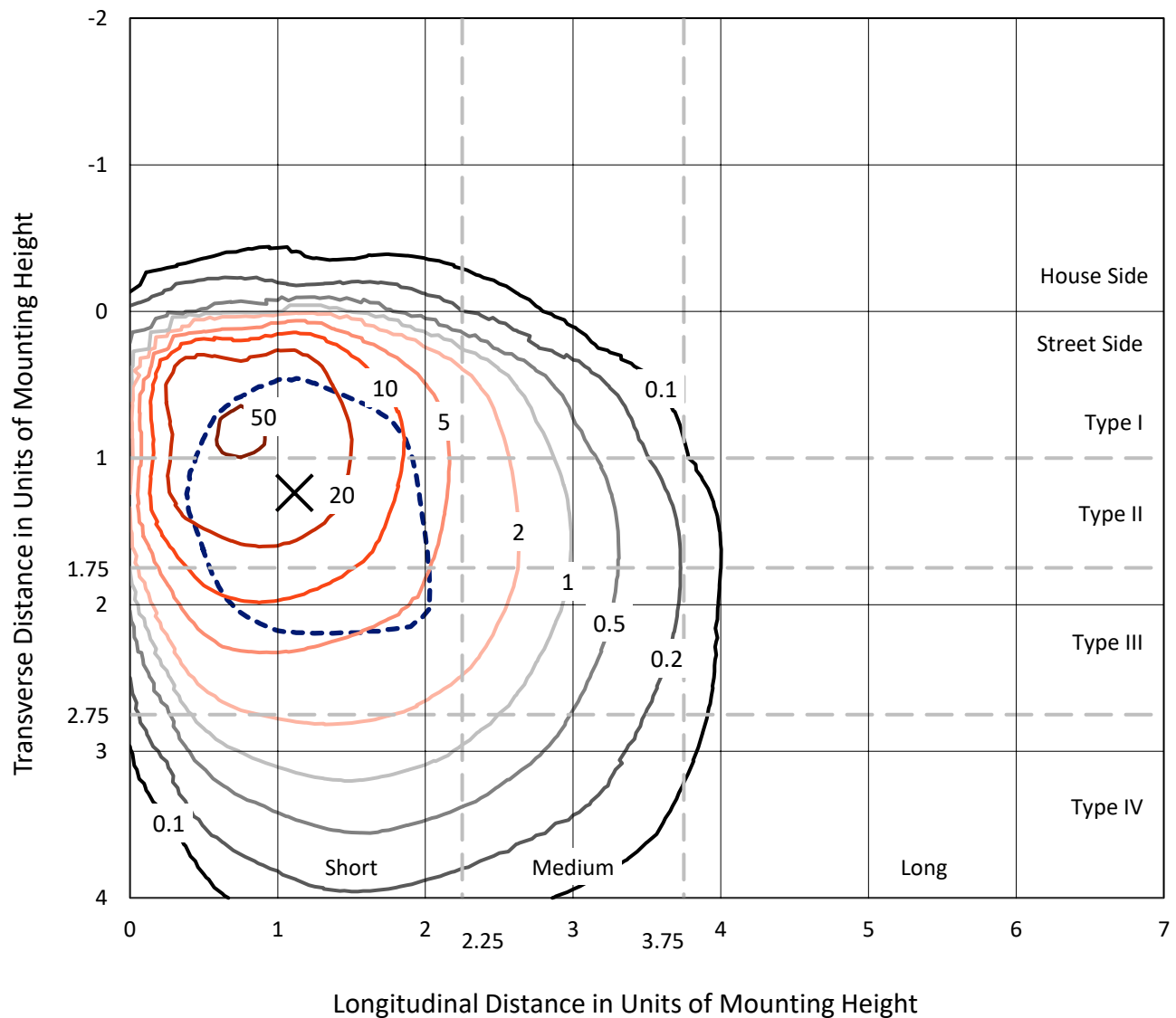


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

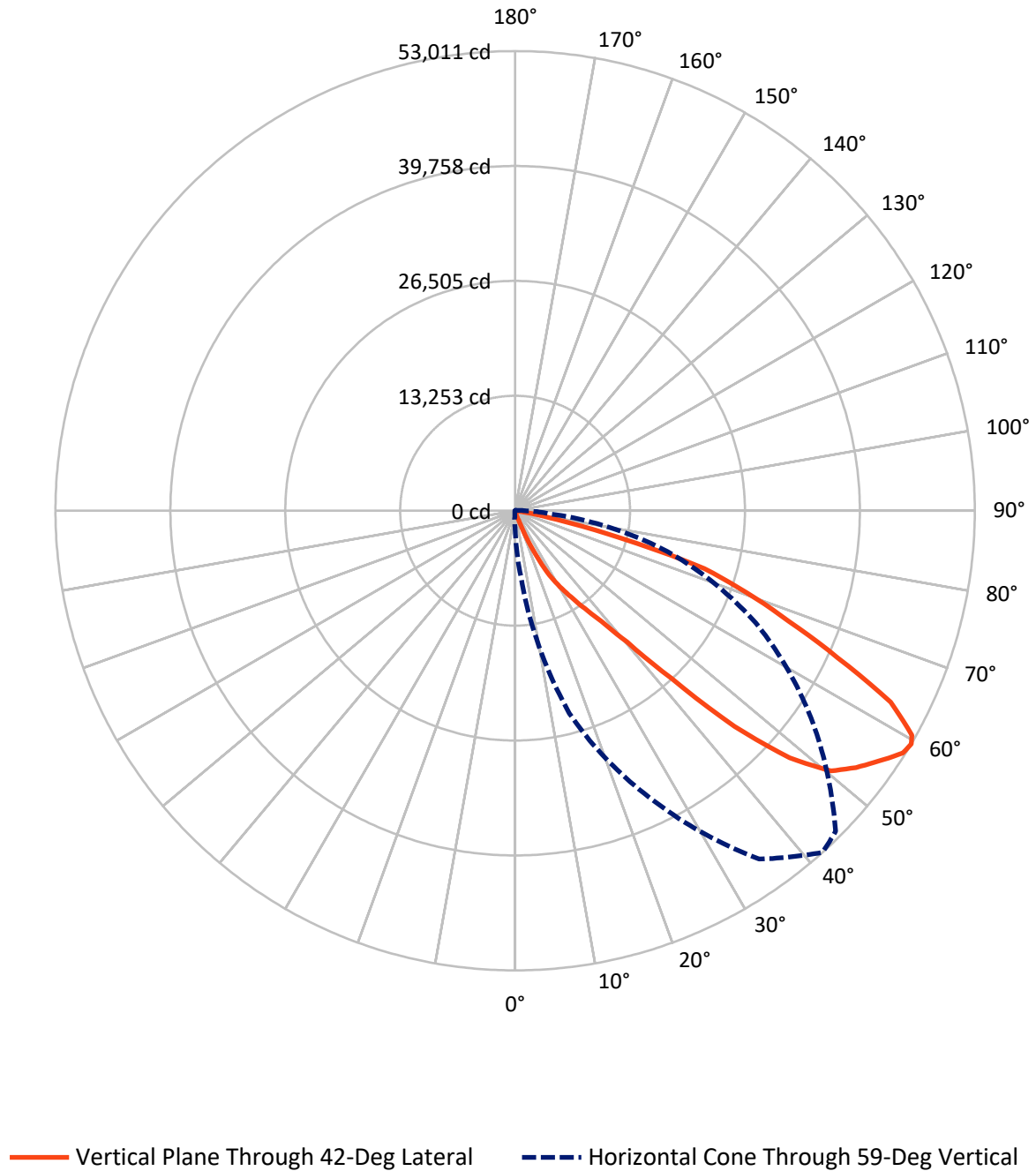


Based on 15 foot mounting height. Maximum calculated value = 57.4 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	93.1	0.0	93.1
	% Fixture	0.5	0.0	0.5
Street Side	Lumens	19227.6	0.0	19227.6
	% Fixture	99.5	0.0	99.5
Total	Lumens	19320.7	0.0	19320.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.7	0.0
10°-20°	28.2	0.1
20°-30°	360.4	1.9
30°-40°	1215.0	6.3
40°-50°	3669.9	19.0
50°-60°	6478.2	33.5
60°-70°	5704.2	29.5
70°-80°	1815.7	9.4
80°-90°	43.4	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°	19320.7	100.0
0°-180°	19320.7	100.0



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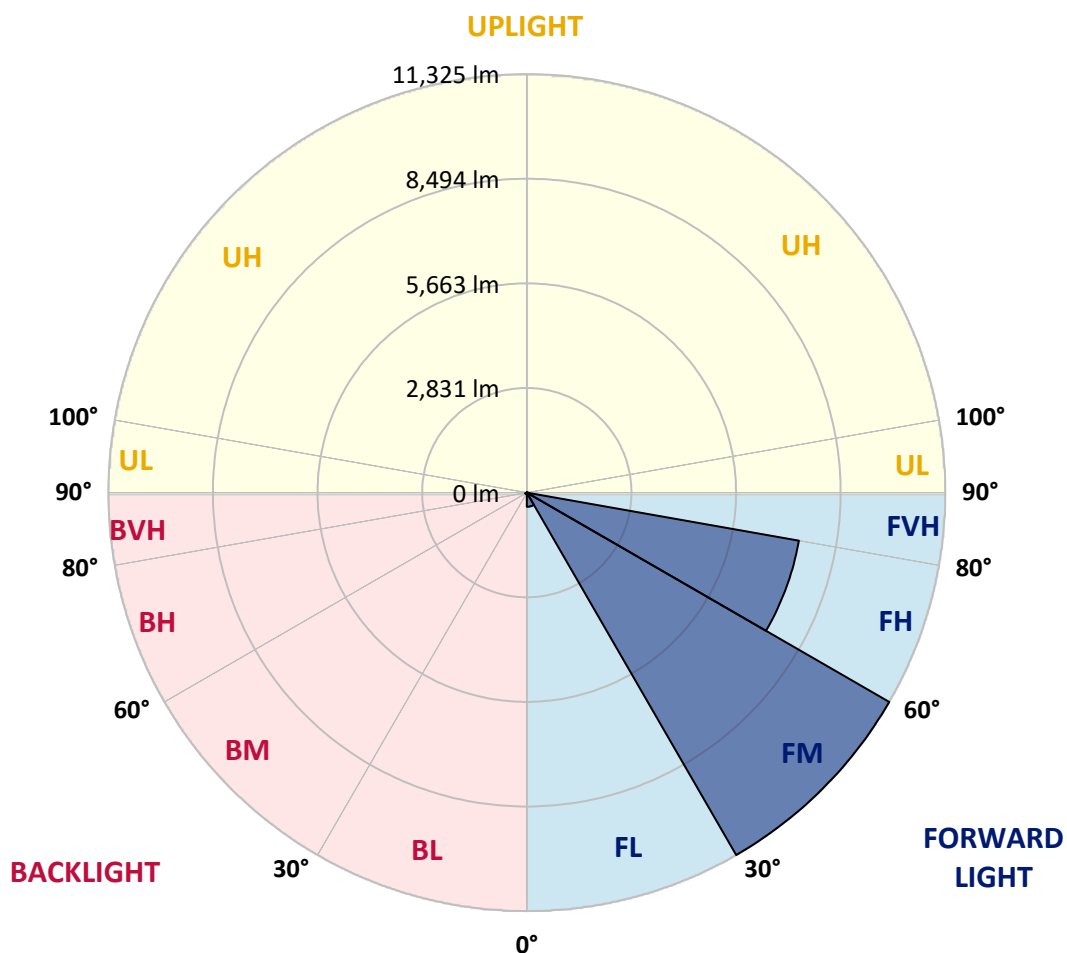
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	383.8	2.0			
FM	(30°-60°)	11325.1	58.6			
FH	(60°-80°)	7477.3	38.7			G3/7500
FVH	(80°-90°)	41.3	0.2			G1/100
BL	(0°-30°)	10.4	0.1	B0/110		
BM	(30°-60°)	38.0	0.2	B0/220		
BH	(60°-80°)	42.6	0.2	B0/110		G0/110
BVH	(80°-90°)	2.1	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°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
2.5°	84.8	84.8	78.7	72.7	66.6	60.6	60.6	60.6	54.5	54.5	48.5
5°	96.9	96.9	90.9	84.8	84.8	78.7	78.7	72.7	66.6	66.6	60.6
7.5°	103.0	103.0	103.0	103.0	96.9	96.9	96.9	90.9	84.8	78.7	72.7
10°	109.0	115.1	121.2	121.2	121.2	121.2	121.2	115.1	103.0	96.9	84.8
12.5°	121.2	127.2	139.3	151.4	151.4	157.5	151.4	145.4	133.3	115.1	96.9
15°	133.3	145.4	163.6	187.8	212.0	218.1	218.1	199.9	175.7	139.3	115.1
17.5°	151.4	169.6	218.1	296.8	381.6	448.3	448.3	399.8	278.7	181.7	133.3
20°	163.6	199.9	351.3	714.8	1090.4	1369.0	1314.5	1163.1	623.9	284.7	145.4
22.5°	181.7	254.4	745.1	1877.9	2907.7	3416.5	3295.4	2501.8	1399.3	508.8	175.7
25°	206.0	369.5	1478.1	3519.5	5403.4	5954.7	5875.9	4670.5	2550.3	854.1	224.1
27.5°	254.4	545.2	2368.6	5336.8	7971.9	8444.4	8414.1	6839.1	4076.8	1375.1	290.8
30°	321.1	793.6	3513.5	7251.0	9674.1	10152.7	10001.2	8426.2	5500.4	2102.0	375.6
32.5°	399.8	1108.6	4549.3	8662.5	11243.0	11873.0	11691.3	9807.4	6645.3	2719.9	557.3
35°	521.0	1417.5	5573.1	9910.4	13054.3	13853.9	13551.0	11230.9	7632.7	3416.5	672.4
37.5°	581.5	1599.2	6512.0	11267.3	15089.7	16180.0	15949.9	13030.1	8638.2	4307.0	823.8
40°	587.6	1817.3	7487.3	13036.1	17967.1	19911.6	19499.7	16119.5	10510.1	5451.9	1060.1
42.5°	605.8	2144.4	8753.3	16052.8	23618.9	26411.5	25945.0	21801.6	14756.5	7747.8	1502.3
45°	690.6	2762.3	11333.9	21692.5	31378.8	35473.7	34934.6	29718.9	20687.0	12066.9	2562.4
47.5°	987.4	4155.6	15859.0	27780.5	39314.3	42579.4	42446.1	35958.4	26060.1	16495.0	4343.4
50°	1587.1	6378.7	21008.0	32899.2	44366.4	47171.1	46837.9	38563.2	29125.3	19517.8	5567.0
52.5°	2120.2	8505.0	24242.8	34783.2	45874.8	49218.6	48812.7	39514.2	29931.0	20408.3	5906.2
55°	2253.5	9274.3	25206.0	35364.7	46874.3	50951.1	50363.5	40150.3	30033.9	19772.2	5342.9
57.5°	2186.8	8547.4	24582.0	35934.1	48267.5	52732.1	51950.6	41392.1	30379.2	18694.0	4446.3
59°	2071.7	7650.8	24194.3	36388.4	49036.9	53010.7	52277.7	41664.7	30609.4	18203.3	3901.1
60°	1938.5	7045.1	23891.5	36685.3	48988.4	52574.6	51817.3	41537.5	30700.3	17779.3	3640.7
62.5°	1496.2	5621.5	23455.3	36473.3	45929.3	48594.7	48164.6	38423.8	29367.6	16422.4	2871.3
65°	1163.1	4300.9	21856.1	32529.7	39084.1	40877.2	40743.9	32535.8	24715.3	14156.8	2071.7
67.5°	920.8	3137.9	18482.0	26344.8	31445.4	33995.7	33898.7	26411.5	18760.6	10819.0	1490.2
70°	751.2	2235.3	12672.7	19863.1	25151.5	28362.0	28222.7	21256.4	13902.4	6863.3	1084.3
72.5°	636.1	1429.6	7687.2	14974.6	20989.8	22825.3	22419.5	17149.3	10110.3	3737.6	860.2
75°	539.1	878.4	3810.3	9334.9	12503.0	12490.9	12085.1	9080.5	5427.7	1829.4	684.5
77.5°	436.2	617.9	1496.2	2562.4	3943.5	4882.5	4803.7	3216.6	1623.5	533.1	424.0
80°	284.7	290.8	399.8	702.7	1084.3	1199.4	1363.0	981.3	472.5	254.4	175.7
82.5°	127.2	139.3	181.7	230.2	230.2	212.0	187.8	139.3	103.0	84.8	42.4
85°	30.3	42.4	30.3	36.3	30.3	24.2	24.2	12.1	0.0	0.0	0.0
87.5°	6.1	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°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
2.5°	48.5	48.5	48.5	42.4	42.4	42.4	36.3	36.3	36.3	30.3	30.3
5°	60.6	54.5	48.5	48.5	42.4	42.4	36.3	30.3	30.3	30.3	24.2
7.5°	66.6	60.6	54.5	48.5	42.4	36.3	36.3	30.3	24.2	24.2	24.2
10°	78.7	72.7	60.6	48.5	42.4	36.3	30.3	30.3	24.2	18.2	18.2
12.5°	90.9	78.7	66.6	54.5	42.4	36.3	30.3	30.3	24.2	18.2	12.1
15°	103.0	90.9	72.7	54.5	42.4	36.3	30.3	30.3	18.2	12.1	6.1
17.5°	115.1	96.9	72.7	60.6	42.4	36.3	30.3	24.2	12.1	6.1	0.0
20°	121.2	103.0	78.7	60.6	42.4	36.3	30.3	18.2	6.1	0.0	0.0
22.5°	133.3	115.1	84.8	60.6	42.4	30.3	18.2	6.1	0.0	0.0	0.0
25°	157.5	121.2	84.8	60.6	42.4	30.3	12.1	0.0	0.0	0.0	0.0
27.5°	175.7	133.3	84.8	60.6	42.4	24.2	6.1	0.0	0.0	0.0	0.0
30°	206.0	145.4	90.9	60.6	42.4	18.2	6.1	0.0	0.0	0.0	0.0
32.5°	254.4	157.5	90.9	60.6	36.3	18.2	0.0	0.0	0.0	0.0	0.0
35°	308.9	181.7	90.9	60.6	36.3	18.2	0.0	0.0	0.0	0.0	0.0
37.5°	315.0	193.8	90.9	60.6	36.3	12.1	0.0	0.0	0.0	0.0	0.0
40°	327.1	181.7	96.9	60.6	36.3	12.1	0.0	0.0	0.0	0.0	0.0
42.5°	375.6	169.6	103.0	60.6	36.3	12.1	0.0	0.0	0.0	0.0	0.0
45°	557.3	175.7	103.0	66.6	36.3	18.2	0.0	0.0	0.0	0.0	0.0
47.5°	969.2	181.7	96.9	66.6	36.3	18.2	0.0	0.0	0.0	0.0	0.0
50°	1241.8	212.0	96.9	72.7	42.4	12.1	0.0	0.0	0.0	0.0	0.0
52.5°	1320.6	248.4	96.9	78.7	54.5	6.1	0.0	0.0	0.0	0.0	0.0
55°	1284.2	290.8	103.0	84.8	66.6	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	1187.3	315.0	109.0	90.9	72.7	0.0	0.0	0.0	0.0	0.0	0.0
59°	1084.3	333.2	127.2	96.9	72.7	0.0	0.0	0.0	0.0	0.0	0.0
60°	999.5	351.3	133.3	103.0	72.7	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	805.7	375.6	145.4	121.2	60.6	0.0	0.0	0.0	0.0	0.0	0.0
65°	702.7	393.7	151.4	133.3	54.5	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	642.1	405.9	163.6	139.3	48.5	0.0	0.0	0.0	0.0	0.0	0.0
70°	593.7	399.8	175.7	133.3	42.4	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	539.1	381.6	212.0	121.2	36.3	0.0	0.0	0.0	0.0	0.0	0.0
75°	484.6	345.3	230.2	109.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	351.3	290.8	212.0	96.9	12.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	151.4	157.5	151.4	72.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	30.3	36.3	30.3	18.2	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°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
2.5°	30.3	30.3	30.3	30.3	36.3	36.3	48.5	60.6	72.7	78.7	78.7
5°	24.2	24.2	24.2	24.2	24.2	30.3	36.3	48.5	66.6	72.7	72.7
7.5°	18.2	18.2	18.2	18.2	18.2	18.2	30.3	42.4	60.6	66.6	72.7
10°	18.2	12.1	12.1	6.1	6.1	12.1	18.2	36.3	54.5	60.6	66.6
12.5°	12.1	6.1	6.1	0.0	0.0	6.1	12.1	30.3	48.5	54.5	60.6
15°	6.1	0.0	0.0	0.0	0.0	0.0	6.1	24.2	42.4	48.5	60.6
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	36.3	48.5	54.5
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	30.3	42.4	48.5
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	24.2	36.3	42.4
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	24.2	30.3
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	18.2	24.2
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.1	18.2	24.2
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1	18.2
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1	18.2
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1	12.1
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
59°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	6.1
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°	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
2.5°	84.8	84.8	78.7	72.7	72.7	72.7	78.7	84.8	84.8	84.8
5°	78.7	78.7	72.7	72.7	72.7	72.7	78.7	90.9	96.9	96.9
7.5°	78.7	78.7	72.7	72.7	72.7	72.7	78.7	90.9	96.9	103.0
10°	72.7	72.7	72.7	72.7	66.6	72.7	78.7	90.9	109.0	109.0
12.5°	72.7	72.7	72.7	72.7	66.6	72.7	84.8	96.9	115.1	121.2
15°	72.7	72.7	72.7	66.6	66.6	72.7	84.8	103.0	121.2	133.3
17.5°	66.6	72.7	72.7	66.6	66.6	72.7	84.8	103.0	133.3	151.4
20°	60.6	66.6	72.7	66.6	66.6	66.6	84.8	103.0	139.3	163.6
22.5°	54.5	60.6	66.6	66.6	60.6	66.6	84.8	109.0	151.4	181.7
25°	48.5	54.5	54.5	60.6	60.6	66.6	84.8	109.0	157.5	206.0
27.5°	36.3	42.4	48.5	54.5	54.5	66.6	84.8	115.1	169.6	254.4
30°	30.3	36.3	42.4	48.5	54.5	66.6	84.8	115.1	181.7	321.1
32.5°	30.3	36.3	42.4	48.5	54.5	60.6	84.8	121.2	199.9	399.8
35°	24.2	30.3	36.3	48.5	48.5	60.6	84.8	121.2	218.1	521.0
37.5°	24.2	30.3	36.3	48.5	48.5	60.6	84.8	121.2	266.5	581.5
40°	18.2	24.2	30.3	48.5	48.5	60.6	90.9	127.2	272.6	587.6
42.5°	18.2	24.2	30.3	42.4	48.5	60.6	90.9	127.2	254.4	605.8
45°	18.2	24.2	30.3	48.5	54.5	66.6	90.9	133.3	248.4	690.6
47.5°	18.2	24.2	30.3	48.5	60.6	66.6	90.9	133.3	254.4	987.4
50°	18.2	24.2	30.3	48.5	66.6	66.6	90.9	133.3	278.7	1587.1
52.5°	12.1	18.2	24.2	42.4	54.5	72.7	96.9	127.2	296.8	2120.2
55°	12.1	12.1	18.2	36.3	48.5	78.7	103.0	127.2	345.3	2253.5
57.5°	12.1	12.1	18.2	30.3	42.4	84.8	109.0	127.2	399.8	2186.8
59°	12.1	12.1	12.1	30.3	36.3	84.8	109.0	133.3	405.9	2071.7
60°	12.1	12.1	12.1	24.2	36.3	84.8	115.1	139.3	411.9	1938.5
62.5°	6.1	6.1	6.1	24.2	30.3	84.8	127.2	169.6	424.0	1496.2
65°	12.1	12.1	6.1	18.2	30.3	72.7	145.4	181.7	430.1	1163.1
67.5°	12.1	12.1	12.1	24.2	30.3	72.7	151.4	187.8	430.1	920.8
70°	12.1	12.1	12.1	24.2	36.3	72.7	151.4	193.8	424.0	751.2
72.5°	12.1	12.1	12.1	24.2	36.3	66.6	139.3	199.9	405.9	636.1
75°	12.1	12.1	12.1	18.2	30.3	60.6	133.3	218.1	369.5	539.1
77.5°	12.1	12.1	12.1	12.1	24.2	48.5	121.2	242.3	327.1	436.2
80°	18.2	12.1	12.1	12.1	18.2	42.4	115.1	236.2	272.6	284.7
82.5°	18.2	12.1	12.1	6.1	12.1	30.3	90.9	181.7	139.3	127.2
85°	12.1	12.1	12.1	6.1	6.1	18.2	42.4	54.5	42.4	30.3
87.5°	12.1	12.1	12.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
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

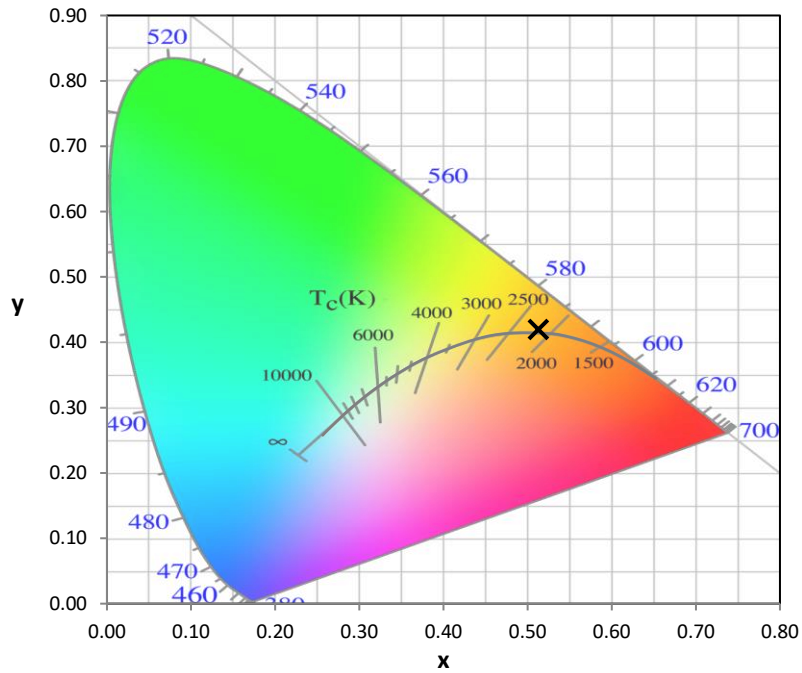
Stabilization Time: 21M
 Operation Time: 1H 21M
 Sphere Temperature (°C): 25.2

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 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	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

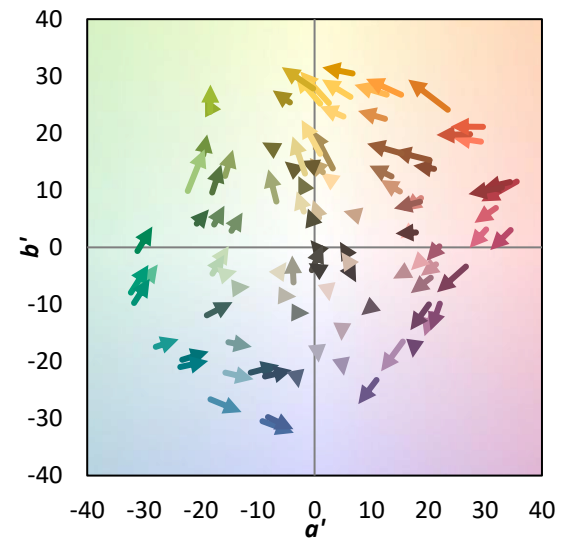
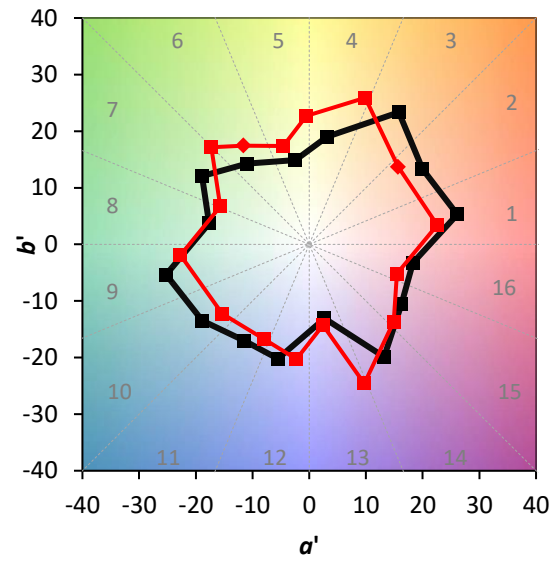
TM-30-18

Summary

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

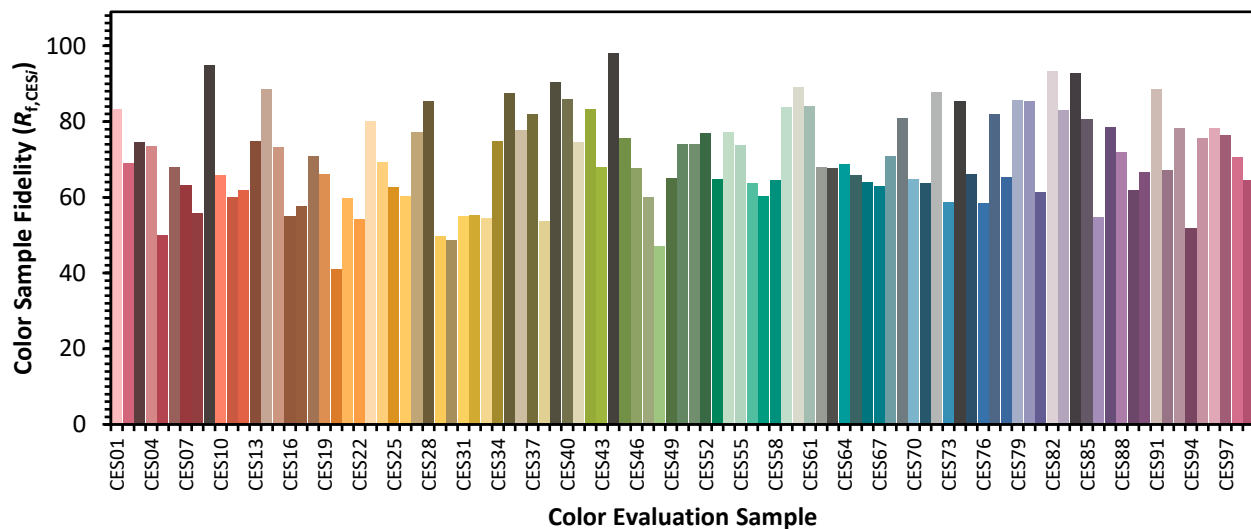


Color Vector Graphics



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)