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: P979125

Luminaire Tested: **WPSLED15S-50W-4000K**

Issue Date: 03/31/2025

Report Generated By 670245763

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P979125
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPSLED15S-50W-4000K
Description:	LUMARK WALL PACK LED SMALL 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @50W-4000K
Light Source:	4000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	7072.1 lumens
Efficiency:	N/A
Efficacy:	142.9 lumens/watt
Luminous Opening:	Rectangular w/ Sides (W: 0.61' x L: 0.12' x H: 0.44')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U3 - G3

Input Watts (W):	49.5
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
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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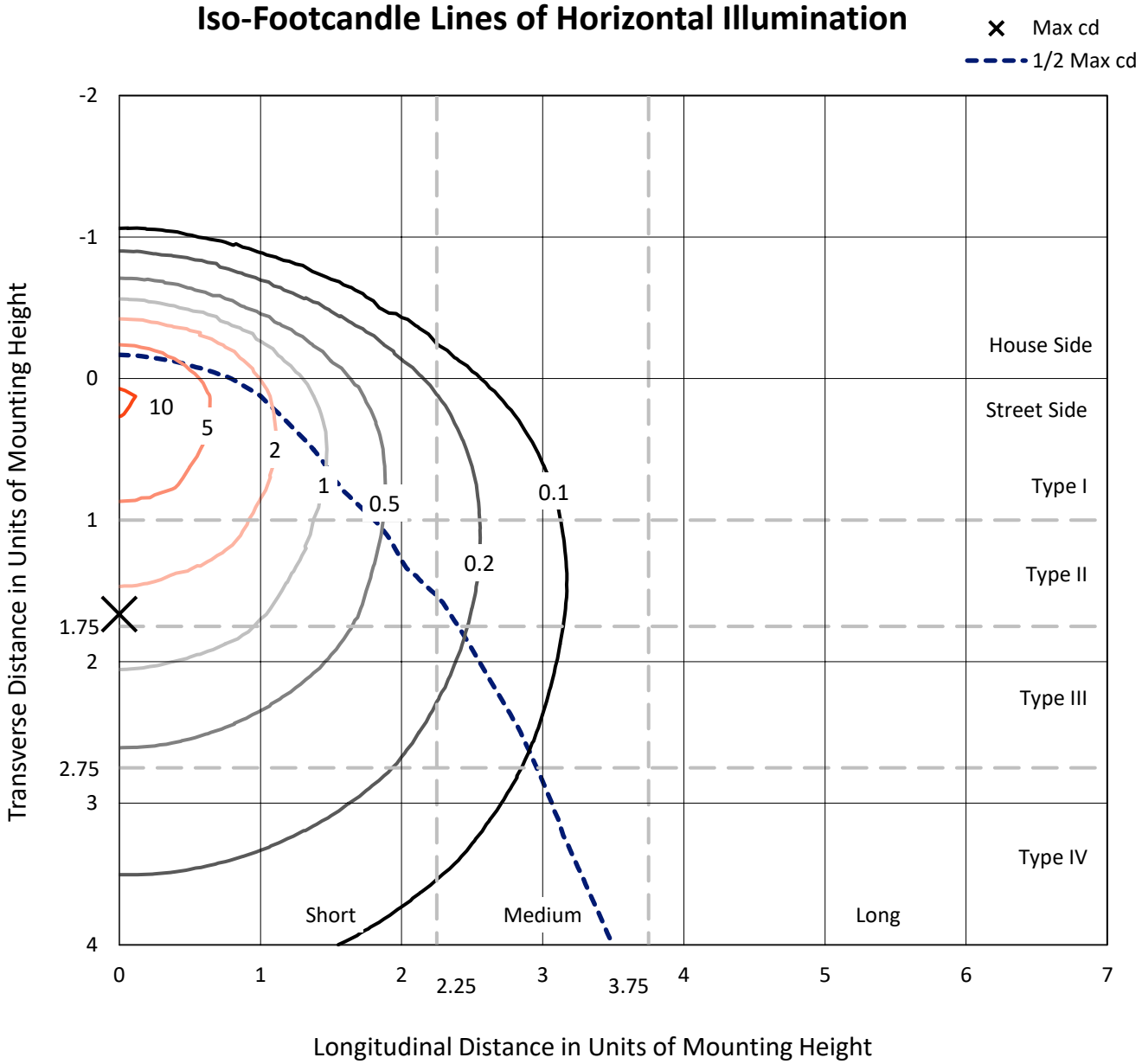
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 10.5 fc
Type IV - Short - N/A

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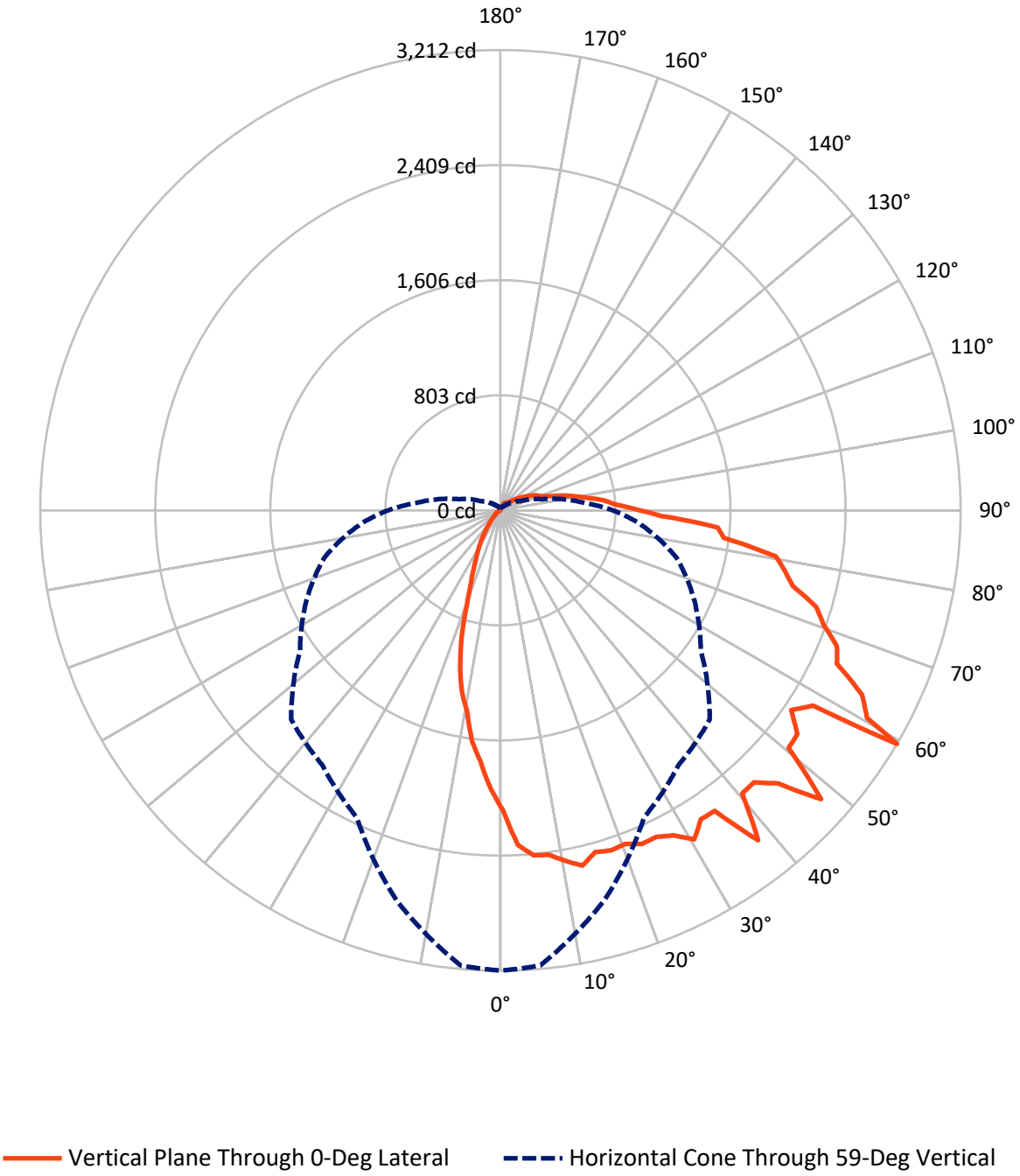
Luminous Intensity Polar Plot



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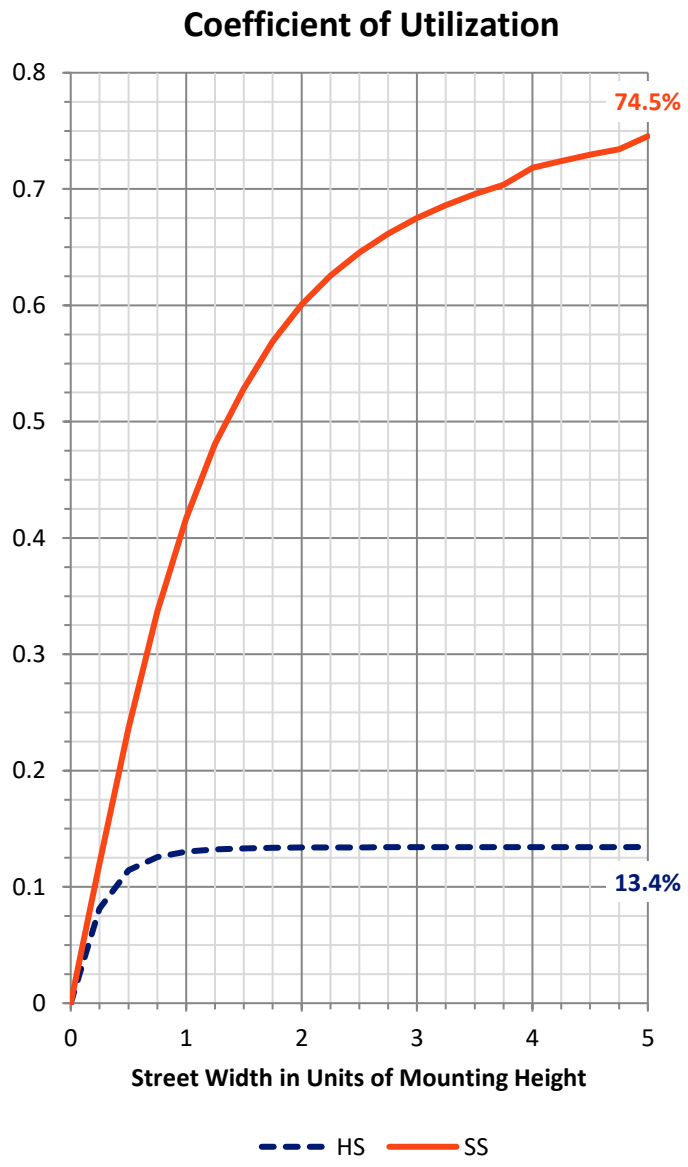
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	960.8	8.7	969.5
	% Fixture	13.6	0.1	13.7
Street Side	Lumens	5605.4	497.2	6102.6
	% Fixture	79.3	7.0	86.3
Total	Lumens	6566.2	505.9	7072.1
	% Fixture	92.8	7.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.3	2.8
10°-20°	526.8	7.4
20°-30°	744.1	10.5
30°-40°	889.4	12.6
40°-50°	969.8	13.7
50°-60°	978.8	13.8
60°-70°	963.6	13.6
70°-80°	792.1	11.2
80°-90°	504.3	7.1
90°-100°	238.6	3.4
100°-110°	120.3	1.7
110°-120°	67.7	1.0
120°-130°	37.4	0.5
130°-140°	20.9	0.3
140°-150°	13.3	0.2
150°-160°	5.9	0.1
160°-170°	1.5	0.0
170°-180°	0.1	0.0
0°-90°	6566.2	92.8
0°-180°	7072.1	100.0



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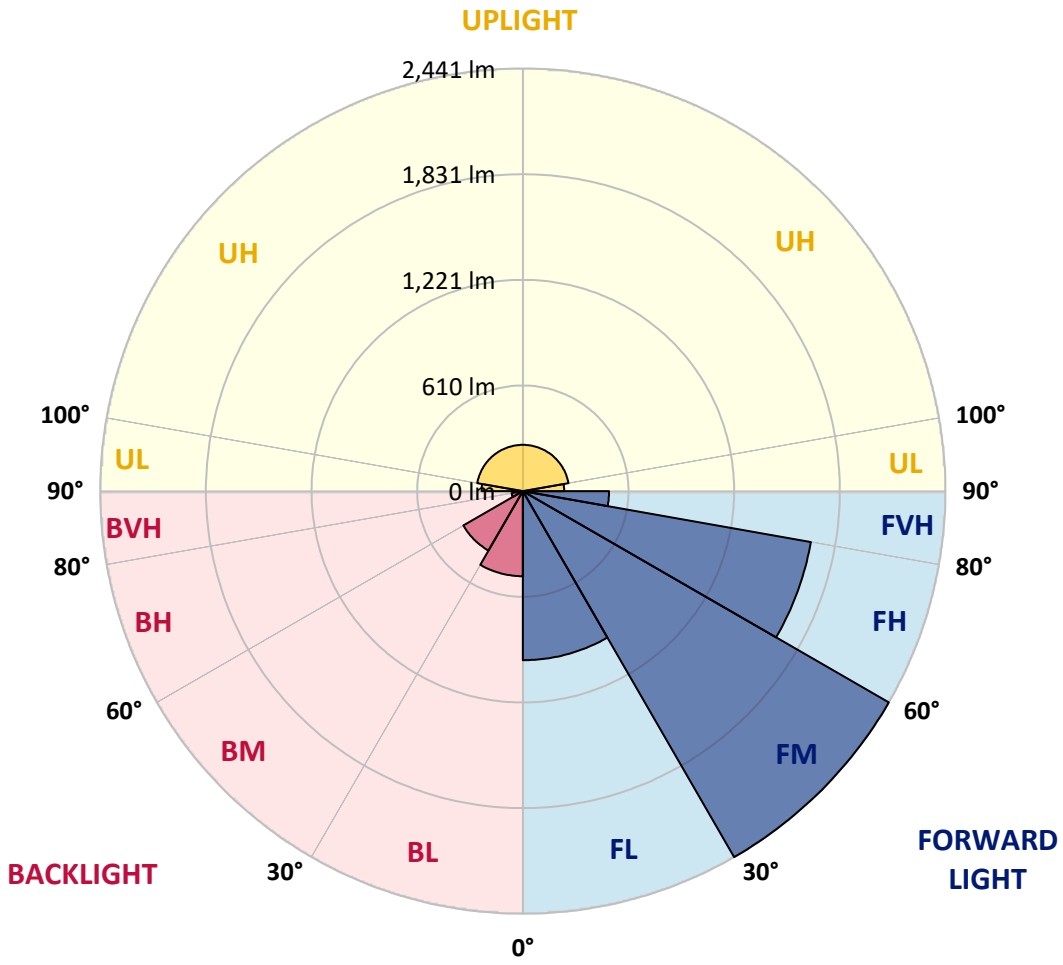
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	976.7	13.8			
FM	(30°-60°)	2441.3	34.5			
FH	(60°-80°)	1689.6	23.9			G1/1800
FVH	(80°-90°)	497.8	7.0			G3/500
BL	(0°-30°)	491.5	7.0	B1/500		
BM	(30°-60°)	396.6	5.6	B1/1000		
BH	(60°-80°)	66.1	0.9	B0/110		G0/110
BVH	(80°-90°)	6.6	0.1			G0/10
UL	(90°-100°)	238.6	3.4		U3/500	
UH	(100°-180°)	267.2	3.8		U3/500	

BUG Rating: B1-U3-G3
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9
2.5°	2338.3	2346.1	2340.0	2341.7	2328.7	2320.1	2325.3	2287.1	2216.9	2132.9	2093.9
5°	2418.0	2427.5	2416.3	2366.0	2340.0	2320.1	2314.9	2317.5	2290.6	2158.9	2078.3
7.5°	2427.5	2425.8	2424.9	2397.2	2428.4	2444.9	2309.7	2290.6	2273.3	2145.9	2038.4
10°	2487.3	2492.5	2475.2	2424.1	2394.6	2344.3	2401.5	2257.7	2257.7	2123.3	1998.5
12.5°	2544.5	2548.0	2499.5	2453.5	2401.5	2371.2	2314.9	2331.3	2234.3	2112.9	1960.4
15°	2473.5	2482.1	2430.1	2402.4	2467.4	2368.6	2317.5	2307.9	2199.6	2104.3	1937.9
17.5°	2495.1	2501.2	2497.7	2442.3	2346.9	2417.1	2322.7	2273.3	2197.9	2088.7	1933.5
20°	2484.7	2489.9	2428.4	2405.9	2434.5	2317.5	2315.7	2255.1	2208.3	2073.1	1892.8
22.5°	2528.9	2535.9	2479.5	2417.1	2367.7	2382.5	2350.4	2248.1	2192.7	2044.5	1854.7
25°	2525.5	2534.1	2489.1	2425.8	2390.3	2336.5	2247.3	2210.0	2156.3	2006.3	1797.5
27.5°	2567.9	2558.4	2456.1	2420.6	2386.8	2310.5	2279.3	2183.1	2104.3	1944.8	1748.9
30°	2664.1	2648.5	2599.1	2461.3	2362.5	2333.1	2254.2	2168.4	2031.5	1887.6	1708.2
32.5°	2568.8	2546.3	2513.3	2538.5	2405.0	2286.3	2190.1	2088.7	1995.9	1820.0	1644.9
35°	2576.6	2566.2	2474.3	2463.9	2476.9	2274.1	2154.5	2022.8	1944.8	1750.7	1583.4
37.5°	2921.5	2868.7	2663.3	2470.9	2410.2	2314.9	2159.7	2047.1	1892.8	1690.0	1515.8
40°	2597.4	2581.8	2559.3	2672.8	2363.4	2305.3	2096.5	2037.5	1815.7	1621.5	1436.1
42.5°	2593.9	2577.5	2551.5	2476.1	2498.6	2242.1	2078.3	1968.2	1750.7	1535.7	1353.7
45°	2717.9	2705.7	2563.6	2496.9	2381.6	2230.8	2047.9	1891.9	1683.1	1448.2	1258.4
47.5°	3011.7	2958.8	2665.0	2457.9	2334.8	2264.6	2028.0	1839.1	1599.0	1347.7	1160.5
50°	2606.1	2601.7	2744.7	2652.9	2272.4	2167.5	1992.5	1771.5	1537.5	1256.7	1061.7
52.5°	2594.8	2585.3	2590.5	2515.9	2371.2	2094.7	1950.0	1683.9	1452.5	1164.8	981.1
55°	2461.3	2438.8	2398.1	2406.7	2386.8	2041.9	1858.1	1629.3	1383.2	1089.4	904.8
57.5°	2571.4	2574.0	2424.1	2310.5	2216.9	2096.5	1786.2	1540.9	1319.1	1007.1	816.4
59°	3211.9	3187.6	2813.2	2367.7	2168.4	2065.3	1707.3	1494.1	1271.4	960.3	784.3
60°	2939.7	2964.0	3035.1	2489.1	2172.7	1999.4	1673.5	1465.5	1238.5	929.9	766.1
62.5°	2831.4	2817.5	2673.7	2633.8	2300.1	1956.1	1673.5	1413.5	1164.8	869.3	694.2
65°	2580.9	2546.3	2515.1	2477.8	2333.9	1957.8	1638.9	1357.2	1091.1	795.6	605.8
67.5°	2532.4	2527.2	2453.5	2330.5	2184.9	1946.5	1531.4	1275.7	1021.8	702.0	508.7
70°	2393.7	2395.5	2331.3	2233.4	2073.1	1826.9	1503.7	1212.5	945.5	604.1	415.1
72.5°	2303.6	2303.6	2238.6	2140.7	1997.7	1696.9	1412.7	1153.5	851.9	516.5	334.5
75°	2106.0	2119.0	2083.5	1993.3	1862.5	1608.5	1303.5	1040.0	740.1	427.3	260.0
77.5°	2028.0	2029.7	1957.8	1847.7	1709.9	1468.1	1187.3	934.3	651.7	341.5	195.0
80°	1949.1	1959.5	1878.1	1755.9	1605.9	1366.7	1085.1	836.3	556.4	259.1	142.1
82.5°	1570.4	1570.4	1521.9	1494.1	1366.7	1170.9	924.7	727.1	455.9	188.1	103.1
85°	1521.0	1506.3	1450.8	1372.8	1260.1	1048.7	778.3	595.4	356.2	136.1	74.5
87.5°	1120.6	1144.0	1117.1	1083.3	1012.3	844.1	645.7	461.9	274.7	99.7	55.5
90°	938.6	953.3	916.1	875.3	803.4	679.5	509.6	364.0	201.1	72.8	43.3
92.5°	796.5	806.0	783.5	747.1	668.2	559.9	413.4	269.5	149.9	54.6	36.4
95°	727.1	728.9	694.2	631.8	569.4	468.9	327.6	216.7	117.9	45.1	32.9
97.5°	617.9	634.4	600.6	552.9	492.3	400.4	267.8	172.5	95.3	39.0	29.5
100°	535.6	539.9	508.7	468.0	413.4	335.4	220.1	142.1	78.0	36.4	27.7
102.5°	458.5	469.7	441.1	392.6	343.2	273.9	185.5	123.9	66.7	34.7	27.7
105°	370.9	371.8	351.0	322.4	292.9	223.6	157.7	104.9	56.3	33.8	27.7
107.5°	315.5	321.5	309.4	280.8	251.3	195.9	136.9	88.4	49.4	32.9	27.7

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REPORT NUMBER: P979125
CATALOG NUMBER: WPSLED15S-50W-4000K

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	*286.9*	288.6	277.3	256.5	222.7	169.9	117.9	74.5	45.9	32.9	26.0
112.5°	*268.7*	268.7	254.8	233.1	195.0	149.1	101.4	65.0	44.2	32.1	25.1
115°	*234.9*	238.3	224.5	205.4	169.9	130.0	89.3	58.1	43.3	30.3	23.4
117.5°	*208.0*	206.3	197.6	178.5	148.2	112.7	80.6	54.6	41.6	28.6	21.7
120°	*179.4*	181.1	172.5	156.0	128.3	98.8	71.9	51.1	39.9	26.9	19.9
122.5°	*159.5*	159.5	153.4	136.1	110.1	86.7	63.3	48.5	38.1	25.1	17.3
125°	*138.7*	140.4	133.5	117.0	95.3	75.4	57.2	46.8	37.3	23.4	15.6
127.5°	*120.5*	121.3	114.4	99.7	82.3	66.7	53.7	45.1	36.4	20.8	13.9
130°	*104.0*	103.1	96.2	84.9	72.8	62.4	52.9	43.3	32.9	18.2	12.1
132.5°	*87.5*	86.7	81.5	74.5	65.9	60.7	51.1	41.6	30.3	15.6	10.4
135°	*74.5*	74.5	71.1	67.6	62.4	57.2	49.4	39.0	27.7	13.9	8.7
137.5°	*66.7*	66.7	65.9	64.1	59.8	54.6	46.8	37.3	25.1	12.1	6.9
140°	*63.3*	64.1	63.3	62.4	58.1	52.0	45.1	34.7	22.5	10.4	6.1
142.5°	*65.0*	64.1	63.3	61.5	55.5	50.3	42.5	32.1	19.9	8.7	5.2
145°	*65.9*	65.9	63.3	58.9	53.7	46.8	39.0	28.6	16.5	6.9	4.3
147.5°	*64.1*	63.3	59.8	54.6	48.5	42.5	34.7	24.3	13.9	5.2	3.5
150°	*60.7*	59.8	54.6	48.5	44.2	38.1	29.5	20.8	11.3	4.3	3.5
152.5°	*53.7*	52.9	48.5	42.5	37.3	31.2	25.1	16.5	8.7	4.3	2.6
155°	*42.5*	41.6	38.1	33.8	29.5	26.0	20.8	13.9	7.8	3.5	2.6
157.5°	*31.2*	31.2	29.5	26.9	23.4	21.7	16.5	11.3	5.2	2.6	1.7
160°	*26.0*	26.0	24.3	22.5	19.9	17.3	13.0	8.7	4.3	2.6	1.7
162.5°	*21.7*	21.7	19.9	18.2	15.6	13.0	9.5	6.1	3.5	1.7	1.7
165°	*17.3*	17.3	16.5	14.7	12.1	9.5	6.9	4.3	3.5	1.7	1.7
167.5°	*13.0*	13.0	11.3	10.4	7.8	6.1	4.3	3.5	2.6	1.7	1.7
170°	*7.8*	7.8	6.9	6.1	4.3	3.5	3.5	2.6	2.6	1.7	1.7
172.5°	*2.6*	3.5	2.6	2.6	2.6	2.6	2.6	2.6	1.7	1.7	1.7
175°	*0.9*	0.9	1.7	1.7	1.7	2.6	2.6	2.6	1.7	1.7	1.7
177.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	*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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9	2093.9
2.5°	2061.8	2027.1	2006.3	1983.8	1974.3	1955.2	1933.5	1938.7	1930.9	1943.1
5°	2031.5	1976.0	1937.0	1882.4	1846.0	1817.4	1794.0	1760.2	1756.7	1761.1
7.5°	1977.7	1914.5	1840.8	1770.6	1746.3	1753.3	1701.3	1664.9	1631.9	1622.4
10°	1927.5	1836.5	1745.5	1729.9	1620.7	1566.1	1507.1	1447.3	1434.3	1418.7
12.5°	1898.9	1780.1	1690.9	1573.0	1466.4	1352.9	1288.7	1287.0	1297.4	1293.9
15°	1870.3	1720.3	1618.1	1441.3	1293.1	1255.8	1219.4	1163.9	1118.9	1119.7
17.5°	1853.8	1672.7	1497.6	1305.2	1212.5	1110.2	969.8	928.2	922.1	923.9
20°	1807.0	1617.2	1399.7	1228.1	1083.3	906.5	828.5	734.9	710.7	699.4
22.5°	1745.5	1541.8	1289.6	1133.6	903.1	758.3	638.7	587.6	560.7	549.5
25°	1695.2	1445.6	1196.0	988.0	780.9	617.9	513.9	474.9	455.9	451.5
27.5°	1634.5	1354.6	1118.9	829.4	646.5	507.0	427.3	393.5	378.7	372.7
30°	1570.4	1257.5	1001.9	724.5	547.7	424.7	357.9	325.9	312.9	310.3
32.5°	1499.3	1166.5	871.9	619.7	454.1	358.8	298.1	271.3	258.3	258.3
35°	1423.9	1072.9	748.8	530.4	385.7	294.7	247.9	215.8	204.5	201.9
37.5°	1335.5	988.9	657.8	445.5	320.7	245.3	198.5	175.9	162.9	162.9
40°	1260.1	905.7	571.1	374.4	263.5	195.0	160.3	136.9	129.1	129.1
42.5°	1160.5	800.8	495.7	313.7	215.8	161.2	128.3	110.1	104.0	103.1
45°	1048.7	696.8	412.5	257.4	175.9	128.3	102.3	86.7	80.6	78.9
47.5°	936.0	593.7	345.8	213.2	142.1	103.1	81.5	69.3	64.1	63.3
50°	837.2	514.8	284.3	172.5	116.1	82.3	63.3	54.6	49.4	49.4
52.5°	754.9	447.2	243.5	143.0	93.6	63.3	50.3	42.5	42.5	43.3
55°	688.1	394.3	202.8	120.5	76.3	51.1	37.3	34.7	37.3	37.3
57.5°	624.9	331.1	169.9	102.3	59.8	39.9	28.6	28.6	29.5	29.5
59°	*589.3*	*299.9*	*152.5*	*91.9*	*52.0*	*33.8*	*23.4*	*23.4*	*23.4*	*23.4*
60°	561.6	277.3	143.0	85.8	46.8	29.5	20.8	19.9	19.1	18.2
62.5°	489.7	220.1	120.5	68.5	35.5	19.1	12.1	11.3	9.5	10.4
65°	404.7	180.3	99.7	54.6	26.9	10.4	4.3	2.6	0.9	0.9
67.5°	319.8	147.3	82.3	43.3	17.3	2.6	0.0	0.0	0.0	0.0
70°	260.0	118.7	66.7	32.1	9.5	0.0	0.0	0.0	0.0	0.0
72.5°	200.2	97.1	53.7	22.5	2.6	0.0	0.0	0.0	0.0	0.0
75°	150.8	77.1	41.6	13.9	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	115.3	61.5	32.1	8.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	85.8	47.7	24.3	5.2	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	65.9	37.3	19.1	3.5	0.0	0.0	0.0	0.0	0.0	0.0
85°	50.3	28.6	13.9	1.7	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	39.9	22.5	11.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0
90°	31.2	18.2	8.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	26.9	15.6	6.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
95°	24.3	13.9	5.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	22.5	13.0	5.2	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	21.7	12.1	4.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	21.7	11.3	3.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	21.7	11.3	3.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	21.7	10.4	3.5	0.9	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

Scaled Data Report

REPORT NUMBER: P979125
CATALOG NUMBER: WPSLED15S-50W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	20.8	8.7	3.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	19.9	7.8	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	18.2	6.1	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	15.6	3.5	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0
120°	13.0	2.6	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	11.3	1.7	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
125°	10.4	1.7	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	9.5	1.7	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
130°	7.8	2.6	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	6.9	2.6	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
135°	6.1	2.6	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
137.5°	5.2	2.6	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
140°	4.3	2.6	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
142.5°	3.5	2.6	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
145°	3.5	2.6	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
147.5°	2.6	1.7	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
150°	2.6	1.7	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
152.5°	2.6	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
155°	1.7	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
157.5°	1.7	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
160°	1.7	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
162.5°	1.7	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.7	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.7	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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

Lumark

Report Number: SP1-2407-168-3

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 4000k

Data in this report applies to families of products including LSDL-92S-100W 4000k.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

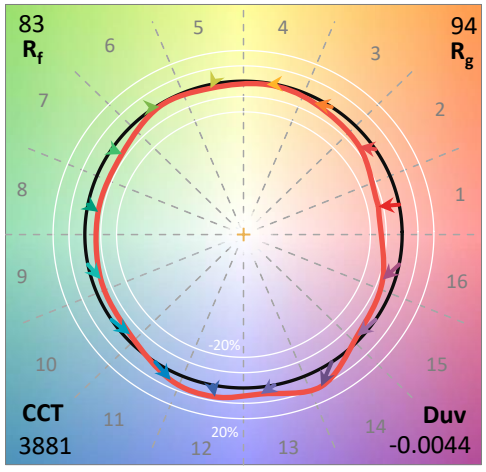
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-168-3
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/12/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Lumark
Catalog Number:	**LSDL-92S-100W 4000k**
Description:	Lumark Wallpack 100W

Spectral Parameters

CCT (K):	3881	CRI (Ra):	82.7		
CIE u':	0.2297	R1:	82.3	R9:	4.8
CIE v':	0.4983	R2:	93.7	R10:	84.4
Duv:	-0.0044	R3:	93.3	R11:	77.9
CIE x:	0.3825	R4:	79.0	R12:	66.7
CIE y:	0.3688	R5:	82.7	R13:	85.8
CIE z:	0.2487	R6:	89.4	R14:	97.2
Peak Wavelength (nm):	453	R7:	81.3	R15:	76.3
Dominant Wavelength (nm):	582	R8:	59.9		
Purity:	25.44833				

Rf:	82.8
Rg:	93.7



Test Conditions

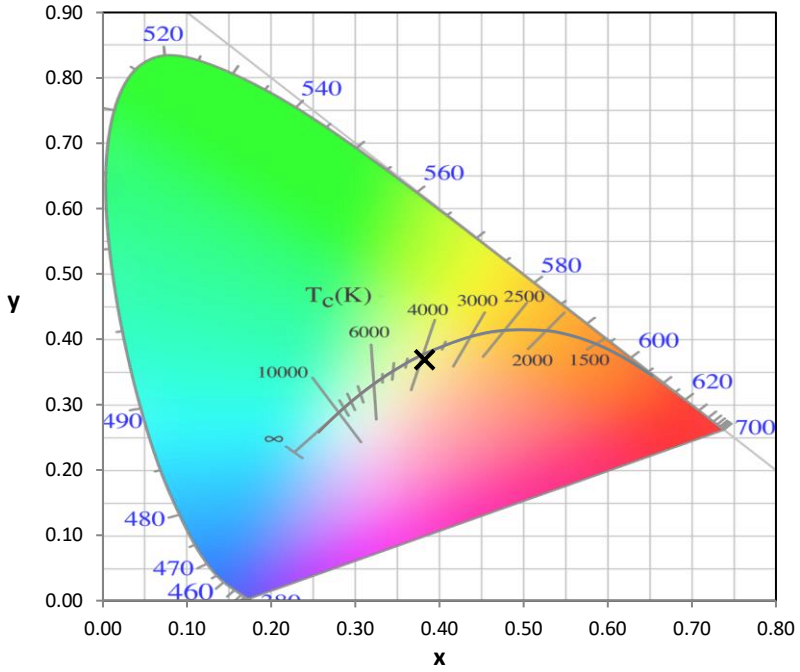
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-3

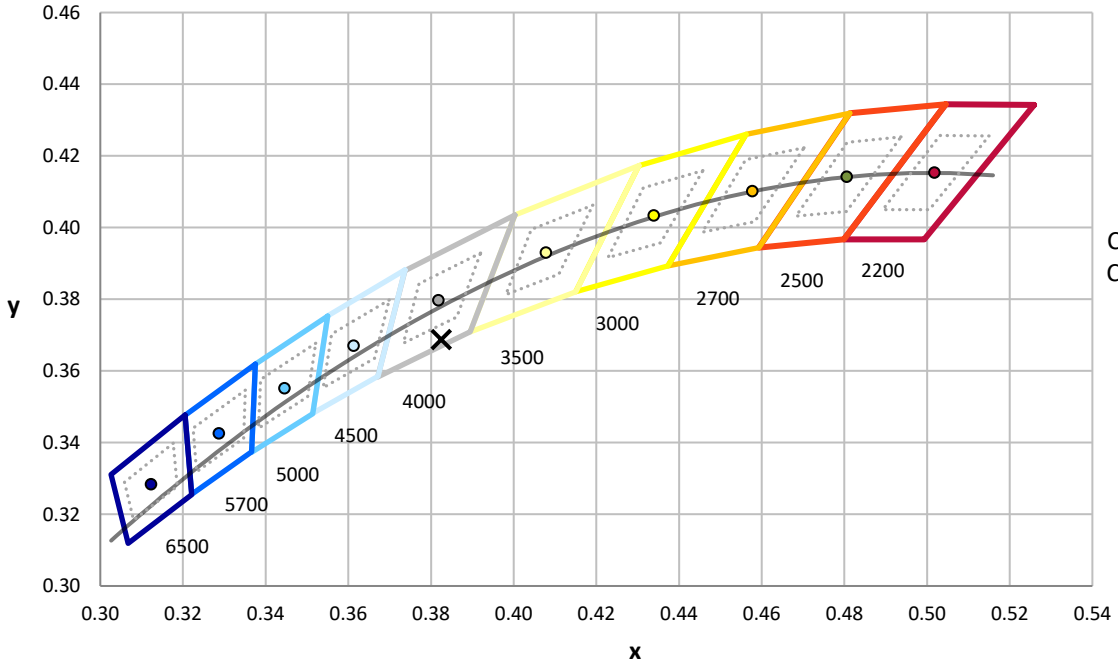
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-3

CIE 1931 Chromaticity Diagram



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

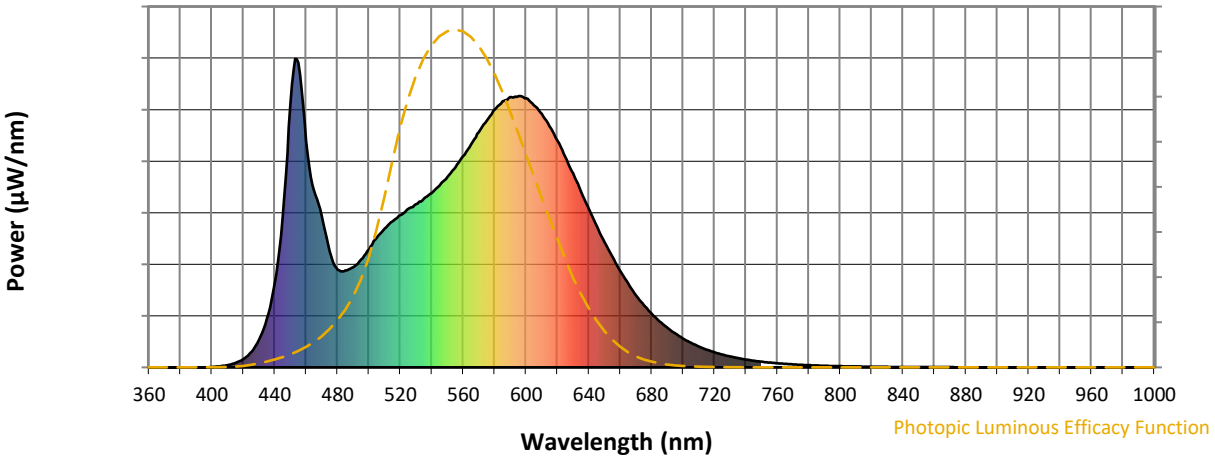


CCT = 3881K
CIE x = 0.3825
CIE y = 0.3688
Duv = -0.0044

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-3

Photopic Flux vs. Wavelength

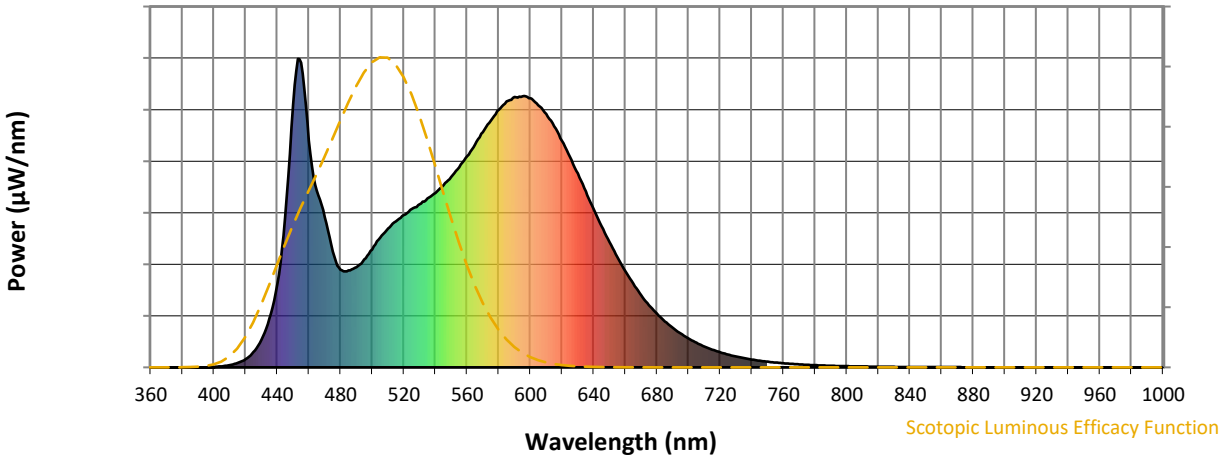


Photopic Lumens: NR

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	325	NR	620	735	NR	750	18	NR	880	0	NR
365	0	NR	495	350	NR	625	682	NR	755	16	NR	885	0	NR
370	0	NR	500	382	NR	630	629	NR	760	13	NR	890	0	NR
375	0	NR	505	421	NR	635	570	NR	765	11	NR	895	0	NR
380	0	NR	510	450	NR	640	514	NR	770	10	NR	900	0	NR
385	0	NR	515	474	NR	645	458	NR	775	8	NR	905	0	NR
390	0	NR	520	494	NR	650	406	NR	780	7	NR	910	0	NR
395	0	NR	525	513	NR	655	358	NR	785	6	NR	915	0	NR
400	2	NR	530	529	NR	660	312	NR	790	5	NR	920	0	NR
405	4	NR	535	548	NR	665	271	NR	795	4	NR	925	0	NR
410	8	NR	540	565	NR	670	234	NR	800	4	NR	930	0	NR
415	14	NR	545	591	NR	675	202	NR	805	3	NR	935	0	NR
420	27	NR	550	618	NR	680	174	NR	810	3	NR	940	0	NR
425	50	NR	555	649	NR	685	149	NR	815	2	NR	945	0	NR
430	89	NR	560	685	NR	690	129	NR	820	2	NR	950	0	NR
435	159	NR	565	723	NR	695	110	NR	825	2	NR	955	0	NR
440	272	NR	570	762	NR	700	93	NR	830	2	NR	960	0	NR
445	486	NR	575	800	NR	705	80	NR	835	1	NR	965	0	NR
450	852	NR	580	835	NR	710	67	NR	840	1	NR	970	0	NR
455	988	NR	585	862	NR	715	57	NR	845	1	NR	975	0	NR
460	735	NR	590	876	NR	720	49	NR	850	1	NR	980	0	NR
465	572	NR	595	879	NR	725	42	NR	855	1	NR	985	0	NR
470	486	NR	600	872	NR	730	35	NR	860	1	NR	990	0	NR
475	375	NR	605	850	NR	735	30	NR	865	1	NR	995	0	NR
480	317	NR	610	821	NR	740	25	NR	870	1	NR	1000	0	NR
485	314	NR	615	782	NR	745	22	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-3

Scotopic Flux vs. Wavelength

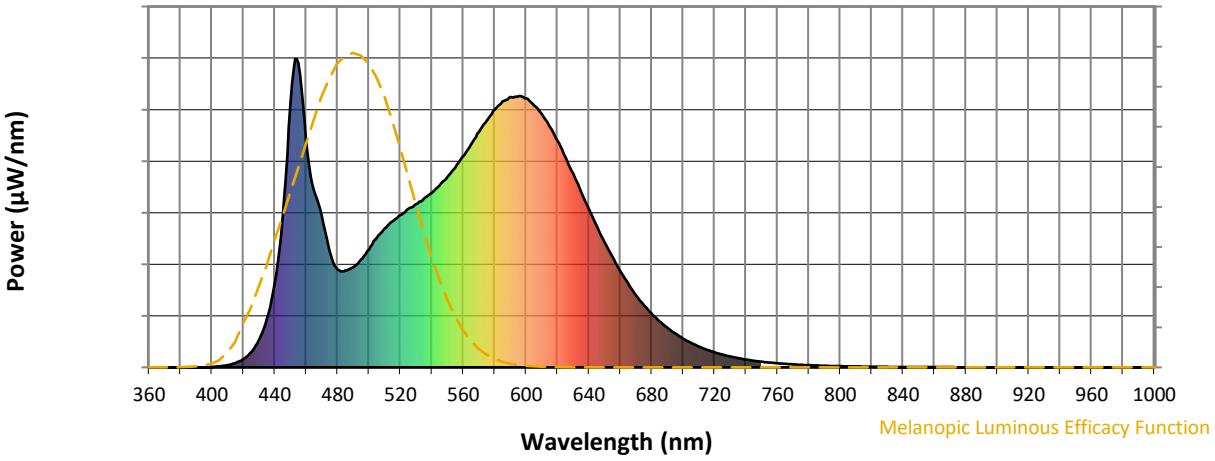


Scotopic Lumens: NR **S/P: 1.72**

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	325	NR	620	735	NR	750	18	NR	880	0	NR
365	0	NR	495	350	NR	625	682	NR	755	16	NR	885	0	NR
370	0	NR	500	382	NR	630	629	NR	760	13	NR	890	0	NR
375	0	NR	505	421	NR	635	570	NR	765	11	NR	895	0	NR
380	0	NR	510	450	NR	640	514	NR	770	10	NR	900	0	NR
385	0	NR	515	474	NR	645	458	NR	775	8	NR	905	0	NR
390	0	NR	520	494	NR	650	406	NR	780	7	NR	910	0	NR
395	0	NR	525	513	NR	655	358	NR	785	6	NR	915	0	NR
400	2	NR	530	529	NR	660	312	NR	790	5	NR	920	0	NR
405	4	NR	535	548	NR	665	271	NR	795	4	NR	925	0	NR
410	8	NR	540	565	NR	670	234	NR	800	4	NR	930	0	NR
415	14	NR	545	591	NR	675	202	NR	805	3	NR	935	0	NR
420	27	NR	550	618	NR	680	174	NR	810	3	NR	940	0	NR
425	50	NR	555	649	NR	685	149	NR	815	2	NR	945	0	NR
430	89	NR	560	685	NR	690	129	NR	820	2	NR	950	0	NR
435	159	NR	565	723	NR	695	110	NR	825	2	NR	955	0	NR
440	272	NR	570	762	NR	700	93	NR	830	2	NR	960	0	NR
445	486	NR	575	800	NR	705	80	NR	835	1	NR	965	0	NR
450	852	NR	580	835	NR	710	67	NR	840	1	NR	970	0	NR
455	988	NR	585	862	NR	715	57	NR	845	1	NR	975	0	NR
460	735	NR	590	876	NR	720	49	NR	850	1	NR	980	0	NR
465	572	NR	595	879	NR	725	42	NR	855	1	NR	985	0	NR
470	486	NR	600	872	NR	730	35	NR	860	1	NR	990	0	NR
475	375	NR	605	850	NR	735	30	NR	865	1	NR	995	0	NR
480	317	NR	610	821	NR	740	25	NR	870	1	NR	1000	0	NR
485	314	NR	615	782	NR	745	22	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.62**

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	325	NR	620	735	NR	750	18	NR	880	0	NR
365	0	NR	495	350	NR	625	682	NR	755	16	NR	885	0	NR
370	0	NR	500	382	NR	630	629	NR	760	13	NR	890	0	NR
375	0	NR	505	421	NR	635	570	NR	765	11	NR	895	0	NR
380	0	NR	510	450	NR	640	514	NR	770	10	NR	900	0	NR
385	0	NR	515	474	NR	645	458	NR	775	8	NR	905	0	NR
390	0	NR	520	494	NR	650	406	NR	780	7	NR	910	0	NR
395	0	NR	525	513	NR	655	358	NR	785	6	NR	915	0	NR
400	2	NR	530	529	NR	660	312	NR	790	5	NR	920	0	NR
405	4	NR	535	548	NR	665	271	NR	795	4	NR	925	0	NR
410	8	NR	540	565	NR	670	234	NR	800	4	NR	930	0	NR
415	14	NR	545	591	NR	675	202	NR	805	3	NR	935	0	NR
420	27	NR	550	618	NR	680	174	NR	810	3	NR	940	0	NR
425	50	NR	555	649	NR	685	149	NR	815	2	NR	945	0	NR
430	89	NR	560	685	NR	690	129	NR	820	2	NR	950	0	NR
435	159	NR	565	723	NR	695	110	NR	825	2	NR	955	0	NR
440	272	NR	570	762	NR	700	93	NR	830	2	NR	960	0	NR
445	486	NR	575	800	NR	705	80	NR	835	1	NR	965	0	NR
450	852	NR	580	835	NR	710	67	NR	840	1	NR	970	0	NR
455	988	NR	585	862	NR	715	57	NR	845	1	NR	975	0	NR
460	735	NR	590	876	NR	720	49	NR	850	1	NR	980	0	NR
465	572	NR	595	879	NR	725	42	NR	855	1	NR	985	0	NR
470	486	NR	600	872	NR	730	35	NR	860	1	NR	990	0	NR
475	375	NR	605	850	NR	735	30	NR	865	1	NR	995	0	NR
480	317	NR	610	821	NR	740	25	NR	870	1	NR	1000	0	NR
485	314	NR	615	782	NR	745	22	NR	875	0	NR			

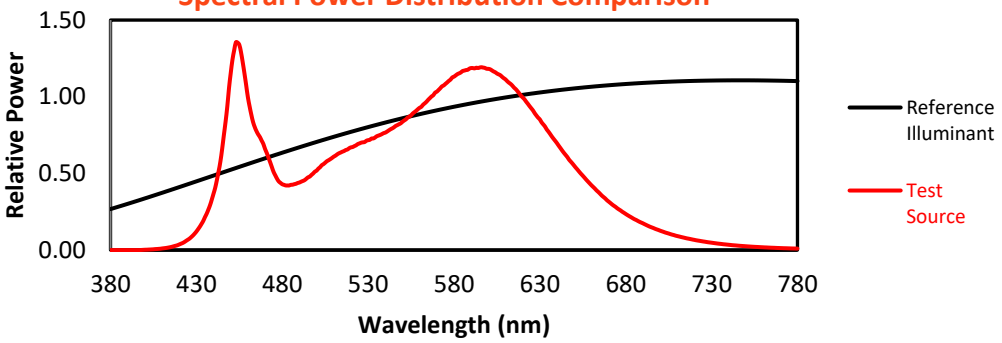
REPORT NUMBER: SP1-2407-168-3

TM-30-18

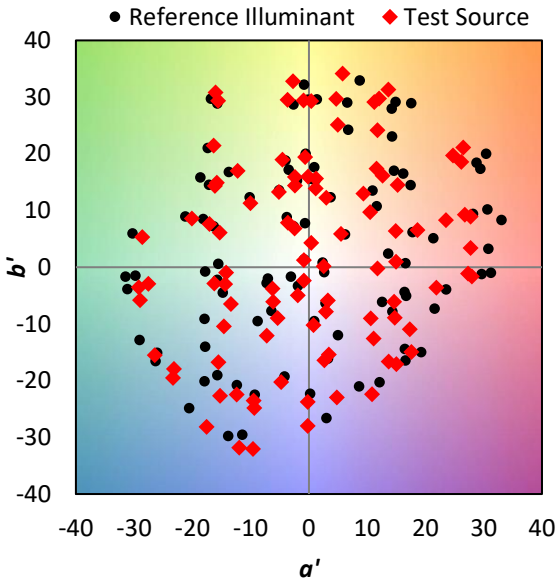
Summary

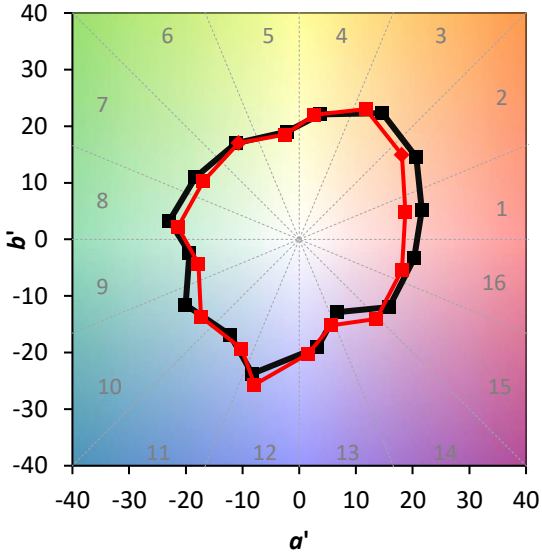
R_f = 82.8
R_g = 93.7
CIE R_a = 82.7
R_9 = 4.8

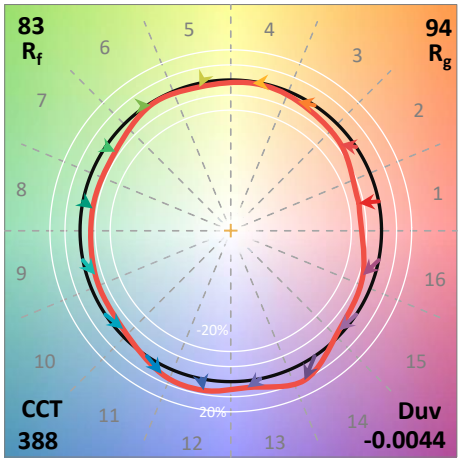
Spectral Power Distribution Comparison

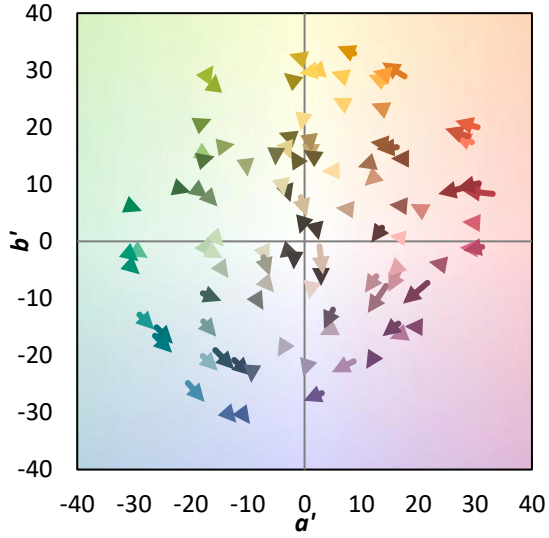


Color Vector Graphics







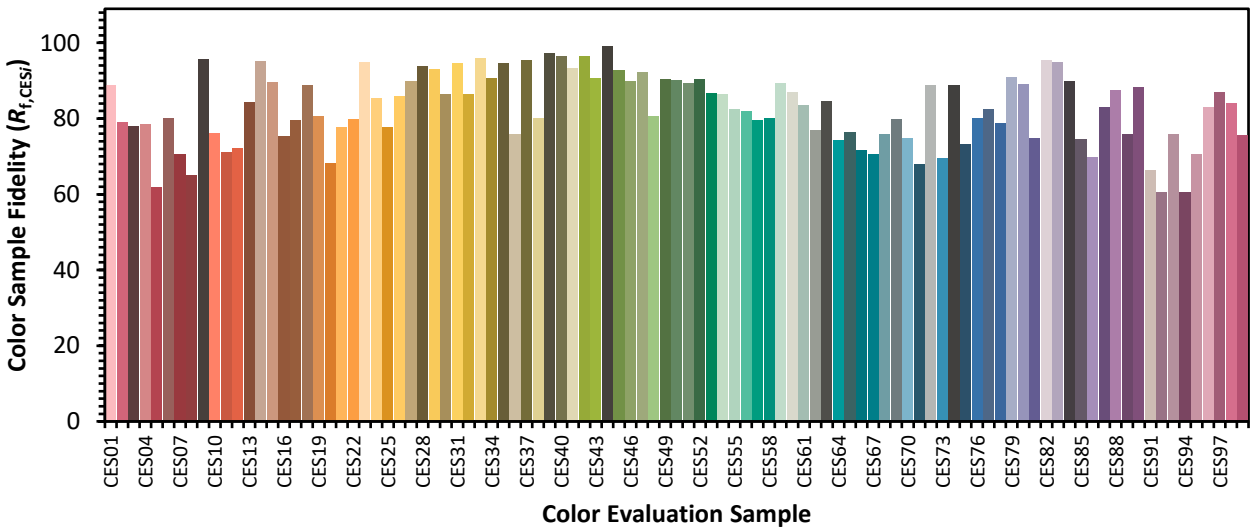


REPORT NUMBER: SP1-2407-168-3

TM-30-18

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

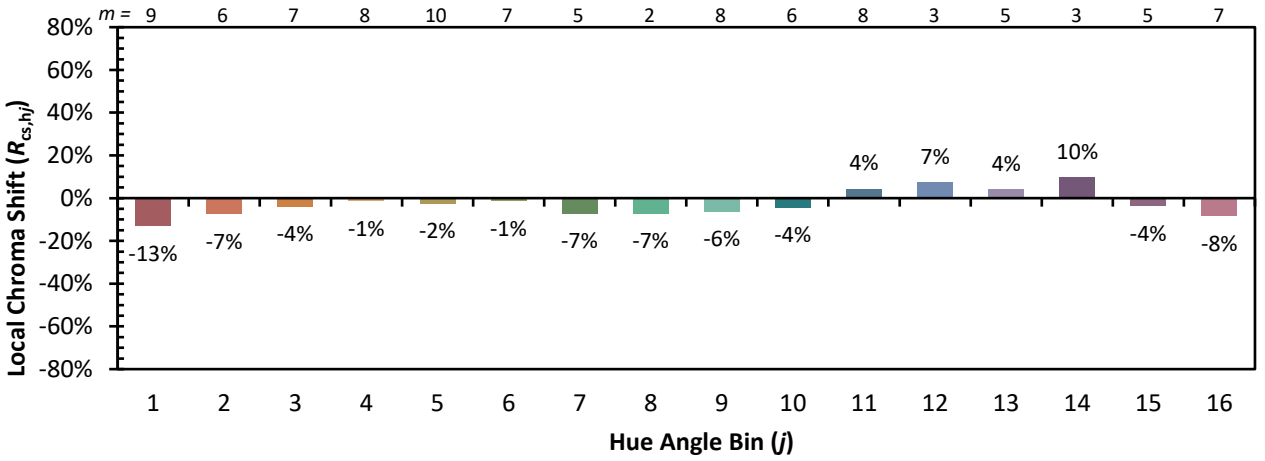
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 80
CES02 = 62	CES27 = 90	CES52 = 91	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 87	CES78 = 79
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 91
CES05 = 48	CES30 = 86	CES55 = 83	CES80 = 89
CES06 = 51	CES31 = 95	CES56 = 82	CES81 = 75
CES07 = 41	CES32 = 86	CES57 = 80	CES82 = 95
CES08 = 40	CES33 = 96	CES58 = 80	CES83 = 95
CES09 = 29	CES34 = 91	CES59 = 89	CES84 = 90
CES10 = 75	CES35 = 95	CES60 = 87	CES85 = 75
CES11 = 58	CES36 = 76	CES61 = 83	CES86 = 70
CES12 = 64	CES37 = 95	CES62 = 77	CES87 = 83
CES13 = 43	CES38 = 80	CES63 = 85	CES88 = 88
CES14 = 74	CES39 = 97	CES64 = 74	CES89 = 76
CES15 = 71	CES40 = 96	CES65 = 76	CES90 = 88
CES16 = 47	CES41 = 93	CES66 = 72	CES91 = 66
CES17 = 49	CES42 = 96	CES67 = 71	CES92 = 60
CES18 = 56	CES43 = 91	CES68 = 76	CES93 = 76
CES19 = 72	CES44 = 99	CES69 = 80	CES94 = 61
CES20 = 65	CES45 = 93	CES70 = 75	CES95 = 71
CES21 = 86	CES46 = 90	CES71 = 68	CES96 = 83
CES22 = 78	CES47 = 92	CES72 = 89	CES97 = 87
CES23 = 91	CES48 = 81	CES73 = 70	CES98 = 84
CES24 = 90	CES49 = 90	CES74 = 89	CES99 = 76
CES25 = 71	CES50 = 90	CES75 = 73	

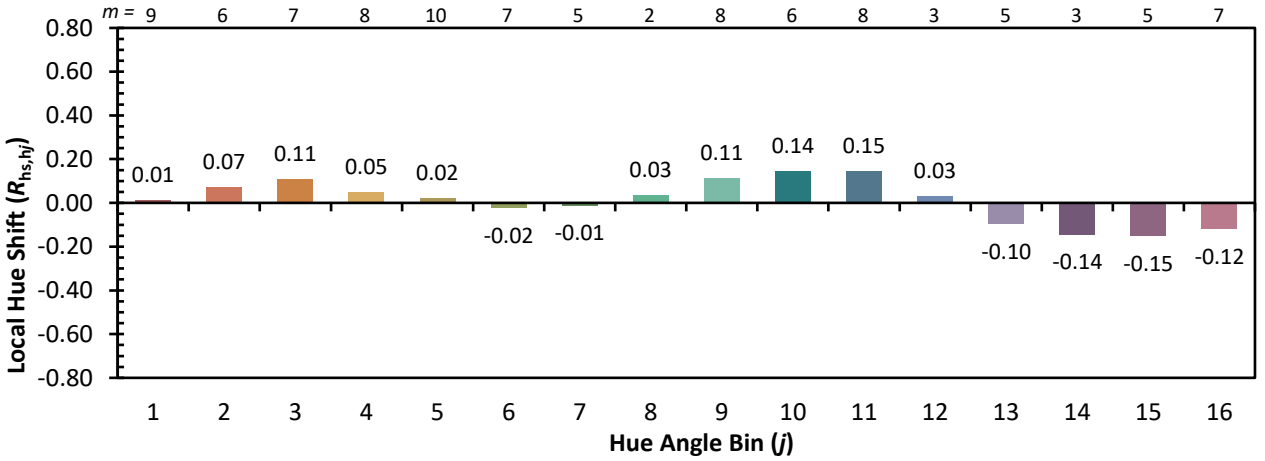


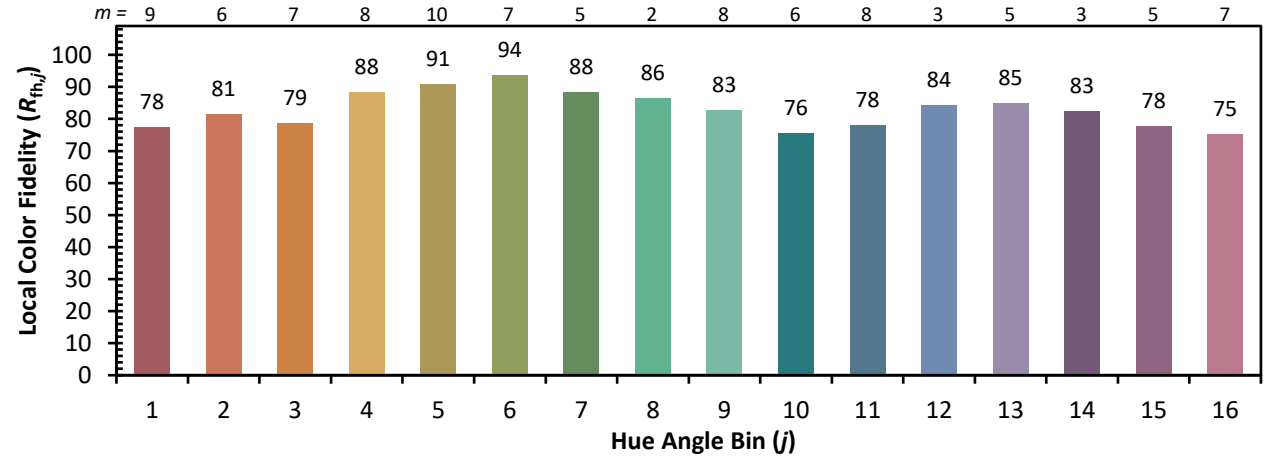
REPORT NUMBER: SP1-2407-168-3

TM-30-18

Color Rendition by Hue-Angle Bin







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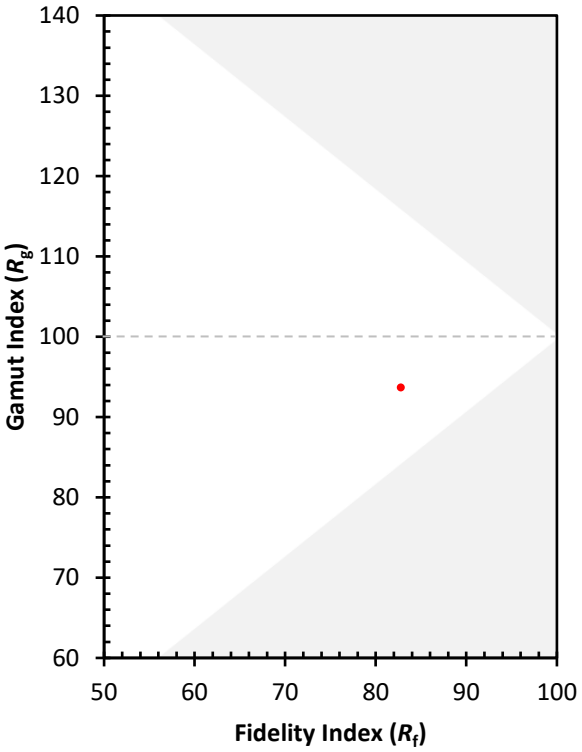
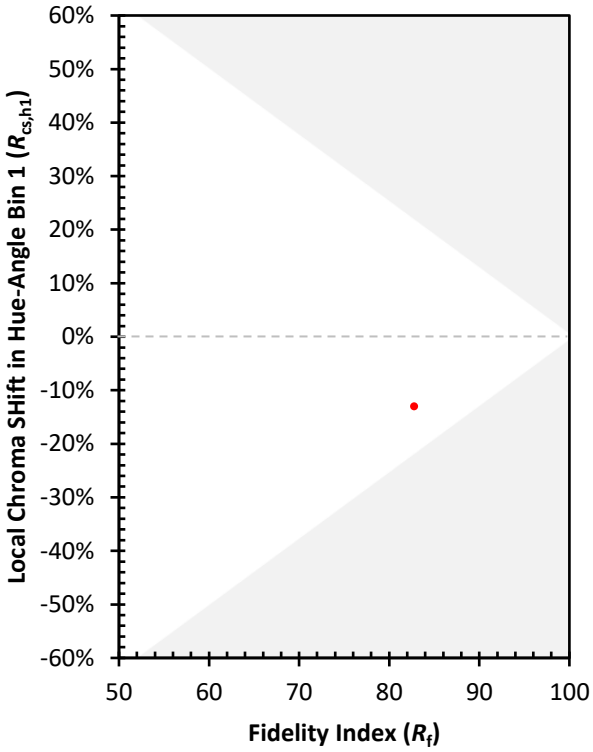
Measure Comparisons





(END OF REPORT)