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: P979163

Luminaire Tested: **WPLLED38S-140W-3000K**

Issue Date: 03/31/2025

Report Generated By 670245763

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P979163
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPLLED38S-140W-3000K
Description:	LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @140W-3000K
Light Source:	3000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	18816.8 lumens
Efficiency:	N/A
Efficacy:	137.1 lumens/watt
Luminous Opening:	Rectangular w/ Sides (W: 1.25' x L: 0.33' x H: 0.58')
IES Classification:	Type IV - Short
BUG Rating:	B3 - U5 - G5

Input Watts (W):	137.2
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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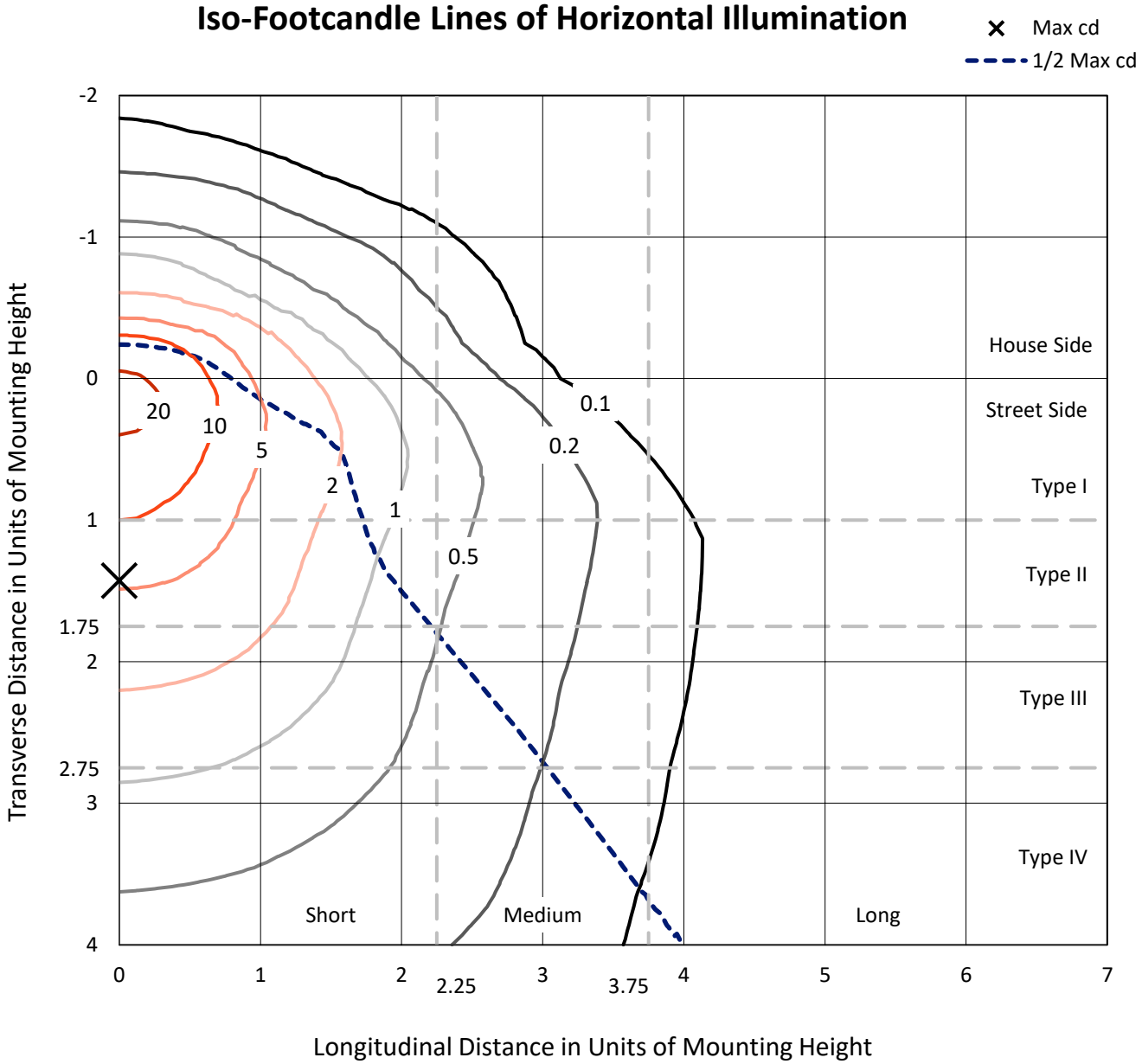
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 23.6 fc
Type IV - Short - N/A

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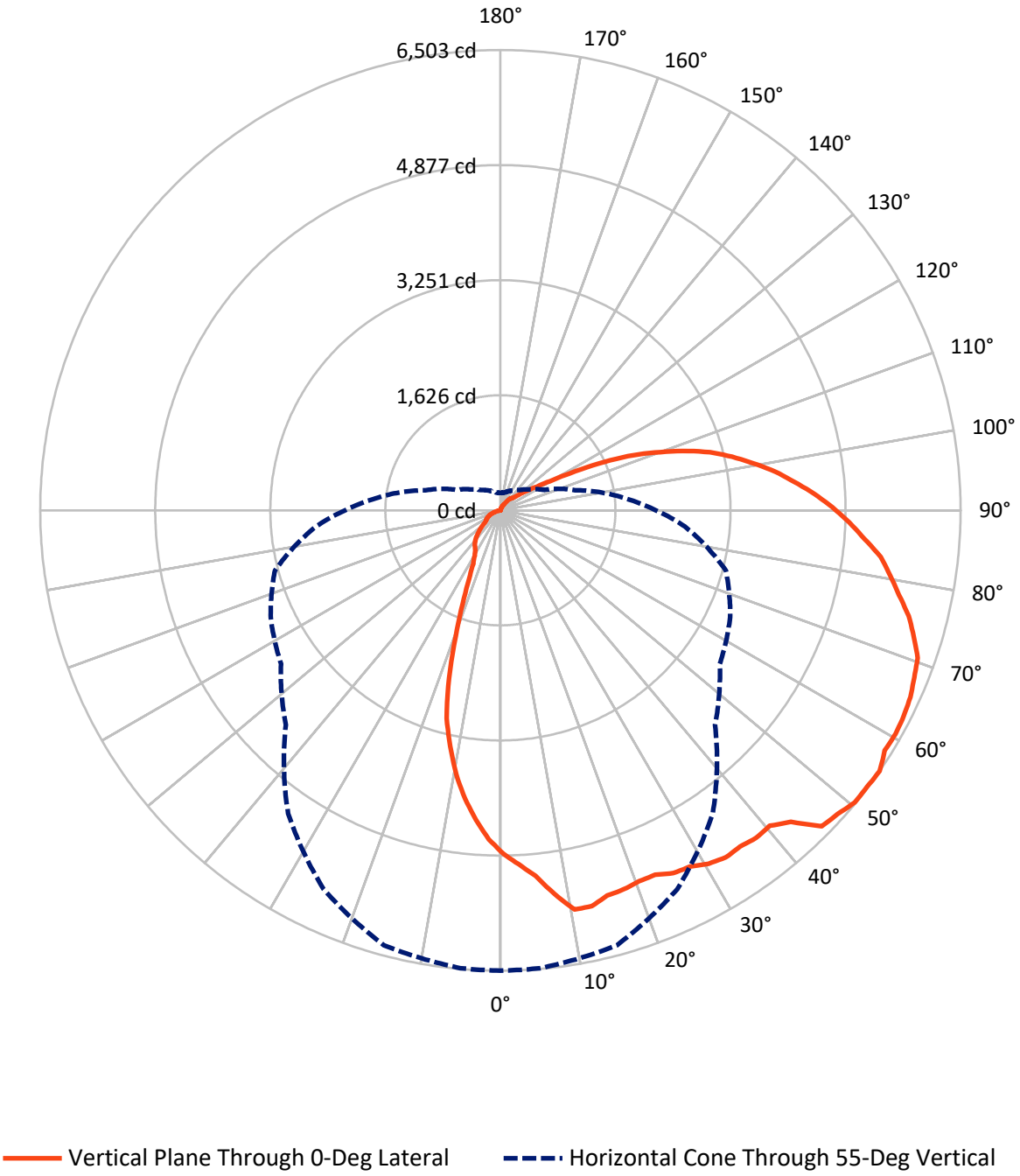
Luminous Intensity Polar Plot



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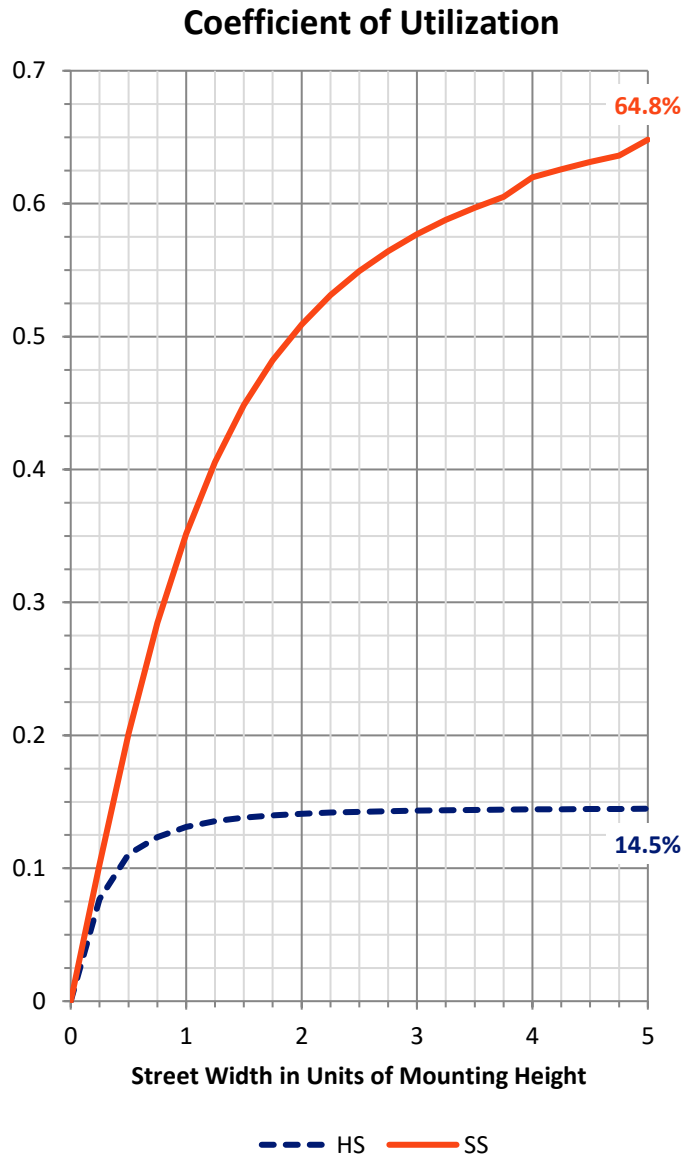
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2764.2	105.8	2870.0
	% Fixture	14.7	0.6	15.3
Street Side	Lumens	13374.5	2572.3	15946.8
	% Fixture	71.1	13.7	84.7
Total	Lumens	16138.7	2678.1	18816.8
	% Fixture	85.8	14.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.8	2.4
10°-20°	1274.5	6.8
20°-30°	1751.8	9.3
30°-40°	2030.4	10.8
40°-50°	2218.5	11.8
50°-60°	2348.8	12.5
60°-70°	2320.1	12.3
70°-80°	2071.1	11.0
80°-90°	1665.7	8.9
90°-100°	1237.0	6.6
100°-110°	792.3	4.2
110°-120°	363.6	1.9
120°-130°	147.1	0.8
130°-140°	77.0	0.4
140°-150°	38.9	0.2
150°-160°	15.2	0.1
160°-170°	5.4	0.0
170°-180°	1.5	0.0
0°-90°	16138.7	85.8
0°-180°	18816.8	100.0



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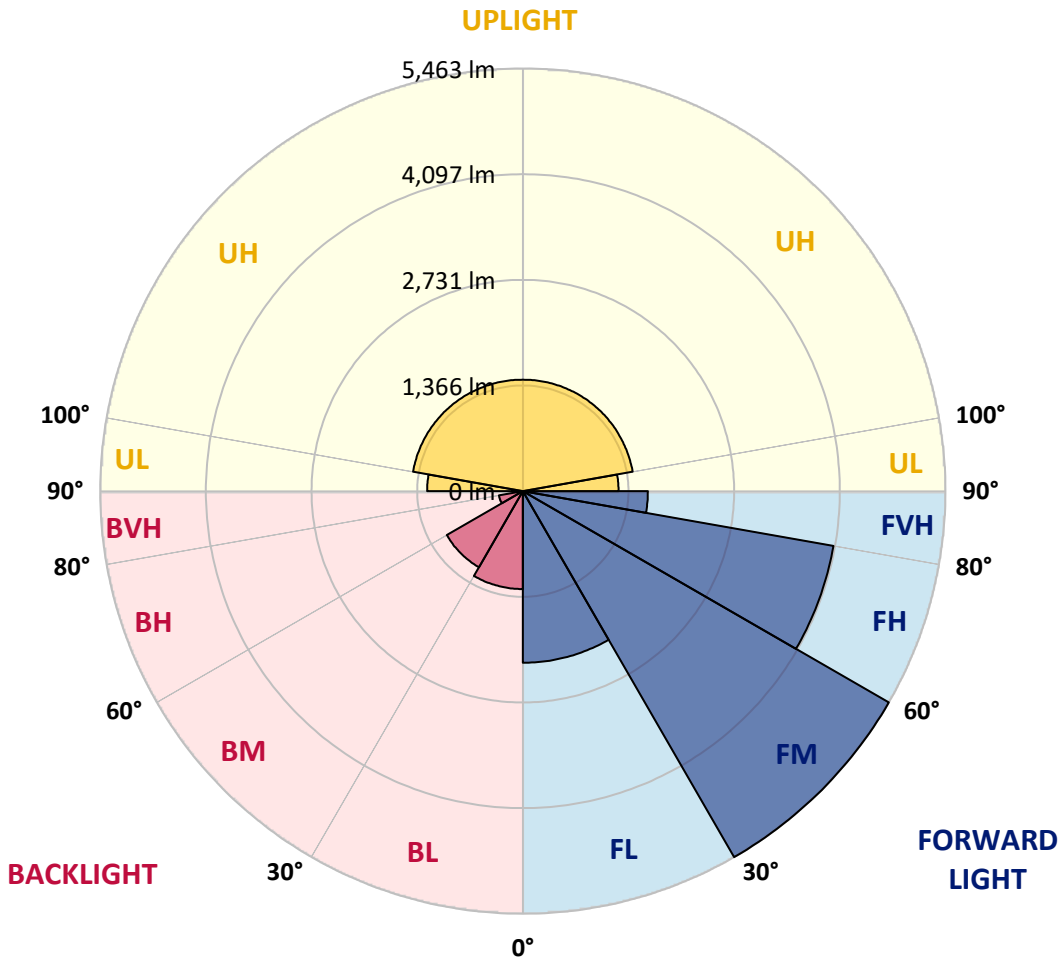
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2218.3	11.8			
FM	(30°-60°)	5462.5	29.0			
FH	(60°-80°)	4077.3	21.7			G2/5000
FVH	(80°-90°)	1616.4	8.6			G5
BL	(0°-30°)	1265.8	6.7	B3/2500		
BM	(30°-60°)	1135.1	6.0	B2/2500		
BH	(60°-80°)	313.9	1.7	B1/500		G1/500
BVH	(80°-90°)	49.4	0.3			G1/100
UL	(90°-100°)	1237.0	6.6		U5	
UH	(100°-180°)	1441.1	7.7		U5	

BUG Rating: B3-U5-G5
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3
2.5°	5008.4	5008.4	5005.0	4990.6	4980.5	4987.3	4961.9	4907.9	4882.6	4858.9	4837.0
5°	5185.6	5179.7	5170.4	5137.5	5071.7	4999.9	4979.7	4921.4	4887.6	4839.5	4802.4
7.5°	5470.1	5508.1	5445.6	5329.1	5216.9	5199.1	5143.4	5072.5	4976.3	4866.5	4815.9
10°	5734.3	5768.1	5711.5	5638.9	5589.1	5456.6	5234.6	5119.8	4984.7	4829.4	4764.4
12.5°	5736.9	5765.6	5668.5	5664.3	5730.1	5616.1	5401.7	5118.9	4936.6	4757.6	4690.1
15°	5647.4	5683.7	5606.9	5694.7	5662.6	5618.7	5522.4	5211.8	4951.8	4738.2	4638.6
17.5°	5630.5	5678.6	5603.5	5650.8	5630.5	5562.1	5580.7	5283.5	4918.0	4670.7	4555.9
20°	5594.2	5641.5	5596.7	5556.2	5525.8	5498.8	5481.1	5356.1	4886.8	4598.9	4458.8
22.5°	5591.7	5615.3	5584.1	5515.7	5449.0	5413.5	5359.5	5335.0	4857.3	4496.0	4353.3
25°	5677.8	5703.1	5617.8	5529.2	5367.1	5309.7	5212.6	5197.4	4810.8	4397.2	4228.4
27.5°	5701.4	5726.7	5628.8	5529.2	5370.5	5186.5	5108.8	5032.8	4755.1	4254.5	4093.3
30°	5793.4	5827.2	5719.1	5536.8	5355.3	5089.4	4951.0	4853.0	4640.3	4119.5	3905.9
32.5°	5845.8	5888.8	5818.7	5601.8	5326.6	5041.3	4783.8	4691.0	4558.4	3954.0	3747.2
35°	5833.1	5894.7	5830.6	5647.4	5332.5	4986.4	4626.0	4526.3	4401.4	3780.1	3549.7
37.5°	5871.1	5930.2	5830.6	5639.8	5308.0	4907.9	4556.7	4340.6	4226.7	3589.3	3326.0
40°	5859.3	5910.8	5762.2	5603.5	5276.8	4822.6	4439.4	4186.2	4028.3	3376.6	3103.9
42.5°	6016.3	6049.2	5843.2	5593.4	5195.8	4708.7	4337.3	4062.1	3846.0	3196.8	2914.9
45°	6365.8	6406.3	6090.6	5675.2	5167.1	4612.4	4204.7	3932.1	3700.8	3047.4	2740.1
47.5°	6412.2	6444.3	6252.6	5789.2	5195.8	4527.2	4132.1	3844.3	3568.2	2930.1	2594.1
50°	6486.5	6494.9	6302.4	5871.1	5211.0	4458.0	4037.6	3782.6	3479.6	2815.2	2464.1
52.5°	6487.3	6495.8	6335.4	5904.8	5212.6	4376.9	3946.4	3693.2	3399.4	2717.3	2343.4
55°	6502.5	6491.5	6359.8	5906.5	5229.5	4288.3	3783.5	3581.7	3298.9	2616.0	2197.3
57.5°	6402.9	6384.3	6281.3	5893.0	5238.0	4215.7	3650.1	3462.7	3223.8	2524.9	2061.4
60°	6413.9	6366.6	6266.1	5859.3	5191.5	4106.0	3536.2	3320.1	3134.3	2413.4	1911.2
62.5°	6396.1	6339.6	6232.4	5833.9	5140.9	4031.7	3418.8	3169.8	3017.8	2297.8	1733.9
65°	6364.1	6296.5	6202.8	5814.5	5086.0	3958.2	3279.5	3035.6	2914.0	2103.6	1514.4
67.5°	6306.7	6229.8	6137.8	5752.1	5025.2	3876.3	3140.2	2877.7	2753.6	1878.2	1280.6
70°	6254.3	6170.8	6071.1	5666.0	4956.0	3767.5	3018.7	2721.5	2583.1	1626.7	1024.0
72.5°	6109.1	6018.8	5920.9	5519.1	4852.2	3665.3	2881.9	2548.5	2357.7	1318.6	771.6
75°	5958.0	5874.5	5768.1	5396.7	4734.9	3541.2	2761.2	2368.7	2115.4	1029.9	567.3
77.5°	5758.0	5659.2	5549.5	5196.6	4555.0	3391.8	2622.8	2190.6	1831.8	761.4	433.1
80°	5584.1	5477.7	5380.6	5032.0	4398.9	3236.5	2498.7	2009.1	1549.0	538.6	354.5
82.5°	5414.4	5286.9	5173.8	4834.5	4203.9	3070.2	2344.2	1848.7	1289.9	392.5	292.1
85°	5159.5	5031.1	4915.5	4596.4	3969.2	2876.9	2206.6	1684.9	1041.7	306.4	243.1
87.5°	4934.9	4841.2	4706.1	4358.4	3731.2	2688.6	2029.3	1506.8	824.7	250.7	204.3
90°	4693.5	4591.3	4461.3	4106.8	3483.8	2494.5	1858.0	1331.2	644.1	216.9	179.0
92.5°	4441.9	4346.5	4212.3	3850.2	3239.0	2313.8	1697.6	1142.1	514.9	191.6	165.5
95°	4172.6	4112.7	3954.9	3612.1	2988.3	2112.1	1527.9	969.9	421.2	177.3	156.2
97.5°	3922.8	3849.3	3706.7	3363.1	2716.5	1929.7	1361.6	804.5	350.3	167.1	149.4
100°	3634.9	3568.2	3423.9	3077.8	2431.2	1724.6	1168.3	657.6	296.3	160.4	145.2
102.5°	3360.6	3312.5	3158.8	2781.5	2142.5	1492.5	972.5	534.3	255.8	157.0	140.1
105°	3072.7	3028.8	2876.0	2476.7	1858.8	1268.8	785.9	433.1	228.8	155.3	136.8
107.5°	2711.4	2687.8	2519.0	2099.4	1547.3	1047.6	639.9	355.4	209.3	153.6	133.4
110°	2329.0	2323.1	2121.4	1743.2	1267.9	839.9	513.2	300.5	194.2	149.4	129.2

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REPORT NUMBER: P979163
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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	*1959.3*	1890.9	1736.4	1347.3	992.7	661.8	414.5	260.8	181.5	143.5	123.2
115°	*1533.0*	1490.8	1324.5	1045.1	769.0	525.1	347.8	227.9	173.1	135.9	116.5
117.5°	*1110.9*	1074.6	962.3	801.1	610.3	439.0	292.9	206.8	164.6	125.8	108.1
120°	*810.4*	800.3	715.0	608.6	506.5	375.6	254.1	187.4	154.5	114.8	97.9
122.5°	*610.3*	603.6	568.1	503.1	434.7	323.3	226.2	172.2	142.7	103.8	88.6
125°	*502.3*	489.6	466.8	425.5	365.5	282.8	207.7	161.2	129.2	92.9	79.4
127.5°	*406.9*	407.7	389.2	355.4	319.1	251.6	194.2	153.6	116.5	81.0	70.9
130°	*334.3*	330.1	324.2	305.6	281.9	231.3	184.9	145.2	103.8	71.8	62.5
132.5°	*280.3*	278.6	274.3	262.5	247.3	214.4	176.4	135.1	92.0	64.2	56.6
135°	*244.8*	245.6	239.7	228.8	224.5	199.2	167.1	122.4	79.4	57.4	51.5
137.5°	*227.9*	227.1	213.6	203.4	202.6	186.6	153.6	108.9	70.1	52.3	48.1
140°	*210.2*	208.5	195.0	184.0	179.8	169.7	138.4	94.5	60.8	48.1	44.7
142.5°	*179.8*	176.4	168.8	162.1	155.3	150.3	119.0	81.0	52.3	43.9	41.4
145°	*136.8*	138.4	139.3	133.4	128.3	124.1	99.6	67.5	46.4	40.5	38.8
147.5°	*110.6*	108.9	109.7	108.1	104.7	97.9	81.9	55.7	41.4	38.0	36.3
150°	*90.3*	88.6	89.5	86.9	84.4	78.5	67.5	46.4	37.1	35.5	34.6
152.5°	*73.4*	73.4	74.3	71.8	69.2	63.3	52.3	38.8	33.8	32.9	32.9
155°	*59.1*	59.9	59.1	58.2	54.9	49.0	40.5	32.9	31.2	31.2	31.2
157.5°	*47.3*	47.3	47.3	46.4	42.2	38.8	32.9	28.7	29.5	30.4	30.4
160°	*35.5*	36.3	36.3	35.5	32.9	28.7	26.2	26.2	27.9	28.7	28.7
162.5°	*25.3*	24.5	26.2	26.2	22.8	21.1	22.8	24.5	27.0	27.9	27.9
165°	*15.2*	15.2	16.9	16.9	16.9	16.9	20.3	23.6	26.2	27.0	27.9
167.5°	*8.4*	8.4	9.3	11.8	12.7	15.2	20.3	23.6	26.2	27.0	27.9
170°	*4.2*	4.2	5.9	9.3	11.8	15.2	21.1	24.5	26.2	27.0	27.9
172.5°	*2.5*	3.4	5.9	9.3	11.8	16.0	21.1	24.5	26.2	27.9	27.9
175°	*3.4*	3.4	5.9	9.3	12.7	16.0	21.1	24.5	27.0	27.9	28.7
177.5°	*3.4*	4.2	6.8	10.1	12.7	16.0	21.9	24.5	27.0	27.9	28.7
180°	*16.0*	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3	4851.3
2.5°	4810.8	4792.3	4767.8	4729.8	4702.8	4690.1	4681.7	4653.0	4655.5	4650.4
5°	4769.5	4707.8	4652.1	4581.2	4506.9	4469.8	4431.8	4409.9	4376.9	4384.5
7.5°	4777.1	4688.4	4577.8	4437.7	4333.9	4254.5	4186.2	4173.5	4127.1	4102.6
10°	4714.6	4584.6	4422.5	4276.5	4131.3	4007.2	3900.8	3881.4	3802.9	3782.6
12.5°	4617.5	4439.4	4248.6	4077.3	3913.5	3707.5	3580.9	3523.5	3442.5	3404.5
15°	4557.6	4328.8	4099.2	3871.3	3630.7	3423.0	3230.6	3114.1	3019.5	3033.9
17.5°	4450.4	4187.8	3911.8	3630.7	3320.9	3075.2	2795.8	2581.4	2483.5	2481.0
20°	4341.5	4033.4	3719.3	3366.5	2985.8	2618.6	2290.2	2016.7	1926.4	1886.7
22.5°	4203.9	3858.6	3488.9	3082.0	2605.1	2103.6	1770.2	1547.3	1434.2	1418.2
25°	4053.6	3660.2	3232.3	2770.5	2150.9	1677.3	1338.8	1148.0	1069.5	1059.4
27.5°	3876.3	3470.3	2989.1	2386.4	1746.6	1284.8	1030.7	898.2	852.6	844.2
30°	3682.2	3244.9	2709.7	1998.1	1391.2	1002.9	836.6	764.8	741.2	737.8
32.5°	3508.3	3036.4	2444.7	1691.7	1120.2	839.1	746.2	697.3	677.9	669.4
35°	3290.5	2780.6	2146.7	1406.4	920.1	748.8	685.5	648.3	635.6	630.6
37.5°	3051.6	2548.5	1872.3	1177.6	804.5	689.7	642.4	614.5	605.3	602.7
40°	2820.3	2311.3	1614.9	982.6	715.0	636.5	601.0	566.4	558.0	558.8
42.5°	2630.4	2101.9	1370.9	821.4	643.2	586.7	547.9	527.6	514.1	510.7
45°	2448.9	1901.9	1148.9	710.8	589.2	528.4	499.7	467.7	452.5	449.9
47.5°	2293.6	1690.8	956.4	649.2	541.9	490.5	441.5	403.5	391.7	389.2
50°	2120.5	1467.1	832.3	600.2	491.3	435.6	390.0	349.5	330.1	330.1
52.5°	1970.3	1274.7	741.2	558.8	449.9	392.5	341.9	302.2	276.9	274.3
55°	*1809.0*	*1093.2*	*680.4*	*513.2*	*407.7*	*345.3*	*300.5*	*262.5*	*246.5*	*247.3*
57.5°	1641.9	954.7	637.3	472.7	360.5	303.9	262.5	234.7	234.7	239.7
60°	1454.5	839.9	602.7	429.7	315.7	264.2	231.3	209.3	213.6	216.9
62.5°	1256.9	750.5	567.3	384.1	277.7	226.2	197.5	187.4	195.8	197.5
65°	1051.8	684.6	526.8	340.2	240.6	197.5	168.8	170.5	176.4	178.1
67.5°	854.3	623.0	472.7	298.0	206.8	162.9	151.9	149.4	157.9	157.9
70°	678.7	571.5	419.5	256.6	173.9	135.9	129.2	126.6	130.8	129.2
72.5°	565.6	513.2	363.0	217.8	142.7	111.4	105.5	104.7	102.1	100.5
75°	482.9	451.6	314.0	181.5	115.6	90.3	79.4	76.8	71.8	71.8
77.5°	417.0	384.1	261.7	149.4	93.7	69.2	54.0	45.6	43.1	41.4
80°	357.9	322.5	216.9	119.9	70.9	45.6	25.3	14.4	9.3	11.0
82.5°	303.1	267.6	180.6	97.1	51.5	22.8	5.1	0.8	0.0	0.0
85°	254.9	222.0	152.8	80.2	42.2	20.3	5.9	1.7	0.0	0.0
87.5°	214.4	187.4	131.7	70.1	38.0	19.4	6.8	2.5	0.8	0.0
90°	186.6	163.8	119.0	63.3	35.5	18.6	6.8	3.4	1.7	1.7
92.5°	168.8	147.7	108.1	58.2	32.9	18.6	7.6	4.2	2.5	2.5
95°	152.8	135.9	98.8	54.9	31.2	18.6	8.4	5.1	4.2	4.2
97.5°	141.0	124.9	92.0	51.5	30.4	18.6	9.3	5.9	5.1	4.2
100°	131.7	116.5	83.6	48.1	28.7	17.7	9.3	6.8	5.1	5.1
102.5°	125.8	109.7	76.8	44.7	27.9	17.7	9.3	6.8	5.1	5.1
105°	120.7	105.5	70.9	43.1	26.2	16.9	9.3	6.8	5.1	5.1
107.5°	116.5	101.3	65.8	40.5	25.3	16.0	9.3	6.8	5.1	5.1
110°	112.3	93.7	60.8	38.0	23.6	15.2	9.3	5.9	5.1	4.2

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P979163
CATALOG NUMBER: WPLLED38S-140W-3000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	106.4	85.3	55.7	35.5	22.8	14.4	8.4	5.9	4.2	4.2
115°	100.5	75.1	50.6	33.8	21.9	13.5	8.4	5.9	4.2	3.4
117.5°	92.9	66.7	46.4	31.2	21.1	12.7	8.4	5.1	3.4	3.4
120°	83.6	59.1	43.1	30.4	20.3	11.8	7.6	5.1	3.4	3.4
122.5°	75.1	54.0	40.5	28.7	19.4	11.8	7.6	5.1	3.4	2.5
125°	66.7	49.8	38.0	27.9	18.6	11.0	7.6	5.1	2.5	2.5
127.5°	59.1	45.6	36.3	27.9	18.6	11.0	7.6	5.1	2.5	2.5
130°	54.0	43.1	34.6	27.0	17.7	11.0	8.4	5.1	3.4	2.5
132.5°	49.8	40.5	33.8	27.0	17.7	11.8	8.4	5.1	3.4	3.4
135°	46.4	38.8	32.9	26.2	16.9	11.8	8.4	5.1	3.4	3.4
137.5°	43.9	37.1	32.1	25.3	16.9	11.8	9.3	5.9	4.2	3.4
140°	41.4	35.5	31.2	25.3	16.9	12.7	9.3	5.9	4.2	4.2
142.5°	38.8	34.6	29.5	24.5	16.9	12.7	9.3	5.9	4.2	4.2
145°	36.3	32.9	28.7	23.6	16.9	12.7	9.3	5.9	4.2	4.2
147.5°	34.6	32.1	27.9	22.8	16.0	12.7	9.3	5.9	4.2	3.4
150°	32.9	30.4	27.0	21.9	16.0	12.7	9.3	5.9	4.2	3.4
152.5°	32.1	29.5	26.2	21.1	16.0	12.7	9.3	5.9	3.4	3.4
155°	30.4	28.7	25.3	21.1	16.0	12.7	9.3	5.9	3.4	3.4
157.5°	29.5	27.9	24.5	21.1	16.0	11.8	9.3	5.1	3.4	3.4
160°	28.7	27.0	24.5	21.1	16.0	11.8	9.3	5.1	3.4	3.4
162.5°	27.9	27.0	24.5	21.1	16.0	11.8	8.4	5.1	3.4	3.4
165°	27.0	26.2	24.5	21.1	15.2	11.8	8.4	5.1	2.5	2.5
167.5°	27.9	26.2	24.5	21.1	15.2	11.8	8.4	4.2	2.5	2.5
170°	27.9	26.2	24.5	20.3	15.2	11.0	8.4	4.2	2.5	1.7
172.5°	27.9	27.0	24.5	20.3	15.2	11.8	8.4	4.2	2.5	1.7
175°	27.9	27.0	24.5	21.1	15.2	11.8	8.4	4.2	2.5	1.7
177.5°	27.9	27.0	24.5	21.1	15.2	11.0	8.4	4.2	2.5	1.7
180°	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0

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: SP1-2407-168-1

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 3000k

Data in this report applies to families of products including LSDL-92S-100W 3000k.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

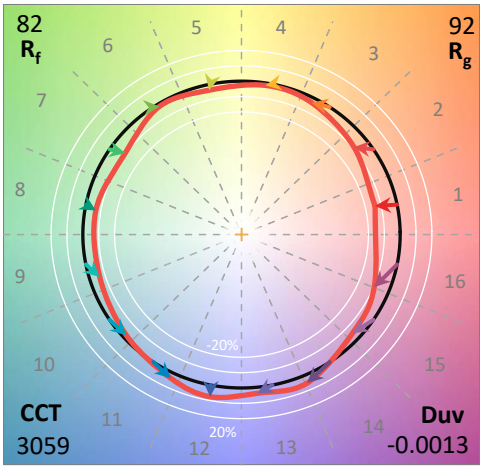
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-168-1
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 3000k**
Description:	Lumark Wallpack 100W

Spectral Parameters

CCT (K):	3059	CRI (Ra):	79.3		
CIE u':	0.2490	R1:	78.1	R9:	-8.3
CIE v':	0.5184	R2:	92.3	R10:	82.8
Duv:	-0.0013	R3:	91.2	R11:	73.1
CIE x:	0.4310	R4:	74.6	R12:	70.5
CIE y:	0.3988	R5:	78.8	R13:	81.8
CIE z:	0.1702	R6:	90.5	R14:	95.7
Peak Wavelength (nm):	600	R7:	77.6	R15:	69.8
Dominant Wavelength (nm):	583	R8:	50.9		
Purity:	49.0643				

Rf:	81.8
Rg:	91.9



Test Conditions

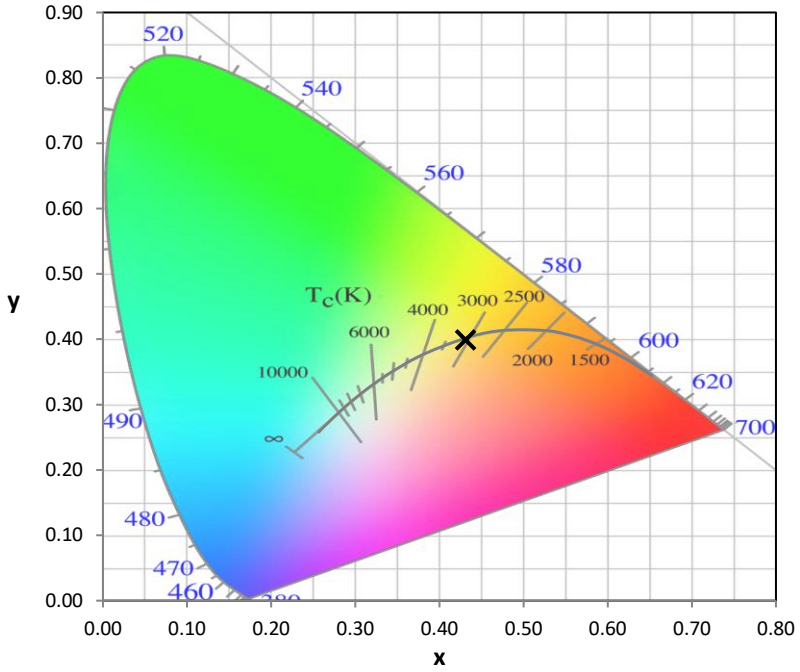
Stabilization Time:	51M
Operation Time:	1H 51M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-1

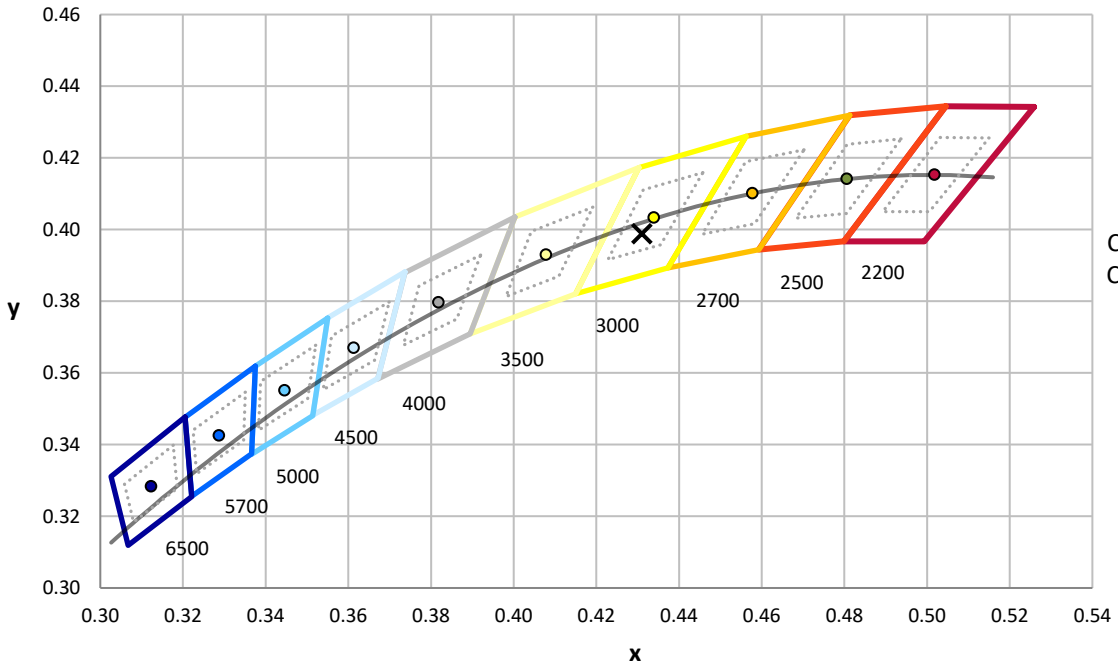
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-1

CIE 1931 Chromaticity Diagram



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

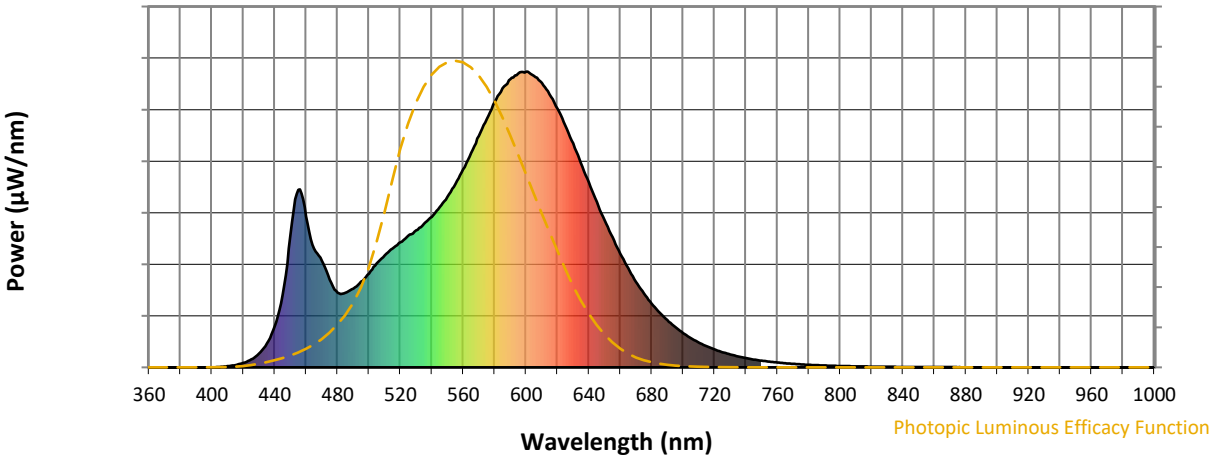


CCT = 3059K
CIE x = 0.4310
CIE y = 0.3988
Duv = -0.0013

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-168-1

Photopic Flux vs. Wavelength

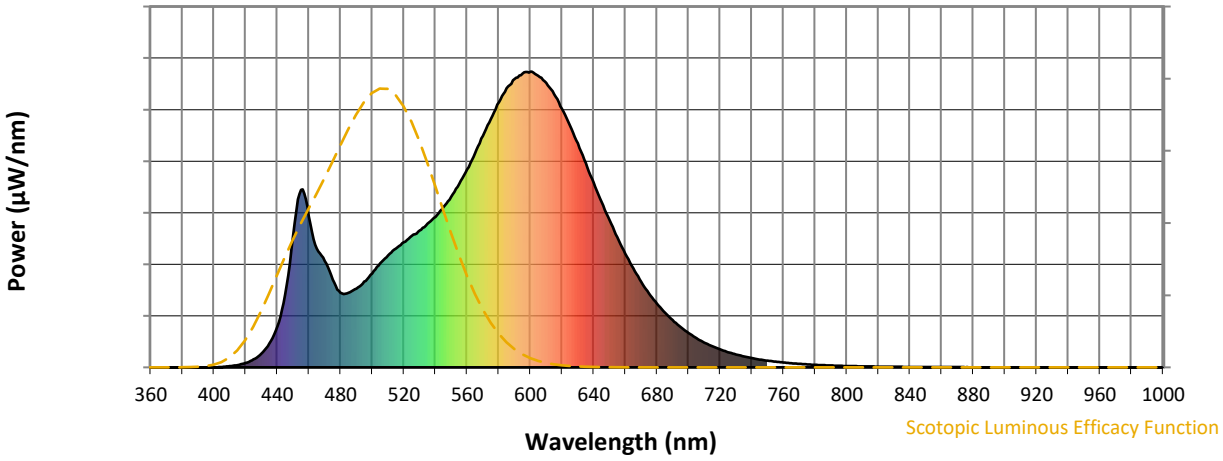


Photopic Lumens: NR

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	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-1

Scotopic Flux vs. Wavelength

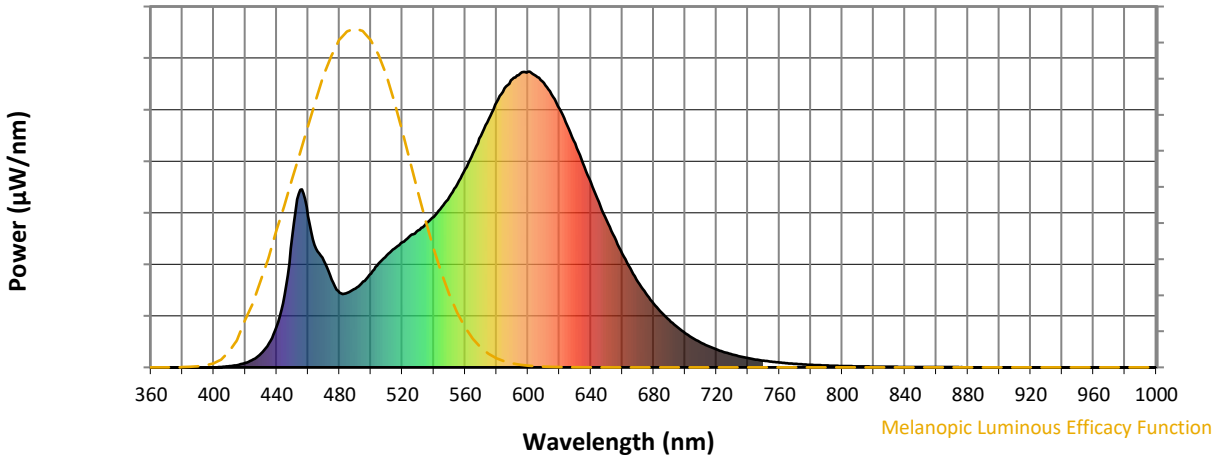


Scotopic Lumens: NR **S/P: 1.39**

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	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.77**

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	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

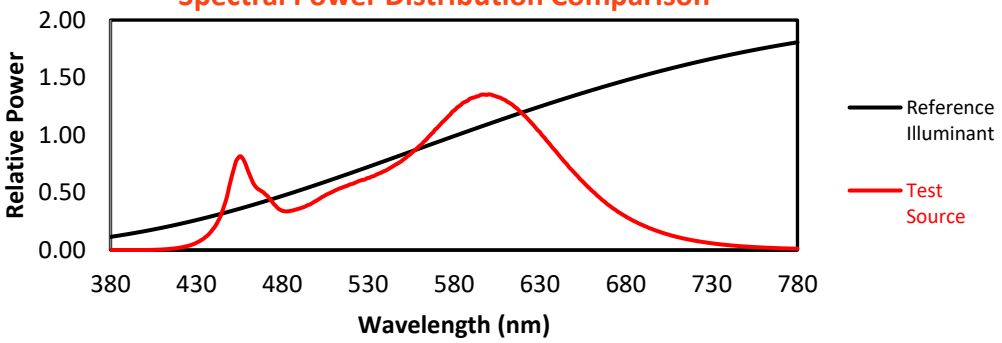
REPORT NUMBER: SP1-2407-168-1

TM-30-18

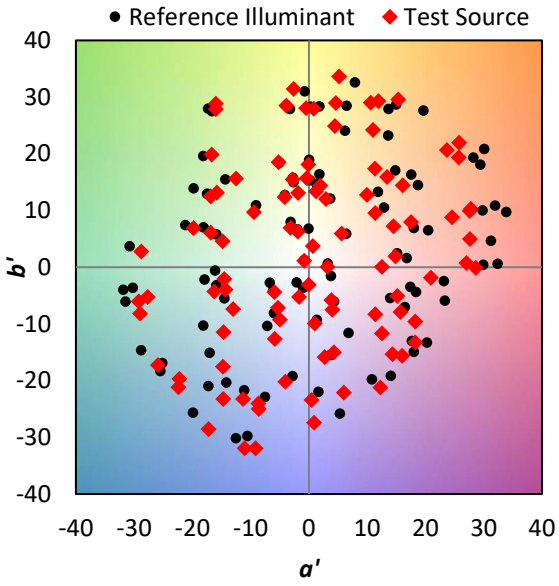
Summary

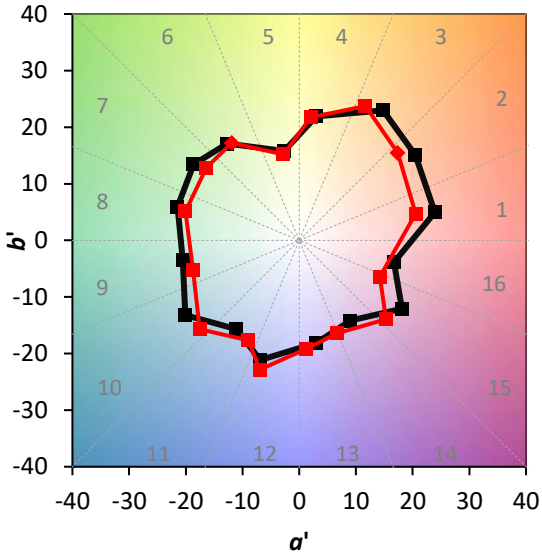
R_f = 81.8
R_g = 91.9
CIE R_a = 79.3
R_9 = -8.3

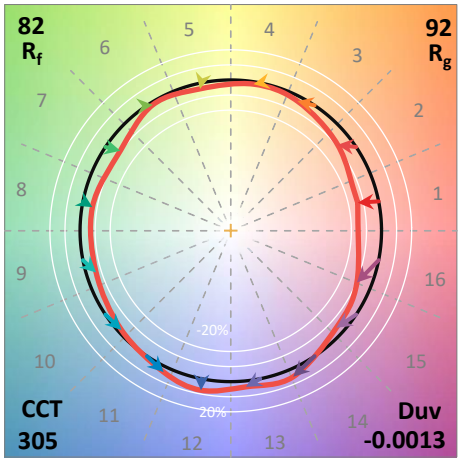
Spectral Power Distribution Comparison

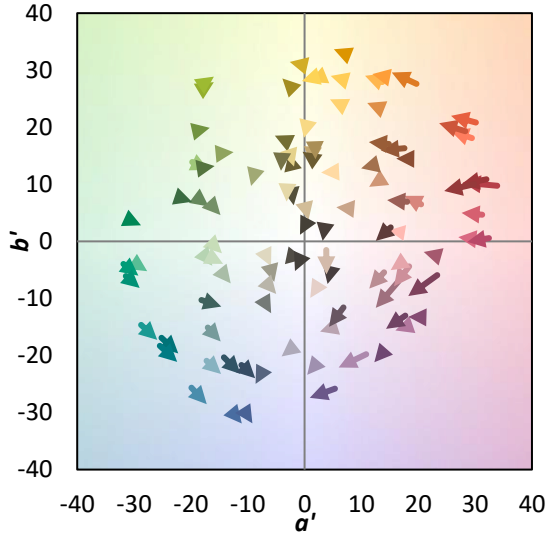


Color Vector Graphics







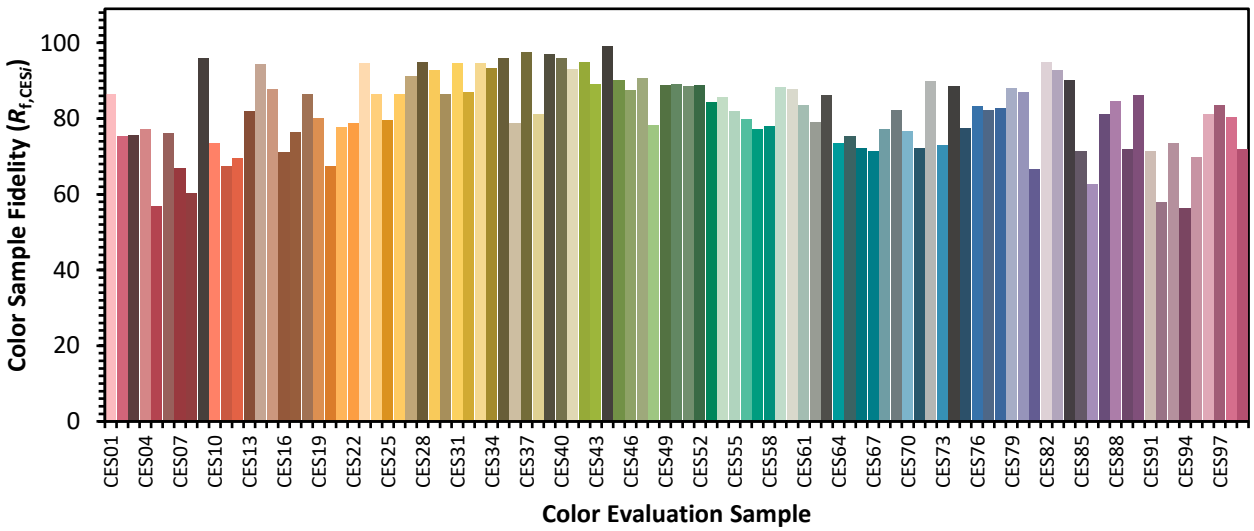


REPORT NUMBER: SP1-2407-168-1

TM-30-18

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

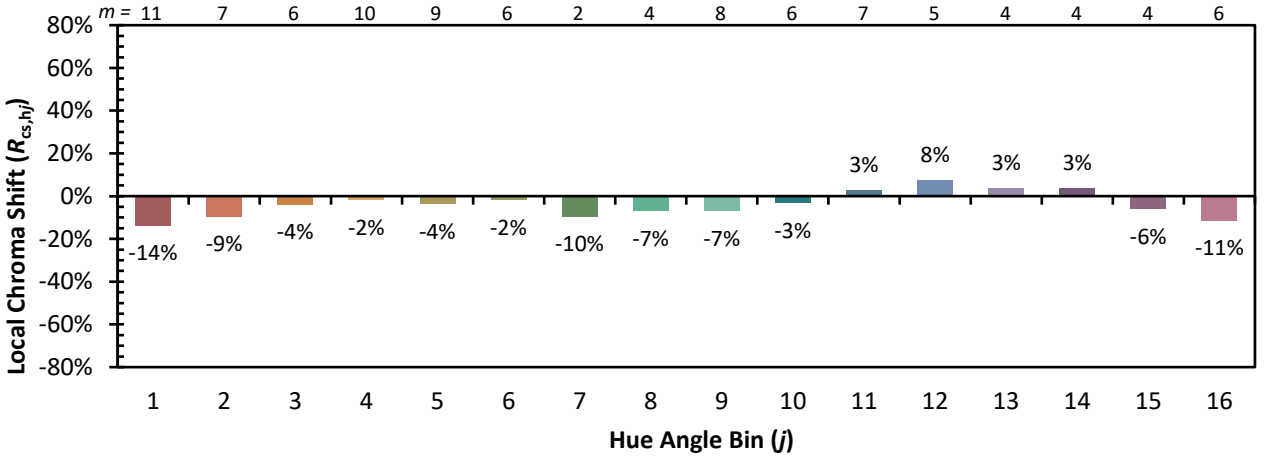
CES01 = 86	CES26 = 86	CES51 = 88	CES76 = 83
CES02 = 63	CES27 = 91	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 95	CES53 = 84	CES78 = 83
CES04 = 71	CES29 = 93	CES54 = 86	CES79 = 88
CES05 = 49	CES30 = 86	CES55 = 82	CES80 = 87
CES06 = 51	CES31 = 95	CES56 = 80	CES81 = 67
CES07 = 42	CES32 = 87	CES57 = 77	CES82 = 95
CES08 = 40	CES33 = 95	CES58 = 78	CES83 = 93
CES09 = 29	CES34 = 93	CES59 = 88	CES84 = 90
CES10 = 76	CES35 = 96	CES60 = 88	CES85 = 71
CES11 = 59	CES36 = 79	CES61 = 84	CES86 = 63
CES12 = 65	CES37 = 98	CES62 = 79	CES87 = 81
CES13 = 43	CES38 = 81	CES63 = 86	CES88 = 85
CES14 = 74	CES39 = 97	CES64 = 73	CES89 = 72
CES15 = 71	CES40 = 96	CES65 = 75	CES90 = 86
CES16 = 47	CES41 = 93	CES66 = 72	CES91 = 71
CES17 = 50	CES42 = 95	CES67 = 71	CES92 = 58
CES18 = 56	CES43 = 89	CES68 = 77	CES93 = 74
CES19 = 72	CES44 = 99	CES69 = 82	CES94 = 56
CES20 = 66	CES45 = 90	CES70 = 77	CES95 = 70
CES21 = 87	CES46 = 88	CES71 = 72	CES96 = 81
CES22 = 79	CES47 = 91	CES72 = 90	CES97 = 84
CES23 = 92	CES48 = 78	CES73 = 73	CES98 = 80
CES24 = 91	CES49 = 89	CES74 = 89	CES99 = 72
CES25 = 72	CES50 = 89	CES75 = 78	

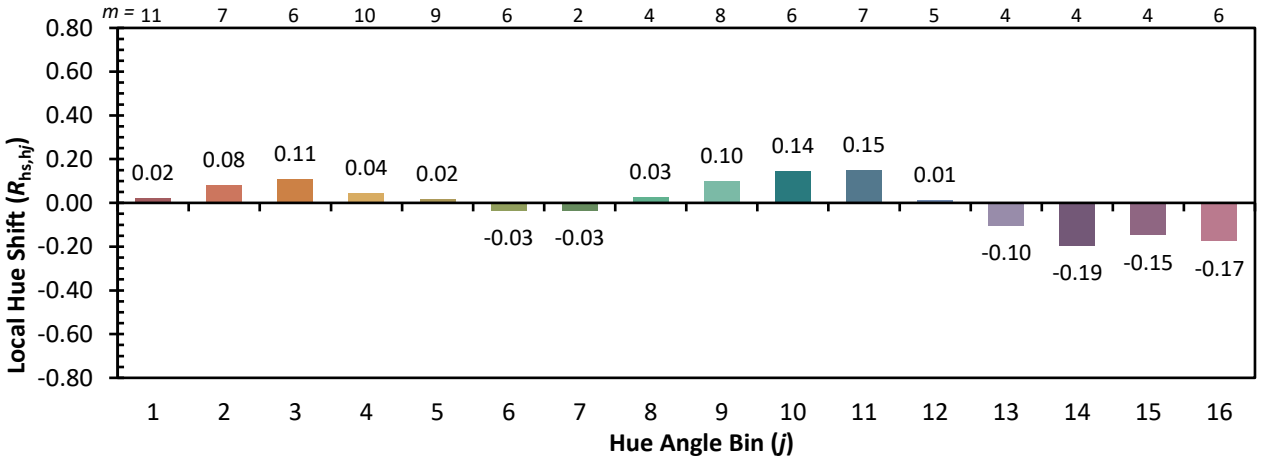


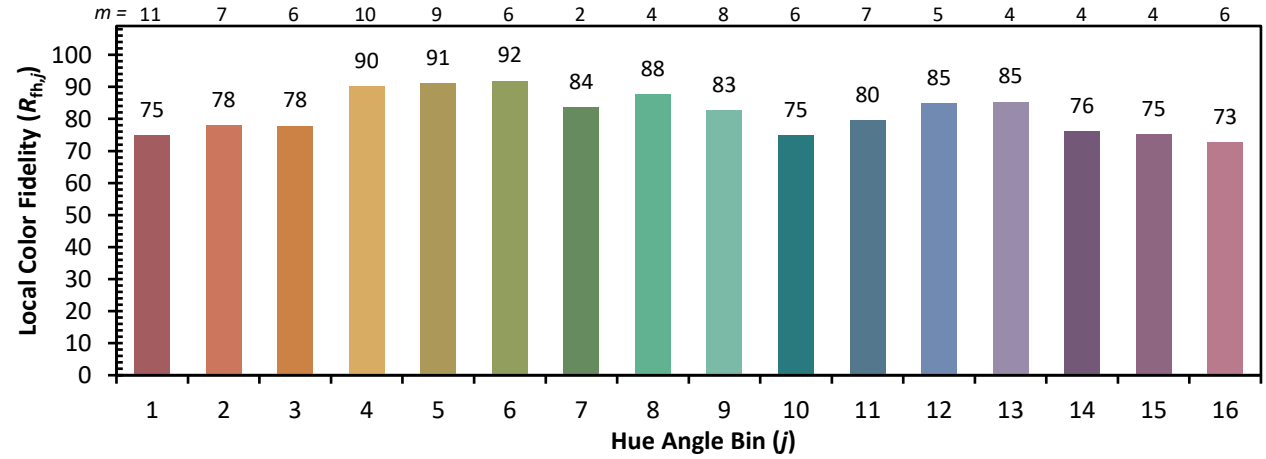
REPORT NUMBER: SP1-2407-168-1

TM-30-18

Color Rendition by Hue-Angle Bin







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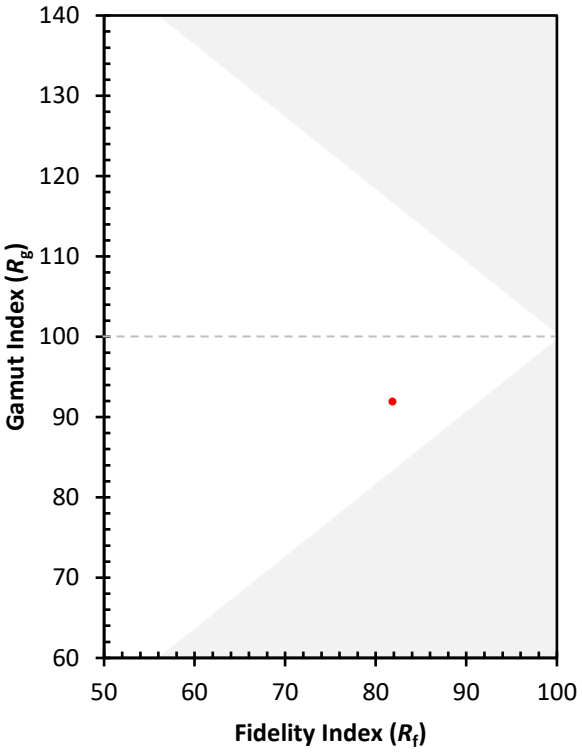
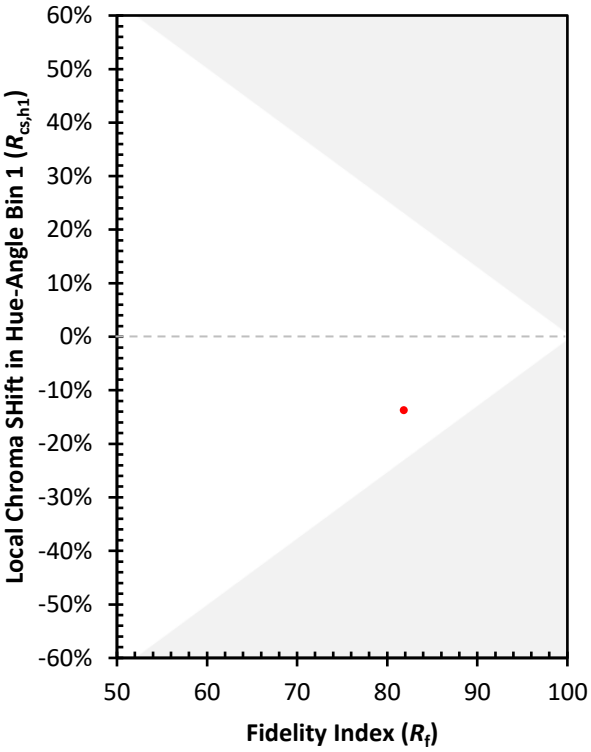
Measure Comparisons





(END OF REPORT)