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: P979160

Luminaire Tested: **WPLLED38S-150W-4000K**

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:	P979160
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPLLED38S-150W-4000K
Description:	LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @150W-4000K
Light Source:	4000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	21308 lumens
Efficiency:	N/A
Efficacy:	147.1 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):	144.9
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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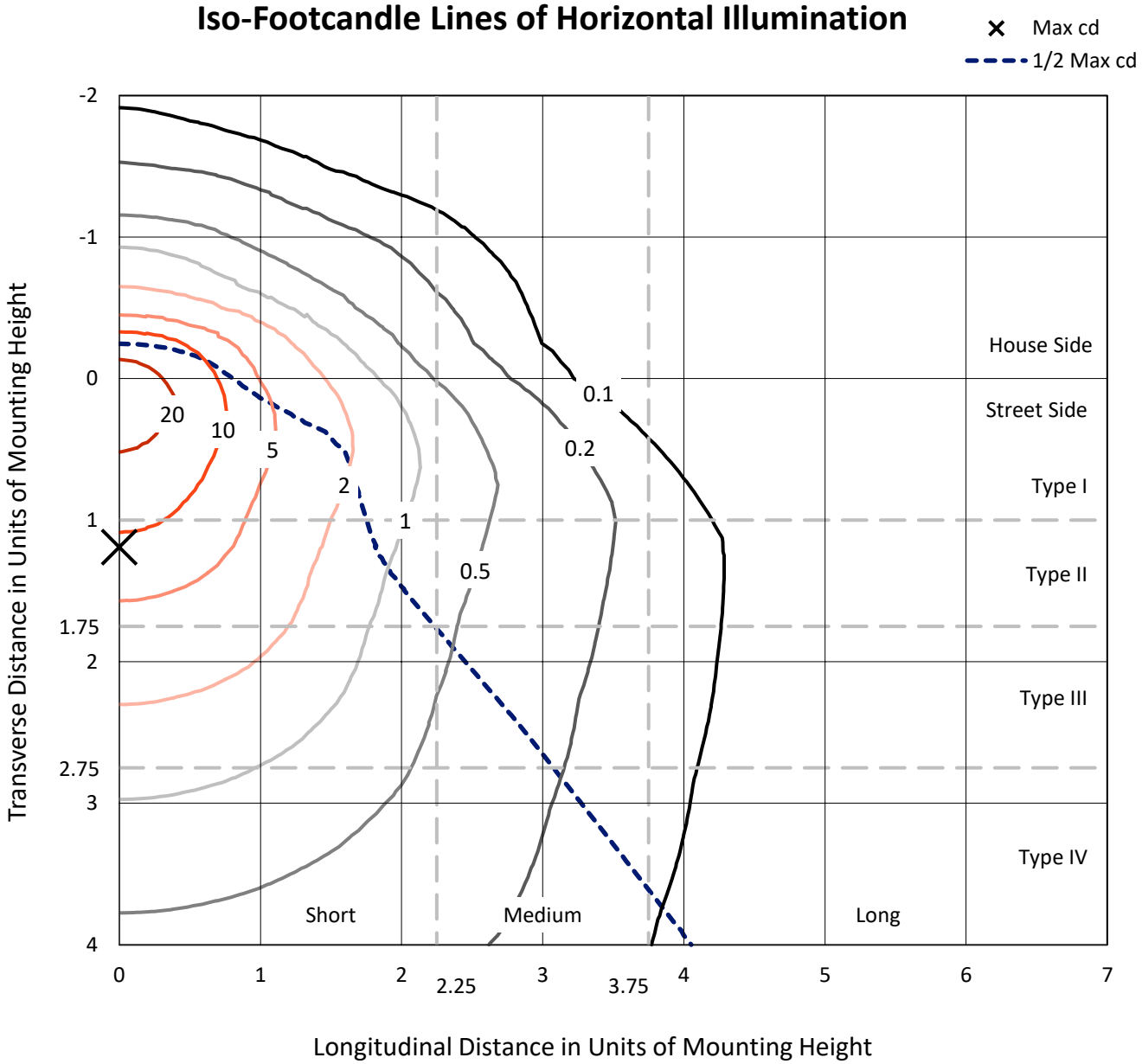
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 26.6 fc
Type IV - Short - N/A

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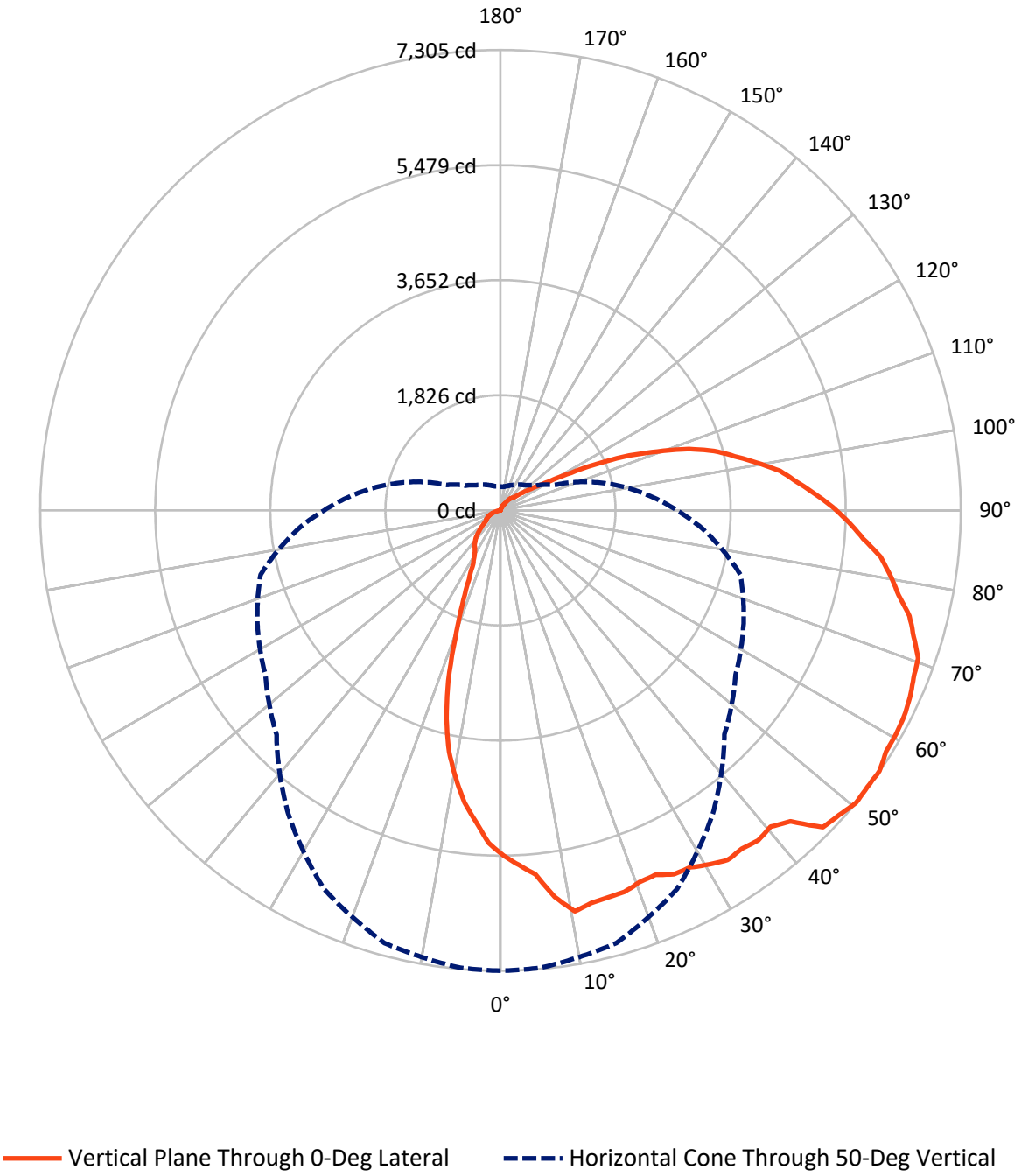
Luminous Intensity Polar Plot



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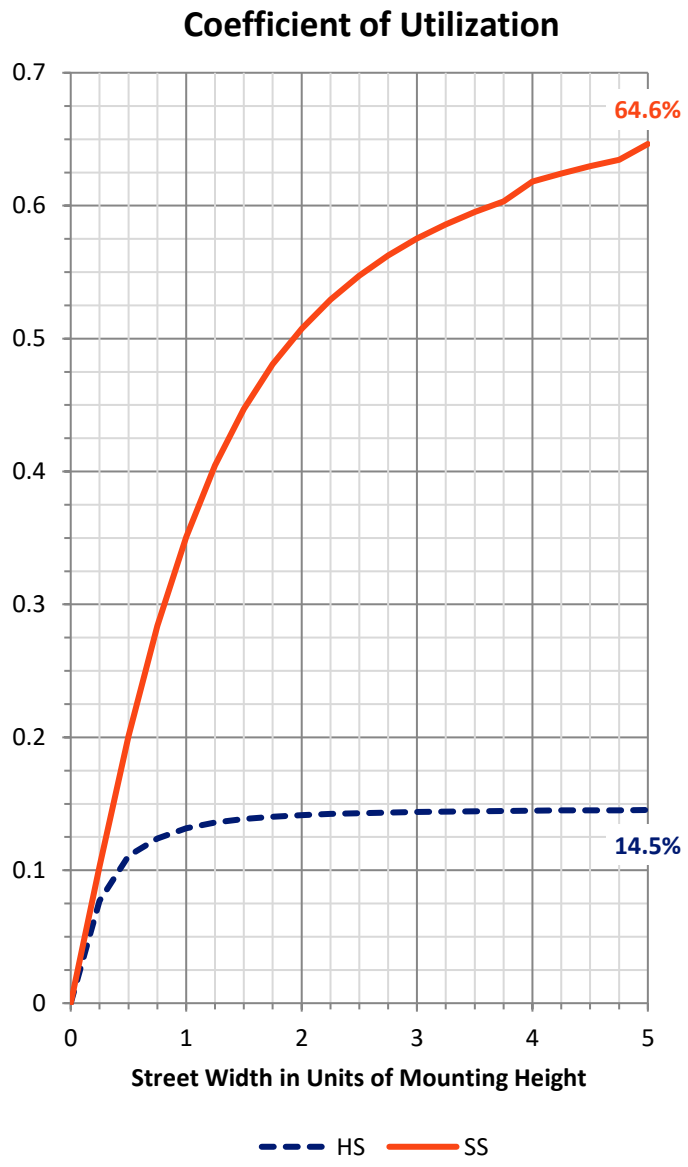
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3141.8	121.3	3263.1
	% Fixture	14.7	0.6	15.3
Street Side	Lumens	15111.5	2933.4	18044.9
	% Fixture	70.9	13.8	84.7
Total	Lumens	18253.3	3054.7	21308.0
	% Fixture	85.7	14.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	517.9	2.4
10°-20°	1441.4	6.8
20°-30°	1979.7	9.3
30°-40°	2293.5	10.8
40°-50°	2506.4	11.8
50°-60°	2652.3	12.4
60°-70°	2620.7	12.3
70°-80°	2348.7	11.0
80°-90°	1892.7	8.9
90°-100°	1408.6	6.6
100°-110°	905.2	4.2
110°-120°	415.5	1.9
120°-130°	168.0	0.8
130°-140°	87.7	0.4
140°-150°	44.4	0.2
150°-160°	17.4	0.1
160°-170°	6.2	0.0
170°-180°	1.8	0.0
0°-90°	18253.3	85.7
0°-180°	21308.0	100.0



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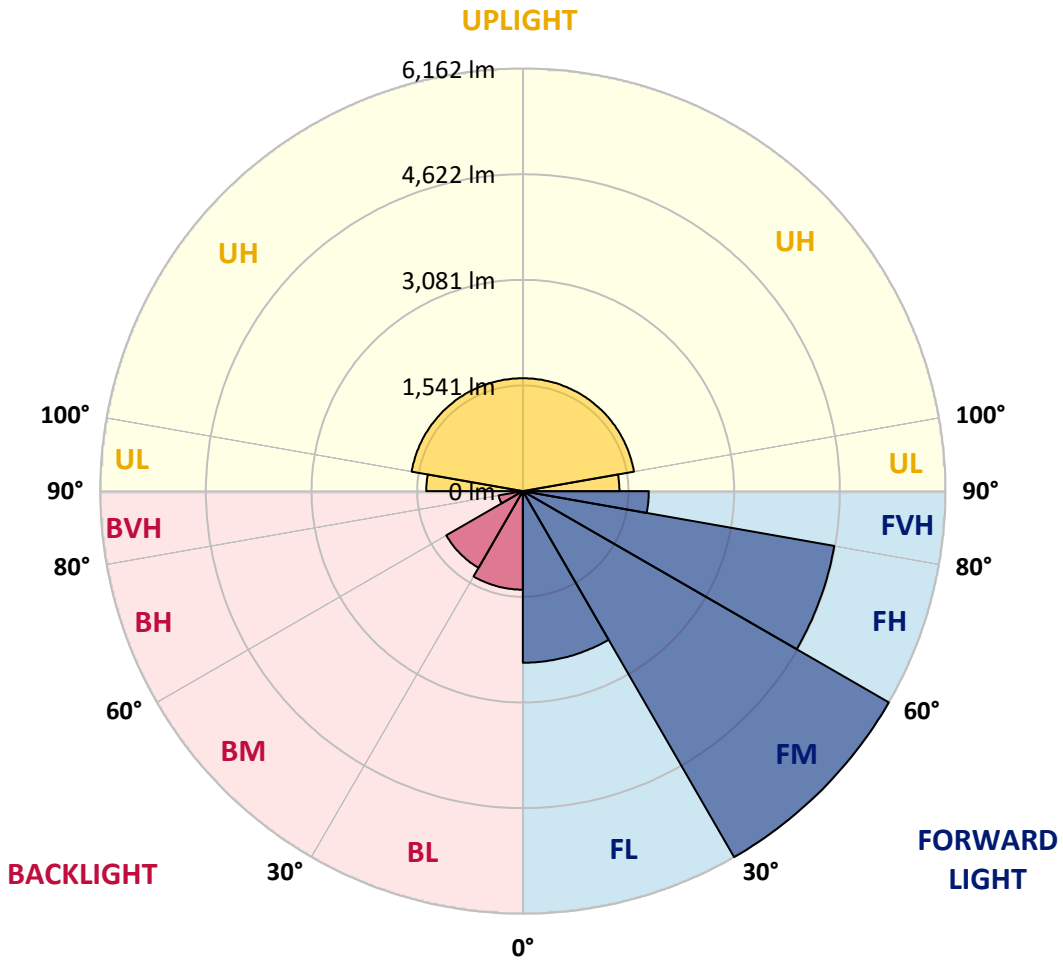
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2502.3	11.7			
FM	(30°-60°)	6162.1	28.9			
FH	(60°-80°)	4611.1	21.6			G2/5000
FVH	(80°-90°)	1836.0	8.6			G5
BL	(0°-30°)	1436.7	6.7	B3/2500		
BM	(30°-60°)	1290.1	6.1	B2/2500		
BH	(60°-80°)	358.3	1.7	B1/500		G1/500
BVH	(80°-90°)	56.7	0.3			G1/100
UL	(90°-100°)	1408.6	6.6		U5	
UH	(100°-180°)	1646.1	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°	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9
2.5°	5636.8	5620.7	5629.6	5642.2	5610.8	5608.1	5588.3	5533.5	5529.9	5502.9	5475.1
5°	5804.0	5808.5	5800.4	5781.5	5759.1	5723.1	5726.7	5645.8	5589.2	5520.0	5473.3
7.5°	6193.2	6216.5	6146.4	6073.6	5990.9	5894.8	5775.2	5699.7	5595.5	5486.7	5438.2
10°	6470.0	6475.4	6452.9	6457.4	6280.3	6097.9	5925.3	5751.9	5605.4	5449.9	5384.3
12.5°	6397.2	6421.4	6421.4	6420.5	6407.9	6380.1	6098.8	5818.4	5622.5	5410.4	5328.6
15°	6372.9	6371.1	6372.9	6397.2	6386.4	6358.5	6277.6	5914.5	5595.5	5350.1	5236.0
17.5°	6366.6	6367.5	6326.2	6339.6	6290.2	6282.1	6269.5	5976.6	5582.9	5300.7	5164.1
20°	6298.3	6295.6	6311.8	6256.1	6222.8	6197.6	6153.6	6062.8	5532.6	5208.1	5064.3
22.5°	6283.9	6285.7	6283.9	6176.1	6136.5	6101.5	6044.0	6016.1	5524.5	5101.2	4943.0
25°	6397.2	6372.0	6327.1	6180.6	6034.1	5964.9	5894.8	5866.9	5444.5	4981.7	4790.2
27.5°	6415.1	6400.8	6335.2	6232.7	6044.0	5844.4	5752.8	5694.4	5392.4	4836.1	4624.9
30°	6521.2	6514.0	6412.4	6245.3	6019.7	5758.2	5578.4	5493.9	5272.9	4684.2	4440.6
32.5°	6616.5	6617.4	6511.3	6313.6	5996.3	5691.7	5405.9	5305.2	5165.0	4490.1	4252.8
35°	6595.8	6610.2	6533.8	6333.4	6012.5	5607.2	5255.8	5101.2	5010.4	4305.8	4011.9
37.5°	6644.3	6664.1	6548.1	6316.3	5984.6	5537.1	5132.6	4925.9	4792.9	4059.6	3763.9
40°	6600.3	6613.8	6493.3	6296.5	5927.1	5457.1	4999.6	4731.8	4566.4	3837.6	3530.2
42.5°	6745.9	6762.9	6592.2	6295.6	5845.3	5309.7	4901.7	4595.2	4354.3	3639.0	3310.0
45°	7172.8	7162.0	6878.9	6399.9	5831.0	5230.6	4762.4	4454.1	4178.2	3461.0	3106.9
47.5°	7227.6	7223.1	7063.1	6545.5	5852.5	5112.0	4666.2	4358.8	4051.5	3334.3	2940.6
50°	7304.9	7286.9	7108.1	6628.1	5874.1	5026.6	4553.9	4256.4	3940.9	3201.3	2798.6
52.5°	7290.5	7278.8	7117.0	6665.0	5892.1	4947.5	4439.7	4167.4	3846.6	3092.5	2645.0
55°	7299.5	7274.3	7123.3	6663.2	5902.9	4854.0	4286.9	4065.9	3752.2	2977.5	2500.3
57.5°	7216.8	7188.9	7030.8	6645.2	5892.1	4764.2	4142.2	3920.3	3660.5	2857.1	2339.4
60°	7212.3	7189.8	6997.5	6593.1	5841.7	4662.6	4009.2	3754.0	3546.4	2743.8	2157.9
62.5°	7189.8	7165.6	6967.9	6572.4	5790.5	4570.0	3863.6	3596.7	3425.1	2602.7	1954.7
65°	7143.1	7126.0	6931.0	6545.5	5732.1	4482.0	3708.2	3432.3	3285.8	2393.3	1706.7
67.5°	7070.3	7057.7	6878.9	6488.8	5676.4	4393.9	3564.4	3262.4	3123.1	2134.5	1447.0
70°	7032.6	7007.4	6823.2	6401.7	5596.4	4275.3	3417.0	3082.6	2921.8	1850.5	1163.9
72.5°	6856.4	6837.5	6656.0	6262.4	5490.3	4154.8	3275.9	2886.7	2694.4	1515.3	881.7
75°	6704.5	6700.0	6514.9	6107.8	5353.7	4024.5	3138.4	2695.3	2388.8	1186.3	658.8
77.5°	6458.3	6429.5	6257.9	5902.9	5156.9	3851.1	2984.7	2494.9	2085.1	886.1	509.6
80°	6272.2	6241.7	6086.2	5717.7	4984.4	3683.0	2831.0	2282.8	1756.1	639.0	409.8
82.5°	6078.1	6027.8	5857.9	5470.6	4775.9	3497.0	2671.0	2111.1	1462.2	466.4	337.9
85°	5774.3	5750.1	5556.0	5193.8	4508.9	3278.6	2505.7	1918.8	1200.7	361.3	277.7
87.5°	5533.5	5493.0	5330.4	4942.1	4253.7	3077.3	2310.6	1700.4	945.5	293.0	233.7
90°	5277.3	5222.5	5043.7	4667.1	3972.4	2849.0	2112.0	1501.8	756.7	249.8	205.8
92.5°	4993.3	4943.0	4776.8	4388.5	3682.1	2627.9	1934.1	1309.5	593.2	222.9	188.7
95°	4721.9	4679.7	4504.4	4117.1	3399.0	2409.5	1739.0	1110.8	483.5	204.9	176.2
97.5°	4479.3	4404.7	4203.4	3813.3	3094.3	2191.1	1547.6	928.4	409.8	194.1	169.9
100°	4139.6	4108.1	3898.7	3496.1	2779.8	1964.6	1332.8	760.3	346.0	184.2	164.5
102.5°	3811.5	3761.2	3594.0	3175.2	2476.0	1705.8	1112.6	616.5	296.6	177.9	160.0
105°	3518.5	3454.7	3280.4	2820.2	2136.3	1447.0	906.8	503.3	263.3	176.2	155.5
107.5°	3146.5	3060.2	2847.2	2392.4	1784.0	1205.2	728.9	413.4	240.0	174.4	151.0
110°	2658.4	2649.5	2441.9	1970.9	1447.9	959.8	581.5	345.1	222.9	169.9	146.5

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REPORT NUMBER: P979160
CATALOG NUMBER: WPLLED38S-150W-4000K

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	2219.9	2175.8	1982.6	1547.6	1140.5	755.8	479.0	297.5	207.6	163.6	140.2
115°	1729.2	1707.6	1524.2	1181.8	870.9	603.0	395.4	261.5	197.7	153.7	131.2
117.5°	1269.0	1242.9	1118.9	887.0	698.3	500.6	339.7	236.4	186.9	142.9	122.2
120°	905.9	896.9	825.9	692.9	574.3	427.8	292.1	214.8	175.3	131.2	112.3
122.5°	708.2	693.8	647.1	577.0	495.2	371.2	259.7	196.8	163.6	118.6	100.7
125°	568.9	564.4	524.0	486.2	421.5	322.6	235.5	183.3	147.4	105.2	89.9
127.5°	467.3	461.0	437.7	408.9	364.0	289.4	222.0	174.4	132.1	93.5	80.0
130°	379.3	378.4	367.6	347.8	319.9	263.3	210.3	165.4	117.7	82.7	71.9
132.5°	318.2	317.3	313.7	295.7	283.1	243.6	200.4	153.7	104.3	72.8	64.7
135°	277.7	278.6	272.3	260.6	253.4	225.6	189.6	139.3	90.8	65.6	59.3
137.5°	257.9	256.1	243.6	231.0	230.1	212.1	175.3	123.1	80.0	60.2	54.8
140°	240.0	236.4	222.0	209.4	204.0	193.2	156.4	107.8	69.2	54.8	51.2
142.5°	199.5	201.3	193.2	184.2	177.0	169.0	135.7	91.7	60.2	50.3	47.6
145°	154.6	156.4	157.3	153.7	146.5	141.1	114.1	76.4	53.0	46.7	44.9
147.5°	123.1	124.0	124.0	122.2	119.5	112.3	94.4	63.8	47.6	43.1	41.3
150°	100.7	102.5	101.6	98.9	96.2	89.9	76.4	52.1	42.2	40.4	39.5
152.5°	82.7	83.6	82.7	80.9	79.1	71.0	61.1	44.0	38.6	37.7	37.7
155°	67.4	67.4	67.4	66.5	62.0	56.6	47.6	37.7	35.9	35.9	35.9
157.5°	53.0	53.0	53.0	53.0	48.5	43.1	37.7	33.3	34.2	34.2	34.2
160°	40.4	39.5	40.4	39.5	35.9	32.4	30.6	29.7	32.4	33.3	33.3
162.5°	27.9	27.9	28.8	28.8	27.0	24.3	26.1	28.8	30.6	32.4	32.4
165°	17.1	17.1	18.9	19.8	18.9	19.8	24.3	27.9	30.6	31.5	31.5
167.5°	9.0	9.0	11.7	13.5	15.3	18.0	24.3	27.9	29.7	31.5	31.5
170°	3.6	4.5	7.2	10.8	13.5	18.0	24.3	27.9	30.6	31.5	31.5
172.5°	3.6	3.6	7.2	10.8	14.4	18.0	24.3	27.9	30.6	31.5	32.4
175°	3.6	4.5	7.2	11.7	14.4	18.9	25.2	28.8	30.6	31.5	32.4
177.5°	4.5	4.5	8.1	11.7	14.4	18.9	25.2	28.8	30.6	32.4	32.4
180°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9	5476.9
2.5°	5447.2	5412.2	5380.7	5325.9	5296.2	5284.5	5254.9	5265.7	5273.8	5282.7
5°	5423.8	5369.0	5305.2	5226.1	5142.5	5070.6	4981.7	4971.8	4977.2	4957.4
7.5°	5381.6	5276.4	5144.3	5027.5	4919.7	4828.9	4752.5	4693.2	4668.9	4671.6
10°	5325.9	5170.4	4981.7	4859.4	4663.5	4551.2	4443.3	4357.0	4325.6	4302.2
12.5°	5257.6	5058.1	4832.5	4647.3	4419.1	4223.1	4083.8	3957.1	3896.0	3918.5
15°	5146.1	4892.7	4650.0	4405.6	4124.3	3871.7	3665.9	3513.1	3442.1	3421.5
17.5°	5051.8	4752.5	4451.4	4091.9	3771.1	3481.7	3196.8	2958.6	2823.8	2826.5
20°	4919.7	4563.8	4211.5	3807.9	3399.0	2953.2	2580.3	2316.0	2170.4	2154.3
22.5°	4766.0	4378.6	3970.6	3497.9	2961.3	2417.6	1988.9	1751.6	1666.2	1618.6
25°	4597.0	4164.7	3700.1	3139.3	2463.4	1902.6	1518.0	1324.7	1225.0	1208.8
27.5°	4409.2	3930.1	3390.0	2697.1	1997.0	1476.6	1170.1	1010.2	964.3	953.6
30°	4194.4	3701.9	3087.1	2285.5	1593.4	1158.5	954.5	872.7	846.6	842.1
32.5°	3980.5	3439.4	2761.8	1904.4	1278.0	953.6	845.7	791.8	770.2	763.0
35°	3720.7	3168.0	2441.9	1596.1	1057.8	848.4	778.3	735.2	720.8	718.1
37.5°	3470.9	2896.6	2123.7	1340.0	913.1	781.9	725.3	696.5	686.6	682.1
40°	3214.8	2644.1	1831.6	1108.1	812.5	721.7	682.1	641.7	630.9	630.9
42.5°	2993.7	2406.8	1539.5	937.4	735.2	666.0	618.3	593.2	582.4	580.6
45°	2778.0	2171.3	1295.1	813.4	668.7	599.5	566.2	523.1	507.8	512.3
47.5°	2603.6	1924.2	1095.6	736.1	616.5	553.6	497.0	459.3	439.5	439.5
50°	*2416.7*	*1671.6*	*950.0*	*681.2*	*559.9*	*495.2*	*440.4*	*397.2*	*372.1*	*375.7*
52.5°	2238.7	1459.5	844.8	634.5	512.3	442.2	387.4	346.0	315.5	311.9
55°	2042.8	1260.0	776.5	587.8	459.3	393.6	341.5	298.4	280.4	279.5
57.5°	1864.9	1094.7	728.0	535.6	408.9	346.9	297.5	266.0	267.8	273.2
60°	1649.2	962.5	686.6	486.2	362.2	298.4	261.5	240.9	244.5	246.3
62.5°	1439.8	863.7	646.2	437.7	314.6	259.7	224.7	212.1	223.8	224.7
65°	1203.4	781.0	595.9	384.7	273.2	223.8	192.3	195.0	200.4	202.2
67.5°	980.5	714.5	539.2	341.5	235.5	186.0	171.7	170.8	178.8	177.9
70°	789.1	649.8	479.9	292.1	199.5	154.6	147.4	145.6	148.3	150.1
72.5°	648.9	582.4	414.3	248.9	166.3	129.4	120.4	118.6	115.9	117.7
75°	555.4	513.2	353.2	206.7	133.0	103.4	91.7	86.3	82.7	84.5
77.5°	480.8	440.4	298.4	170.8	105.2	79.1	62.0	50.3	47.6	47.6
80°	407.1	366.7	248.9	138.4	81.8	53.0	28.8	18.0	15.3	15.3
82.5°	346.0	307.4	206.7	111.4	59.3	27.9	6.3	0.9	0.0	0.0
85°	291.2	257.0	174.4	92.6	48.5	23.4	7.2	1.8	0.0	0.0
87.5°	245.4	215.7	152.8	80.9	44.0	22.5	8.1	2.7	0.9	0.9
90°	213.0	188.7	134.8	72.8	40.4	21.6	8.1	3.6	2.7	2.7
92.5°	192.3	169.9	124.0	67.4	37.7	20.7	9.0	5.4	3.6	3.6
95°	175.3	154.6	113.2	62.9	35.9	20.7	9.9	6.3	4.5	4.5
97.5°	162.7	143.8	104.3	58.4	34.2	20.7	10.8	7.2	6.3	5.4
100°	151.0	133.0	95.3	54.8	33.3	20.7	10.8	8.1	6.3	6.3
102.5°	142.9	124.9	88.1	51.2	32.4	19.8	10.8	8.1	6.3	6.3
105°	137.5	119.5	81.8	48.5	30.6	19.8	10.8	8.1	6.3	6.3
107.5°	132.1	115.0	74.6	46.7	28.8	18.9	10.8	8.1	6.3	6.3
110°	127.6	106.9	69.2	44.0	27.9	18.0	10.8	7.2	5.4	5.4

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

Scaled Data Report

REPORT NUMBER: P979160
CATALOG NUMBER: WPLLED38S-150W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	122.2	97.1	63.8	40.4	26.1	16.2	9.9	7.2	5.4	5.4
115°	114.1	85.4	58.4	38.6	25.2	15.3	9.9	6.3	4.5	4.5
117.5°	106.1	76.4	53.0	35.9	24.3	14.4	9.0	6.3	4.5	4.5
120°	97.1	68.3	49.4	34.2	23.4	14.4	9.0	5.4	4.5	4.5
122.5°	86.3	62.0	46.7	33.3	22.5	13.5	9.0	5.4	3.6	3.6
125°	76.4	56.6	44.0	32.4	21.6	12.6	9.0	5.4	3.6	3.6
127.5°	68.3	53.0	41.3	31.5	20.7	12.6	9.0	5.4	3.6	3.6
130°	62.0	49.4	40.4	30.6	20.7	13.5	9.0	5.4	3.6	3.6
132.5°	56.6	46.7	38.6	30.6	20.7	13.5	9.9	6.3	4.5	4.5
135°	53.0	44.0	37.7	29.7	19.8	13.5	9.9	6.3	4.5	4.5
137.5°	50.3	42.2	35.9	29.7	19.8	14.4	10.8	6.3	4.5	4.5
140°	47.6	40.4	35.1	28.8	19.8	14.4	10.8	7.2	5.4	5.4
142.5°	44.9	39.5	34.2	27.9	19.8	14.4	10.8	7.2	5.4	5.4
145°	42.2	37.7	33.3	27.0	18.9	14.4	10.8	7.2	5.4	5.4
147.5°	40.4	36.8	31.5	26.1	18.9	14.4	10.8	7.2	5.4	5.4
150°	37.7	35.1	30.6	25.2	18.9	14.4	10.8	7.2	4.5	4.5
152.5°	35.9	33.3	29.7	24.3	18.0	14.4	10.8	7.2	4.5	4.5
155°	35.1	32.4	28.8	24.3	18.0	14.4	10.8	6.3	4.5	4.5
157.5°	33.3	31.5	28.8	24.3	18.0	14.4	10.8	6.3	4.5	4.5
160°	32.4	30.6	27.9	24.3	18.0	14.4	9.9	6.3	4.5	4.5
162.5°	32.4	30.6	27.9	24.3	18.0	14.4	9.9	6.3	4.5	3.6
165°	31.5	30.6	27.9	24.3	18.0	13.5	9.9	5.4	3.6	3.6
167.5°	31.5	30.6	27.9	23.4	18.0	13.5	9.9	5.4	3.6	3.6
170°	31.5	30.6	27.9	23.4	18.0	13.5	9.9	5.4	3.6	2.7
172.5°	31.5	30.6	27.9	23.4	18.0	13.5	9.9	5.4	2.7	2.7
175°	32.4	30.6	27.9	23.4	18.0	13.5	9.9	5.4	2.7	2.7
177.5°	32.4	30.6	27.9	23.4	18.0	13.5	9.0	5.4	2.7	2.7
180°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9

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

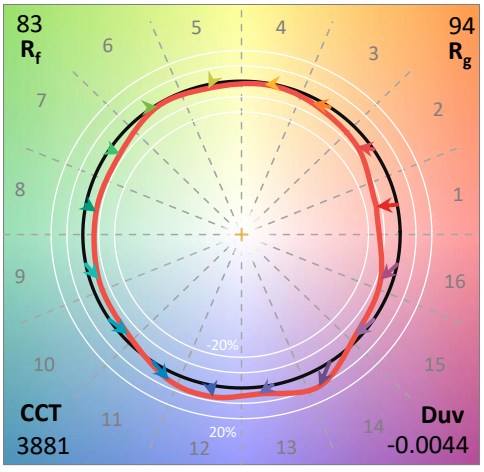
Test Information

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
CIE u':	0.2297
CIE v':	0.4983
Duv:	-0.0044
CIE x:	0.3825
CIE y:	0.3688
CIE z:	0.2487
Peak Wavelength (nm):	453
Dominant Wavelength (nm):	582
Purity:	25.44833
Rf:	82.8
Rg:	93.7

CRI (Ra):	82.7
R1:	82.3
R2:	93.7
R3:	93.3
R4:	79.0
R5:	82.7
R6:	89.4
R7:	81.3
R8:	59.9
R9:	4.8
R10:	84.4
R11:	77.9
R12:	66.7
R13:	85.8
R14:	97.2
R15:	76.3



Test Conditions

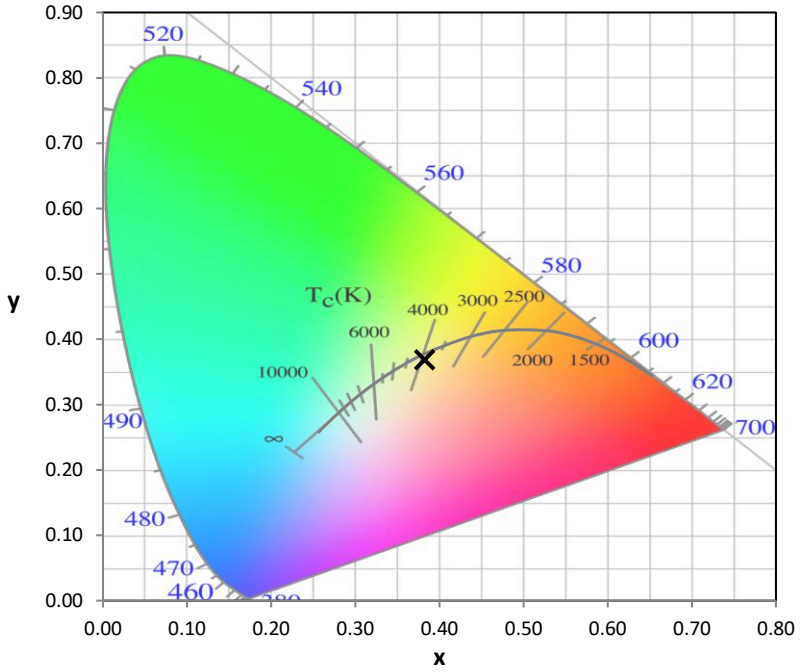
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-3

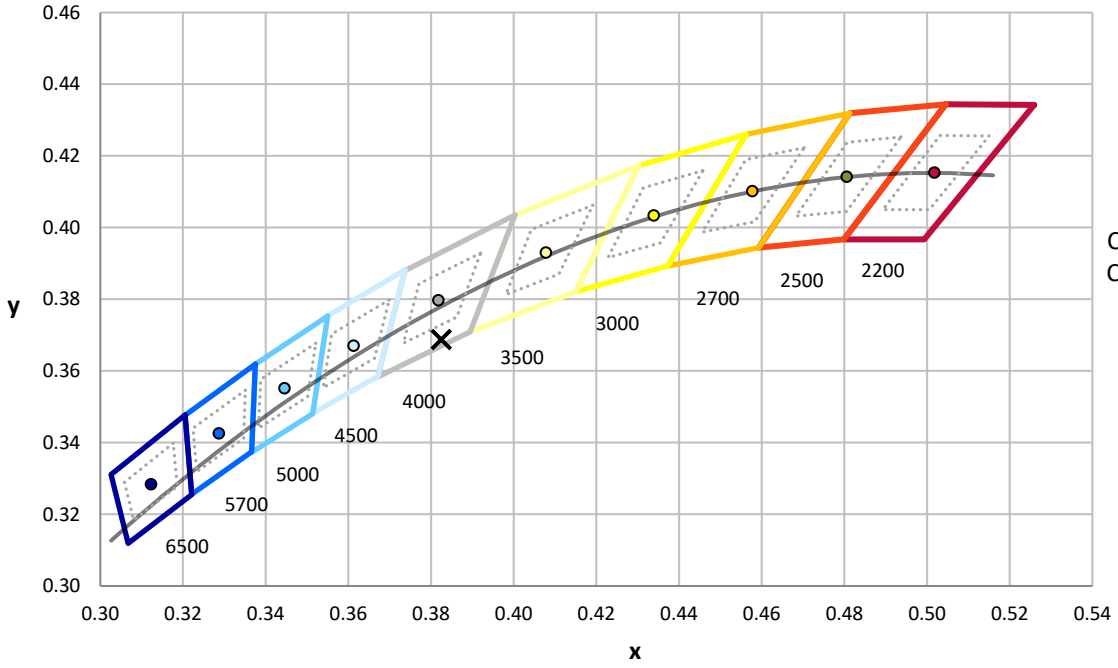
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

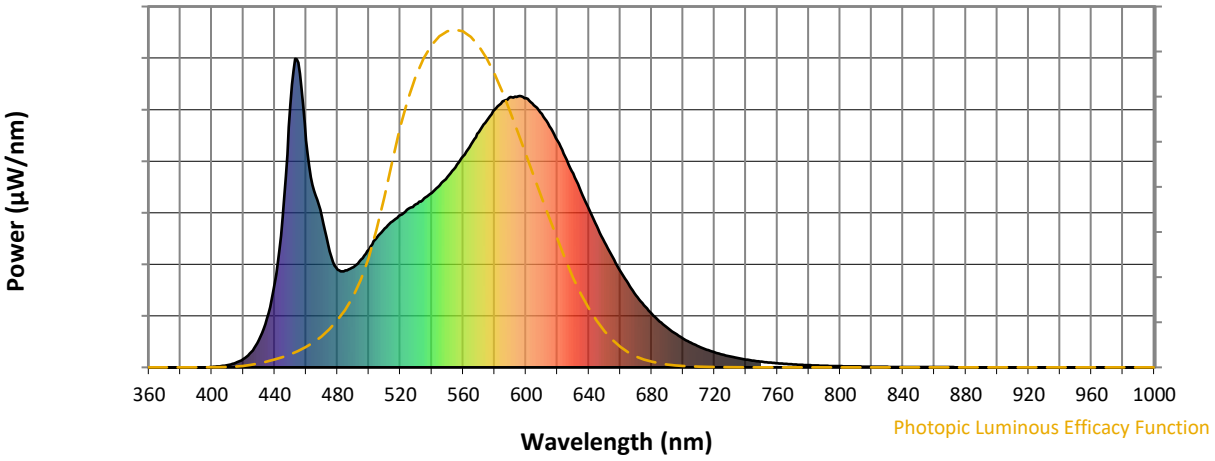


CCT = 3881K
CIE x = 0.3825
CIE y = 0.3688
Duv = -0.0044

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-3

Photopic Flux vs. Wavelength

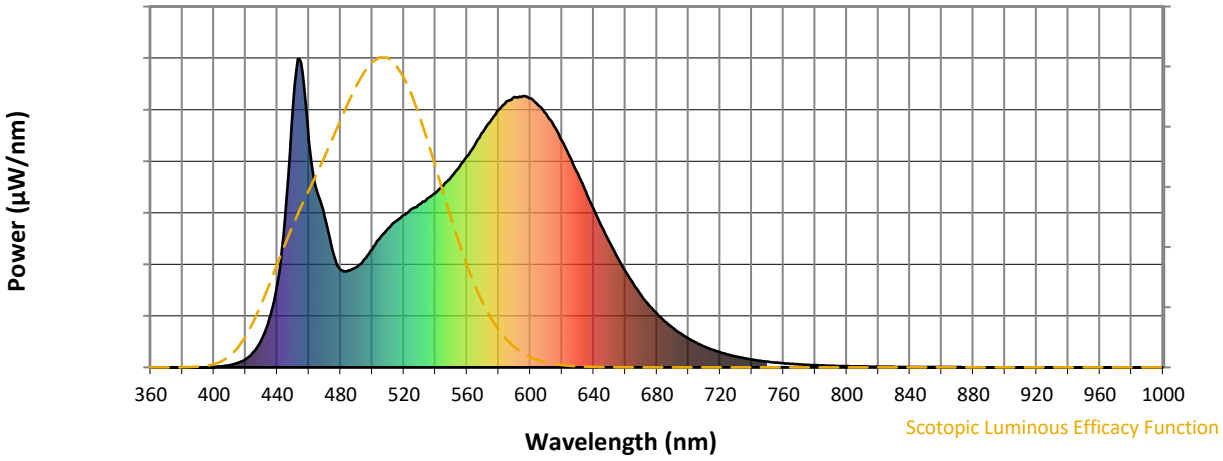


Photopic Lumens: NR

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

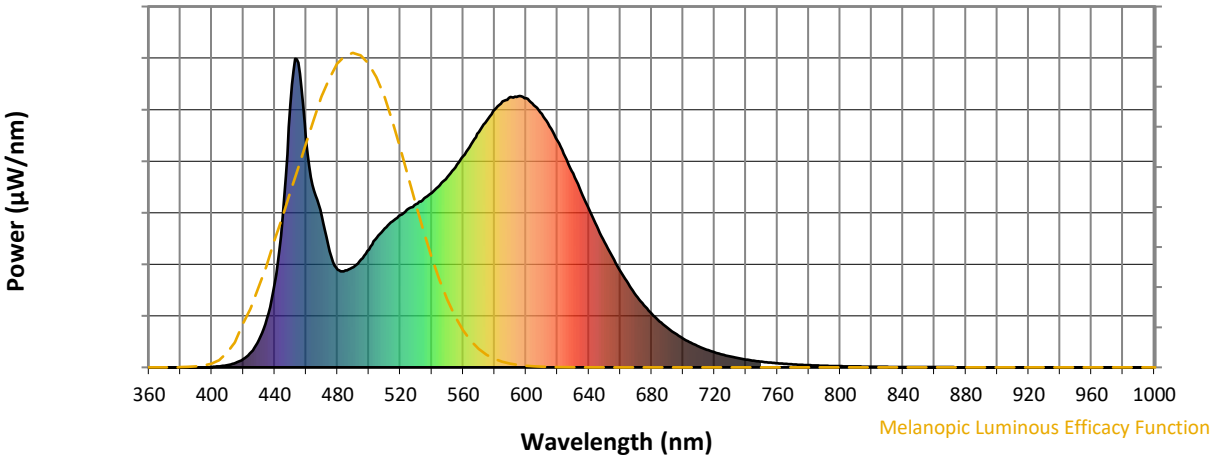


Scotopic Lumens: NR **S/P: 1.72**

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			

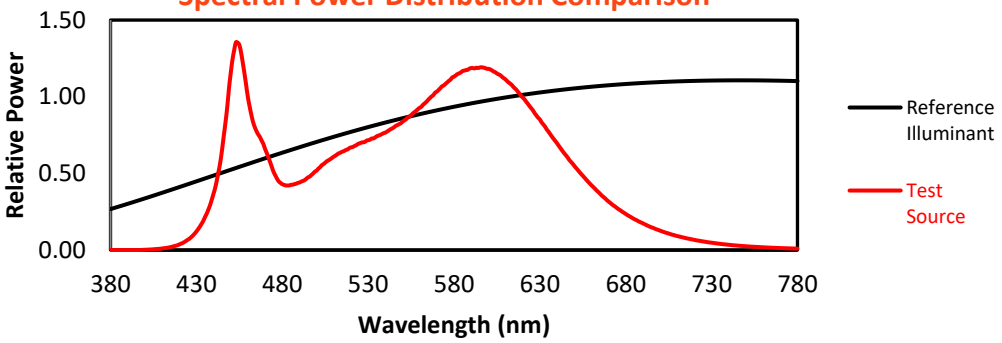
REPORT NUMBER: SP1-2407-168-3

TM-30-18

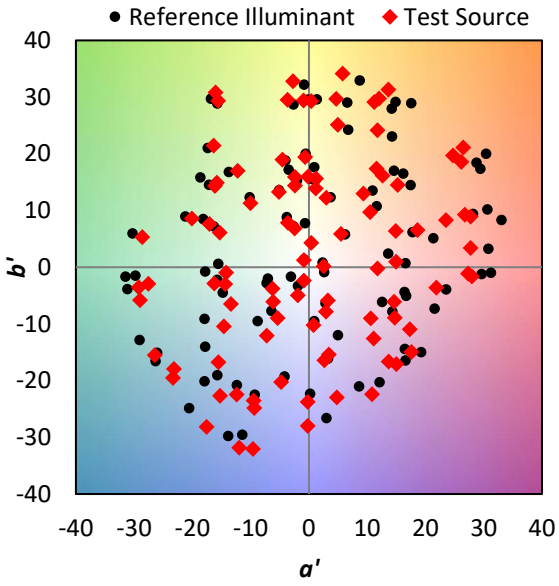
Summary

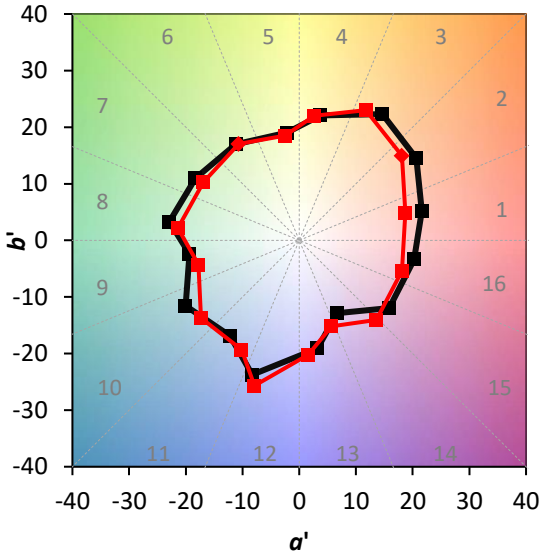
R_f = 82.8
R_g = 93.7
CIE R_a = 82.7
R_9 = 4.8

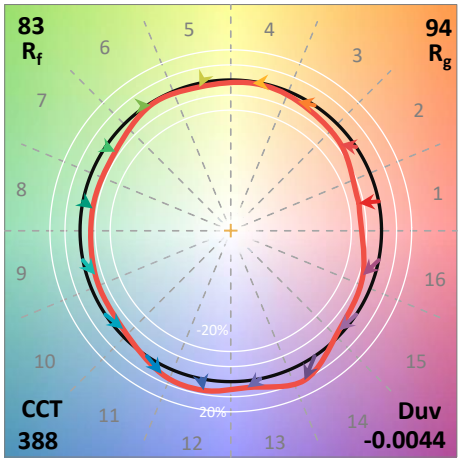
Spectral Power Distribution Comparison

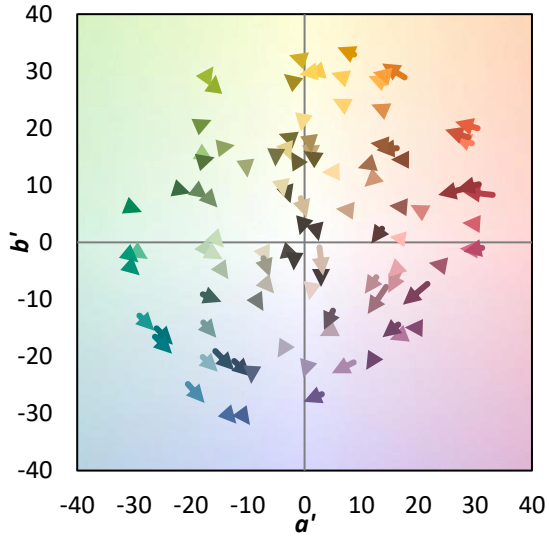


Color Vector Graphics







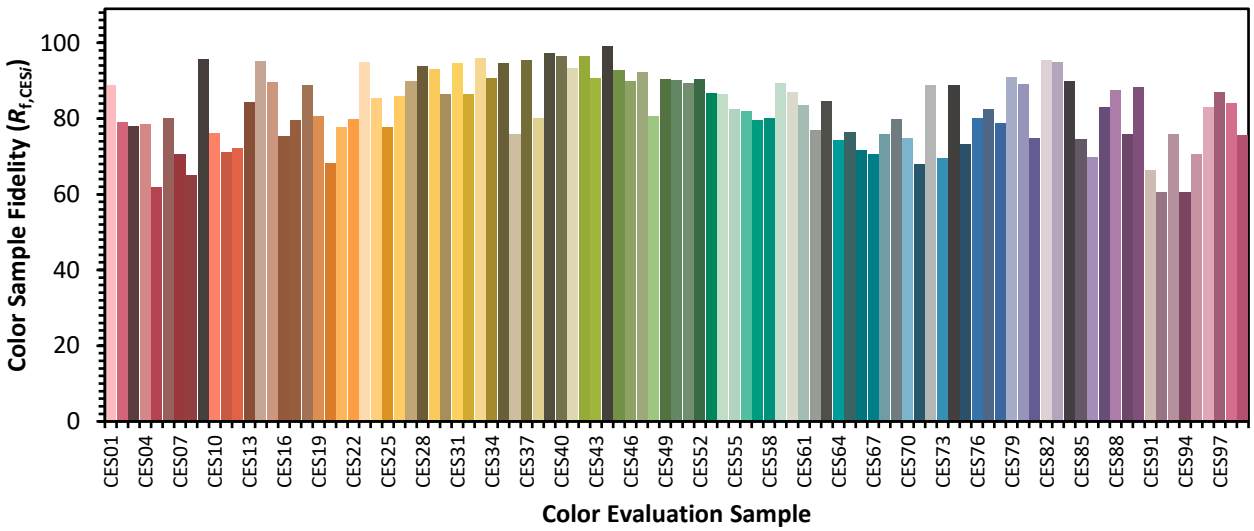


REPORT NUMBER: SP1-2407-168-3

TM-30-18

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

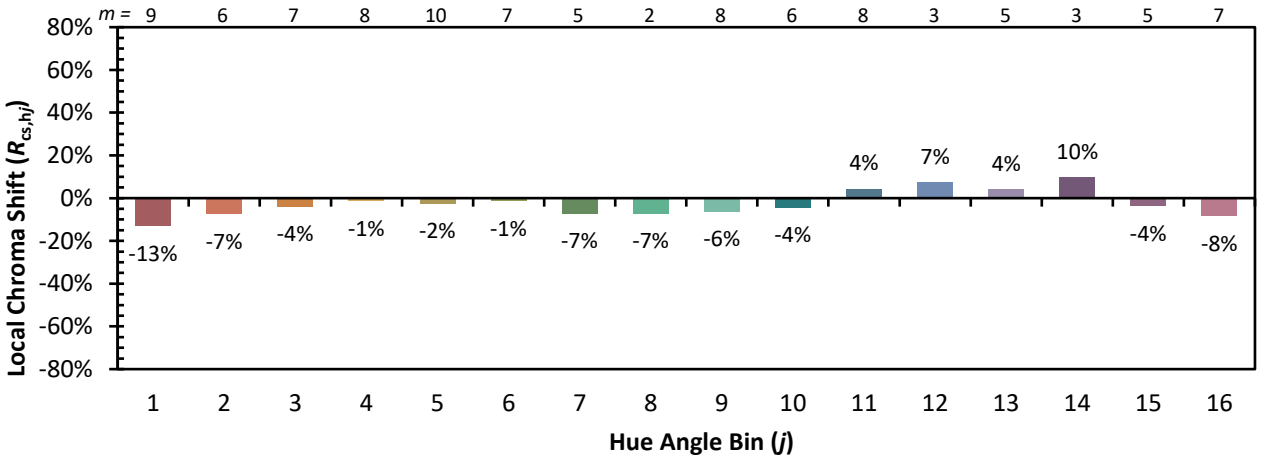
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 80
CES02 = 62	CES27 = 90	CES52 = 91	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 87	CES78 = 79
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 91
CES05 = 48	CES30 = 86	CES55 = 83	CES80 = 89
CES06 = 51	CES31 = 95	CES56 = 82	CES81 = 75
CES07 = 41	CES32 = 86	CES57 = 80	CES82 = 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	

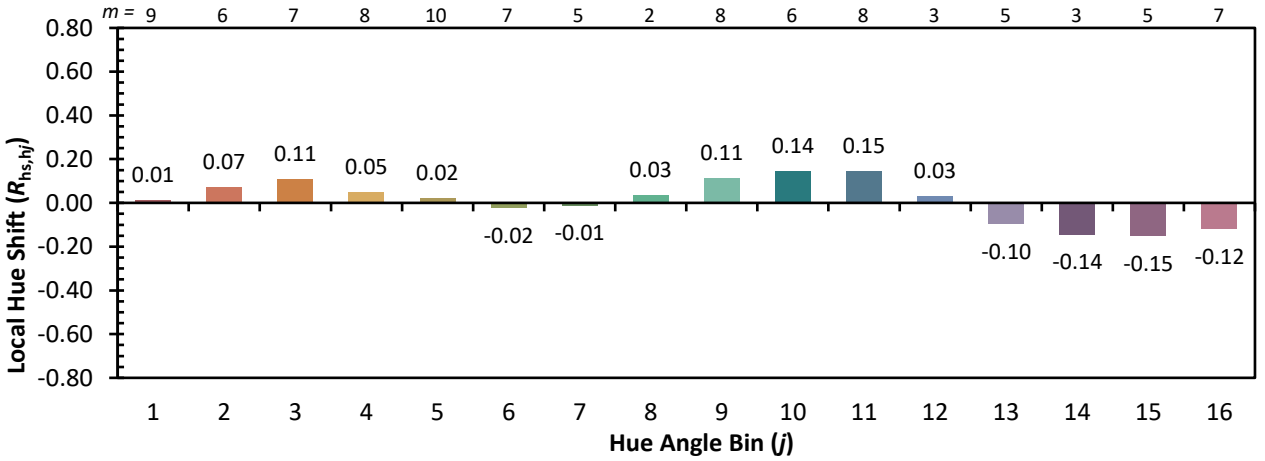


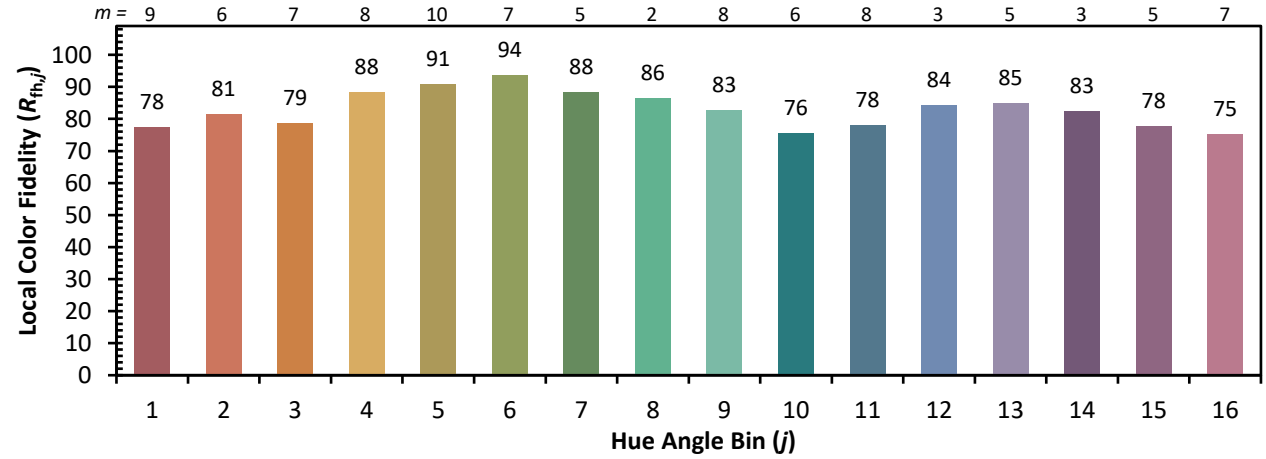
REPORT NUMBER: SP1-2407-168-3

TM-30-18

Color Rendition by Hue-Angle Bin







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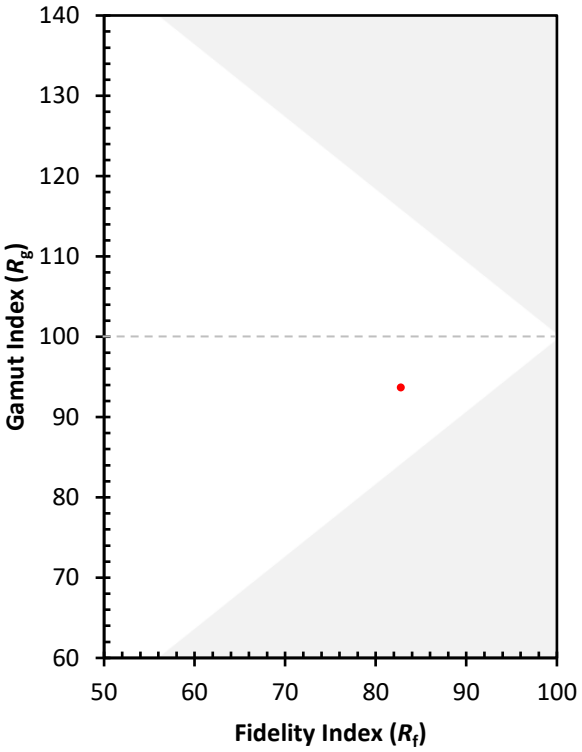
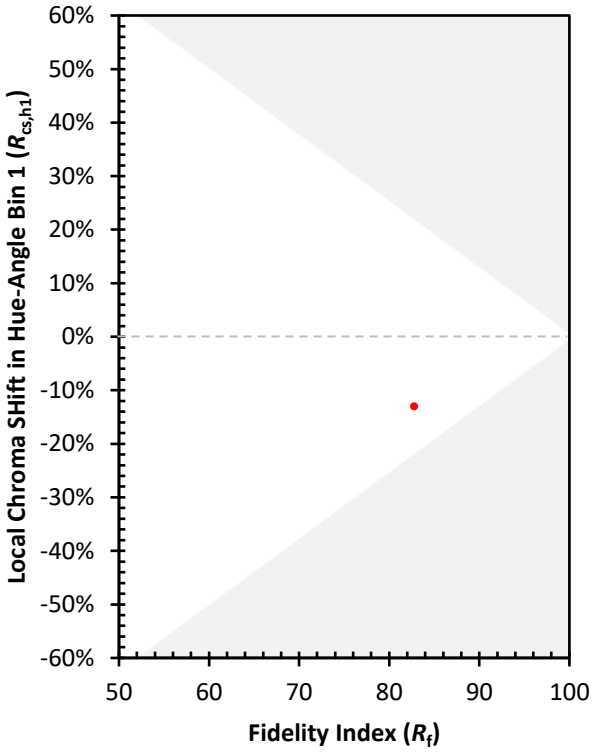
Measure Comparisons





(END OF REPORT)