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: P979175

Luminaire Tested: **WPLLED38S-120W-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:	P979175
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPLLED38S-120W-4000K
Description:	LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @120W-4000K
Light Source:	4000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	17646 lumens
Efficiency:	N/A
Efficacy:	152.5 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):	115.7
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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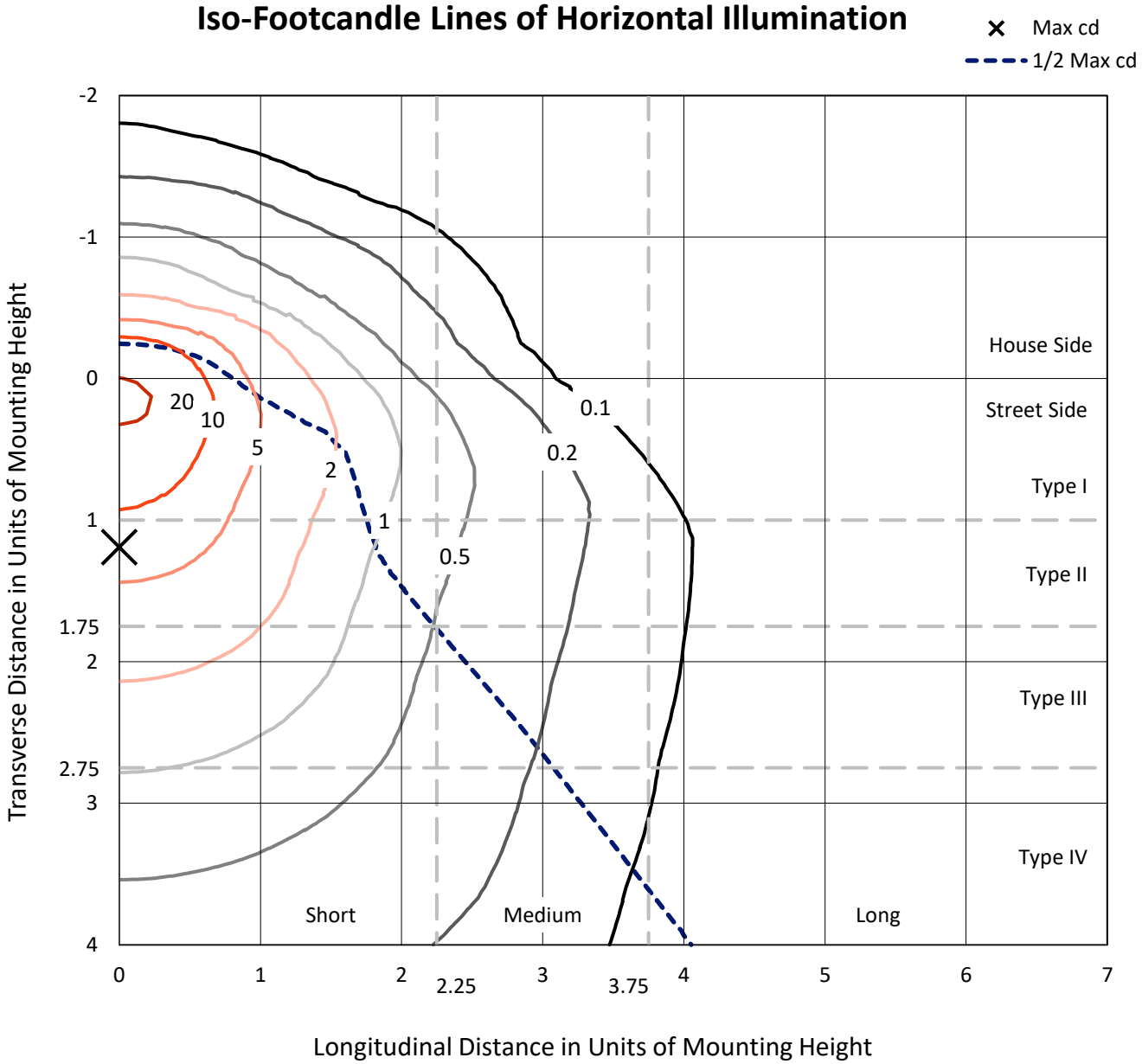
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 22.1 fc
Type IV - Short - N/A

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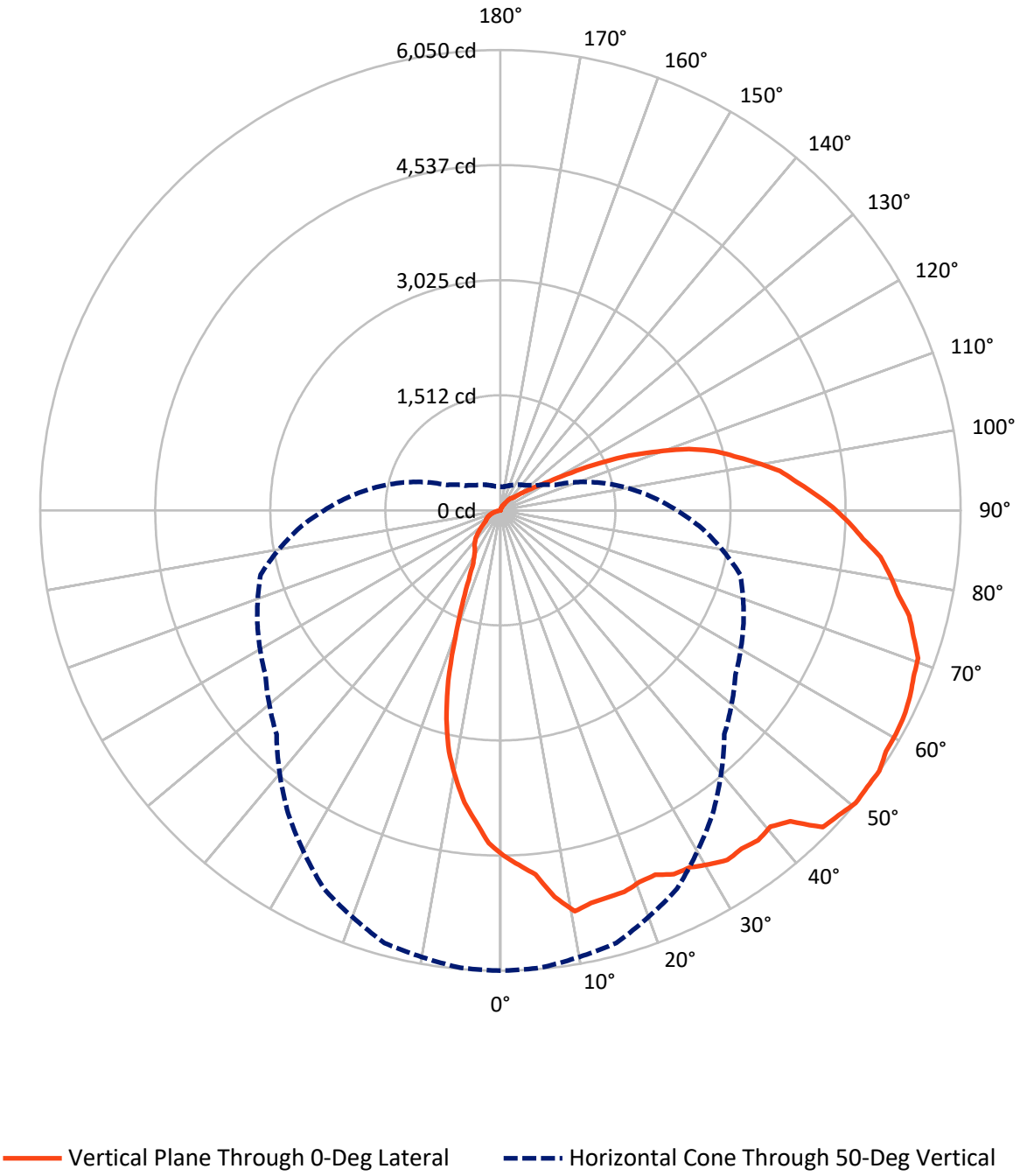
Luminous Intensity Polar Plot



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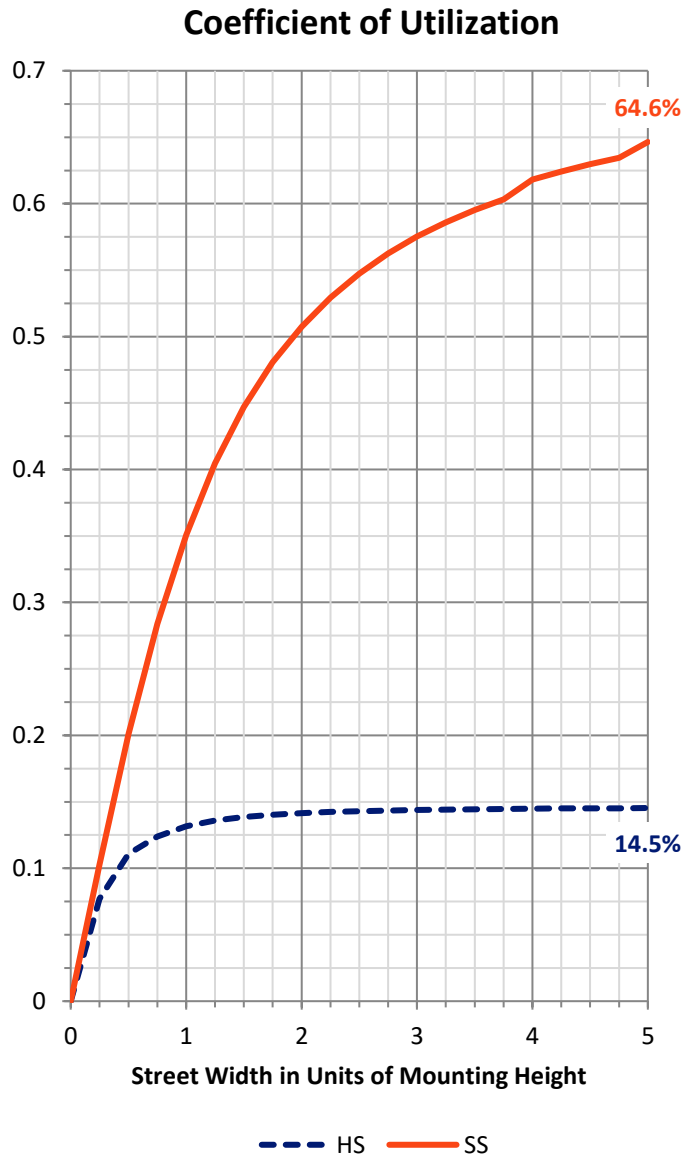
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2601.9	100.5	2702.3
	% Fixture	14.7	0.6	15.3
Street Side	Lumens	12514.4	2429.2	14943.7
	% Fixture	70.9	13.8	84.7
Total	Lumens	15116.3	2529.7	17646.0
	% Fixture	85.7	14.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	428.9	2.4
10°-20°	1193.7	6.8
20°-30°	1639.4	9.3
30°-40°	1899.3	10.8
40°-50°	2075.7	11.8
50°-60°	2196.5	12.4
60°-70°	2170.3	12.3
70°-80°	1945.1	11.0
80°-90°	1567.4	8.9
90°-100°	1166.6	6.6
100°-110°	749.6	4.2
110°-120°	344.1	2.0
120°-130°	139.1	0.8
130°-140°	72.6	0.4
140°-150°	36.8	0.2
150°-160°	14.4	0.1
160°-170°	5.1	0.0
170°-180°	1.5	0.0
0°-90°	15116.3	85.7
0°-180°	17646.0	100.0



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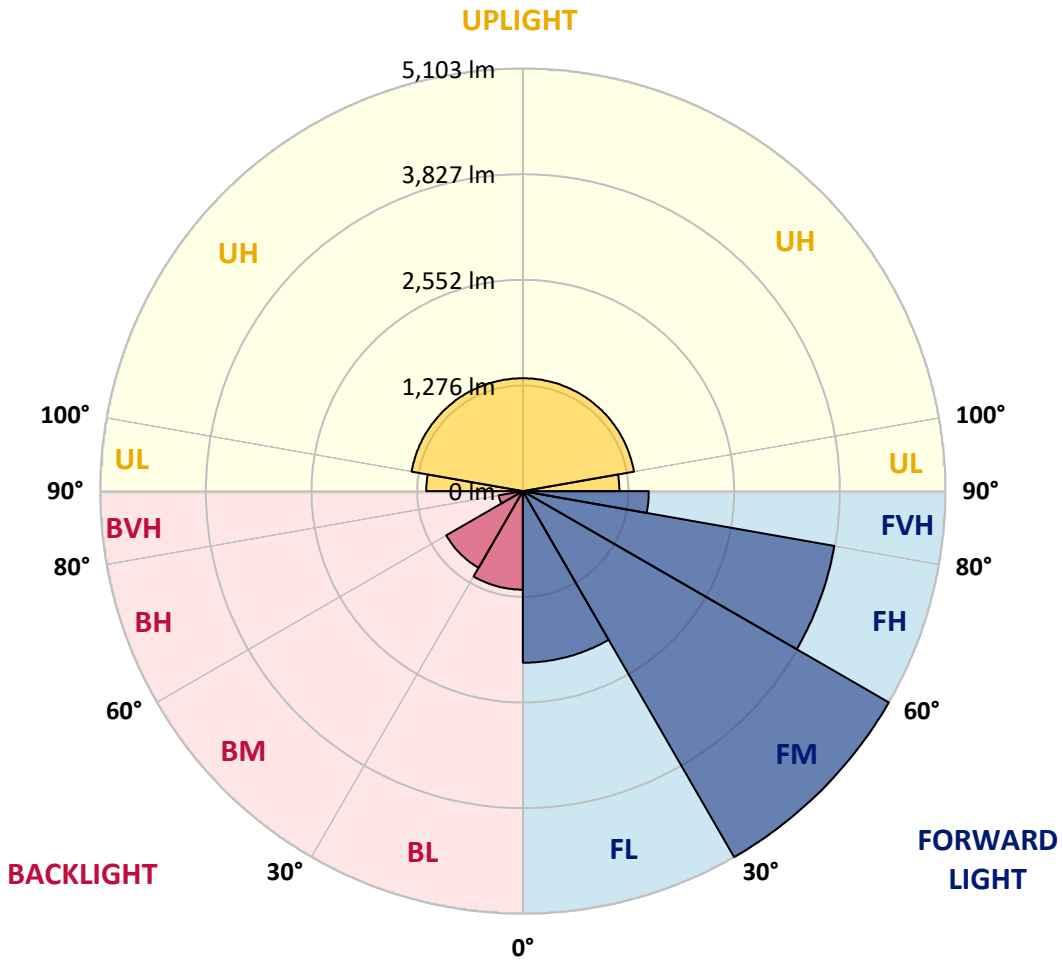
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2072.2	11.7			
FM	(30°-60°)	5103.0	28.9			
FH	(60°-80°)	3818.7	21.6			G2/5000
FVH	(80°-90°)	1520.5	8.6			G5
BL	(0°-30°)	1189.8	6.7	B3/2500		
BM	(30°-60°)	1068.4	6.1	B2/2500		
BH	(60°-80°)	296.7	1.7	B1/500		G1/500
BVH	(80°-90°)	47.0	0.3			G1/100
UL	(90°-100°)	1166.6	6.6		U5	
UH	(100°-180°)	1363.2	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°	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6
2.5°	4668.1	4654.7	4662.1	4672.6	4646.5	4644.3	4627.9	4582.5	4579.5	4557.2	4534.1
5°	4806.5	4810.2	4803.5	4787.9	4769.3	4739.5	4742.5	4675.5	4628.6	4571.3	4532.6
7.5°	5128.8	5148.1	5090.1	5029.8	4961.3	4881.7	4782.7	4720.2	4633.9	4543.8	4503.6
10°	5358.0	5362.5	5343.9	5347.6	5201.0	5049.9	4907.0	4763.4	4642.0	4513.3	4458.9
12.5°	5297.7	5317.8	5317.8	5317.1	5306.7	5283.6	5050.6	4818.4	4656.2	4480.5	4412.8
15°	5277.6	5276.2	5277.6	5297.7	5288.8	5265.7	5198.8	4898.1	4633.9	4430.7	4336.1
17.5°	5272.4	5273.2	5238.9	5250.1	5209.2	5202.5	5192.1	4949.4	4623.4	4389.7	4276.6
20°	5215.9	5213.6	5227.0	5180.9	5153.4	5132.5	5096.0	5020.9	4581.8	4313.1	4194.0
22.5°	5204.0	5205.5	5204.0	5114.7	5081.9	5052.9	5005.2	4982.2	4575.1	4224.5	4093.5
25°	5297.7	5276.9	5239.7	5118.4	4997.1	4939.7	4881.7	4858.6	4508.8	4125.5	3967.0
27.5°	5312.6	5300.7	5246.4	5161.5	5005.2	4840.0	4764.1	4715.7	4465.6	4004.9	3830.0
30°	5400.5	5394.5	5310.4	5172.0	4985.1	4768.6	4619.7	4549.7	4366.7	3879.2	3677.5
32.5°	5479.3	5480.1	5392.3	5228.5	4965.8	4713.5	4476.8	4393.5	4277.3	3718.4	3521.9
35°	5462.2	5474.1	5410.9	5244.9	4979.2	4643.5	4352.5	4224.5	4149.3	3565.8	3322.4
37.5°	5502.4	5518.8	5422.8	5230.8	4956.1	4585.5	4250.6	4079.4	3969.2	3361.9	3117.0
40°	5466.0	5477.1	5377.4	5214.4	4908.5	4519.2	4140.4	3918.6	3781.7	3178.1	2923.5
42.5°	5586.5	5600.7	5459.3	5213.6	4840.8	4397.2	4059.3	3805.5	3606.0	3013.6	2741.2
45°	5940.1	5931.1	5696.7	5300.0	4828.9	4331.7	3943.9	3688.6	3460.1	2866.2	2573.0
47.5°	5985.5	5981.7	5849.3	5420.5	4846.7	4233.4	3864.3	3609.7	3355.2	2761.3	2435.3
50°	6049.5	6034.6	5886.5	5489.0	4864.6	4162.7	3771.2	3524.9	3263.6	2651.1	2317.7
52.5°	6037.6	6027.9	5893.9	5519.5	4879.5	4097.2	3676.7	3451.2	3185.5	2561.0	2190.4
55°	6045.0	6024.2	5899.1	5518.0	4888.4	4019.8	3550.2	3367.1	3107.3	2465.8	2070.6
57.5°	5976.5	5953.5	5822.5	5503.2	4879.5	3945.4	3430.4	3246.5	3031.4	2366.0	1937.3
60°	5972.8	5954.2	5794.9	5460.0	4837.8	3861.3	3320.2	3108.8	2936.9	2272.3	1787.0
62.5°	5954.2	5934.1	5770.4	5442.9	4795.4	3784.6	3199.6	2978.6	2836.4	2155.4	1618.8
65°	5915.5	5901.4	5739.8	5420.5	4747.0	3711.7	3070.9	2842.4	2721.1	1982.0	1413.4
67.5°	5855.2	5844.8	5696.7	5373.7	4700.8	3638.8	2951.8	2701.7	2586.4	1767.7	1198.3
70°	5823.9	5803.1	5650.5	5301.5	4634.6	3540.5	2829.7	2552.9	2419.6	1532.5	963.8
72.5°	5678.1	5662.4	5512.1	5186.1	4546.8	3440.8	2712.9	2390.6	2231.3	1254.8	730.1
75°	5552.3	5548.6	5395.2	5058.1	4433.6	3332.9	2599.0	2232.1	1978.3	982.4	545.6
77.5°	5348.4	5324.5	5182.4	4888.4	4270.6	3189.2	2471.7	2066.1	1726.7	733.9	422.0
80°	5194.3	5169.0	5040.2	4735.1	4127.7	3050.0	2344.5	1890.5	1454.3	529.2	339.4
82.5°	5033.5	4991.8	4851.2	4530.4	3955.1	2896.0	2212.0	1748.3	1210.9	386.3	279.8
85°	4782.0	4761.9	4601.1	4301.2	3734.0	2715.1	2075.0	1589.0	994.4	299.2	230.0
87.5°	4582.5	4549.0	4414.3	4092.8	3522.7	2548.4	1913.5	1408.2	783.0	242.6	193.5
90°	4370.4	4325.0	4176.9	3865.0	3289.7	2359.3	1749.0	1243.7	626.7	206.9	170.4
92.5°	4135.2	4093.5	3955.8	3634.3	3049.3	2176.3	1601.7	1084.4	491.2	184.6	156.3
95°	3910.4	3875.4	3730.3	3409.5	2814.8	1995.4	1440.2	919.9	400.4	169.7	145.9
97.5°	3709.5	3647.7	3481.0	3158.0	2562.5	1814.5	1281.6	768.8	339.4	160.8	140.7
100°	3428.1	3402.1	3228.7	2895.2	2302.0	1627.0	1103.8	629.7	286.5	152.6	136.2
102.5°	3156.5	3114.8	2976.4	2629.5	2050.5	1412.6	921.4	510.6	245.6	147.4	132.5
105°	2913.8	2861.0	2716.6	2335.5	1769.1	1198.3	751.0	416.8	218.1	145.9	128.8
107.5°	2605.7	2534.3	2357.9	1981.3	1477.4	998.1	603.6	342.4	198.7	144.4	125.0
110°	2201.6	2194.1	2022.2	1632.2	1199.0	794.9	481.5	285.8	184.6	140.7	121.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	*1838.4*	1801.9	1641.9	1281.6	944.5	625.9	396.7	246.4	171.9	135.5	116.1
115°	*1432.0*	1414.1	1262.3	978.7	721.2	499.4	327.5	216.6	163.7	127.3	108.7
117.5°	*1050.9*	1029.3	926.6	734.6	578.3	414.6	281.3	195.7	154.8	118.3	101.2
120°	*750.2*	742.8	684.0	573.8	475.6	354.3	241.9	177.9	145.1	108.7	93.0
122.5°	*586.5*	574.6	535.9	477.8	410.1	307.4	215.1	163.0	135.5	98.2	83.4
125°	*471.1*	467.4	433.9	402.7	349.1	267.2	195.0	151.8	122.1	87.1	74.4
127.5°	*387.0*	381.8	362.5	338.6	301.4	239.7	183.8	144.4	109.4	77.4	66.2
130°	*314.1*	313.3	304.4	288.0	265.0	218.1	174.2	136.9	97.5	68.5	59.5
132.5°	*263.5*	262.7	259.8	244.9	234.4	201.7	166.0	127.3	86.3	60.3	53.6
135°	*230.0*	230.7	225.5	215.8	209.9	186.8	157.0	115.4	75.2	54.3	49.1
137.5°	*213.6*	212.1	201.7	191.3	190.5	175.6	145.1	102.0	66.2	49.9	45.4
140°	*198.7*	195.7	183.8	173.4	169.0	160.0	129.5	89.3	57.3	45.4	42.4
142.5°	*165.2*	166.7	160.0	152.6	146.6	139.9	112.4	75.9	49.9	41.7	39.4
145°	*128.0*	129.5	130.2	127.3	121.3	116.9	94.5	63.3	43.9	38.7	37.2
147.5°	*102.0*	102.7	102.7	101.2	99.0	93.0	78.1	52.8	39.4	35.7	34.2
150°	*83.4*	84.8	84.1	81.9	79.6	74.4	63.3	43.2	35.0	33.5	32.7
152.5°	*68.5*	69.2	68.5	67.0	65.5	58.8	50.6	36.5	32.0	31.3	31.3
155°	*55.8*	55.8	55.8	55.1	51.4	46.9	39.4	31.3	29.8	29.8	29.8
157.5°	*43.9*	43.9	43.9	43.9	40.2	35.7	31.3	27.5	28.3	28.3	28.3
160°	*33.5*	32.7	33.5	32.7	29.8	26.8	25.3	24.6	26.8	27.5	27.5
162.5°	*23.1*	23.1	23.8	23.8	22.3	20.1	21.6	23.8	25.3	26.8	26.8
165°	*14.1*	14.1	15.6	16.4	15.6	16.4	20.1	23.1	25.3	26.0	26.0
167.5°	*7.4*	7.4	9.7	11.2	12.7	14.9	20.1	23.1	24.6	26.0	26.0
170°	*3.0*	3.7	6.0	8.9	11.2	14.9	20.1	23.1	25.3	26.0	26.0
172.5°	*3.0*	3.0	6.0	8.9	11.9	14.9	20.1	23.1	25.3	26.0	26.8
175°	*3.0*	3.7	6.0	9.7	11.9	15.6	20.8	23.8	25.3	26.0	26.8
177.5°	*3.7*	3.7	6.7	9.7	11.9	15.6	20.8	23.8	25.3	26.8	26.8
180°	*15.6*	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6	4535.6
2.5°	4511.0	4482.0	4456.0	4410.6	4386.0	4376.3	4351.8	4360.7	4367.4	4374.8
5°	4491.7	4446.3	4393.5	4328.0	4258.7	4199.2	4125.5	4117.3	4121.8	4105.4
7.5°	4456.7	4369.6	4260.2	4163.5	4074.2	3999.0	3935.7	3886.6	3866.5	3868.7
10°	4410.6	4281.8	4125.5	4024.3	3862.0	3769.0	3679.7	3608.2	3582.2	3562.8
12.5°	4354.0	4188.8	4002.0	3848.6	3659.6	3497.3	3382.0	3277.0	3226.4	3245.0
15°	4261.7	4051.8	3850.9	3648.4	3415.5	3206.3	3035.9	2909.4	2850.6	2833.5
17.5°	4183.6	3935.7	3686.4	3388.7	3123.0	2883.3	2647.4	2450.2	2338.5	2340.7
20°	4074.2	3779.4	3487.7	3153.5	2814.8	2445.7	2136.8	1918.0	1797.4	1784.0
22.5°	3946.9	3626.1	3288.2	2896.7	2452.4	2002.1	1647.1	1450.6	1379.9	1340.4
25°	3807.0	3449.0	3064.2	2599.8	2040.1	1575.6	1257.1	1097.1	1014.4	1001.0
27.5°	3651.4	3254.7	2807.4	2233.6	1653.8	1222.8	969.0	836.6	798.6	789.7
30°	3473.5	3065.7	2556.6	1892.7	1319.6	959.4	790.4	722.7	701.1	697.4
32.5°	3296.4	2848.3	2287.2	1577.1	1058.4	789.7	700.4	655.7	637.8	631.9
35°	3081.3	2623.6	2022.2	1321.8	876.0	702.6	644.5	608.8	596.9	594.7
37.5°	2874.4	2398.8	1758.7	1109.7	756.2	647.5	600.6	576.8	568.6	564.9
40°	2662.3	2189.7	1516.8	917.7	672.8	597.7	564.9	531.4	522.5	522.5
42.5°	2479.2	1993.2	1274.9	776.3	608.8	551.5	512.1	491.2	482.3	480.8
45°	2300.6	1798.2	1072.5	673.6	553.7	496.4	468.9	433.2	420.5	424.2
47.5°	2156.2	1593.5	907.3	609.6	510.6	458.5	411.6	380.3	364.0	364.0
50°	*2001.4*	*1384.4*	*786.7*	*564.2*	*463.7*	*410.1*	*364.7*	*329.0*	*308.1*	*311.1*
52.5°	1854.0	1208.7	699.6	525.5	424.2	366.2	320.8	286.5	261.2	258.3
55°	1691.7	1043.5	643.1	486.8	380.3	326.0	282.8	247.1	232.2	231.5
57.5°	1544.4	906.5	602.9	443.6	338.6	287.3	246.4	220.3	221.8	226.3
60°	1365.7	797.1	568.6	402.7	299.9	247.1	216.6	199.5	202.4	203.9
62.5°	1192.3	715.2	535.1	362.5	260.5	215.1	186.1	175.6	185.3	186.1
65°	996.6	646.8	493.5	318.5	226.3	185.3	159.3	161.5	166.0	167.5
67.5°	812.0	591.7	446.6	282.8	195.0	154.1	142.2	141.4	148.1	147.4
70°	653.5	538.1	397.4	241.9	165.2	128.0	122.1	120.6	122.8	124.3
72.5°	537.4	482.3	343.1	206.2	137.7	107.2	99.7	98.2	96.0	97.5
75°	460.0	425.0	292.5	171.2	110.2	85.6	75.9	71.5	68.5	70.0
77.5°	398.2	364.7	247.1	141.4	87.1	65.5	51.4	41.7	39.4	39.4
80°	337.2	303.7	206.2	114.6	67.7	43.9	23.8	14.9	12.7	12.7
82.5°	286.5	254.5	171.2	92.3	49.1	23.1	5.2	0.7	0.0	0.0
85°	241.1	212.9	144.4	76.7	40.2	19.4	6.0	1.5	0.0	0.0
87.5°	203.2	178.6	126.5	67.0	36.5	18.6	6.7	2.2	0.7	0.7
90°	176.4	156.3	111.6	60.3	33.5	17.9	6.7	3.0	2.2	2.2
92.5°	159.3	140.7	102.7	55.8	31.3	17.1	7.4	4.5	3.0	3.0
95°	145.1	128.0	93.8	52.1	29.8	17.1	8.2	5.2	3.7	3.7
97.5°	134.7	119.1	86.3	48.4	28.3	17.1	8.9	6.0	5.2	4.5
100°	125.0	110.2	78.9	45.4	27.5	17.1	8.9	6.7	5.2	5.2
102.5°	118.3	103.5	72.9	42.4	26.8	16.4	8.9	6.7	5.2	5.2
105°	113.9	99.0	67.7	40.2	25.3	16.4	8.9	6.7	5.2	5.2
107.5°	109.4	95.3	61.8	38.7	23.8	15.6	8.9	6.7	5.2	5.2
110°	105.7	88.6	57.3	36.5	23.1	14.9	8.9	6.0	4.5	4.5

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

Scaled Data Report

REPORT NUMBER: P979175
CATALOG NUMBER: WPLLED38S-120W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	101.2	80.4	52.8	33.5	21.6	13.4	8.2	6.0	4.5	4.5
115°	94.5	70.7	48.4	32.0	20.8	12.7	8.2	5.2	3.7	3.7
117.5°	87.8	63.3	43.9	29.8	20.1	11.9	7.4	5.2	3.7	3.7
120°	80.4	56.6	40.9	28.3	19.4	11.9	7.4	4.5	3.7	3.7
122.5°	71.5	51.4	38.7	27.5	18.6	11.2	7.4	4.5	3.0	3.0
125°	63.3	46.9	36.5	26.8	17.9	10.4	7.4	4.5	3.0	3.0
127.5°	56.6	43.9	34.2	26.0	17.1	10.4	7.4	4.5	3.0	3.0
130°	51.4	40.9	33.5	25.3	17.1	11.2	7.4	4.5	3.0	3.0
132.5°	46.9	38.7	32.0	25.3	17.1	11.2	8.2	5.2	3.7	3.7
135°	43.9	36.5	31.3	24.6	16.4	11.2	8.2	5.2	3.7	3.7
137.5°	41.7	35.0	29.8	24.6	16.4	11.9	8.9	5.2	3.7	3.7
140°	39.4	33.5	29.0	23.8	16.4	11.9	8.9	6.0	4.5	4.5
142.5°	37.2	32.7	28.3	23.1	16.4	11.9	8.9	6.0	4.5	4.5
145°	35.0	31.3	27.5	22.3	15.6	11.9	8.9	6.0	4.5	4.5
147.5°	33.5	30.5	26.0	21.6	15.6	11.9	8.9	6.0	4.5	4.5
150°	31.3	29.0	25.3	20.8	15.6	11.9	8.9	6.0	3.7	3.7
152.5°	29.8	27.5	24.6	20.1	14.9	11.9	8.9	6.0	3.7	3.7
155°	29.0	26.8	23.8	20.1	14.9	11.9	8.9	5.2	3.7	3.7
157.5°	27.5	26.0	23.8	20.1	14.9	11.9	8.9	5.2	3.7	3.7
160°	26.8	25.3	23.1	20.1	14.9	11.9	8.2	5.2	3.7	3.7
162.5°	26.8	25.3	23.1	20.1	14.9	11.9	8.2	5.2	3.7	3.0
165°	26.0	25.3	23.1	20.1	14.9	11.2	8.2	4.5	3.0	3.0
167.5°	26.0	25.3	23.1	19.4	14.9	11.2	8.2	4.5	3.0	3.0
170°	26.0	25.3	23.1	19.4	14.9	11.2	8.2	4.5	3.0	2.2
172.5°	26.0	25.3	23.1	19.4	14.9	11.2	8.2	4.5	2.2	2.2
175°	26.8	25.3	23.1	19.4	14.9	11.2	8.2	4.5	2.2	2.2
177.5°	26.8	25.3	23.1	19.4	14.9	11.2	7.4	4.5	2.2	2.2
180°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6

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

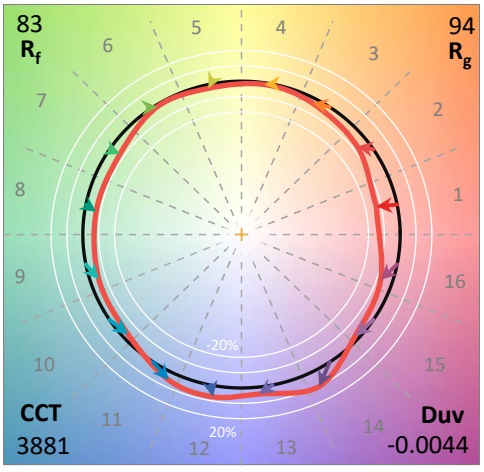
Test Information

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

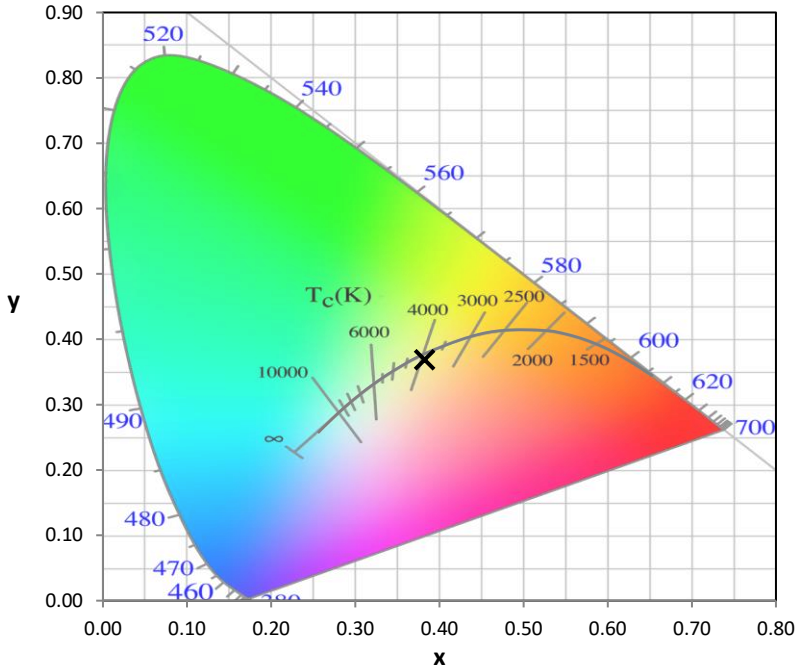
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-3

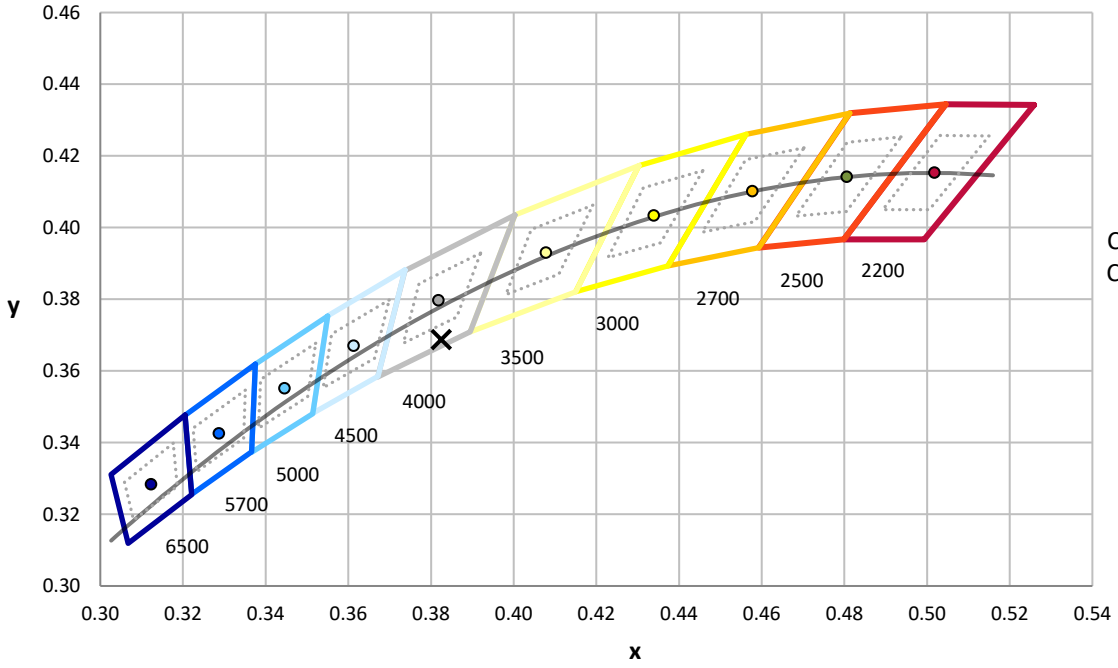
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

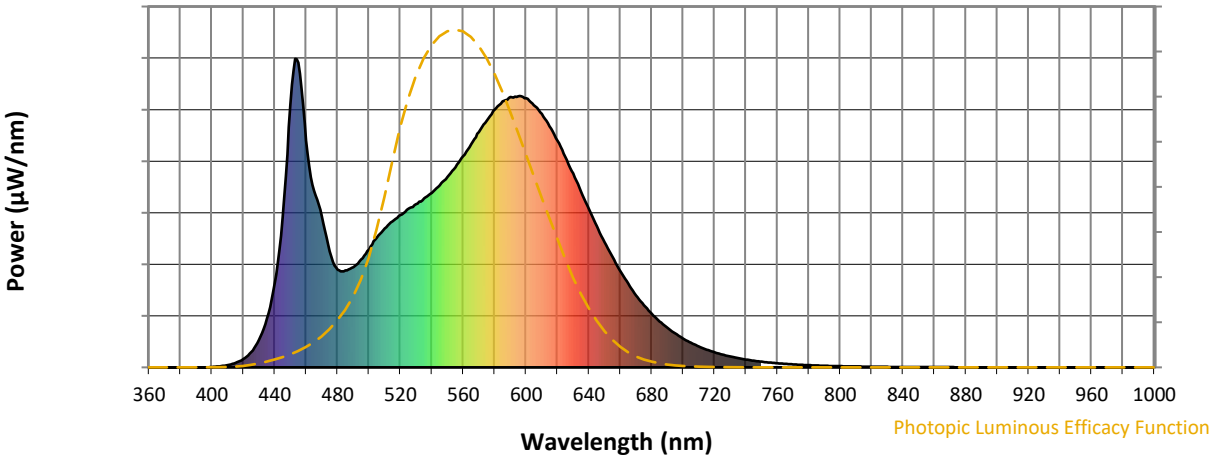


CCT = 3881K
CIE x = 0.3825
CIE y = 0.3688
Duv = -0.0044

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-3

Photopic Flux vs. Wavelength

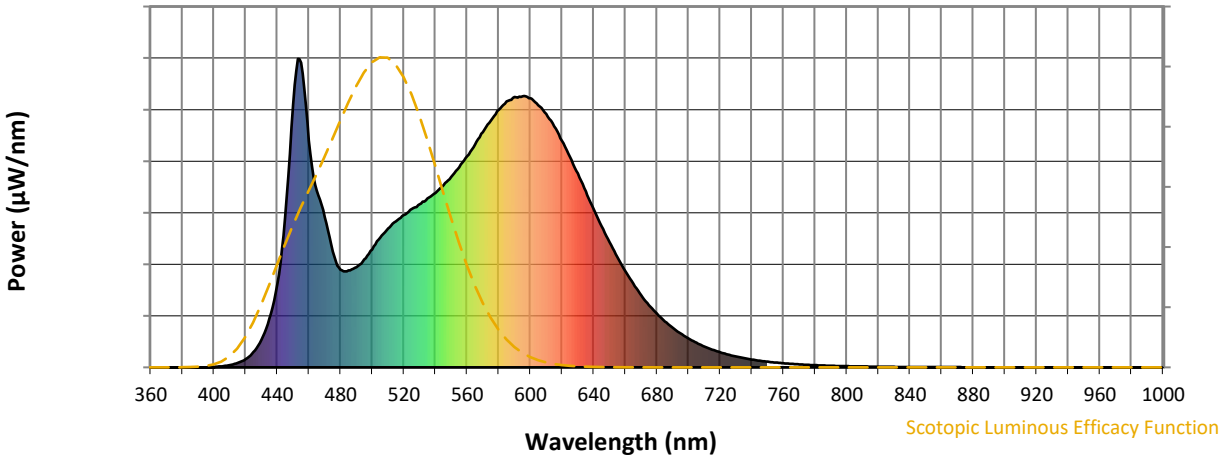


Photopic Lumens: NR

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

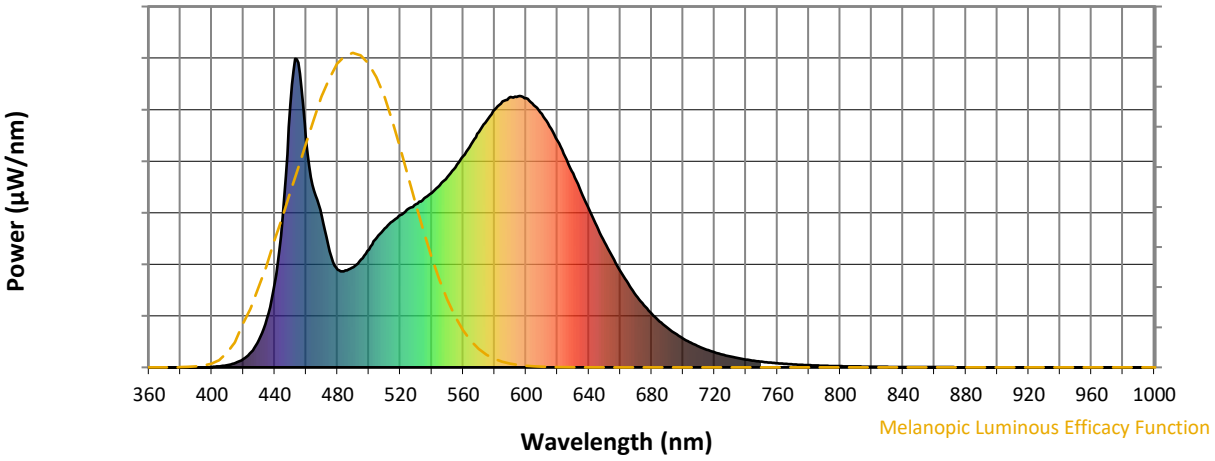


Scotopic Lumens: NR **S/P: 1.72**

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			

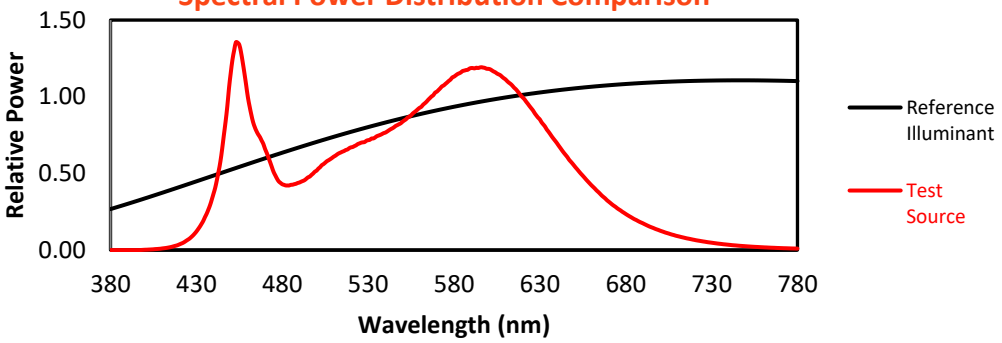
REPORT NUMBER: SP1-2407-168-3

TM-30-18

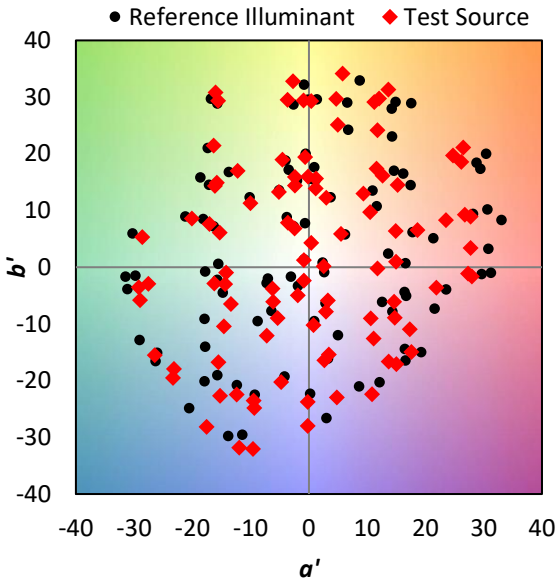
Summary

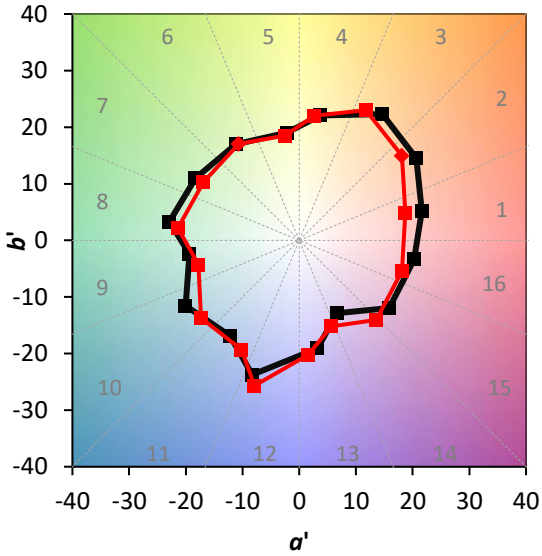
R_f = 82.8
R_g = 93.7
CIE R_a = 82.7
R_9 = 4.8

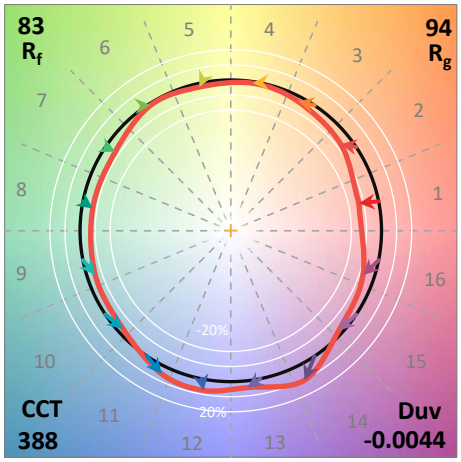
Spectral Power Distribution Comparison

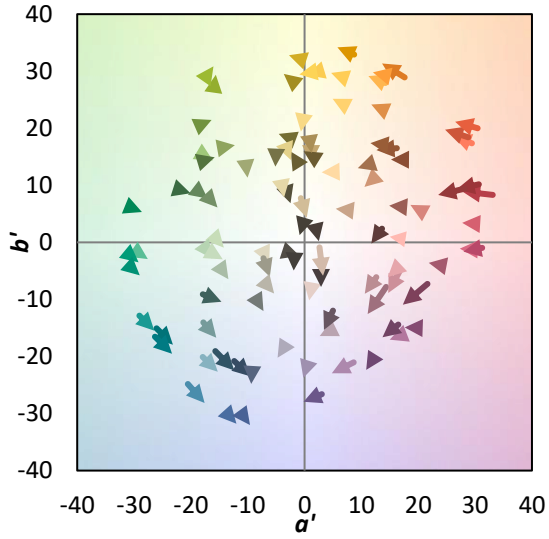


Color Vector Graphics







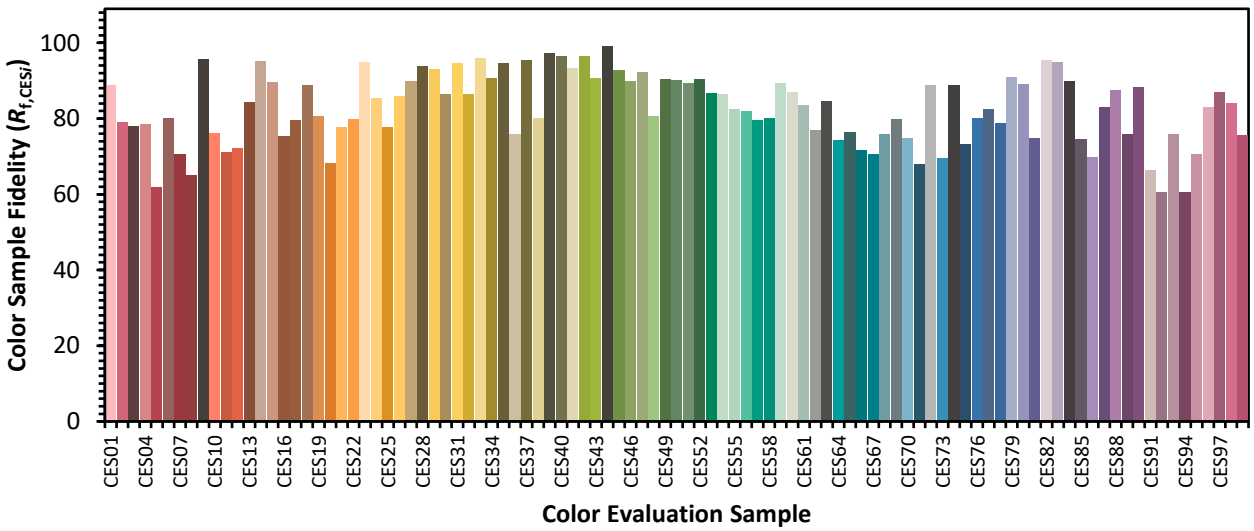


REPORT NUMBER: SP1-2407-168-3

TM-30-18

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

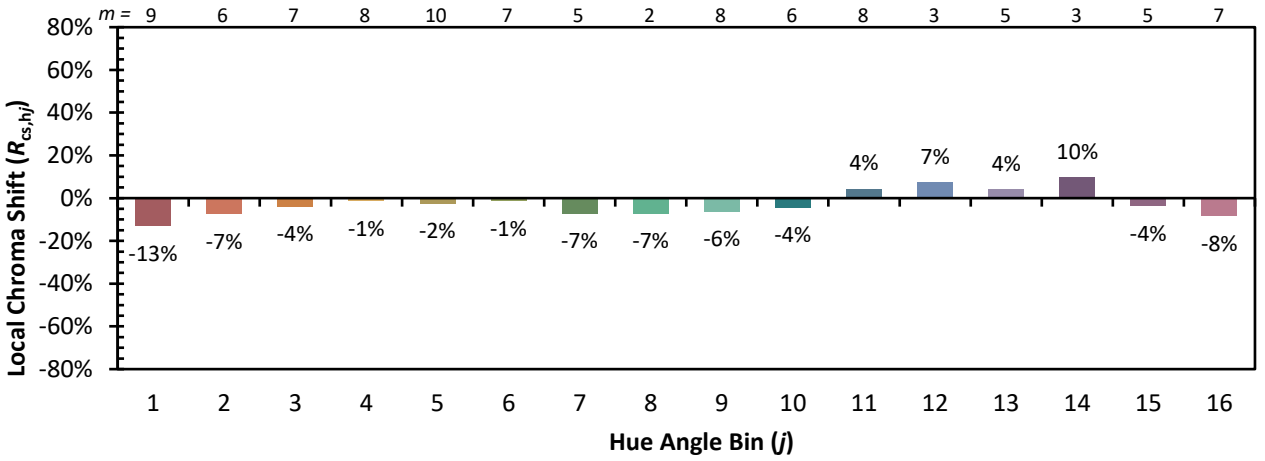
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 80
CES02 = 62	CES27 = 90	CES52 = 91	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 87	CES78 = 79
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 91
CES05 = 48	CES30 = 86	CES55 = 83	CES80 = 89
CES06 = 51	CES31 = 95	CES56 = 82	CES81 = 75
CES07 = 41	CES32 = 86	CES57 = 80	CES82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

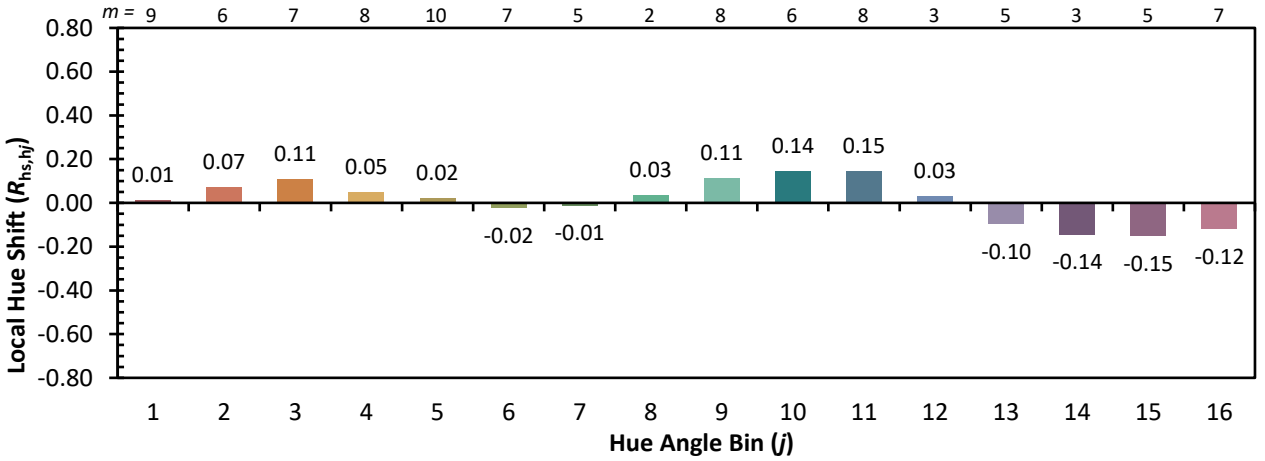


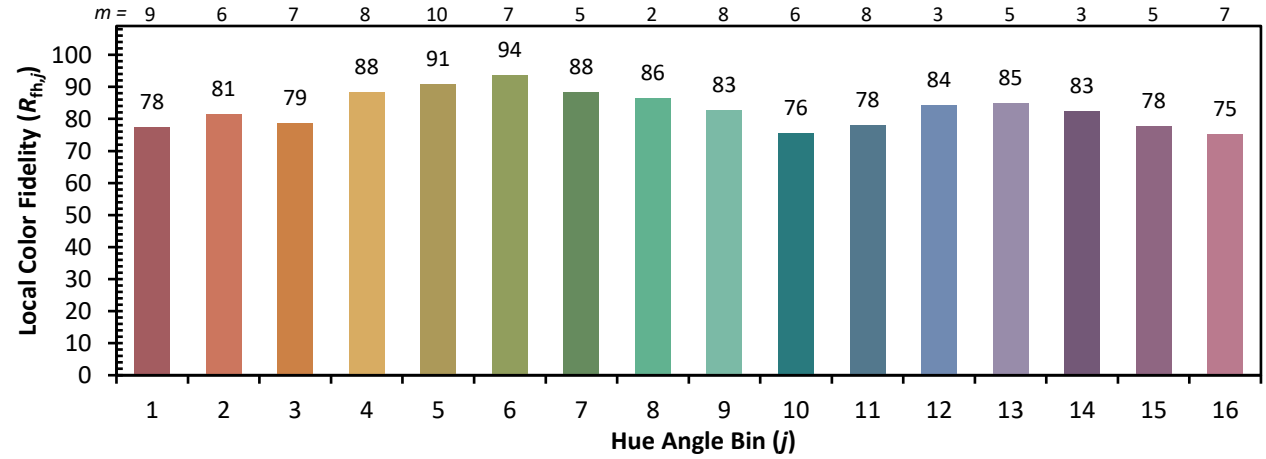
REPORT NUMBER: SP1-2407-168-3

TM-30-18

Color Rendition by Hue-Angle Bin







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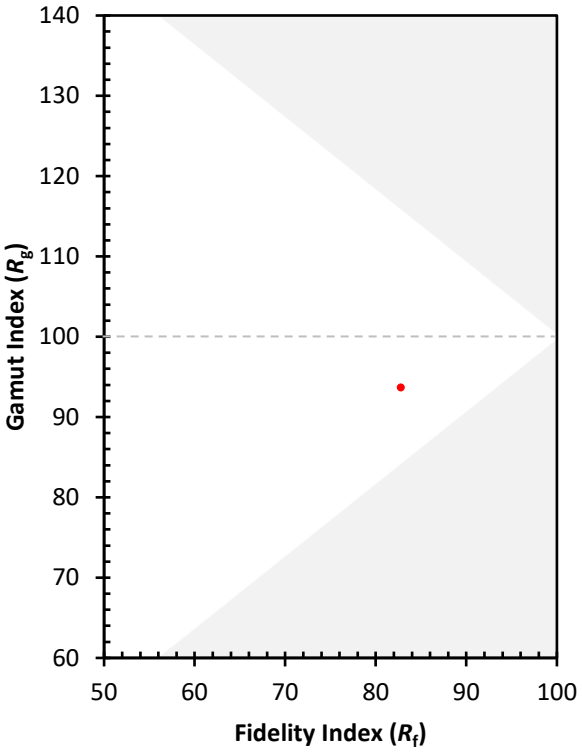
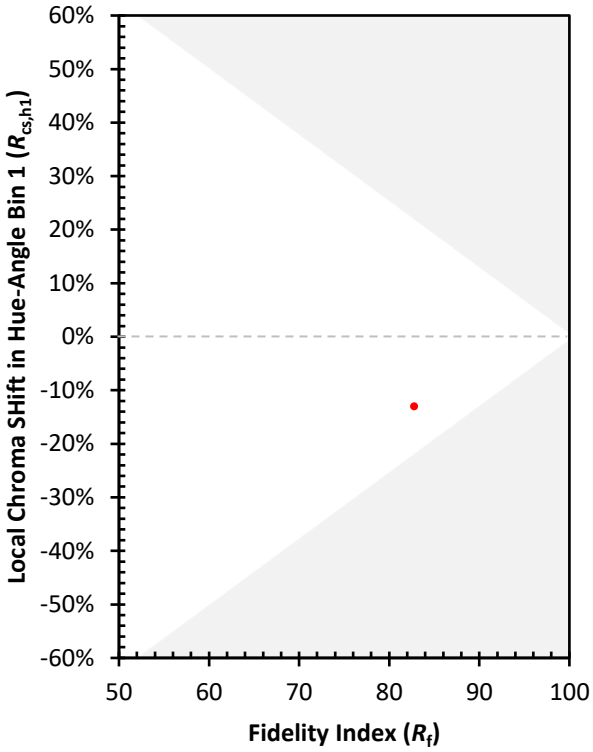
Measure Comparisons





(END OF REPORT)