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: P979165

Luminaire Tested: **WPLLED38S-140W-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:	P979165
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPLLED38S-140W-4000K
Description:	LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @140W-4000K
Light Source:	4000K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	19985.9 lumens
Efficiency:	N/A
Efficacy:	150.4 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):	132.9
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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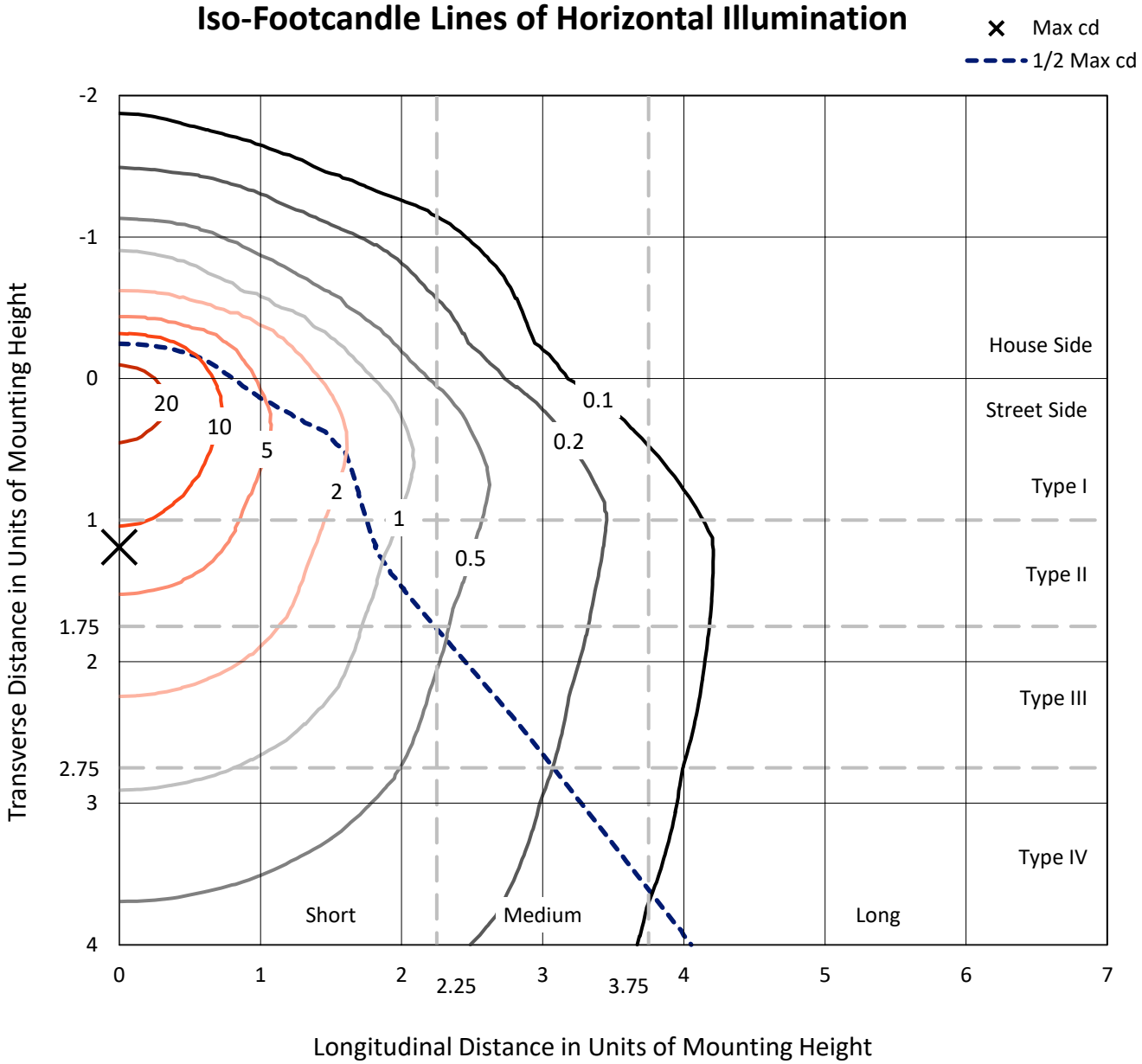
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 25 fc
Type IV - Short - N/A

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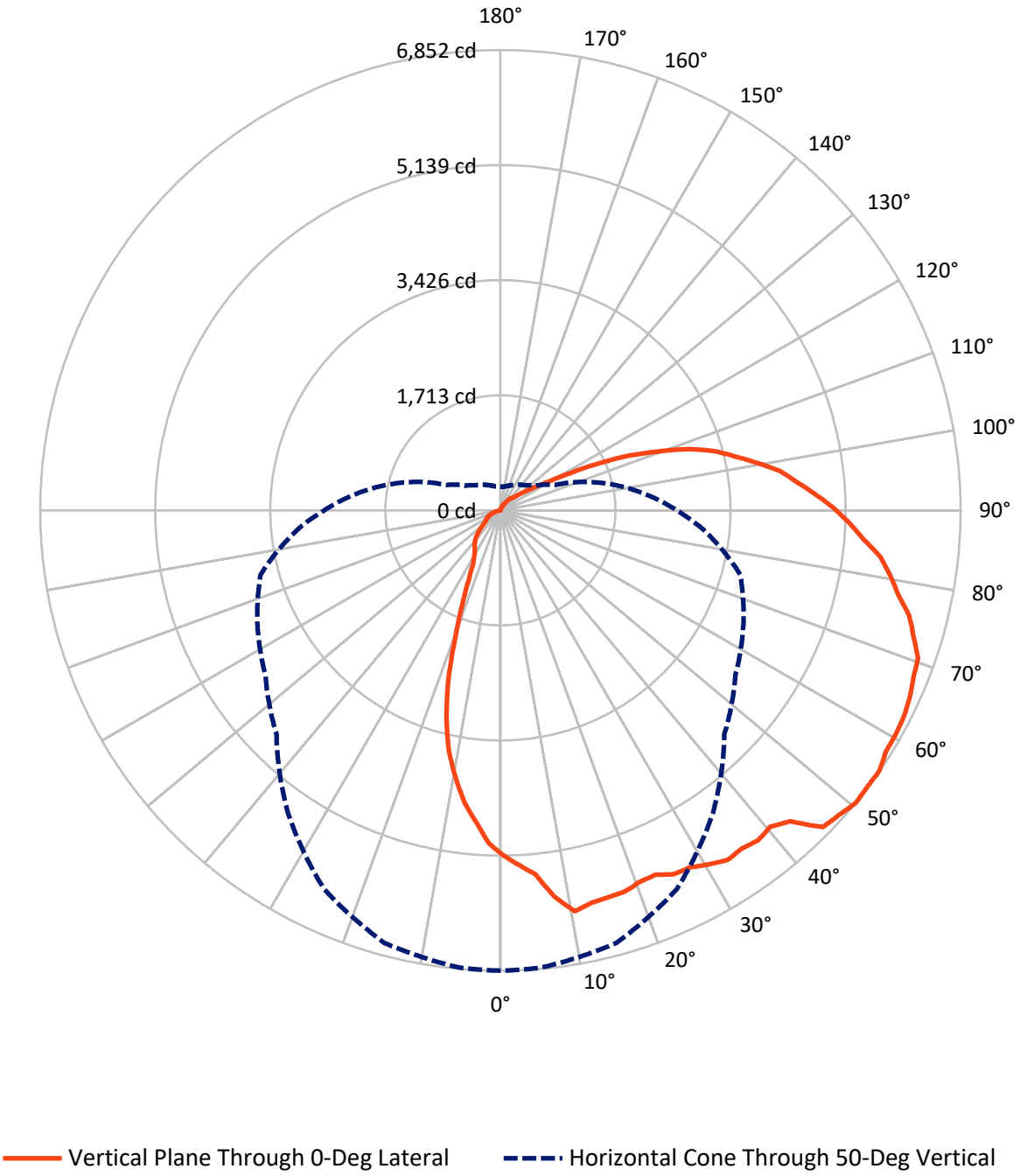
Luminous Intensity Polar Plot



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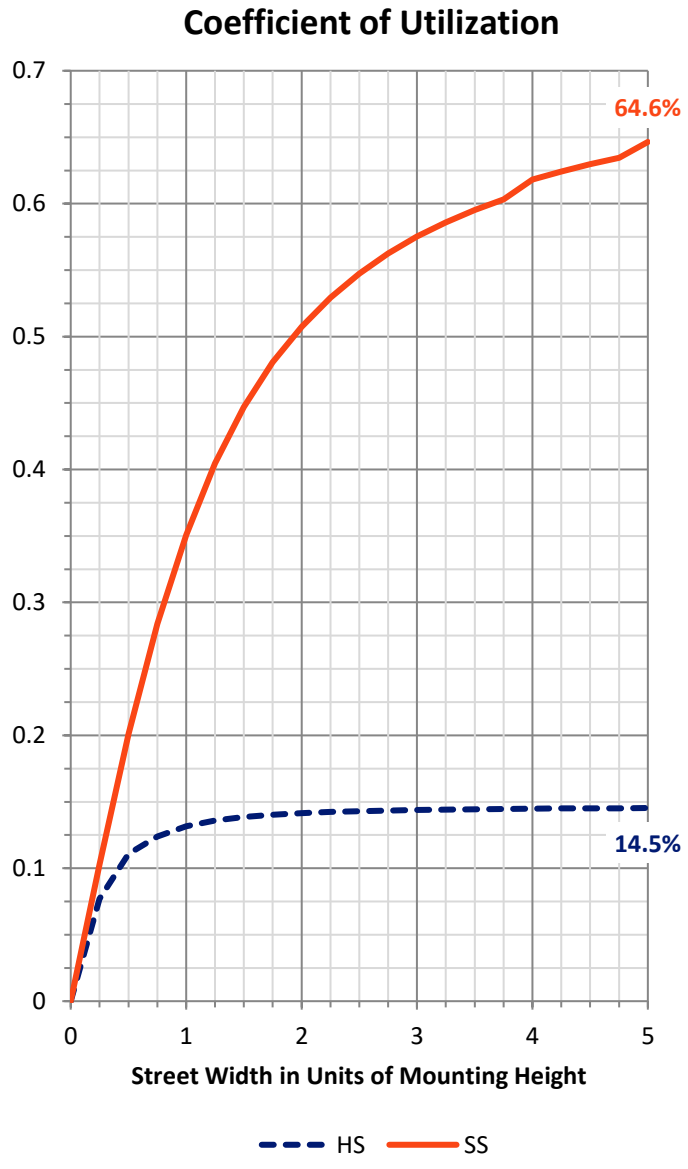
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2946.9	113.8	3060.6
	% Fixture	14.7	0.6	15.3
Street Side	Lumens	14173.9	2751.4	16925.3
	% Fixture	70.9	13.8	84.7
Total	Lumens	17120.8	2865.1	19985.9
	% Fixture	85.7	14.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	485.7	2.4
10°-20°	1352.0	6.8
20°-30°	1856.8	9.3
30°-40°	2151.2	10.8
40°-50°	2350.9	11.8
50°-60°	2487.7	12.4
60°-70°	2458.1	12.3
70°-80°	2203.0	11.0
80°-90°	1775.3	8.9
90°-100°	1321.2	6.6
100°-110°	849.0	4.2
110°-120°	389.7	1.9
120°-130°	157.5	0.8
130°-140°	82.2	0.4
140°-150°	41.6	0.2
150°-160°	16.3	0.1
160°-170°	5.8	0.0
170°-180°	1.7	0.0
0°-90°	17120.8	85.7
0°-180°	19985.9	100.0



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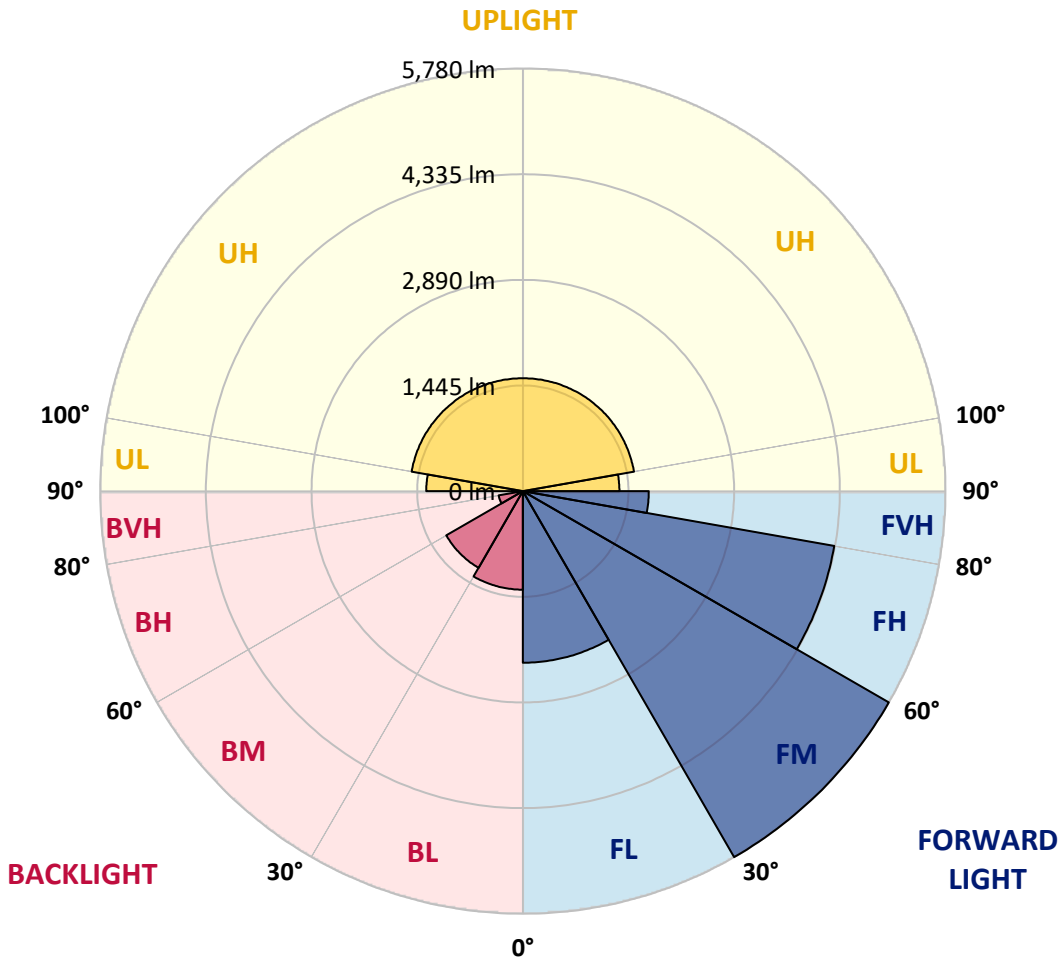
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2347.0	11.7			
FM	(30°-60°)	5779.8	28.9			
FH	(60°-80°)	4325.1	21.6			G2/5000
FVH	(80°-90°)	1722.1	8.6			G5
BL	(0°-30°)	1347.5	6.7	B3/2500		
BM	(30°-60°)	1210.0	6.1	B2/2500		
BH	(60°-80°)	336.1	1.7	B1/500		G1/500
BVH	(80°-90°)	53.2	0.3			G1/100
UL	(90°-100°)	1321.2	6.6		U5	
UH	(100°-180°)	1543.9	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°	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1
2.5°	5287.1	5271.9	5280.4	5292.2	5262.7	5260.1	5241.6	5190.2	5186.8	5161.5	5135.4
5°	5443.9	5448.1	5440.5	5422.8	5401.8	5368.0	5371.4	5295.5	5242.4	5177.5	5133.7
7.5°	5808.9	5830.8	5765.1	5696.8	5619.2	5529.0	5416.9	5346.1	5248.3	5146.3	5100.8
10°	6068.5	6073.6	6052.5	6056.7	5890.7	5719.6	5557.7	5395.0	5257.6	5111.8	5050.2
12.5°	6000.3	6023.0	6023.0	6022.2	6010.4	5984.3	5720.4	5457.4	5273.6	5074.7	4998.0
15°	5977.5	5975.8	5977.5	6000.3	5990.2	5964.0	5888.2	5547.6	5248.3	5018.2	4911.1
17.5°	5971.6	5972.4	5933.7	5946.3	5900.0	5892.4	5880.6	5605.8	5236.5	4971.8	4843.7
20°	5907.5	5905.0	5920.2	5867.9	5836.7	5813.1	5771.8	5686.7	5189.3	4885.0	4750.1
22.5°	5894.1	5895.7	5894.1	5792.9	5755.8	5722.9	5669.0	5642.8	5181.7	4784.7	4636.3
25°	6000.3	5976.7	5934.5	5797.1	5659.7	5594.8	5529.0	5502.9	5106.7	4672.6	4493.0
27.5°	6017.1	6003.6	5942.1	5846.0	5669.0	5481.8	5395.9	5341.1	5057.8	4536.0	4337.9
30°	6116.6	6109.9	6014.6	5857.8	5646.2	5400.9	5232.3	5153.1	4945.7	4393.6	4165.1
32.5°	6206.0	6206.8	6107.3	5921.9	5624.3	5338.5	5070.5	4976.1	4844.6	4211.5	3988.9
35°	6186.6	6200.1	6128.4	5940.4	5639.5	5259.3	4929.7	4784.7	4699.6	4038.7	3763.0
37.5°	6232.1	6250.6	6141.9	5924.4	5613.3	5193.5	4814.2	4620.3	4495.6	3807.7	3530.4
40°	6190.8	6203.4	6090.5	5905.9	5559.4	5118.5	4689.4	4438.2	4283.1	3599.5	3311.2
42.5°	6327.3	6343.4	6183.2	5905.0	5482.7	4980.3	4597.6	4310.1	4084.2	3413.2	3104.7
45°	6727.8	6717.6	6452.1	6002.8	5469.2	4906.1	4466.9	4177.8	3919.0	3246.3	2914.2
47.5°	6779.2	6775.0	6624.9	6139.4	5489.4	4794.8	4376.7	4088.4	3800.1	3127.4	2758.2
50°	6851.7	6834.8	6667.1	6216.9	5509.7	4714.7	4271.3	3992.3	3696.4	3002.7	2625.0
52.5°	6838.2	6827.2	6675.5	6251.5	5526.5	4640.6	4164.3	3908.9	3607.9	2900.7	2480.9
55°	6846.6	6823.0	6681.4	6249.8	5536.6	4552.9	4021.0	3813.6	3519.4	2792.8	2345.1
57.5°	6769.1	6742.9	6594.6	6232.9	5526.5	4468.6	3885.3	3677.0	3433.4	2679.8	2194.3
60°	6764.8	6743.8	6563.4	6184.0	5479.3	4373.3	3760.5	3521.1	3326.4	2573.6	2024.0
62.5°	6743.8	6721.0	6535.6	6164.6	5431.3	4286.5	3623.9	3373.6	3212.6	2441.2	1833.5
65°	6699.9	6683.9	6501.0	6139.4	5376.5	4203.9	3478.1	3219.3	3081.9	2244.8	1600.8
67.5°	6631.7	6619.9	6452.1	6086.3	5324.2	4121.3	3343.2	3060.0	2929.3	2002.1	1357.2
70°	6596.2	6572.6	6399.8	6004.5	5249.2	4010.0	3205.0	2891.4	2740.5	1735.7	1091.6
72.5°	6431.0	6413.3	6243.0	5873.8	5149.7	3897.1	3072.6	2707.6	2527.2	1421.2	827.0
75°	6288.6	6284.3	6110.7	5728.8	5021.6	3774.8	2943.7	2528.1	2240.6	1112.7	617.9
77.5°	6057.6	6030.6	5869.6	5536.6	4837.0	3612.1	2799.5	2340.1	1955.7	831.2	478.0
80°	5883.1	5854.4	5708.6	5363.0	4675.1	3454.5	2655.4	2141.1	1647.2	599.4	384.4
82.5°	5701.0	5653.8	5494.5	5131.2	4479.5	3280.0	2505.3	1980.1	1371.5	437.5	317.0
85°	5416.1	5393.3	5211.2	4871.5	4229.2	3075.2	2350.2	1799.7	1126.2	338.9	260.5
87.5°	5190.2	5152.2	4999.7	4635.5	3989.8	2886.3	2167.3	1594.9	886.8	274.8	219.2
90°	4949.9	4898.5	4730.8	4377.5	3725.9	2672.2	1981.0	1408.6	709.8	234.3	193.0
92.5°	4683.5	4636.3	4480.4	4116.2	3453.7	2464.8	1814.1	1228.2	556.4	209.1	177.0
95°	4429.0	4389.4	4225.0	3861.7	3188.1	2260.0	1631.1	1041.9	453.5	192.2	165.2
97.5°	4201.4	4131.4	3942.6	3576.7	2902.3	2055.2	1451.6	870.8	384.4	182.1	159.3
100°	3882.7	3853.2	3656.8	3279.2	2607.3	1842.7	1250.1	713.2	324.5	172.8	154.3
102.5°	3575.0	3527.8	3371.0	2978.2	2322.4	1600.0	1043.6	578.3	278.2	166.9	150.0
105°	3300.2	3240.4	3076.8	2645.2	2003.7	1357.2	850.6	472.1	247.0	165.2	145.8
107.5°	2951.2	2870.3	2670.5	2244.0	1673.3	1130.4	683.6	387.8	225.1	163.5	141.6
110°	2493.5	2485.1	2290.4	1848.6	1358.0	900.3	545.4	323.7	209.1	159.3	137.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	*2082.1*	2040.8	1859.6	1451.6	1069.7	708.9	449.3	279.0	194.7	153.4	131.5
115°	*1621.9*	1601.6	1429.7	1108.5	816.8	565.6	370.9	245.3	185.5	144.1	123.1
117.5°	*1190.3*	1165.8	1049.5	832.0	655.0	469.5	318.6	221.7	175.3	134.0	114.6
120°	*849.7*	841.3	774.7	649.9	538.7	401.3	274.0	201.5	164.4	123.1	105.4
122.5°	*664.3*	650.8	606.9	541.2	464.5	348.1	243.6	184.6	153.4	111.3	94.4
125°	*533.6*	529.4	491.5	456.0	395.4	302.6	220.9	172.0	138.2	98.6	84.3
127.5°	*438.3*	432.4	410.5	383.6	341.4	271.4	208.2	163.5	123.9	87.7	75.0
130°	*355.7*	354.9	344.8	326.2	300.1	247.0	197.3	155.1	110.4	77.6	67.4
132.5°	*298.4*	297.6	294.2	277.3	265.5	228.4	188.0	144.1	97.8	68.3	60.7
135°	*260.5*	261.3	255.4	244.5	237.7	211.6	177.9	130.7	85.1	61.5	55.6
137.5°	*241.9*	240.2	228.4	216.6	215.8	198.9	164.4	115.5	75.0	56.5	51.4
140°	*225.1*	221.7	208.2	196.4	191.4	181.2	146.7	101.2	64.9	51.4	48.0
142.5°	*187.1*	188.8	181.2	172.8	166.1	158.5	127.3	86.0	56.5	47.2	44.7
145°	*145.0*	146.7	147.5	144.1	137.4	132.3	107.1	71.7	49.7	43.8	42.1
147.5°	*115.5*	116.3	116.3	114.6	112.1	105.4	88.5	59.9	44.7	40.5	38.8
150°	*94.4*	96.1	95.3	92.7	90.2	84.3	71.7	48.9	39.6	37.9	37.1
152.5°	*77.6*	78.4	77.6	75.9	74.2	66.6	57.3	41.3	36.2	35.4	35.4
155°	*63.2*	63.2	63.2	62.4	58.2	53.1	44.7	35.4	33.7	33.7	33.7
157.5°	*49.7*	49.7	49.7	49.7	45.5	40.5	35.4	31.2	32.0	32.0	32.0
160°	*37.9*	37.1	37.9	37.1	33.7	30.3	28.7	27.8	30.3	31.2	31.2
162.5°	*26.1*	26.1	27.0	27.0	25.3	22.8	24.4	27.0	28.7	30.3	30.3
165°	*16.0*	16.0	17.7	18.5	17.7	18.5	22.8	26.1	28.7	29.5	29.5
167.5°	*8.4*	8.4	11.0	12.6	14.3	16.9	22.8	26.1	27.8	29.5	29.5
170°	*3.4*	4.2	6.7	10.1	12.6	16.9	22.8	26.1	28.7	29.5	29.5
172.5°	*3.4*	3.4	6.7	10.1	13.5	16.9	22.8	26.1	28.7	29.5	30.3
175°	*3.4*	4.2	6.7	11.0	13.5	17.7	23.6	27.0	28.7	29.5	30.3
177.5°	*4.2*	4.2	7.6	11.0	13.5	17.7	23.6	27.0	28.7	30.3	30.3
180°	*17.7*	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1	5137.1
2.5°	5109.2	5076.4	5046.9	4995.4	4967.6	4956.7	4928.9	4939.0	4946.6	4955.0
5°	5087.3	5035.9	4976.1	4901.9	4823.5	4756.0	4672.6	4663.3	4668.4	4649.8
7.5°	5047.7	4949.1	4825.2	4715.6	4614.4	4529.3	4457.6	4402.0	4379.2	4381.8
10°	4995.4	4849.6	4672.6	4557.9	4374.2	4268.8	4167.6	4086.7	4057.2	4035.3
12.5°	4931.4	4744.2	4532.7	4359.0	4144.9	3961.1	3830.5	3711.6	3654.3	3675.4
15°	4826.9	4589.1	4361.5	4132.2	3868.4	3631.5	3438.5	3295.2	3228.6	3209.2
17.5°	4738.3	4457.6	4175.2	3838.0	3537.1	3265.7	2998.4	2775.1	2648.6	2651.1
20°	4614.4	4280.6	3950.2	3571.7	3188.1	2770.0	2420.2	2172.3	2035.8	2020.6
22.5°	4470.3	4107.0	3724.2	3280.8	2777.6	2267.6	1865.5	1643.0	1562.9	1518.2
25°	4311.8	3906.3	3470.5	2944.5	2310.6	1784.6	1423.8	1242.5	1149.0	1133.8
27.5°	4135.6	3686.3	3179.7	2529.8	1873.1	1385.0	1097.5	947.5	904.5	894.4
30°	3934.1	3472.2	2895.6	2143.7	1494.6	1086.6	895.2	818.5	794.1	789.9
32.5°	3733.5	3226.1	2590.4	1786.3	1198.7	894.4	793.2	742.7	722.4	715.7
35°	3489.9	2971.5	2290.4	1497.1	992.2	795.8	730.0	689.6	676.1	673.5
37.5°	3255.6	2716.9	1991.9	1256.9	856.5	733.4	680.3	653.3	644.0	639.8
40°	3015.3	2480.0	1718.0	1039.4	762.0	676.9	639.8	601.9	591.8	591.8
42.5°	2807.9	2257.5	1444.0	879.2	689.6	624.6	580.0	556.4	546.2	544.6
45°	2605.6	2036.6	1214.7	762.9	627.2	562.3	531.1	490.6	476.3	480.5
47.5°	2442.1	1804.8	1027.6	690.4	578.3	519.3	466.2	430.8	412.2	412.2
50°	*2266.7*	*1567.9*	*891.0*	*639.0*	*525.2*	*464.5*	*413.1*	*372.6*	*349.0*	*352.4*
52.5°	2099.8	1369.0	792.4	595.1	480.5	414.7	363.3	324.5	295.9	292.5
55°	1916.1	1181.8	728.3	551.3	430.8	369.2	320.3	279.9	263.0	262.2
57.5°	1749.2	1026.7	682.8	502.4	383.6	325.4	279.0	249.5	251.2	256.3
60°	1546.9	902.8	644.0	456.0	339.7	279.9	245.3	225.9	229.3	231.0
62.5°	1350.4	810.1	606.1	410.5	295.0	243.6	210.7	198.9	209.9	210.7
65°	1128.7	732.5	558.9	360.8	256.3	209.9	180.4	182.9	188.0	189.7
67.5°	919.7	670.2	505.8	320.3	220.9	174.5	161.0	160.2	167.8	166.9
70°	740.1	609.5	450.1	274.0	187.1	145.0	138.2	136.6	139.1	140.8
72.5°	608.6	546.2	388.6	233.5	155.9	121.4	113.0	111.3	108.7	110.4
75°	521.0	481.3	331.3	193.9	124.8	96.9	86.0	80.9	77.6	79.2
77.5°	451.0	413.1	279.9	160.2	98.6	74.2	58.2	47.2	44.7	44.7
80°	381.9	343.9	233.5	129.8	76.7	49.7	27.0	16.9	14.3	14.3
82.5°	324.5	288.3	193.9	104.5	55.6	26.1	5.9	0.8	0.0	0.0
85°	273.1	241.1	163.5	86.8	45.5	21.9	6.7	1.7	0.0	0.0
87.5°	230.1	202.3	143.3	75.9	41.3	21.1	7.6	2.5	0.8	0.8
90°	199.8	177.0	126.4	68.3	37.9	20.2	7.6	3.4	2.5	2.5
92.5°	180.4	159.3	116.3	63.2	35.4	19.4	8.4	5.1	3.4	3.4
95°	164.4	145.0	106.2	59.0	33.7	19.4	9.3	5.9	4.2	4.2
97.5°	152.6	134.9	97.8	54.8	32.0	19.4	10.1	6.7	5.9	5.1
100°	141.6	124.8	89.4	51.4	31.2	19.4	10.1	7.6	5.9	5.9
102.5°	134.0	117.2	82.6	48.0	30.3	18.5	10.1	7.6	5.9	5.9
105°	129.0	112.1	76.7	45.5	28.7	18.5	10.1	7.6	5.9	5.9
107.5°	123.9	107.9	70.0	43.8	27.0	17.7	10.1	7.6	5.9	5.9
110°	119.7	100.3	64.9	41.3	26.1	16.9	10.1	6.7	5.1	5.1

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

Scaled Data Report

REPORT NUMBER: P979165
CATALOG NUMBER: WPLLED38S-140W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	114.6	91.0	59.9	37.9	24.4	15.2	9.3	6.7	5.1	5.1
115°	107.1	80.1	54.8	36.2	23.6	14.3	9.3	5.9	4.2	4.2
117.5°	99.5	71.7	49.7	33.7	22.8	13.5	8.4	5.9	4.2	4.2
120°	91.0	64.1	46.4	32.0	21.9	13.5	8.4	5.1	4.2	4.2
122.5°	80.9	58.2	43.8	31.2	21.1	12.6	8.4	5.1	3.4	3.4
125°	71.7	53.1	41.3	30.3	20.2	11.8	8.4	5.1	3.4	3.4
127.5°	64.1	49.7	38.8	29.5	19.4	11.8	8.4	5.1	3.4	3.4
130°	58.2	46.4	37.9	28.7	19.4	12.6	8.4	5.1	3.4	3.4
132.5°	53.1	43.8	36.2	28.7	19.4	12.6	9.3	5.9	4.2	4.2
135°	49.7	41.3	35.4	27.8	18.5	12.6	9.3	5.9	4.2	4.2
137.5°	47.2	39.6	33.7	27.8	18.5	13.5	10.1	5.9	4.2	4.2
140°	44.7	37.9	32.9	27.0	18.5	13.5	10.1	6.7	5.1	5.1
142.5°	42.1	37.1	32.0	26.1	18.5	13.5	10.1	6.7	5.1	5.1
145°	39.6	35.4	31.2	25.3	17.7	13.5	10.1	6.7	5.1	5.1
147.5°	37.9	34.6	29.5	24.4	17.7	13.5	10.1	6.7	5.1	5.1
150°	35.4	32.9	28.7	23.6	17.7	13.5	10.1	6.7	4.2	4.2
152.5°	33.7	31.2	27.8	22.8	16.9	13.5	10.1	6.7	4.2	4.2
155°	32.9	30.3	27.0	22.8	16.9	13.5	10.1	5.9	4.2	4.2
157.5°	31.2	29.5	27.0	22.8	16.9	13.5	10.1	5.9	4.2	4.2
160°	30.3	28.7	26.1	22.8	16.9	13.5	9.3	5.9	4.2	4.2
162.5°	30.3	28.7	26.1	22.8	16.9	13.5	9.3	5.9	4.2	3.4
165°	29.5	28.7	26.1	22.8	16.9	12.6	9.3	5.1	3.4	3.4
167.5°	29.5	28.7	26.1	21.9	16.9	12.6	9.3	5.1	3.4	3.4
170°	29.5	28.7	26.1	21.9	16.9	12.6	9.3	5.1	3.4	2.5
172.5°	29.5	28.7	26.1	21.9	16.9	12.6	9.3	5.1	2.5	2.5
175°	30.3	28.7	26.1	21.9	16.9	12.6	9.3	5.1	2.5	2.5
177.5°	30.3	28.7	26.1	21.9	16.9	12.6	8.4	5.1	2.5	2.5
180°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7

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

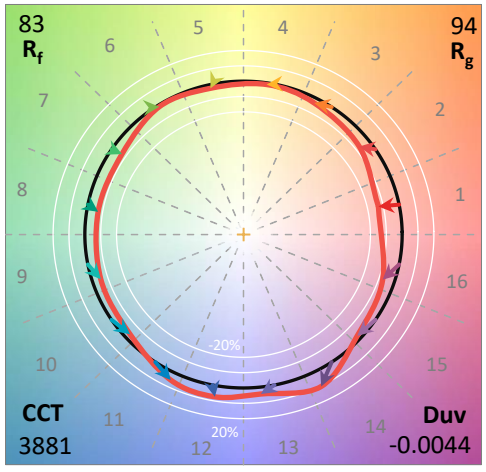
Test Information

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

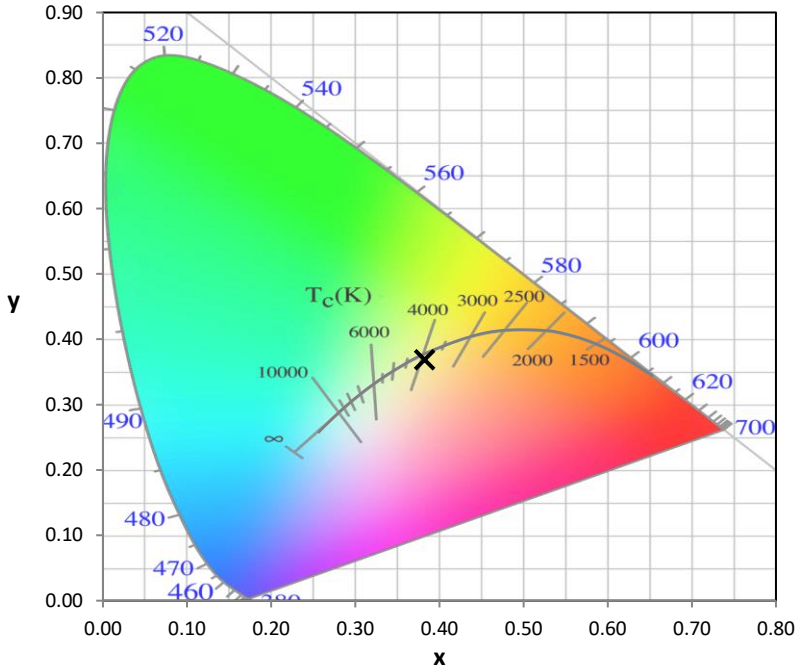
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-3

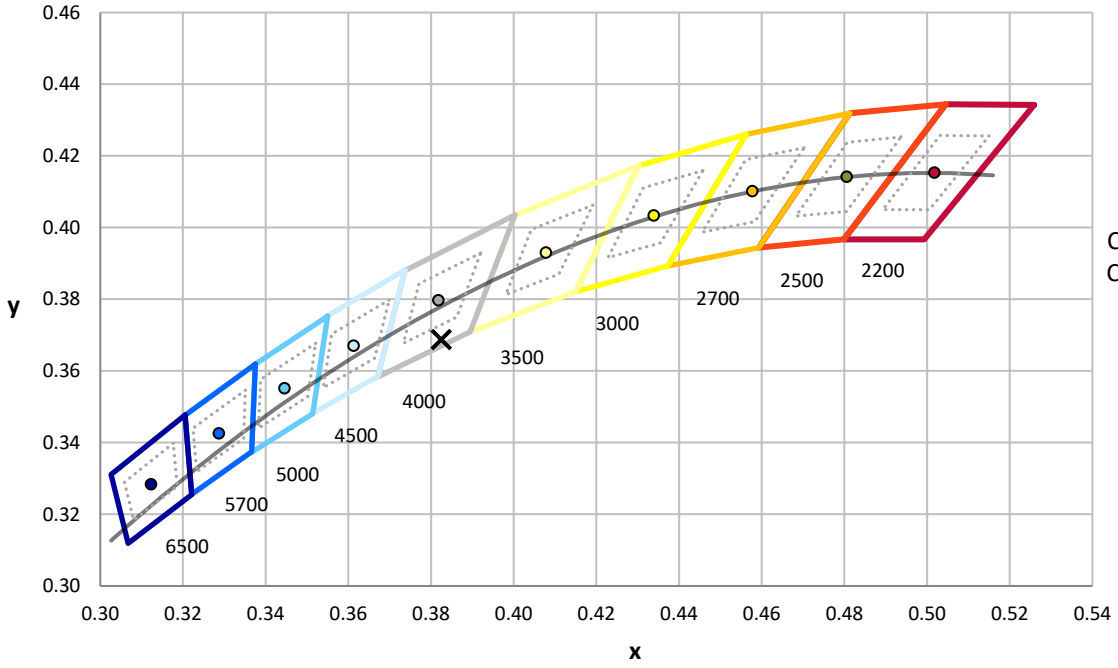
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

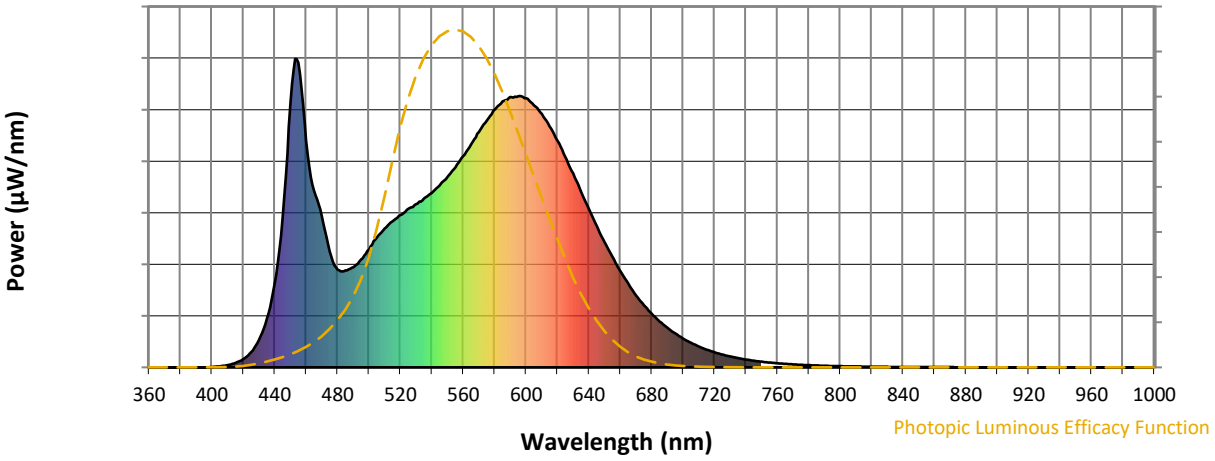


CCT = 3881K
CIE x = 0.3825
CIE y = 0.3688
Duv = -0.0044

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-3

Photopic Flux vs. Wavelength

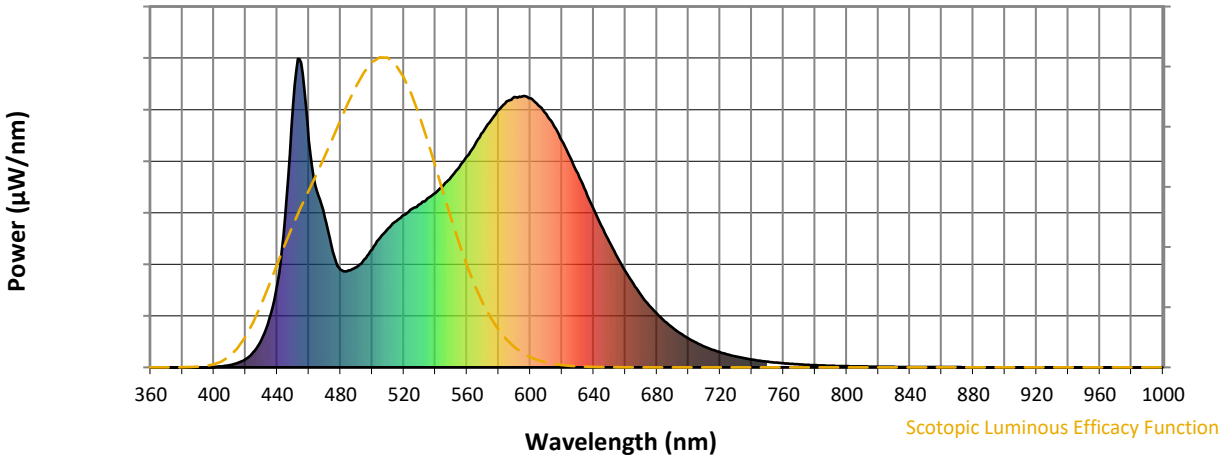


Photopic Lumens: NR

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

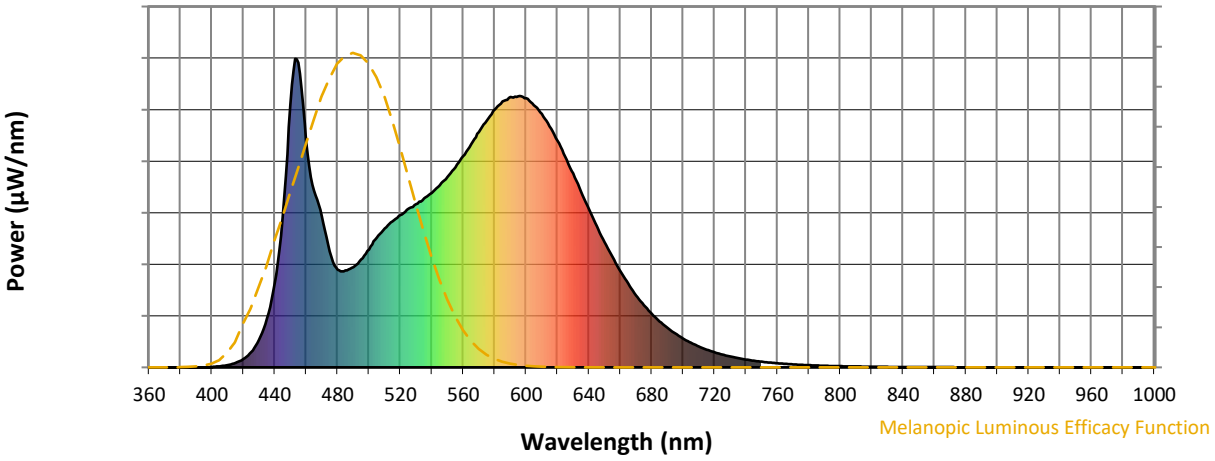


Scotopic Lumens: NR **S/P: 1.72**

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			

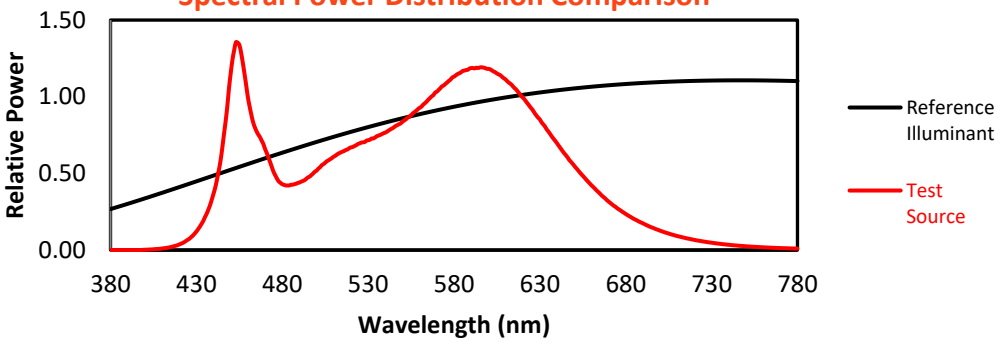
REPORT NUMBER: SP1-2407-168-3

TM-30-18

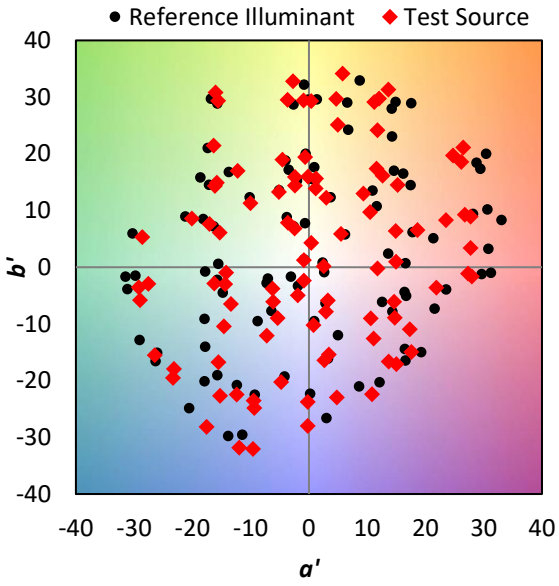
Summary

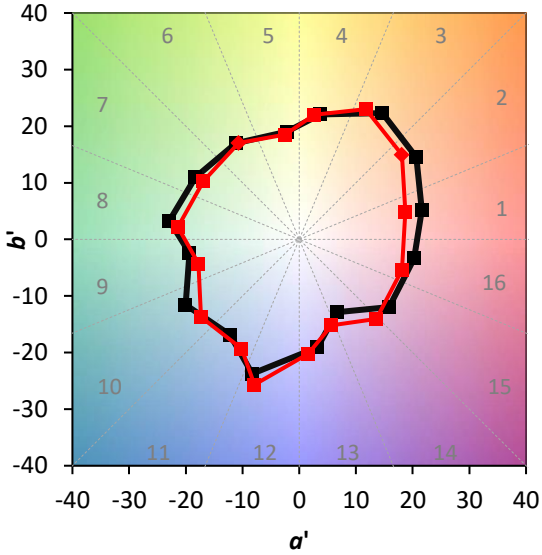
R_f = 82.8
R_g = 93.7
CIE R_a = 82.7
R_9 = 4.8

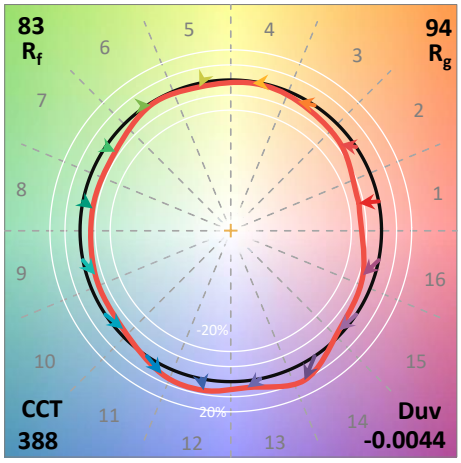
Spectral Power Distribution Comparison

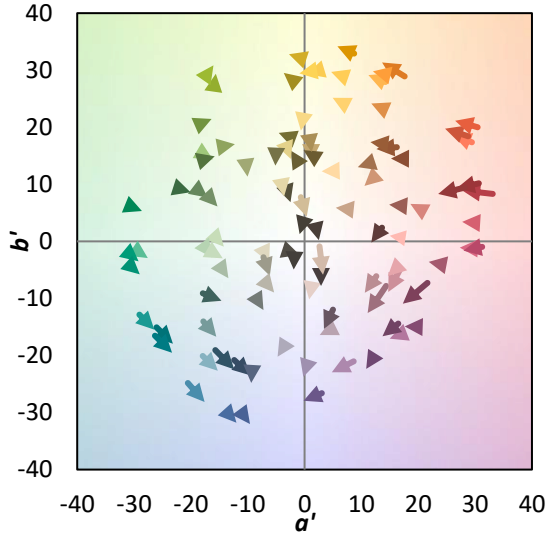


Color Vector Graphics







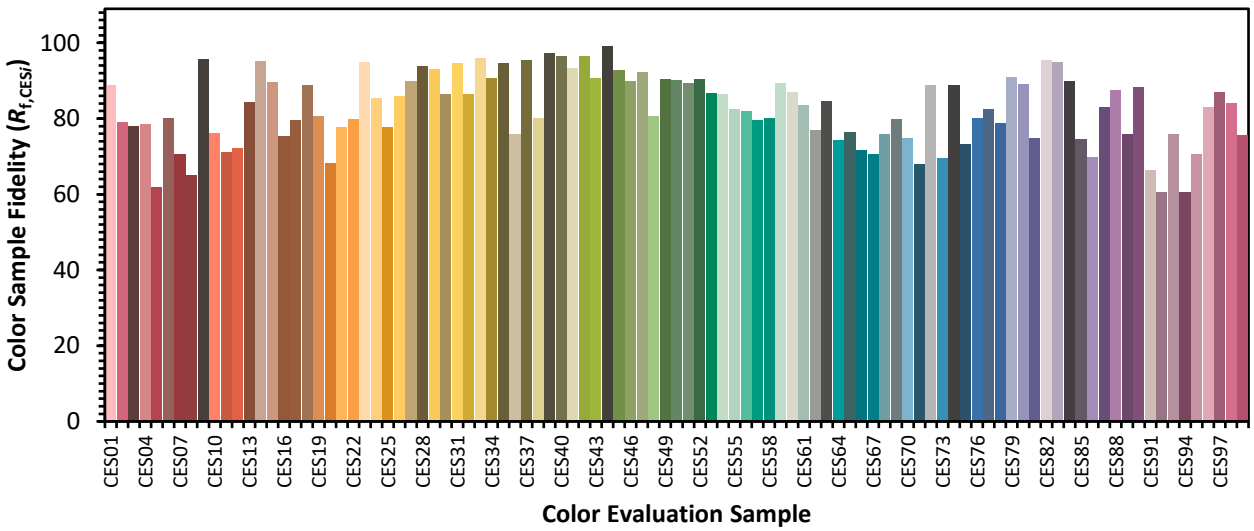


REPORT NUMBER: SP1-2407-168-3

TM-30-18

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

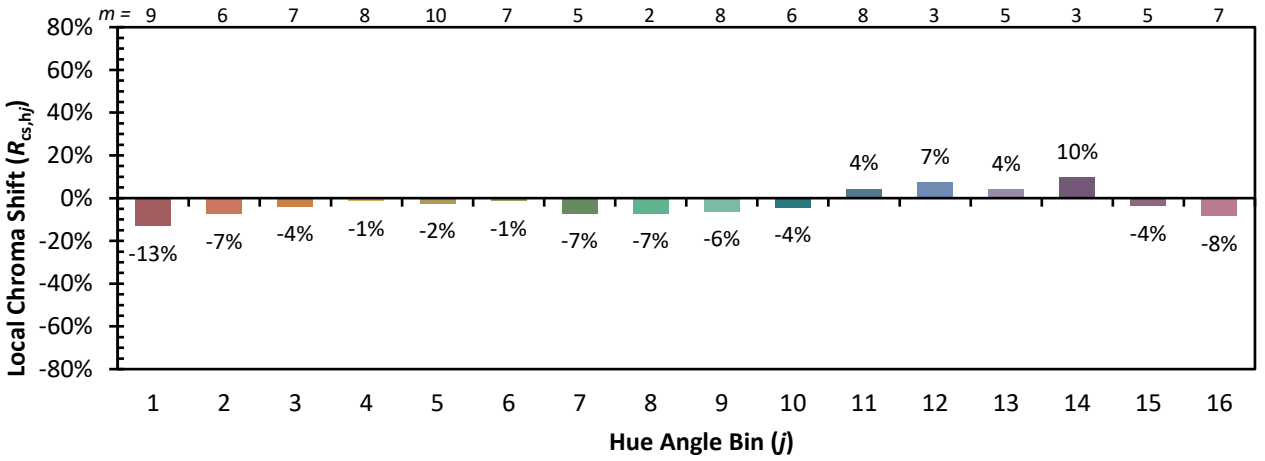
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 80
CES02 = 62	CES27 = 90	CES52 = 91	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 87	CES78 = 79
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 91
CES05 = 48	CES30 = 86	CES55 = 83	CES80 = 89
CES06 = 51	CES31 = 95	CES56 = 82	CES81 = 75
CES07 = 41	CES32 = 86	CES57 = 80	CES82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

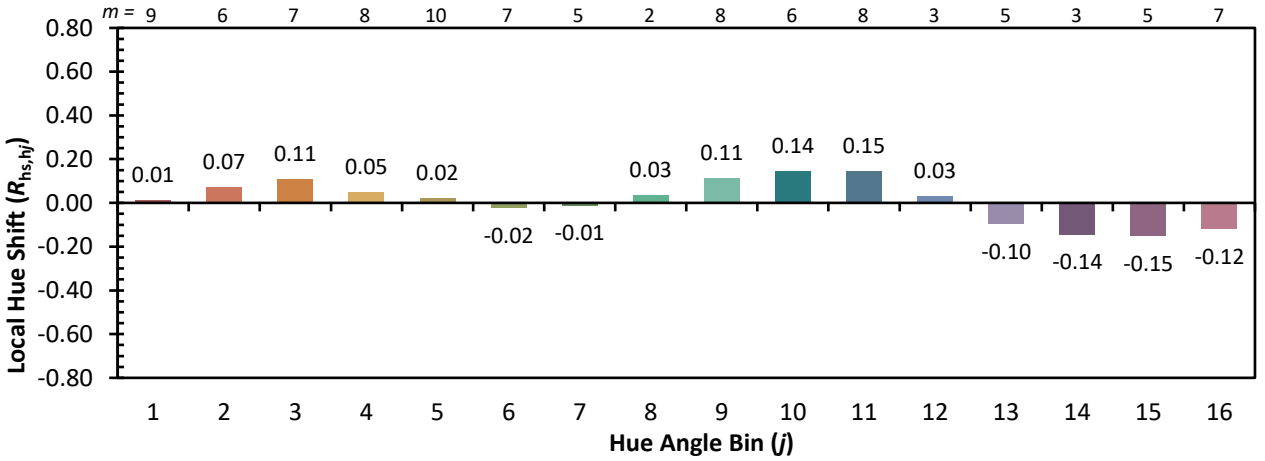


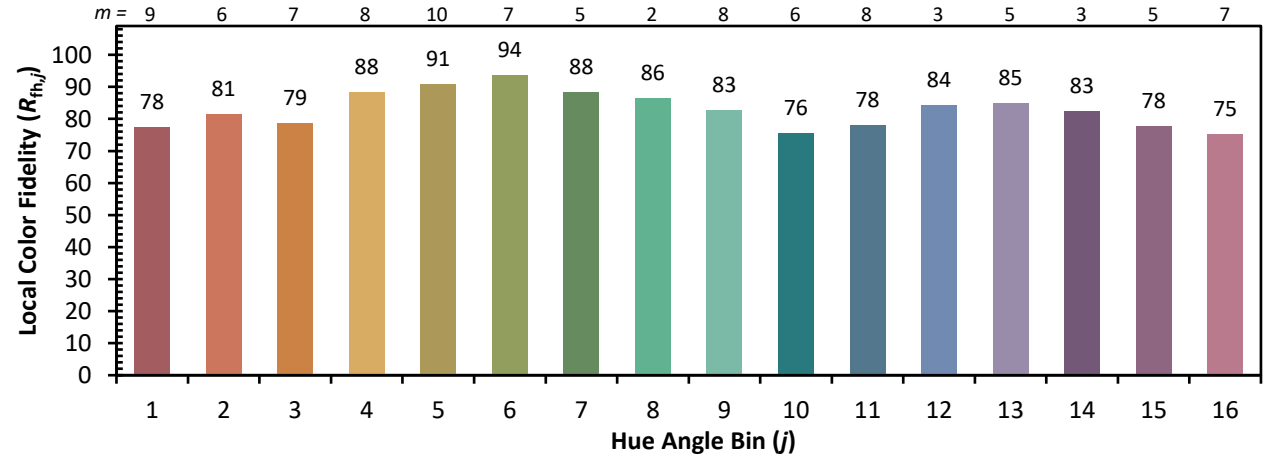
REPORT NUMBER: SP1-2407-168-3

TM-30-18

Color Rendition by Hue-Angle Bin







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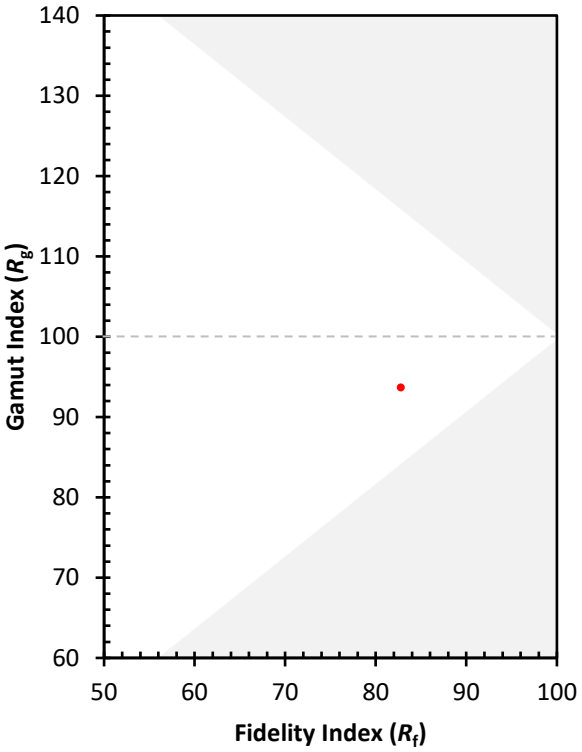
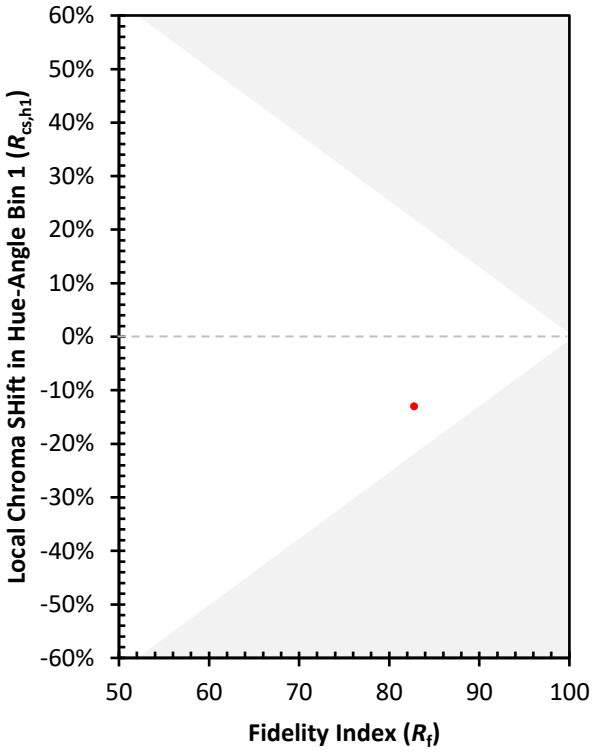
Measure Comparisons





(END OF REPORT)