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: P979169

Luminaire Tested: **WPLLED38S-130W-3500K**

Issue Date: 03/31/2025

Report Generated By 670245763

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P979169
Test Lab:	Cooper Lighting Solutions
Issue Date:	03/31/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	WPLLED38S-130W-3500K
Description:	LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE OPERATING @130W-3500K
Light Source:	3500K CCT, 80 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	18541.6 lumens
Efficiency:	N/A
Efficacy:	145.7 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):	127.3
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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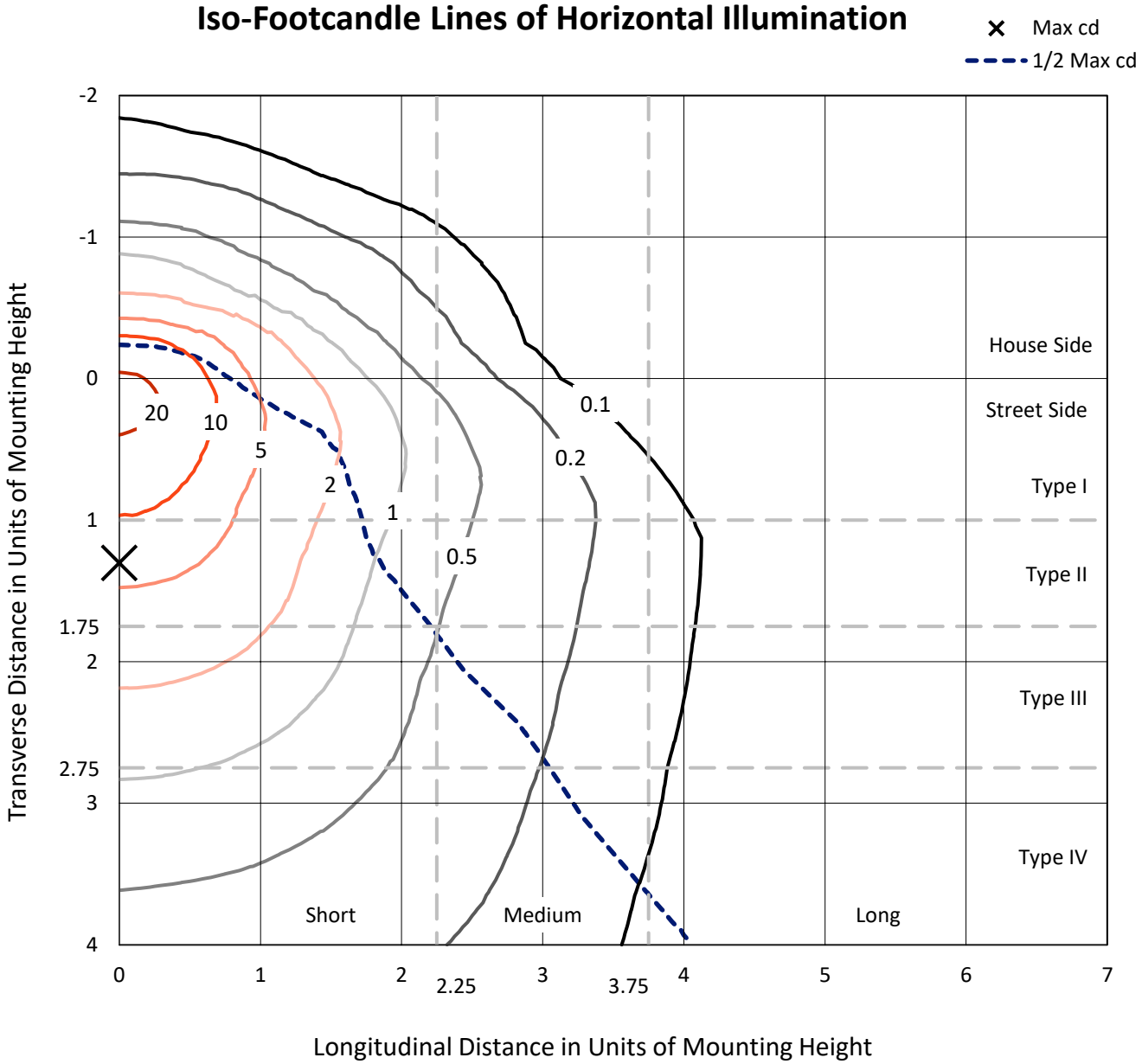
Iso-Footcandle Lines of Horizontal Illumination



Based on 15 foot mounting height. Maximum calculated value = 23.4 fc
Type IV - Short - N/A

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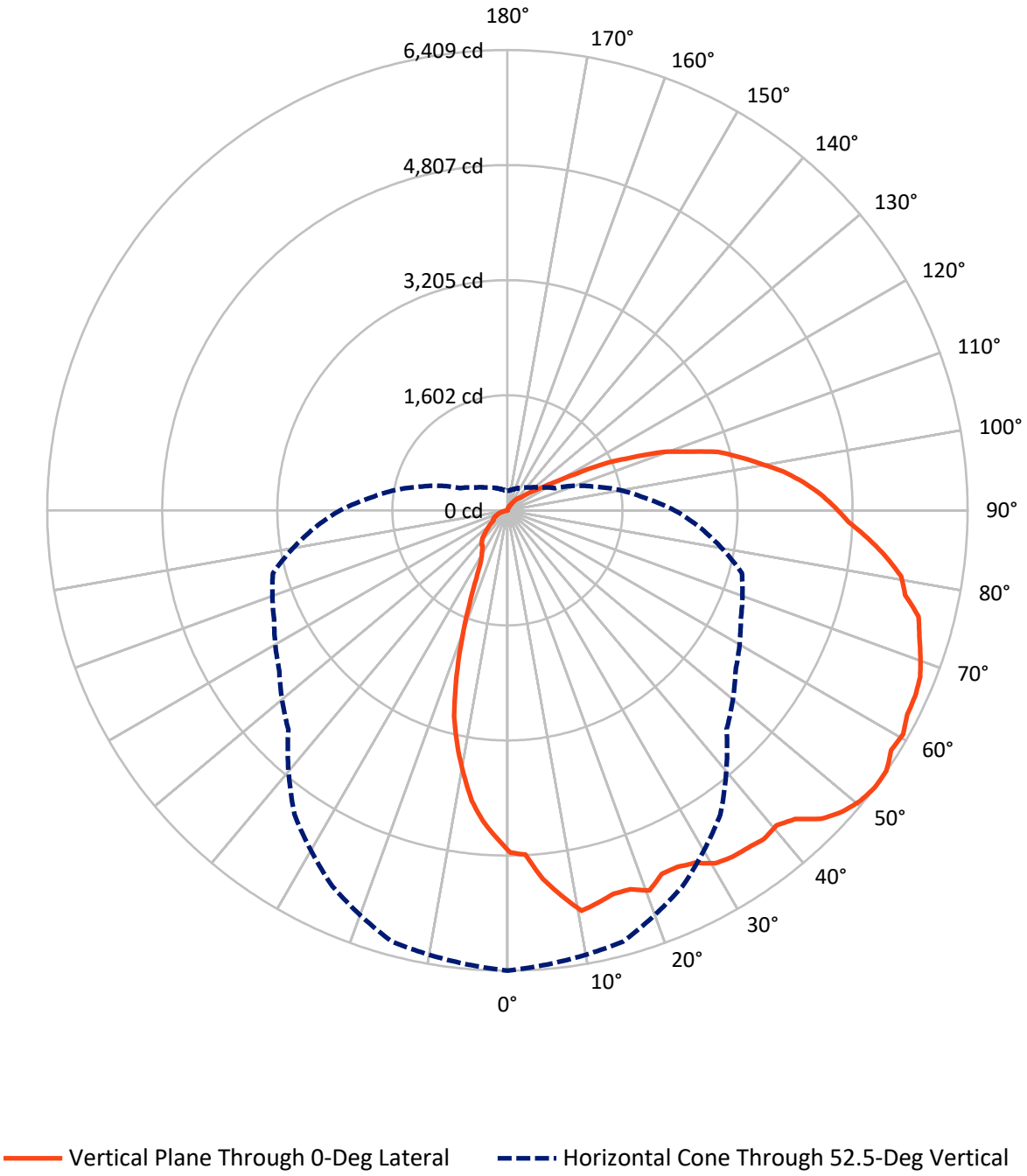
Luminous Intensity Polar Plot



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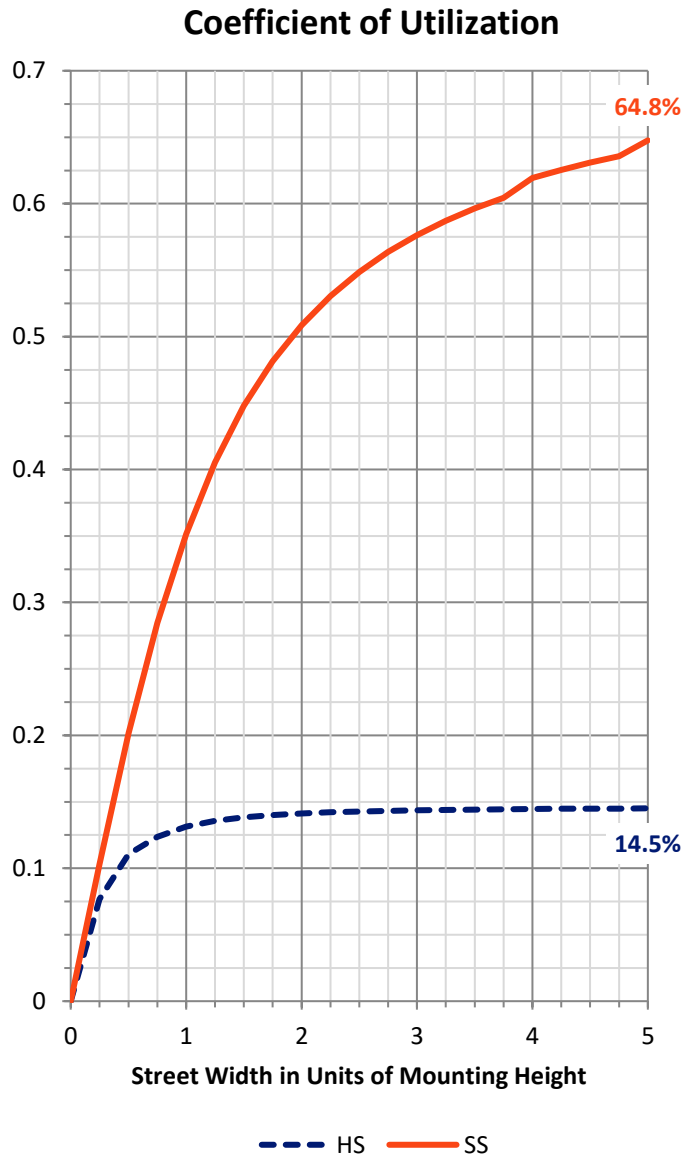
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2729.3	105.1	2834.4
	% Fixture	14.7	0.6	15.3
Street Side	Lumens	13168.3	2538.9	15707.2
	% Fixture	71.0	13.7	84.7
Total	Lumens	15897.6	2644.0	18541.6
	% Fixture	85.7	14.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.9	2.4
10°-20°	1254.3	6.8
20°-30°	1726.8	9.3
30°-40°	2000.4	10.8
40°-50°	2185.0	11.8
50°-60°	2309.6	12.5
60°-70°	2283.7	12.3
70°-80°	2044.3	11.0
80°-90°	1642.5	8.9
90°-100°	1219.9	6.6
100°-110°	784.0	4.2
110°-120°	358.3	1.9
120°-130°	145.2	0.8
130°-140°	76.1	0.4
140°-150°	38.5	0.2
150°-160°	15.1	0.1
160°-170°	5.3	0.0
170°-180°	1.5	0.0
0°-90°	15897.6	85.7
0°-180°	18541.6	100.0



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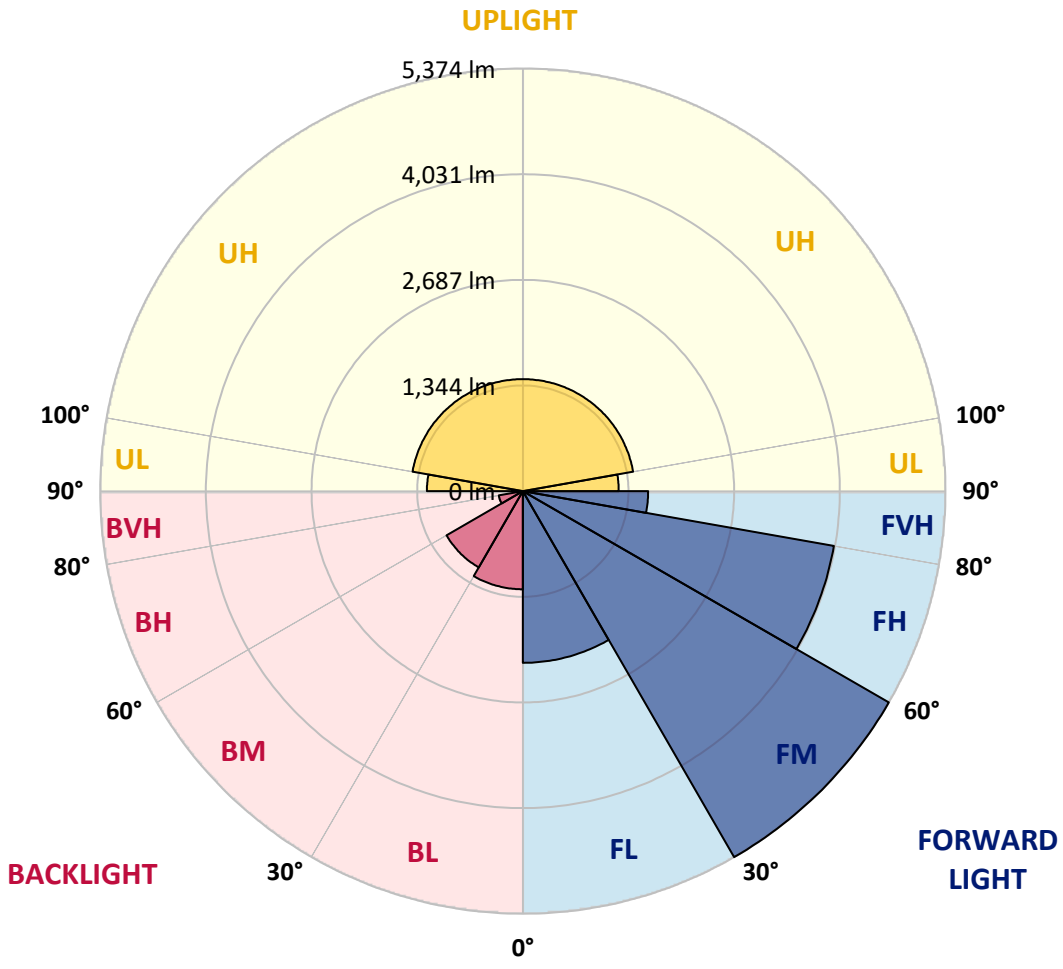
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2183.7	11.8			
FM	(30°-60°)	5374.4	29.0			
FH	(60°-80°)	4017.0	21.7			G2/5000
FVH	(80°-90°)	1593.2	8.6			G5
BL	(0°-30°)	1248.3	6.7	B3/2500		
BM	(30°-60°)	1120.7	6.0	B2/2500		
BH	(60°-80°)	311.1	1.7	B1/500		G1/500
BVH	(80°-90°)	49.3	0.3			G1/100
UL	(90°-100°)	1219.9	6.6		U5	
UH	(100°-180°)	1424.1	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°	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0
2.5°	4801.1	4937.6	5002.6	4871.7	4956.8	4888.6	4832.4	4803.5	4810.7	4772.2	4838.0
5°	5155.1	5078.1	5080.5	5020.3	5016.3	4894.2	4927.1	4878.2	4851.7	4777.0	4778.6
7.5°	5420.1	5387.2	5376.7	5207.3	5185.7	5174.4	4997.0	4954.4	4887.8	4805.9	4778.6
10°	5670.6	5661.0	5640.1	5498.0	5599.1	5398.4	5153.5	5066.8	4876.6	4774.6	4757.7
12.5°	5607.2	5632.9	5555.0	5560.6	5595.1	5538.9	5270.0	5054.0	4918.3	4684.7	4664.6
15°	5539.7	5583.1	5464.2	5544.5	5610.4	5522.1	5433.7	5156.0	4860.5	4643.7	4676.6
17.5°	5546.1	5530.9	5494.8	5553.4	5469.9	5528.5	5469.1	5158.4	4882.2	4617.2	4484.8
20°	5650.5	5445.0	5513.2	5450.6	5409.7	5414.5	5350.2	5302.9	4815.5	4496.0	4409.3
22.5°	5499.6	5473.9	5515.6	5448.2	5395.2	5232.2	5358.3	5245.1	4885.4	4468.7	4293.7
25°	5500.4	5576.7	5553.4	5408.9	5287.6	5208.9	5122.2	5107.0	4740.9	4337.0	4183.7
27.5°	5558.2	5632.9	5505.2	5423.3	5237.0	5155.1	5029.1	4993.8	4704.7	4256.8	4006.3
30°	5705.1	5691.5	5622.4	5473.1	5233.8	5084.5	4940.8	4822.0	4614.0	4099.4	3887.4
32.5°	5752.5	5785.4	5772.5	5511.6	5300.5	4981.7	4742.5	4651.0	4481.6	3910.7	3682.7
35°	5770.1	5813.5	5839.2	5464.2	5270.0	4887.8	4557.0	4412.5	4363.5	3757.4	3441.0
37.5°	5806.3	5827.9	5768.5	5519.6	5241.9	4781.8	4493.6	4312.1	4193.3	3551.0	3246.8
40°	5768.5	5699.5	5699.5	5441.8	5163.2	4659.0	4401.3	4095.4	3971.7	3339.9	3071.7
42.5°	5874.5	5862.5	5807.1	5502.0	5087.7	4671.8	4266.4	3998.2	3802.3	3168.9	2857.4
45°	6129.0	6246.2	5970.9	5600.7	5047.6	4557.0	4236.7	3897.9	3653.8	3026.8	2669.5
47.5°	6272.7	6282.4	6238.2	5713.1	5085.3	4493.6	4040.8	3816.0	3523.7	2899.9	2537.8
50°	6363.5	6372.3	6187.6	5762.9	5122.2	4312.1	3987.8	3720.4	3421.8	2752.2	2381.3
52.5°	6409.2	6347.4	6218.1	5773.4	5168.8	4316.2	3879.4	3585.6	3380.8	2684.0	2327.5
55°	6405.2	6361.0	6276.7	5856.8	5130.3	4225.4	3665.0	3513.3	3266.0	2618.9	2195.0
57.5°	6301.6	6288.8	6025.4	5868.1	5137.5	4217.4	3576.7	3341.5	3180.1	2482.4	2040.9
60°	6329.7	6343.4	6037.5	5761.3	5024.3	4007.1	3501.3	3246.8	3098.2	2380.5	1893.9
62.5°	6251.9	6299.2	6055.2	5742.8	5080.5	3970.1	3355.1	3138.4	2950.5	2275.3	1723.7
65°	6239.0	6272.7	6118.6	5752.5	5004.2	3859.3	3218.7	2990.6	2860.6	2091.4	1480.5
67.5°	6199.7	6144.3	5977.3	5672.2	4939.2	3834.4	3103.8	2852.6	2716.9	1848.2	1274.9
70°	6102.5	6081.6	5931.5	5579.9	4838.0	3714.0	2976.2	2688.8	2557.9	1584.8	989.1
72.5°	5999.8	5937.9	5875.3	5518.8	4795.5	3535.8	2853.4	2510.5	2319.5	1304.6	778.0
75°	5914.7	5784.6	5709.1	5355.1	4651.8	3532.6	2762.6	2350.8	2097.1	1023.6	567.6
77.5°	5663.4	5523.7	5457.8	5164.8	4410.1	3323.8	2598.0	2161.3	1824.9	758.7	434.3
80°	5558.2	5372.7	5256.3	4972.9	4381.2	3238.7	2452.7	1999.9	1523.8	537.9	353.3
82.5°	5312.5	5211.3	5092.5	4846.0	4126.7	2993.1	2330.7	1835.3	1264.5	408.7	290.6
85°	5044.4	4940.0	4833.2	4516.9	3902.7	2816.4	2162.9	1637.8	1028.5	307.5	246.5
87.5°	4757.7	4731.2	4630.9	4270.4	3698.0	2702.4	2006.3	1496.5	816.5	246.5	201.5
90°	4562.6	4548.2	4386.8	4055.2	3442.7	2468.8	1839.3	1299.8	639.1	218.4	177.4
92.5°	4363.5	4257.6	4089.8	3869.0	3185.7	2260.0	1666.7	1116.0	510.6	195.1	162.2
95°	4133.1	4061.7	3880.2	3600.0	2908.8	2060.1	1507.0	953.8	410.3	175.0	154.1
97.5°	3880.2	3824.0	3633.7	3302.2	2692.8	1935.7	1341.6	821.3	352.5	163.8	145.3
100°	3575.9	3561.5	3394.5	3048.5	2410.2	1683.6	1152.1	666.4	293.0	158.2	141.3
102.5°	3308.6	3237.9	3131.1	2767.5	2142.8	1474.0	957.8	529.9	256.1	152.5	139.7
105°	3041.2	2990.6	2830.1	2444.7	1844.2	1246.8	790.0	440.8	230.4	153.3	137.3
107.5°	2639.0	2648.6	2484.0	2097.9	1525.4	1035.7	621.4	362.9	213.6	150.9	132.5
110°	2324.3	2268.9	2086.6	1706.9	1257.3	843.0	507.4	300.3	192.7	147.7	126.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	*1880.3*	1869.9	1698.0	1350.4	975.5	653.5	410.3	258.5	182.2	138.1	120.4
115°	*1527.0*	1462.0	1290.2	1028.5	750.7	521.1	338.0	228.0	173.4	135.7	113.2
117.5°	*1087.9*	1085.5	942.6	786.0	599.7	429.5	289.0	200.7	163.0	125.2	108.4
120°	*787.6*	776.4	702.5	596.5	502.6	370.9	252.9	187.1	154.1	113.2	97.9
122.5°	*605.4*	598.1	554.8	486.5	434.3	321.1	222.4	170.2	143.7	102.0	87.5
125°	*484.9*	491.3	456.8	419.1	366.9	277.0	204.7	156.6	127.7	92.3	77.9
127.5°	*407.0*	403.8	378.9	351.7	314.7	251.3	190.3	150.9	114.0	81.1	70.7
130°	*339.6*	325.2	316.3	301.9	278.6	227.2	181.4	142.9	103.6	70.7	61.8
132.5°	*273.0*	274.6	270.6	259.3	248.9	212.0	175.0	131.7	89.9	63.4	55.4
135°	*243.3*	242.5	235.2	229.6	221.6	196.7	163.8	119.6	78.7	57.8	50.6
137.5°	*228.0*	222.4	212.0	200.7	198.3	185.5	149.3	107.6	68.2	52.2	47.4
140°	*207.1*	204.7	191.9	183.1	177.4	167.0	136.5	93.1	61.0	47.4	45.0
142.5°	*172.6*	172.6	167.8	158.2	155.0	146.1	118.0	80.3	52.2	45.0	40.9
145°	*138.9*	135.7	135.7	132.5	128.5	123.6	97.9	68.2	46.6	40.1	39.3
147.5°	*105.2*	105.2	106.0	106.0	102.0	100.4	81.9	54.6	40.9	36.9	35.3
150°	*88.3*	89.1	88.3	84.3	84.3	79.5	67.4	45.8	36.1	35.3	33.7
152.5°	*72.3*	71.5	72.3	71.5	67.4	61.8	52.2	37.7	33.7	33.7	32.9
155°	*58.6*	59.4	58.6	55.4	53.0	47.4	40.9	32.1	31.3	31.3	30.5
157.5°	*45.8*	47.4	45.8	45.8	43.4	37.7	32.1	28.9	29.7	29.7	29.7
160°	*35.3*	35.3	36.1	35.3	32.1	28.1	26.5	26.5	28.1	28.9	29.7
162.5°	*24.1*	25.7	25.7	24.9	23.3	20.9	21.7	24.9	27.3	27.3	28.9
165°	*14.5*	14.5	16.1	16.9	16.1	16.9	20.1	22.5	24.9	27.3	27.3
167.5°	*7.2*	8.0	9.6	11.2	12.8	14.5	20.1	23.3	25.7	27.3	27.3
170°	*3.2*	3.2	5.6	8.8	12.0	15.3	20.9	24.1	25.7	27.3	26.5
172.5°	*3.2*	3.2	5.6	9.6	12.0	15.3	21.7	22.5	26.5	28.1	27.3
175°	*2.4*	4.0	5.6	9.6	12.8	16.1	21.7	24.9	25.7	28.1	28.1
177.5°	*2.4*	4.0	6.4	9.6	12.8	16.1	20.9	24.9	26.5	27.3	28.9
180°	*16.9*	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0	4765.0
2.5°	4738.5	4753.7	4682.3	4651.0	4561.0	4516.9	4638.1	4685.5	4597.2	4555.4
5°	4639.7	4669.4	4606.8	4545.0	4485.6	4371.6	4445.4	4329.8	4331.4	4340.2
7.5°	4773.8	4581.9	4462.3	4276.0	4276.8	4194.1	4158.8	4055.2	4060.9	4072.9
10°	4657.4	4469.5	4348.3	4214.2	4141.9	3960.5	3848.9	3832.8	3767.8	3708.4
12.5°	4496.0	4414.1	4144.4	4058.4	3887.4	3642.6	3534.2	3493.2	3376.8	3350.3
15°	4467.9	4240.7	4061.7	3819.2	3604.8	3349.5	3144.0	3107.9	2978.6	2966.6
17.5°	4428.6	4140.3	3905.9	3547.8	3285.3	2989.0	2716.9	2563.5	2405.4	2427.0
20°	4256.8	3930.0	3666.7	3330.3	2975.4	2586.0	2266.5	1990.3	1907.6	1889.1
22.5°	4182.9	3797.5	3445.1	3013.9	2595.6	2089.8	1739.8	1527.8	1454.0	1409.0
25°	4003.9	3528.6	3197.8	2723.3	2110.7	1686.0	1318.3	1122.4	1060.6	1038.1
27.5°	3804.7	3434.6	2892.7	2379.7	1740.6	1282.2	1026.9	871.9	835.8	829.4
30°	3645.8	3211.4	2675.9	1977.4	1414.6	1002.0	836.6	757.9	726.6	725.8
32.5°	3441.0	2981.8	2390.9	1655.5	1113.6	843.0	733.0	688.9	649.5	665.6
35°	3221.9	2761.8	2129.2	1380.9	910.4	737.0	676.8	631.0	627.0	610.2
37.5°	2955.3	2455.9	1856.2	1153.7	790.0	685.6	629.4	607.0	608.6	595.7
40°	2774.7	2285.7	1588.1	969.0	693.7	631.0	592.5	558.8	551.6	558.8
42.5°	2561.1	2070.6	1358.4	825.3	635.9	579.7	537.1	518.6	505.8	515.4
45°	2438.3	1893.1	1142.5	714.5	582.9	522.7	488.9	460.8	446.4	448.0
47.5°	2248.8	1721.3	963.4	648.7	530.7	481.7	437.6	393.4	382.2	382.2
50°	2094.7	1483.7	826.1	598.9	484.1	427.9	378.9	345.2	323.6	336.4
52.5°	*1931.7*	*1268.5*	*726.6*	*550.0*	*448.8*	*385.4*	*338.0*	*301.1*	*276.2*	*270.6*
55°	1783.1	1091.9	673.6	515.4	395.0	343.6	292.2	263.3	241.7	238.4
57.5°	1641.8	954.6	624.6	473.7	355.7	300.3	259.3	233.6	231.2	235.2
60°	1425.9	822.9	586.1	421.5	316.3	260.1	225.6	207.9	212.8	217.6
62.5°	1254.1	745.1	558.0	379.8	273.8	224.8	199.9	185.5	193.5	198.3
65°	1031.7	672.8	521.1	339.6	237.6	192.7	170.2	168.6	175.8	180.6
67.5°	848.6	624.6	472.1	299.5	207.1	160.6	147.7	150.1	157.4	155.8
70°	682.4	561.2	411.1	253.7	171.0	131.7	126.9	125.2	127.7	130.1
72.5°	566.8	506.6	358.1	220.0	143.7	112.4	105.2	102.8	100.4	104.4
75°	468.9	457.6	310.7	184.7	116.4	91.5	80.3	76.3	69.8	72.3
77.5°	411.9	383.8	252.1	147.7	92.3	69.0	53.8	45.8	41.7	44.2
80°	357.3	317.9	212.8	117.2	70.7	44.2	25.7	15.3	12.0	12.0
82.5°	297.1	261.7	182.2	96.3	50.6	24.9	5.6	0.8	0.0	0.0
85°	253.7	222.4	155.0	81.1	42.6	20.9	8.0	1.6	0.8	0.0
87.5°	212.8	187.1	131.7	70.7	38.5	20.1	7.2	2.4	1.6	1.6
90°	183.1	163.0	120.4	63.4	34.5	19.3	8.0	3.2	2.4	2.4
92.5°	165.4	145.3	109.2	57.0	32.1	17.7	7.2	4.0	3.2	4.0
95°	153.3	132.5	98.8	54.6	30.5	18.5	8.0	5.6	4.0	4.8
97.5°	138.9	122.8	89.1	49.0	27.3	16.1	8.0	5.6	4.0	3.2
100°	130.9	114.8	81.1	47.4	28.1	17.7	8.8	6.4	5.6	4.8
102.5°	125.2	110.0	76.3	45.0	28.1	18.5	10.4	7.2	6.4	5.6
105°	120.4	104.4	70.7	42.6	25.7	16.9	9.6	7.2	5.6	5.6
107.5°	115.6	99.6	65.8	40.1	24.9	16.9	9.6	7.2	5.6	4.8
110°	110.8	93.1	60.2	37.7	24.1	15.3	9.6	7.2	4.8	6.4

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

Scaled Data Report

REPORT NUMBER: P979169
CATALOG NUMBER: WPLLED38S-130W-3500K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	106.0	85.1	55.4	35.3	23.3	14.5	8.0	6.4	4.0	4.0
115°	98.8	74.7	51.4	32.9	21.7	13.6	8.0	5.6	4.0	4.0
117.5°	90.7	65.8	46.6	32.1	20.9	12.8	8.0	5.6	4.0	4.0
120°	85.1	59.4	43.4	29.7	19.3	12.0	8.8	4.8	4.0	3.2
122.5°	75.5	53.8	40.1	28.9	20.1	11.2	8.0	4.8	4.0	3.2
125°	65.8	47.4	37.7	28.1	19.3	11.2	7.2	4.8	3.2	3.2
127.5°	59.4	45.0	35.3	28.1	18.5	12.0	8.0	4.0	3.2	3.2
130°	53.8	41.7	34.5	26.5	17.7	12.0	8.0	4.8	3.2	3.2
132.5°	49.0	40.9	33.7	27.3	17.7	11.2	8.8	4.8	4.0	2.4
135°	46.6	37.7	31.3	25.7	16.9	11.2	8.8	5.6	4.0	3.2
137.5°	42.6	36.9	32.1	25.7	17.7	12.0	8.8	5.6	4.8	4.0
140°	40.9	35.3	30.5	24.9	16.9	12.0	9.6	5.6	4.0	4.0
142.5°	38.5	33.7	30.5	24.1	17.7	12.8	10.4	6.4	4.8	4.8
145°	36.9	33.7	29.7	23.3	16.1	12.8	9.6	6.4	4.8	4.8
147.5°	33.7	32.1	27.3	21.7	16.1	11.2	8.8	4.8	4.0	4.0
150°	34.5	29.7	26.5	21.7	16.1	12.8	10.4	5.6	4.0	4.0
152.5°	31.3	29.7	26.5	21.7	15.3	12.8	9.6	6.4	4.0	4.0
155°	29.7	28.1	26.5	21.7	15.3	12.0	9.6	5.6	4.0	4.0
157.5°	28.9	27.3	24.9	21.7	16.1	12.8	8.8	5.6	4.0	3.2
160°	28.9	27.3	24.9	21.7	15.3	12.8	9.6	6.4	4.0	4.0
162.5°	27.3	25.7	24.1	20.9	15.3	12.8	9.6	5.6	4.0	4.0
165°	27.3	25.7	23.3	19.3	14.5	11.2	8.0	4.8	3.2	2.4
167.5°	28.1	25.7	24.1	20.9	14.5	12.0	8.0	4.8	3.2	2.4
170°	28.1	25.7	24.9	20.9	15.3	12.0	8.0	4.0	2.4	2.4
172.5°	28.1	26.5	24.1	20.9	15.3	12.0	8.0	4.0	3.2	2.4
175°	28.9	26.5	24.1	20.9	15.3	11.2	8.0	4.0	2.4	2.4
177.5°	28.1	25.7	24.1	20.9	15.3	11.2	8.0	4.0	2.4	2.4
180°	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9

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: SP1-2407-168-2

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 3500k

Data in this report applies to families of products including LSDL-92S-100W 3500k.

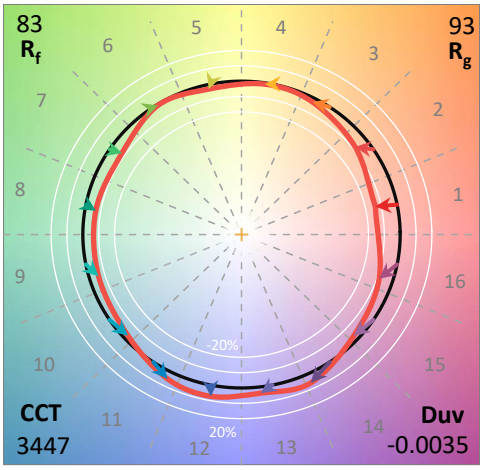
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-168-2
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 3500k**
Description:	Lumark Wallpack 100W

Spectral Parameters

CCT (K):	3447	CRI (Ra):	81.3		
CIE u':	0.2387	R1:	80.7	R9:	-0.6
CIE v':	0.5076	R2:	93.3	R10:	84.3
Duv:	-0.0035	R3:	92.2	R11:	76.0
CIE x:	0.4046	R4:	77.2	R12:	69.4
CIE y:	0.3824	R5:	81.3	R13:	84.3
CIE z:	0.2130	R6:	90.3	R14:	96.4
Peak Wavelength (nm):	597	R7:	79.5	R15:	73.7
Dominant Wavelength (nm):	582	R8:	55.9		
Purity:	36.18615				
Rf:	82.6				
Rg:	93				



Test Conditions

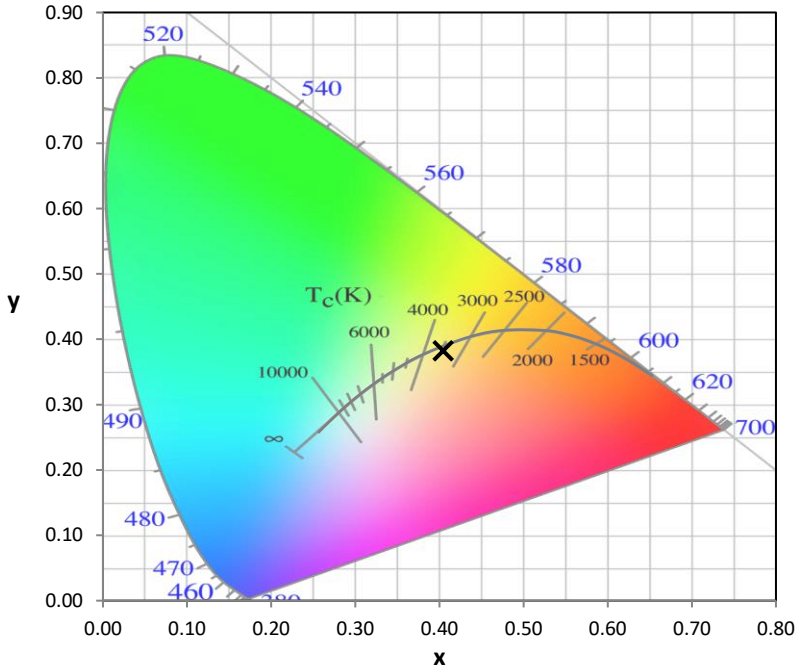
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2407-168-2

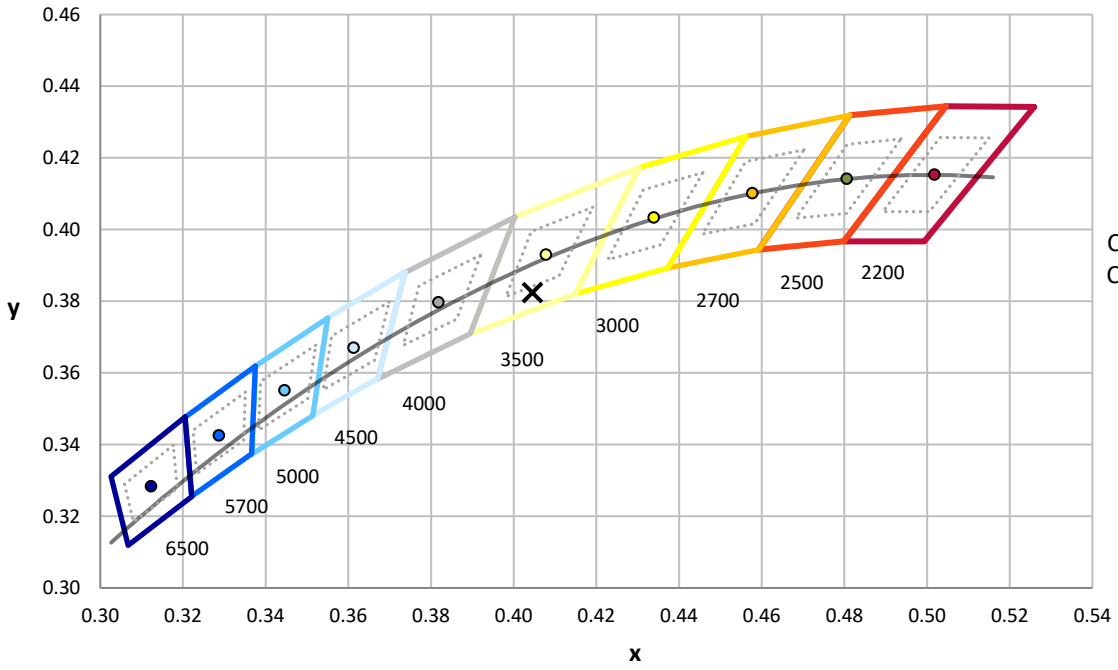
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-2

CIE 1931 Chromaticity Diagram



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

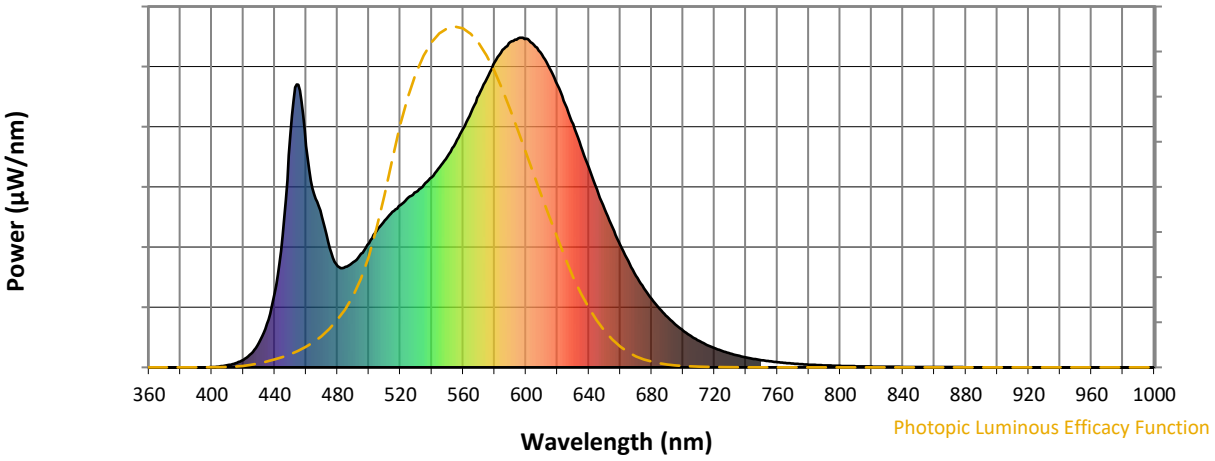


CCT = 3447K
CIE x = 0.4046
CIE y = 0.3824
Duv = -0.0035

Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-2

Photopic Flux vs. Wavelength

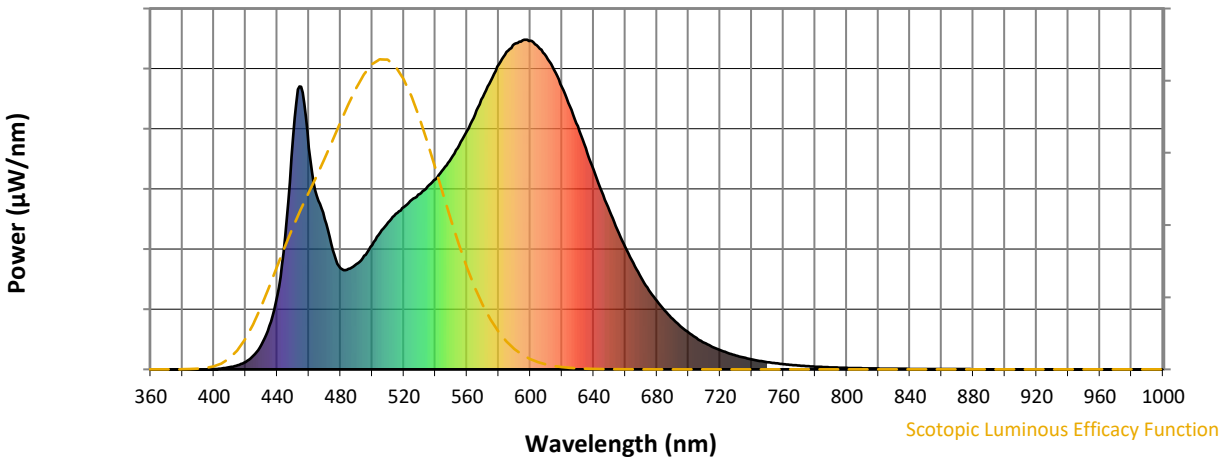


Photopic Lumens: NR

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	319	NR	620	856	NR	750	22	NR	880	1	NR
365	0	NR	495	344	NR	625	798	NR	755	18	NR	885	0	NR
370	0	NR	500	377	NR	630	738	NR	760	16	NR	890	0	NR
375	0	NR	505	415	NR	635	671	NR	765	13	NR	895	0	NR
380	0	NR	510	445	NR	640	606	NR	770	11	NR	900	0	NR
385	0	NR	515	472	NR	645	541	NR	775	10	NR	905	0	NR
390	0	NR	520	492	NR	650	481	NR	780	8	NR	910	0	NR
395	0	NR	525	514	NR	655	424	NR	785	7	NR	915	0	NR
400	1	NR	530	532	NR	660	371	NR	790	6	NR	920	0	NR
405	3	NR	535	554	NR	665	323	NR	795	5	NR	925	0	NR
410	6	NR	540	577	NR	670	278	NR	800	4	NR	930	0	NR
415	12	NR	545	608	NR	675	240	NR	805	4	NR	935	0	NR
420	23	NR	550	640	NR	680	207	NR	810	3	NR	940	0	NR
425	42	NR	555	680	NR	685	178	NR	815	3	NR	945	0	NR
430	75	NR	560	725	NR	690	154	NR	820	3	NR	950	0	NR
435	132	NR	565	774	NR	695	131	NR	825	2	NR	955	0	NR
440	225	NR	570	826	NR	700	111	NR	830	2	NR	960	0	NR
445	400	NR	575	875	NR	705	95	NR	835	2	NR	965	0	NR
450	706	NR	580	925	NR	710	80	NR	840	1	NR	970	0	NR
455	858	NR	585	963	NR	715	68	NR	845	1	NR	975	0	NR
460	672	NR	590	987	NR	720	58	NR	850	1	NR	980	0	NR
465	526	NR	595	998	NR	725	49	NR	855	1	NR	985	0	NR
470	456	NR	600	997	NR	730	42	NR	860	1	NR	990	0	NR
475	363	NR	605	978	NR	735	36	NR	865	1	NR	995	0	NR
480	307	NR	610	950	NR	740	30	NR	870	1	NR	1000	0	NR
485	305	NR	615	908	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-2

Scotopic Flux vs. Wavelength

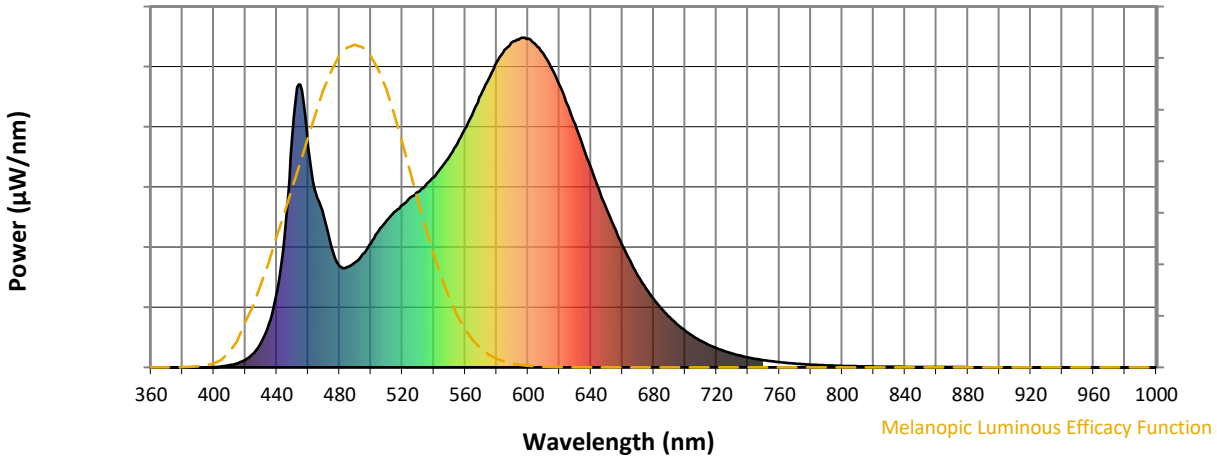


Scotopic Lumens: NR **S/P: 1.56**

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	319	NR	620	856	NR	750	22	NR	880	1	NR
365	0	NR	495	344	NR	625	798	NR	755	18	NR	885	0	NR
370	0	NR	500	377	NR	630	738	NR	760	16	NR	890	0	NR
375	0	NR	505	415	NR	635	671	NR	765	13	NR	895	0	NR
380	0	NR	510	445	NR	640	606	NR	770	11	NR	900	0	NR
385	0	NR	515	472	NR	645	541	NR	775	10	NR	905	0	NR
390	0	NR	520	492	NR	650	481	NR	780	8	NR	910	0	NR
395	0	NR	525	514	NR	655	424	NR	785	7	NR	915	0	NR
400	1	NR	530	532	NR	660	371	NR	790	6	NR	920	0	NR
405	3	NR	535	554	NR	665	323	NR	795	5	NR	925	0	NR
410	6	NR	540	577	NR	670	278	NR	800	4	NR	930	0	NR
415	12	NR	545	608	NR	675	240	NR	805	4	NR	935	0	NR
420	23	NR	550	640	NR	680	207	NR	810	3	NR	940	0	NR
425	42	NR	555	680	NR	685	178	NR	815	3	NR	945	0	NR
430	75	NR	560	725	NR	690	154	NR	820	3	NR	950	0	NR
435	132	NR	565	774	NR	695	131	NR	825	2	NR	955	0	NR
440	225	NR	570	826	NR	700	111	NR	830	2	NR	960	0	NR
445	400	NR	575	875	NR	705	95	NR	835	2	NR	965	0	NR
450	706	NR	580	925	NR	710	80	NR	840	1	NR	970	0	NR
455	858	NR	585	963	NR	715	68	NR	845	1	NR	975	0	NR
460	672	NR	590	987	NR	720	58	NR	850	1	NR	980	0	NR
465	526	NR	595	998	NR	725	49	NR	855	1	NR	985	0	NR
470	456	NR	600	997	NR	730	42	NR	860	1	NR	990	0	NR
475	363	NR	605	978	NR	735	36	NR	865	1	NR	995	0	NR
480	307	NR	610	950	NR	740	30	NR	870	1	NR	1000	0	NR
485	305	NR	615	908	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.22**

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	319	NR	620	856	NR	750	22	NR	880	1	NR
365	0	NR	495	344	NR	625	798	NR	755	18	NR	885	0	NR
370	0	NR	500	377	NR	630	738	NR	760	16	NR	890	0	NR
375	0	NR	505	415	NR	635	671	NR	765	13	NR	895	0	NR
380	0	NR	510	445	NR	640	606	NR	770	11	NR	900	0	NR
385	0	NR	515	472	NR	645	541	NR	775	10	NR	905	0	NR
390	0	NR	520	492	NR	650	481	NR	780	8	NR	910	0	NR
395	0	NR	525	514	NR	655	424	NR	785	7	NR	915	0	NR
400	1	NR	530	532	NR	660	371	NR	790	6	NR	920	0	NR
405	3	NR	535	554	NR	665	323	NR	795	5	NR	925	0	NR
410	6	NR	540	577	NR	670	278	NR	800	4	NR	930	0	NR
415	12	NR	545	608	NR	675	240	NR	805	4	NR	935	0	NR
420	23	NR	550	640	NR	680	207	NR	810	3	NR	940	0	NR
425	42	NR	555	680	NR	685	178	NR	815	3	NR	945	0	NR
430	75	NR	560	725	NR	690	154	NR	820	3	NR	950	0	NR
435	132	NR	565	774	NR	695	131	NR	825	2	NR	955	0	NR
440	225	NR	570	826	NR	700	111	NR	830	2	NR	960	0	NR
445	400	NR	575	875	NR	705	95	NR	835	2	NR	965	0	NR
450	706	NR	580	925	NR	710	80	NR	840	1	NR	970	0	NR
455	858	NR	585	963	NR	715	68	NR	845	1	NR	975	0	NR
460	672	NR	590	987	NR	720	58	NR	850	1	NR	980	0	NR
465	526	NR	595	998	NR	725	49	NR	855	1	NR	985	0	NR
470	456	NR	600	997	NR	730	42	NR	860	1	NR	990	0	NR
475	363	NR	605	978	NR	735	36	NR	865	1	NR	995	0	NR
480	307	NR	610	950	NR	740	30	NR	870	1	NR	1000	0	NR
485	305	NR	615	908	NR	745	26	NR	875	1	NR			

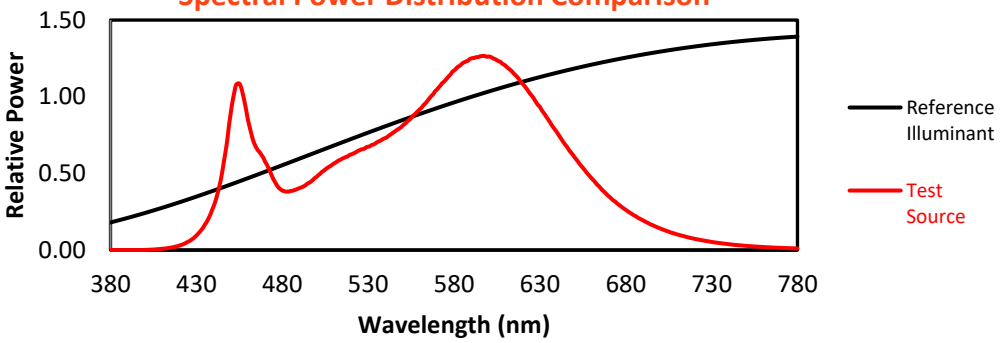
REPORT NUMBER: SP1-2407-168-2

TM-30-18

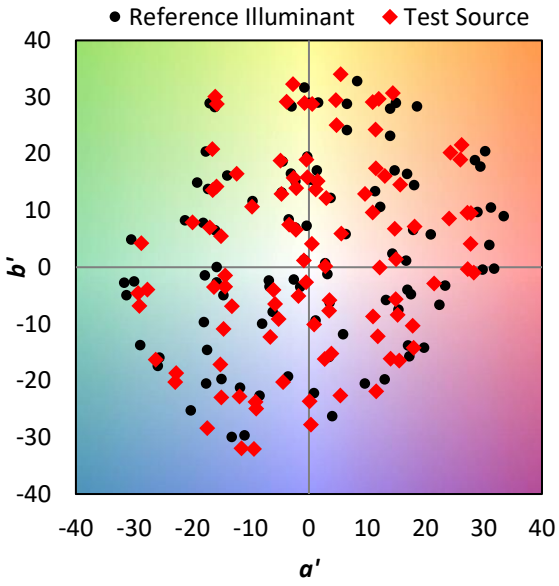
Summary

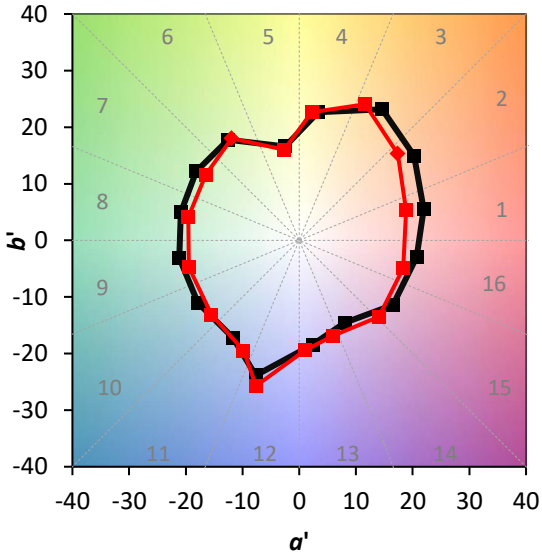
R_f = 82.6
R_g = 93
CIE R_a = 81.3
R_9 = -0.6

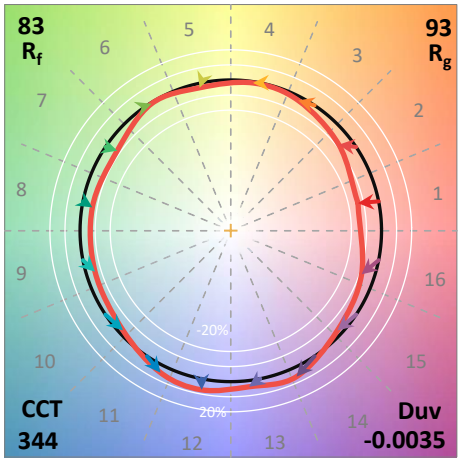
Spectral Power Distribution Comparison

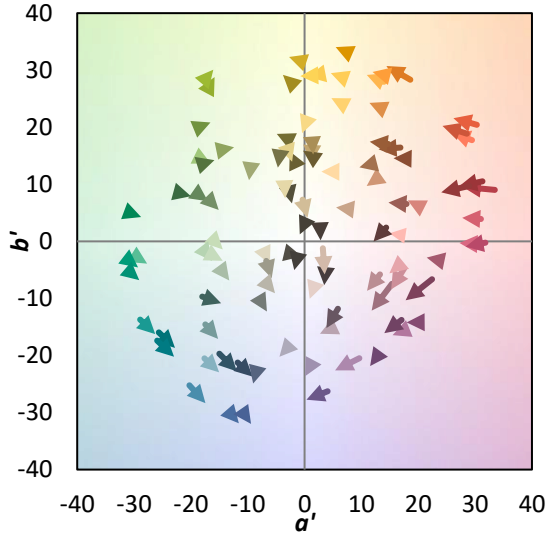


Color Vector Graphics







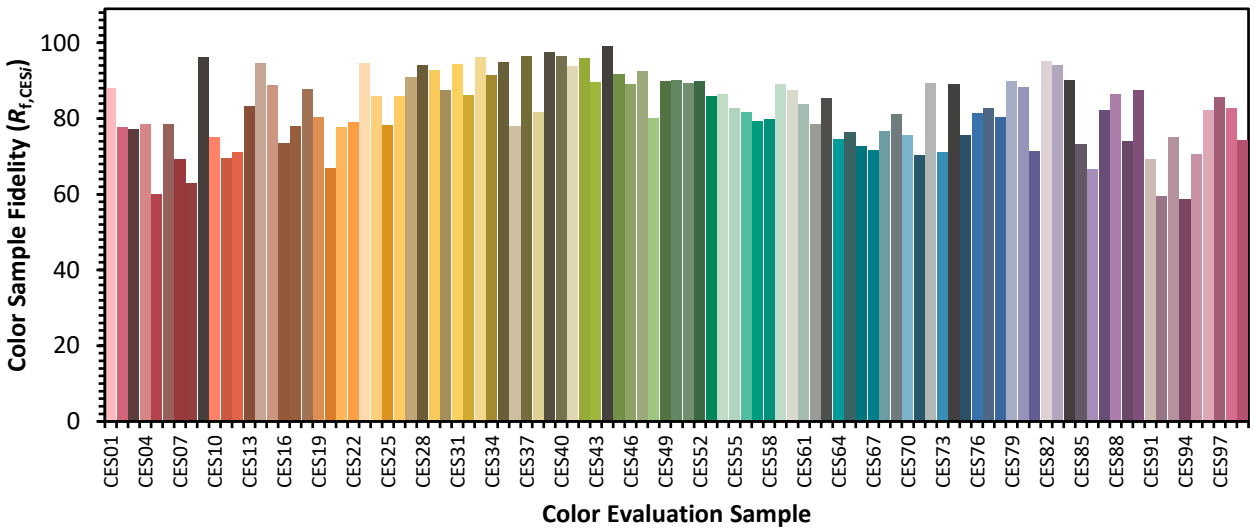


REPORT NUMBER: SP1-2407-168-2

TM-30-18

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

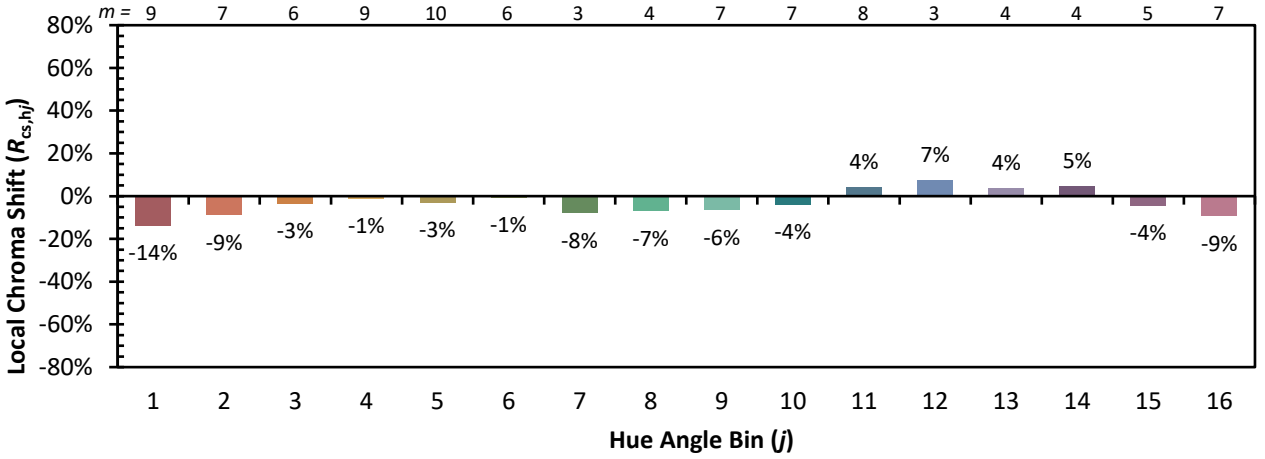
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 81
CES02 = 62	CES27 = 91	CES52 = 90	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 86	CES78 = 80
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 90
CES05 = 49	CES30 = 87	CES55 = 83	CES80 = 88
CES06 = 51	CES31 = 94	CES56 = 82	CES81 = 71
CES07 = 41	CES32 = 86	CES57 = 79	CES82 = 95
CES08 = 40	CES33 = 96	CES58 = 80	CES83 = 94
CES09 = 29	CES34 = 91	CES59 = 89	CES84 = 90
CES10 = 75	CES35 = 95	CES60 = 88	CES85 = 73
CES11 = 58	CES36 = 78	CES61 = 84	CES86 = 67
CES12 = 64	CES37 = 96	CES62 = 79	CES87 = 82
CES13 = 43	CES38 = 82	CES63 = 86	CES88 = 86
CES14 = 74	CES39 = 97	CES64 = 74	CES89 = 74
CES15 = 71	CES40 = 96	CES65 = 76	CES90 = 88
CES16 = 47	CES41 = 94	CES66 = 73	CES91 = 69
CES17 = 50	CES42 = 96	CES67 = 72	CES92 = 59
CES18 = 56	CES43 = 90	CES68 = 77	CES93 = 75
CES19 = 72	CES44 = 99	CES69 = 81	CES94 = 59
CES20 = 66	CES45 = 92	CES70 = 76	CES95 = 71
CES21 = 86	CES46 = 89	CES71 = 70	CES96 = 82
CES22 = 79	CES47 = 92	CES72 = 89	CES97 = 86
CES23 = 92	CES48 = 80	CES73 = 71	CES98 = 83
CES24 = 91	CES49 = 90	CES74 = 89	CES99 = 74
CES25 = 72	CES50 = 90	CES75 = 76	

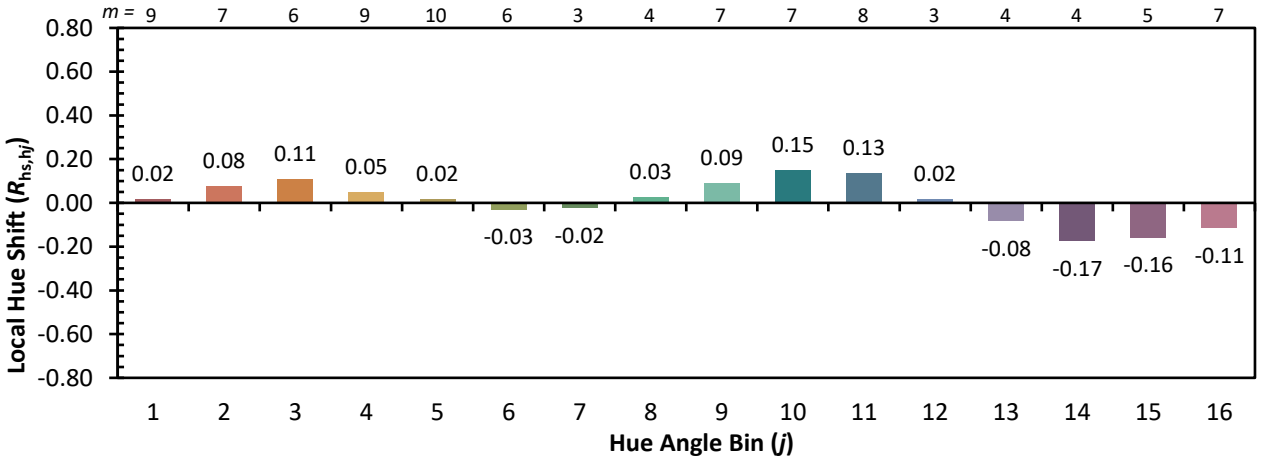


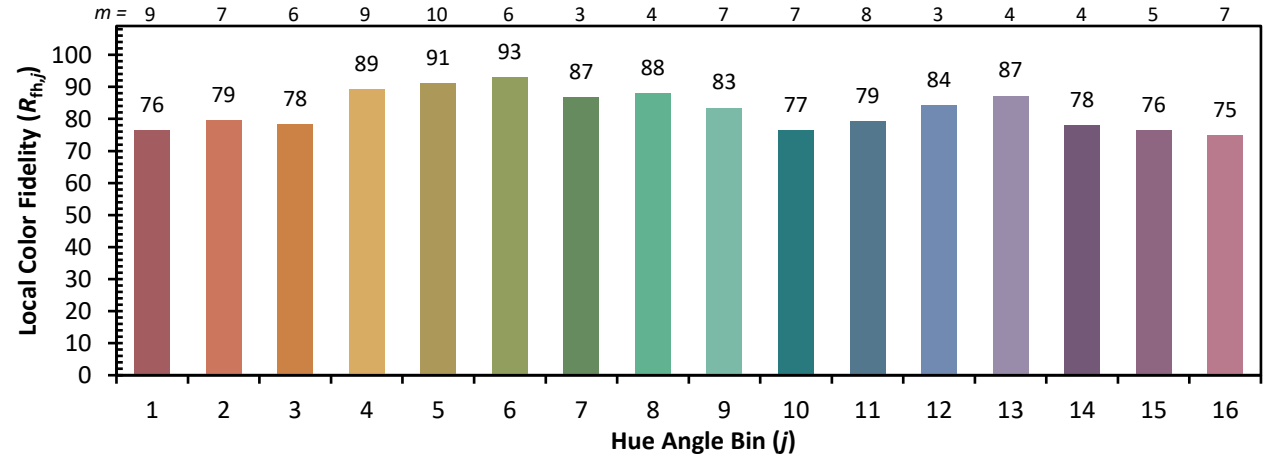
REPORT NUMBER: SP1-2407-168-2

TM-30-18

Color Rendition by Hue-Angle Bin







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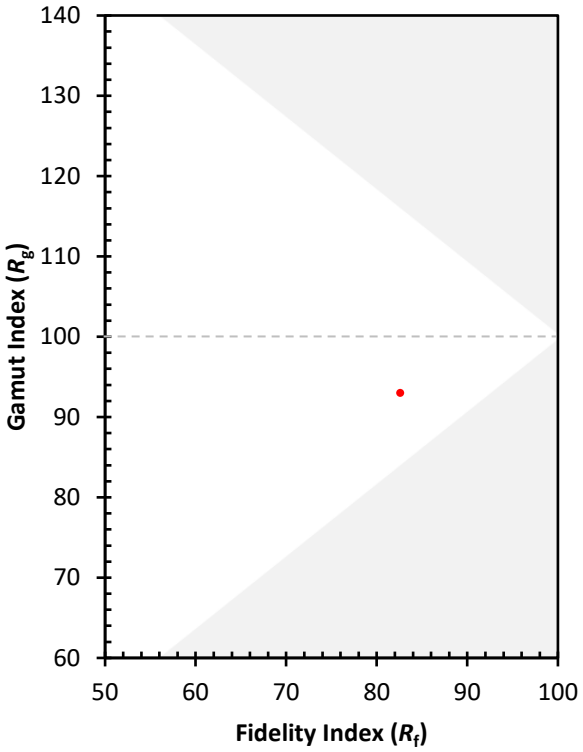
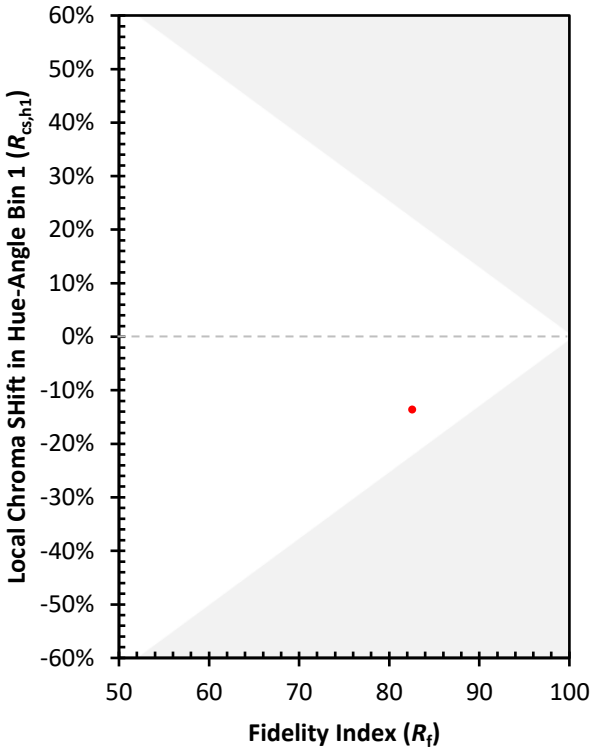
Measure Comparisons





(END OF REPORT)