

Signify Classified - Internal
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: P979144

Luminaire Tested: **WPMLED26S-90W-3500K**

Issue Date: 03/31/2025



Test Information

Test Method: LM-79-08
Report Number: P979144
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPMLD26S-90W-3500K
Description: LUMARK WALL PACK LED MEDIUM 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @90W-3500K
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

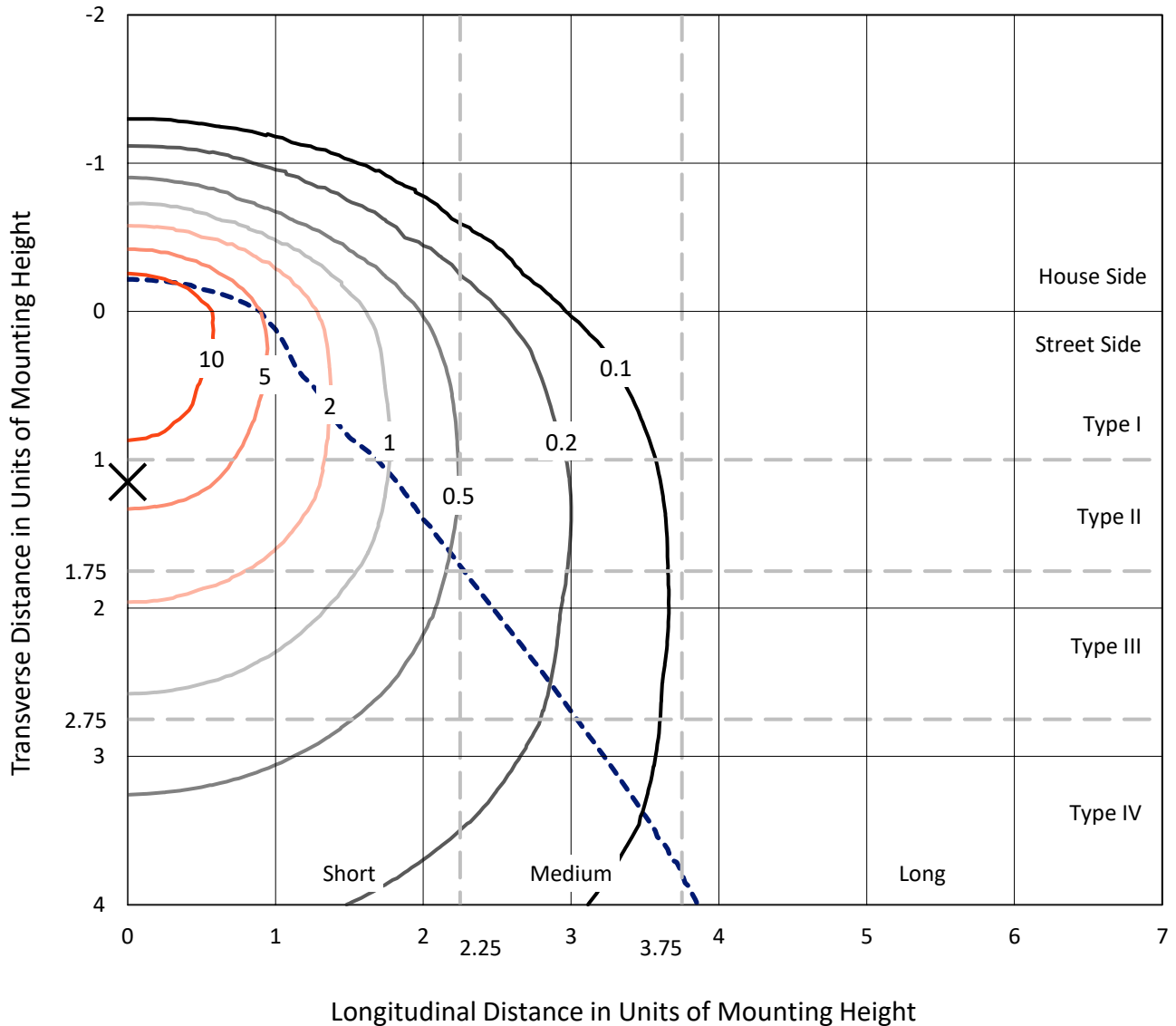
Lumens per Lamp: N/A
Luminaire Lumens: 13516.6 lumens
Efficiency: N/A
Efficacy: 149.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.86' x L: 0.17' x H: 0.58')
IES Classification: Type IV - Short
BUG Rating: B3 - U4 - G5

Input Watts (W): 90.3
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

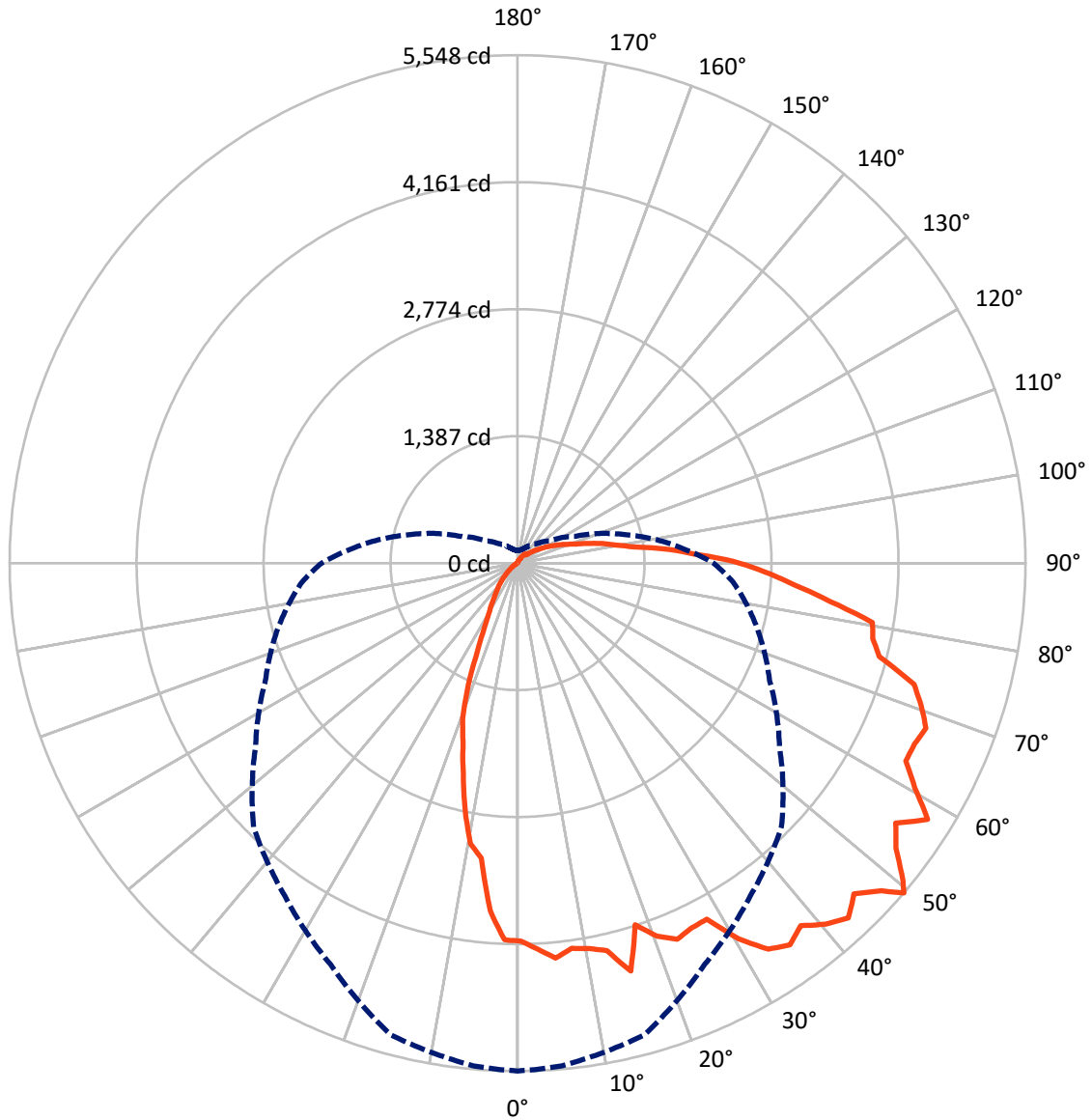
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 18.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 49-Deg Vertical

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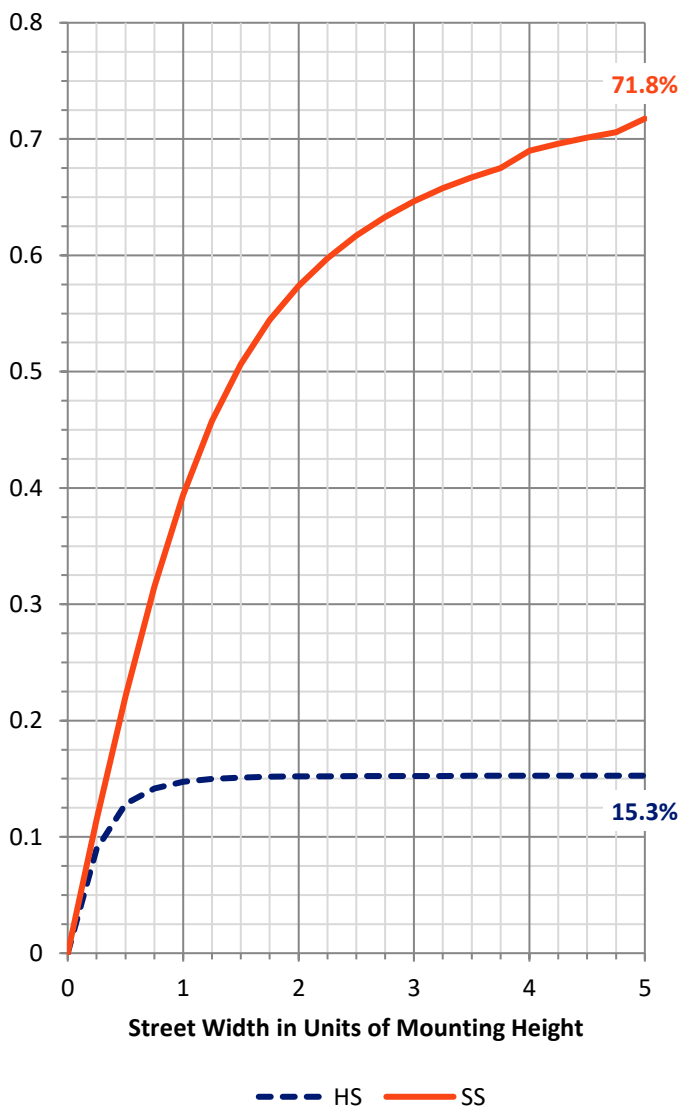
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2087.6	18.7	2106.3
	% Fixture	15.4	0.1	15.6
Street Side	Lumens	10412.5	997.8	11410.3
	% Fixture	77.0	7.4	84.4
Total	Lumens	12500.1	1016.5	13516.6
	% Fixture	92.5	7.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	383.6	2.8
10°-20°	1022.0	7.6
20°-30°	1420.0	10.5
30°-40°	1688.2	12.5
40°-50°	1851.7	13.7
50°-60°	1867.9	13.8
60°-70°	1746.9	12.9
70°-80°	1491.6	11.0
80°-90°	1028.1	7.6
90°-100°	519.2	3.8
100°-110°	247.7	1.8
110°-120°	127.2	0.9
120°-130°	64.6	0.5
130°-140°	34.4	0.3
140°-150°	16.9	0.1
150°-160°	5.3	0.0
160°-170°	1.1	0.0
170°-180°	0.1	0.0
0°-90°	12500.1	92.5
0°-180°	13516.6	100.0



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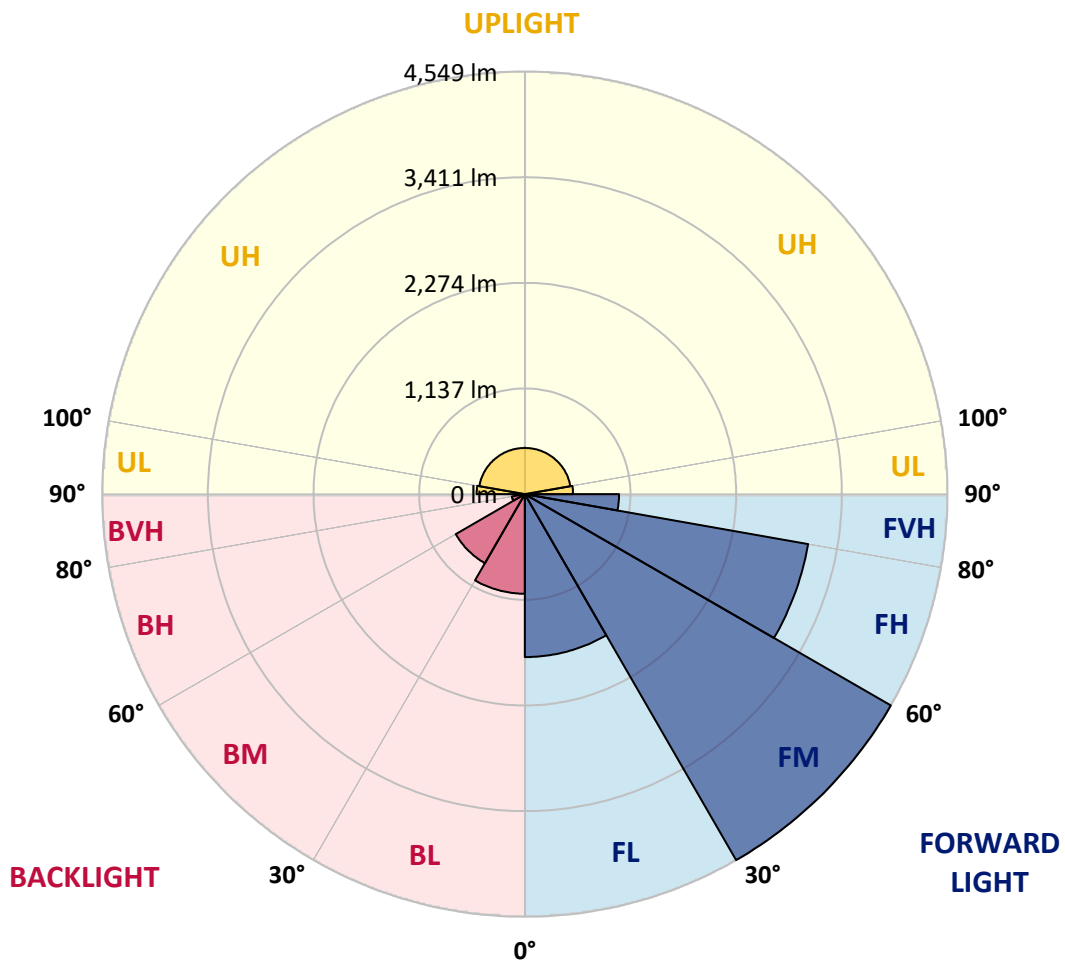
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1753.6	13.0			
FM (30°-60°)	4548.5	33.7			
FH (60°-80°)	3096.5	22.9			G2/5000
FVH (80°-90°)	1013.8	7.5			G5
BL (0°-30°)	1072.0	7.9	B3/2500		
BM (30°-60°)	859.3	6.4	B1/1000		
BH (60°-80°)	142.0	1.1	B1/500		G1/500
BVH (80°-90°)	14.3	0.1			G1/100
UL (90°-100°)	519.2	3.8		U4/1000	
UH (100°-180°)	497.3	3.7		U3/500	

BUG Rating: B3-U4-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3
2.5°	4220.7	4235.0	4217.8	4217.8	4212.1	4197.8	4205.4	4183.5	4139.7	4116.9	4141.6
5°	4333.0	4328.3	4347.3	4364.4	4349.2	4264.5	4233.0	4165.4	4195.0	4115.0	4124.5
7.5°	4249.2	4238.8	4263.5	4336.8	4347.3	4329.2	4340.6	4236.9	4195.0	4095.0	4107.4
10°	4279.7	4279.7	4225.4	4194.0	4195.9	4255.9	4315.9	4342.5	4166.4	4099.8	4076.0
12.5°	4343.5	4339.7	4305.4	4288.3	4228.3	4167.4	4237.8	4267.3	4181.6	4086.4	4033.1
15°	4623.4	4594.8	4594.8	4440.6	4298.7	4231.1	4120.7	4210.2	4185.4	4047.4	3979.8
17.5°	4153.1	4161.6	4185.4	4383.5	4530.1	4278.7	4116.9	4100.7	4118.8	3988.4	3912.2
20°	4348.3	4354.9	4223.5	4075.0	4227.3	4434.9	4134.0	3936.0	4015.0	3891.2	3824.6
22.5°	4462.5	4459.6	4464.4	4413.9	4056.9	4211.1	4205.4	3885.5	3913.1	3800.8	3735.1
25°	4414.9	4393.0	4379.7	4392.0	4392.0	3954.1	4225.4	3875.1	3835.1	3698.9	3619.9
27.5°	4403.5	4395.9	4335.9	4347.3	4294.9	4131.2	3942.7	3865.5	3736.1	3577.0	3520.9
30°	4764.3	4769.1	4662.4	4358.7	4210.2	4164.5	3737.0	3893.1	3570.4	3466.6	3418.0
32.5°	5026.1	5021.4	4929.0	4668.2	4215.9	4026.4	3835.1	3810.3	3433.3	3373.3	3305.7
35°	5122.3	5109.0	4946.2	4822.4	4486.3	3975.0	3910.3	3621.8	3358.1	3278.1	3197.2
37.5°	5024.2	5036.6	4913.8	4800.5	4520.6	4054.1	3760.8	3438.0	3296.2	3165.7	3042.9
40°	5186.1	5175.6	5118.5	4787.2	4433.0	4176.9	3631.3	3383.8	3267.6	3033.4	2889.6
42.5°	5297.5	5266.1	5254.7	4922.4	4422.5	4085.5	3624.7	3447.6	3207.6	2868.7	2688.7
45°	5151.8	5179.4	5198.5	4894.8	4577.7	3974.1	3726.5	3328.6	3023.9	2687.8	2468.8
47.5°	5346.1	5314.6	5091.8	4932.8	4463.5	4008.4	3584.7	3118.1	2834.4	2490.7	2275.5
49°	5547.9	5513.6	5337.5	4835.7	4434.9	4076.0	3491.4	3038.2	2704.9	2363.1	2141.3
50°	5454.6	5445.1	5405.1	4967.1	4469.2	4030.3	3449.5	2974.4	2625.9	2287.9	2061.3
52.5°	5173.7	5147.1	5205.1	5058.5	4523.4	3884.6	3393.3	2952.5	2446.9	2097.5	1884.2
55°	5011.9	5028.1	5011.9	4852.9	4592.0	3904.6	3374.3	2800.1	2306.0	1942.3	1721.4
57.5°	5281.3	5269.9	5065.2	4683.4	4478.7	3982.6	3199.1	2575.4	2139.4	1802.3	1572.9
60°	4984.3	4951.9	5030.9	4812.9	4263.5	3907.4	3076.2	2438.3	1991.8	1668.1	1418.6
62.5°	4758.6	4775.7	4648.2	4570.1	4302.6	3749.4	3040.1	2393.6	1875.6	1515.7	1261.5
65°	4764.3	4753.8	4688.2	4360.6	4083.6	3651.3	2922.0	2253.6	1803.3	1365.3	1111.1
67.5°	4811.0	4806.2	4674.8	4375.9	3932.2	3478.0	2738.2	2127.9	1638.6	1232.0	958.8
70°	4677.7	4653.9	4584.4	4323.5	3910.3	3324.7	2599.2	2074.6	1484.3	1090.2	780.7
72.5°	4528.2	4492.0	4391.1	4159.7	3815.1	3221.9	2409.8	1929.0	1390.1	919.7	609.3
75°	4079.8	4089.3	4093.1	3897.9	3583.7	3062.9	2236.5	1689.0	1238.7	747.4	463.7
77.5°	3966.5	3924.6	3806.5	3615.1	3369.5	2877.3	2060.3	1495.8	1110.2	581.7	338.0
80°	3929.3	3881.7	3773.2	3464.7	3134.3	2664.9	1885.2	1321.5	937.8	430.4	237.1
82.5°	3439.9	3436.1	3360.9	3228.6	2845.8	2372.6	1675.7	1145.4	754.1	310.4	161.9
85°	3031.5	3033.4	2953.4	2747.8	2545.0	2087.0	1468.1	979.7	600.8	220.9	109.5
87.5°	2700.2	2716.3	2625.9	2426.9	2168.9	1808.0	1248.2	822.6	461.8	150.4	73.3
90°	2357.4	2348.8	2269.8	2098.4	1874.7	1494.8	1034.0	661.7	346.6	101.9	51.4
92.5°	1924.2	1900.4	1848.0	1715.7	1569.1	1252.0	834.0	510.3	261.8	74.3	43.8
95°	1618.6	1617.6	1537.6	1438.6	1265.3	1031.1	682.7	410.4	210.4	62.8	43.8
97.5°	1272.0	1293.0	1239.6	1184.4	1044.5	835.9	564.6	336.1	169.5	59.0	45.7
100°	1087.3	1083.5	1034.0	952.1	840.7	677.9	461.8	282.8	142.8	59.0	47.6
102.5°	951.2	959.7	925.4	836.9	707.4	551.3	380.8	239.0	121.9	61.9	49.5
105°	805.5	797.9	770.3	707.4	617.0	463.7	319.0	199.9	106.6	62.8	50.5
107.5°	675.0	682.7	659.8	599.8	510.3	392.3	270.4	168.5	96.2	62.8	50.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	586.5	587.4	558.9	505.6	427.5	332.3	227.6	144.7	90.4	61.9	49.5
112.5°	517.9	513.2	494.1	433.2	361.8	274.2	194.2	125.7	85.7	60.0	48.6
115°	444.6	443.7	420.8	373.2	304.7	236.1	166.6	110.4	81.9	59.0	46.7
117.5°	386.6	385.6	365.6	318.0	259.0	202.8	145.7	99.0	78.1	55.2	43.8
120°	338.9	333.2	316.1	271.3	221.8	174.2	127.6	90.4	73.3	50.5	40.0
122.5°	283.7	279.0	265.6	228.5	188.5	151.4	114.3	82.8	66.6	45.7	35.2
125°	239.0	237.1	221.8	192.3	163.8	134.2	101.9	75.2	60.0	40.0	31.4
127.5°	198.0	195.2	182.8	164.7	143.8	119.0	92.4	69.5	53.3	35.2	27.6
130°	163.8	162.8	155.2	144.7	129.5	108.5	84.7	63.8	47.6	31.4	24.8
132.5°	139.0	137.1	136.2	131.4	119.0	99.0	77.1	59.0	41.9	27.6	21.9
135°	125.7	124.7	127.6	123.8	109.5	88.5	69.5	54.3	37.1	23.8	19.0
137.5°	125.7	125.7	125.7	117.1	98.1	78.1	61.9	48.6	32.4	20.9	16.2
140°	128.5	127.6	120.0	105.7	85.7	68.6	54.3	41.9	26.7	17.1	13.3
142.5°	114.3	111.4	103.8	89.5	72.4	59.0	47.6	35.2	21.9	14.3	11.4
145°	92.4	91.4	84.7	73.3	60.9	50.5	40.9	29.5	17.1	11.4	8.6
147.5°	70.5	70.5	66.6	60.0	51.4	43.8	35.2	23.8	13.3	9.5	7.6
150°	56.2	56.2	53.3	48.6	42.8	36.2	27.6	18.1	9.5	7.6	6.7
152.5°	45.7	45.7	42.8	39.0	35.2	29.5	20.9	12.4	8.6	6.7	5.7
155°	35.2	35.2	34.3	31.4	27.6	21.9	14.3	8.6	6.7	4.8	4.8
157.5°	28.6	27.6	25.7	23.8	20.9	15.2	9.5	6.7	5.7	4.8	3.8
160°	20.9	20.9	20.0	17.1	14.3	9.5	6.7	5.7	4.8	3.8	2.9
162.5°	15.2	15.2	14.3	11.4	9.5	6.7	5.7	4.8	3.8	3.8	2.9
165°	9.5	9.5	8.6	7.6	5.7	5.7	4.8	3.8	3.8	2.9	2.9
167.5°	6.7	5.7	5.7	4.8	4.8	3.8	3.8	3.8	3.8	3.8	2.9
170°	2.9	2.9	2.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.9
172.5°	1.0	1.0	1.9	2.9	2.9	3.8	3.8	3.8	3.8	3.8	2.9
175°	0.0	1.0	1.9	1.9	2.9	3.8	3.8	3.8	3.8	2.9	2.9
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3	4128.3
2.5°	4142.6	4151.2	4140.7	4099.8	4081.7	4095.0	4108.3	4107.4	4113.1	4115.9
5°	4146.4	4096.9	4090.2	4082.6	4026.4	3923.6	3868.4	3828.4	3806.5	3804.6
7.5°	4123.6	4082.6	4042.6	3883.6	3687.5	3539.0	3403.8	3335.2	3258.1	3244.8
10°	4102.6	4076.0	3859.8	3586.6	3311.4	3191.4	3139.1	3123.8	3100.0	3106.7
12.5°	4020.7	3962.7	3631.3	3270.5	3118.1	3063.9	2948.7	2823.9	2732.5	2757.3
15°	3966.5	3811.3	3385.7	3098.1	2992.5	2724.0	2523.1	2415.5	2370.7	2368.8
17.5°	3884.6	3616.1	3131.5	2975.3	2645.9	2384.1	2247.0	2136.5	2055.6	2034.6
20°	3781.8	3394.2	2992.5	2709.7	2357.4	2112.7	1952.8	1860.4	1809.9	1794.7
22.5°	3680.8	3219.1	2833.5	2402.2	2091.8	1866.1	1685.2	1526.2	1436.7	1436.7
25°	3561.8	3001.0	2624.9	2163.2	1842.3	1599.5	1347.2	1151.1	1063.5	1050.2
27.5°	3420.0	2809.7	2380.3	1922.3	1599.5	1261.5	1017.8	869.3	813.1	804.5
30°	3271.4	2635.4	2151.8	1702.4	1325.3	984.5	794.1	694.1	646.5	638.9
32.5°	3121.9	2482.1	1939.4	1474.8	1056.8	778.8	636.0	567.5	534.1	536.0
35°	2938.2	2306.9	1728.1	1253.9	849.3	634.1	536.0	478.9	446.5	442.7
37.5°	2776.3	2106.1	1508.1	1034.9	680.8	526.5	444.6	406.5	381.8	375.1
40°	2586.9	1907.1	1286.3	832.1	567.5	446.5	381.8	338.9	316.1	318.0
42.5°	2378.4	1676.7	1099.7	669.3	479.9	380.8	319.0	280.9	260.9	261.8
45°	2153.7	1484.3	929.3	553.2	402.7	317.1	259.9	224.7	205.7	203.7
47.5°	1934.7	1298.7	774.1	465.6	336.1	259.9	207.6	175.2	161.9	160.9
49°	1815.7	1203.5	689.3	423.7	302.8	232.3	180.9	151.4	138.1	137.1
50°	1740.4	1138.7	638.9	398.0	280.9	213.3	165.7	139.0	122.8	122.8
52.5°	1578.6	980.7	524.6	342.8	234.2	171.4	128.5	106.6	98.1	96.2
55°	1406.3	830.2	445.6	287.5	194.2	135.2	100.0	80.9	71.4	68.6
57.5°	1244.4	694.1	383.7	241.8	158.0	104.7	73.3	56.2	49.5	48.6
60°	1092.1	574.1	331.3	204.7	126.6	78.1	51.4	36.2	30.5	30.5
62.5°	950.2	470.3	282.8	171.4	98.1	55.2	29.5	19.0	18.1	19.0
65°	796.9	393.2	240.9	139.0	72.4	35.2	11.4	4.8	4.8	4.8
67.5°	648.4	327.5	203.7	110.4	50.5	16.2	0.0	0.0	0.0	0.0
70°	514.1	274.2	170.4	87.6	32.4	3.8	0.0	0.0	0.0	0.0
72.5°	394.2	228.5	142.8	66.6	18.1	0.0	0.0	0.0	0.0	0.0
75°	299.0	184.7	115.2	49.5	6.7	0.0	0.0	0.0	0.0	0.0
77.5°	219.9	146.6	92.4	34.3	2.9	0.0	0.0	0.0	0.0	0.0
80°	163.8	115.2	71.4	24.8	1.0	0.0	0.0	0.0	0.0	0.0
82.5°	120.0	91.4	54.3	17.1	0.0	0.0	0.0	0.0	0.0	0.0
85°	84.7	73.3	42.8	12.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	62.8	59.0	35.2	9.5	0.0	0.0	0.0	0.0	0.0	0.0
90°	49.5	48.6	27.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	42.8	40.9	23.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0
95°	40.0	36.2	20.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	40.0	32.4	17.1	3.8	0.0	0.0	0.0	0.0	0.0	0.0
100°	40.9	29.5	14.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	40.9	27.6	13.3	2.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	40.9	25.7	11.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	40.9	23.8	9.5	1.9	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P979144
 CATALOG NUMBER: WPMLD26S-90W-3500K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	40.0	21.9	8.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	38.1	20.0	5.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	37.1	18.1	4.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	34.3	16.2	4.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	30.5	14.3	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	26.7	12.4	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	23.8	10.5	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	20.9	9.5	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	18.1	8.6	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	16.2	7.6	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	14.3	6.7	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	12.4	5.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	10.5	4.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	8.6	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	7.6	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	6.7	3.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	5.7	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	4.8	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	3.8	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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.

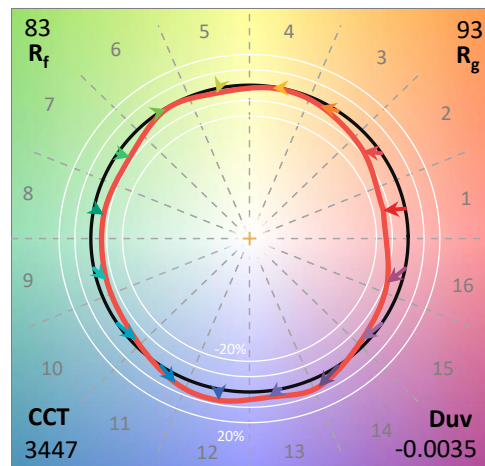
Test Information

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
 CIE u': 0.2387
 CIE v': 0.5076
 Duv: -0.0035
 CIE x: 0.4046
 CIE y: 0.3824
 CIE z: 0.2130
 Peak Wavelength (nm): 597
 Dominant Wavelength (nm): 582
 Purity: 36.18615
 R_f: 82.6
 R_g: 93

CRI (Ra):	81.3		
R1:	80.7	R9:	-0.6
R2:	93.3	R10:	84.3
R3:	92.2	R11:	76.0
R4:	77.2	R12:	69.4
R5:	81.3	R13:	84.3
R6:	90.3	R14:	96.4
R7:	79.5	R15:	73.7
R8:	55.9		



Test Conditions

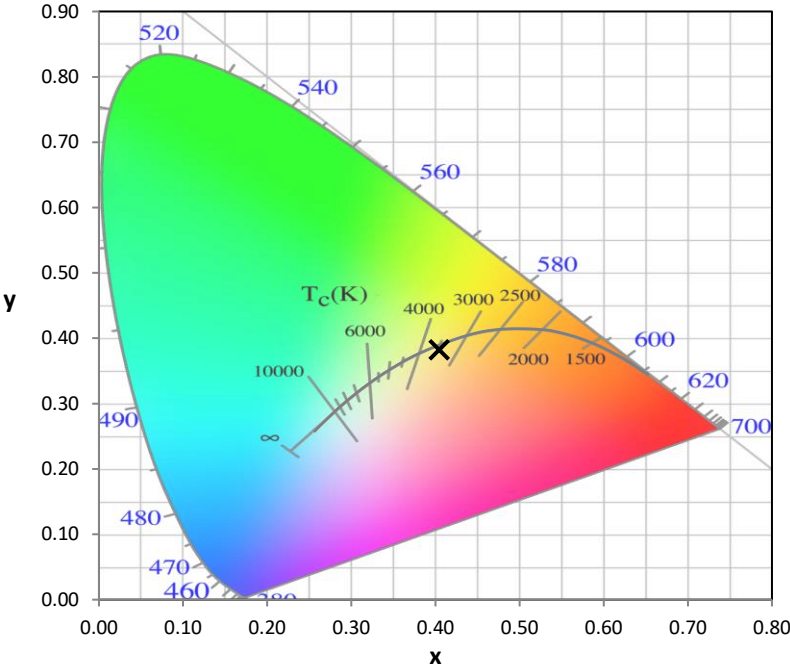
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-2

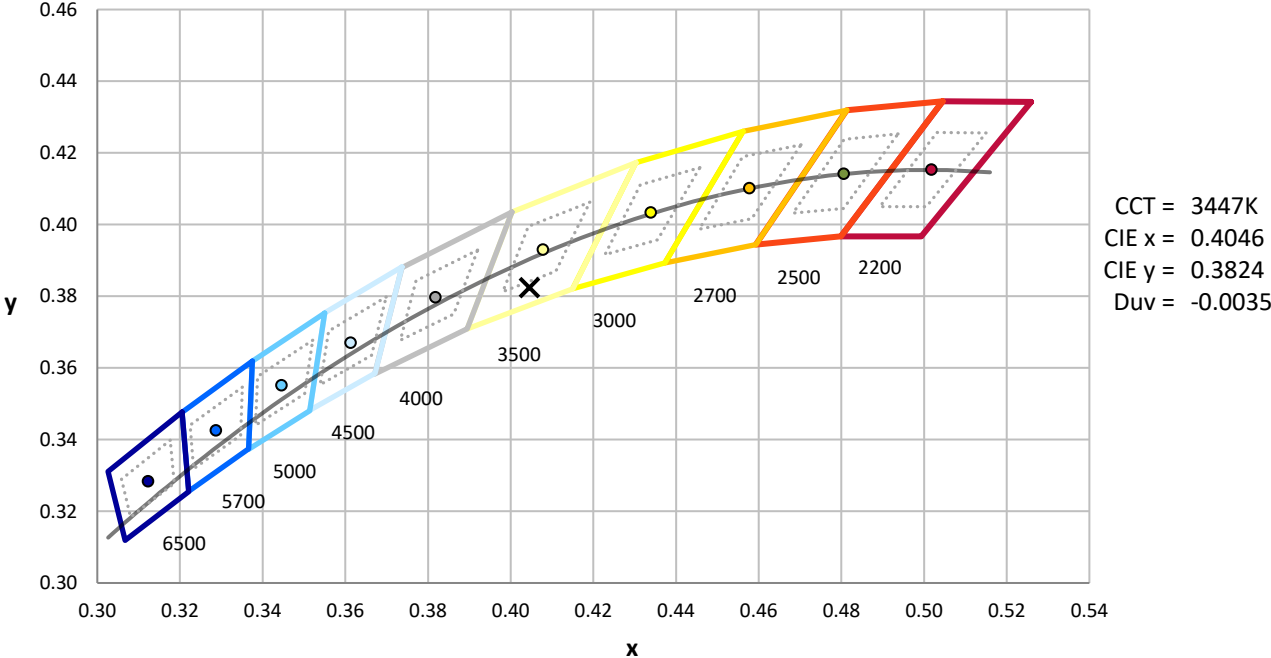
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



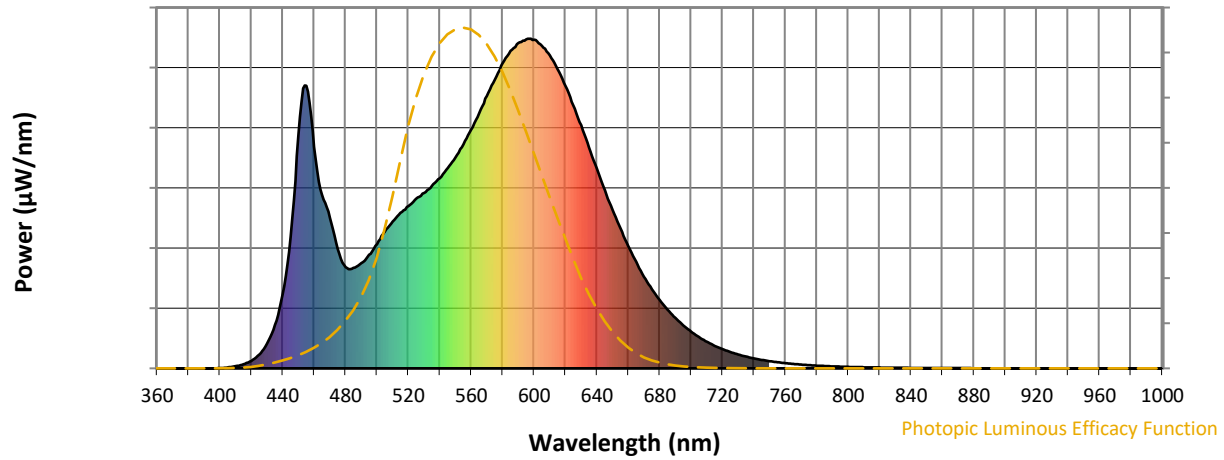
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 7-step quadrangle

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Photopic Flux vs. Wavelength

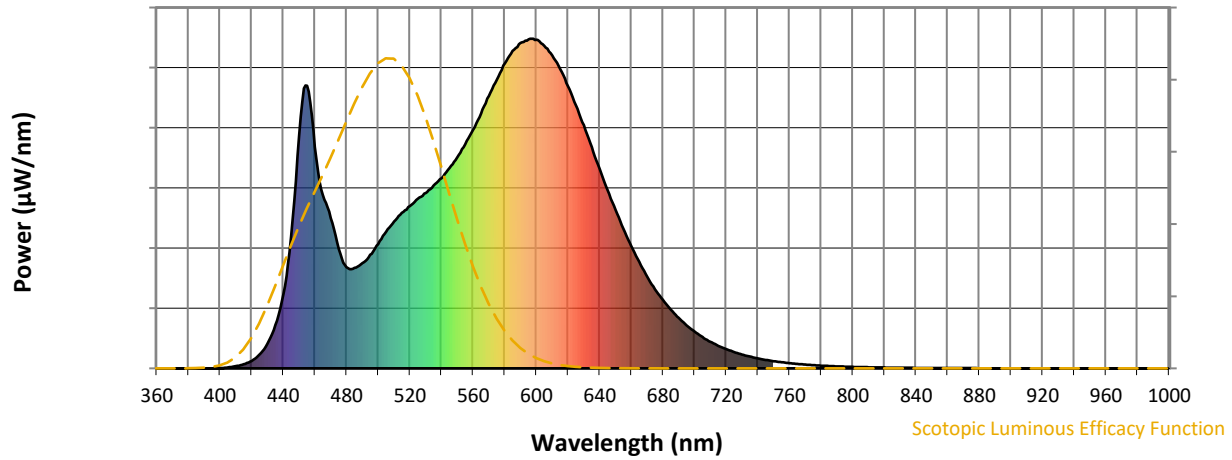


Photopic Lumens: NR

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



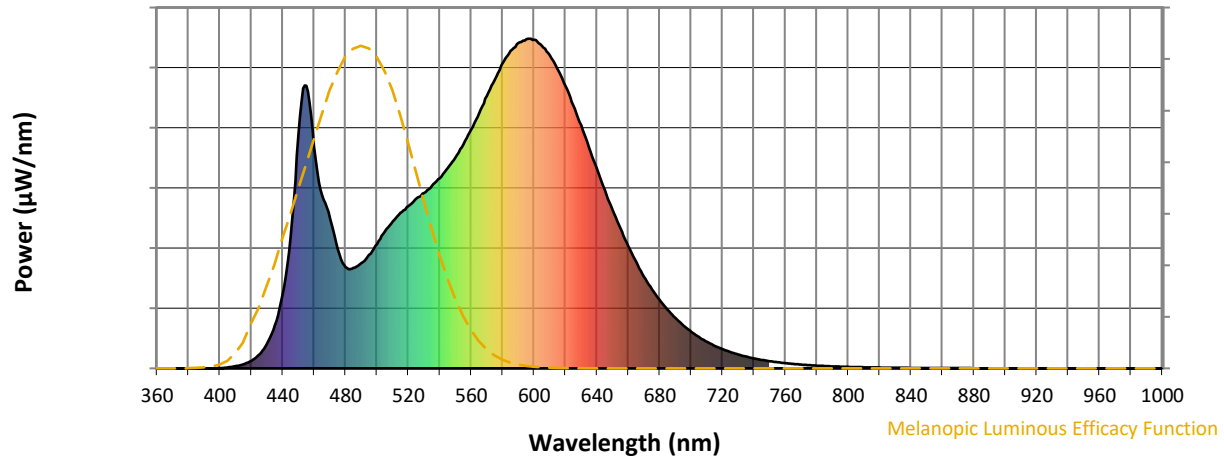
Scotopic Lumens: NR

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



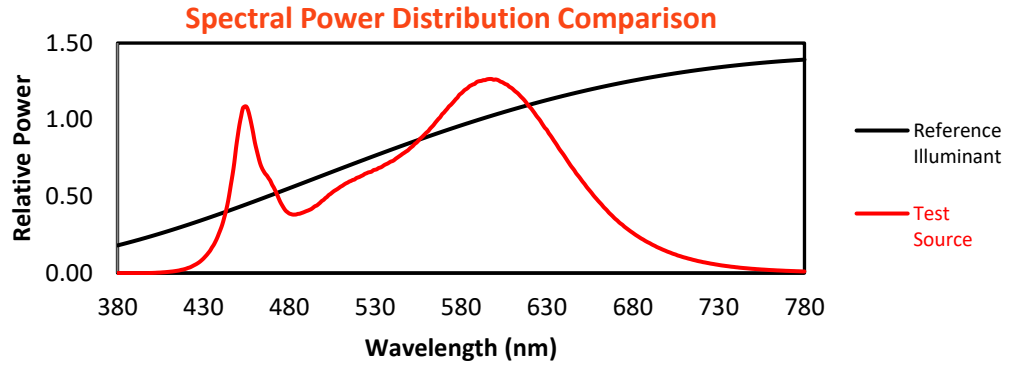
Melanopic Lumens: NR

M/P: 3.22

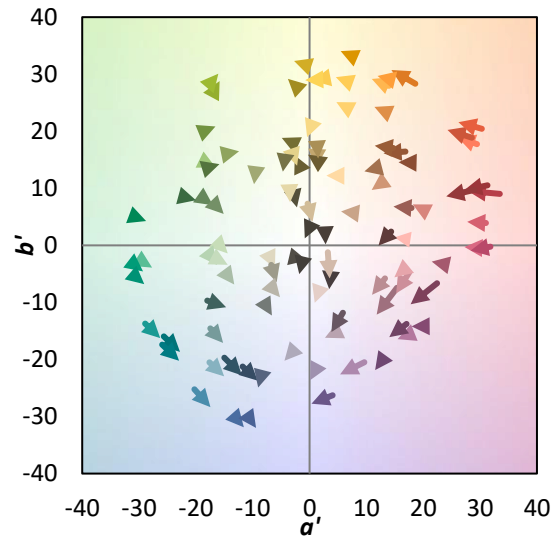
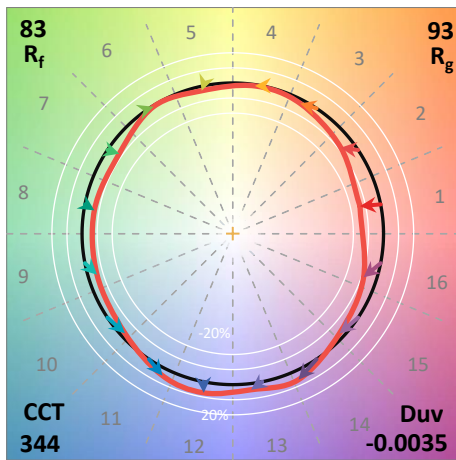
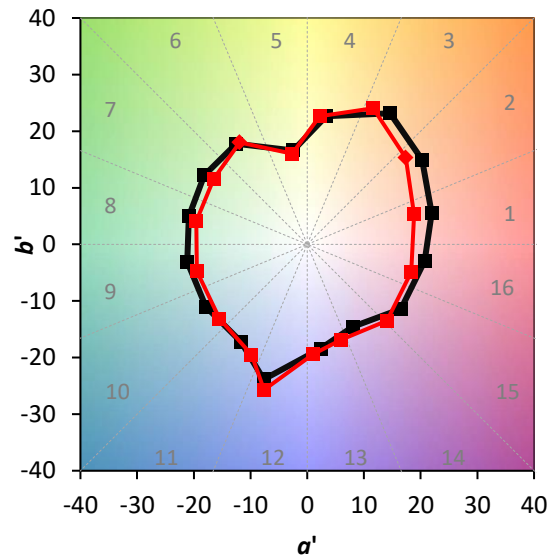
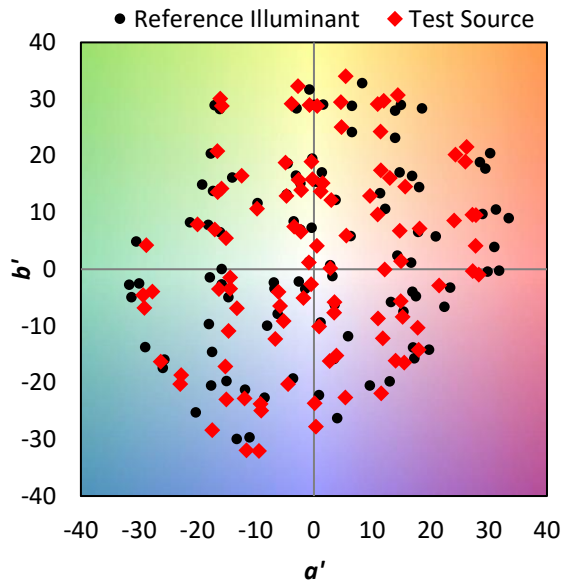
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	319	NR	620	856	NR	750	22	NR	880	1	NR
365	0	NR	495	344	NR	625	798	NR	755	18	NR	885	0	NR
370	0	NR	500	377	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			

Summary

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

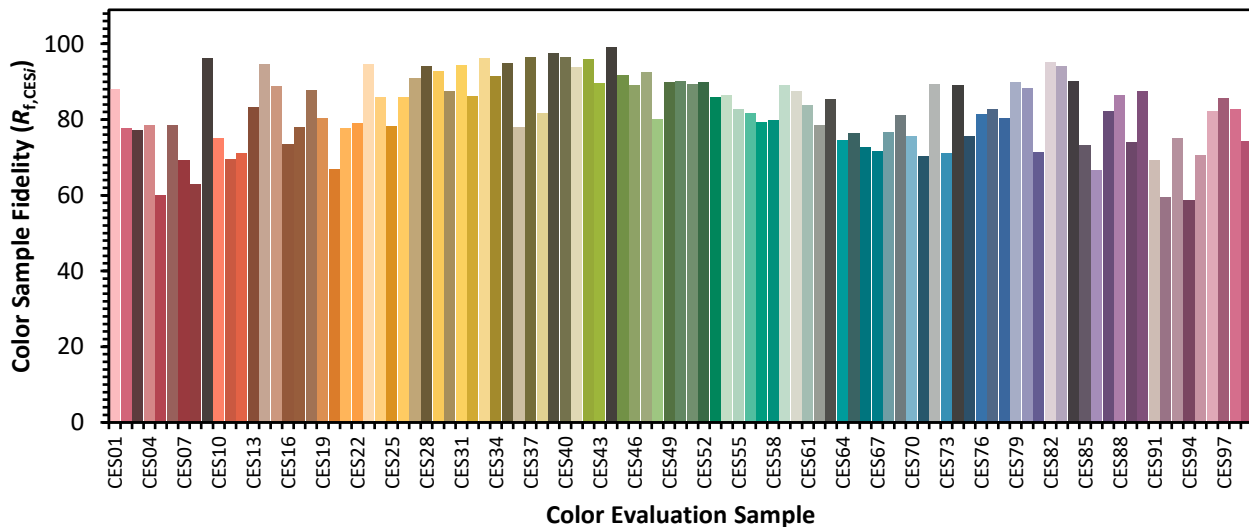


Color Vector Graphics

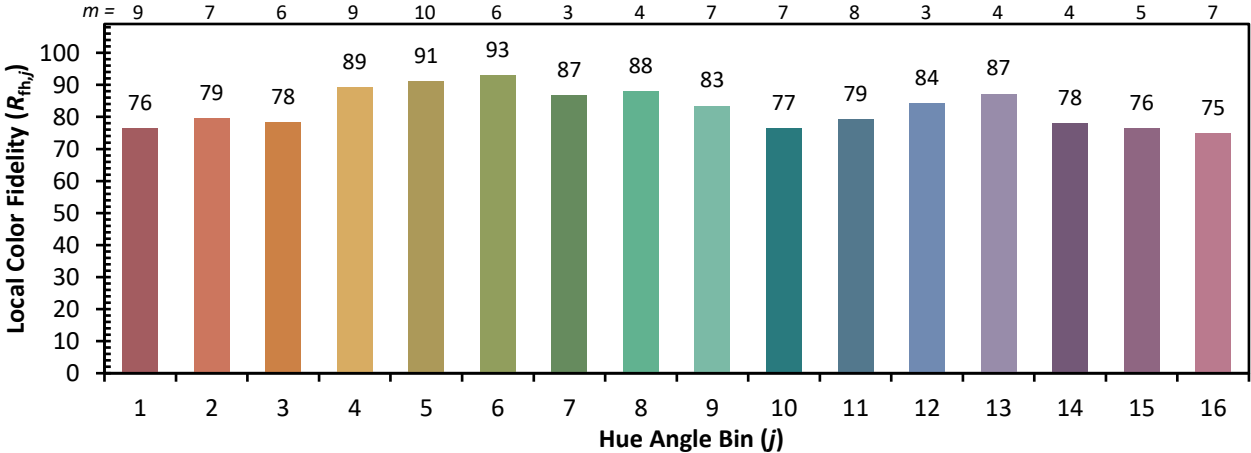
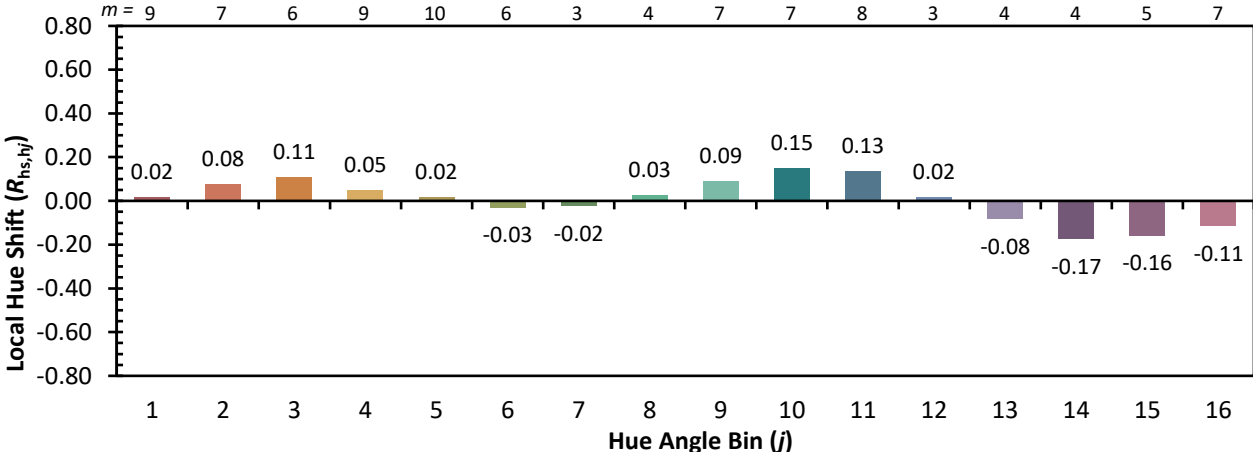
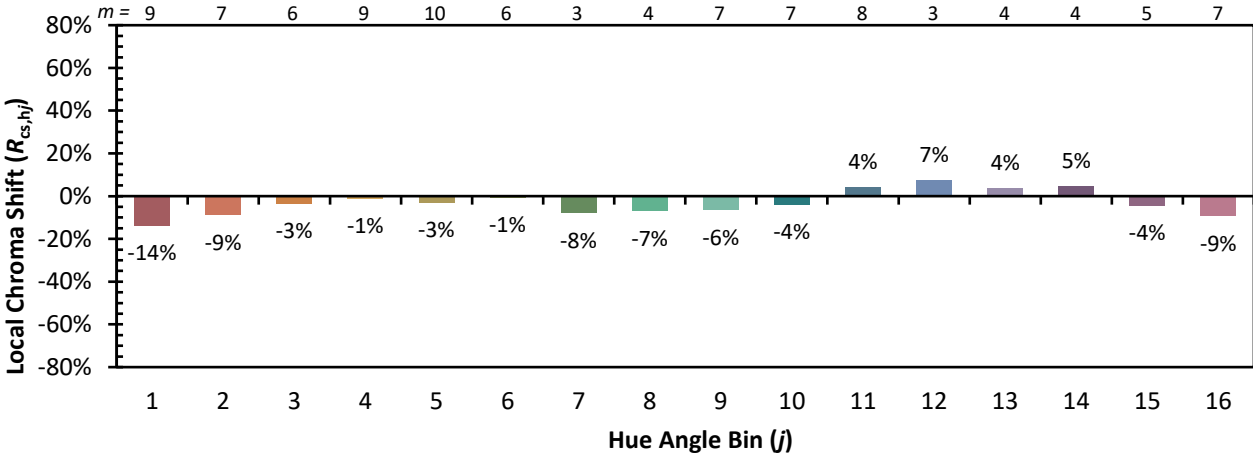


Individual Sample Fidelity Index ($R_{f,i}$)

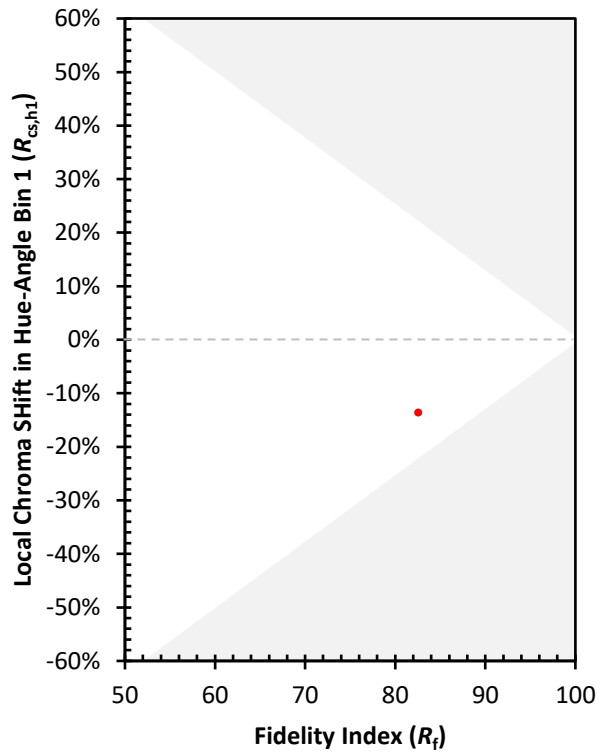
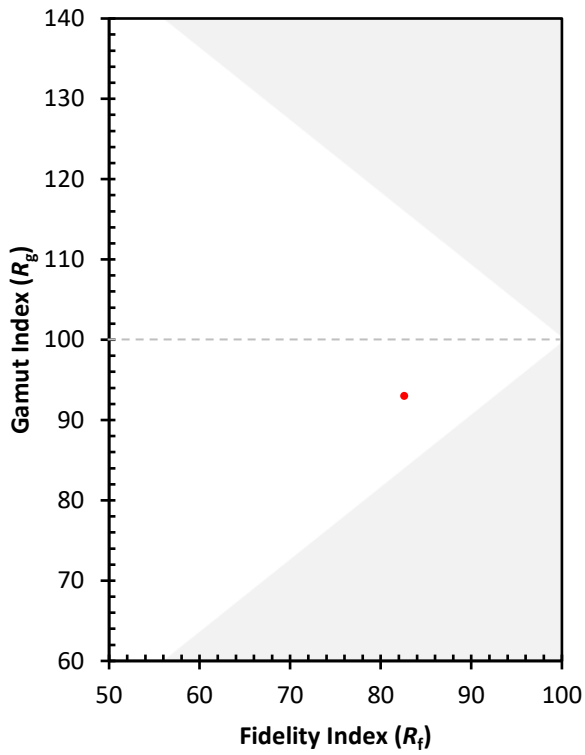
CES01 = 86	CES26 = 86	CES51 = 89	CES76 = 81
CES02 = 62	CES27 = 91	CES52 = 90	CES77 = 83
CES03 = 31	CES28 = 94	CES53 = 86	CES78 = 80
CES04 = 70	CES29 = 93	CES54 = 86	CES79 = 90
CES05 = 49	CES30 = 87	CES55 = 83	CES80 = 88
CES06 = 51	CES31 = 94	CES56 = 82	CES81 = 71
CES07 = 41	CES32 = 86	CES57 = 79	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)