

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: P979167

Luminaire Tested: **WPLLED38S-140W-6500K**

Issue Date: 03/31/2025



Test Information

Test Method: LM-79-08
Report Number: P979167
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPLED38S-140W-6500K
Description: LUMARK WALL PACK LED LARGE 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @140W-6500K
Light Source: 6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

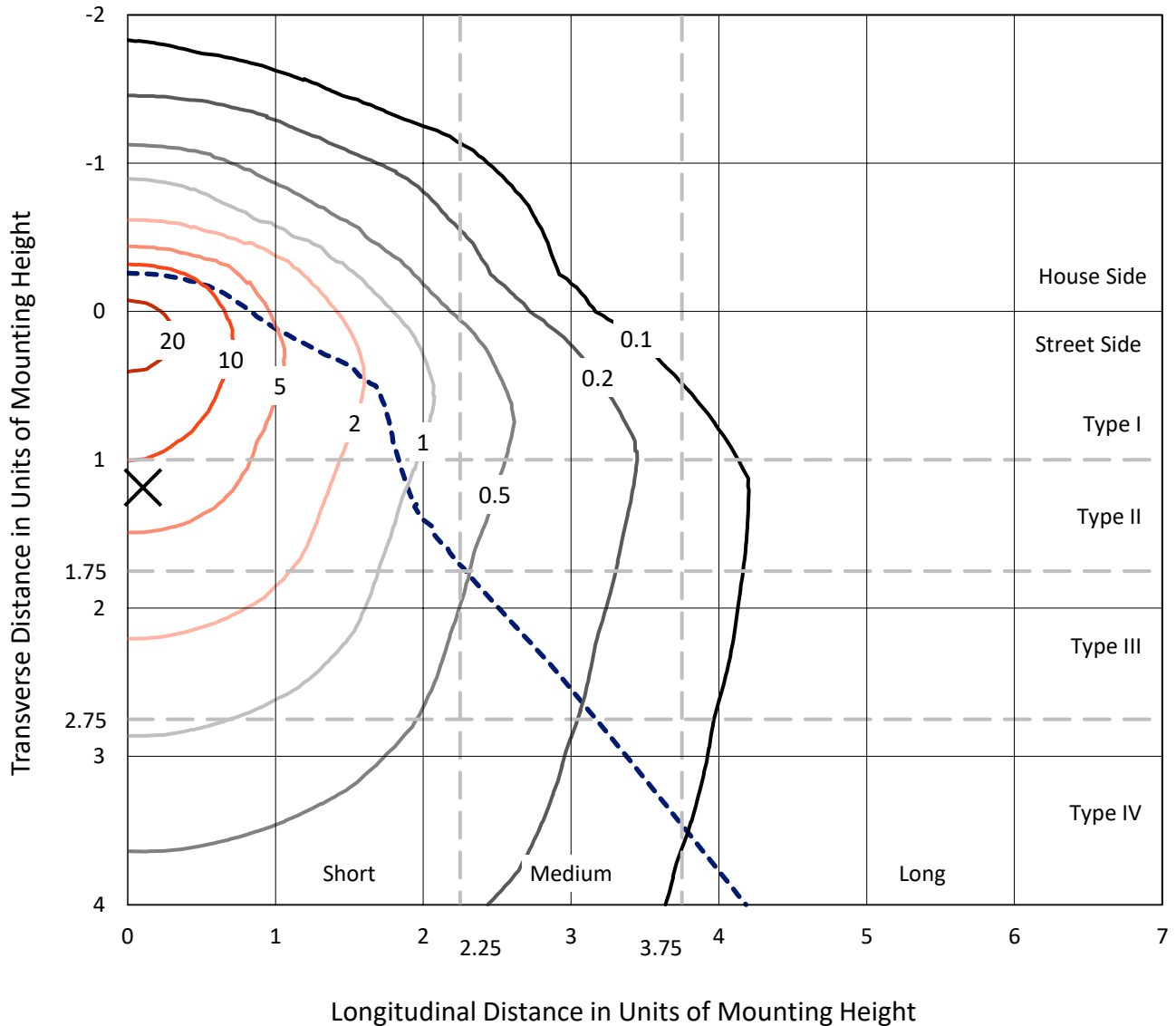
Lumens per Lamp: N/A
Luminaire Lumens: 19455.4 lumens
Efficiency: N/A
Efficacy: 140.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 0.33' x H: 0.58')
IES Classification: Type IV - Short
BUG Rating: B3 - U5 - G5

Input Watts (W): 138.2
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

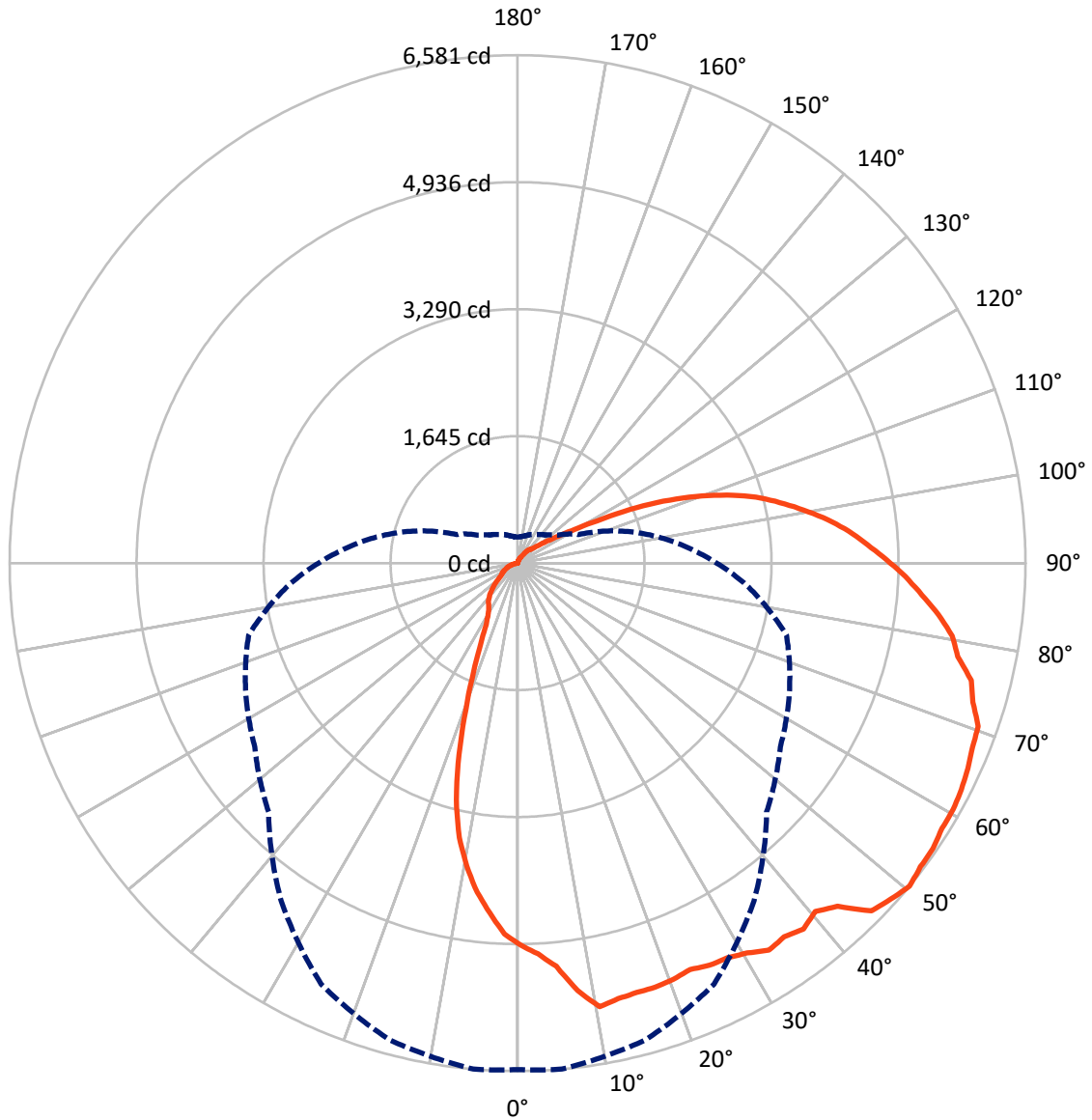
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 24 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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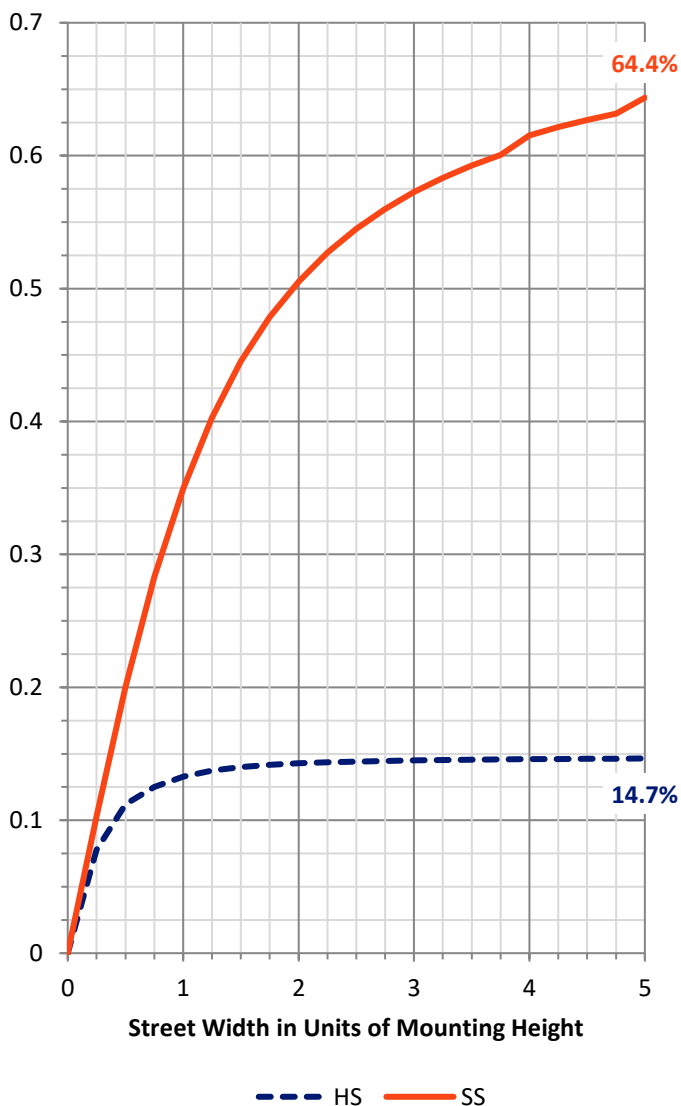
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2891.6	111.1	3002.7
	% Fixture	14.9	0.6	15.4
Street Side	Lumens	13745.9	2706.7	16452.6
	% Fixture	70.7	13.9	84.6
Total	Lumens	16637.6	2817.8	19455.4
	% Fixture	85.5	14.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.2	2.4
10°-20°	1317.1	6.8
20°-30°	1806.6	9.3
30°-40°	2088.2	10.7
40°-50°	2278.4	11.7
50°-60°	2413.5	12.4
60°-70°	2382.8	12.2
70°-80°	2143.3	11.0
80°-90°	1733.6	8.9
90°-100°	1296.1	6.7
100°-110°	836.2	4.3
110°-120°	385.9	2.0
120°-130°	155.3	0.8
130°-140°	80.7	0.4
140°-150°	40.7	0.2
150°-160°	15.9	0.1
160°-170°	5.6	0.0
170°-180°	1.6	0.0
0°-90°	16637.6	85.5
0°-180°	19455.4	100.0

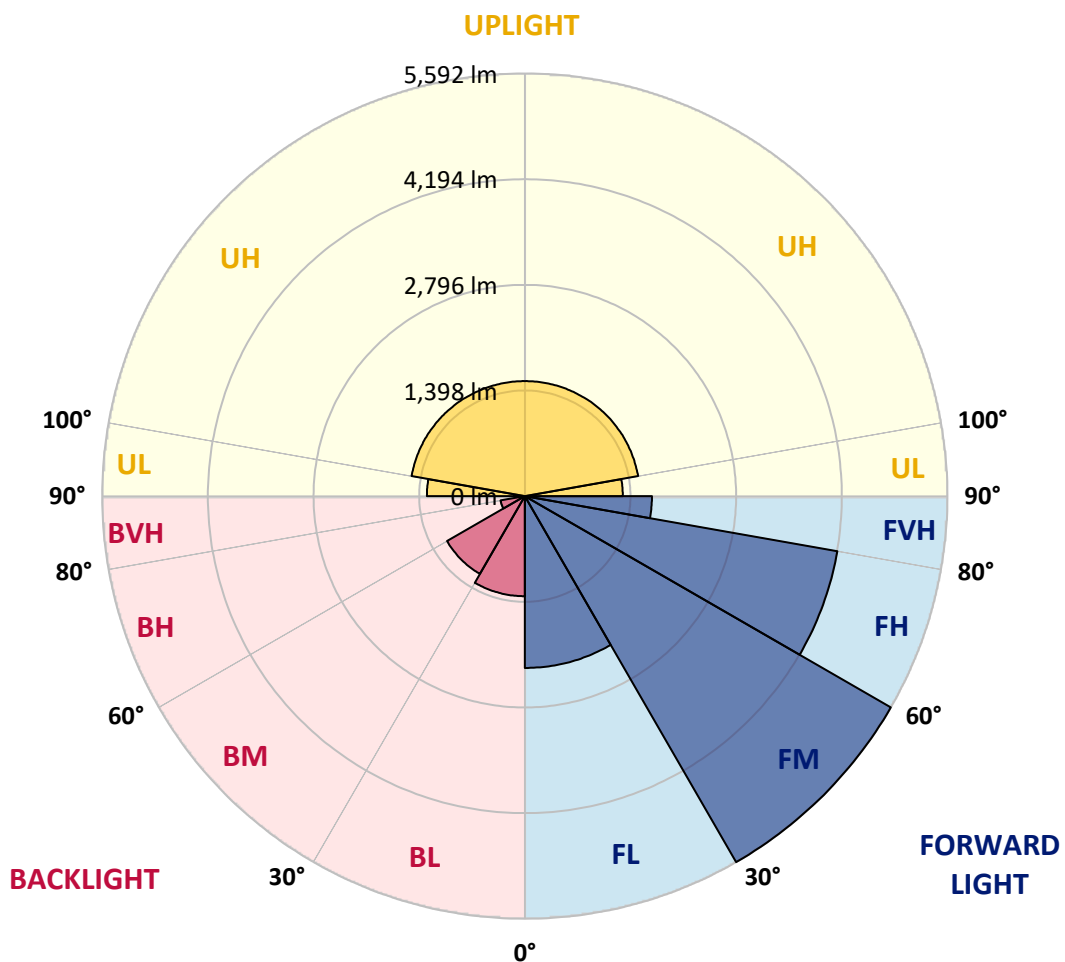


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2273.6	11.7			
FM (30°-60°)	5591.6	28.7			
FH (60°-80°)	4199.2	21.6			G2/5000
FVH (80°-90°)	1681.6	8.6			G5
BL (0°-30°)	1324.2	6.8	B3/2500		
BM (30°-60°)	1188.5	6.1	B2/2500		
BH (60°-80°)	326.8	1.7	B1/500		G1/500
BVH (80°-90°)	52.0	0.3			G1/100
UL (90°-100°)	1296.1	6.7		U5	
UH (100°-180°)	1521.7	7.8		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°	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3
2.5°	5069.2	5068.3	5050.4	5095.6	5113.6	5131.5	5127.2	5078.6	5089.7	5072.6	5051.2
5°	5238.3	5247.7	5248.5	5316.9	5295.5	5266.5	5240.8	5174.2	5130.7	5096.5	5060.6
7.5°	5578.2	5593.6	5661.9	5597.0	5505.6	5384.3	5288.7	5197.3	5082.0	4988.9	4939.3
10°	5815.7	5844.7	5927.5	5904.5	5741.4	5531.2	5345.9	5211.8	5109.3	4985.5	4937.6
12.5°	5731.1	5790.9	5846.4	5866.1	5778.1	5764.4	5548.3	5316.9	5165.7	4961.5	4894.9
15°	5732.0	5773.0	5784.9	5814.0	5743.1	5788.3	5681.6	5427.9	5076.9	4900.0	4809.5
17.5°	5719.1	5777.2	5705.5	5716.6	5720.0	5701.2	5697.8	5454.4	5114.4	4847.9	4726.7
20°	5640.6	5757.6	5719.1	5644.0	5647.4	5643.1	5573.9	5500.5	5065.7	4780.5	4643.8
22.5°	5636.3	5720.0	5697.8	5592.7	5540.6	5507.3	5485.1	5490.2	5029.9	4688.2	4530.2
25°	5707.2	5773.8	5708.9	5614.9	5497.9	5386.0	5385.2	5339.1	5007.7	4559.3	4391.0
27.5°	5755.0	5789.2	5704.6	5636.3	5466.3	5279.3	5216.9	5156.3	4890.7	4429.4	4244.9
30°	5852.4	5860.9	5790.0	5626.0	5455.2	5242.5	5038.4	5024.8	4848.8	4287.7	4078.4
32.5°	5977.1	5979.6	5889.1	5691.8	5434.7	5177.6	4907.7	4815.5	4703.6	4116.0	3900.7
35°	5954.0	5946.3	5919.0	5718.3	5440.7	5080.3	4785.6	4625.9	4555.8	3928.1	3698.3
37.5°	6019.8	6015.5	5931.8	5712.3	5416.8	5011.9	4671.1	4477.3	4367.9	3729.1	3458.3
40°	5942.9	5936.9	5875.4	5668.8	5392.0	4935.1	4531.1	4303.9	4174.1	3516.4	3234.5
42.5°	6083.9	6077.0	5941.2	5664.5	5304.9	4831.7	4436.3	4163.8	3967.4	3330.2	3047.5
45°	6416.1	6428.9	6187.2	5781.5	5258.8	4736.9	4360.3	4066.4	3829.0	3185.0	2871.5
47.5°	6479.3	6506.6	6365.7	5924.1	5309.2	4636.1	4230.4	3963.9	3708.6	3052.6	2713.5
50°	6563.0	6580.9	6397.3	6019.8	5339.9	4561.8	4155.3	3887.9	3606.9	2945.8	2578.6
52.5°	6536.5	6535.7	6417.0	6055.7	5351.9	4502.0	4025.4	3800.0	3521.5	2838.2	2452.2
55°	6524.6	6528.8	6425.5	6063.4	5372.4	4418.3	3920.4	3713.7	3447.2	2735.7	2311.2
57.5°	6483.6	6484.4	6358.0	6044.6	5355.3	4347.4	3793.1	3581.3	3351.5	2643.5	2173.7
60°	6471.6	6483.6	6302.5	5972.8	5302.3	4263.7	3663.3	3442.1	3252.5	2532.4	2004.6
62.5°	6452.8	6454.5	6270.0	5937.8	5259.6	4173.2	3516.4	3307.1	3157.7	2402.6	1812.4
65°	6392.2	6410.1	6229.9	5937.8	5202.4	4076.7	3393.4	3153.4	3021.9	2226.7	1582.7
67.5°	6324.7	6357.2	6189.8	5893.4	5167.4	4001.5	3265.3	3001.4	2885.2	1985.0	1346.1
70°	6307.6	6330.7	6130.0	5816.5	5094.8	3892.2	3131.2	2847.6	2711.8	1717.6	1071.9
72.5°	6139.4	6169.3	5991.6	5696.9	4994.9	3798.2	3001.4	2665.7	2500.8	1405.0	812.3
75°	6030.9	6070.2	5888.3	5591.9	4892.4	3694.0	2888.6	2487.2	2235.2	1095.8	599.6
77.5°	5790.0	5831.9	5644.8	5385.2	4723.2	3543.7	2748.5	2306.1	1949.1	802.9	454.4
80°	5655.9	5707.2	5514.2	5224.6	4584.9	3387.4	2599.9	2122.5	1640.8	566.3	371.5
82.5°	5455.2	5497.1	5311.7	5005.1	4370.5	3226.0	2452.2	1946.5	1364.0	412.5	305.8
85°	5221.2	5256.2	5055.5	4759.1	4133.9	3027.8	2295.9	1786.0	1112.9	321.1	255.4
87.5°	5014.5	5027.3	4858.2	4520.0	3907.6	2824.6	2130.2	1587.8	878.0	261.4	215.2
90°	4783.9	4783.0	4605.4	4280.0	3659.9	2622.1	1960.2	1399.9	686.7	227.2	188.8
92.5°	4566.1	4538.8	4359.4	4005.8	3396.0	2425.7	1789.4	1212.8	544.9	202.4	173.4
95°	4332.9	4310.7	4117.7	3775.2	3131.2	2239.5	1617.7	1031.8	443.3	186.2	164.0
97.5°	4101.5	4057.0	3858.0	3506.1	2867.3	2037.9	1434.1	865.2	373.2	174.2	158.0
100°	3789.7	3769.2	3600.1	3233.7	2574.3	1809.9	1241.9	697.8	316.0	167.4	152.0
102.5°	3501.9	3488.2	3291.8	2921.9	2283.9	1577.5	1033.5	582.5	273.3	164.8	146.9
105°	3236.2	3204.6	3009.9	2605.0	1985.0	1350.4	843.0	465.5	242.6	163.1	143.5
107.5°	2873.2	2853.6	2629.0	2236.9	1632.2	1101.0	670.5	381.8	221.2	160.6	140.1
110°	2479.5	2466.7	2246.3	1826.9	1338.4	885.7	540.7	317.7	204.1	156.3	134.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	2069.5	2050.7	1819.3	1462.2	1054.8	690.1	442.4	275.9	191.3	150.3	129.0
115°	1624.5	1614.3	1417.0	1107.8	813.1	557.7	365.6	240.9	181.1	142.6	122.1
117.5°	1187.2	1166.7	1026.6	826.8	640.6	463.8	311.8	217.8	172.5	131.5	112.7
120°	860.9	854.1	757.6	648.3	538.9	393.7	269.0	197.3	162.3	121.3	102.5
122.5°	651.7	656.0	597.9	528.7	459.5	339.9	239.2	181.1	148.6	108.5	92.2
125°	527.8	523.6	492.0	445.8	390.3	296.4	218.7	169.1	134.9	96.5	83.7
127.5°	433.0	428.8	404.8	379.2	334.8	267.3	204.1	161.4	120.4	85.4	74.3
130°	355.3	351.0	335.7	322.9	296.4	242.6	193.9	152.0	107.6	75.2	64.9
132.5°	295.5	296.4	287.0	276.7	260.5	224.6	184.5	141.8	94.8	66.6	58.1
135°	257.9	257.9	249.4	240.0	234.0	207.5	175.1	129.8	82.8	59.8	53.8
137.5°	238.3	236.6	224.6	215.2	211.0	195.6	161.4	115.3	72.6	54.7	49.5
140°	219.5	218.7	204.1	192.2	187.1	176.8	145.2	99.9	63.2	50.4	46.1
142.5°	186.2	185.3	177.7	171.7	162.3	156.3	124.7	84.6	54.7	46.1	42.7
145°	143.5	144.3	143.5	140.9	134.9	130.7	104.2	70.9	47.0	42.7	40.1
147.5°	115.3	114.5	115.3	112.7	109.3	105.1	86.3	58.9	42.7	39.3	37.6
150°	94.8	94.0	94.0	92.2	88.8	82.0	70.9	48.7	38.4	36.7	35.0
152.5°	76.9	77.7	76.9	74.3	71.7	64.9	55.5	40.1	35.0	34.2	33.3
155°	61.5	62.4	63.2	60.6	58.1	52.1	43.6	34.2	32.5	32.5	31.6
157.5°	50.4	49.5	49.5	48.7	44.4	40.1	34.2	29.9	29.9	30.7	30.7
160°	37.6	37.6	38.4	36.7	33.3	29.9	27.3	26.5	28.2	29.9	29.0
162.5°	25.6	26.5	26.5	26.5	24.8	22.2	23.1	25.6	27.3	28.2	28.2
165°	16.2	16.2	17.9	18.8	17.1	17.9	21.4	24.8	26.5	28.2	28.2
167.5°	8.5	8.5	10.2	12.0	13.7	15.4	21.4	24.8	26.5	28.2	28.2
170°	4.3	4.3	6.0	9.4	12.0	15.4	21.4	24.8	27.3	28.2	28.2
172.5°	3.4	3.4	6.0	9.4	12.0	16.2	21.4	24.8	27.3	28.2	28.2
175°	3.4	3.4	6.0	9.4	12.8	16.2	22.2	25.6	27.3	28.2	28.2
177.5°	3.4	4.3	6.8	10.2	12.8	17.1	22.2	25.6	27.3	29.0	28.2
180°	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3	4951.3
2.5°	5019.6	4989.7	4976.1	4926.5	4862.5	4838.6	4818.9	4825.7	4808.7	4816.3
5°	5006.8	4970.1	4895.8	4806.1	4736.1	4662.6	4614.8	4566.1	4548.2	4539.6
7.5°	4892.4	4813.8	4718.1	4629.3	4558.4	4441.4	4362.0	4335.5	4295.3	4262.9
10°	4891.5	4746.3	4589.2	4449.1	4294.5	4201.4	4083.5	4012.6	3979.3	3990.4
12.5°	4824.0	4654.1	4449.9	4254.3	4067.3	3911.8	3777.7	3611.2	3635.1	3625.7
15°	4727.5	4501.2	4277.4	4039.1	3788.0	3577.0	3404.5	3234.5	3165.3	3192.7
17.5°	4614.8	4357.7	4094.6	3788.0	3501.0	3182.4	2960.4	2725.5	2593.1	2605.9
20°	4534.5	4190.3	3877.7	3522.4	3147.4	2759.6	2388.1	2132.7	1998.6	2047.3
22.5°	4398.7	4037.4	3656.5	3205.5	2718.6	2242.0	1859.4	1646.7	1519.5	1513.5
25°	4239.8	3833.3	3413.0	2898.9	2269.4	1772.3	1412.7	1211.1	1138.5	1112.1
27.5°	4054.5	3618.9	3133.7	2514.5	1834.6	1386.2	1089.0	951.5	895.1	881.4
30°	3867.4	3413.9	2841.6	2131.0	1479.3	1058.2	883.2	805.4	776.4	768.7
32.5°	3650.5	3162.8	2576.0	1789.4	1194.9	879.7	779.0	726.0	704.6	702.1
35°	3423.3	2933.9	2248.0	1480.2	972.8	786.6	714.9	673.0	660.2	657.7
37.5°	3182.4	2664.8	1965.3	1246.2	844.7	720.0	667.9	639.7	627.8	625.2
40°	2953.5	2419.7	1701.4	1024.9	745.6	662.8	625.2	586.8	577.4	578.2
42.5°	2744.3	2200.2	1445.2	859.2	674.7	609.8	570.5	544.1	529.6	530.4
45°	2568.3	1996.1	1214.5	750.8	617.5	552.6	519.3	480.0	465.5	462.9
47.5°	2409.5	1788.5	1012.1	682.4	562.9	509.1	459.5	420.2	405.7	408.3
50°	2228.4	1551.9	876.3	629.5	514.2	452.7	407.4	364.7	339.9	339.1
52.5°	2067.8	1346.9	780.7	585.9	474.0	409.1	354.5	310.9	279.3	274.2
55°	1902.1	1153.9	716.6	537.2	422.8	364.7	309.2	264.8	246.8	246.0
57.5°	1714.2	1012.1	673.9	498.8	376.7	313.5	263.1	234.0	234.0	237.4
60°	1534.8	880.6	637.2	446.7	332.3	270.8	231.5	207.5	211.8	217.8
62.5°	1341.0	787.5	599.6	403.1	290.4	234.0	200.7	182.8	187.9	188.8
65°	1113.8	719.2	556.0	357.0	252.0	202.4	169.1	161.4	161.4	164.0
67.5°	892.5	658.5	500.5	313.5	214.4	165.7	146.1	140.1	146.1	146.9
70°	716.6	596.2	442.4	270.8	181.9	137.5	129.0	124.7	124.7	123.8
72.5°	596.2	538.1	382.6	230.6	149.5	116.2	108.5	103.3	97.4	99.1
75°	509.9	474.9	329.7	193.0	121.3	94.0	80.3	75.2	70.9	68.3
77.5°	442.4	405.7	274.2	157.2	96.5	71.7	54.7	44.4	41.9	40.1
80°	376.7	342.5	230.6	128.1	74.3	47.8	26.5	14.5	10.2	10.2
82.5°	319.4	281.9	190.5	103.3	54.7	24.8	6.0	0.9	0.0	0.0
85°	267.3	234.9	159.7	84.6	44.4	21.4	6.0	1.7	0.0	0.0
87.5°	224.6	195.6	139.2	73.5	40.1	20.5	6.8	1.7	0.9	0.0
90°	198.2	172.5	125.6	66.6	36.7	19.6	7.7	3.4	1.7	1.7
92.5°	176.8	155.4	114.5	61.5	35.0	19.6	8.5	4.3	3.4	2.6
95°	161.4	141.8	104.2	58.1	33.3	19.6	9.4	6.0	4.3	4.3
97.5°	148.6	131.5	96.5	53.8	31.6	19.6	9.4	6.8	5.1	5.1
100°	139.2	122.1	88.8	50.4	30.7	18.8	9.4	6.8	5.1	5.1
102.5°	132.4	116.2	81.1	47.0	29.9	18.8	10.2	6.8	6.0	5.1
105°	126.4	111.0	74.3	45.3	28.2	17.9	10.2	7.7	6.0	5.1
107.5°	123.0	106.8	69.2	42.7	27.3	17.1	10.2	6.8	5.1	5.1
110°	117.9	99.1	64.1	40.1	25.6	16.2	9.4	6.8	5.1	5.1



REPORT NUMBER: P979167
 CATALOG NUMBER: WPLLED38S-140W-6500K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	111.9	89.7	58.9	37.6	23.9	15.4	9.4	6.0	4.3	4.3
115°	105.9	78.6	53.8	35.0	23.9	14.5	9.4	6.0	4.3	4.3
117.5°	97.4	70.0	48.7	33.3	22.2	13.7	8.5	6.0	3.4	3.4
120°	88.0	62.4	45.3	31.6	21.4	12.8	8.5	5.1	3.4	3.4
122.5°	79.4	56.4	41.9	30.7	20.5	12.0	8.5	5.1	3.4	3.4
125°	70.0	51.2	39.3	29.9	19.6	12.0	8.5	5.1	3.4	2.6
127.5°	62.4	47.0	37.6	29.0	18.8	12.0	8.5	5.1	3.4	2.6
130°	56.4	44.4	36.7	28.2	18.8	12.0	8.5	5.1	3.4	3.4
132.5°	51.2	41.9	35.0	28.2	18.8	12.0	9.4	5.1	3.4	3.4
135°	47.8	39.3	34.2	27.3	17.9	12.8	9.4	6.0	3.4	3.4
137.5°	45.3	38.4	32.5	26.5	17.9	12.8	9.4	6.0	4.3	4.3
140°	42.7	36.7	31.6	25.6	17.9	12.8	10.2	6.0	4.3	4.3
142.5°	40.1	35.9	30.7	25.6	17.1	13.7	10.2	6.0	4.3	4.3
145°	37.6	34.2	29.9	23.9	17.1	13.7	10.2	6.0	4.3	4.3
147.5°	35.9	32.5	28.2	23.1	17.1	13.7	10.2	6.0	4.3	4.3
150°	34.2	30.7	27.3	22.2	17.1	13.7	10.2	6.0	4.3	3.4
152.5°	32.5	29.9	26.5	22.2	16.2	13.7	10.2	6.0	4.3	3.4
155°	31.6	29.0	25.6	22.2	16.2	12.8	10.2	6.0	4.3	3.4
157.5°	29.9	28.2	25.6	21.4	16.2	12.8	9.4	6.0	3.4	3.4
160°	29.0	27.3	25.6	22.2	16.2	12.8	9.4	6.0	3.4	3.4
162.5°	28.2	27.3	24.8	21.4	16.2	12.8	9.4	5.1	3.4	3.4
165°	28.2	27.3	24.8	21.4	16.2	12.8	9.4	5.1	3.4	2.6
167.5°	28.2	27.3	24.8	21.4	16.2	12.8	9.4	5.1	2.6	2.6
170°	28.2	26.5	24.8	21.4	16.2	12.0	8.5	5.1	2.6	2.6
172.5°	28.2	27.3	24.8	21.4	16.2	12.0	8.5	4.3	2.6	2.6
175°	28.2	27.3	24.8	21.4	16.2	12.0	8.5	4.3	2.6	2.6
177.5°	29.0	27.3	24.8	21.4	16.2	12.0	8.5	4.3	2.6	1.7
180°	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2407-168-5

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 6500k

Data in this report applies to families of products including LSDL-92S-100W 6500k.

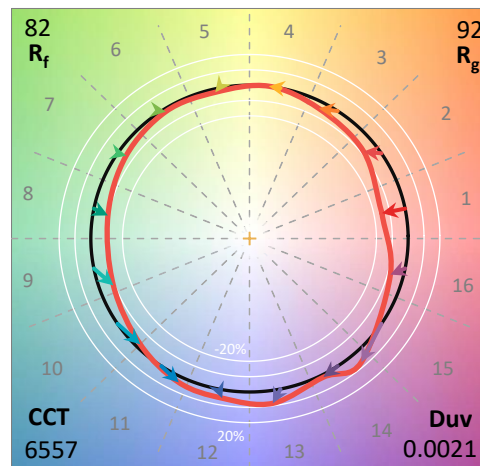
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-168-5
 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 6500k**
 Description: Lumark Wallpack 100W

Spectral Parameters

CCT (K): 6557
 CIE u': 0.1985
 CIE v': 0.4668
 Duv: 0.0021
 CIE x: 0.3121
 CIE y: 0.3263
 CIE z: 0.3616
 Peak Wavelength (nm): 453
 Dominant Wavelength (nm): 487
 Purity: 7.689333
 Rf: 81.6
 Rg: 92.3

CRI (Ra):	82.1		
R1:	80.1	R9:	-3.7
R2:	89.1	R10:	72.9
R3:	92.6	R11:	78.9
R4:	79.9	R12:	57.0
R5:	80.7	R13:	83.1
R6:	82.7	R14:	96.5
R7:	86.0	R15:	74.6
R8:	65.5		



Test Conditions

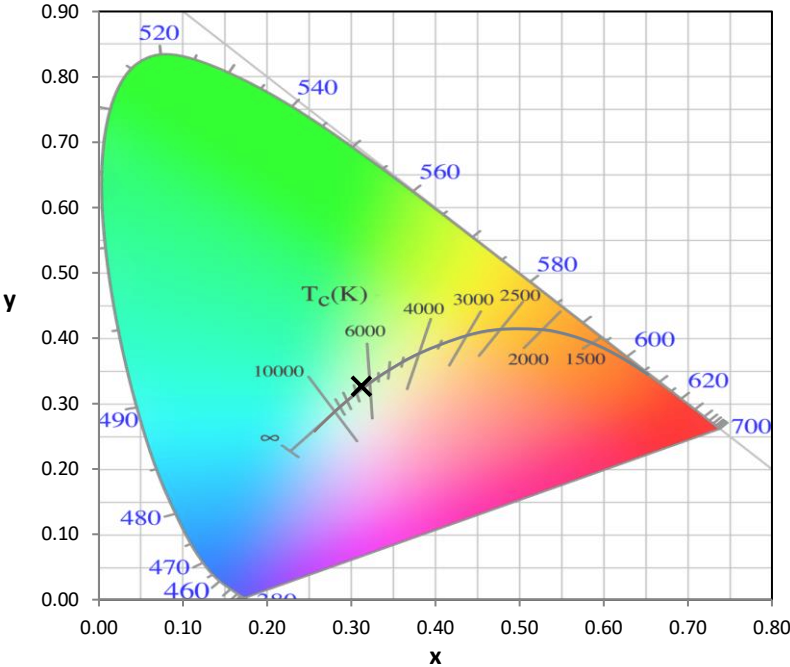
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-5

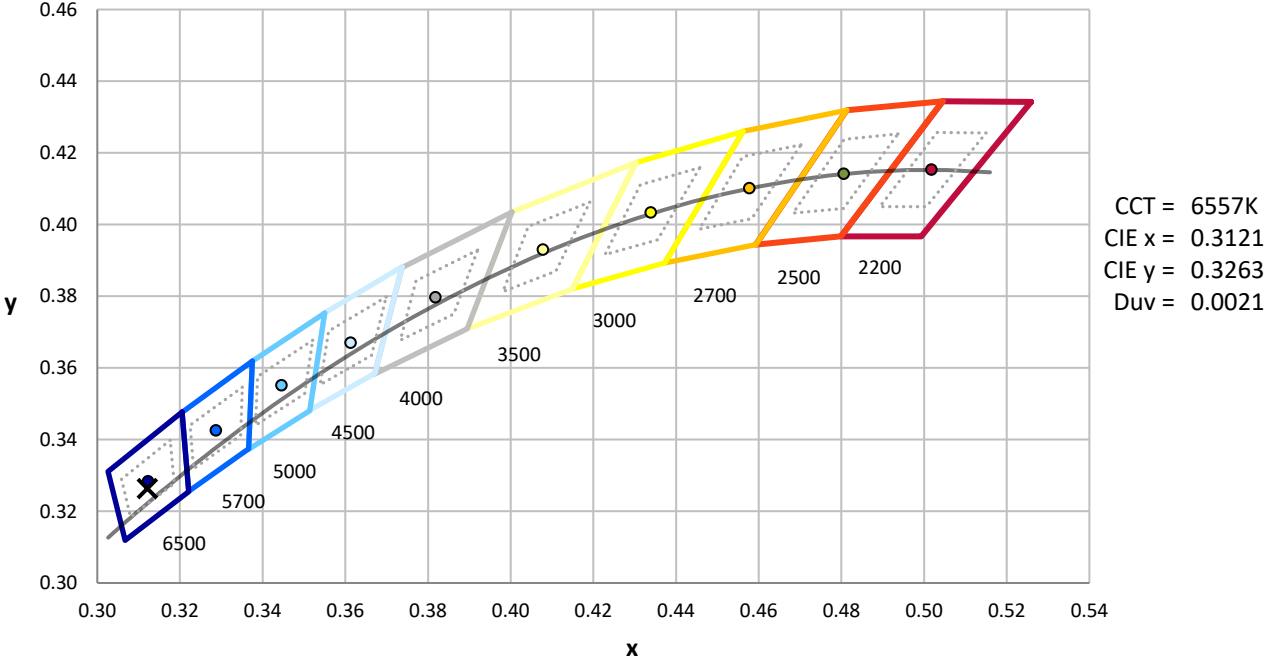
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-5

CIE 1931 Chromaticity Diagram



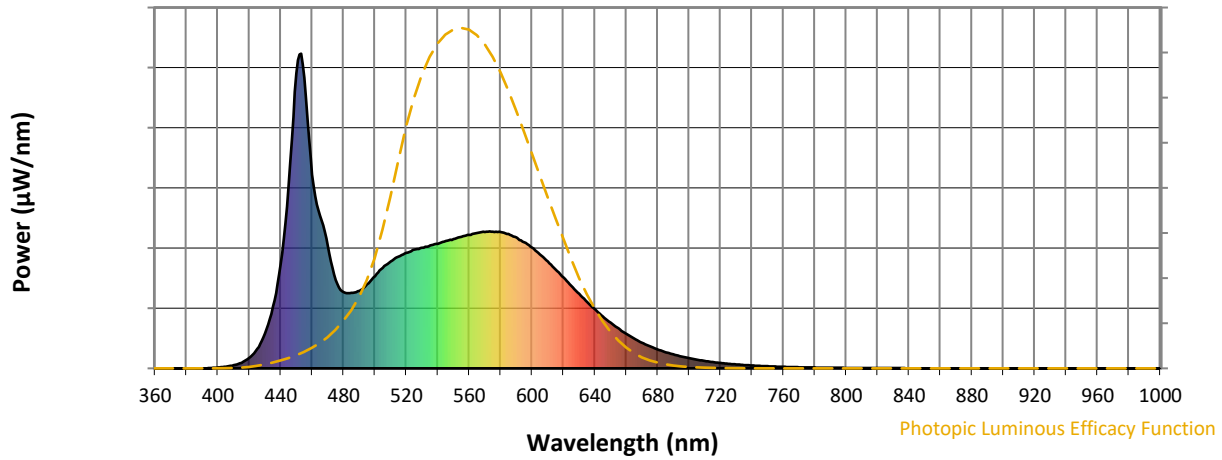
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 6500K 4-step quadrangle

REPORT NUMBER: SP1-2407-168-5

Photopic Flux vs. Wavelength

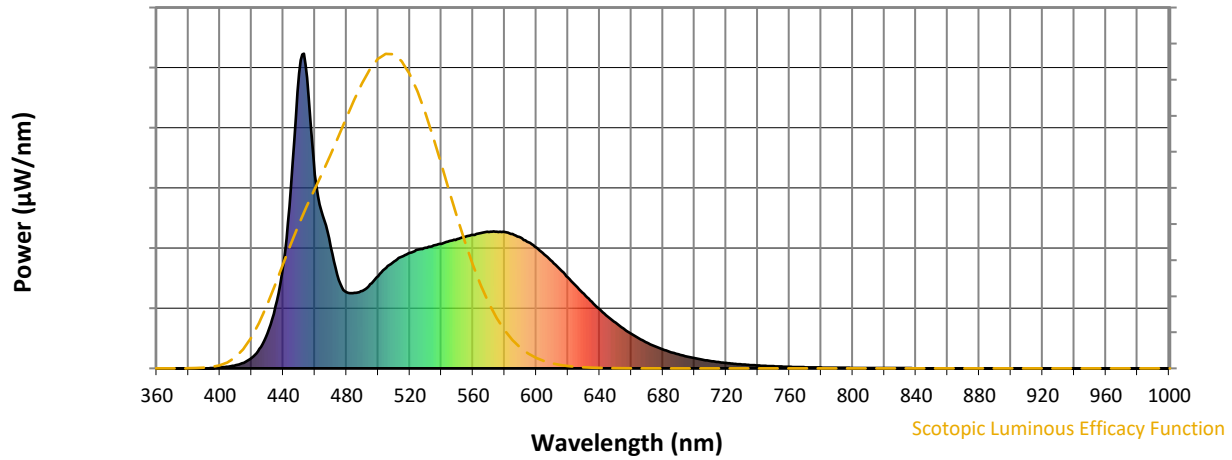


Photopic Lumens: NR

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	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-5

Scotopic Flux vs. Wavelength



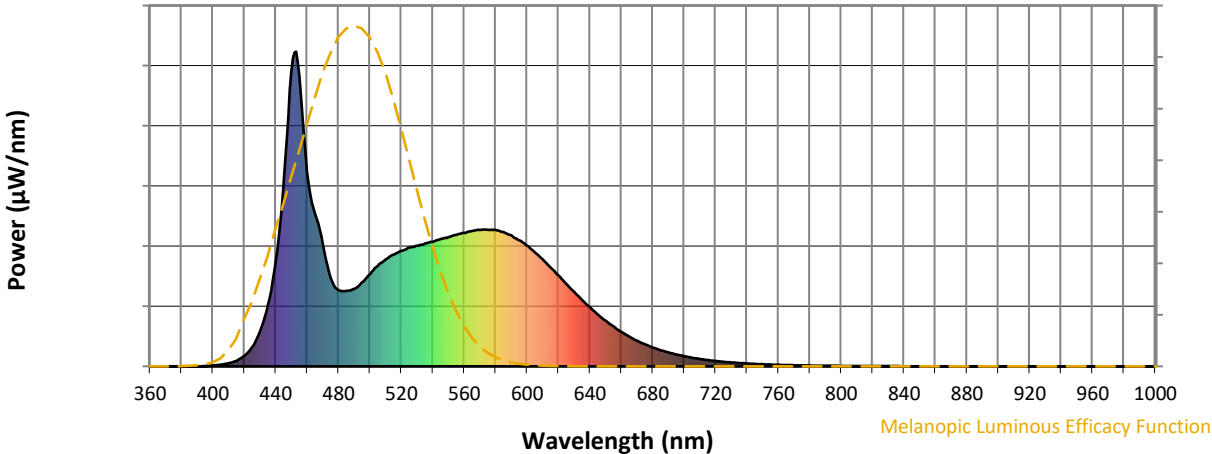
Scotopic Lumens: NR

S/P: 2.27

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	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-5

Melanopic Flux vs. Wavelength



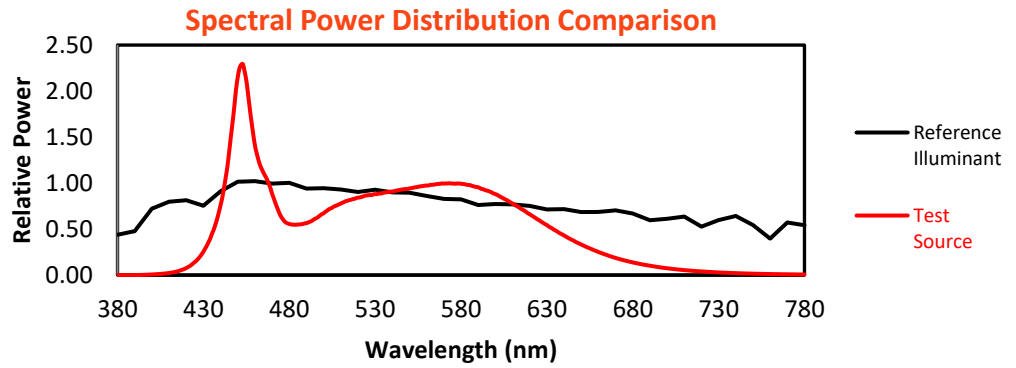
Melanopic Lumens: NR

M/P: 5.06

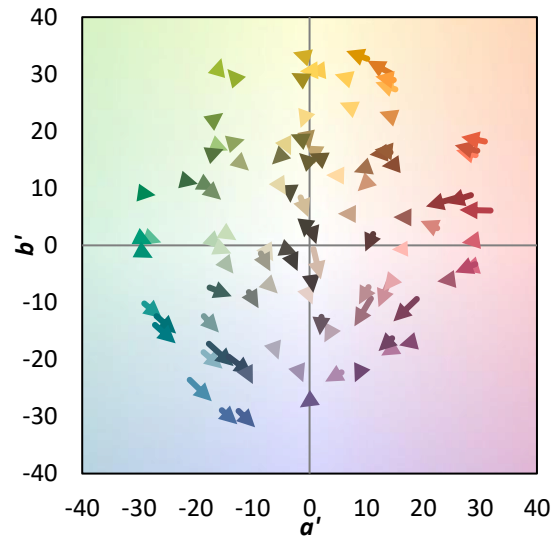
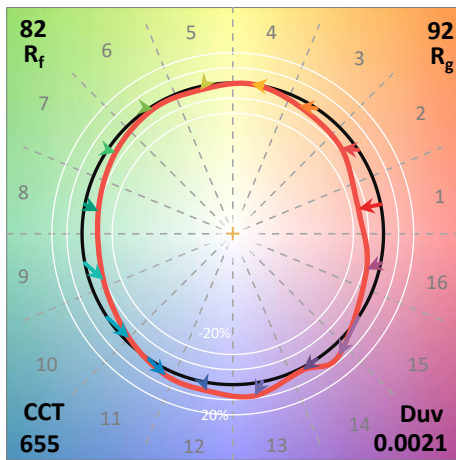
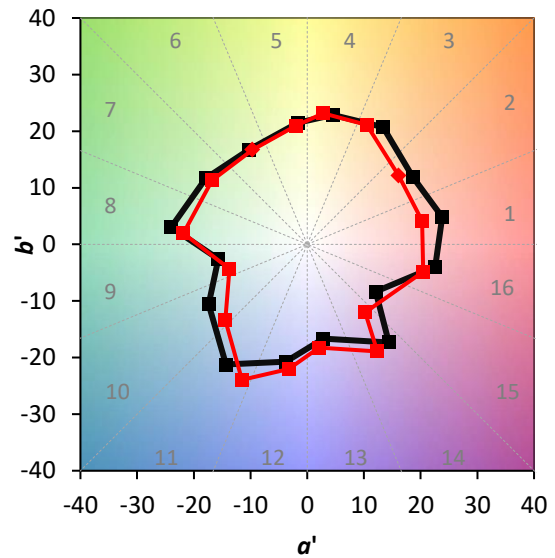
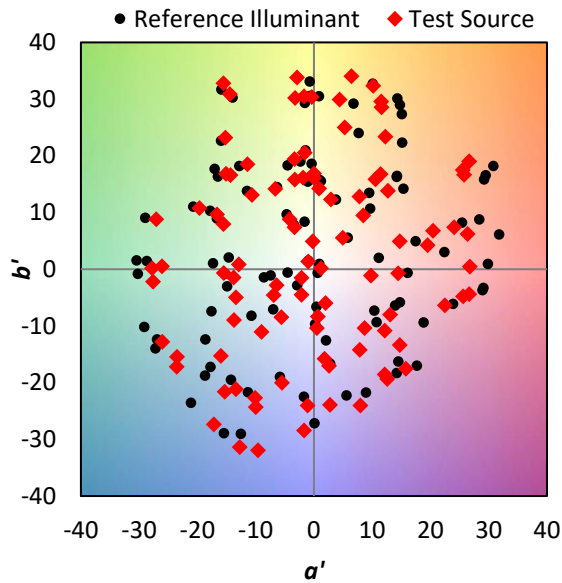
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

Summary

$R_f = 81.6$
 $R_g = 92.3$
 $CIE R_a = 82.1$
 $R_9 = -3.7$

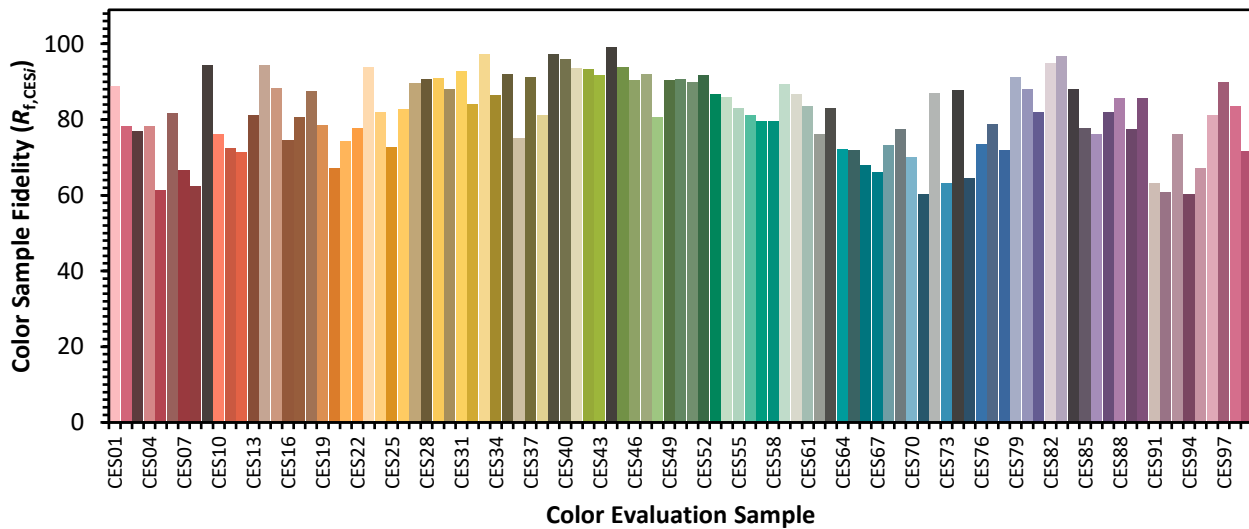


Color Vector Graphics

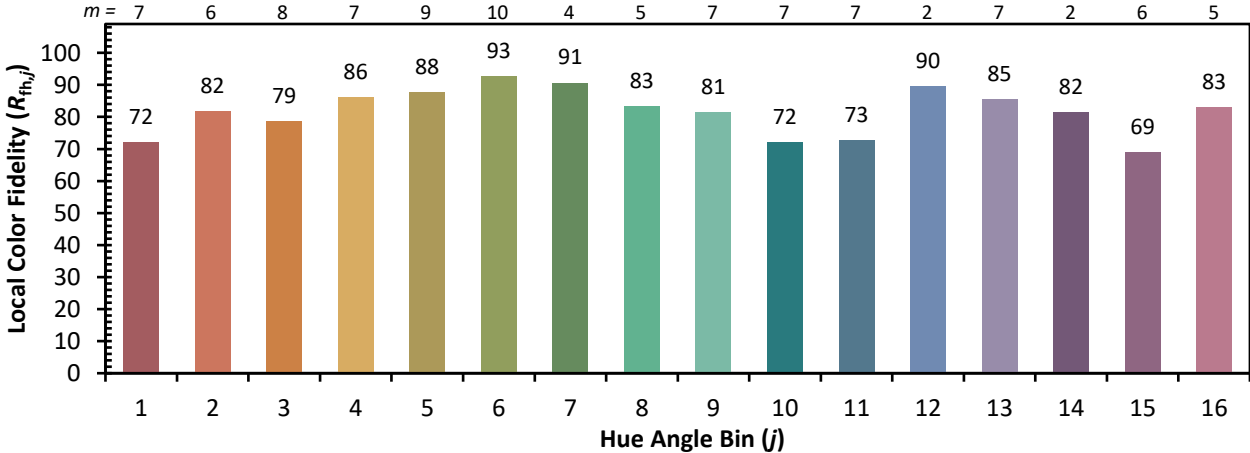
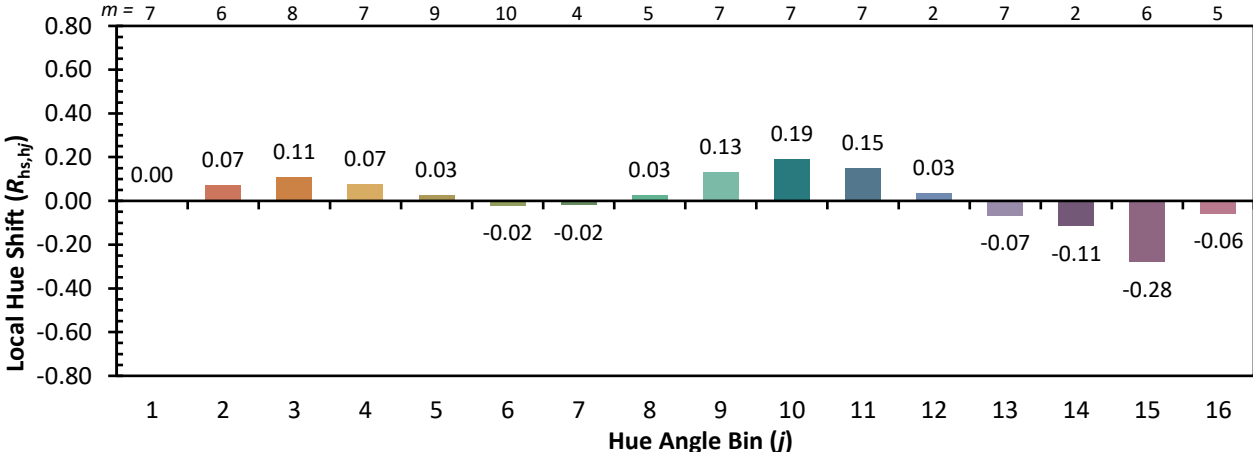
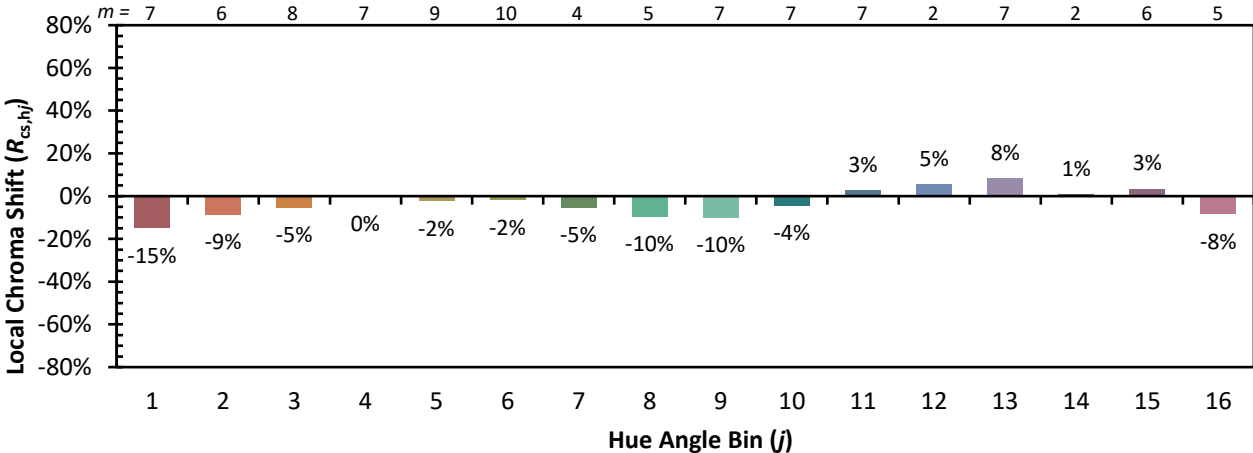


Individual Sample Fidelity Index ($R_{f,i}$)

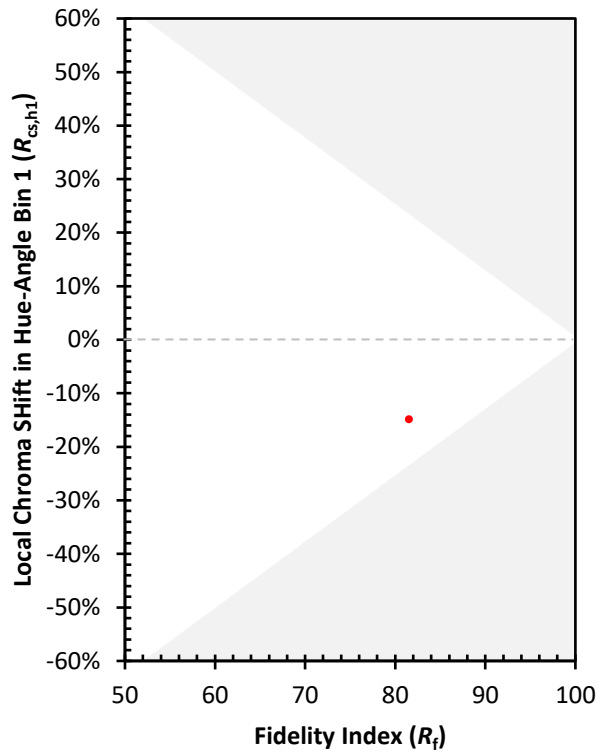
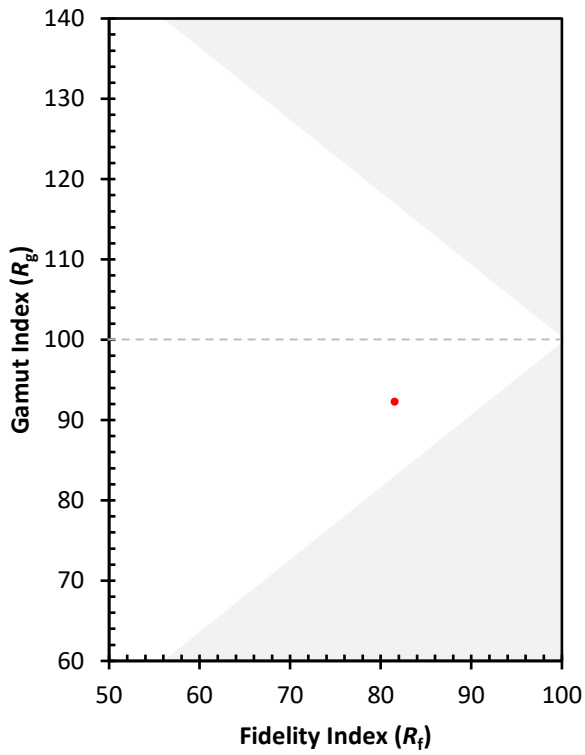
CES01 = 85	CES26 = 83	CES51 = 90	CES76 = 74
CES02 = 59	CES27 = 90	CES52 = 92	CES77 = 79
CES03 = 30	CES28 = 91	CES53 = 87	CES78 = 72
CES04 = 68	CES29 = 91	CES54 = 86	CES79 = 91
CES05 = 45	CES30 = 88	CES55 = 83	CES80 = 88
CES06 = 49	CES31 = 93	CES56 = 81	CES81 = 82
CES07 = 38	CES32 = 84	CES57 = 80	CES82 = 95
CES08 = 38	CES33 = 97	CES58 = 80	CES83 = 97
CES09 = 29	CES34 = 86	CES59 = 89	CES84 = 88
CES10 = 72	CES35 = 92	CES60 = 87	CES85 = 78
CES11 = 55	CES36 = 75	CES61 = 83	CES86 = 76
CES12 = 60	CES37 = 91	CES62 = 76	CES87 = 82
CES13 = 41	CES38 = 81	CES63 = 83	CES88 = 86
CES14 = 74	CES39 = 97	CES64 = 72	CES89 = 77
CES15 = 70	CES40 = 96	CES65 = 72	CES90 = 86
CES16 = 45	CES41 = 93	CES66 = 68	CES91 = 63
CES17 = 48	CES42 = 93	CES67 = 66	CES92 = 61
CES18 = 55	CES43 = 92	CES68 = 73	CES93 = 76
CES19 = 70	CES44 = 99	CES69 = 77	CES94 = 60
CES20 = 63	CES45 = 94	CES70 = 70	CES95 = 67
CES21 = 84	CES46 = 90	CES71 = 60	CES96 = 81
CES22 = 76	CES47 = 92	CES72 = 87	CES97 = 90
CES23 = 91	CES48 = 81	CES73 = 63	CES98 = 83
CES24 = 90	CES49 = 90	CES74 = 88	CES99 = 72
CES25 = 70	CES50 = 91	CES75 = 65	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)