

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: P979145

Luminaire Tested: **WPMLED26S-90W-4000K**

Issue Date: 03/31/2025

Test Information

Test Method: LM-79-08
Report Number: P979145
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPMLED26S-90W-4000K
Description: LUMARK WALL PACK LED MEDIUM 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @90W-4000K
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

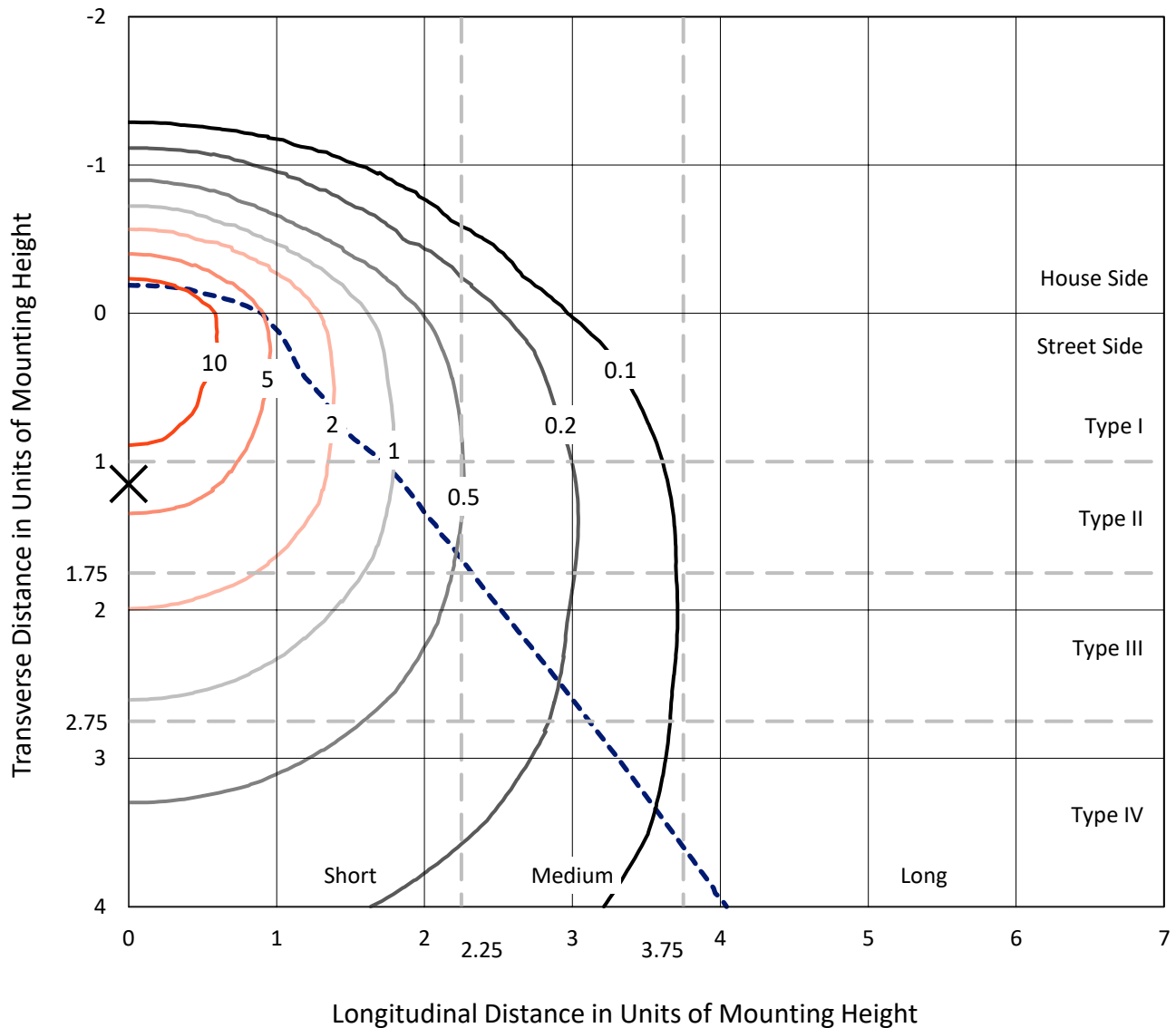
Lumens per Lamp: N/A
Luminaire Lumens: 13999.2 lumens
Efficiency: N/A
Efficacy: 156.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.86' x L: 0.17' x H: 0.58')
IES Classification: Type IV - Short
BUG Rating: B3 - U4 - G5

Input Watts (W): 89.5
Input Voltage (V): 120
Input Current (A_{in}): 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

REPORT NUMBER: P979145
 CATALOG NUMBER: WPMLED26S-90W-4000K

Iso-Footcandle Lines of Horizontal Illumination

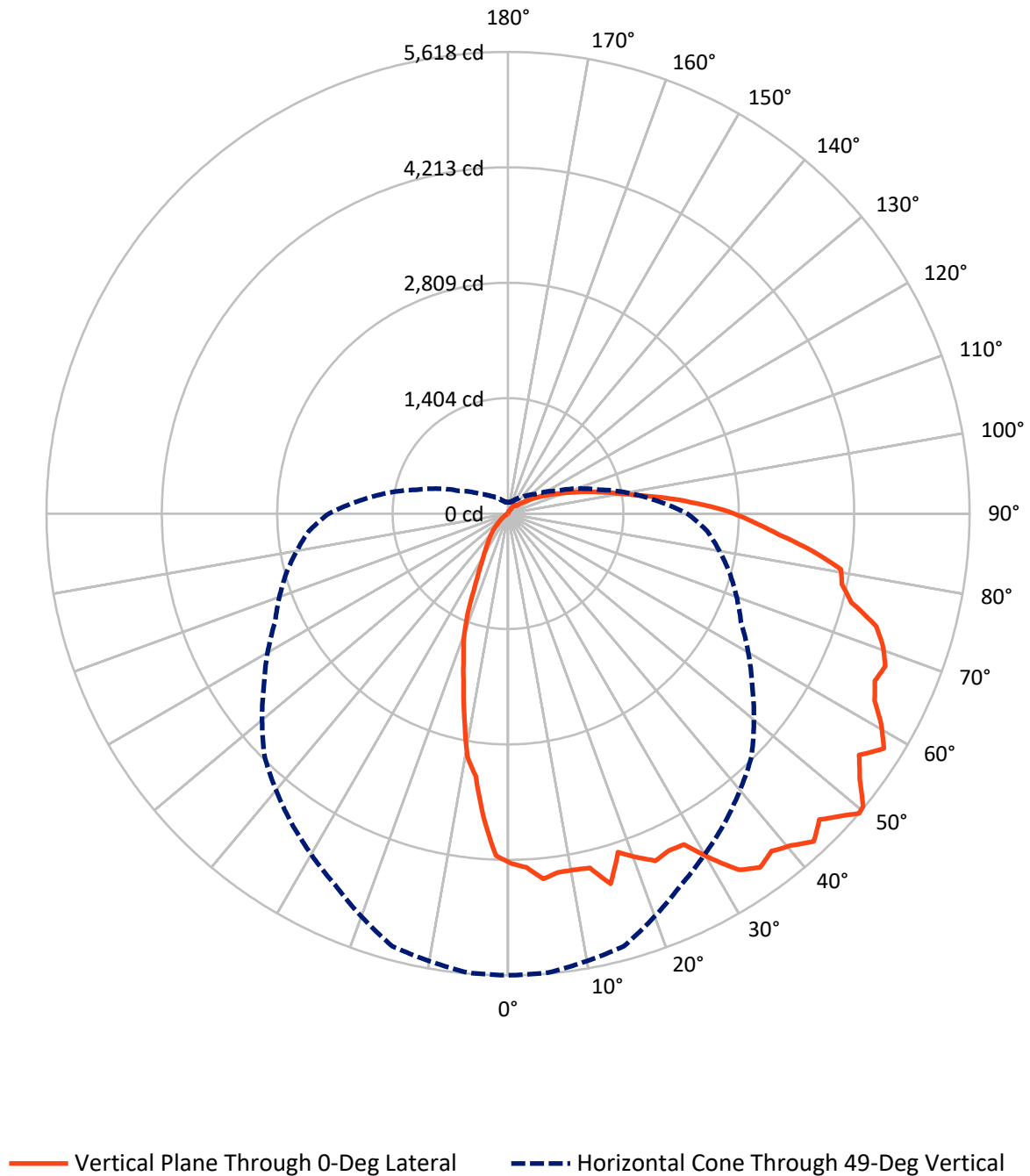
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 19.2 fc
 Type IV - Short - N/A

REPORT NUMBER: P979145
CATALOG NUMBER: WPMLED26S-90W-4000K

Luminous Intensity Polar Plot



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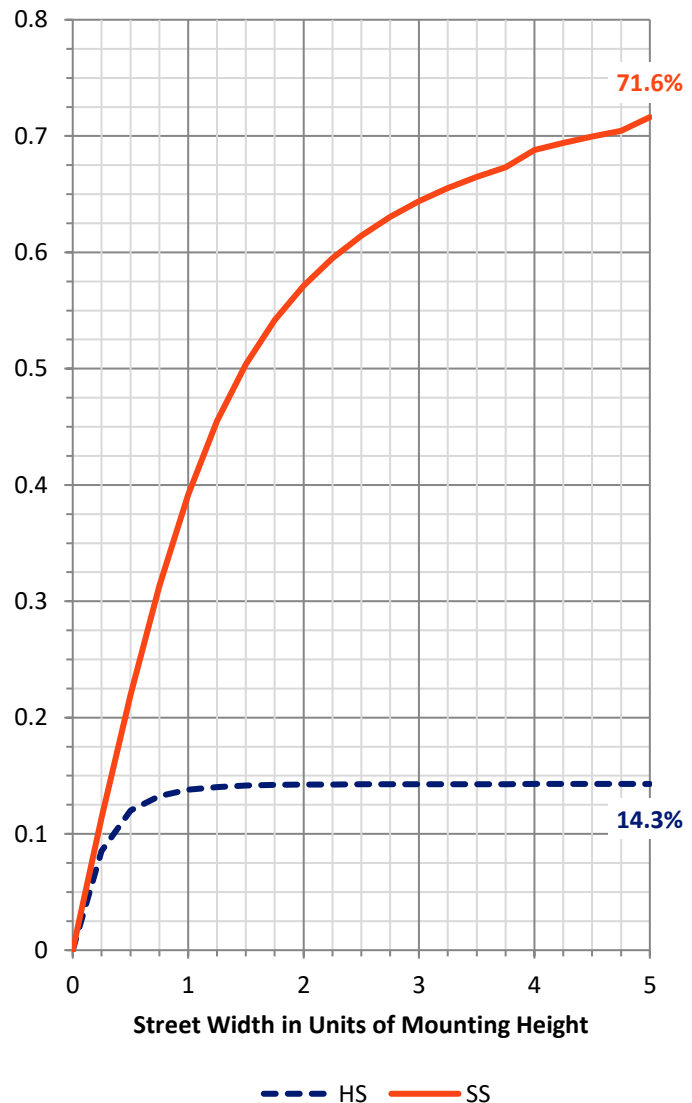
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2024.0	19.3	2043.3
	% Fixture	14.5	0.1	14.6
Street Side	Lumens	10807.5	1148.4	11955.9
	% Fixture	77.2	8.2	85.4
Total	Lumens	12831.5	1167.7	13999.2
	% Fixture	91.7	8.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.2	2.8
10°-20°	1026.0	7.3
20°-30°	1426.4	10.2
30°-40°	1712.6	12.2
40°-50°	1889.6	13.5
50°-60°	1915.4	13.7
60°-70°	1803.8	12.9
70°-80°	1556.4	11.1
80°-90°	1110.9	7.9
90°-100°	603.4	4.3
100°-110°	291.4	2.1
110°-120°	143.1	1.0
120°-130°	68.9	0.5
130°-140°	36.2	0.3
140°-150°	17.8	0.1
150°-160°	5.6	0.0
160°-170°	1.1	0.0
170°-180°	0.2	0.0
0°-90°	12831.5	91.7
0°-180°	13999.2	100.0

Coefficient of Utilization



REPORT NUMBER: P979145

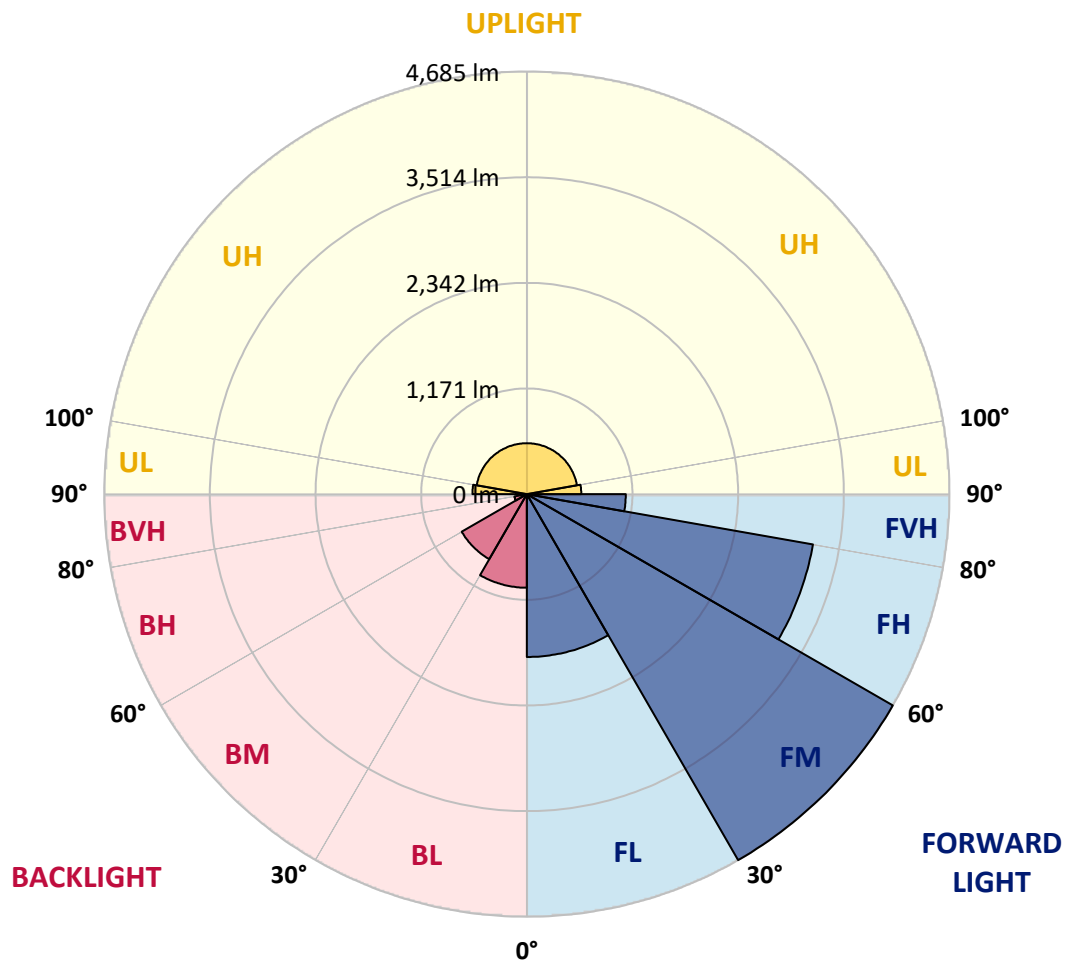
CATALOG NUMBER: WPMLED26S-90W-4000K

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1805.4	12.9			
FM	(30°-60°)	4684.7	33.5			
FH	(60°-80°)	3220.6	23.0			G2/5000
FVH	(80°-90°)	1096.8	7.8			G5
BL	(0°-30°)	1037.3	7.4	B3/2500		
BM	(30°-60°)	832.9	5.9	B1/1000		
BH	(60°-80°)	139.7	1.0	B1/500		G1/500
BVH	(80°-90°)	14.1	0.1			G1/100
UL	(90°-100°)	603.4	4.3		U4/1000	
UH	(100°-180°)	564.3	4.0		U4/1000	

BUG Rating: B3-U4-G5

Type IV Short



REPORT NUMBER: P979145

CATALOG NUMBER: WPMLED26S-90W-4000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7
2.5°	4311.1	4310.2	4315.0	4295.6	4299.5	4318.9	4335.4	4319.9	4266.4	4243.1	4261.5
5°	4464.7	4464.7	4463.8	4482.2	4445.3	4382.1	4324.7	4286.8	4317.0	4234.3	4243.1
7.5°	4406.4	4417.1	4436.5	4474.5	4479.3	4457.9	4449.2	4308.2	4275.1	4234.3	4228.5
10°	4407.4	4401.5	4386.0	4356.8	4389.9	4413.2	4448.2	4414.2	4267.4	4234.3	4212.0
12.5°	4424.9	4423.9	4389.9	4368.5	4358.8	4326.7	4389.9	4394.7	4272.2	4202.2	4151.7
15°	4673.8	4663.1	4677.7	4527.9	4385.0	4327.7	4299.5	4365.6	4293.6	4161.4	4108.9
17.5°	4331.5	4346.1	4379.2	4527.9	4602.8	4357.8	4235.3	4256.7	4248.9	4099.2	4035.0
20°	4462.8	4445.3	4343.2	4265.4	4400.6	4527.9	4200.3	4117.6	4142.9	4003.9	3940.7
22.5°	4589.2	4575.6	4533.8	4477.4	4229.5	4357.8	4284.9	4027.2	4052.5	3906.7	3835.7
25°	4543.5	4546.4	4551.3	4553.2	4451.1	4135.1	4327.7	3960.1	3976.7	3795.8	3742.3
27.5°	4560.0	4534.8	4478.4	4482.2	4462.8	4209.0	4106.9	3928.0	3861.9	3677.2	3630.5
30°	4870.2	4856.6	4773.0	4497.8	4359.7	4239.2	3915.4	3978.6	3704.4	3573.2	3511.9
32.5°	5169.7	5168.7	5056.9	4746.7	4335.4	4198.3	3939.7	3926.1	3576.1	3467.2	3393.3
35°	5286.3	5267.9	5099.6	4964.5	4560.0	4092.4	3967.9	3769.6	3467.2	3364.1	3266.9
37.5°	5211.5	5214.4	5104.5	4970.3	4666.0	4171.1	3909.6	3570.2	3387.5	3256.2	3113.3
40°	5308.7	5296.1	5218.3	4936.3	4594.1	4260.6	3759.8	3497.3	3342.7	3112.3	2945.1
42.5°	5456.5	5457.5	5412.7	5044.2	4569.8	4233.3	3729.7	3516.8	3268.8	2947.0	2740.9
45°	5312.6	5295.1	5333.0	5078.3	4707.8	4113.7	3802.6	3432.2	3120.1	2757.4	2534.8
47.5°	5490.5	5469.1	5274.7	5054.9	4649.5	4131.3	3716.1	3230.9	2931.4	2552.3	2322.8
49°	5617.9	5607.2	5448.7	4983.9	4596.0	4189.6	3626.6	3128.8	2792.4	2432.7	2182.8
50°	5599.4	5586.8	5501.2	5102.6	4597.0	4149.7	3565.4	3065.6	2703.9	2352.9	2106.0
52.5°	5359.3	5362.2	5416.6	5191.0	4636.8	4026.2	3485.7	3002.4	2514.3	2161.4	1923.2
55°	5185.2	5187.2	5162.8	5053.0	4700.0	4018.5	3473.0	2861.4	2371.4	1996.1	1754.0
57.5°	5395.2	5384.5	5194.9	4854.6	4635.9	4076.8	3307.7	2670.9	2212.9	1860.0	1596.5
60°	5220.2	5236.7	5240.6	4920.7	4432.7	4044.7	3182.3	2504.6	2062.2	1706.4	1431.2
62.5°	5007.3	4973.3	4868.2	4794.4	4420.0	3893.0	3132.7	2461.8	1926.1	1551.8	1277.6
65°	4908.1	4907.1	4812.8	4542.5	4279.0	3767.6	3026.7	2349.0	1848.3	1399.1	1124.0
67.5°	4952.8	4946.0	4818.7	4514.3	4083.6	3626.6	2850.7	2209.0	1708.3	1264.0	958.7
70°	4842.0	4832.3	4733.1	4467.7	4036.0	3450.6	2699.1	2123.5	1534.3	1120.1	782.7
72.5°	4688.4	4689.3	4601.8	4319.9	3962.1	3343.7	2508.5	2014.6	1432.2	943.1	612.5
75°	4317.0	4346.1	4306.3	4081.7	3748.2	3187.2	2340.3	1769.6	1290.2	768.1	465.7
77.5°	4154.6	4143.9	4033.0	3806.5	3522.6	3009.2	2165.3	1560.5	1151.2	593.1	337.4
80°	4108.9	4087.5	3989.3	3667.5	3319.4	2809.9	1985.4	1381.6	977.1	445.3	238.2
82.5°	3732.6	3704.4	3629.6	3441.9	3048.1	2551.3	1775.4	1210.5	781.7	316.0	161.4
85°	3316.5	3325.2	3236.7	3015.1	2747.7	2247.9	1578.0	1048.1	626.2	221.7	109.9
87.5°	2990.8	2983.0	2890.6	2678.7	2389.9	1997.1	1354.4	880.9	481.3	150.7	71.9
90°	2692.3	2693.2	2586.3	2388.9	2105.0	1675.3	1140.5	713.7	364.6	103.1	52.5
92.5°	2311.1	2288.8	2190.6	2013.6	1785.1	1401.1	931.5	563.0	275.2	76.8	43.8
95°	1951.4	1943.6	1869.7	1719.0	1495.4	1175.5	768.1	453.1	218.8	64.2	43.8
97.5°	1593.6	1575.1	1529.4	1413.7	1238.7	969.4	644.6	364.6	178.9	60.3	45.7
100°	1347.6	1337.9	1266.9	1154.1	993.7	789.5	520.2	303.4	149.7	60.3	48.6
102.5°	1162.9	1163.8	1120.1	1005.3	845.9	629.1	422.0	252.8	127.4	63.2	50.6
105°	989.8	988.8	944.1	858.5	720.5	528.9	354.9	212.9	111.8	65.1	51.5
107.5°	840.1	833.3	802.1	721.4	599.9	451.1	296.5	178.9	101.1	65.1	51.5



REPORT NUMBER: P979145

CATALOG NUMBER: WPMLED26S-90W-4000K

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	708.8	708.8	673.8	596.0	493.9	378.2	251.8	154.6	95.3	64.2	51.5
112.5°	609.6	605.7	575.6	506.6	415.2	311.1	212.9	134.2	90.4	63.2	50.6
115°	507.5	506.6	479.3	421.0	344.2	261.5	181.8	118.6	86.5	61.3	48.6
117.5°	430.7	430.7	405.4	351.0	284.9	219.7	156.5	105.0	81.7	57.4	45.7
120°	369.5	366.6	346.1	294.6	240.2	186.7	136.1	96.3	76.8	52.5	41.8
122.5°	303.4	303.4	285.9	246.0	203.2	163.3	121.5	87.5	71.0	47.6	36.9
125°	249.9	249.9	233.3	205.2	173.1	142.9	108.9	79.7	63.2	41.8	33.1
127.5°	206.1	206.1	192.5	173.1	152.6	127.4	98.2	73.9	56.4	37.9	29.2
130°	170.2	168.2	161.4	150.7	136.1	114.7	89.5	69.0	50.6	33.1	26.3
132.5°	143.9	142.9	141.0	137.1	124.5	104.0	81.7	63.2	44.7	29.2	23.3
135°	130.3	130.3	133.2	129.3	114.7	93.3	73.9	57.4	39.9	26.3	20.4
137.5°	133.2	132.2	131.3	122.5	103.1	83.6	66.1	51.5	34.0	22.4	17.5
140°	134.2	132.2	125.4	110.8	89.5	72.9	58.3	44.7	28.2	18.5	14.6
142.5°	118.6	117.6	107.9	94.3	76.8	63.2	51.5	37.9	23.3	15.6	11.7
145°	96.3	95.3	87.5	76.8	64.2	53.5	43.8	31.1	18.5	11.7	9.7
147.5°	73.9	73.9	69.0	62.2	53.5	45.7	36.9	24.3	14.6	9.7	7.8
150°	59.3	58.3	56.4	50.6	44.7	38.9	29.2	18.5	10.7	7.8	6.8
152.5°	47.6	47.6	45.7	41.8	36.9	31.1	22.4	13.6	8.8	6.8	5.8
155°	37.9	37.9	36.0	33.1	30.1	23.3	15.6	9.7	6.8	5.8	4.9
157.5°	29.2	29.2	28.2	25.3	21.4	16.5	10.7	7.8	5.8	4.9	3.9
160°	22.4	22.4	21.4	18.5	15.6	10.7	7.8	5.8	4.9	3.9	3.9
162.5°	15.6	16.5	14.6	12.6	9.7	7.8	5.8	4.9	4.9	3.9	3.9
165°	10.7	10.7	9.7	7.8	6.8	5.8	4.9	3.9	3.9	3.9	2.9
167.5°	6.8	5.8	5.8	4.9	4.9	4.9	3.9	3.9	3.9	3.9	2.9
170°	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9
172.5°	0.0	1.0	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	2.9
175°	0.0	1.0	1.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9	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

REPORT NUMBER: P979145

CATALOG NUMBER: WPMLED26S-90W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7	4254.7
2.5°	4264.5	4277.1	4262.5	4212.0	4189.6	4175.0	4169.2	4163.3	4155.6	4165.3
5°	4274.2	4220.7	4164.3	4115.7	4032.1	3926.1	3839.6	3791.0	3751.1	3728.7
7.5°	4252.8	4172.1	4065.1	3865.8	3666.5	3485.7	3333.0	3261.1	3220.2	3220.2
10°	4217.8	4111.8	3851.2	3550.8	3275.6	3124.9	3063.7	3025.8	3001.5	2999.5
12.5°	4160.4	3985.4	3593.6	3231.9	3056.9	2941.2	2781.7	2634.9	2549.3	2546.4
15°	4072.9	3806.5	3343.7	3035.5	2857.6	2558.1	2329.6	2221.7	2180.8	2160.4
17.5°	3965.0	3603.3	3088.0	2859.5	2484.2	2204.2	2048.6	1920.3	1852.2	1847.3
20°	3868.7	3371.9	2928.5	2552.3	2169.2	1928.0	1764.7	1671.4	1623.7	1615.0
22.5°	3754.0	3182.3	2742.8	2248.9	1903.7	1685.0	1513.9	1371.9	1294.1	1305.8
25°	3603.3	2968.4	2509.5	1994.2	1668.4	1447.7	1213.4	1061.7	976.2	963.5
27.5°	3461.3	2761.3	2243.1	1755.0	1447.7	1159.0	935.3	821.6	768.1	754.5
30°	3301.9	2598.0	2005.8	1546.9	1207.6	916.9	752.6	657.3	620.3	611.6
32.5°	3137.6	2415.2	1788.0	1352.5	986.9	730.2	609.6	550.3	519.2	514.3
35°	2956.7	2224.6	1591.6	1142.4	789.5	607.7	520.2	467.7	438.5	431.7
37.5°	2783.7	2026.2	1386.5	949.0	645.6	513.4	438.5	400.6	377.2	374.3
40°	2587.3	1803.6	1184.2	776.9	544.5	437.5	378.2	335.4	317.0	312.1
42.5°	2369.5	1589.7	1017.0	635.9	464.8	373.4	316.0	278.1	260.6	256.7
45°	2150.7	1397.2	861.4	529.9	393.8	314.0	260.6	224.6	206.1	204.2
47.5°	1931.9	1221.2	723.4	449.2	335.4	261.5	207.1	174.0	161.4	158.5
49°	1809.4	1125.9	650.5	412.3	302.4	232.4	178.9	148.8	138.1	136.1
50°	1742.3	1074.4	599.9	387.0	280.0	212.0	163.3	135.1	122.5	120.6
52.5°	1573.2	916.9	496.8	333.5	232.4	168.2	127.4	102.1	92.4	91.4
55°	1401.1	782.7	425.9	286.8	193.5	133.2	97.2	77.8	67.1	66.1
57.5°	1241.6	653.4	370.4	242.1	157.5	102.1	70.0	51.5	44.7	42.8
60°	1084.1	547.4	323.8	202.2	125.4	75.8	47.6	31.1	26.3	25.3
62.5°	933.4	455.0	280.0	170.2	95.3	51.5	25.3	13.6	12.6	13.6
65°	781.7	381.1	240.2	139.0	71.0	31.1	6.8	2.9	1.0	0.0
67.5°	642.7	324.7	205.2	111.8	47.6	11.7	0.0	0.0	0.0	0.0
70°	503.6	272.2	171.1	86.5	29.2	1.9	0.0	0.0	0.0	0.0
72.5°	388.9	226.5	142.0	65.1	14.6	0.0	0.0	0.0	0.0	0.0
75°	293.6	181.8	114.7	46.7	3.9	0.0	0.0	0.0	0.0	0.0
77.5°	219.7	146.8	91.4	33.1	1.0	0.0	0.0	0.0	0.0	0.0
80°	164.3	116.7	71.0	22.4	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	118.6	91.4	54.4	14.6	0.0	0.0	0.0	0.0	0.0	0.0
85°	84.6	72.9	41.8	10.7	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	62.2	59.3	34.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0
90°	49.6	48.6	27.2	5.8	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	42.8	40.8	22.4	4.9	0.0	0.0	0.0	0.0	0.0	0.0
95°	40.8	36.0	19.4	3.9	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	40.8	32.1	16.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	41.8	30.1	14.6	2.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	41.8	28.2	12.6	2.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	42.8	26.3	11.7	2.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	41.8	24.3	9.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P979145
 CATALOG NUMBER: WPMLED26S-90W-4000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	40.8	22.4	8.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	40.8	21.4	6.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	38.9	19.4	5.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	36.0	17.5	4.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
120°	32.1	14.6	4.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	28.2	12.6	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	25.3	11.7	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	22.4	10.7	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	19.4	9.7	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	17.5	7.8	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	15.6	7.8	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	13.6	6.8	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	11.7	4.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	8.8	3.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	7.8	3.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	6.8	3.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	5.8	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	4.9	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	3.9	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	3.9	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°	2.9	1.9	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: SP1-2407-168-3

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.

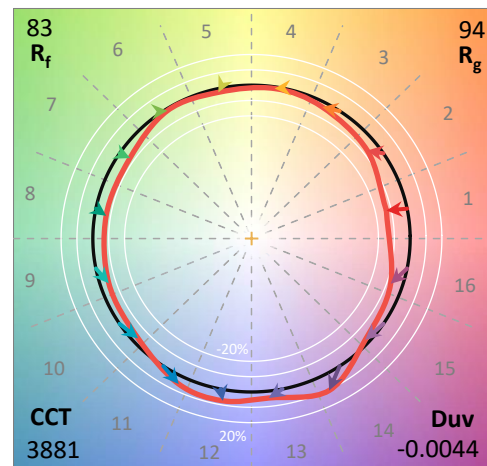
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-168-3
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/12/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Lumark
 Catalog Number: **LSDL-92S-100W 4000k**
 Description: Lumark Wallpack 100W

Spectral Parameters

CCT (K): 3881
 CIE u' : 0.2297
 CIE v' : 0.4983
 Duv: -0.0044
 CIE x: 0.3825
 CIE y: 0.3688
 CIE z: 0.2487
 Peak Wavelength (nm): 453
 Dominant Wavelength (nm): 582
 Purity: 25.44833
 R_f: 82.8
 R_g: 93.7

CRI (Ra): 82.7
 R1: 82.3
 R2: 93.7
 R3: 93.3
 R4: 79.0
 R5: 82.7
 R6: 89.4
 R7: 81.3
 R8: 59.9
 R9: 4.8
 R10: 84.4
 R11: 77.9
 R12: 66.7
 R13: 85.8
 R14: 97.2
 R15: 76.3



Test Conditions

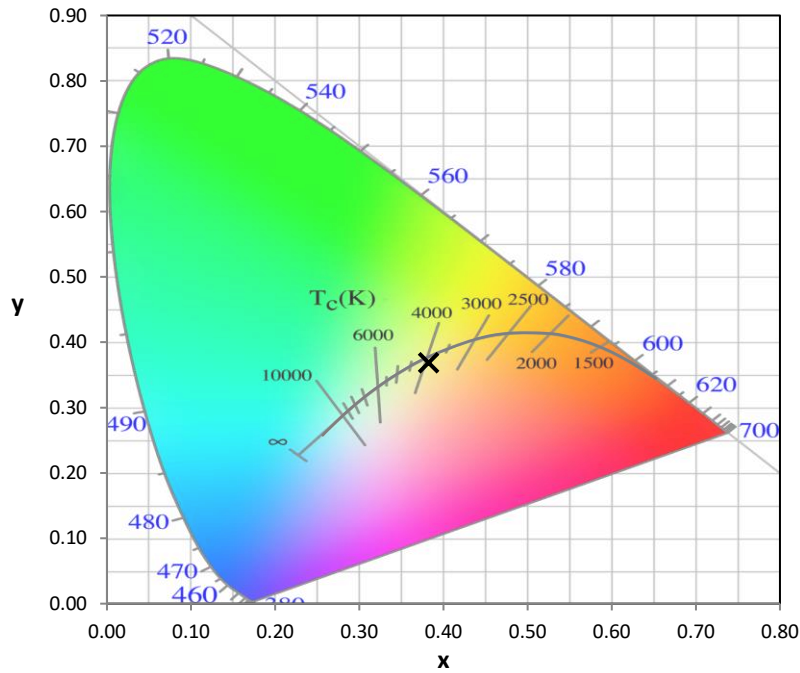
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-3

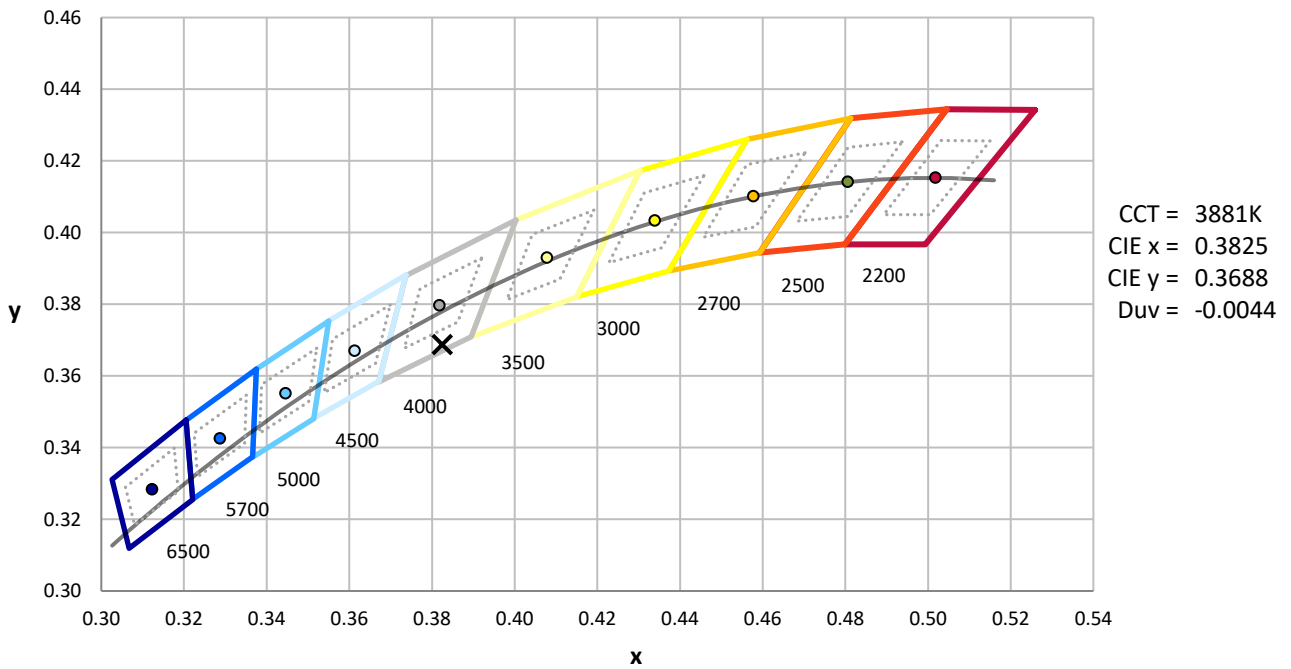
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-3

CIE 1931 Chromaticity Diagram



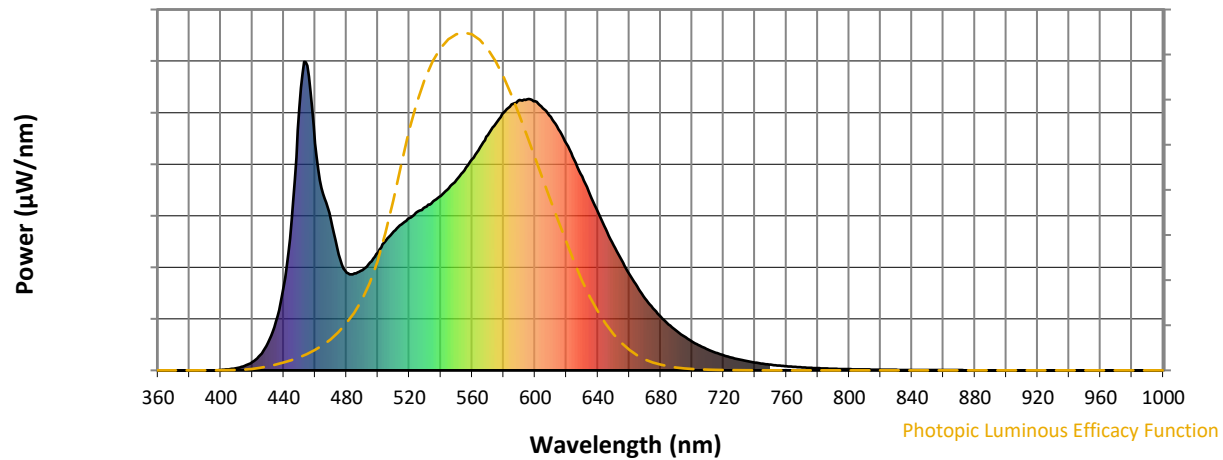
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-168-3

Photopic Flux vs. Wavelength

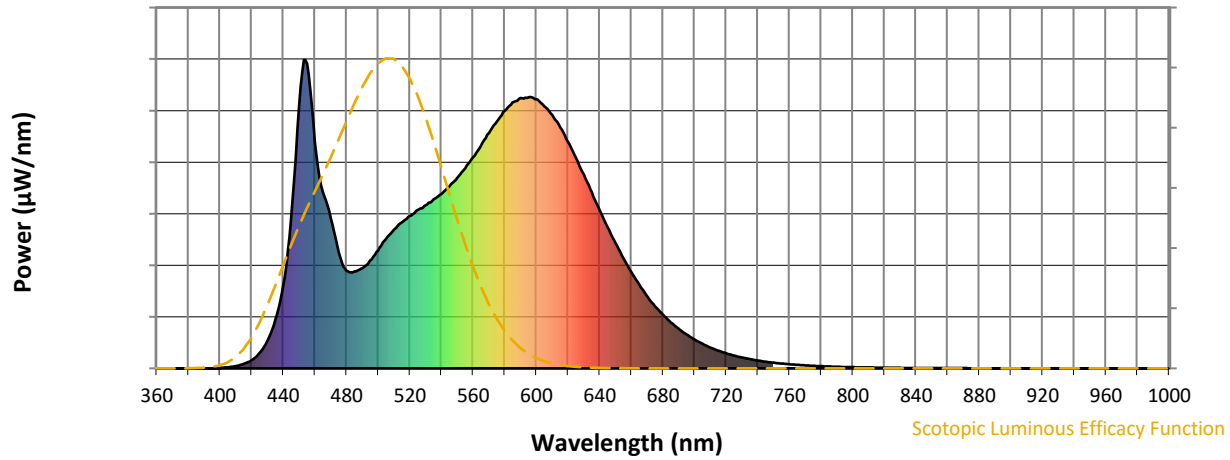


Photopic Lumens: NR

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



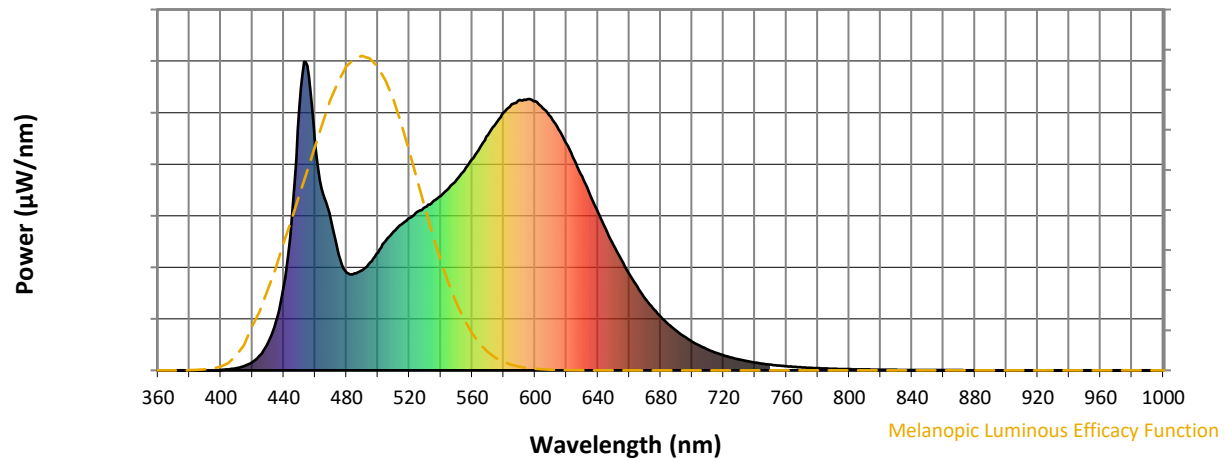
Scotopic Lumens: NR

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

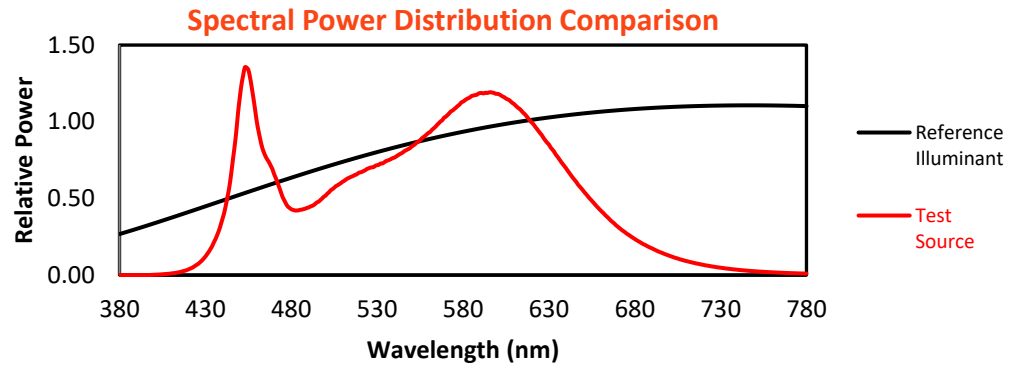
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	325	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

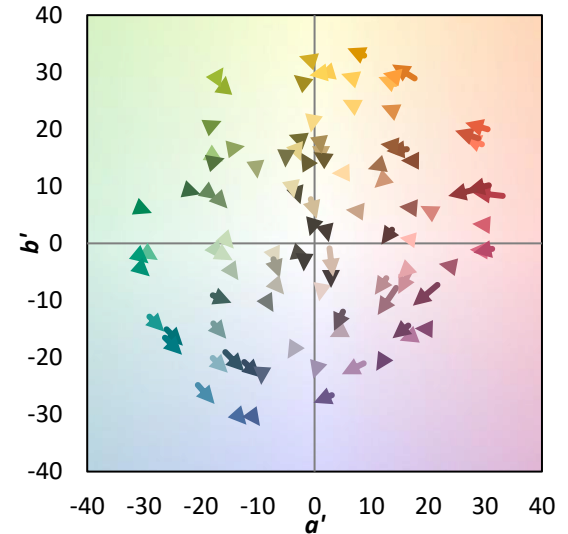
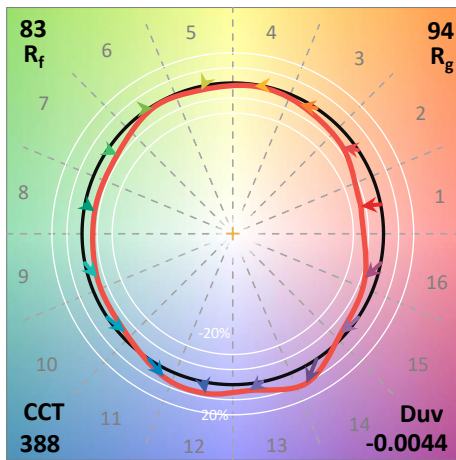
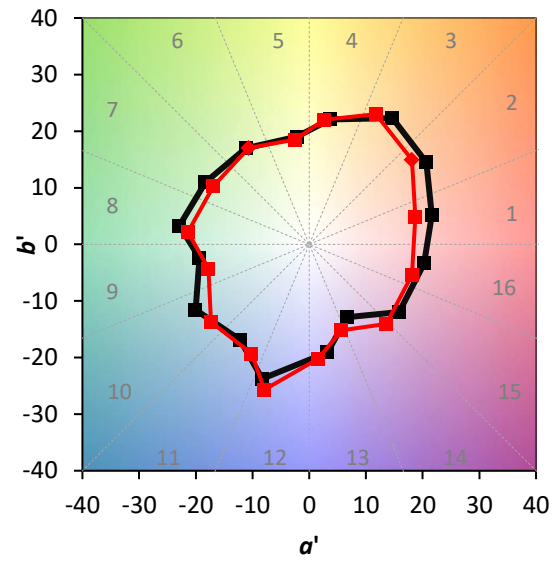
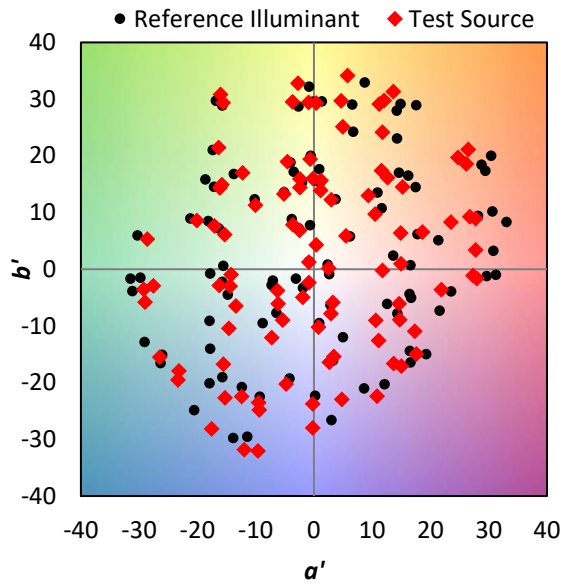
TM-30-18

Summary

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

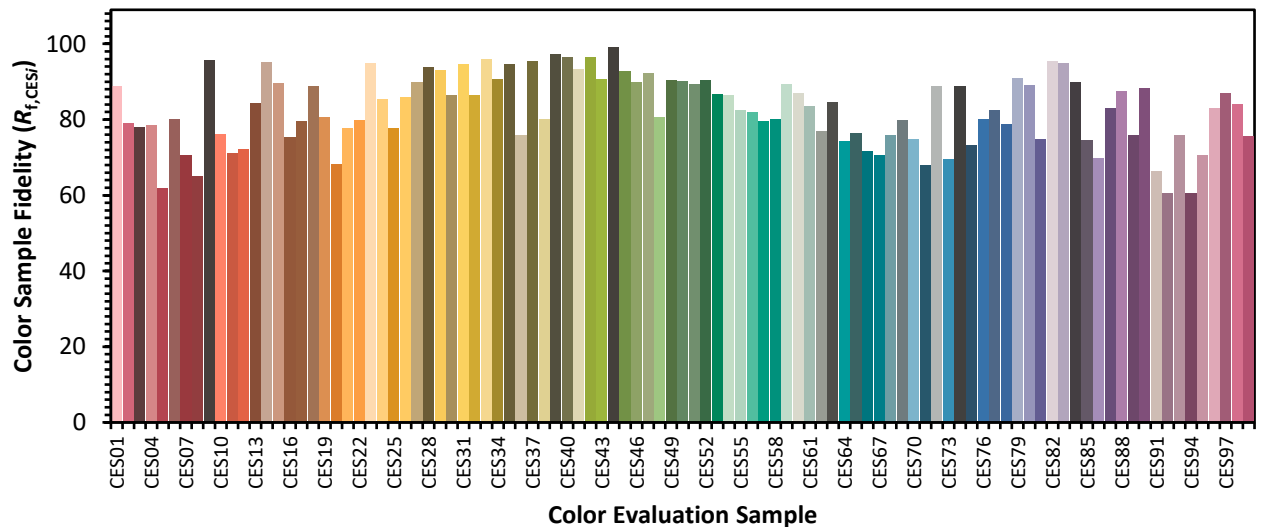


Color Vector Graphics

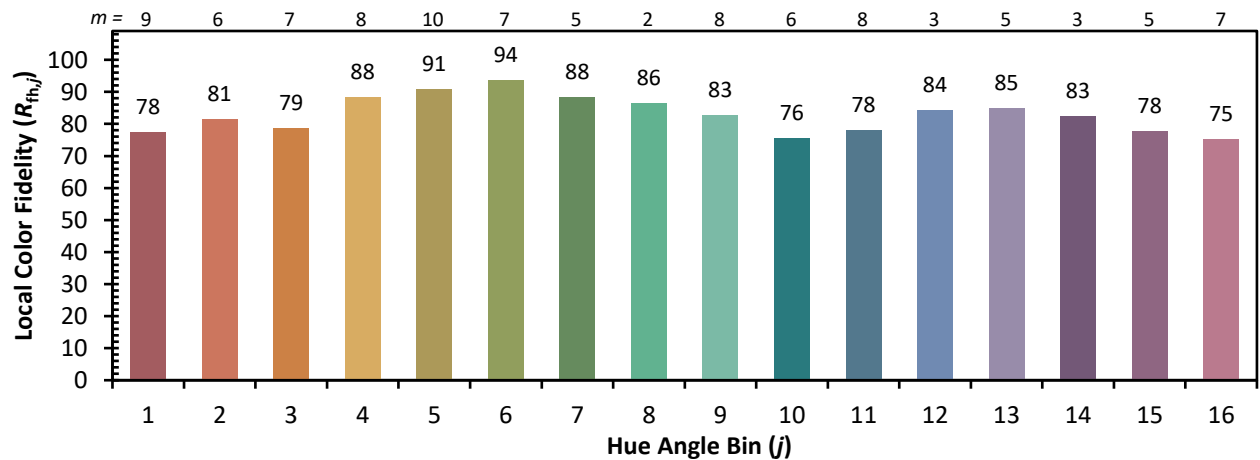
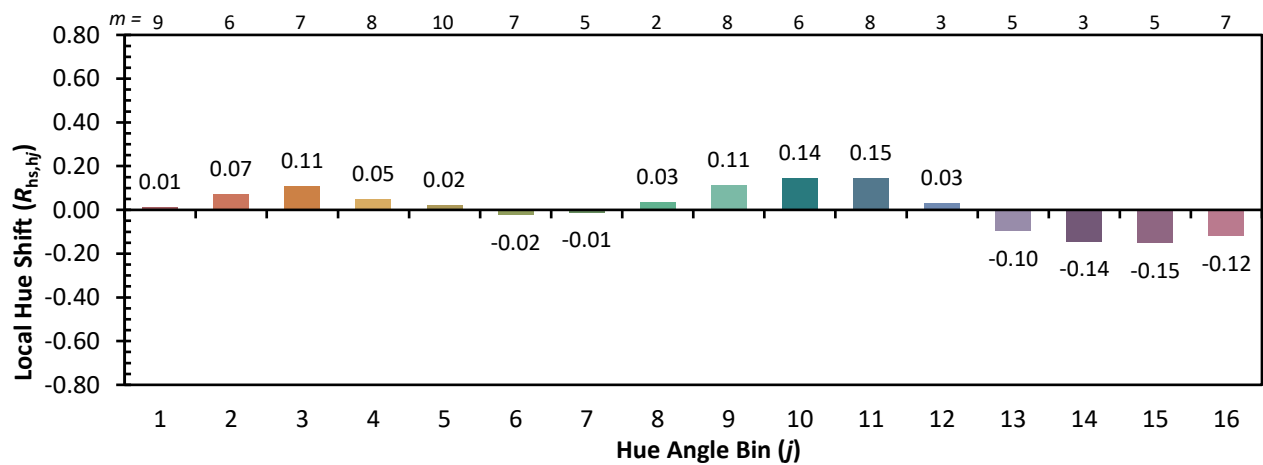
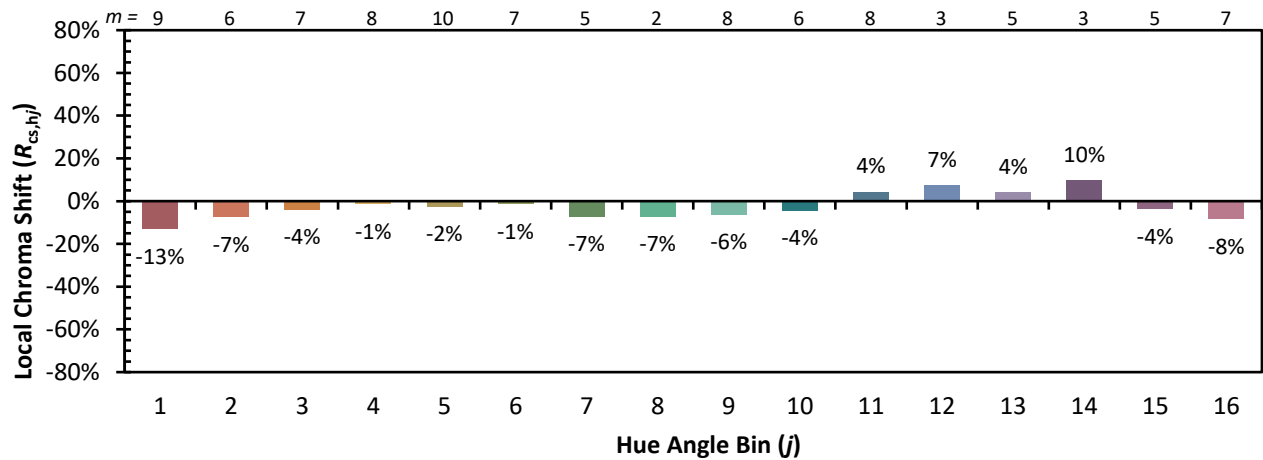


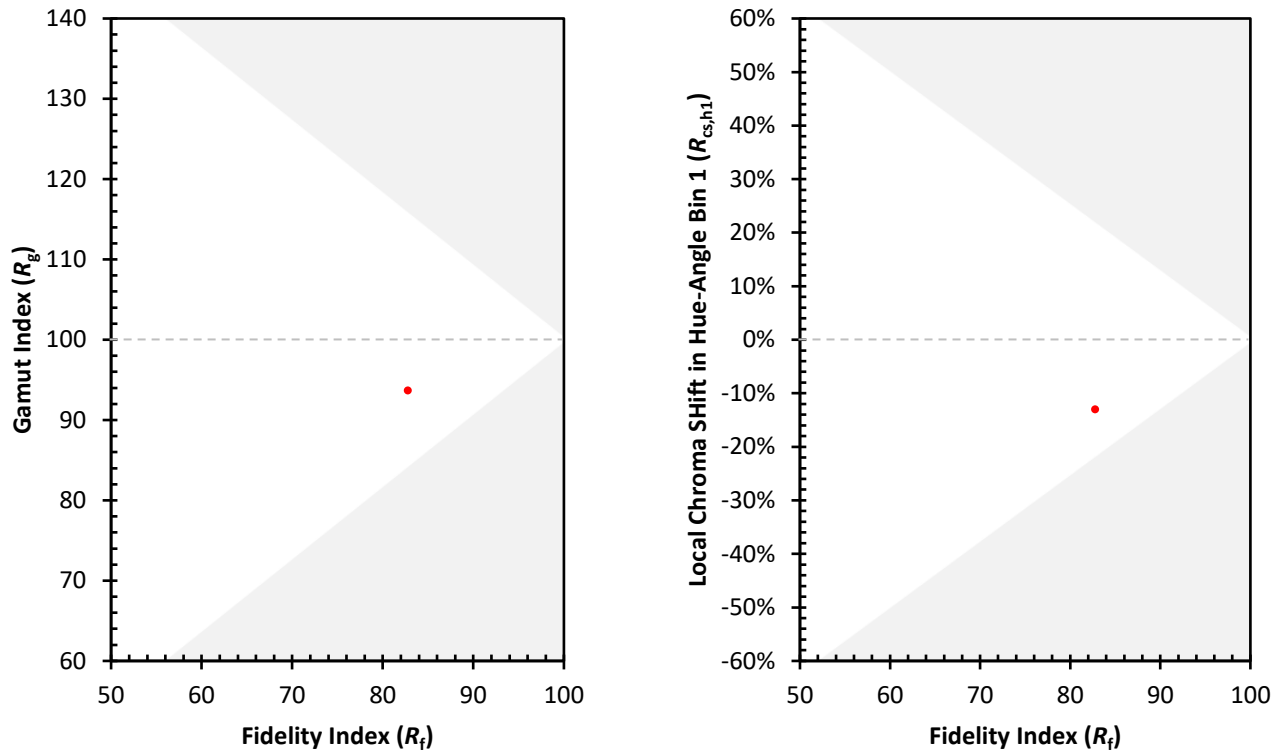
Individual Sample Fidelity Index ($R_{f,i}$)

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	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)