

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: STREETWORKS

Report Number: P856195

Luminaire Tested: **FFX-CLB-60-722-U-FR-T3-UPLR**

Issue Date: 07/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856195  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 07/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: FFX-CLB-60-722-U-FR-T3-UPLR  
Description: FAIRFAX POST TOP FIXTURE w/ FAIRFAX REFRACTOR T3 DISTRIBUTION LENS AND UPLIGHT REFLECTOR  
Light Source: (4) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

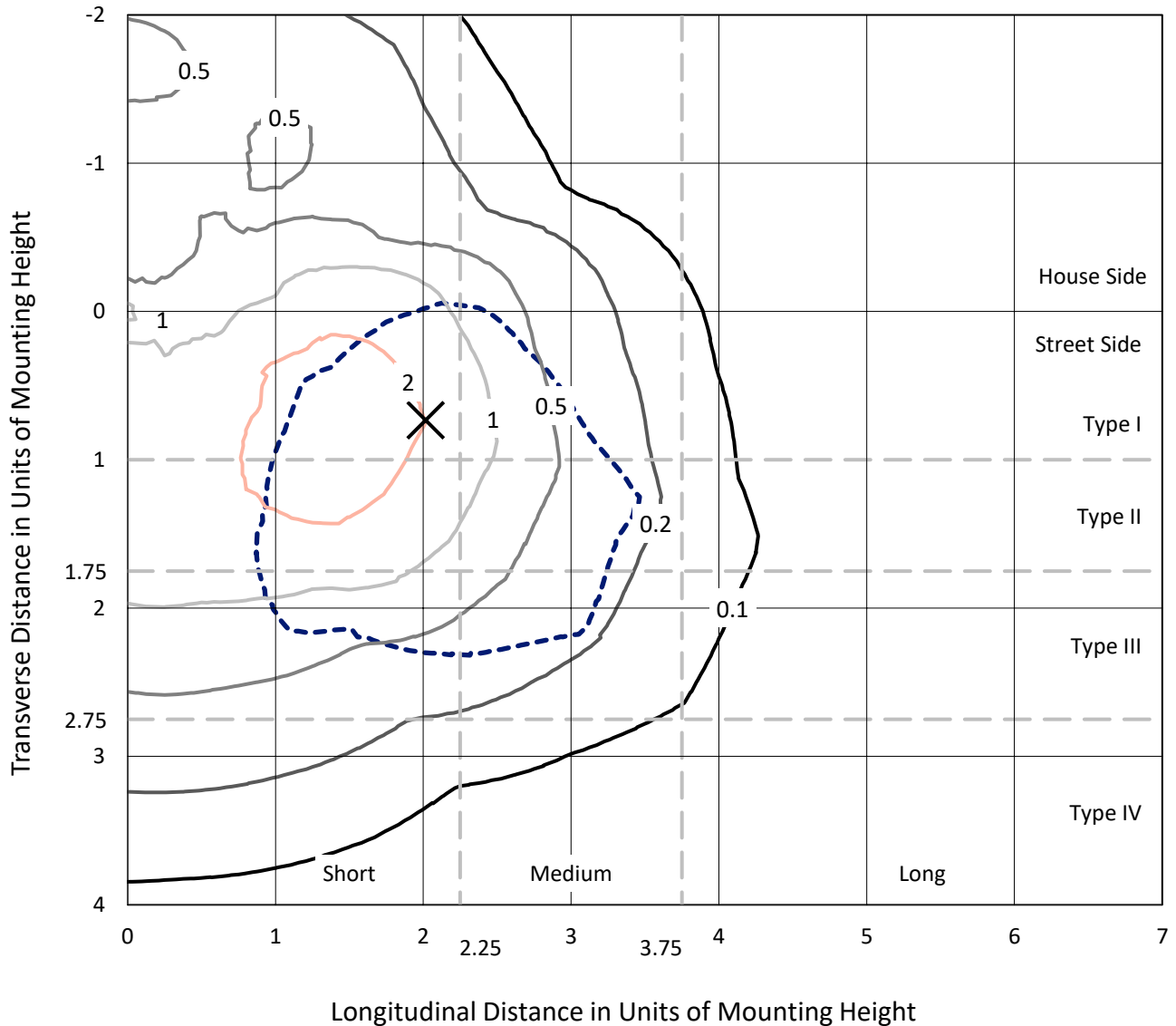
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7888.6 lumens  
Efficiency: N/A  
Efficacy: 131.9 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.17' x H: 1.67')  
IES Classification: Type III - Short  
BUG Rating: B2 - U4 - G3  
  
Input Watts (W): 59.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 8.9%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Iso-Footcandle Lines of Horizontal Illumination

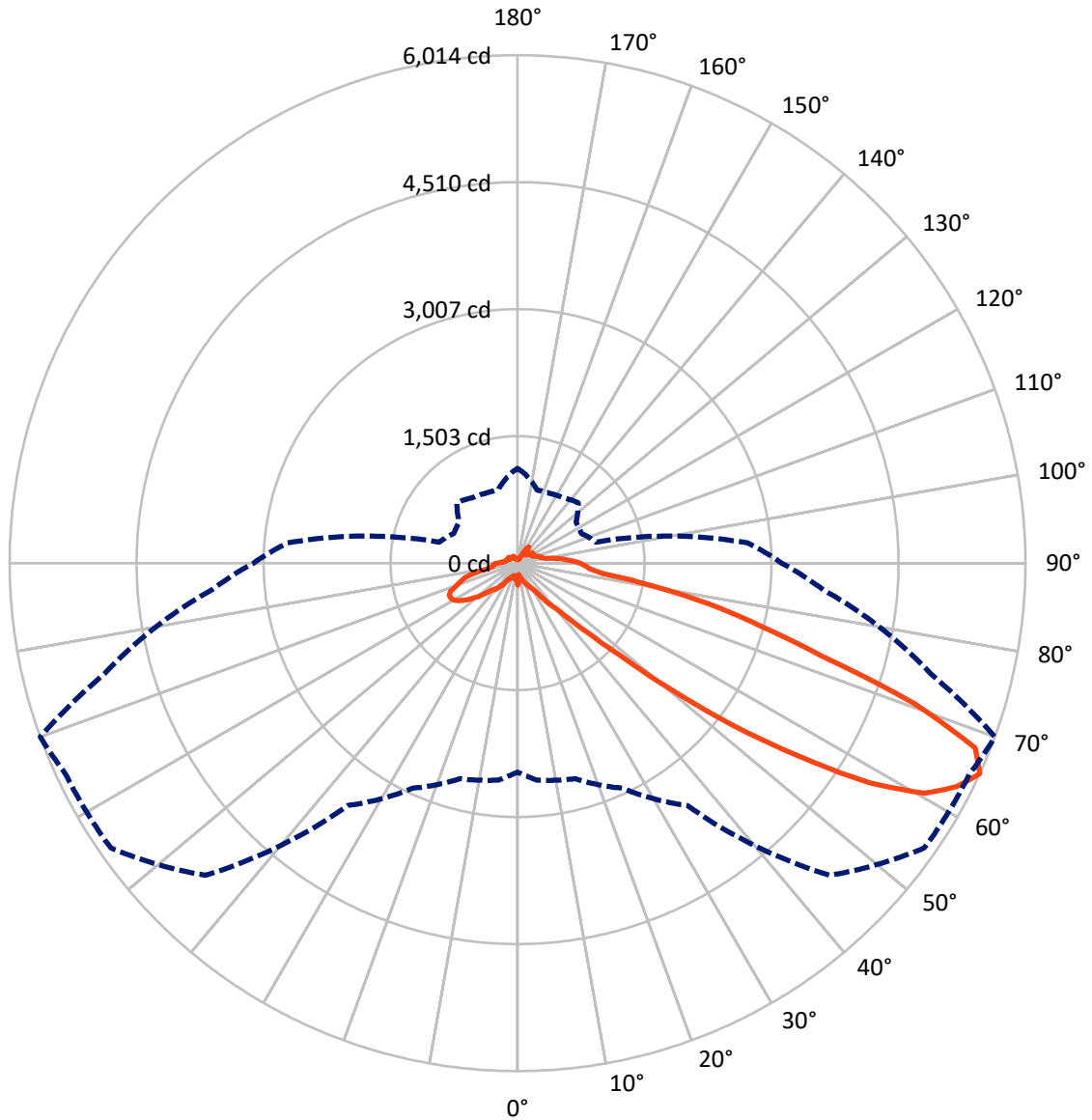
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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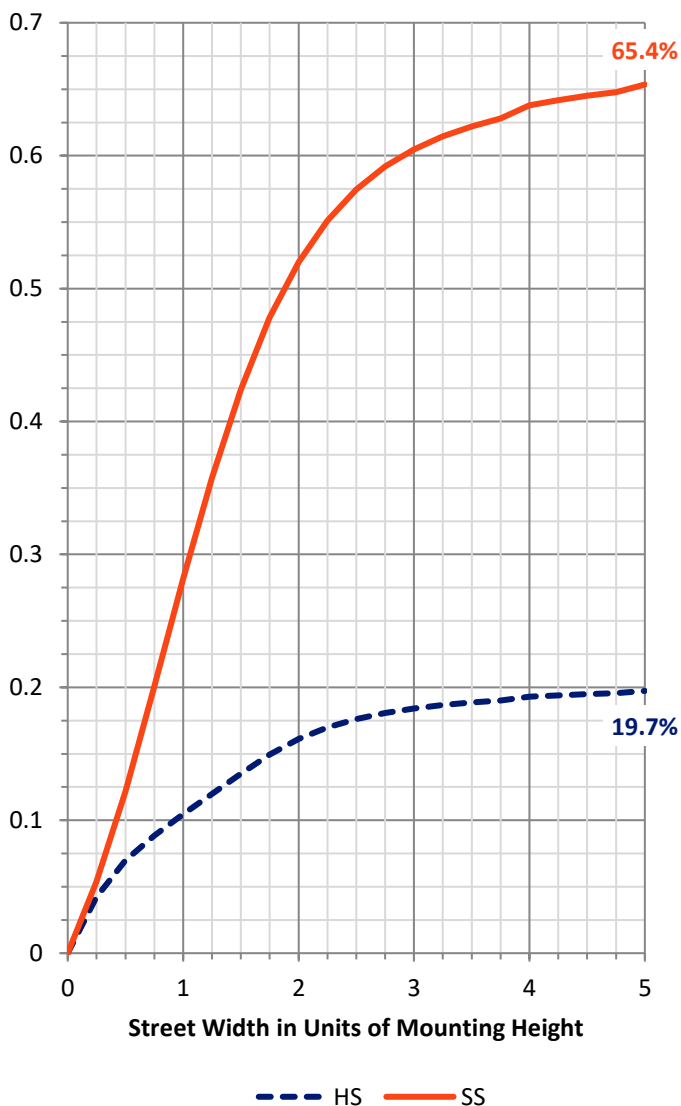
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1618.0	303.1	1921.1
	% Fixture	20.5	3.8	24.4
<b>Street Side</b>	Lumens	5335.2	632.3	5967.5
	% Fixture	67.6	8.0	75.6
<b>Total</b>	Lumens	6953.1	935.4	7888.6
	% Fixture	88.1	11.9	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.8	0.2
10°-20°	52.8	0.7
20°-30°	106.5	1.3
30°-40°	225.3	2.9
40°-50°	525.3	6.7
50°-60°	1565.6	19.8
60°-70°	2508.6	31.8
70°-80°	1441.1	18.3
80°-90°	511.1	6.5
90°-100°	301.4	3.8
100°-110°	182.1	2.3
110°-120°	136.9	1.7
120°-130°	116.0	1.5
130°-140°	77.0	1.0
140°-150°	72.3	0.9
150°-160°	32.1	0.4
160°-170°	13.3	0.2
170°-180°	4.4	0.1
0°-90°	6953.1	88.1
0°-180°	7888.6	100.0



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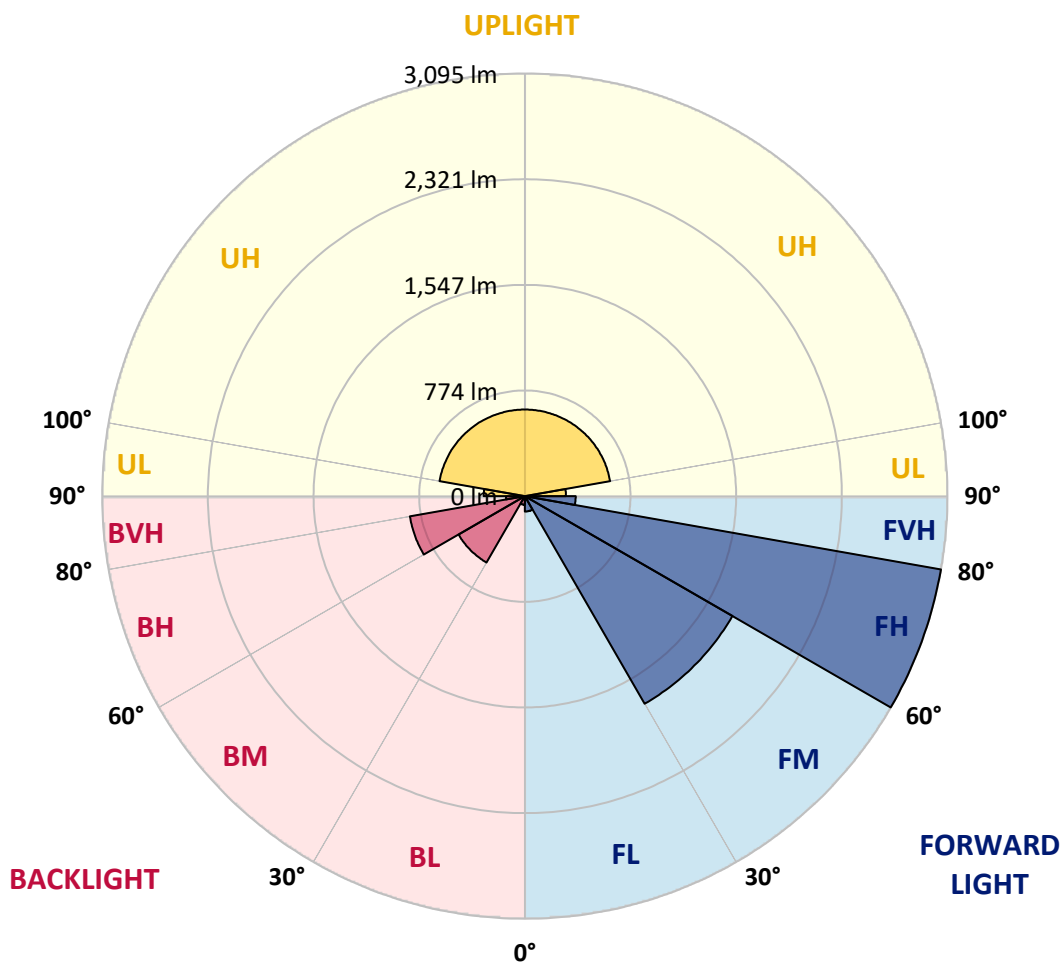
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	113.0	1.4			
FM (30°-60°)	1755.3	22.3			
FH (60°-80°)	3094.6	39.2			G2/5000
FVH (80°-90°)	372.3	4.7			G3/500
BL (0°-30°)	63.0	0.8	B0/110		
BM (30°-60°)	560.9	7.1	B1/1000		
BH (60°-80°)	855.2	10.8	B2/1000		G2/1000
BVH (80°-90°)	138.8	1.8			G2/225
UL (90°-100°)	301.4	3.8		U3/500	
UH (100°-180°)	634.0	8.0		U4/1000	

**BUG Rating: B2-U4-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7
2.5°	218.2	216.5	220.7	224.1	228.2	222.4	212.3	222.4	225.7	235.8	243.3
5°	185.6	186.4	190.6	199.8	208.2	206.5	180.6	147.1	137.1	132.9	133.8
7.5°	183.9	183.1	180.6	179.7	184.8	203.2	200.6	176.4	158.0	142.1	126.2
10°	194.0	196.5	199.0	199.0	195.6	183.9	183.1	181.4	174.7	167.2	157.2
12.5°	239.9	243.3	245.8	237.4	226.6	214.9	205.7	190.6	183.9	179.7	172.2
15°	290.1	293.4	289.3	273.4	254.1	232.4	224.1	224.9	215.7	204.8	188.9
17.5°	316.9	315.2	297.6	279.2	264.2	247.5	235.8	228.2	224.9	220.7	204.8
20°	300.1	296.0	285.1	277.6	275.9	266.7	259.2	252.5	248.3	239.1	219.9
22.5°	287.6	287.6	285.9	284.2	294.3	290.1	286.8	277.6	271.7	260.0	231.6
25°	303.5	303.5	304.3	301.8	315.2	315.2	315.2	305.1	297.6	280.9	246.6
27.5°	326.0	325.2	327.7	326.0	337.8	340.3	345.3	337.8	326.9	306.8	263.3
30°	350.3	350.3	352.8	354.5	366.2	372.0	377.9	374.5	361.2	336.9	291.8
32.5°	376.2	375.4	382.9	391.3	397.9	408.8	411.3	419.7	406.3	377.9	333.6
35°	413.8	416.3	436.4	454.0	473.2	479.9	491.6	524.2	510.8	472.4	421.4
37.5°	598.6	586.0	581.0	561.0	558.5	597.8	612.0	642.9	616.1	564.3	486.6
40°	634.5	619.5	612.8	593.6	600.3	681.4	667.1	778.3	713.1	630.4	580.2
42.5°	597.8	595.2	673.8	688.9	680.5	809.3	781.7	987.3	917.9	725.7	669.7
45°	721.5	714.8	748.2	775.0	795.9	1027.5	1010.7	1227.3	1197.2	883.7	828.5
47.5°	814.3	807.6	846.1	935.5	1057.6	1308.4	1406.2	1733.1	1631.1	1215.6	1090.2
50°	1091.8	1087.7	1191.3	1287.5	1489.0	1859.3	2127.7	2480.5	2330.8	1698.0	1467.2
52.5°	1354.4	1367.7	1489.0	1673.7	1886.9	2555.7	2938.6	3186.1	3184.4	2211.3	1883.6
55°	1542.5	1587.6	1730.6	2064.1	2360.1	3173.5	3690.2	3873.3	4027.1	2950.3	2294.0
57.5°	1907.8	1986.4	2123.5	2453.7	2835.8	3920.9	4658.3	4628.2	4904.9	3716.9	2740.5
60°	2283.2	2375.1	2421.1	2724.6	3226.2	4640.7	5323.8	5253.5	5531.9	4384.1	3210.3
62.5°	2400.2	2490.5	2535.6	2865.9	3507.9	5048.7	5630.6	5658.2	5831.2	4859.8	3488.7
65°	2473.8	2577.4	2642.7	2940.3	3502.1	5226.8	5878.9	5904.8	6013.5	5064.6	3632.5
67.5°	2460.4	2576.6	2660.2	2926.9	3308.1	5078.8	5817.0	5700.0	5845.4	4918.3	3481.2
70°	2194.6	2295.7	2379.3	2585.0	2761.4	4278.7	5032.8	4839.7	4990.2	4109.0	2874.2
72.5°	1793.3	1835.1	1907.8	2004.8	2092.6	3174.4	3839.0	3673.5	3760.4	3082.4	2153.6
75°	1473.1	1464.7	1529.9	1600.1	1572.6	2319.1	3037.3	2885.9	2967.0	2340.9	1718.0
77.5°	1091.8	1087.7	1182.1	1176.3	1134.5	1606.0	2407.7	2298.2	2309.1	1728.9	1286.6
80°	656.3	668.8	760.8	779.2	729.8	1007.4	1718.9	1667.0	1589.3	1181.3	902.1
82.5°	460.6	479.9	528.4	548.4	524.2	735.7	1138.7	1102.7	1010.7	856.9	635.4
85°	469.8	473.2	479.0	480.7	469.8	660.5	883.7	863.6	857.8	718.1	524.2
87.5°	469.8	477.4	482.4	481.5	462.3	618.7	815.1	783.4	790.9	671.3	506.6
90°	421.4	434.7	433.9	436.4	420.5	559.3	739.0	713.1	723.2	605.3	460.6
92.5°	344.4	353.6	362.8	380.4	357.0	475.7	624.5	600.3	612.8	515.0	392.1
95°	320.2	328.6	334.4	343.6	320.2	423.0	552.6	523.3	528.4	437.2	331.9
97.5°	259.2	264.2	270.9	272.5	255.8	325.2	420.5	395.4	398.8	339.4	260.8
100°	217.4	221.5	227.4	227.4	216.5	269.2	332.7	319.4	317.7	277.6	220.7
102.5°	205.7	207.3	216.5	214.9	204.0	248.3	301.0	292.6	293.4	257.5	207.3
105°	202.3	202.3	211.5	207.3	198.1	236.6	281.7	279.2	278.4	245.0	199.0
107.5°	199.0	199.0	208.2	204.0	196.5	223.2	265.0	256.7	255.8	233.2	188.1
110°	185.6	188.1	198.1	193.1	187.3	210.7	243.3	237.4	237.4	219.9	179.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
112.5°	164.7	166.4	175.6	171.4	167.2	187.3	215.7	208.2	209.0	197.3	168.0
115°	153.8	156.3	165.5	159.7	156.3	174.7	199.8	194.8	196.5	185.6	158.8
117.5°	154.7	155.5	162.2	163.0	156.3	171.4	184.8	186.4	188.9	182.3	161.4
120°	188.1	183.9	187.3	183.1	179.7	197.3	213.2	214.9	214.0	201.5	160.5
122.5°	189.8	181.4	190.6	184.8	181.4	200.6	218.2	222.4	218.2	207.3	163.9
125°	151.3	153.8	154.7	156.3	159.7	180.6	189.8	190.6	191.4	188.1	158.8
127.5°	132.9	132.1	127.9	128.7	136.3	154.7	161.4	166.4	163.0	161.4	143.0
130°	127.1	128.7	127.9	127.9	132.1	146.3	151.3	158.8	156.3	153.0	130.4
132.5°	117.0	118.7	126.2	135.4	133.8	138.8	140.5	148.0	148.8	148.8	131.3
135°	111.2	112.9	118.7	130.4	127.1	129.6	128.7	135.4	136.3	137.1	123.7
137.5°	113.7	114.5	111.2	112.9	115.4	126.2	129.6	136.3	136.3	132.9	115.4
140°	119.6	119.6	112.0	109.5	114.5	131.3	137.9	148.8	147.1	141.3	119.6
142.5°	110.4	112.0	116.2	121.2	132.1	178.1	178.1	199.0	205.7	207.3	144.6
145°	143.8	144.6	146.3	148.8	169.7	233.2	212.3	227.4	233.2	239.1	173.9
147.5°	165.5	167.2	165.5	158.8	178.1	199.8	189.8	196.5	203.2	204.8	174.7
150°	129.6	127.9	127.1	126.2	147.1	153.8	145.5	144.6	149.6	153.8	135.4
152.5°	94.5	93.6	92.8	92.0	110.4	106.2	100.3	100.3	102.0	102.8	95.3
155°	83.6	82.8	81.1	81.9	93.6	89.5	84.4	82.8	84.4	83.6	79.4
157.5°	68.6	66.9	66.9	70.2	76.1	71.1	67.7	65.2	66.0	65.2	66.0
160°	56.8	56.0	56.8	61.0	64.4	60.2	56.8	55.2	55.2	56.8	60.2
162.5°	51.0	50.2	51.0	52.7	54.3	50.2	47.7	47.7	48.5	51.8	58.5
165°	44.3	44.3	45.1	46.0	46.8	44.3	43.5	43.5	45.1	50.2	57.7
167.5°	42.6	42.6	42.6	42.6	42.6	41.8	41.0	43.5	45.1	47.7	52.7
170°	41.8	41.0	41.8	41.8	41.8	41.8	41.8	44.3	44.3	45.1	47.7
172.5°	42.6	42.6	42.6	43.5	45.1	46.0	45.1	46.8	46.0	46.0	46.0
175°	43.5	43.5	44.3	45.1	46.0	46.8	47.7	47.7	47.7	48.5	48.5
177.5°	43.5	43.5	44.3	45.1	46.0	44.3	42.6	41.8	41.0	41.0	41.0
180°	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7	261.7
2.5°	236.6	215.7	186.4	199.0	237.4	229.9	191.4	168.0	169.7	186.4	188.1
5°	137.9	142.1	161.4	201.5	209.0	173.1	139.6	134.6	162.2	200.6	208.2
7.5°	124.6	124.6	140.5	195.6	219.9	180.6	136.3	122.9	143.8	175.6	180.6
10°	150.5	145.5	147.1	167.2	176.4	144.6	122.1	116.2	127.9	132.1	130.4
12.5°	169.7	173.1	188.9	184.8	144.6	117.9	110.4	109.5	116.2	120.4	119.6
15°	182.3	176.4	164.7	151.3	137.9	122.9	112.0	105.3	97.8	94.5	94.5
17.5°	194.0	182.3	161.4	148.8	135.4	124.6	114.5	104.5	101.2	102.0	102.0
20°	208.2	194.0	174.7	160.5	144.6	129.6	117.0	106.2	103.7	104.5	103.7
22.5°	219.0	206.5	186.4	168.0	151.3	134.6	122.1	111.2	107.8	107.0	107.0
25°	232.4	221.5	200.6	178.1	158.0	142.1	131.3	118.7	112.9	111.2	111.2
27.5°	250.0	240.8	217.4	193.1	169.7	151.3	139.6	126.2	117.9	114.5	113.7
30°	276.7	264.2	238.3	208.2	183.9	164.7	150.5	133.8	123.7	117.9	117.0
32.5°	316.9	301.0	266.7	229.1	199.8	179.7	162.2	141.3	128.7	122.1	121.2
35°	402.1	384.6	341.1	288.4	245.8	204.8	177.2	149.6	133.8	125.4	124.6
37.5°	455.6	423.9	371.2	323.5	271.7	247.5	212.3	175.6	140.5	129.6	127.9
40°	533.4	492.4	426.4	362.0	270.9	270.0	246.6	214.0	165.5	137.1	134.6
42.5°	591.1	538.4	455.6	383.7	273.4	280.9	260.8	232.4	196.5	159.7	155.5
45°	708.9	642.1	510.8	403.0	276.7	293.4	273.4	243.3	211.5	185.6	183.1
47.5°	929.7	836.9	617.8	439.7	314.3	335.2	299.3	264.2	233.2	207.3	201.5
50°	1238.1	1127.0	747.4	472.4	378.7	426.4	367.8	314.3	277.6	257.5	251.6
52.5°	1600.1	1475.6	828.5	523.3	456.5	538.4	474.0	411.3	362.8	366.2	362.8
55°	2003.9	1856.8	899.6	600.3	556.0	663.0	592.7	538.4	512.5	585.2	589.4
57.5°	2393.5	2236.4	943.9	681.4	667.1	806.8	724.8	686.4	696.4	909.6	959.8
60°	2765.6	2517.3	978.1	757.4	760.8	919.6	856.9	849.4	880.3	1153.7	1229.8
62.5°	2980.4	2661.0	976.5	806.8	819.3	989.0	933.8	938.0	961.4	1193.8	1257.4
65°	3126.7	2733.8	959.8	831.8	844.4	1014.1	943.0	910.4	895.4	1054.2	1121.9
67.5°	3038.9	2593.3	919.6	810.1	826.8	974.0	885.3	803.4	777.5	863.6	903.7
70°	2569.1	2167.0	819.3	736.5	747.4	821.8	746.6	657.1	631.2	676.3	694.7
72.5°	1941.2	1663.7	734.9	680.5	654.6	679.7	606.1	512.5	506.6	530.9	534.2
75°	1550.8	1305.9	669.7	613.6	544.2	570.2	481.5	381.2	373.7	375.4	367.0
77.5°	1168.8	971.5	563.5	483.2	412.2	454.8	357.8	263.3	250.8	245.8	236.6
80°	800.1	674.7	382.9	323.5	292.6	333.6	255.0	193.1	192.3	190.6	180.6
82.5°	567.7	520.8	312.7	275.1	248.3	262.5	221.5	180.6	176.4	177.2	166.4
85°	496.6	471.5	301.8	278.4	252.5	251.6	211.5	168.9	167.2	168.0	158.0
87.5°	474.9	447.3	295.1	265.9	240.8	228.2	186.4	148.8	153.0	155.5	146.3
90°	425.5	397.1	267.5	237.4	213.2	191.4	158.0	134.6	141.3	143.0	134.6
92.5°	358.7	329.4	208.2	190.6	178.9	175.6	148.0	127.9	132.9	133.8	127.1
95°	303.5	276.7	181.4	168.0	159.7	158.8	133.8	116.2	118.7	117.9	112.0
97.5°	244.1	224.9	158.8	146.3	137.1	132.1	114.5	101.2	104.5	106.2	102.0
100°	208.2	197.3	148.0	137.1	126.2	119.6	104.5	93.6	97.0	100.3	97.0
102.5°	195.6	187.3	145.5	133.8	122.1	113.7	99.5	87.8	89.5	93.6	91.1
105°	185.6	178.1	141.3	128.7	117.9	108.7	97.0	82.8	81.9	86.1	85.3
107.5°	174.7	168.0	138.8	123.7	112.0	103.7	92.8	79.4	76.1	78.6	77.7
110°	168.9	162.2	133.8	117.9	105.3	97.8	87.8	76.9	72.7	73.6	73.6



REPORT NUMBER: P856195  
 CATALOG NUMBER: FFX-CLB-60-722-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	157.2	149.6	122.9	107.8	97.8	91.1	81.1	73.6	68.6	70.2	71.1
115°	149.6	139.6	112.9	102.0	91.1	85.3	79.4	72.7	66.9	66.9	67.7
117.5°	154.7	135.4	105.3	97.0	91.1	89.5	87.8	77.7	66.0	65.2	65.2
120°	148.0	136.3	114.5	112.0	106.2	101.2	90.3	76.9	64.4	62.7	62.7
122.5°	144.6	142.1	129.6	121.2	110.4	100.3	84.4	70.2	61.9	60.2	60.2
125°	143.0	140.5	125.4	109.5	95.3	85.3	75.2	66.0	61.0	58.5	58.5
127.5°	131.3	119.6	101.2	92.0	82.8	78.6	70.2	64.4	58.5	55.2	55.2
130°	121.2	110.4	94.5	84.4	76.9	73.6	67.7	61.9	56.0	52.7	51.8
132.5°	119.6	108.7	92.0	79.4	72.7	69.4	66.0	59.4	52.7	49.3	48.5
135°	111.2	98.7	81.9	75.2	71.1	68.6	66.0	57.7	51.0	47.7	47.7
137.5°	102.8	90.3	77.7	74.4	71.1	68.6	61.0	52.7	47.7	45.1	45.1
140°	103.7	89.5	79.4	76.9	71.9	64.4	57.7	51.8	47.7	44.3	43.5
142.5°	110.4	92.8	80.3	72.7	69.4	65.2	62.7	56.0	47.7	41.8	40.1
145°	121.2	100.3	90.3	86.9	81.1	73.6	64.4	51.8	43.5	38.5	37.6
147.5°	133.8	112.9	101.2	92.0	80.3	67.7	55.2	45.1	38.5	36.8	35.9
150°	116.2	96.1	86.9	74.4	64.4	54.3	45.1	40.1	36.8	35.9	35.9
152.5°	87.8	71.9	64.4	58.5	52.7	47.7	42.6	39.3	36.8	35.1	35.1
155°	76.1	67.7	60.2	54.3	48.5	43.5	39.3	37.6	35.1	35.1	34.3
157.5°	66.9	62.7	52.7	47.7	43.5	41.0	39.3	36.8	35.9	35.1	35.1
160°	61.0	58.5	48.5	44.3	41.8	40.1	40.1	38.5	35.9	35.1	35.1
162.5°	59.4	56.8	46.8	42.6	40.1	41.0	42.6	41.8	38.5	36.8	36.8
165°	58.5	56.8	47.7	41.8	40.1	41.0	45.1	46.0	41.8	39.3	38.5
167.5°	53.5	52.7	50.2	46.0	43.5	43.5	46.0	46.8	45.1	45.1	44.3
170°	48.5	48.5	49.3	50.2	48.5	46.0	44.3	44.3	46.8	49.3	50.2
172.5°	46.8	47.7	49.3	51.8	51.8	48.5	46.0	45.1	47.7	51.0	51.8
175°	49.3	50.2	51.0	51.0	49.3	48.5	47.7	46.8	48.5	51.8	52.7
177.5°	41.0	41.0	41.8	41.8	41.0	41.8	41.0	39.3	39.3	39.3	39.3
180°	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5

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

Streetworks

Report Number: SP1-2406-133-2

Test Date: 07/11/2024

Luminaire Tested: FFX-CLB-100-722-U-FR-T5

Data in this report applies to families of products including FFX-CLB-100-722-U-FR-T5.

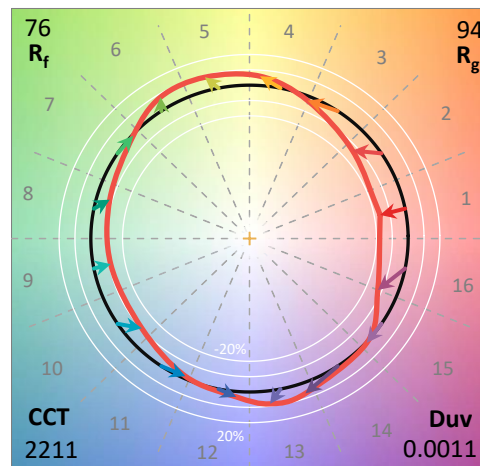
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2406-133-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 07/12/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **FFX-CLB-100-722-U-FR-T5**  
 Description: FAIRFAX ACORN W/ FAIRFAX REFRACTOR 100W T5

**Spectral Parameters**

CCT (K): 2211  
 CIE u': 0.2892  
 CIE v': 0.5376  
 Duv: 0.0011  
 CIE x: 0.5069  
 CIE y: 0.4188  
 CIE z: 0.0743  
 Peak Wavelength (nm): 606  
 Dominant Wavelength (nm): 586  
 Purity: 77.8805  
 Rf: 76.1  
 Rg: 94.3

CRI (Ra):	71.4		
R1:	68.2	R9:	-29.2
R2:	85.0	R10:	67.8
R3:	94.0	R11:	60.7
R4:	65.1	R12:	59.0
R5:	66.6	R13:	71.3
R6:	81.8	R14:	97.6
R7:	73.4	R15:	58.9
R8:	37.3		



**Test Conditions**

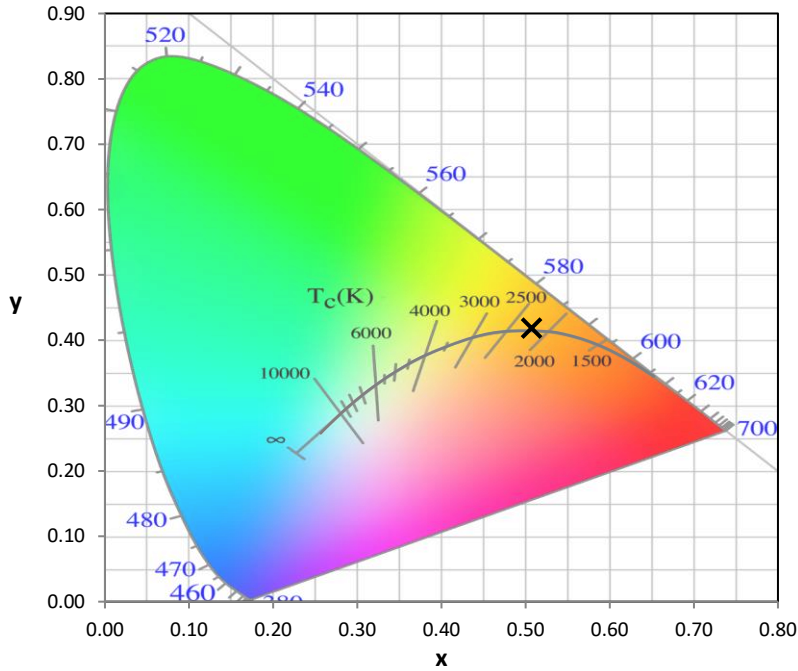
Stabilization Time: 0.813563M  
 Operation Time: 1H  
 Sphere Temperature (°C): 24.7

REPORT NUMBER: SP1-2406-133-2

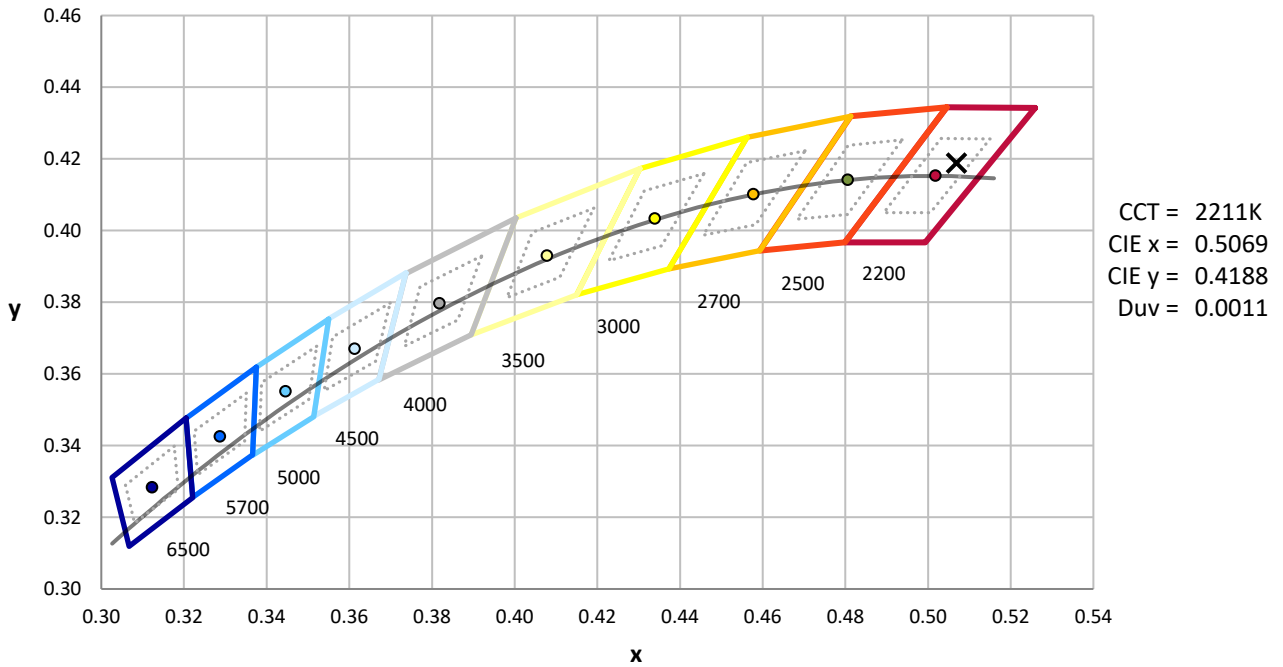
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2406-133-2

CIE 1931 Chromaticity Diagram



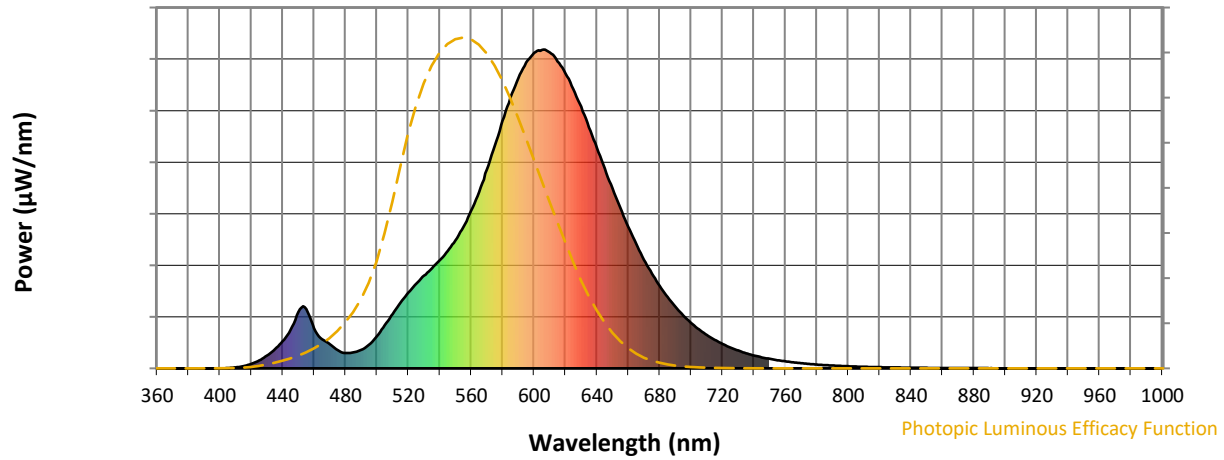
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-2406-133-2

**Photopic Flux vs. Wavelength**

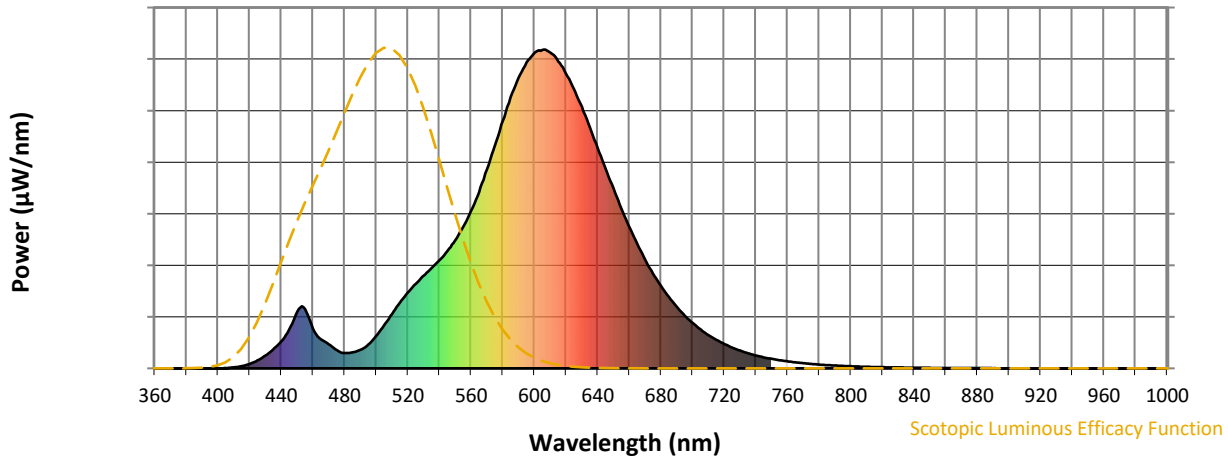


**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	58	NR	620	925	NR	750	30	NR	880	1	NR
365	0	NR	495	75	NR	625	877	NR	755	26	NR	885	1	NR
370	0	NR	500	101	NR	630	821	NR	760	22	NR	890	1	NR
375	0	NR	505	135	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	171	NR	640	692	NR	770	16	NR	900	0	NR
385	0	NR	515	206	NR	645	626	NR	775	14	NR	905	0	NR
390	0	NR	520	238	NR	650	564	NR	780	12	NR	910	0	NR
395	0	NR	525	265	NR	655	502	NR	785	10	NR	915	0	NR
400	0	NR	530	291	NR	660	444	NR	790	9	NR	920	0	NR
405	1	NR	535	314	NR	665	390	NR	795	8	NR	925	0	NR
410	3	NR	540	339	NR	670	341	NR	800	7	NR	930	0	NR
415	7	NR	545	368	NR	675	298	NR	805	6	NR	935	0	NR
420	14	NR	550	401	NR	680	259	NR	810	5	NR	940	0	NR
425	25	NR	555	444	NR	685	224	NR	815	4	NR	945	0	NR
430	40	NR	560	495	NR	690	194	NR	820	4	NR	950	0	NR
435	60	NR	565	553	NR	695	166	NR	825	3	NR	955	0	NR
440	85	NR	570	623	NR	700	142	NR	830	3	NR	960	0	NR
445	121	NR	575	699	NR	705	122	NR	835	2	NR	965	0	NR
450	177	NR	580	777	NR	710	105	NR	840	2	NR	970	0	NR
455	186	NR	585	850	NR	715	90	NR	845	2	NR	975	0	NR
460	126	NR	590	912	NR	720	77	NR	850	2	NR	980	0	NR
465	92	NR	595	960	NR	725	65	NR	855	1	NR	985	0	NR
470	76	NR	600	990	NR	730	56	NR	860	1	NR	990	0	NR
475	57	NR	605	998	NR	735	48	NR	865	1	NR	995	0	NR
480	48	NR	610	991	NR	740	40	NR	870	1	NR	1000	0	NR
485	50	NR	615	963	NR	745	35	NR	875	1	NR			

REPORT NUMBER: SP1-2406-133-2

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

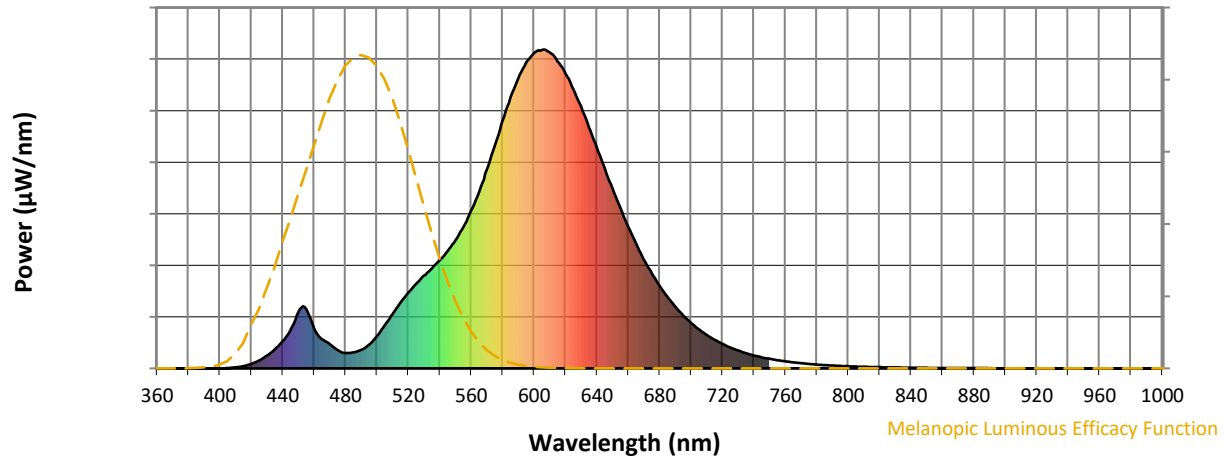
**S/P: 0.87**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	58	NR	620	925	NR	750	30	NR	880	1	NR
365	0	NR	495	75	NR	625	877	NR	755	26	NR	885	1	NR
370	0	NR	500	101	NR	630	821	NR	760	22	NR	890	1	NR
375	0	NR	505	135	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	171	NR	640	692	NR	770	16	NR	900	0	NR
385	0	NR	515	206	NR	645	626	NR	775	14	NR	905	0	NR
390	0	NR	520	238	NR	650	564	NR	780	12	NR	910	0	NR
395	0	NR	525	265	NR	655	502	NR	785	10	NR	915	0	NR
400	0	NR	530	291	NR	660	444	NR	790	9	NR	920	0	NR
405	1	NR	535	314	NR	665	390	NR	795	8	NR	925	0	NR
410	3	NR	540	339	NR	670	341	NR	800	7	NR	930	0	NR
415	7	NR	545	368	NR	675	298	NR	805	6	NR	935	0	NR
420	14	NR	550	401	NR	680	259	NR	810	5	NR	940	0	NR
425	25	NR	555	444	NR	685	224	NR	815	4	NR	945	0	NR
430	40	NR	560	495	NR	690	194	NR	820	4	NR	950	0	NR
435	60	NR	565	553	NR	695	166	NR	825	3	NR	955	0	NR
440	85	NR	570	623	NR	700	142	NR	830	3	NR	960	0	NR
445	121	NR	575	699	NR	705	122	NR	835	2	NR	965	0	NR
450	177	NR	580	777	NR	710	105	NR	840	2	NR	970	0	NR
455	186	NR	585	850	NR	715	90	NR	845	2	NR	975	0	NR
460	126	NR	590	912	NR	720	77	NR	850	2	NR	980	0	NR
465	92	NR	595	960	NR	725	65	NR	855	1	NR	985	0	NR
470	76	NR	600	990	NR	730	56	NR	860	1	NR	990	0	NR
475	57	NR	605	998	NR	735	48	NR	865	1	NR	995	0	NR
480	48	NR	610	991	NR	740	40	NR	870	1	NR	1000	0	NR
485	50	NR	615	963	NR	745	35	NR	875	1	NR			



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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.42

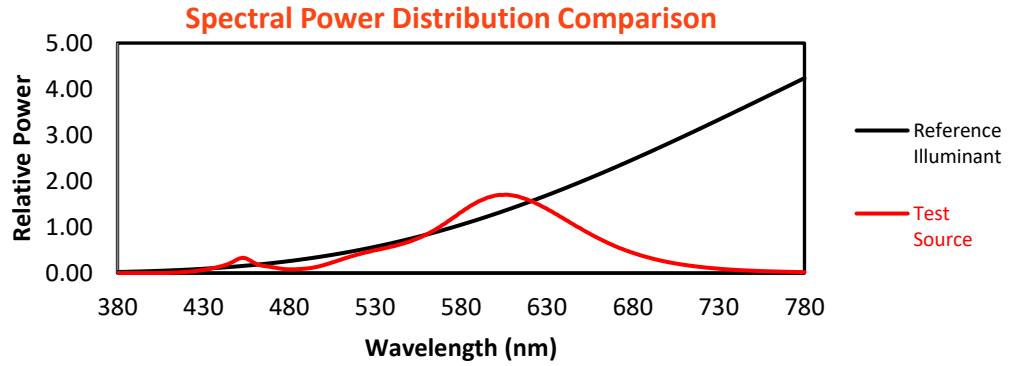
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	58	NR	620	925	NR	750	30	NR	880	1	NR
365	0	NR	495	75	NR	625	877	NR	755	26	NR	885	1	NR
370	0	NR	500	101	NR	630	821	NR	760	22	NR	890	1	NR
375	0	NR	505	135	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	171	NR	640	692	NR	770	16	NR	900	0	NR
385	0	NR	515	206	NR	645	626	NR	775	14	NR	905	0	NR
390	0	NR	520	238	NR	650	564	NR	780	12	NR	910	0	NR
395	0	NR	525	265	NR	655	502	NR	785	10	NR	915	0	NR
400	0	NR	530	291	NR	660	444	NR	790	9	NR	920	0	NR
405	1	NR	535	314	NR	665	390	NR	795	8	NR	925	0	NR
410	3	NR	540	339	NR	670	341	NR	800	7	NR	930	0	NR
415	7	NR	545	368	NR	675	298	NR	805	6	NR	935	0	NR
420	14	NR	550	401	NR	680	259	NR	810	5	NR	940	0	NR
425	25	NR	555	444	NR	685	224	NR	815	4	NR	945	0	NR
430	40	NR	560	495	NR	690	194	NR	820	4	NR	950	0	NR
435	60	NR	565	553	NR	695	166	NR	825	3	NR	955	0	NR
440	85	NR	570	623	NR	700	142	NR	830	3	NR	960	0	NR
445	121	NR	575	699	NR	705	122	NR	835	2	NR	965	0	NR
450	177	NR	580	777	NR	710	105	NR	840	2	NR	970	0	NR
455	186	NR	585	850	NR	715	90	NR	845	2	NR	975	0	NR
460	126	NR	590	912	NR	720	77	NR	850	2	NR	980	0	NR
465	92	NR	595	960	NR	725	65	NR	855	1	NR	985	0	NR
470	76	NR	600	990	NR	730	56	NR	860	1	NR	990	0	NR
475	57	NR	605	998	NR	735	48	NR	865	1	NR	995	0	NR
480	48	NR	610	991	NR	740	40	NR	870	1	NR	1000	0	NR
485	50	NR	615	963	NR	745	35	NR	875	1	NR			

REPORT NUMBER: SP1-2406-133-2

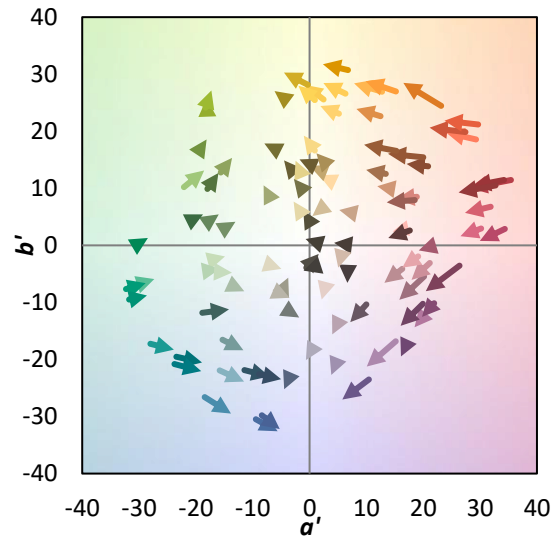
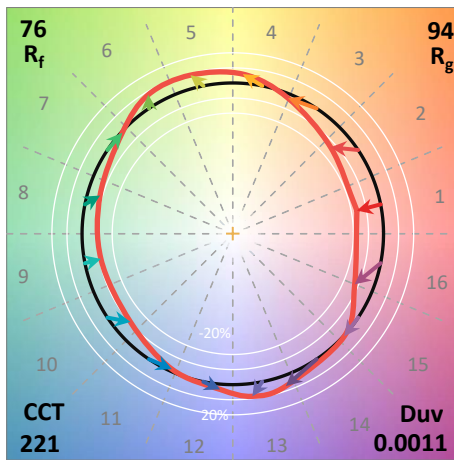
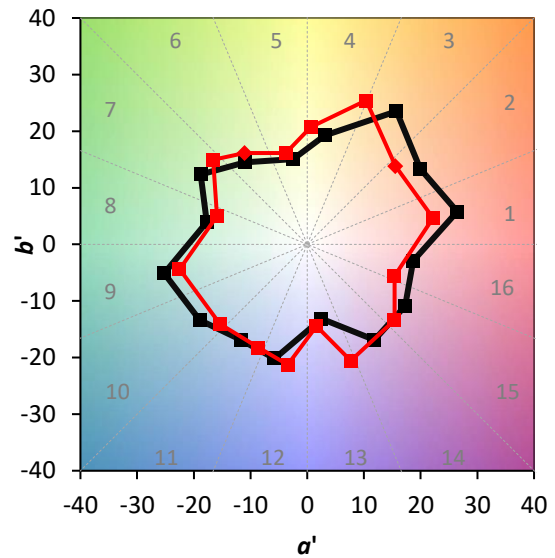
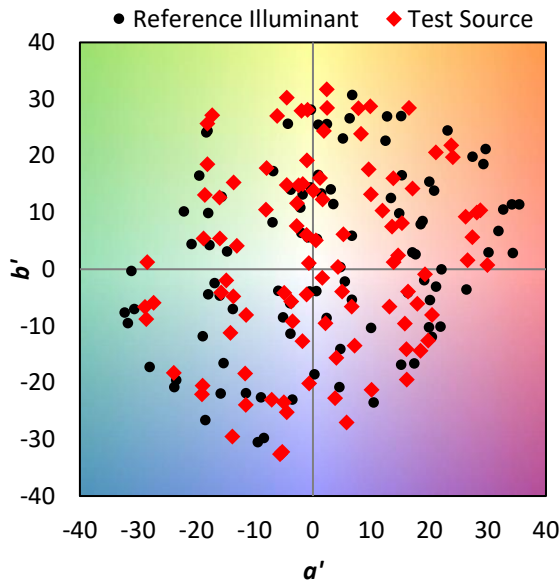
TM-30-18

**Summary**

$R_f = 76.1$   
 $R_g = 94.3$   
 CIE  $R_a = 71.4$   
 $R_9 = -29.2$



**Color Vector Graphics**

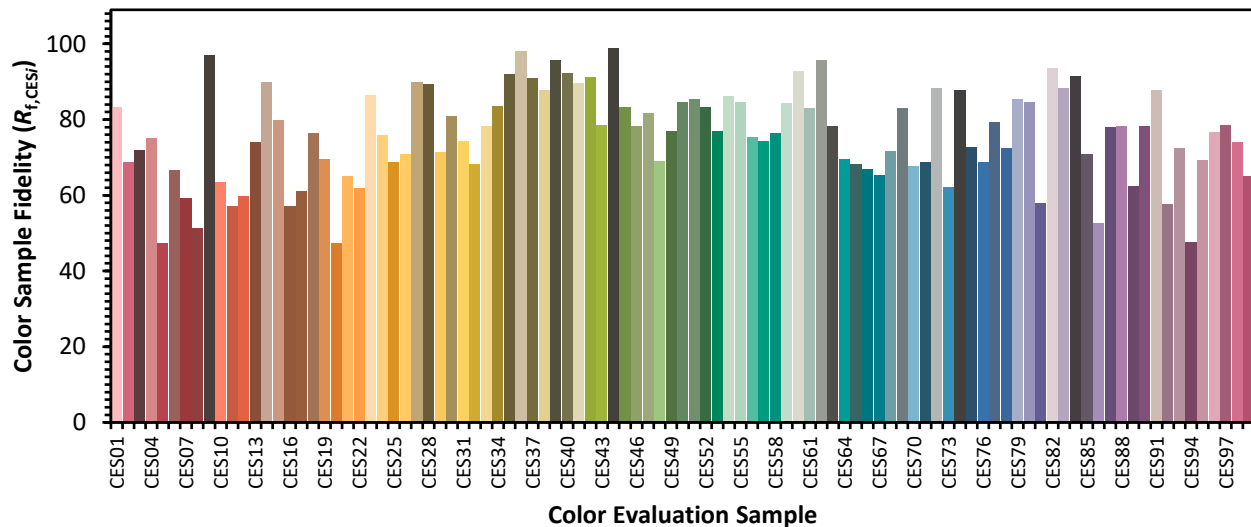


REPORT NUMBER: SP1-2406-133-2

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

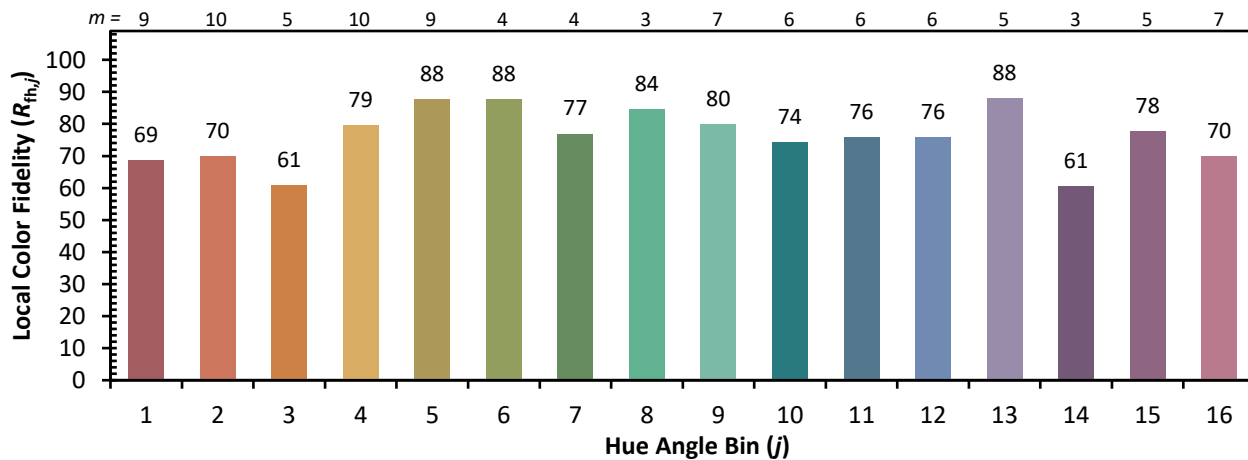
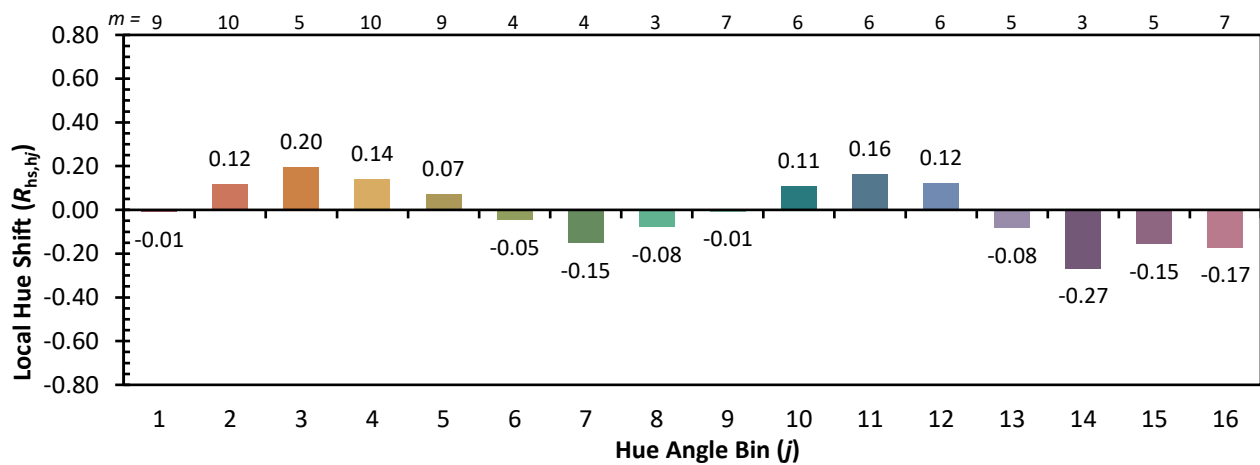
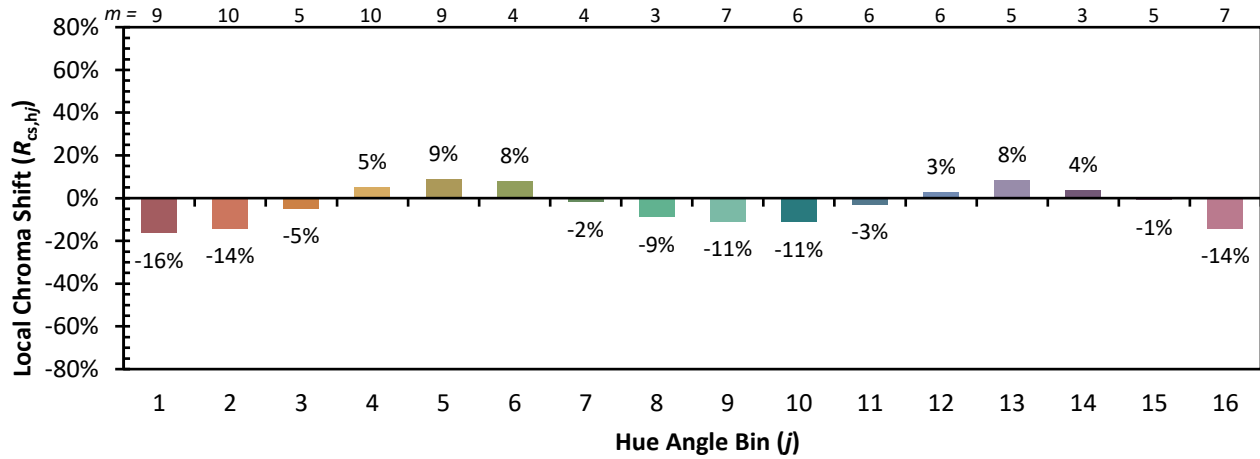
CES01 = 87	CES26 = 71	CES51 = 85	CES76 = 69
CES02 = 65	CES27 = 90	CES52 = 83	CES77 = 79
CES03 = 32	CES28 = 89	CES53 = 77	CES78 = 72
CES04 = 72	CES29 = 71	CES54 = 86	CES79 = 86
CES05 = 52	CES30 = 81	CES55 = 85	CES80 = 85
CES06 = 52	CES31 = 74	CES56 = 75	CES81 = 58
CES07 = 44	CES32 = 68	CES57 = 74	CES82 = 93
CES08 = 42	CES33 = 78	CES58 = 76	CES83 = 88
CES09 = 29	CES34 = 84	CES59 = 84	CES84 = 92
CES10 = 79	CES35 = 92	CES60 = 93	CES85 = 71
CES11 = 62	CES36 = 98	CES61 = 83	CES86 = 53
CES12 = 68	CES37 = 91	CES62 = 96	CES87 = 78
CES13 = 45	CES38 = 88	CES63 = 78	CES88 = 78
CES14 = 75	CES39 = 96	CES64 = 69	CES89 = 63
CES15 = 72	CES40 = 92	CES65 = 68	CES90 = 78
CES16 = 49	CES41 = 90	CES66 = 67	CES91 = 88
CES17 = 51	CES42 = 91	CES67 = 65	CES92 = 58
CES18 = 57	CES43 = 79	CES68 = 72	CES93 = 72
CES19 = 74	CES44 = 99	CES69 = 83	CES94 = 48
CES20 = 68	CES45 = 83	CES70 = 68	CES95 = 69
CES21 = 88	CES46 = 78	CES71 = 69	CES96 = 77
CES22 = 81	CES47 = 82	CES72 = 88	CES97 = 79
CES23 = 92	CES48 = 69	CES73 = 62	CES98 = 74
CES24 = 92	CES49 = 77	CES74 = 88	CES99 = 65
CES25 = 74	CES50 = 85	CES75 = 73	



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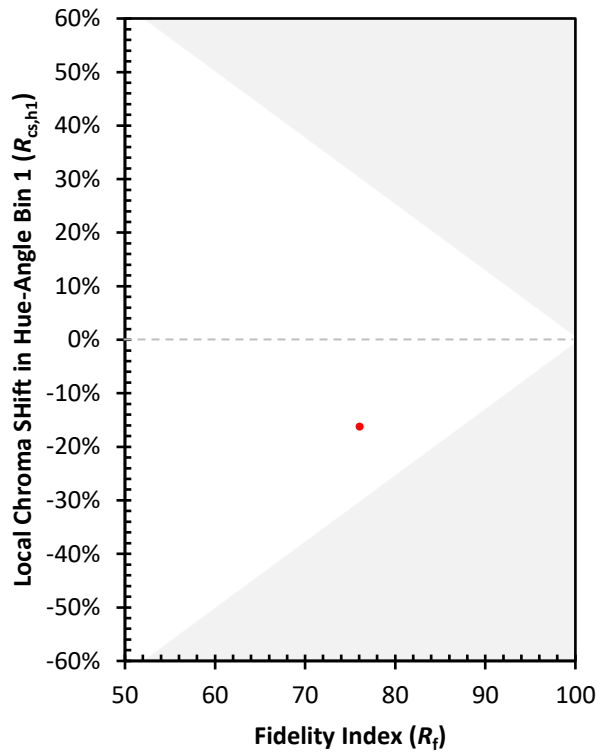
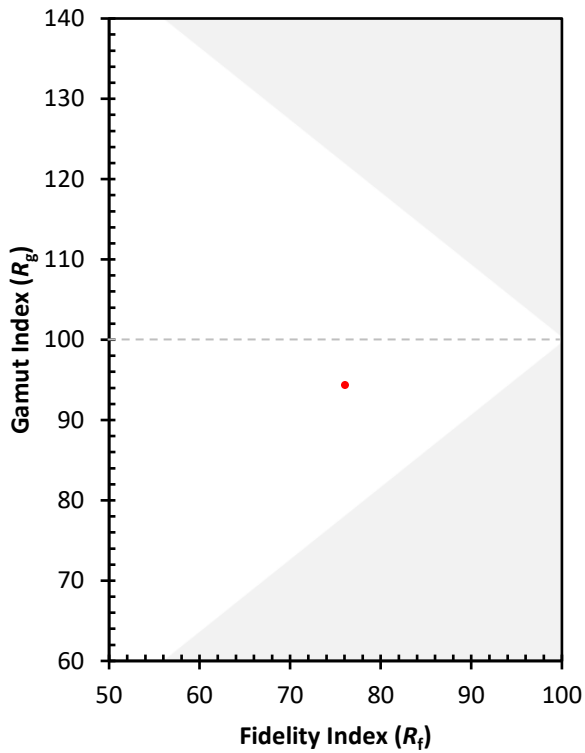
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2406-133-2

TM-30-18

Measure Comparisons



(END OF REPORT)