

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: P856222

Luminaire Tested: **FFX-CLB-60-740-U-FR-T3-UPLR**

Issue Date: 07/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856222  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 07/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: FFX-CLB-60-740-U-FR-T3-UPLR  
Description: FAIRFAX POST TOP FIXTURE w/ FAIRFAX REFRACTOR T3 DISTRIBUTION LENS AND UPLIGHT REFLECTOR  
Light Source: (4) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

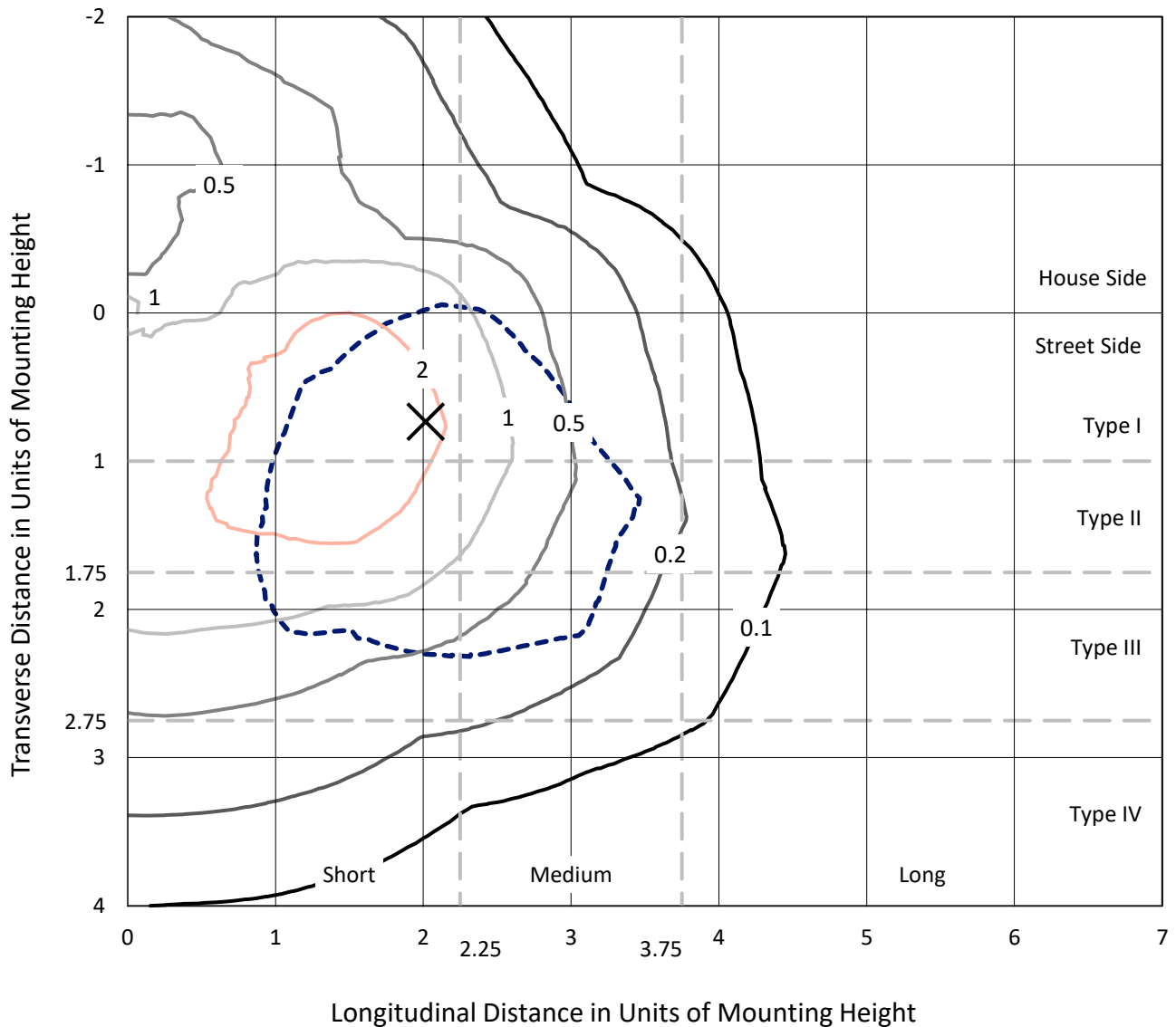
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9436 lumens  
Efficiency: N/A  
Efficacy: 157.8 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.17' x H: 1.67')  
IES Classification: Type III - Short  
BUG Rating: B3 - 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

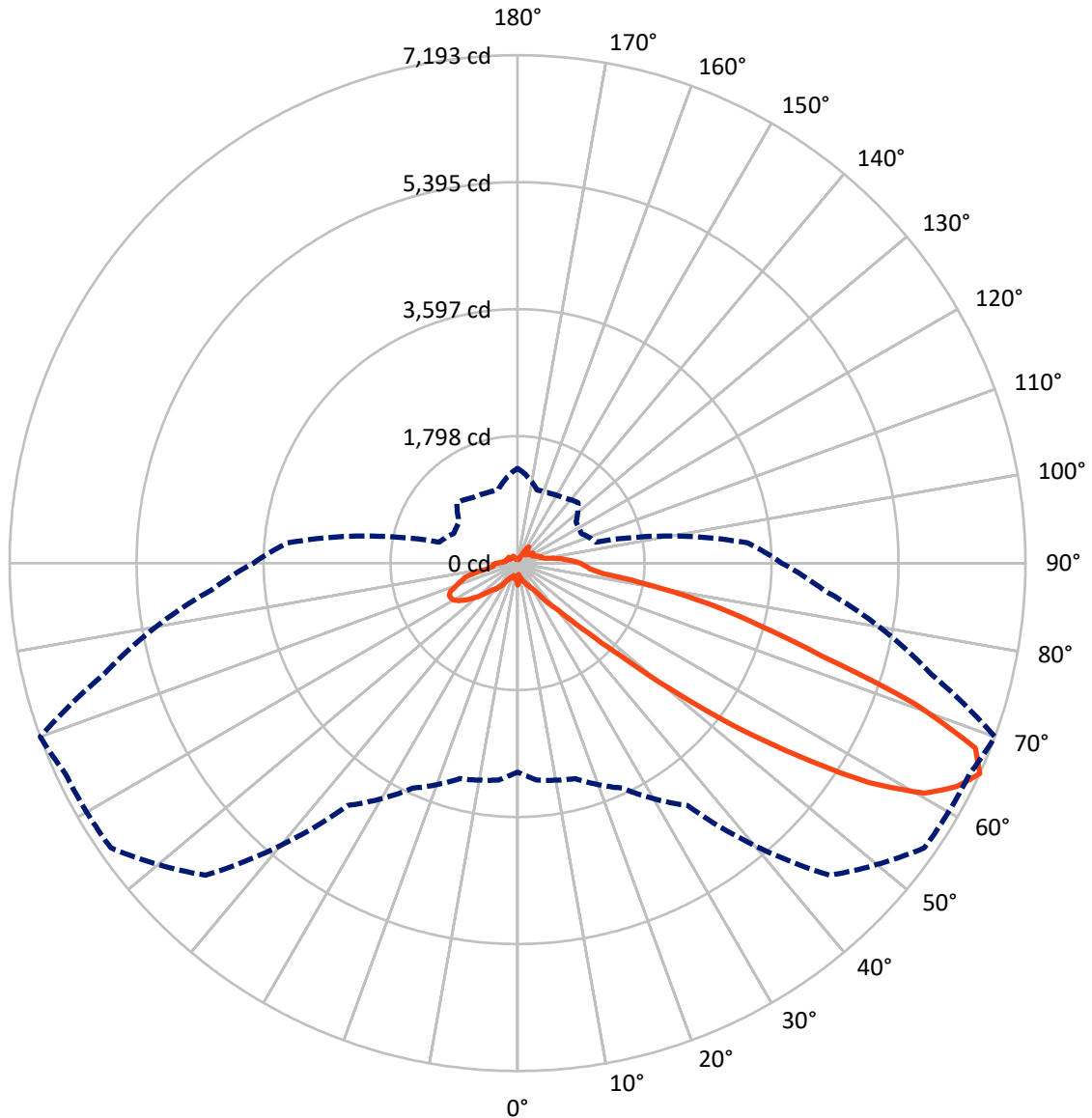
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.1 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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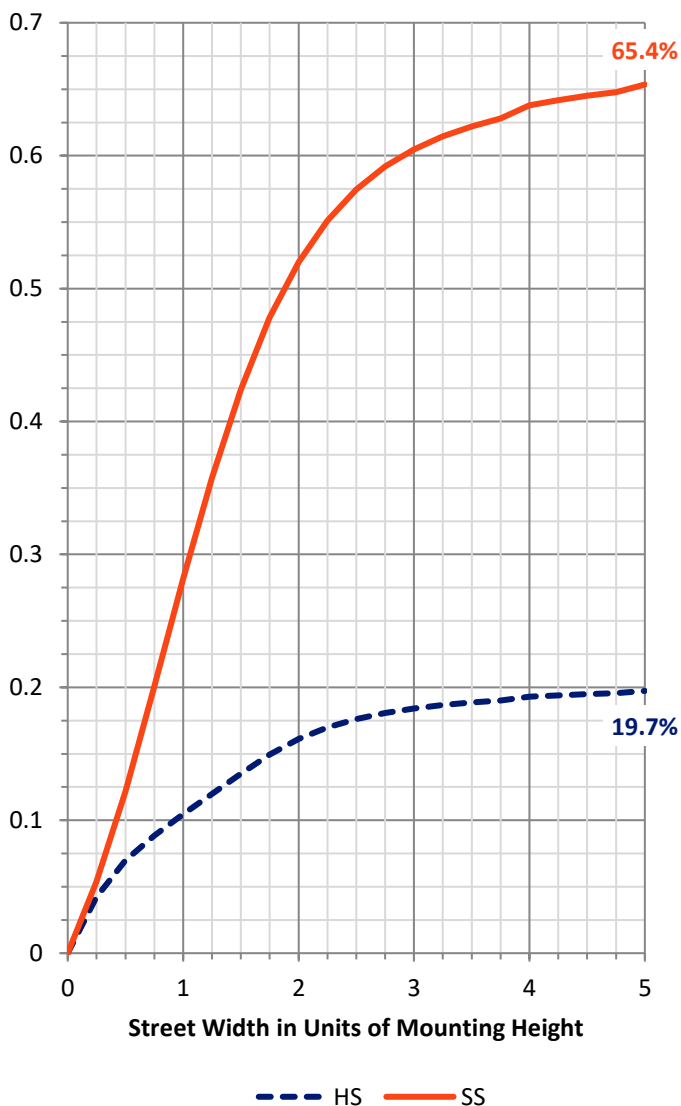
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1935.3	362.5	2297.9
	% Fixture	20.5	3.8	24.4
<b>Street Side</b>	Lumens	6381.8	756.4	7138.1
	% Fixture	67.6	8.0	75.6
<b>Total</b>	Lumens	8317.1	1118.9	9436.0
	% Fixture	88.1	11.9	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.1	0.2
10°-20°	63.1	0.7
20°-30°	127.4	1.3
30°-40°	269.5	2.9
40°-50°	628.4	6.7
50°-60°	1872.7	19.8
60°-70°	3000.8	31.8
70°-80°	1723.8	18.3
80°-90°	611.4	6.5
90°-100°	360.6	3.8
100°-110°	217.8	2.3
110°-120°	163.8	1.7
120°-130°	138.7	1.5
130°-140°	92.1	1.0
140°-150°	86.5	0.9
150°-160°	38.3	0.4
160°-170°	15.9	0.2
170°-180°	5.2	0.1
0°-90°	8317.1	88.1
0°-180°	9436.0	100.0



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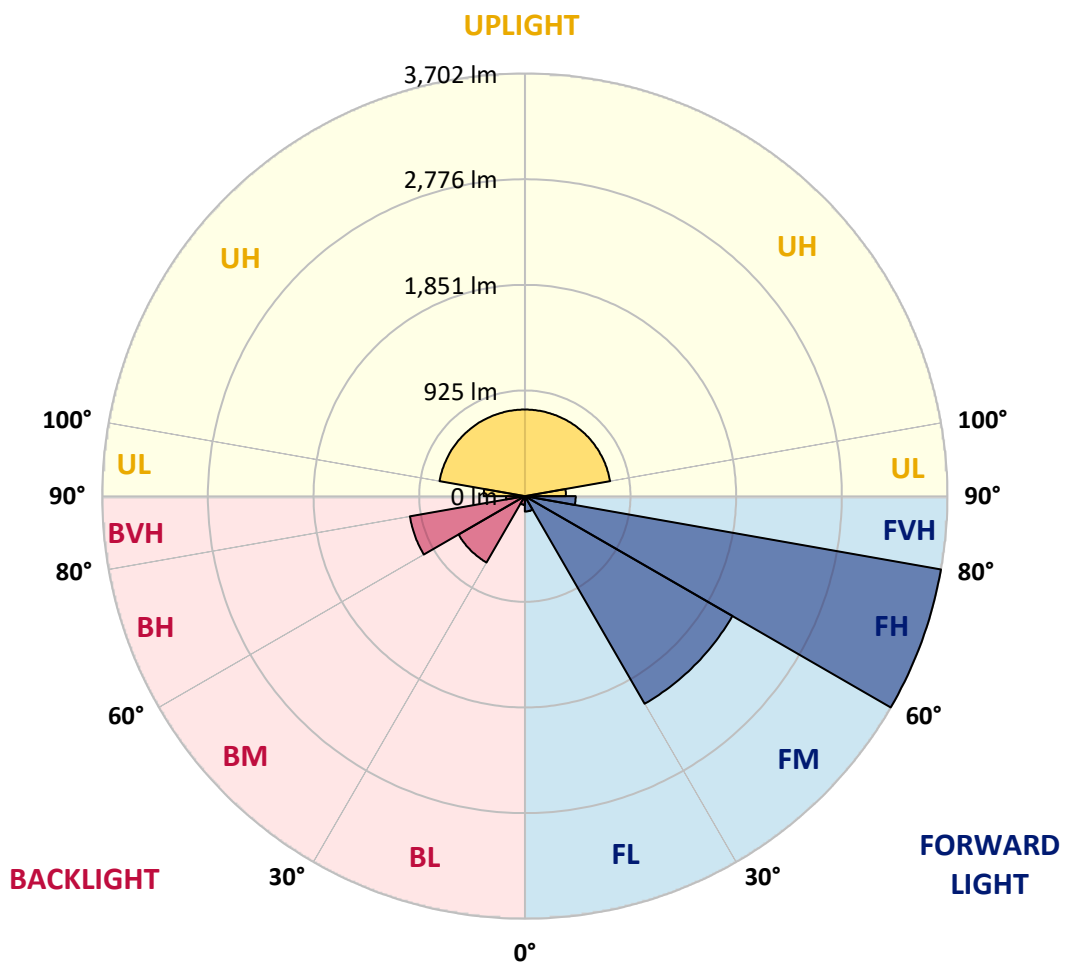
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	135.2	1.4			
FM (30°-60°)	2099.6	22.3			
FH (60°-80°)	3701.6	39.2			G2/5000
FVH (80°-90°)	445.3	4.7			G3/500
BL (0°-30°)	75.4	0.8	B0/110		
BM (30°-60°)	671.0	7.1	B1/1000		
BH (60°-80°)	1022.9	10.8	B3/2500		G3/2500
BVH (80°-90°)	166.0	1.8			G2/225
UL (90°-100°)	360.6	3.8		U3/500	
UH (100°-180°)	758.3	8.0		U4/1000	

**BUG Rating: B3-U4-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0
2.5°	261.0	259.0	264.0	268.0	273.0	266.0	254.0	266.0	270.0	282.0	291.0
5°	222.0	223.0	228.0	239.0	249.0	247.0	216.0	176.0	164.0	159.0	160.0
7.5°	220.0	219.0	216.0	215.0	221.0	243.0	240.0	211.0	189.0	170.0	151.0
10°	232.0	235.0	238.0	238.0	234.0	220.0	219.0	217.0	209.0	200.0	188.0
12.5°	287.0	291.0	294.0	284.0	271.0	257.0	246.0	228.0	220.0	215.0	206.0
15°	347.0	351.0	346.0	327.0	304.0	278.0	268.0	269.0	258.0	245.0	226.0
17.5°	379.0	377.0	356.0	334.0	316.0	296.0	282.0	273.0	269.0	264.0	245.0
20°	359.0	354.0	341.0	332.0	330.0	319.0	310.0	302.0	297.0	286.0	263.0
22.5°	344.0	344.0	342.0	340.0	352.0	347.0	343.0	332.0	325.0	311.0	277.0
25°	363.0	363.0	364.0	361.0	377.0	377.0	377.0	365.0	356.0	336.0	295.0
27.5°	390.0	389.0	392.0	390.0	404.0	407.0	413.0	404.0	391.0	367.0	315.0
30°	419.0	419.0	422.0	424.0	438.0	445.0	452.0	448.0	432.0	403.0	349.0
32.5°	450.0	449.0	458.0	468.0	476.0	489.0	492.0	502.0	486.0	452.0	399.0
35°	495.0	498.0	522.0	543.0	566.0	574.0	588.0	627.0	611.0	565.0	504.0
37.5°	716.0	701.0	695.0	671.0	668.0	715.0	732.0	769.0	737.0	675.0	582.0
40°	759.0	741.0	733.0	710.0	718.0	815.0	798.0	931.0	853.0	754.0	694.0
42.5°	715.0	712.0	806.0	824.0	814.0	968.0	935.0	1181.0	1098.0	868.0	801.0
45°	863.0	855.0	895.0	927.0	952.0	1229.0	1209.0	1468.0	1432.0	1057.0	991.0
47.5°	974.0	966.0	1012.0	1119.0	1265.0	1565.0	1682.0	2073.0	1951.0	1454.0	1304.0
50°	1306.0	1301.0	1425.0	1540.0	1781.0	2224.1	2545.1	2967.1	2788.1	2031.0	1755.0
52.5°	1620.0	1636.0	1781.0	2002.0	2257.1	3057.1	3515.1	3811.1	3809.1	2645.1	2253.1
55°	1845.0	1899.0	2070.0	2469.1	2823.1	3796.1	4414.1	4633.1	4817.1	3529.1	2744.1
57.5°	2282.1	2376.1	2540.1	2935.1	3392.1	4690.1	5572.1	5536.1	5867.1	4446.1	3278.1
60°	2731.1	2841.1	2896.1	3259.1	3859.1	5551.1	6368.1	6284.1	6617.2	5244.1	3840.1
62.5°	2871.1	2979.1	3033.1	3428.1	4196.1	6039.1	6735.2	6768.2	6975.2	5813.1	4173.1
65°	2959.1	3083.1	3161.1	3517.1	4189.1	6252.1	7032.2	7063.2	7193.2	6058.1	4345.1
67.5°	2943.1	3082.1	3182.1	3501.1	3957.1	6075.1	6958.2	6818.2	6992.2	5883.1	4164.1
70°	2625.1	2746.1	2846.1	3092.1	3303.1	5118.1	6020.1	5789.1	5969.1	4915.1	3438.1
72.5°	2145.0	2195.1	2282.1	2398.1	2503.1	3797.1	4592.1	4394.1	4498.1	3687.1	2576.1
75°	1762.0	1752.0	1830.0	1914.0	1881.0	2774.1	3633.1	3452.1	3549.1	2800.1	2055.0
77.5°	1306.0	1301.0	1414.0	1407.0	1357.0	1921.0	2880.1	2749.1	2762.1	2068.0	1539.0
80°	785.0	800.0	910.0	932.0	873.0	1205.0	2056.0	1994.0	1901.0	1413.0	1079.0
82.5°	551.0	574.0	632.0	656.0	627.0	880.0	1362.0	1319.0	1209.0	1025.0	760.0
85°	562.0	566.0	573.0	575.0	562.0	790.0	1057.0	1033.0	1026.0	859.0	627.0
87.5°	562.0	571.0	577.0	576.0	553.0	740.0	975.0	937.0	946.0	803.0	606.0
90°	504.0	520.0	519.0	522.0	503.0	669.0	884.0	853.0	865.0	724.0	551.0
92.5°	412.0	423.0	434.0	455.0	427.0	569.0	747.0	718.0	733.0	616.0	469.0
95°	383.0	393.0	400.0	411.0	383.0	506.0	661.0	626.0	632.0	523.0	397.0
97.5°	310.0	316.0	324.0	326.0	306.0	389.0	503.0	473.0	477.0	406.0	312.0
100°	260.0	265.0	272.0	272.0	259.0	322.0	398.0	382.0	380.0	332.0	264.0
102.5°	246.0	248.0	259.0	257.0	244.0	297.0	360.0	350.0	351.0	308.0	248.0
105°	242.0	242.0	253.0	248.0	237.0	283.0	337.0	334.0	333.0	293.0	238.0
107.5°	238.0	238.0	249.0	244.0	235.0	267.0	317.0	307.0	306.0	279.0	225.0
110°	222.0	225.0	237.0	231.0	224.0	252.0	291.0	284.0	284.0	263.0	215.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
112.5°	197.0	199.0	210.0	205.0	200.0	224.0	258.0	249.0	250.0	236.0	201.0
115°	184.0	187.0	198.0	191.0	187.0	209.0	239.0	233.0	235.0	222.0	190.0
117.5°	185.0	186.0	194.0	195.0	187.0	205.0	221.0	223.0	226.0	218.0	193.0
120°	225.0	220.0	224.0	219.0	215.0	236.0	255.0	257.0	256.0	241.0	192.0
122.5°	227.0	217.0	228.0	221.0	217.0	240.0	261.0	266.0	261.0	248.0	196.0
125°	181.0	184.0	185.0	187.0	191.0	216.0	227.0	228.0	229.0	225.0	190.0
127.5°	159.0	158.0	153.0	154.0	163.0	185.0	193.0	199.0	195.0	193.0	171.0
130°	152.0	154.0	153.0	153.0	158.0	175.0	181.0	190.0	187.0	183.0	156.0
132.5°	140.0	142.0	151.0	162.0	160.0	166.0	168.0	177.0	178.0	178.0	157.0
135°	133.0	135.0	142.0	156.0	152.0	155.0	154.0	162.0	163.0	164.0	148.0
137.5°	136.0	137.0	133.0	135.0	138.0	151.0	155.0	163.0	163.0	159.0	138.0
140°	143.0	143.0	134.0	131.0	137.0	157.0	165.0	178.0	176.0	169.0	143.0
142.5°	132.0	134.0	139.0	145.0	158.0	213.0	213.0	238.0	246.0	248.0	173.0
145°	172.0	173.0	175.0	178.0	203.0	279.0	254.0	272.0	279.0	286.0	208.0
147.5°	198.0	200.0	198.0	190.0	213.0	239.0	227.0	235.0	243.0	245.0	209.0
150°	155.0	153.0	152.0	151.0	176.0	184.0	174.0	173.0	179.0	184.0	162.0
152.5°	113.0	112.0	111.0	110.0	132.0	127.0	120.0	120.0	122.0	123.0	114.0
155°	100.0	99.0	97.0	98.0	112.0	107.0	101.0	99.0	101.0	100.0	95.0
157.5°	82.0	80.0	80.0	84.0	91.0	85.0	81.0	78.0	79.0	78.0	79.0
160°	68.0	67.0	68.0	73.0	77.0	72.0	68.0	66.0	66.0	68.0	72.0
162.5°	61.0	60.0	61.0	63.0	65.0	60.0	57.0	57.0	58.0	62.0	70.0
165°	53.0	53.0	54.0	55.0	56.0	53.0	52.0	52.0	54.0	60.0	69.0
167.5°	51.0	51.0	51.0	51.0	51.0	50.0	49.0	52.0	54.0	57.0	63.0
170°	50.0	49.0	50.0	50.0	50.0	50.0	50.0	53.0	53.0	54.0	57.0
172.5°	51.0	51.0	51.0	52.0	54.0	55.0	54.0	56.0	55.0	55.0	55.0
175°	52.0	52.0	53.0	54.0	55.0	56.0	57.0	57.0	57.0	58.0	58.0
177.5°	52.0	52.0	53.0	54.0	55.0	53.0	51.0	50.0	49.0	49.0	49.0
180°	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0	313.0
2.5°	283.0	258.0	223.0	238.0	284.0	275.0	229.0	201.0	203.0	223.0	225.0
5°	165.0	170.0	193.0	241.0	250.0	207.0	167.0	161.0	194.0	240.0	249.0
7.5°	149.0	149.0	168.0	234.0	263.0	216.0	163.0	147.0	172.0	210.0	216.0
10°	180.0	174.0	176.0	200.0	211.0	173.0	146.0	139.0	153.0	158.0	156.0
12.5°	203.0	207.0	226.0	221.0	173.0	141.0	132.0	131.0	139.0	144.0	143.0
15°	218.0	211.0	197.0	181.0	165.0	147.0	134.0	126.0	117.0	113.0	113.0
17.5°	232.0	218.0	193.0	178.0	162.0	149.0	137.0	125.0	121.0	122.0	122.0
20°	249.0	232.0	209.0	192.0	173.0	155.0	140.0	127.0	124.0	125.0	124.0
22.5°	262.0	247.0	223.0	201.0	181.0	161.0	146.0	133.0	129.0	128.0	128.0
25°	278.0	265.0	240.0	213.0	189.0	170.0	157.0	142.0	135.0	133.0	133.0
27.5°	299.0	288.0	260.0	231.0	203.0	181.0	167.0	151.0	141.0	137.0	136.0
30°	331.0	316.0	285.0	249.0	220.0	197.0	180.0	160.0	148.0	141.0	140.0
32.5°	379.0	360.0	319.0	274.0	239.0	215.0	194.0	169.0	154.0	146.0	145.0
35°	481.0	460.0	408.0	345.0	294.0	245.0	212.0	179.0	160.0	150.0	149.0
37.5°	545.0	507.0	444.0	387.0	325.0	296.0	254.0	210.0	168.0	155.0	153.0
40°	638.0	589.0	510.0	433.0	324.0	323.0	295.0	256.0	198.0	164.0	161.0
42.5°	707.0	644.0	545.0	459.0	327.0	336.0	312.0	278.0	235.0	191.0	186.0
45°	848.0	768.0	611.0	482.0	331.0	351.0	327.0	291.0	253.0	222.0	219.0
47.5°	1112.0	1001.0	739.0	526.0	376.0	401.0	358.0	316.0	279.0	248.0	241.0
50°	1481.0	1348.0	894.0	565.0	453.0	510.0	440.0	376.0	332.0	308.0	301.0
52.5°	1914.0	1765.0	991.0	626.0	546.0	644.0	567.0	492.0	434.0	438.0	434.0
55°	2397.1	2221.1	1076.0	718.0	665.0	793.0	709.0	644.0	613.0	700.0	705.0
57.5°	2863.1	2675.1	1129.0	815.0	798.0	965.0	867.0	821.0	833.0	1088.0	1148.0
60°	3308.1	3011.1	1170.0	906.0	910.0	1100.0	1025.0	1016.0	1053.0	1380.0	1471.0
62.5°	3565.1	3183.1	1168.0	965.0	980.0	1183.0	1117.0	1122.0	1150.0	1428.0	1504.0
65°	3740.1	3270.1	1148.0	995.0	1010.0	1213.0	1128.0	1089.0	1071.0	1261.0	1342.0
67.5°	3635.1	3102.1	1100.0	969.0	989.0	1165.0	1059.0	961.0	930.0	1033.0	1081.0
70°	3073.1	2592.1	980.0	881.0	894.0	983.0	893.0	786.0	755.0	809.0	831.0
72.5°	2322.1	1990.0	879.0	814.0	783.0	813.0	725.0	613.0	606.0	635.0	639.0
75°	1855.0	1562.0	801.0	734.0	651.0	682.0	576.0	456.0	447.0	449.0	439.0
77.5°	1398.0	1162.0	674.0	578.0	493.0	544.0	428.0	315.0	300.0	294.0	283.0
80°	957.0	807.0	458.0	387.0	350.0	399.0	305.0	231.0	230.0	228.0	216.0
82.5°	679.0	623.0	374.0	329.0	297.0	314.0	265.0	216.0	211.0	212.0	199.0
85°	594.0	564.0	361.0	333.0	302.0	301.0	253.0	202.0	200.0	201.0	189.0
87.5°	568.0	535.0	353.0	318.0	288.0	273.0	223.0	178.0	183.0	186.0	175.0
90°	509.0	475.0	320.0	284.0	255.0	229.0	189.0	161.0	169.0	171.0	161.0
92.5°	429.0	394.0	249.0	228.0	214.0	210.0	177.0	153.0	159.0	160.0	152.0
95°	363.0	331.0	217.0	201.0	191.0	190.0	160.0	139.0	142.0	141.0	134.0
97.5°	292.0	269.0	190.0	175.0	164.0	158.0	137.0	121.0	125.0	127.0	122.0
100°	249.0	236.0	177.0	164.0	151.0	143.0	125.0	112.0	116.0	120.0	116.0
102.5°	234.0	224.0	174.0	160.0	146.0	136.0	119.0	105.0	107.0	112.0	109.0
105°	222.0	213.0	169.0	154.0	141.0	130.0	116.0	99.0	98.0	103.0	102.0
107.5°	209.0	201.0	166.0	148.0	134.0	124.0	111.0	95.0	91.0	94.0	93.0
110°	202.0	194.0	160.0	141.0	126.0	117.0	105.0	92.0	87.0	88.0	88.0



REPORT NUMBER: P856222

CATALOG NUMBER: FFX-CLB-60-740-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	188.0	179.0	147.0	129.0	117.0	109.0	97.0	88.0	82.0	84.0	85.0
115°	179.0	167.0	135.0	122.0	109.0	102.0	95.0	87.0	80.0	80.0	81.0
117.5°	185.0	162.0	126.0	116.0	109.0	107.0	105.0	93.0	79.0	78.0	78.0
120°	177.0	163.0	137.0	134.0	127.0	121.0	108.0	92.0	77.0	75.0	75.0
122.5°	173.0	170.0	155.0	145.0	132.0	120.0	101.0	84.0	74.0	72.0	72.0
125°	171.0	168.0	150.0	131.0	114.0	102.0	90.0	79.0	73.0	70.0	70.0
127.5°	157.0	143.0	121.0	110.0	99.0	94.0	84.0	77.0	70.0	66.0	66.0
130°	145.0	132.0	113.0	101.0	92.0	88.0	81.0	74.0	67.0	63.0	62.0
132.5°	143.0	130.0	110.0	95.0	87.0	83.0	79.0	71.0	63.0	59.0	58.0
135°	133.0	118.0	98.0	90.0	85.0	82.0	79.0	69.0	61.0	57.0	57.0
137.5°	123.0	108.0	93.0	89.0	85.0	82.0	73.0	63.0	57.0	54.0	54.0
140°	124.0	107.0	95.0	92.0	86.0	77.0	69.0	62.0	57.0	53.0	52.0
142.5°	132.0	111.0	96.0	87.0	83.0	78.0	75.0	67.0	57.0	50.0	48.0
145°	145.0	120.0	108.0	104.0	97.0	88.0	77.0	62.0	52.0	46.0	45.0
147.5°	160.0	135.0	121.0	110.0	96.0	81.0	66.0	54.0	46.0	44.0	43.0
150°	139.0	115.0	104.0	89.0	77.0	65.0	54.0	48.0	44.0	43.0	43.0
152.5°	105.0	86.0	77.0	70.0	63.0	57.0	51.0	47.0	44.0	42.0	42.0
155°	91.0	81.0	72.0	65.0	58.0	52.0	47.0	45.0	42.0	42.0	41.0
157.5°	80.0	75.0	63.0	57.0	52.0	49.0	47.0	44.0	43.0	42.0	42.0
160°	73.0	70.0	58.0	53.0	50.0	48.0	48.0	46.0	43.0	42.0	42.0
162.5°	71.0	68.0	56.0	51.0	48.0	49.0	51.0	50.0	46.0	44.0	44.0
165°	70.0	68.0	57.0	50.0	48.0	49.0	54.0	55.0	50.0	47.0	46.0
167.5°	64.0	63.0	60.0	55.0	52.0	52.0	55.0	56.0	54.0	54.0	53.0
170°	58.0	58.0	59.0	60.0	58.0	55.0	53.0	53.0	56.0	59.0	60.0
172.5°	56.0	57.0	59.0	62.0	62.0	58.0	55.0	54.0	57.0	61.0	62.0
175°	59.0	60.0	61.0	61.0	59.0	58.0	57.0	56.0	58.0	62.0	63.0
177.5°	49.0	49.0	50.0	50.0	49.0	50.0	49.0	47.0	47.0	47.0	47.0
180°	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2406-133-1

Test Date: 07/11/2024

Luminaire Tested: FFX-CLB-100-740-U-FR-T5

Data in this report applies to families of products including FFX-CLB-100-740-U-FR-T5.

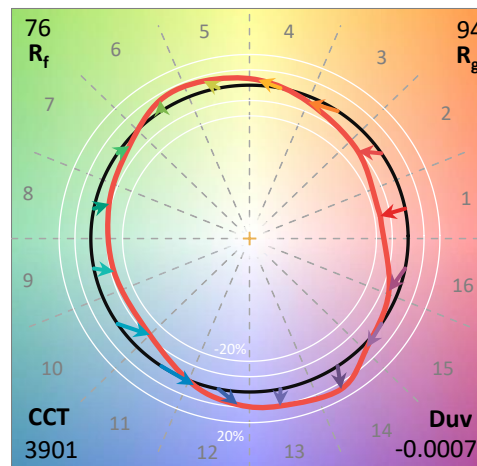
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2406-133-1  
 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-100-740-U-FR-T5**  
 Description: FAIRFAX ACORN W/ FAIRFAX REFRACTOR 100W T5

**Spectral Parameters**

CCT (K): 3901  
 CIE u': 0.2273  
 CIE v': 0.5026  
 Duv: -0.0007  
 CIE x: 0.3844  
 CIE y: 0.3776  
 CIE z: 0.2380  
 Peak Wavelength (nm): 451  
 Dominant Wavelength (nm): 579  
 Purity: 28.6799  
 Rf: 76.2  
 Rg: 94.4

CRI (Ra):	74.5		
R1:	71.8	R9:	-23.4
R2:	81.9	R10:	56.6
R3:	89.3	R11:	68.4
R4:	72.6	R12:	46.6
R5:	71.3	R13:	73.7
R6:	74.0	R14:	93.9
R7:	81.5	R15:	65.1
R8:	53.3		



**Test Conditions**

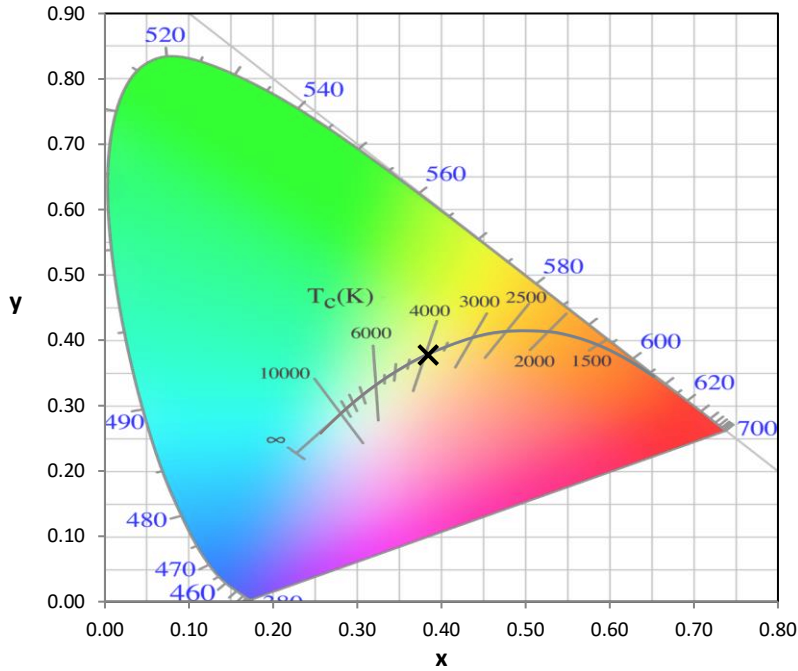
Stabilization Time: 0.818109M  
 Operation Time: 1H  
 Sphere Temperature (°C): 24.6

REPORT NUMBER: SP1-2406-133-1

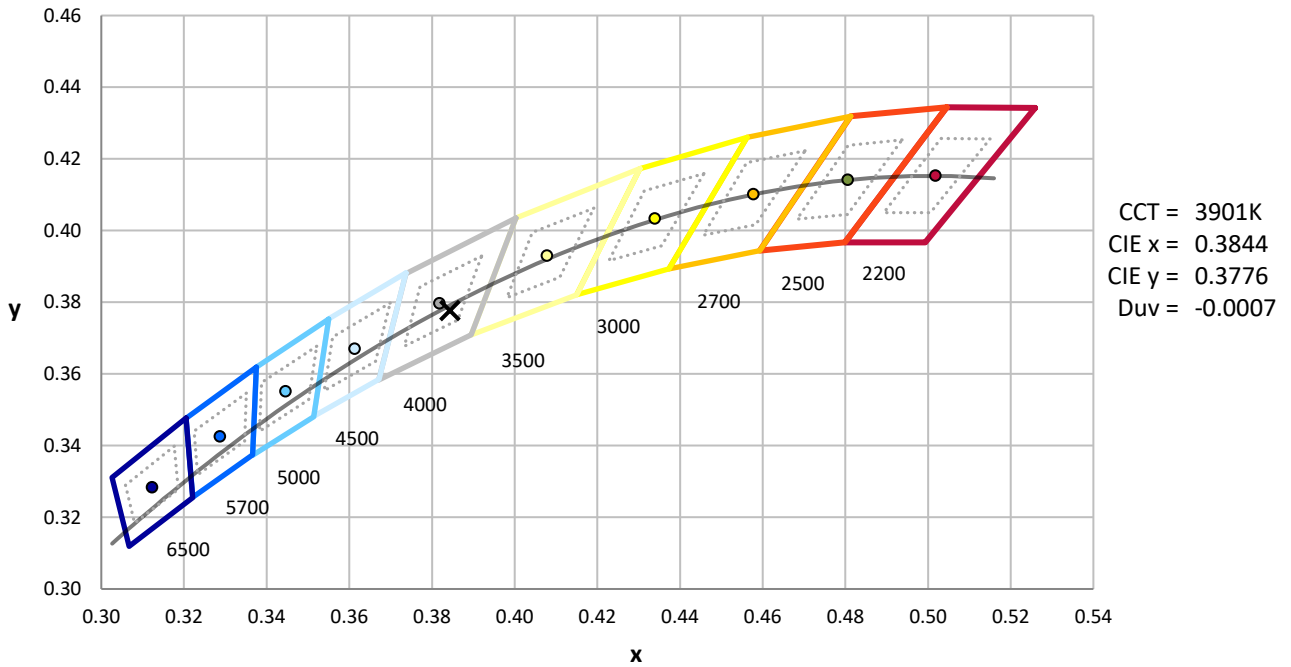
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2406-133-1

CIE 1931 Chromaticity Diagram



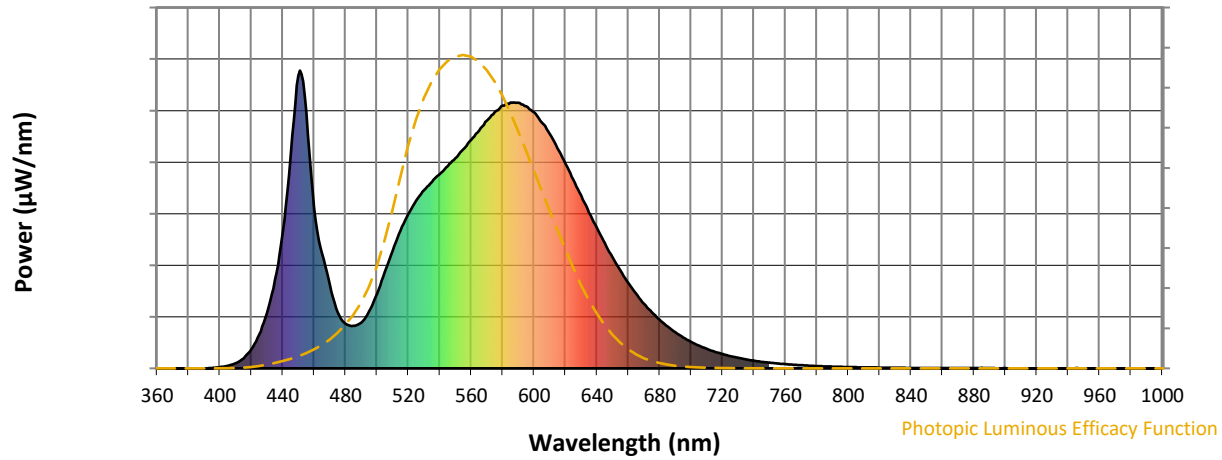
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2406-133-1

**Photopic Flux vs. Wavelength**

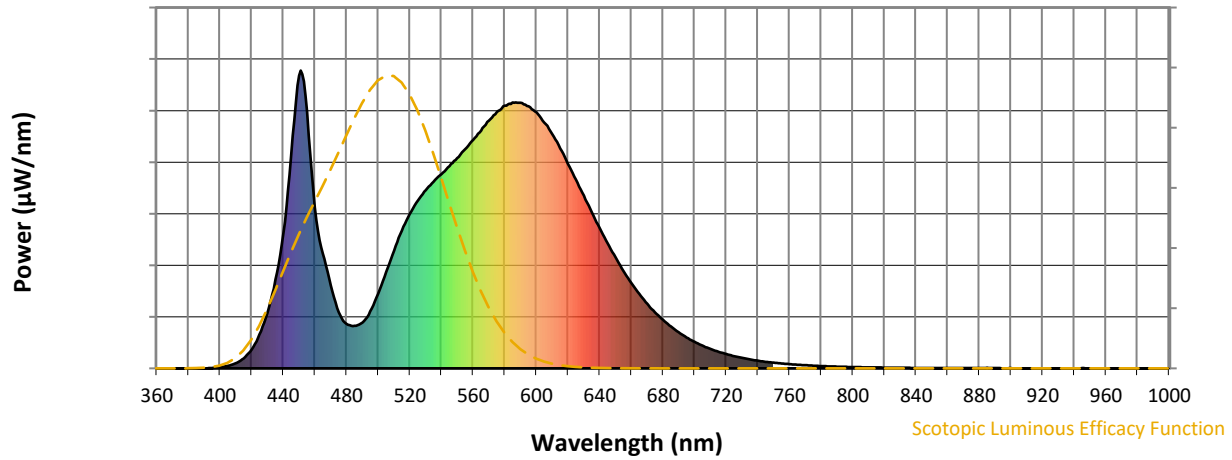


**Photopic Lumens: NR**

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	154	NR	620	687	NR	750	19	NR	880	1	NR
365	0	NR	495	191	NR	625	634	NR	755	17	NR	885	2	NR
370	0	NR	500	251	NR	630	581	NR	760	14	NR	890	1	NR
375	0	NR	505	323	NR	635	524	NR	765	12	NR	895	0	NR
380	0	NR	510	395	NR	640	471	NR	770	11	NR	900	1	NR
385	0	NR	515	462	NR	645	420	NR	775	9	NR	905	0	NR
390	0	NR	520	520	NR	650	373	NR	780	8	NR	910	0	NR
395	1	NR	525	563	NR	655	328	NR	785	7	NR	915	0	NR
400	4	NR	530	599	NR	660	286	NR	790	6	NR	920	0	NR
405	8	NR	535	627	NR	665	250	NR	795	5	NR	925	0	NR
410	17	NR	540	653	NR	670	217	NR	800	4	NR	930	0	NR
415	34	NR	545	679	NR	675	188	NR	805	4	NR	935	0	NR
420	63	NR	550	706	NR	680	163	NR	810	3	NR	940	0	NR
425	114	NR	555	737	NR	685	140	NR	815	3	NR	945	1	NR
430	186	NR	560	768	NR	690	121	NR	820	3	NR	950	0	NR
435	297	NR	565	798	NR	695	104	NR	825	2	NR	955	0	NR
440	454	NR	570	831	NR	700	89	NR	830	2	NR	960	0	NR
445	713	NR	575	860	NR	705	77	NR	835	2	NR	965	0	NR
450	983	NR	580	882	NR	710	65	NR	840	2	NR	970	0	NR
455	861	NR	585	893	NR	715	56	NR	845	1	NR	975	0	NR
460	540	NR	590	892	NR	720	48	NR	850	1	NR	980	0	NR
465	386	NR	595	880	NR	725	41	NR	855	1	NR	985	0	NR
470	279	NR	600	859	NR	730	35	NR	860	1	NR	990	0	NR
475	188	NR	605	825	NR	735	30	NR	865	1	NR	995	0	NR
480	149	NR	610	787	NR	740	26	NR	870	1	NR	1000	0	NR
485	143	NR	615	738	NR	745	22	NR	875	1	NR			

REPORT NUMBER: SP1-2406-133-1

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

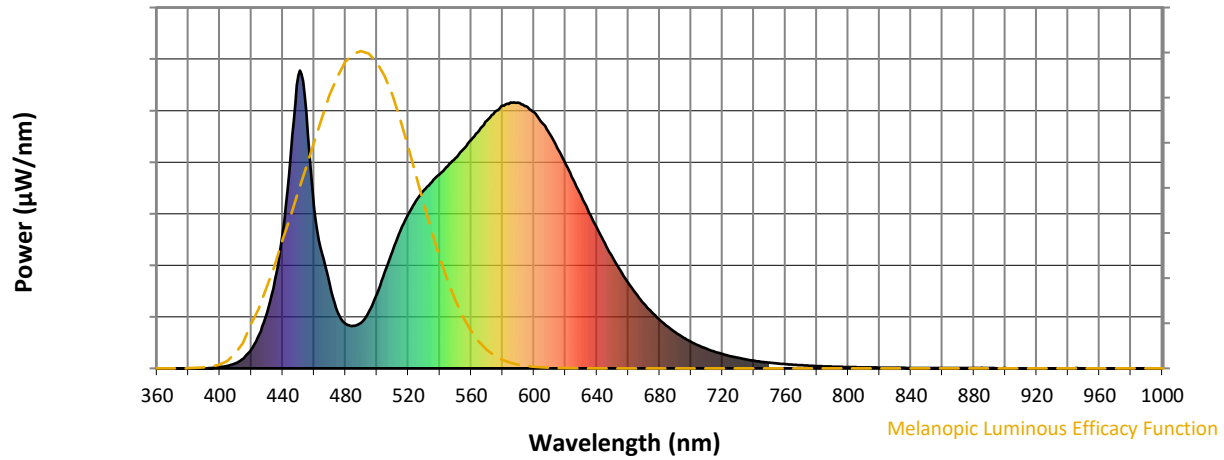
S/P: 1.53

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	154	NR	620	687	NR	750	19	NR	880	1	NR
365	0	NR	495	191	NR	625	634	NR	755	17	NR	885	2	NR
370	0	NR	500	251	NR	630	581	NR	760	14	NR	890	1	NR
375	0	NR	505	323	NR	635	524	NR	765	12	NR	895	0	NR
380	0	NR	510	395	NR	640	471	NR	770	11	NR	900	1	NR
385	0	NR	515	462	NR	645	420	NR	775	9	NR	905	0	NR
390	0	NR	520	520	NR	650	373	NR	780	8	NR	910	0	NR
395	1	NR	525	563	NR	655	328	NR	785	7	NR	915	0	NR
400	4	NR	530	599	NR	660	286	NR	790	6	NR	920	0	NR
405	8	NR	535	627	NR	665	250	NR	795	5	NR	925	0	NR
410	17	NR	540	653	NR	670	217	NR	800	4	NR	930	0	NR
415	34	NR	545	679	NR	675	188	NR	805	4	NR	935	0	NR
420	63	NR	550	706	NR	680	163	NR	810	3	NR	940	0	NR
425	114	NR	555	737	NR	685	140	NR	815	3	NR	945	1	NR
430	186	NR	560	768	NR	690	121	NR	820	3	NR	950	0	NR
435	297	NR	565	798	NR	695	104	NR	825	2	NR	955	0	NR
440	454	NR	570	831	NR	700	89	NR	830	2	NR	960	0	NR
445	713	NR	575	860	NR	705	77	NR	835	2	NR	965	0	NR
450	983	NR	580	882	NR	710	65	NR	840	2	NR	970	0	NR
455	861	NR	585	893	NR	715	56	NR	845	1	NR	975	0	NR
460	540	NR	590	892	NR	720	48	NR	850	1	NR	980	0	NR
465	386	NR	595	880	NR	725	41	NR	855	1	NR	985	0	NR
470	279	NR	600	859	NR	730	35	NR	860	1	NR	990	0	NR
475	188	NR	605	825	NR	735	30	NR	865	1	NR	995	0	NR
480	149	NR	610	787	NR	740	26	NR	870	1	NR	1000	0	NR
485	143	NR	615	738	NR	745	22	NR	875	1	NR			



REPORT NUMBER: SP1-2406-133-1

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.04

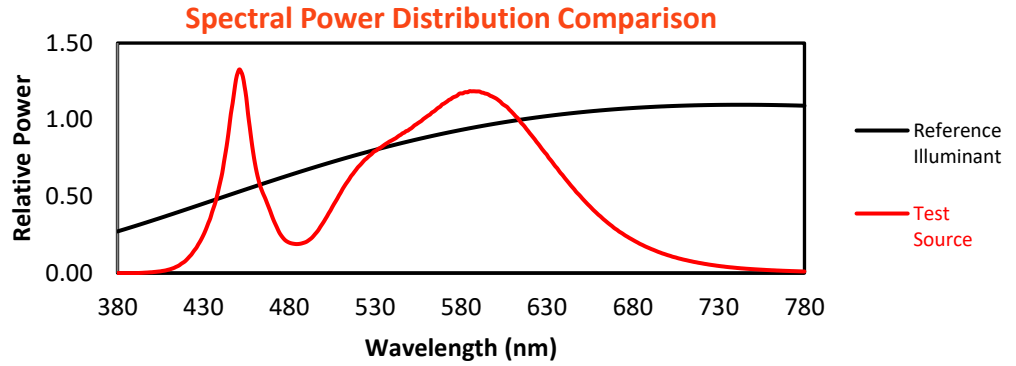
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	154	NR	620	687	NR	750	19	NR	880	1	NR
365	0	NR	495	191	NR	625	634	NR	755	17	NR	885	2	NR
370	0	NR	500	251	NR	630	581	NR	760	14	NR	890	1	NR
375	0	NR	505	323	NR	635	524	NR	765	12	NR	895	0	NR
380	0	NR	510	395	NR	640	471	NR	770	11	NR	900	1	NR
385	0	NR	515	462	NR	645	420	NR	775	9	NR	905	0	NR
390	0	NR	520	520	NR	650	373	NR	780	8	NR	910	0	NR
395	1	NR	525	563	NR	655	328	NR	785	7	NR	915	0	NR
400	4	NR	530	599	NR	660	286	NR	790	6	NR	920	0	NR
405	8	NR	535	627	NR	665	250	NR	795	5	NR	925	0	NR
410	17	NR	540	653	NR	670	217	NR	800	4	NR	930	0	NR
415	34	NR	545	679	NR	675	188	NR	805	4	NR	935	0	NR
420	63	NR	550	706	NR	680	163	NR	810	3	NR	940	0	NR
425	114	NR	555	737	NR	685	140	NR	815	3	NR	945	1	NR
430	186	NR	560	768	NR	690	121	NR	820	3	NR	950	0	NR
435	297	NR	565	798	NR	695	104	NR	825	2	NR	955	0	NR
440	454	NR	570	831	NR	700	89	NR	830	2	NR	960	0	NR
445	713	NR	575	860	NR	705	77	NR	835	2	NR	965	0	NR
450	983	NR	580	882	NR	710	65	NR	840	2	NR	970	0	NR
455	861	NR	585	893	NR	715	56	NR	845	1	NR	975	0	NR
460	540	NR	590	892	NR	720	48	NR	850	1	NR	980	0	NR
465	386	NR	595	880	NR	725	41	NR	855	1	NR	985	0	NR
470	279	NR	600	859	NR	730	35	NR	860	1	NR	990	0	NR
475	188	NR	605	825	NR	735	30	NR	865	1	NR	995	0	NR
480	149	NR	610	787	NR	740	26	NR	870	1	NR	1000	0	NR
485	143	NR	615	738	NR	745	22	NR	875	1	NR			

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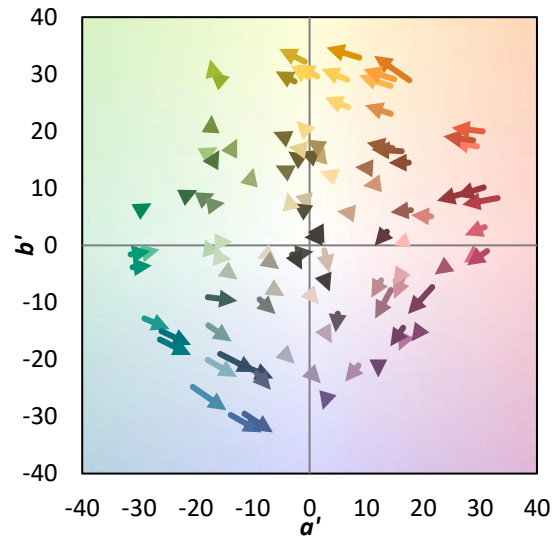
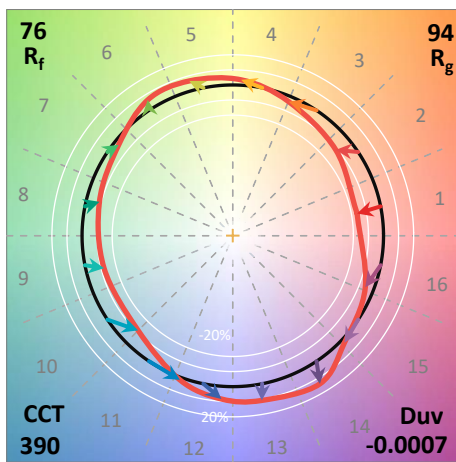
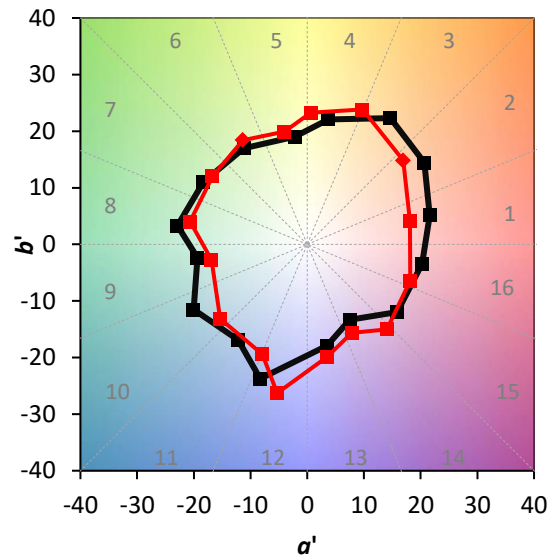
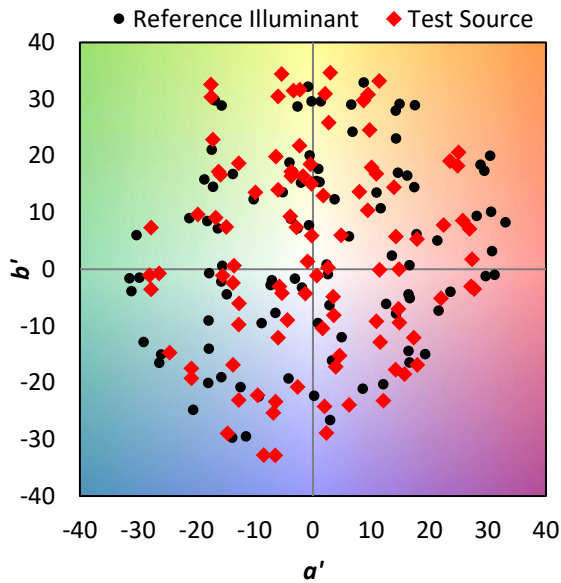
TM-30-18

**Summary**

$R_f = 76.2$   
 $R_g = 94.4$   
 CIE  $R_a = 74.5$   
 $R_g = -23.4$



**Color Vector Graphics**

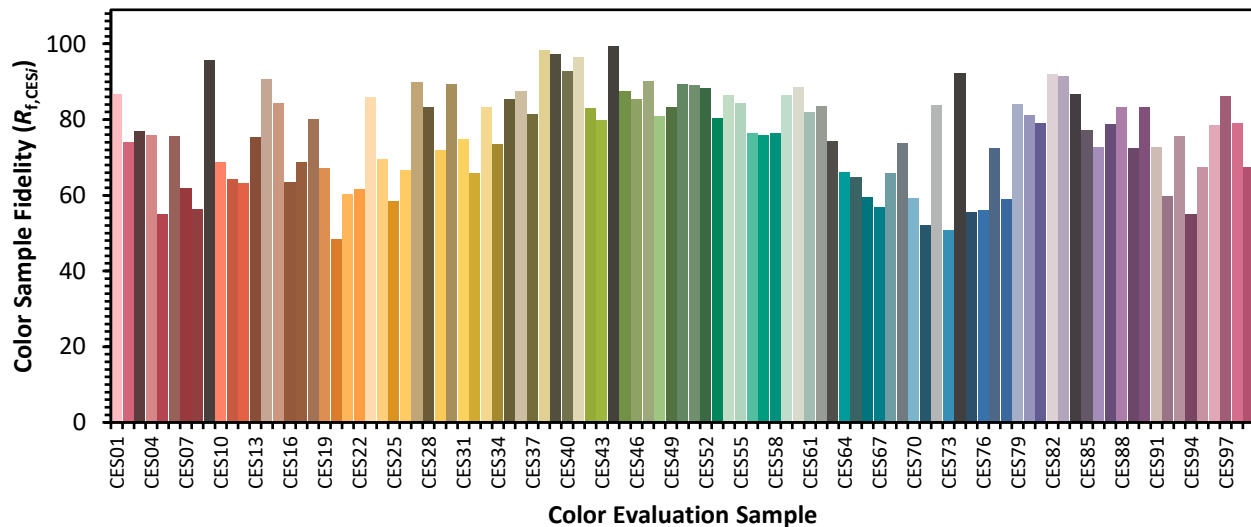


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**Individual Sample Fidelity Index ( $R_{f,i}$ )**

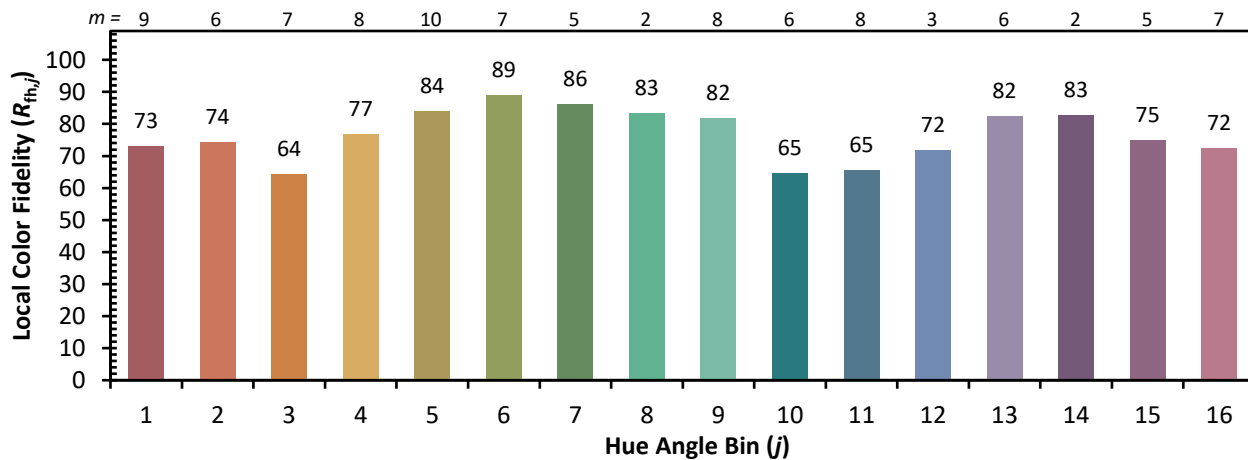
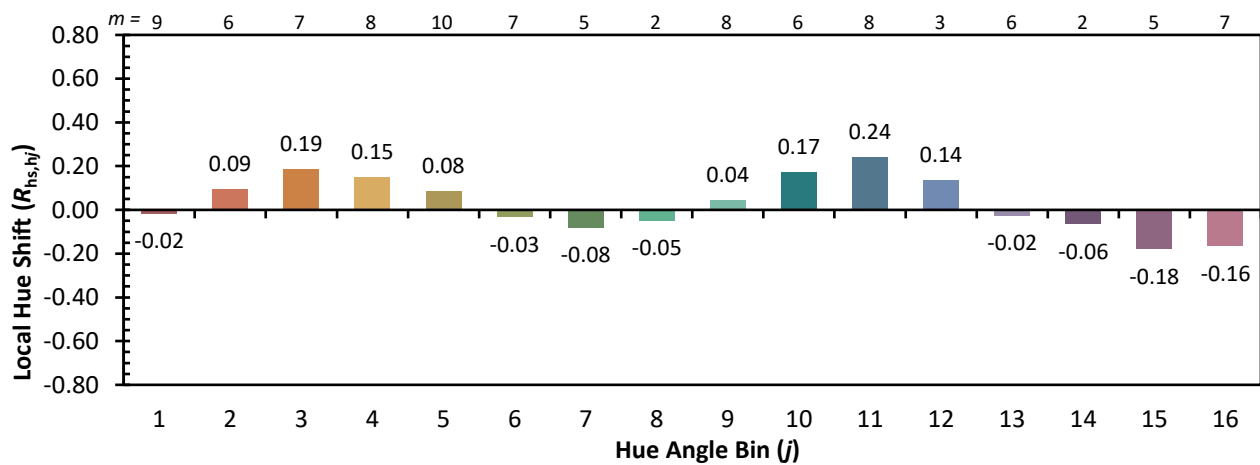
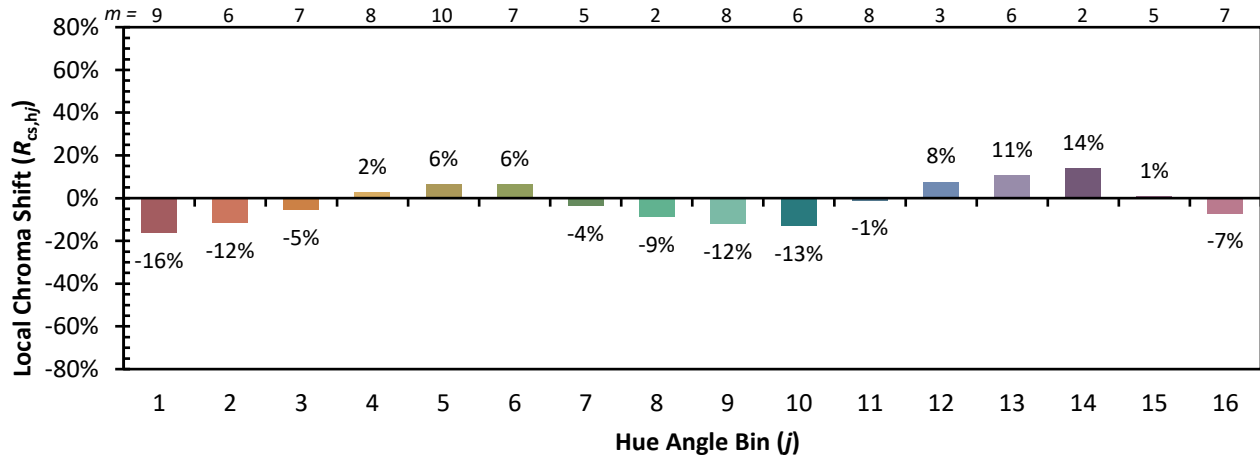
CES01 = 85	CES26 = 67	CES51 = 89	CES76 = 56
CES02 = 61	CES27 = 90	CES52 = 88	CES77 = 72
CES03 = 30	CES28 = 83	CES53 = 80	CES78 = 59
CES04 = 70	CES29 = 72	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 89	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 75	CES56 = 77	CES81 = 79
CES07 = 40	CES32 = 66	CES57 = 76	CES82 = 92
CES08 = 39	CES33 = 83	CES58 = 76	CES83 = 92
CES09 = 29	CES34 = 74	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 85	CES60 = 89	CES85 = 77
CES11 = 57	CES36 = 87	CES61 = 82	CES86 = 73
CES12 = 63	CES37 = 81	CES62 = 84	CES87 = 79
CES13 = 42	CES38 = 98	CES63 = 74	CES88 = 83
CES14 = 74	CES39 = 97	CES64 = 66	CES89 = 72
CES15 = 71	CES40 = 93	CES65 = 65	CES90 = 83
CES16 = 46	CES41 = 96	CES66 = 59	CES91 = 73
CES17 = 49	CES42 = 83	CES67 = 57	CES92 = 60
CES18 = 56	CES43 = 80	CES68 = 66	CES93 = 75
CES19 = 72	CES44 = 99	CES69 = 74	CES94 = 55
CES20 = 65	CES45 = 87	CES70 = 59	CES95 = 67
CES21 = 86	CES46 = 85	CES71 = 52	CES96 = 78
CES22 = 78	CES47 = 90	CES72 = 84	CES97 = 86
CES23 = 92	CES48 = 81	CES73 = 51	CES98 = 79
CES24 = 91	CES49 = 83	CES74 = 92	CES99 = 68
CES25 = 72	CES50 = 89	CES75 = 56	



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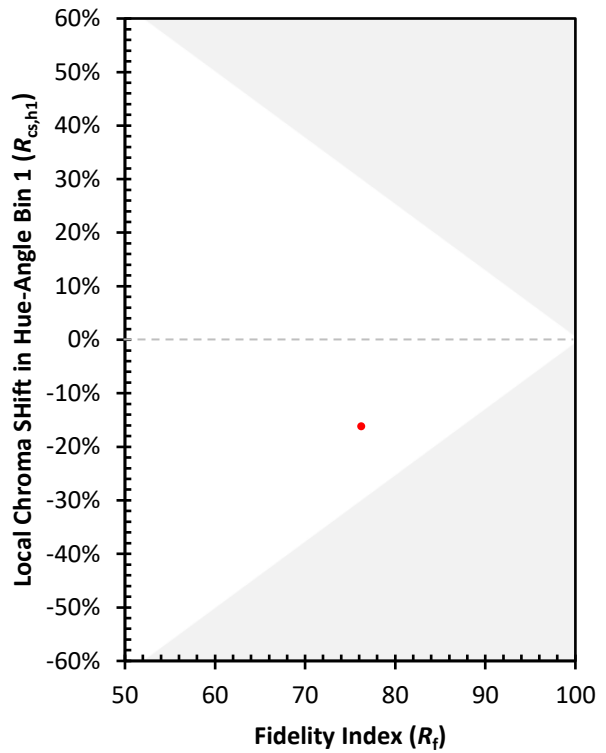
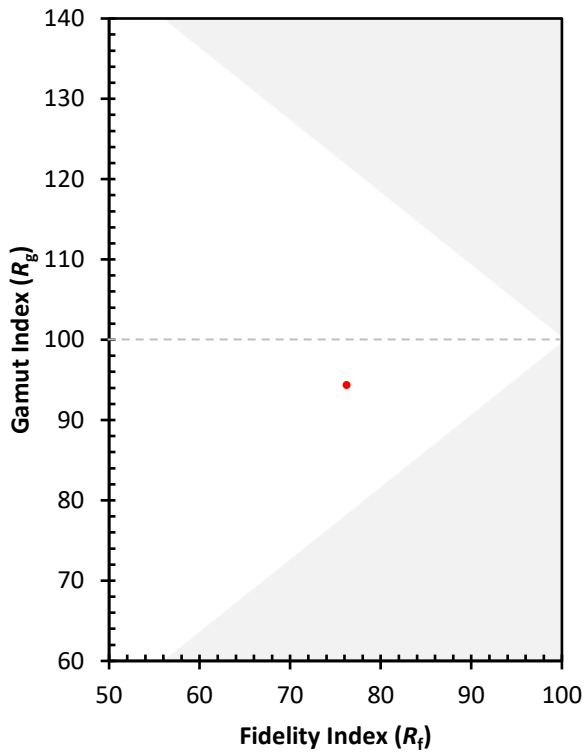
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2406-133-1

TM-30-18

Measure Comparisons



(END OF REPORT)