

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: P856203

Luminaire Tested: **FFX-CLB-70-727-U-FR-T3-UPLR**

Issue Date: 07/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856203  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 07/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: FFX-CLB-70-727-U-FR-T3-UPLR  
Description: FAIRFAX POST TOP FIXTURE w/ FAIRFAX REFRACTOR T3 DISTRIBUTION LENS AND UPLIGHT REFLECTOR  
Light Source: (4) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

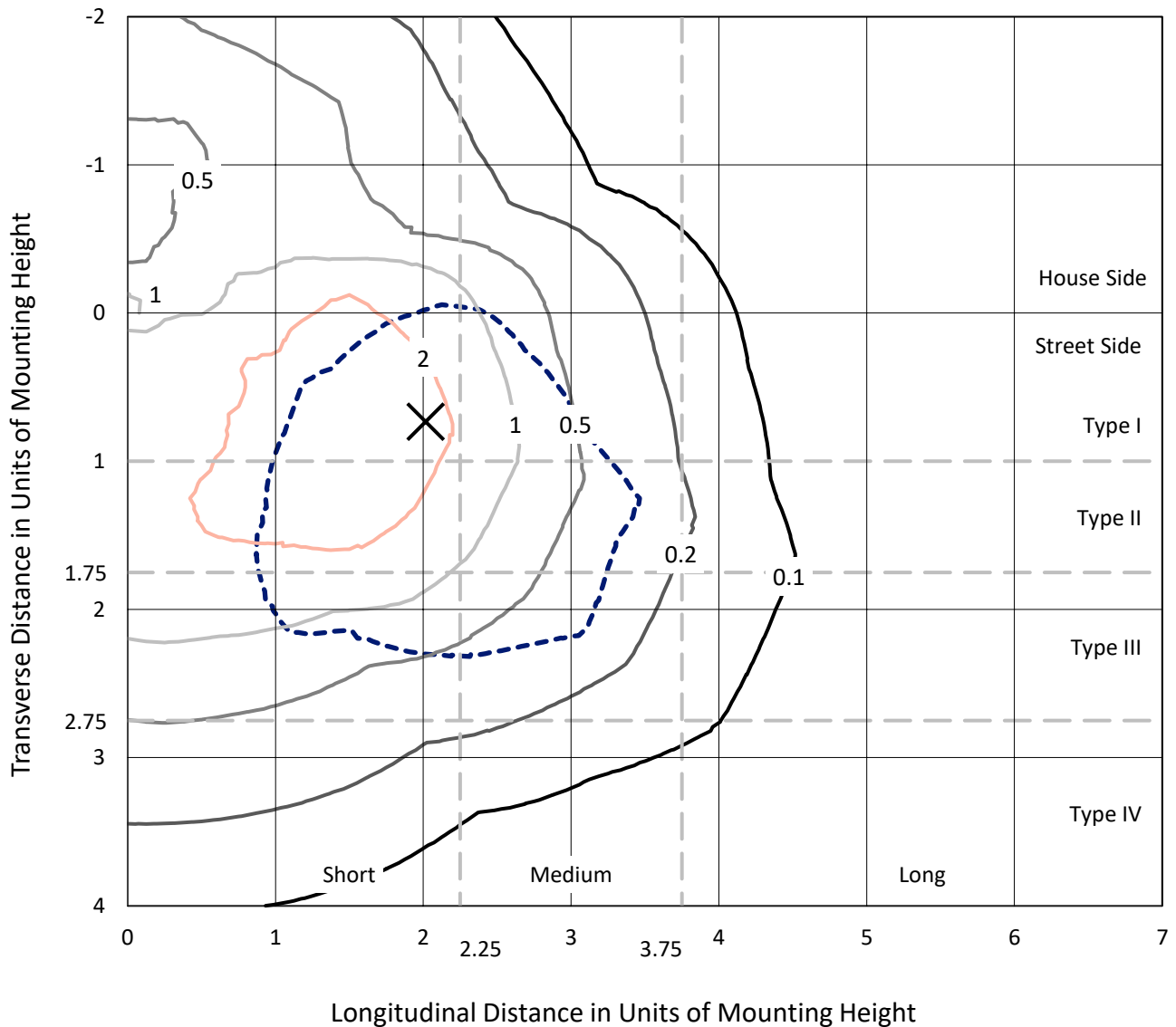
Lumens per Lamp: N/A  
Luminaire Lumens: 10072.1 lumens  
Efficiency: N/A  
Efficacy: 143.3 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.17' x H: 1.67')  
IES Classification: Type III - Short  
BUG Rating: B3 - U4 - G3

Input Watts (W): 70.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 7.1%%  
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

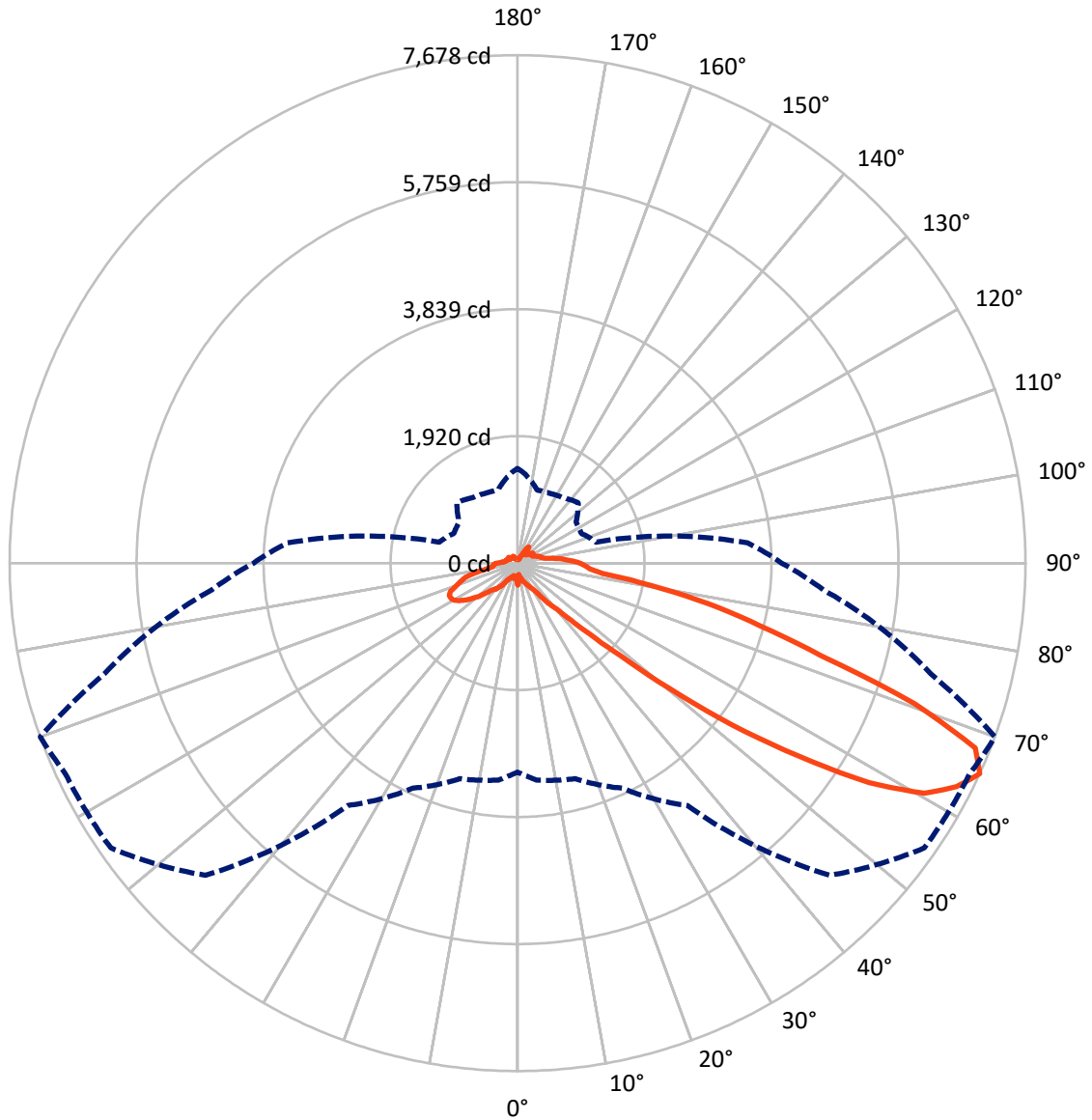
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.3 fc  
 Type III - Short - N/A

REPORT NUMBER: P856203  
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### Luminous Intensity Polar Plot



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

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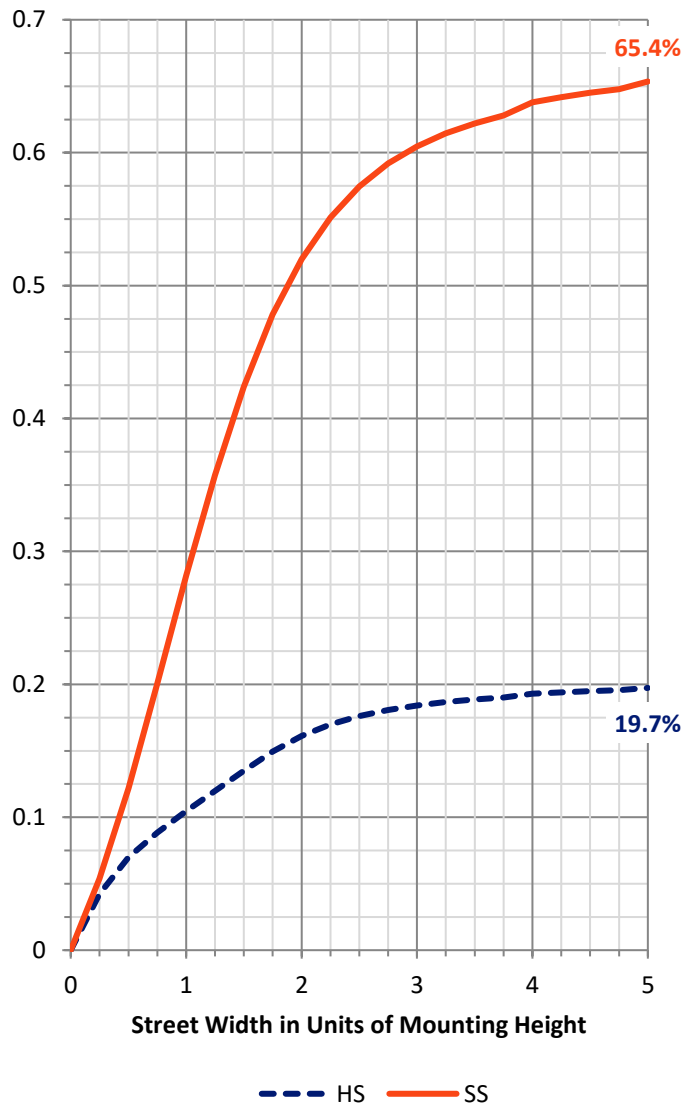
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2065.8	387.0	2452.8
	% Fixture	20.5	3.8	24.4
<b>Street Side</b>	Lumens	6811.9	807.4	7619.3
	% Fixture	67.6	8.0	75.6
<b>Total</b>	Lumens	8877.7	1194.4	10072.1
	% Fixture	88.1	11.9	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.5	0.2
10°-20°	67.4	0.7
20°-30°	135.9	1.3
30°-40°	287.6	2.9
40°-50°	670.7	6.7
50°-60°	1998.9	19.8
60°-70°	3203.0	31.8
70°-80°	1840.0	18.3
80°-90°	652.6	6.5
90°-100°	384.9	3.8
100°-110°	232.5	2.3
110°-120°	174.8	1.7
120°-130°	148.1	1.5
130°-140°	98.3	1.0
140°-150°	92.3	0.9
150°-160°	40.9	0.4
160°-170°	16.9	0.2
170°-180°	5.6	0.1
0°-90°	8877.7	88.1
0°-180°	10072.1	100.0



REPORT NUMBER: P856203

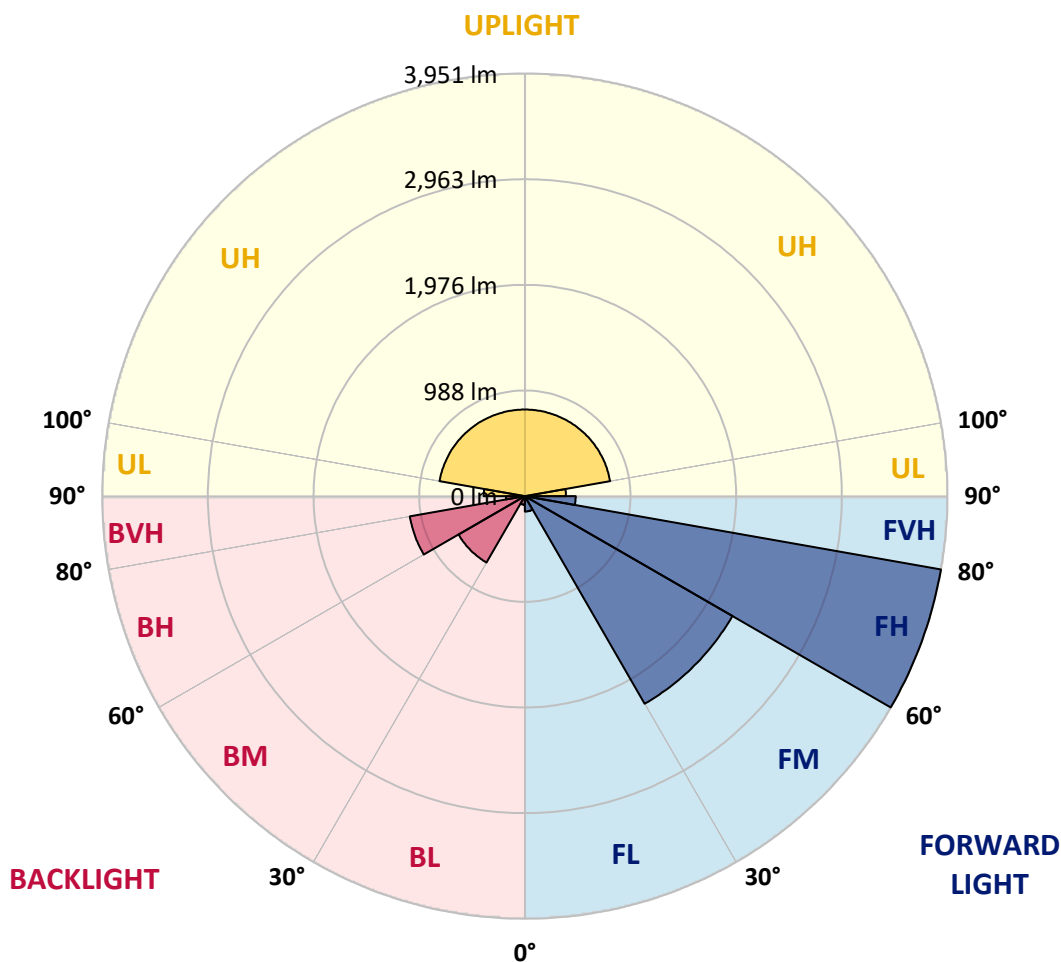
CATALOG NUMBER: FFX-CLB-70-727-U-FR-T3-UPLR

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	144.3	1.4			
FM (30°-60°)	2241.1	22.3			
FH (60°-80°)	3951.1	39.2			G2/5000
FVH (80°-90°)	475.4	4.7			G3/500
BL (0°-30°)	80.5	0.8	B0/110		
BM (30°-60°)	716.2	7.1	B1/1000		
BH (60°-80°)	1091.9	10.8	B3/2500		G3/2500
BVH (80°-90°)	177.2	1.8			G2/225
UL (90°-100°)	384.9	3.8		U3/500	
UH (100°-180°)	809.5	8.0		U4/1000	

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

Type III Short





REPORT NUMBER: P856203

CATALOG NUMBER: FFX-CLB-70-727-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1
2.5°	278.6	276.5	281.8	286.1	291.4	283.9	271.1	283.9	288.2	301.0	310.6
5°	237.0	238.0	243.4	255.1	265.8	263.7	230.6	187.9	175.1	169.7	170.8
7.5°	234.8	233.8	230.6	229.5	235.9	259.4	256.2	225.2	201.7	181.5	161.2
10°	247.6	250.8	254.0	254.0	249.8	234.8	233.8	231.6	223.1	213.5	200.7
12.5°	306.3	310.6	313.8	303.1	289.3	274.3	262.6	243.4	234.8	229.5	219.9
15°	370.4	374.7	369.3	349.0	324.5	296.7	286.1	287.1	275.4	261.5	241.2
17.5°	404.6	402.4	380.0	356.5	337.3	316.0	301.0	291.4	287.1	281.8	261.5
20°	383.2	377.9	364.0	354.4	352.2	340.5	330.9	322.4	317.0	305.3	280.7
22.5°	367.2	367.2	365.1	362.9	375.7	370.4	366.1	354.4	346.9	332.0	295.7
25°	387.5	387.5	388.5	385.3	402.4	402.4	402.4	389.6	380.0	358.7	314.9
27.5°	416.3	415.2	418.4	416.3	431.2	434.4	440.8	431.2	417.4	391.7	336.2
30°	447.2	447.2	450.5	452.6	467.5	475.0	482.5	478.2	461.1	430.2	372.5
32.5°	480.3	479.3	488.9	499.6	508.1	522.0	525.2	535.8	518.8	482.5	425.9
35°	528.4	531.6	557.2	579.6	604.2	612.7	627.6	669.3	652.2	603.1	538.0
37.5°	764.3	748.3	741.9	716.2	713.0	763.2	781.4	820.8	786.7	720.5	621.2
40°	810.2	791.0	782.4	757.9	766.4	869.9	851.8	993.8	910.5	804.8	740.8
42.5°	763.2	760.0	860.3	879.6	868.9	1033.3	998.0	1260.6	1172.0	926.5	855.0
45°	921.2	912.6	955.3	989.5	1016.2	1311.9	1290.5	1567.0	1528.5	1128.3	1057.8
47.5°	1039.7	1031.1	1080.2	1194.4	1350.3	1670.5	1795.4	2212.8	2082.5	1552.0	1391.9
50°	1394.1	1388.7	1521.1	1643.8	1901.1	2373.9	2716.6	3167.0	2976.0	2167.9	1873.3
52.5°	1729.2	1746.3	1901.1	2137.0	2409.2	3263.1	3752.0	4067.9	4065.8	2823.3	2404.9
55°	1969.4	2027.0	2209.6	2635.5	3013.3	4051.9	4711.6	4945.4	5141.8	3766.9	2929.0
57.5°	2435.9	2536.2	2711.2	3132.9	3620.7	5006.2	5947.7	5909.2	6262.6	4745.8	3499.0
60°	2915.1	3032.5	3091.3	3478.7	4119.2	5925.3	6797.3	6707.7	7063.1	5597.6	4098.9
62.5°	3064.6	3179.8	3237.5	3659.1	4478.9	6446.2	7189.1	7224.3	7445.3	6204.9	4454.3
65°	3158.5	3290.9	3374.1	3754.1	4471.4	6673.5	7506.1	7539.2	7678.0	6466.4	4637.9
67.5°	3141.4	3289.8	3396.5	3737.0	4223.8	6484.6	7427.1	7277.7	7463.4	6279.6	4444.7
70°	2802.0	2931.1	3037.9	3300.5	3525.7	5463.1	6425.9	6179.3	6371.4	5246.4	3669.8
72.5°	2289.6	2343.0	2435.9	2559.7	2671.8	4053.0	4901.6	4690.2	4801.3	3935.6	2749.7
75°	1880.8	1870.1	1953.4	2043.0	2007.8	2961.0	3877.9	3684.7	3788.3	2988.8	2193.5
77.5°	1394.1	1388.7	1509.3	1501.9	1448.5	2050.5	3074.2	2934.3	2948.2	2207.4	1642.8
80°	837.9	853.9	971.4	994.8	931.9	1286.2	2194.6	2128.4	2029.2	1508.3	1151.7
82.5°	588.1	612.7	674.6	700.2	669.3	939.3	1453.8	1407.9	1290.5	1094.1	811.2
85°	599.9	604.2	611.6	613.8	599.9	843.3	1128.3	1102.6	1095.2	916.9	669.3
87.5°	599.9	609.5	615.9	614.8	590.3	789.9	1040.7	1000.2	1009.8	857.1	646.9
90°	538.0	555.1	554.0	557.2	536.9	714.1	943.6	910.5	923.3	772.8	588.1
92.5°	439.8	451.5	463.3	485.7	455.8	607.4	797.4	766.4	782.4	657.5	500.6
95°	408.8	419.5	427.0	438.7	408.8	540.1	705.6	668.2	674.6	558.3	423.8
97.5°	330.9	337.3	345.8	348.0	326.6	415.2	536.9	504.9	509.2	433.4	333.0
100°	277.5	282.9	290.3	290.3	276.5	343.7	424.8	407.8	405.6	354.4	281.8
102.5°	262.6	264.7	276.5	274.3	260.5	317.0	384.3	373.6	374.7	328.8	264.7
105°	258.3	258.3	270.1	264.7	253.0	302.1	359.7	356.5	355.5	312.8	254.0
107.5°	254.0	254.0	265.8	260.5	250.8	285.0	338.4	327.7	326.6	297.8	240.2
110°	237.0	240.2	253.0	246.6	239.1	269.0	310.6	303.1	303.1	280.7	229.5



REPORT NUMBER: P856203

CATALOG NUMBER: FFX-CLB-70-727-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
112.5°	210.3	212.4	224.2	218.8	213.5	239.1	275.4	265.8	266.9	251.9	214.6
115°	196.4	199.6	211.3	203.9	199.6	223.1	255.1	248.7	250.8	237.0	202.8
117.5°	197.5	198.5	207.1	208.1	199.6	218.8	235.9	238.0	241.2	232.7	206.0
120°	240.2	234.8	239.1	233.8	229.5	251.9	272.2	274.3	273.3	257.2	204.9
122.5°	242.3	231.6	243.4	235.9	231.6	256.2	278.6	283.9	278.6	264.7	209.2
125°	193.2	196.4	197.5	199.6	203.9	230.6	242.3	243.4	244.4	240.2	202.8
127.5°	169.7	168.7	163.3	164.4	174.0	197.5	206.0	212.4	208.1	206.0	182.5
130°	162.2	164.4	163.3	163.3	168.7	186.8	193.2	202.8	199.6	195.3	166.5
132.5°	149.4	151.6	161.2	172.9	170.8	177.2	179.3	188.9	190.0	190.0	167.6
135°	142.0	144.1	151.6	166.5	162.2	165.5	164.4	172.9	174.0	175.1	158.0
137.5°	145.2	146.2	142.0	144.1	147.3	161.2	165.5	174.0	174.0	169.7	147.3
140°	152.6	152.6	143.0	139.8	146.2	167.6	176.1	190.0	187.9	180.4	152.6
142.5°	140.9	143.0	148.4	154.8	168.7	227.4	227.4	254.0	262.6	264.7	184.7
145°	183.6	184.7	186.8	190.0	216.7	297.8	271.1	290.3	297.8	305.3	222.0
147.5°	211.3	213.5	211.3	202.8	227.4	255.1	242.3	250.8	259.4	261.5	223.1
150°	165.5	163.3	162.2	161.2	187.9	196.4	185.7	184.7	191.1	196.4	172.9
152.5°	120.6	119.6	118.5	117.4	140.9	135.6	128.1	128.1	130.2	131.3	121.7
155°	106.7	105.7	103.5	104.6	119.6	114.2	107.8	105.7	107.8	106.7	101.4
157.5°	87.5	85.4	85.4	89.7	97.1	90.7	86.5	83.3	84.3	83.3	84.3
160°	72.6	71.5	72.6	77.9	82.2	76.9	72.6	70.4	70.4	72.6	76.9
162.5°	65.1	64.0	65.1	67.2	69.4	64.0	60.8	60.8	61.9	66.2	74.7
165°	56.6	56.6	57.6	58.7	59.8	56.6	55.5	55.5	57.6	64.0	73.7
167.5°	54.4	54.4	54.4	54.4	54.4	53.4	52.3	55.5	57.6	60.8	67.2
170°	53.4	52.3	53.4	53.4	53.4	53.4	53.4	56.6	56.6	57.6	60.8
172.5°	54.4	54.4	54.4	55.5	57.6	58.7	57.6	59.8	58.7	58.7	58.7
175°	55.5	55.5	56.6	57.6	58.7	59.8	60.8	60.8	60.8	61.9	61.9
177.5°	55.5	55.5	56.6	57.6	58.7	56.6	54.4	53.4	52.3	52.3	52.3
180°	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1	334.1
2.5°	302.1	275.4	238.0	254.0	303.1	293.5	244.4	214.6	216.7	238.0	240.2
5°	176.1	181.5	206.0	257.2	266.9	221.0	178.3	171.9	207.1	256.2	265.8
7.5°	159.0	159.0	179.3	249.8	280.7	230.6	174.0	156.9	183.6	224.2	230.6
10°	192.1	185.7	187.9	213.5	225.2	184.7	155.8	148.4	163.3	168.7	166.5
12.5°	216.7	221.0	241.2	235.9	184.7	150.5	140.9	139.8	148.4	153.7	152.6
15°	232.7	225.2	210.3	193.2	176.1	156.9	143.0	134.5	124.9	120.6	120.6
17.5°	247.6	232.7	206.0	190.0	172.9	159.0	146.2	133.4	129.2	130.2	130.2
20°	265.8	247.6	223.1	204.9	184.7	165.5	149.4	135.6	132.4	133.4	132.4
22.5°	279.7	263.7	238.0	214.6	193.2	171.9	155.8	142.0	137.7	136.6	136.6
25°	296.7	282.9	256.2	227.4	201.7	181.5	167.6	151.6	144.1	142.0	142.0
27.5°	319.2	307.4	277.5	246.6	216.7	193.2	178.3	161.2	150.5	146.2	145.2
30°	353.3	337.3	304.2	265.8	234.8	210.3	192.1	170.8	158.0	150.5	149.4
32.5°	404.6	384.3	340.5	292.5	255.1	229.5	207.1	180.4	164.4	155.8	154.8
35°	513.4	491.0	435.5	368.3	313.8	261.5	226.3	191.1	170.8	160.1	159.0
37.5°	581.7	541.2	473.9	413.1	346.9	316.0	271.1	224.2	179.3	165.5	163.3
40°	681.0	628.7	544.4	462.2	345.8	344.8	314.9	273.3	211.3	175.1	171.9
42.5°	754.7	687.4	581.7	489.9	349.0	358.7	333.0	296.7	250.8	203.9	198.5
45°	905.2	819.8	652.2	514.5	353.3	374.7	349.0	310.6	270.1	237.0	233.8
47.5°	1187.0	1068.5	788.8	561.5	401.4	428.0	382.1	337.3	297.8	264.7	257.2
50°	1580.9	1438.9	954.3	603.1	483.5	544.4	469.7	401.4	354.4	328.8	321.3
52.5°	2043.0	1884.0	1057.8	668.2	582.8	687.4	605.2	525.2	463.3	467.5	463.3
55°	2558.6	2370.7	1148.5	766.4	709.8	846.5	756.8	687.4	654.3	747.2	752.5
57.5°	3056.0	2855.4	1205.1	869.9	851.8	1030.1	925.5	876.4	889.2	1161.4	1225.4
60°	3531.0	3214.0	1248.9	967.1	971.4	1174.2	1094.1	1084.5	1124.0	1473.0	1570.2
62.5°	3805.4	3397.6	1246.7	1030.1	1046.1	1262.8	1192.3	1197.6	1227.5	1524.3	1605.4
65°	3992.2	3490.5	1225.4	1062.1	1078.1	1294.8	1204.1	1162.4	1143.2	1346.0	1432.5
67.5°	3880.1	3311.1	1174.2	1034.3	1055.7	1243.5	1130.4	1025.8	992.7	1102.6	1153.9
70°	3280.2	2766.8	1046.1	940.4	954.3	1049.3	953.2	839.0	805.9	863.5	887.0
72.5°	2478.6	2124.2	938.3	868.9	835.8	867.8	773.9	654.3	646.9	677.8	682.1
75°	1980.1	1667.3	855.0	783.5	694.9	728.0	614.8	486.7	477.1	479.3	468.6
77.5°	1492.3	1240.3	719.4	617.0	526.2	580.7	456.9	336.2	320.2	313.8	302.1
80°	1021.5	861.4	488.9	413.1	373.6	425.9	325.6	246.6	245.5	243.4	230.6
82.5°	724.8	665.0	399.2	351.2	317.0	335.2	282.9	230.6	225.2	226.3	212.4
85°	634.0	602.0	385.3	355.5	322.4	321.3	270.1	215.6	213.5	214.6	201.7
87.5°	606.3	571.1	376.8	339.4	307.4	291.4	238.0	190.0	195.3	198.5	186.8
90°	543.3	507.0	341.6	303.1	272.2	244.4	201.7	171.9	180.4	182.5	171.9
92.5°	457.9	420.6	265.8	243.4	228.4	224.2	188.9	163.3	169.7	170.8	162.2
95°	387.5	353.3	231.6	214.6	203.9	202.8	170.8	148.4	151.6	150.5	143.0
97.5°	311.7	287.1	202.8	186.8	175.1	168.7	146.2	129.2	133.4	135.6	130.2
100°	265.8	251.9	188.9	175.1	161.2	152.6	133.4	119.6	123.8	128.1	123.8
102.5°	249.8	239.1	185.7	170.8	155.8	145.2	127.0	112.1	114.2	119.6	116.3
105°	237.0	227.4	180.4	164.4	150.5	138.8	123.8	105.7	104.6	109.9	108.9
107.5°	223.1	214.6	177.2	158.0	143.0	132.4	118.5	101.4	97.1	100.3	99.3
110°	215.6	207.1	170.8	150.5	134.5	124.9	112.1	98.2	92.9	93.9	93.9



REPORT NUMBER: P856203  
 CATALOG NUMBER: FFX-CLB-70-727-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	200.7	191.1	156.9	137.7	124.9	116.3	103.5	93.9	87.5	89.7	90.7
115°	191.1	178.3	144.1	130.2	116.3	108.9	101.4	92.9	85.4	85.4	86.5
117.5°	197.5	172.9	134.5	123.8	116.3	114.2	112.1	99.3	84.3	83.3	83.3
120°	188.9	174.0	146.2	143.0	135.6	129.2	115.3	98.2	82.2	80.1	80.1
122.5°	184.7	181.5	165.5	154.8	140.9	128.1	107.8	89.7	79.0	76.9	76.9
125°	182.5	179.3	160.1	139.8	121.7	108.9	96.1	84.3	77.9	74.7	74.7
127.5°	167.6	152.6	129.2	117.4	105.7	100.3	89.7	82.2	74.7	70.4	70.4
130°	154.8	140.9	120.6	107.8	98.2	93.9	86.5	79.0	71.5	67.2	66.2
132.5°	152.6	138.8	117.4	101.4	92.9	88.6	84.3	75.8	67.2	63.0	61.9
135°	142.0	126.0	104.6	96.1	90.7	87.5	84.3	73.7	65.1	60.8	60.8
137.5°	131.3	115.3	99.3	95.0	90.7	87.5	77.9	67.2	60.8	57.6	57.6
140°	132.4	114.2	101.4	98.2	91.8	82.2	73.7	66.2	60.8	56.6	55.5
142.5°	140.9	118.5	102.5	92.9	88.6	83.3	80.1	71.5	60.8	53.4	51.2
145°	154.8	128.1	115.3	111.0	103.5	93.9	82.2	66.2	55.5	49.1	48.0
147.5°	170.8	144.1	129.2	117.4	102.5	86.5	70.4	57.6	49.1	47.0	45.9
150°	148.4	122.8	111.0	95.0	82.2	69.4	57.6	51.2	47.0	45.9	45.9
152.5°	112.1	91.8	82.2	74.7	67.2	60.8	54.4	50.2	47.0	44.8	44.8
155°	97.1	86.5	76.9	69.4	61.9	55.5	50.2	48.0	44.8	44.8	43.8
157.5°	85.4	80.1	67.2	60.8	55.5	52.3	50.2	47.0	45.9	44.8	44.8
160°	77.9	74.7	61.9	56.6	53.4	51.2	51.2	49.1	45.9	44.8	44.8
162.5°	75.8	72.6	59.8	54.4	51.2	52.3	54.4	53.4	49.1	47.0	47.0
165°	74.7	72.6	60.8	53.4	51.2	52.3	57.6	58.7	53.4	50.2	49.1
167.5°	68.3	67.2	64.0	58.7	55.5	55.5	58.7	59.8	57.6	57.6	56.6
170°	61.9	61.9	63.0	64.0	61.9	58.7	56.6	56.6	59.8	63.0	64.0
172.5°	59.8	60.8	63.0	66.2	66.2	61.9	58.7	57.6	60.8	65.1	66.2
175°	63.0	64.0	65.1	65.1	63.0	61.9	60.8	59.8	61.9	66.2	67.2
177.5°	52.3	52.3	53.4	53.4	52.3	53.4	52.3	50.2	50.2	50.2	50.2
180°	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1	49.1

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2406-133-3

Test Date: 07/12/2024

Luminaire Tested: FFX-CLB-100-727-U-FR-T5

Data in this report applies to families of products including FFX-CLB-100-727-U-FR-T5.

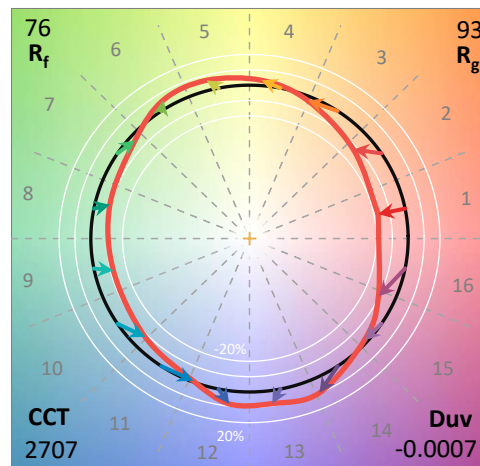
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2406-133-3  
 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-100-727-U-FR-T5**  
 Description: FAIRFAX ACORN W/ FAIRFAX REFRACTOR 100W T5

**Spectral Parameters**

CCT (K): 2707  
 CIE u': 0.2624  
 CIE v': 0.5261  
 Duv: -0.0007  
 CIE x: 0.4580  
 CIE y: 0.4082  
 CIE z: 0.1338  
 Peak Wavelength (nm): 599  
 Dominant Wavelength (nm): 584  
 Purity: 59.99901  
 Rf: 75.5  
 Rg: 92.5

CRI (Ra):	71.3		
R1:	67.8	R9:	-34.9
R2:	84.5	R10:	65.1
R3:	94.2	R11:	59.2
R4:	64.8	R12:	54.2
R5:	66.9	R13:	71.2
R6:	79.2	R14:	97.5
R7:	74.4	R15:	59.4
R8:	38.8		



**Test Conditions**

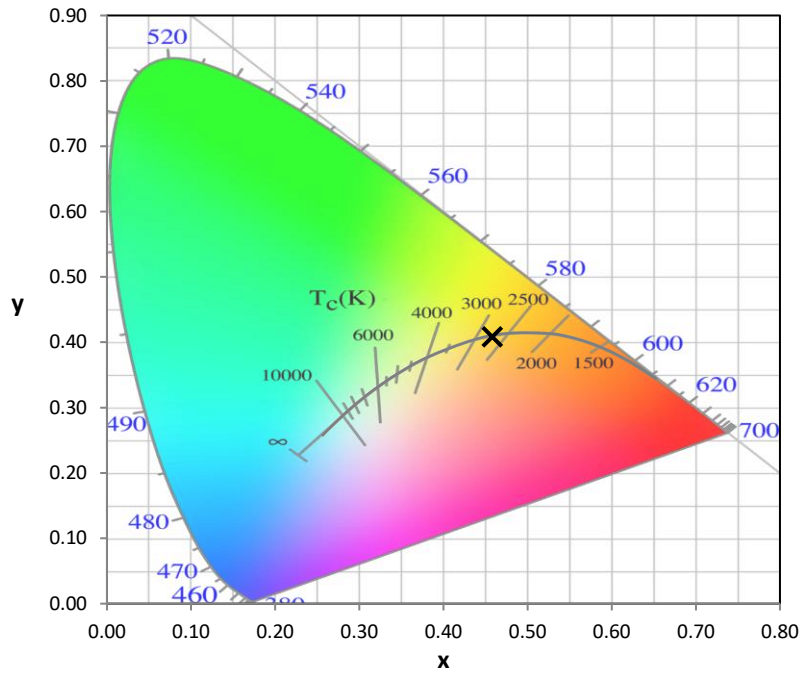
Stabilization Time: 0.813602M  
 Operation Time: 1H  
 Sphere Temperature (°C): 24.7

REPORT NUMBER: SP1-2406-133-3

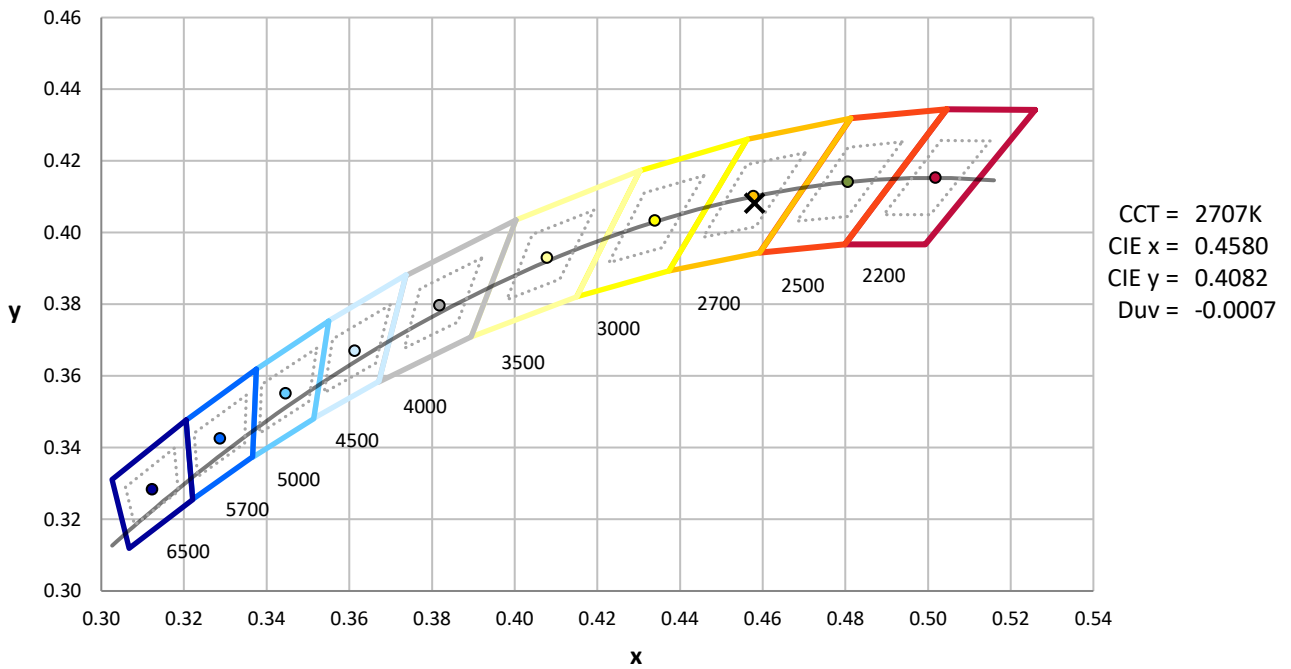
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2406-133-3

CIE 1931 Chromaticity Diagram



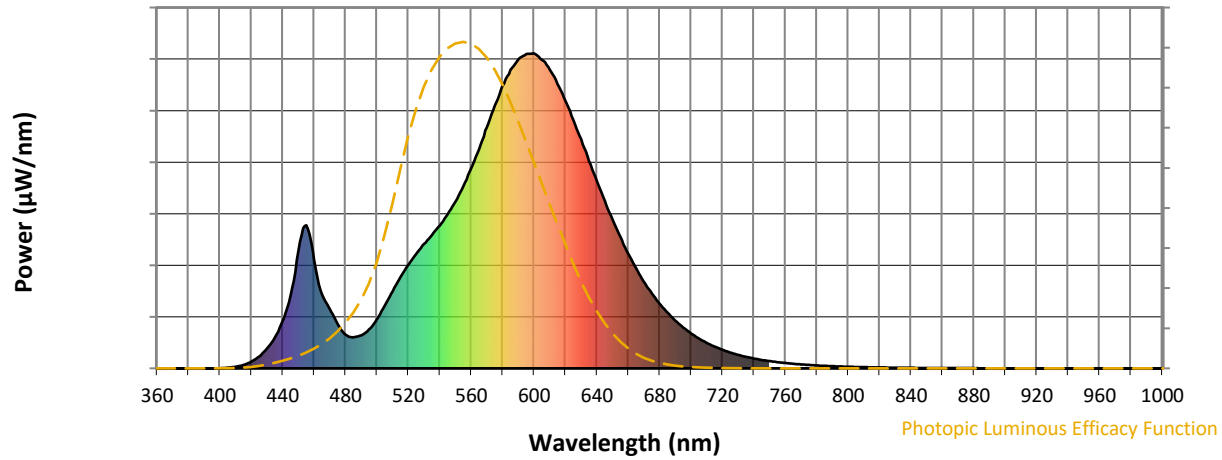
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2406-133-3

**Photopic Flux vs. Wavelength**

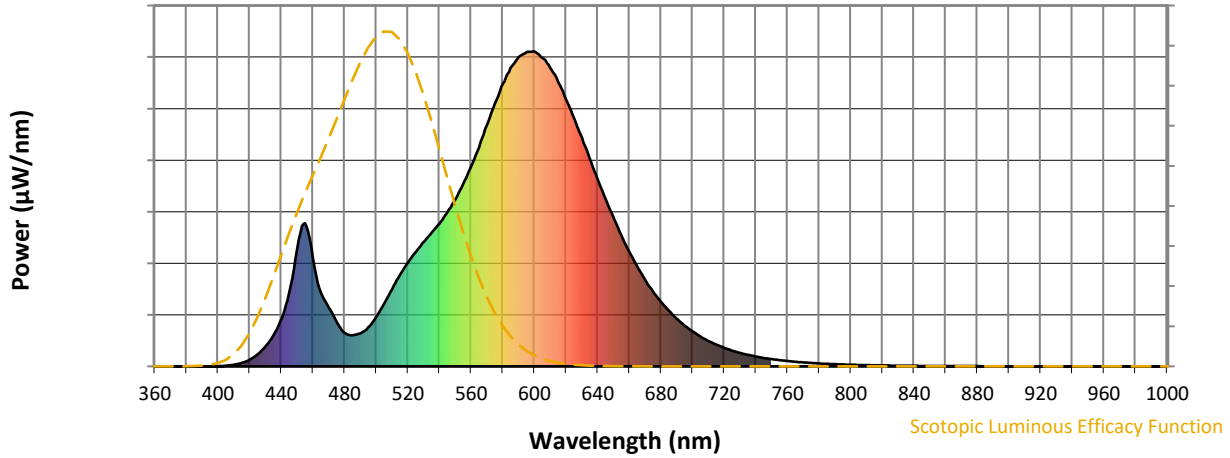


**Photopic Lumens: NR**

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	105	NR	620	849	NR	750	23	NR	880	1	NR
365	0	NR	495	124	NR	625	789	NR	755	20	NR	885	0	NR
370	0	NR	500	156	NR	630	727	NR	760	17	NR	890	0	NR
375	0	NR	505	200	NR	635	659	NR	765	15	NR	895	0	NR
380	0	NR	510	245	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	290	NR	645	531	NR	775	11	NR	905	0	NR
390	0	NR	520	330	NR	650	472	NR	780	9	NR	910	0	NR
395	0	NR	525	363	NR	655	417	NR	785	8	NR	915	0	NR
400	0	NR	530	395	NR	660	364	NR	790	7	NR	920	0	NR
405	2	NR	535	424	NR	665	317	NR	795	6	NR	925	0	NR
410	5	NR	540	454	NR	670	274	NR	800	5	NR	930	0	NR
415	11	NR	545	490	NR	675	237	NR	805	4	NR	935	0	NR
420	21	NR	550	530	NR	680	206	NR	810	4	NR	940	0	NR
425	38	NR	555	579	NR	685	176	NR	815	3	NR	945	0	NR
430	63	NR	560	635	NR	690	152	NR	820	3	NR	950	0	NR
435	99	NR	565	697	NR	695	129	NR	825	3	NR	955	0	NR
440	150	NR	570	765	NR	700	111	NR	830	2	NR	960	0	NR
445	233	NR	575	834	NR	705	95	NR	835	2	NR	965	0	NR
450	372	NR	580	897	NR	710	81	NR	840	2	NR	970	0	NR
455	454	NR	585	948	NR	715	69	NR	845	1	NR	975	0	NR
460	345	NR	590	982	NR	720	59	NR	850	1	NR	980	0	NR
465	235	NR	595	998	NR	725	50	NR	855	1	NR	985	0	NR
470	187	NR	600	1000	NR	730	43	NR	860	1	NR	990	0	NR
475	141	NR	605	980	NR	735	36	NR	865	1	NR	995	0	NR
480	107	NR	610	949	NR	740	31	NR	870	1	NR	1000	0	NR
485	99	NR	615	902	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP1-2406-133-3

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

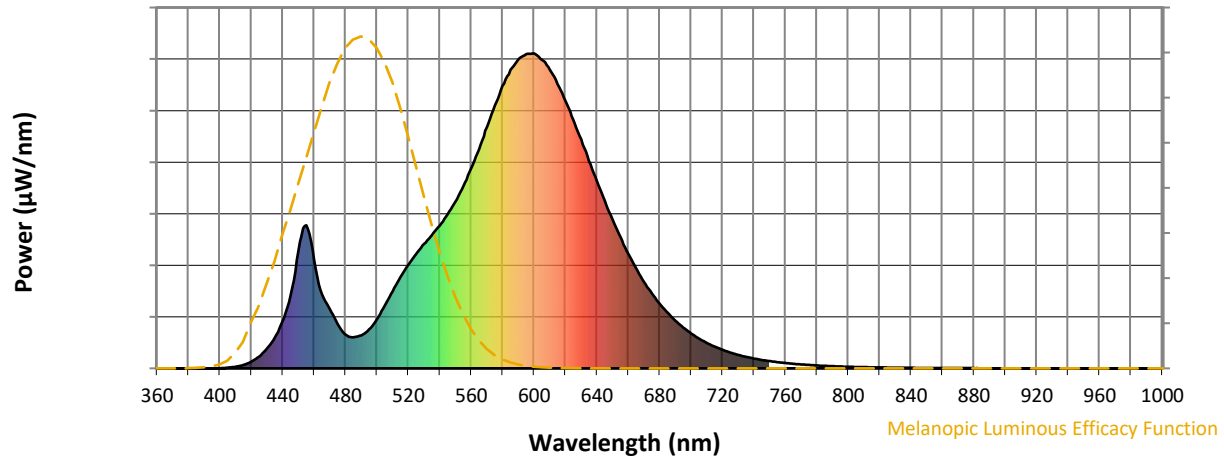
S/P: 1.12

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	105	NR	620	849	NR	750	23	NR	880	1	NR
365	0	NR	495	124	NR	625	789	NR	755	20	NR	885	0	NR
370	0	NR	500	156	NR	630	727	NR	760	17	NR	890	0	NR
375	0	NR	505	200	NR	635	659	NR	765	15	NR	895	0	NR
380	0	NR	510	245	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	290	NR	645	531	NR	775	11	NR	905	0	NR
390	0	NR	520	330	NR	650	472	NR	780	9	NR	910	0	NR
395	0	NR	525	363	NR	655	417	NR	785	8	NR	915	0	NR
400	0	NR	530	395	NR	660	364	NR	790	7	NR	920	0	NR
405	2	NR	535	424	NR	665	317	NR	795	6	NR	925	0	NR
410	5	NR	540	454	NR	670	274	NR	800	5	NR	930	0	NR
415	11	NR	545	490	NR	675	237	NR	805	4	NR	935	0	NR
420	21	NR	550	530	NR	680	206	NR	810	4	NR	940	0	NR
425	38	NR	555	579	NR	685	176	NR	815	3	NR	945	0	NR
430	63	NR	560	635	NR	690	152	NR	820	3	NR	950	0	NR
435	99	NR	565	697	NR	695	129	NR	825	3	NR	955	0	NR
440	150	NR	570	765	NR	700	111	NR	830	2	NR	960	0	NR
445	233	NR	575	834	NR	705	95	NR	835	2	NR	965	0	NR
450	372	NR	580	897	NR	710	81	NR	840	2	NR	970	0	NR
455	454	NR	585	948	NR	715	69	NR	845	1	NR	975	0	NR
460	345	NR	590	982	NR	720	59	NR	850	1	NR	980	0	NR
465	235	NR	595	998	NR	725	50	NR	855	1	NR	985	0	NR
470	187	NR	600	1000	NR	730	43	NR	860	1	NR	990	0	NR
475	141	NR	605	980	NR	735	36	NR	865	1	NR	995	0	NR
480	107	NR	610	949	NR	740	31	NR	870	1	NR	1000	0	NR
485	99	NR	615	902	NR	745	27	NR	875	1	NR			



REPORT NUMBER: SP1-2406-133-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.03

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	105	NR	620	849	NR	750	23	NR	880	1	NR
365	0	NR	495	124	NR	625	789	NR	755	20	NR	885	0	NR
370	0	NR	500	156	NR	630	727	NR	760	17	NR	890	0	NR
375	0	NR	505	200	NR	635	659	NR	765	15	NR	895	0	NR
380	0	NR	510	245	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	290	NR	645	531	NR	775	11	NR	905	0	NR
390	0	NR	520	330	NR	650	472	NR	780	9	NR	910	0	NR
395	0	NR	525	363	NR	655	417	NR	785	8	NR	915	0	NR
400	0	NR	530	395	NR	660	364	NR	790	7	NR	920	0	NR
405	2	NR	535	424	NR	665	317	NR	795	6	NR	925	0	NR
410	5	NR	540	454	NR	670	274	NR	800	5	NR	930	0	NR
415	11	NR	545	490	NR	675	237	NR	805	4	NR	935	0	NR
420	21	NR	550	530	NR	680	206	NR	810	4	NR	940	0	NR
425	38	NR	555	579	NR	685	176	NR	815	3	NR	945	0	NR
430	63	NR	560	635	NR	690	152	NR	820	3	NR	950	0	NR
435	99	NR	565	697	NR	695	129	NR	825	3	NR	955	0	NR
440	150	NR	570	765	NR	700	111	NR	830	2	NR	960	0	NR
445	233	NR	575	834	NR	705	95	NR	835	2	NR	965	0	NR
450	372	NR	580	897	NR	710	81	NR	840	2	NR	970	0	NR
455	454	NR	585	948	NR	715	69	NR	845	1	NR	975	0	NR
460	345	NR	590	982	NR	720	59	NR	850	1	NR	980	0	NR
465	235	NR	595	998	NR	725	50	NR	855	1	NR	985	0	NR
470	187	NR	600	1000	NR	730	43	NR	860	1	NR	990	0	NR
475	141	NR	605	980	NR	735	36	NR	865	1	NR	995	0	NR
480	107	NR	610	949	NR	740	31	NR	870	1	NR	1000	0	NR
485	99	NR	615	902	NR	745	27	NR	875	1	NR			

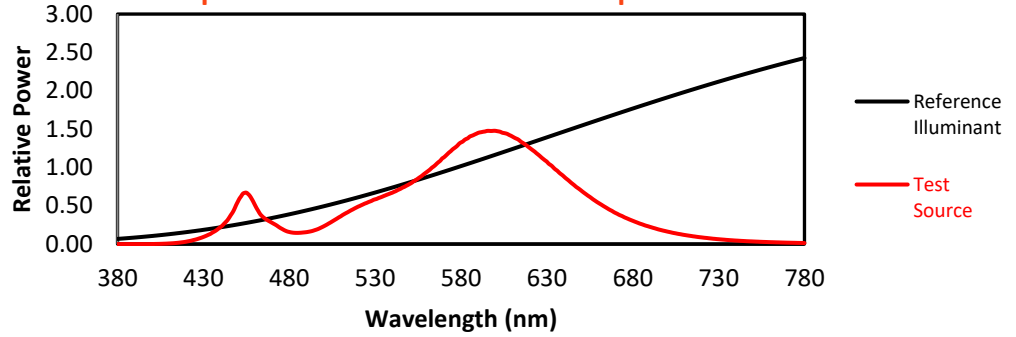
REPORT NUMBER: SP1-2406-133-3

TM-30-18

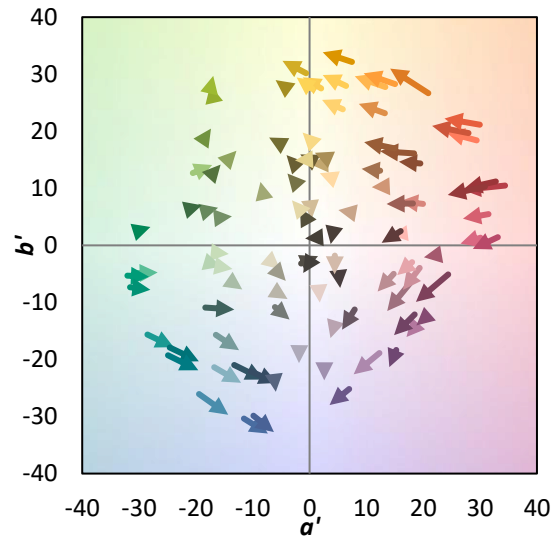
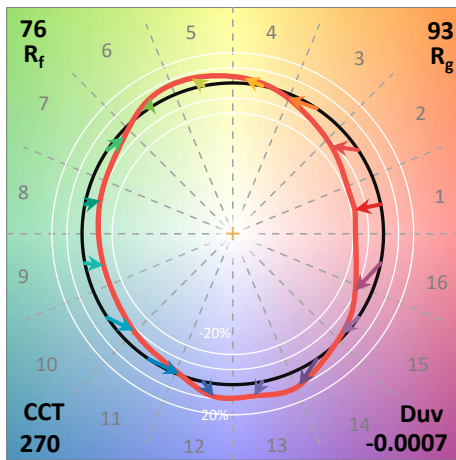
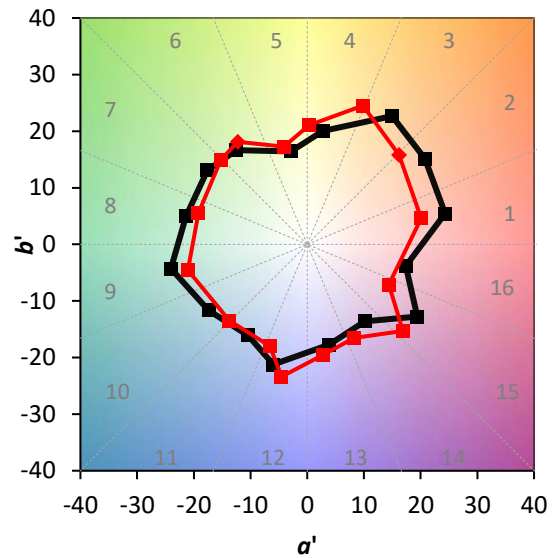
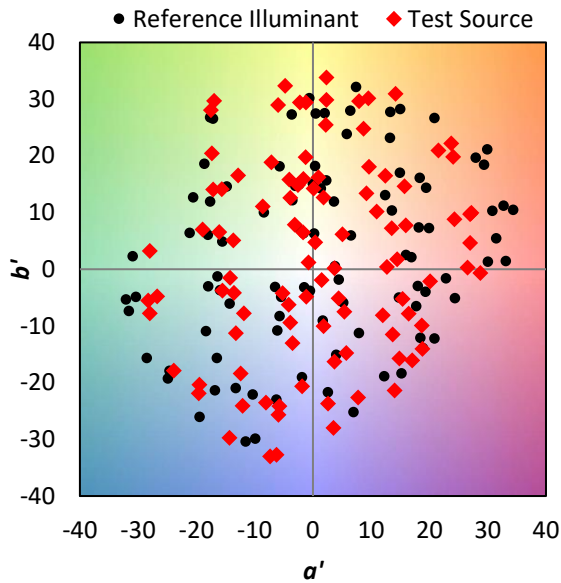
**Summary**

$R_f = 75.5$   
 $R_g = 92.5$   
 CIE  $R_a = 71.3$   
 $R_9 = -34.9$

**Spectral Power Distribution Comparison**



**Color Vector Graphics**

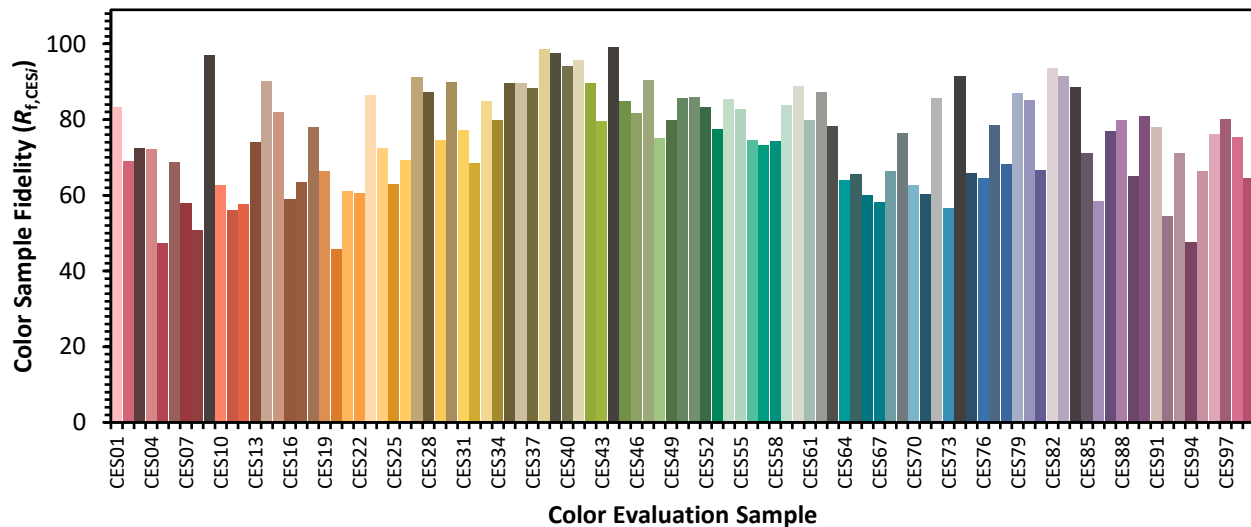


REPORT NUMBER: SP1-2406-133-3

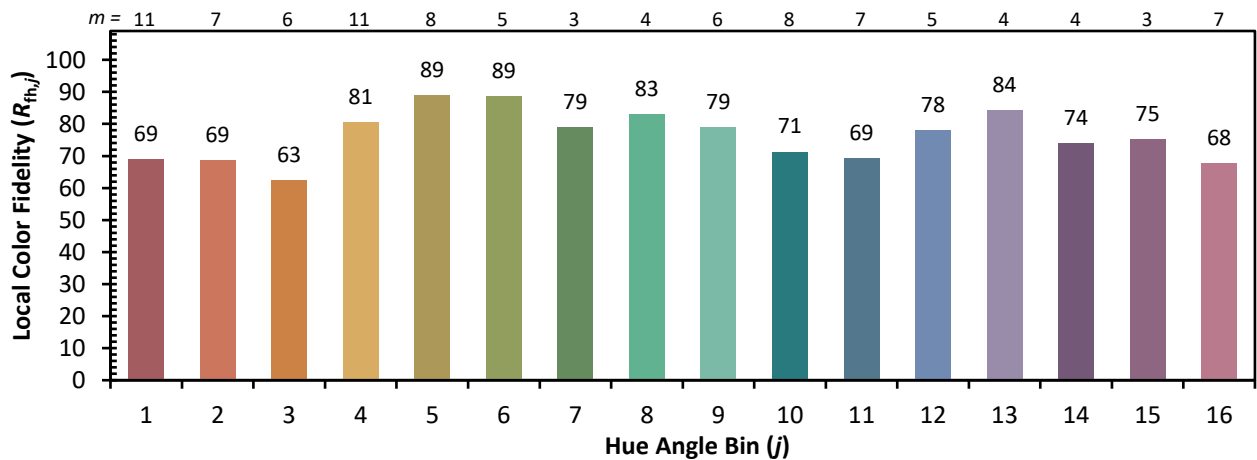
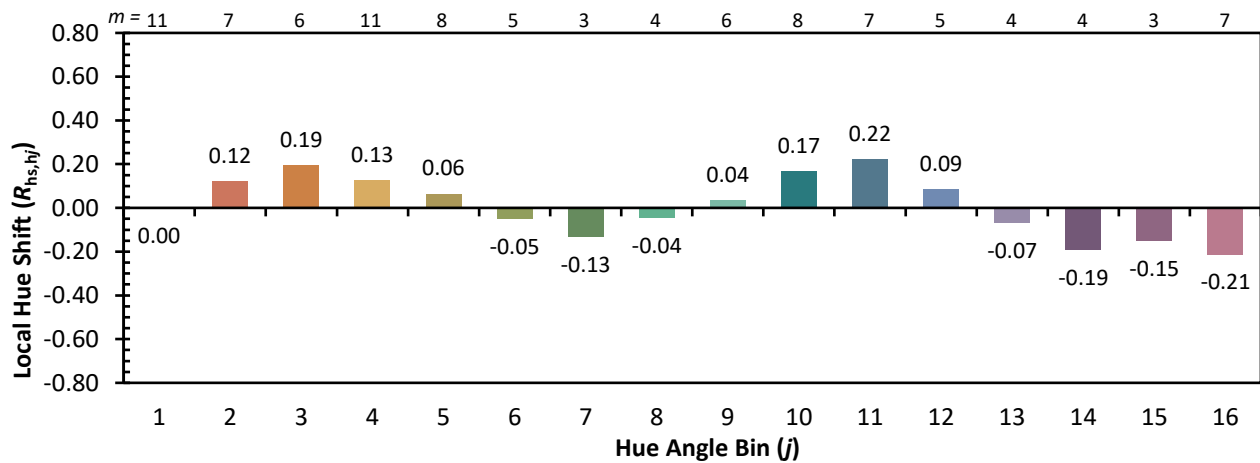
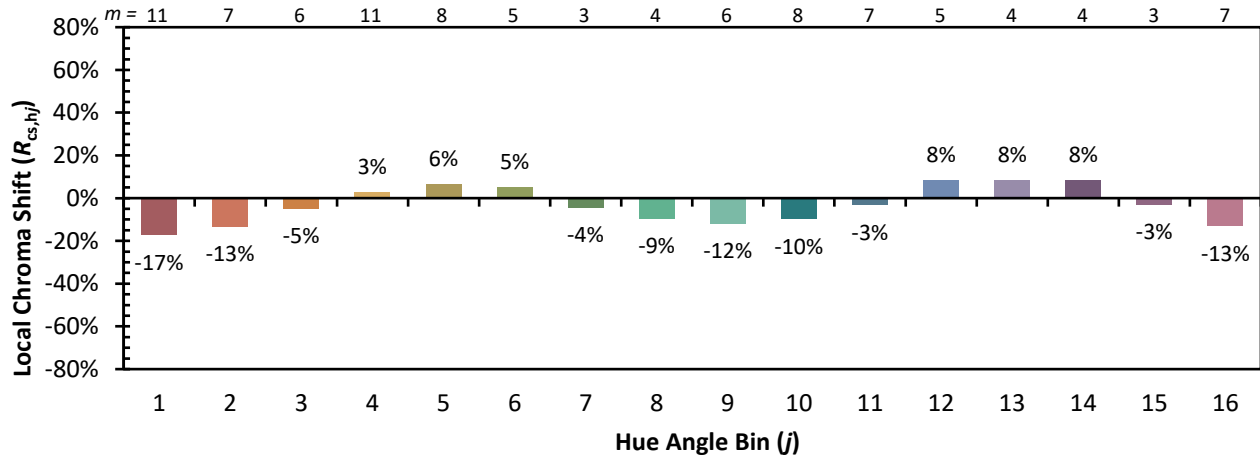
TM-30-18

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

CES01 = 86	CES26 = 69	CES51 = 86	CES76 = 64
CES02 = 63	CES27 = 91	CES52 = 83	CES77 = 79
CES03 = 31	CES28 = 87	CES53 = 77	CES78 = 68
CES04 = 71	CES29 = 75	CES54 = 85	CES79 = 87
CES05 = 50	CES30 = 90	CES55 = 83	CES80 = 85
CES06 = 52	CES31 = 77	CES56 = 75	CES81 = 67
CES07 = 42	CES32 = 68	CES57 = 73	CES82 = 93
CES08 = 41	CES33 = 85	CES58 = 74	CES83 = 91
CES09 = 29	CES34 = 80	CES59 = 84	CES84 = 89
CES10 = 77	CES35 = 89	CES60 = 89	CES85 = 71
CES11 = 60	CES36 = 90	CES61 = 80	CES86 = 59
CES12 = 66	CES37 = 88	CES62 = 87	CES87 = 77
CES13 = 43	CES38 = 99	CES63 = 78	CES88 = 80
CES14 = 74	CES39 = 97	CES64 = 64	CES89 = 65
CES15 = 72	CES40 = 94	CES65 = 66	CES90 = 81
CES16 = 48	CES41 = 96	CES66 = 60	CES91 = 78
CES17 = 51	CES42 = 90	CES67 = 58	CES92 = 54
CES18 = 57	CES43 = 80	CES68 = 66	CES93 = 71
CES19 = 73	CES44 = 99	CES69 = 76	CES94 = 48
CES20 = 67	CES45 = 85	CES70 = 63	CES95 = 66
CES21 = 88	CES46 = 82	CES71 = 60	CES96 = 76
CES22 = 80	CES47 = 90	CES72 = 86	CES97 = 80
CES23 = 92	CES48 = 75	CES73 = 57	CES98 = 75
CES24 = 91	CES49 = 80	CES74 = 92	CES99 = 64
CES25 = 73	CES50 = 86	CES75 = 66	



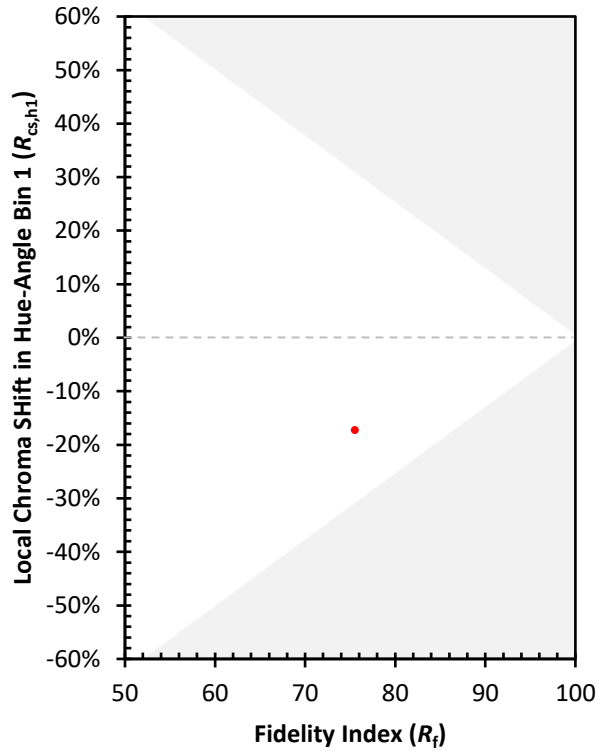
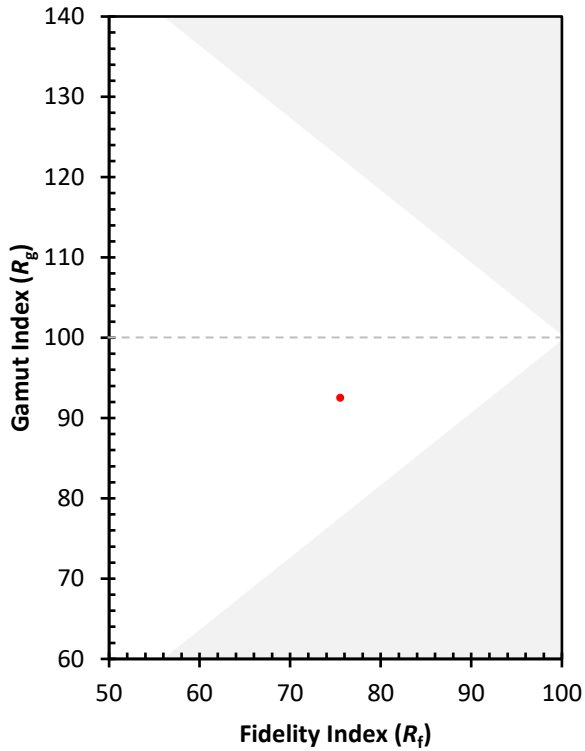
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2406-133-3

TM-30-18

Measure Comparisons



(END OF REPORT)