

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: P856224

Luminaire Tested: **FFX-CLB-40-740-U-FR-T3-UPLR**

Issue Date: 07/16/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P856224  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 07/16/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: FFX-CLB-40-740-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

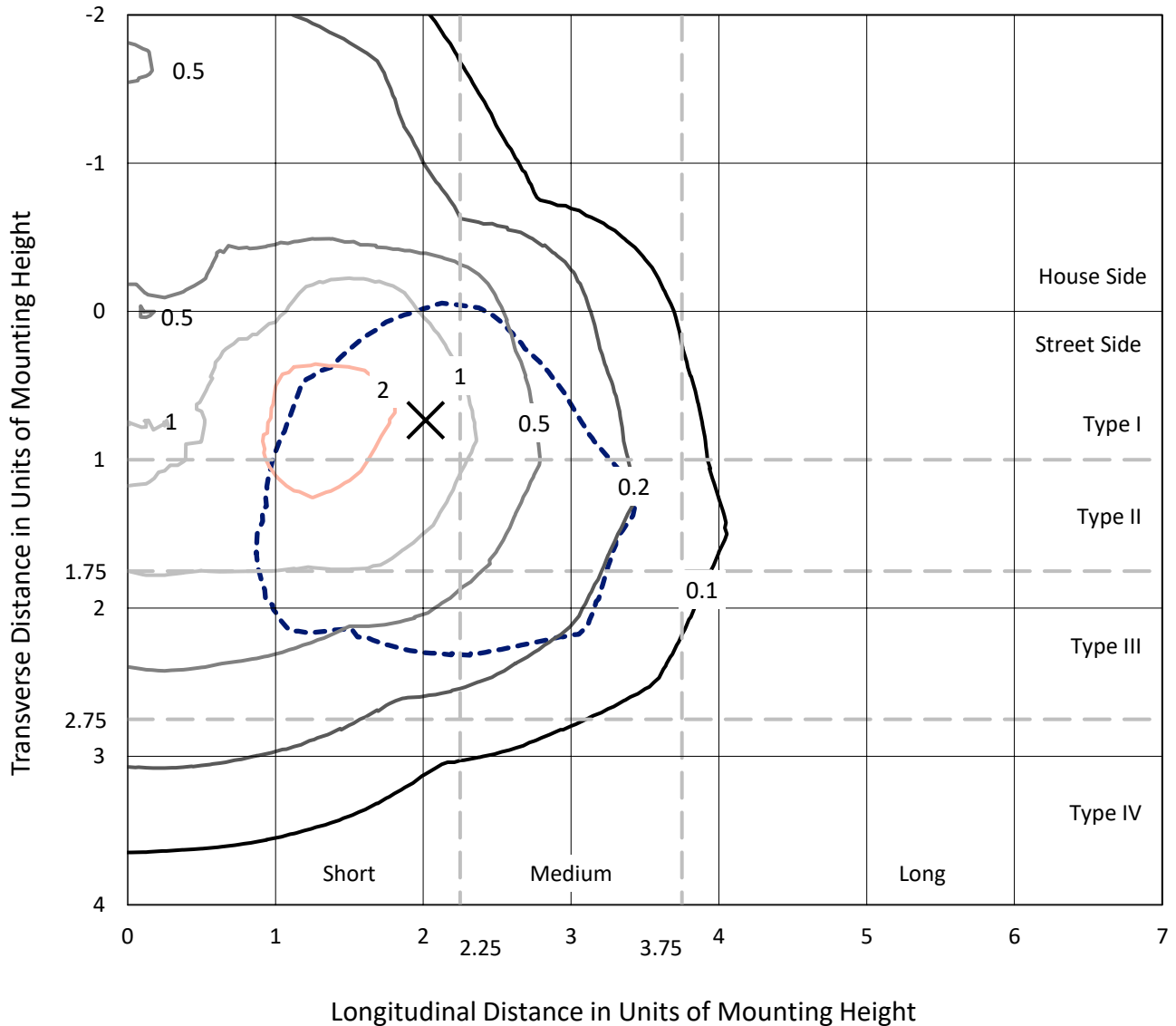
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6326.6 lumens  
Efficiency: N/A  
Efficacy: 161.0 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): 39.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 8.2%%  
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

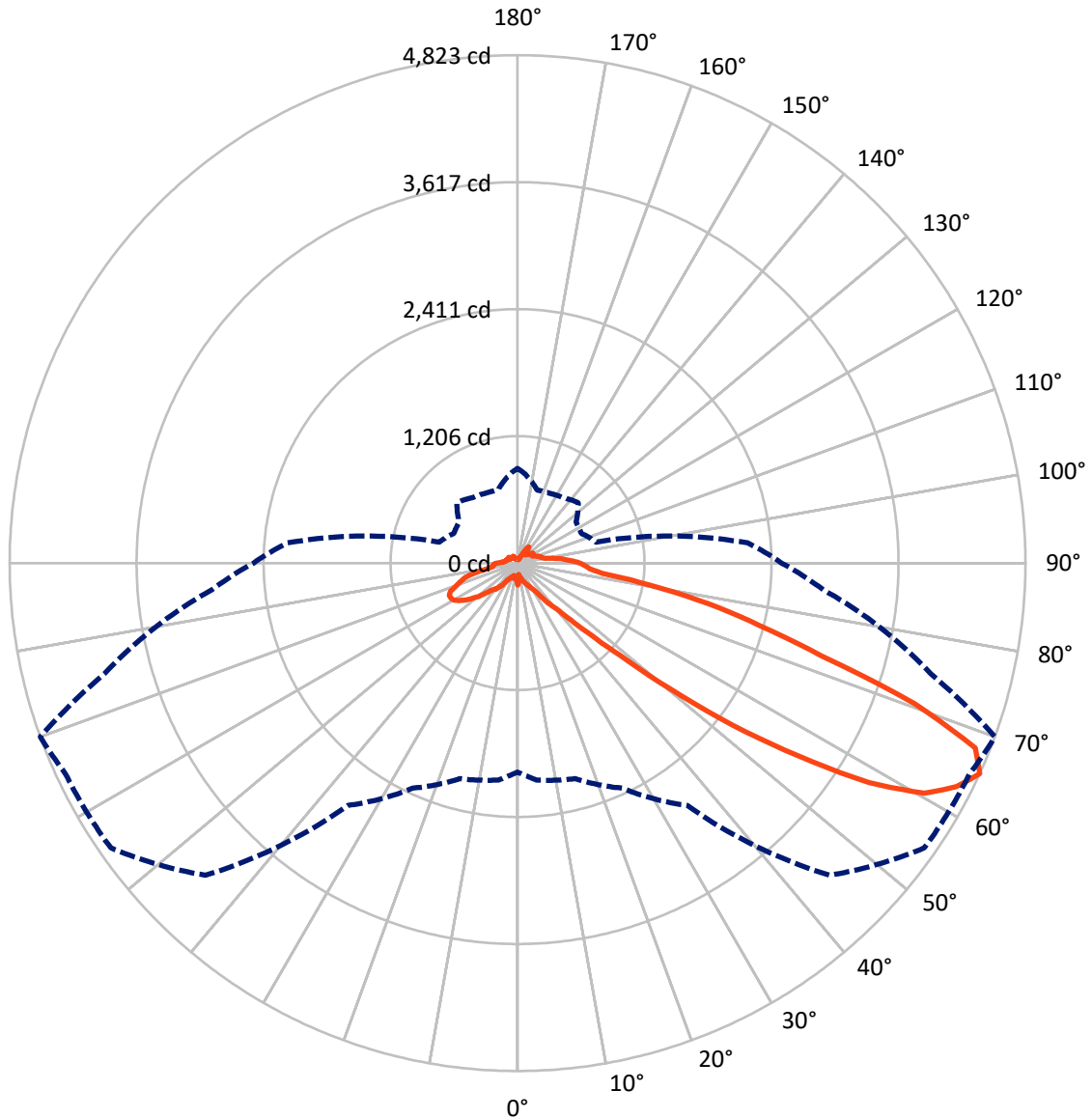
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.7 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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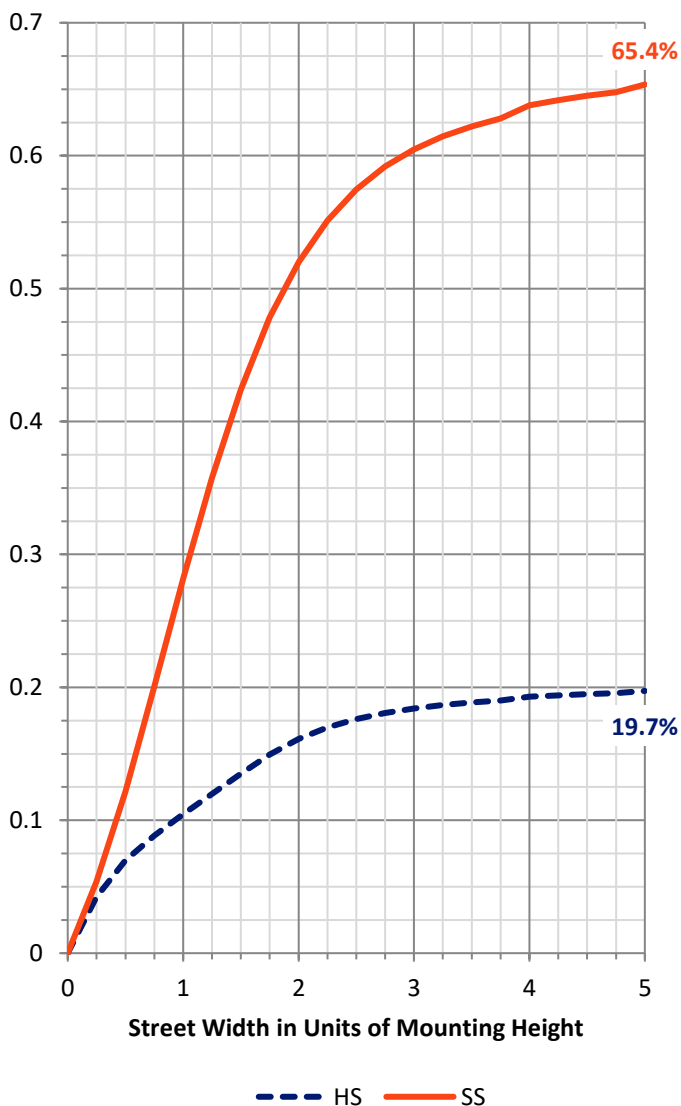
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1297.6	243.1	1540.7
	% Fixture	20.5	3.8	24.4
<b>Street Side</b>	Lumens	4278.8	507.1	4786.0
	% Fixture	67.6	8.0	75.6
<b>Total</b>	Lumens	5576.4	750.2	6326.6
	% Fixture	88.1	11.9	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.5	0.2
10°-20°	42.3	0.7
20°-30°	85.4	1.3
30°-40°	180.7	2.9
40°-50°	421.3	6.7
50°-60°	1255.6	19.8
60°-70°	2011.9	31.8
70°-80°	1155.8	18.3
80°-90°	409.9	6.5
90°-100°	241.8	3.8
100°-110°	146.1	2.3
110°-120°	109.8	1.7
120°-130°	93.0	1.5
130°-140°	61.7	1.0
140°-150°	58.0	0.9
150°-160°	25.7	0.4
160°-170°	10.6	0.2
170°-180°	3.5	0.1
0°-90°	5576.4	88.1
0°-180°	6326.6	100.0



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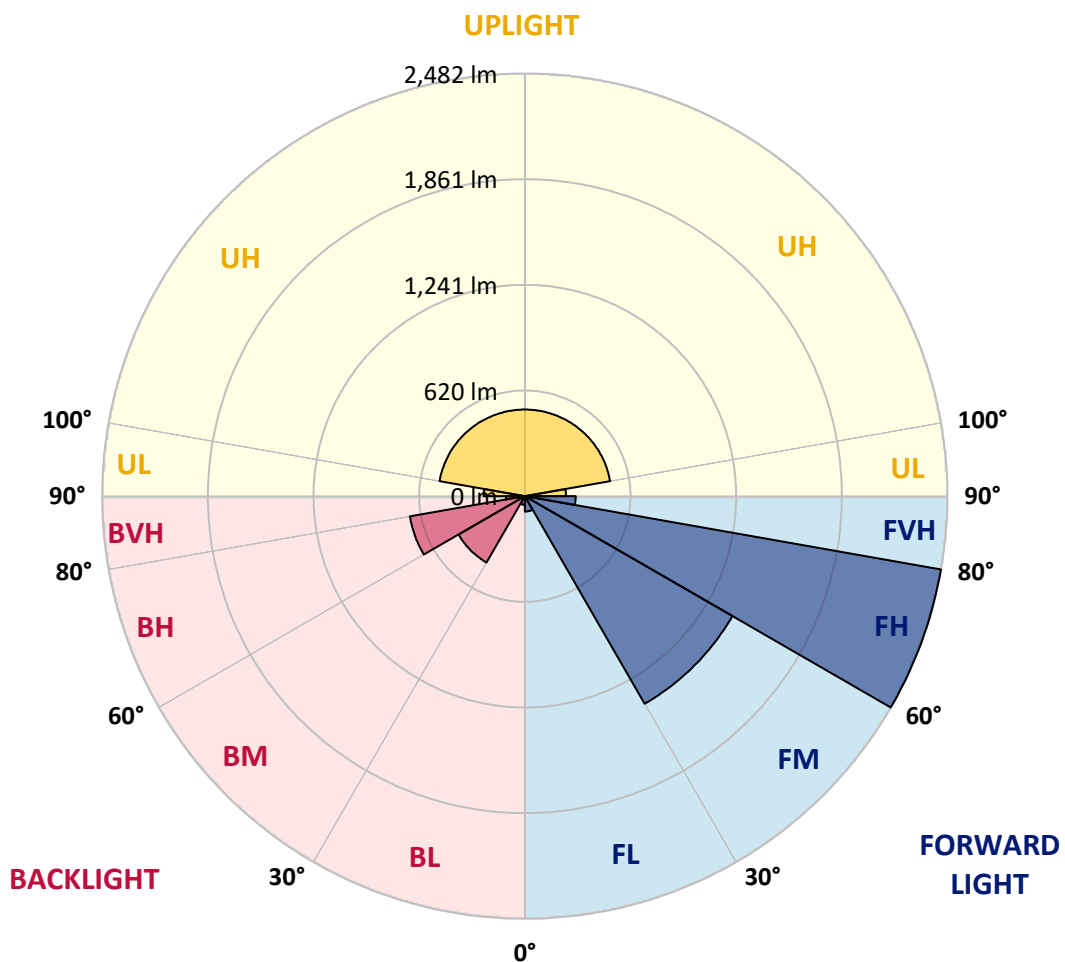
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	90.7	1.4			
FM (30°-60°)	1407.7	22.3			
FH (60°-80°)	2481.9	39.2			G2/5000
FVH (80°-90°)	298.6	4.7			G3/500
BL (0°-30°)	50.6	0.8	B0/110		
BM (30°-60°)	449.9	7.1	B1/1000		
BH (60°-80°)	685.9	10.8	B2/1000		G2/1000
BVH (80°-90°)	111.3	1.8			G2/225
UL (90°-100°)	241.8	3.8		U3/500	
UH (100°-180°)	508.5	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°	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9
2.5°	175.0	173.7	177.0	179.7	183.0	178.3	170.3	178.3	181.0	189.1	195.1
5°	148.8	149.5	152.9	160.2	167.0	165.6	144.8	118.0	110.0	106.6	107.3
7.5°	147.5	146.8	144.8	144.2	148.2	162.9	160.9	141.5	126.7	114.0	101.2
10°	155.6	157.6	159.6	159.6	156.9	147.5	146.8	145.5	140.1	134.1	126.1
12.5°	192.4	195.1	197.1	190.4	181.7	172.3	164.9	152.9	147.5	144.2	138.1
15°	232.7	235.3	232.0	219.2	203.8	186.4	179.7	180.4	173.0	164.3	151.5
17.5°	254.1	252.8	238.7	223.9	211.9	198.5	189.1	183.0	180.4	177.0	164.3
20°	240.7	237.4	228.6	222.6	221.3	213.9	207.9	202.5	199.1	191.8	176.3
22.5°	230.6	230.6	229.3	228.0	236.0	232.7	230.0	222.6	217.9	208.5	185.7
25°	243.4	243.4	244.1	242.0	252.8	252.8	252.8	244.7	238.7	225.3	197.8
27.5°	261.5	260.8	262.8	261.5	270.9	272.9	276.9	270.9	262.2	246.1	211.2
30°	280.9	280.9	282.9	284.3	293.7	298.4	303.1	300.4	289.7	270.2	234.0
32.5°	301.7	301.0	307.1	313.8	319.2	327.9	329.9	336.6	325.9	303.1	267.5
35°	331.9	333.9	350.0	364.1	379.5	384.9	394.2	420.4	409.7	378.8	337.9
37.5°	480.1	470.0	466.0	449.9	447.9	479.4	490.8	515.6	494.1	452.6	390.2
40°	508.9	496.8	491.5	476.0	481.4	546.4	535.0	624.2	571.9	505.5	465.3
42.5°	479.4	477.4	540.4	552.5	545.8	649.0	626.9	791.8	736.2	582.0	537.1
45°	578.6	573.3	600.1	621.5	638.3	824.0	810.6	984.3	960.1	708.7	664.5
47.5°	653.1	647.7	678.5	750.3	848.2	1049.3	1127.8	1389.9	1308.1	974.9	874.3
50°	875.7	872.3	955.4	1032.6	1194.1	1491.2	1706.4	1989.3	1869.3	1361.8	1176.7
52.5°	1086.2	1096.9	1194.1	1342.3	1513.3	2049.7	2356.8	2555.2	2553.9	1773.4	1510.6
55°	1237.0	1273.3	1387.9	1655.4	1892.8	2545.2	2959.5	3106.4	3229.7	2366.2	1839.8
57.5°	1530.1	1593.1	1703.0	1967.9	2274.3	3144.6	3736.0	3711.8	3933.8	2981.0	2197.9
60°	1831.1	1904.9	1941.7	2185.1	2587.4	3721.9	4269.7	4213.3	4436.6	3516.0	2574.7
62.5°	1925.0	1997.4	2033.6	2298.4	2813.4	4049.1	4515.7	4537.9	4676.7	3897.5	2797.9
65°	1984.0	2067.1	2119.4	2358.1	2808.7	4191.9	4714.9	4735.7	4822.8	4061.8	2913.3
67.5°	1973.2	2066.4	2133.5	2347.4	2653.1	4073.2	4665.3	4571.4	4688.0	3944.5	2791.9
70°	1760.0	1841.2	1908.2	2073.1	2214.6	3431.6	4036.3	3881.5	4002.1	3295.4	2305.1
72.5°	1438.2	1471.7	1530.1	1607.8	1678.2	2545.8	3078.9	2946.1	3015.9	2472.1	1727.2
75°	1181.4	1174.7	1227.0	1283.3	1261.2	1859.9	2435.9	2314.5	2379.6	1877.4	1377.9
77.5°	875.7	872.3	948.1	943.4	909.9	1288.0	1931.0	1843.2	1851.9	1386.6	1031.9
80°	526.3	536.4	610.1	624.9	585.3	807.9	1378.5	1337.0	1274.6	947.4	723.5
82.5°	369.4	384.9	423.7	439.8	420.4	590.0	913.2	884.4	810.6	687.2	509.6
85°	376.8	379.5	384.2	385.5	376.8	529.7	708.7	692.6	687.9	575.9	420.4
87.5°	376.8	382.8	386.9	386.2	370.8	496.2	653.7	628.2	634.3	538.4	406.3
90°	337.9	348.7	348.0	350.0	337.3	448.6	592.7	571.9	580.0	485.4	369.4
92.5°	276.2	283.6	291.0	305.1	286.3	381.5	500.9	481.4	491.5	413.0	314.5
95°	256.8	263.5	268.2	275.6	256.8	339.3	443.2	419.7	423.7	350.7	266.2
97.5°	207.9	211.9	217.2	218.6	205.2	260.8	337.3	317.1	319.8	272.2	209.2
100°	174.3	177.7	182.4	182.4	173.7	215.9	266.9	256.1	254.8	222.6	177.0
102.5°	164.9	166.3	173.7	172.3	163.6	199.1	241.4	234.7	235.3	206.5	166.3
105°	162.3	162.3	169.6	166.3	158.9	189.7	226.0	223.9	223.3	196.5	159.6
107.5°	159.6	159.6	167.0	163.6	157.6	179.0	212.5	205.8	205.2	187.1	150.9
110°	148.8	150.9	158.9	154.9	150.2	169.0	195.1	190.4	190.4	176.3	144.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
112.5°	132.1	133.4	140.8	137.4	134.1	150.2	173.0	167.0	167.6	158.2	134.8
115°	123.4	125.4	132.8	128.1	125.4	140.1	160.2	156.2	157.6	148.8	127.4
117.5°	124.0	124.7	130.1	130.7	125.4	137.4	148.2	149.5	151.5	146.2	129.4
120°	150.9	147.5	150.2	146.8	144.2	158.2	171.0	172.3	171.6	161.6	128.7
122.5°	152.2	145.5	152.9	148.2	145.5	160.9	175.0	178.3	175.0	166.3	131.4
125°	121.4	123.4	124.0	125.4	128.1	144.8	152.2	152.9	153.5	150.9	127.4
127.5°	106.6	105.9	102.6	103.3	109.3	124.0	129.4	133.4	130.7	129.4	114.7
130°	101.9	103.3	102.6	102.6	105.9	117.3	121.4	127.4	125.4	122.7	104.6
132.5°	93.9	95.2	101.2	108.6	107.3	111.3	112.6	118.7	119.3	119.3	105.3
135°	89.2	90.5	95.2	104.6	101.9	103.9	103.3	108.6	109.3	110.0	99.2
137.5°	91.2	91.9	89.2	90.5	92.5	101.2	103.9	109.3	109.3	106.6	92.5
140°	95.9	95.9	89.8	87.8	91.9	105.3	110.6	119.3	118.0	113.3	95.9
142.5°	88.5	89.8	93.2	97.2	105.9	142.8	142.8	159.6	164.9	166.3	116.0
145°	115.3	116.0	117.3	119.3	136.1	187.1	170.3	182.4	187.1	191.8	139.5
147.5°	132.8	134.1	132.8	127.4	142.8	160.2	152.2	157.6	162.9	164.3	140.1
150°	103.9	102.6	101.9	101.2	118.0	123.4	116.7	116.0	120.0	123.4	108.6
152.5°	75.8	75.1	74.4	73.8	88.5	85.2	80.5	80.5	81.8	82.5	76.4
155°	67.0	66.4	65.0	65.7	75.1	71.7	67.7	66.4	67.7	67.0	63.7
157.5°	55.0	53.6	53.6	56.3	61.0	57.0	54.3	52.3	53.0	52.3	53.0
160°	45.6	44.9	45.6	48.9	51.6	48.3	45.6	44.3	44.3	45.6	48.3
162.5°	40.9	40.2	40.9	42.2	43.6	40.2	38.2	38.2	38.9	41.6	46.9
165°	35.5	35.5	36.2	36.9	37.5	35.5	34.9	34.9	36.2	40.2	46.3
167.5°	34.2	34.2	34.2	34.2	34.2	33.5	32.9	34.9	36.2	38.2	42.2
170°	33.5	32.9	33.5	33.5	33.5	33.5	33.5	35.5	35.5	36.2	38.2
172.5°	34.2	34.2	34.2	34.9	36.2	36.9	36.2	37.5	36.9	36.9	36.9
175°	34.9	34.9	35.5	36.2	36.9	37.5	38.2	38.2	38.2	38.9	38.9
177.5°	34.9	34.9	35.5	36.2	36.9	35.5	34.2	33.5	32.9	32.9	32.9
180°	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9	209.9
2.5°	189.7	173.0	149.5	159.6	190.4	184.4	153.5	134.8	136.1	149.5	150.9
5°	110.6	114.0	129.4	161.6	167.6	138.8	112.0	107.9	130.1	160.9	167.0
7.5°	99.9	99.9	112.6	156.9	176.3	144.8	109.3	98.6	115.3	140.8	144.8
10°	120.7	116.7	118.0	134.1	141.5	116.0	97.9	93.2	102.6	105.9	104.6
12.5°	136.1	138.8	151.5	148.2	116.0	94.5	88.5	87.8	93.2	96.6	95.9
15°	146.2	141.5	132.1	121.4	110.6	98.6	89.8	84.5	78.4	75.8	75.8
17.5°	155.6	146.2	129.4	119.3	108.6	99.9	91.9	83.8	81.1	81.8	81.8
20°	167.0	155.6	140.1	128.7	116.0	103.9	93.9	85.2	83.1	83.8	83.1
22.5°	175.7	165.6	149.5	134.8	121.4	107.9	97.9	89.2	86.5	85.8	85.8
25°	186.4	177.7	160.9	142.8	126.7	114.0	105.3	95.2	90.5	89.2	89.2
27.5°	200.5	193.1	174.3	154.9	136.1	121.4	112.0	101.2	94.5	91.9	91.2
30°	221.9	211.9	191.1	167.0	147.5	132.1	120.7	107.3	99.2	94.5	93.9
32.5°	254.1	241.4	213.9	183.7	160.2	144.2	130.1	113.3	103.3	97.9	97.2
35°	322.5	308.4	273.6	231.3	197.1	164.3	142.1	120.0	107.3	100.6	99.9
37.5°	365.4	339.9	297.7	259.5	217.9	198.5	170.3	140.8	112.6	103.9	102.6
40°	427.8	394.9	341.9	290.3	217.2	216.6	197.8	171.6	132.8	110.0	107.9
42.5°	474.0	431.8	365.4	307.8	219.2	225.3	209.2	186.4	157.6	128.1	124.7
45°	568.6	514.9	409.7	323.2	221.9	235.3	219.2	195.1	169.6	148.8	146.8
47.5°	745.6	671.2	495.5	352.7	252.1	268.9	240.0	211.9	187.1	166.3	161.6
50°	993.0	903.8	599.4	378.8	303.7	341.9	295.0	252.1	222.6	206.5	201.8
52.5°	1283.3	1183.4	664.5	419.7	366.1	431.8	380.2	329.9	291.0	293.7	291.0
55°	1607.2	1489.2	721.4	481.4	445.9	531.7	475.4	431.8	411.0	469.3	472.7
57.5°	1919.6	1793.6	757.0	546.4	535.0	647.0	581.3	550.5	558.5	729.5	769.7
60°	2218.0	2018.8	784.5	607.5	610.1	737.5	687.2	681.2	706.0	925.3	986.3
62.5°	2390.3	2134.2	783.1	647.0	657.1	793.2	748.9	752.3	771.1	957.5	1008.4
65°	2507.6	2192.5	769.7	667.1	677.2	813.3	756.3	730.2	718.1	845.5	899.8
67.5°	2437.2	2079.9	737.5	649.7	663.1	781.1	710.0	644.3	623.6	692.6	724.8
70°	2060.4	1737.9	657.1	590.7	599.4	659.1	598.7	527.0	506.2	542.4	557.2
72.5°	1556.9	1334.3	589.4	545.8	525.0	545.1	486.1	411.0	406.3	425.8	428.4
75°	1243.8	1047.3	537.1	492.1	436.5	457.3	386.2	305.7	299.7	301.0	294.3
77.5°	937.3	779.1	451.9	387.5	330.6	364.7	287.0	211.2	201.1	197.1	189.7
80°	641.7	541.1	307.1	259.5	234.7	267.5	204.5	154.9	154.2	152.9	144.8
82.5°	455.3	417.7	250.8	220.6	199.1	210.5	177.7	144.8	141.5	142.1	133.4
85°	398.3	378.2	242.0	223.3	202.5	201.8	169.6	135.4	134.1	134.8	126.7
87.5°	380.8	358.7	236.7	213.2	193.1	183.0	149.5	119.3	122.7	124.7	117.3
90°	341.3	318.5	214.6	190.4	171.0	153.5	126.7	107.9	113.3	114.7	107.9
92.5°	287.6	264.2	167.0	152.9	143.5	140.8	118.7	102.6	106.6	107.3	101.9
95°	243.4	221.9	145.5	134.8	128.1	127.4	107.3	93.2	95.2	94.5	89.8
97.5°	195.8	180.4	127.4	117.3	110.0	105.9	91.9	81.1	83.8	85.2	81.8
100°	167.0	158.2	118.7	110.0	101.2	95.9	83.8	75.1	77.8	80.5	77.8
102.5°	156.9	150.2	116.7	107.3	97.9	91.2	79.8	70.4	71.7	75.1	73.1
105°	148.8	142.8	113.3	103.3	94.5	87.2	77.8	66.4	65.7	69.1	68.4
107.5°	140.1	134.8	111.3	99.2	89.8	83.1	74.4	63.7	61.0	63.0	62.4
110°	135.4	130.1	107.3	94.5	84.5	78.4	70.4	61.7	58.3	59.0	59.0



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CATALOG NUMBER: FFX-CLB-40-740-U-FR-T3-UPLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	126.1	120.0	98.6	86.5	78.4	73.1	65.0	59.0	55.0	56.3	57.0
115°	120.0	112.0	90.5	81.8	73.1	68.4	63.7	58.3	53.6	53.6	54.3
117.5°	124.0	108.6	84.5	77.8	73.1	71.7	70.4	62.4	53.0	52.3	52.3
120°	118.7	109.3	91.9	89.8	85.2	81.1	72.4	61.7	51.6	50.3	50.3
122.5°	116.0	114.0	103.9	97.2	88.5	80.5	67.7	56.3	49.6	48.3	48.3
125°	114.7	112.6	100.6	87.8	76.4	68.4	60.3	53.0	48.9	46.9	46.9
127.5°	105.3	95.9	81.1	73.8	66.4	63.0	56.3	51.6	46.9	44.3	44.3
130°	97.2	88.5	75.8	67.7	61.7	59.0	54.3	49.6	44.9	42.2	41.6
132.5°	95.9	87.2	73.8	63.7	58.3	55.7	53.0	47.6	42.2	39.6	38.9
135°	89.2	79.1	65.7	60.3	57.0	55.0	53.0	46.3	40.9	38.2	38.2
137.5°	82.5	72.4	62.4	59.7	57.0	55.0	48.9	42.2	38.2	36.2	36.2
140°	83.1	71.7	63.7	61.7	57.7	51.6	46.3	41.6	38.2	35.5	34.9
142.5°	88.5	74.4	64.4	58.3	55.7	52.3	50.3	44.9	38.2	33.5	32.2
145°	97.2	80.5	72.4	69.7	65.0	59.0	51.6	41.6	34.9	30.8	30.2
147.5°	107.3	90.5	81.1	73.8	64.4	54.3	44.3	36.2	30.8	29.5	28.8
150°	93.2	77.1	69.7	59.7	51.6	43.6	36.2	32.2	29.5	28.8	28.8
152.5°	70.4	57.7	51.6	46.9	42.2	38.2	34.2	31.5	29.5	28.2	28.2
155°	61.0	54.3	48.3	43.6	38.9	34.9	31.5	30.2	28.2	28.2	27.5
157.5°	53.6	50.3	42.2	38.2	34.9	32.9	31.5	29.5	28.8	28.2	28.2
160°	48.9	46.9	38.9	35.5	33.5	32.2	32.2	30.8	28.8	28.2	28.2
162.5°	47.6	45.6	37.5	34.2	32.2	32.9	34.2	33.5	30.8	29.5	29.5
165°	46.9	45.6	38.2	33.5	32.2	32.9	36.2	36.9	33.5	31.5	30.8
167.5°	42.9	42.2	40.2	36.9	34.9	34.9	36.9	37.5	36.2	36.2	35.5
170°	38.9	38.9	39.6	40.2	38.9	36.9	35.5	35.5	37.5	39.6	40.2
172.5°	37.5	38.2	39.6	41.6	41.6	38.9	36.9	36.2	38.2	40.9	41.6
175°	39.6	40.2	40.9	40.9	39.6	38.9	38.2	37.5	38.9	41.6	42.2
177.5°	32.9	32.9	33.5	33.5	32.9	33.5	32.9	31.5	31.5	31.5	31.5
180°	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8

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: SP1-2406-133-1

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.

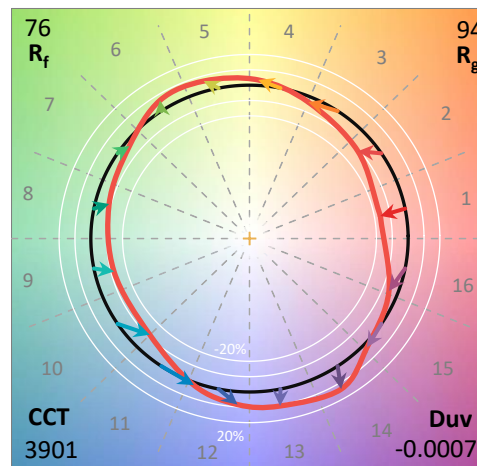
**Test Information**

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  
 R<sub>f</sub>: 76.2  
 R<sub>g</sub>: 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**

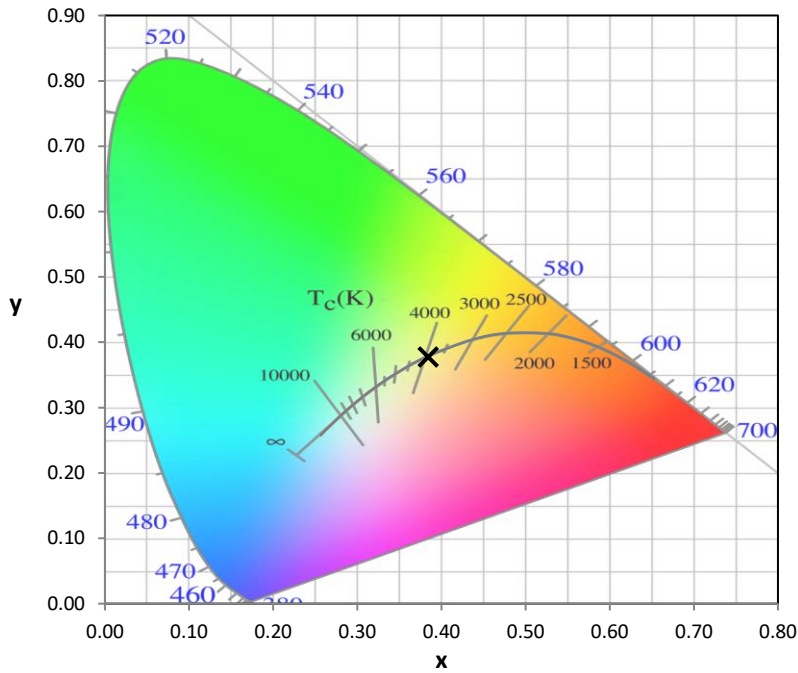
Stabilization Time: 0.818109M  
 Operation Time: 1H  
 Sphere Temperature (°C): 24.6

REPORT NUMBER: SP1-2406-133-1

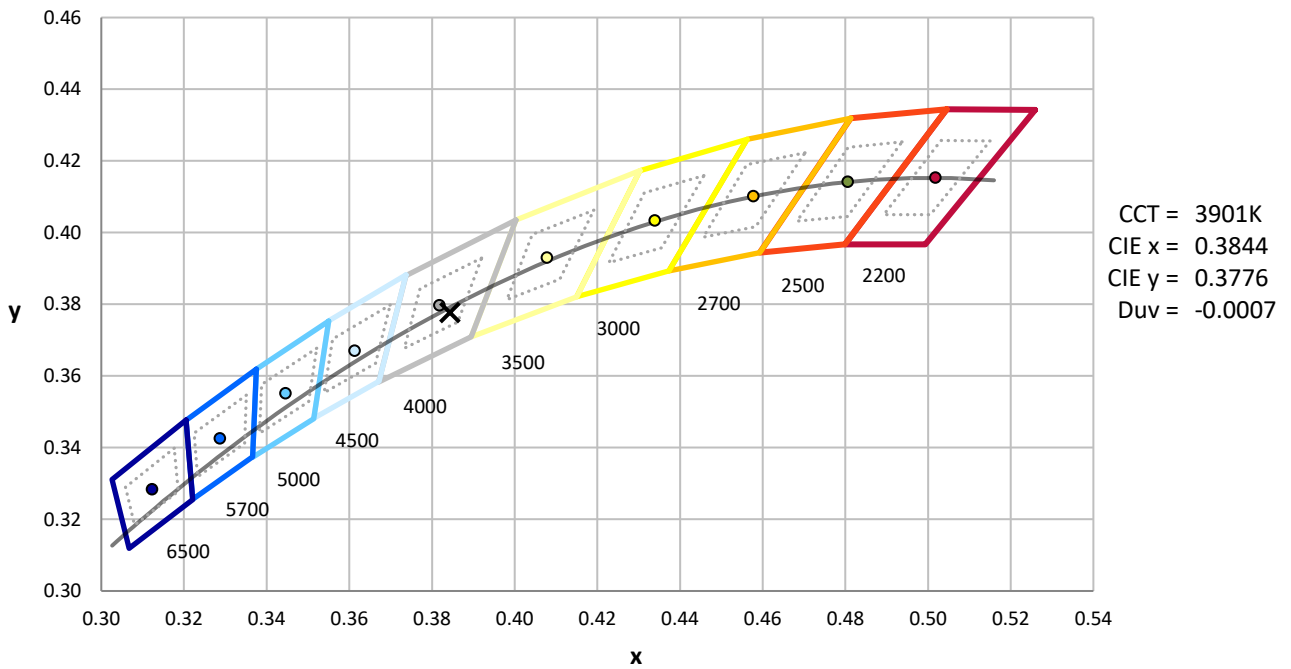
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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



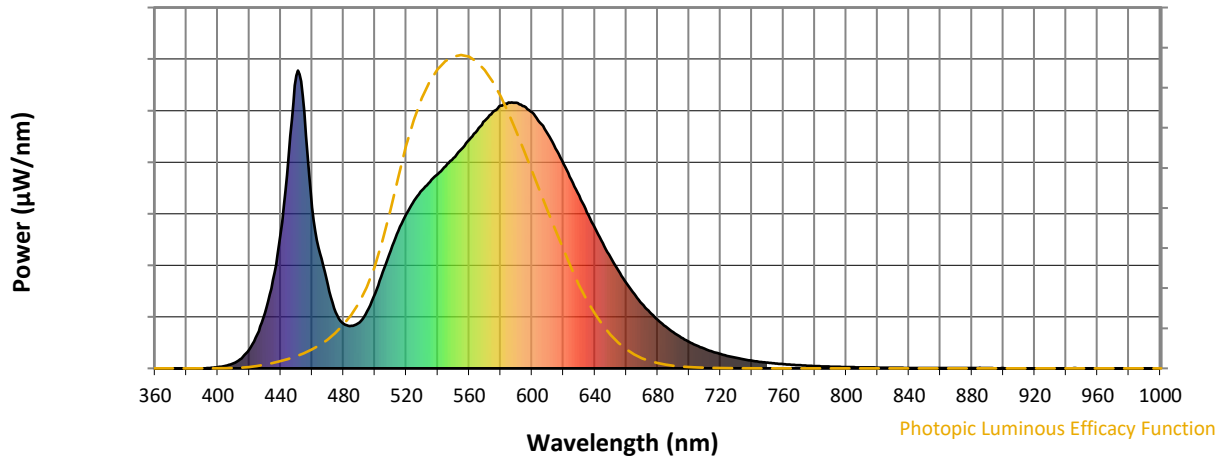
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2406-133-1

**Photopic Flux vs. Wavelength**

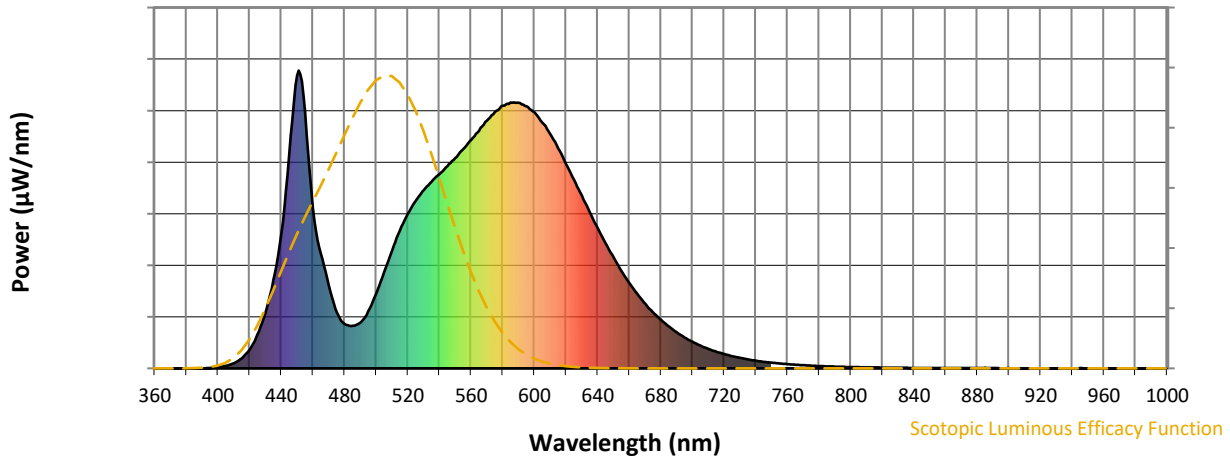


**Photopic Lumens: NR**

$\lambda$ (nm)	Power (W/nm)	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power (W/nm)	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power (W/nm)	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power (W/nm)	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power (W/nm)	Lumens ( $\phi$ /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**

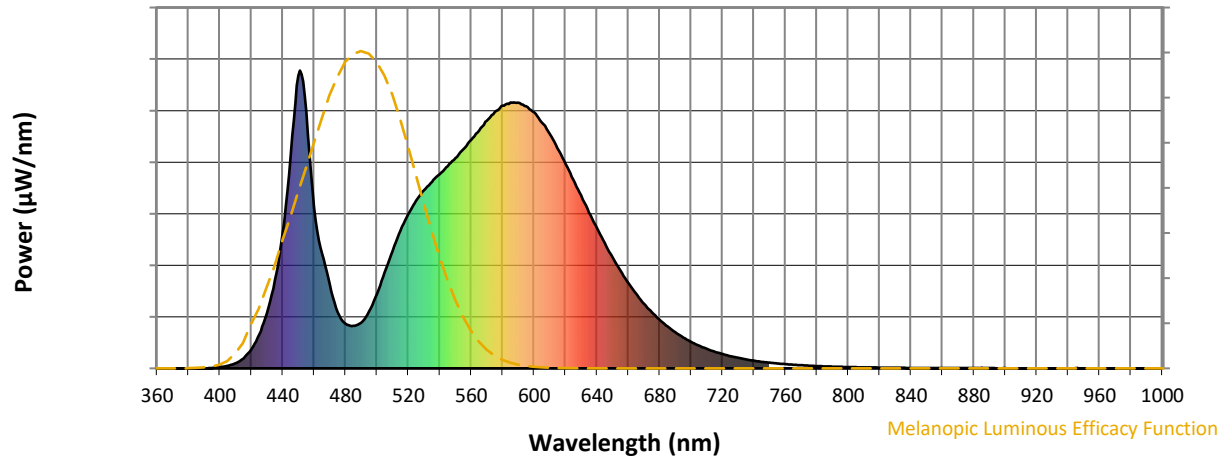
**S/P: 1.53**

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			



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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.04

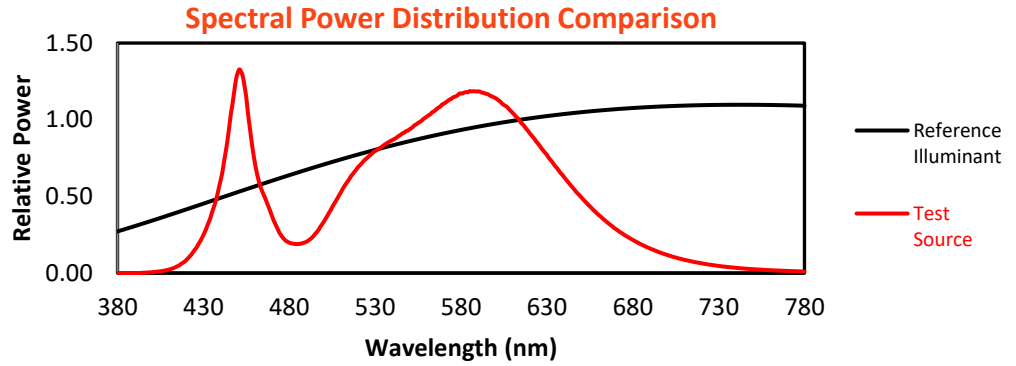
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	154	NR	620	687	NR	750	19	NR	880	1	NR
365	0	NR	495	191	NR	625	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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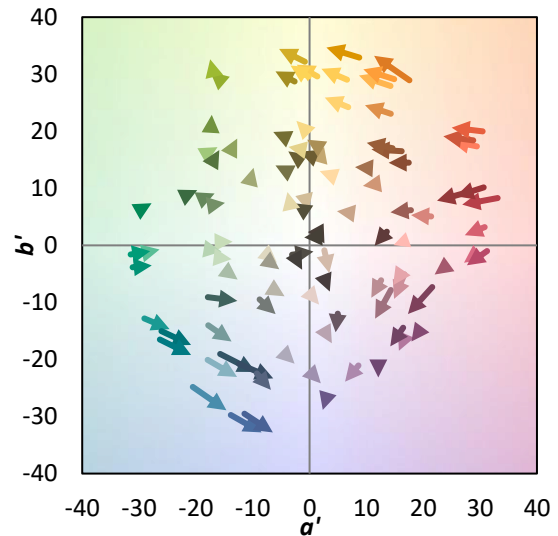
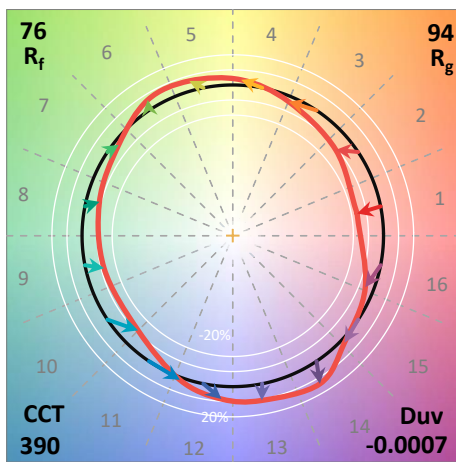
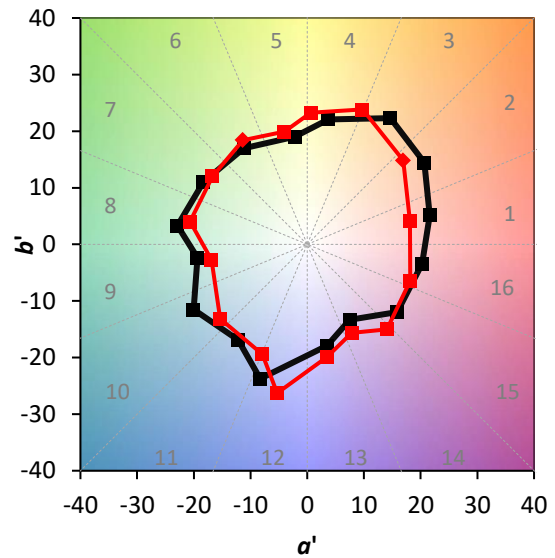
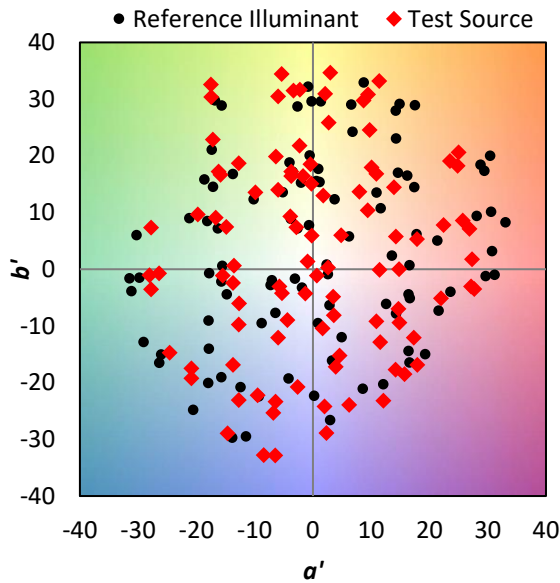
TM-30-18

**Summary**

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



**Color Vector Graphics**

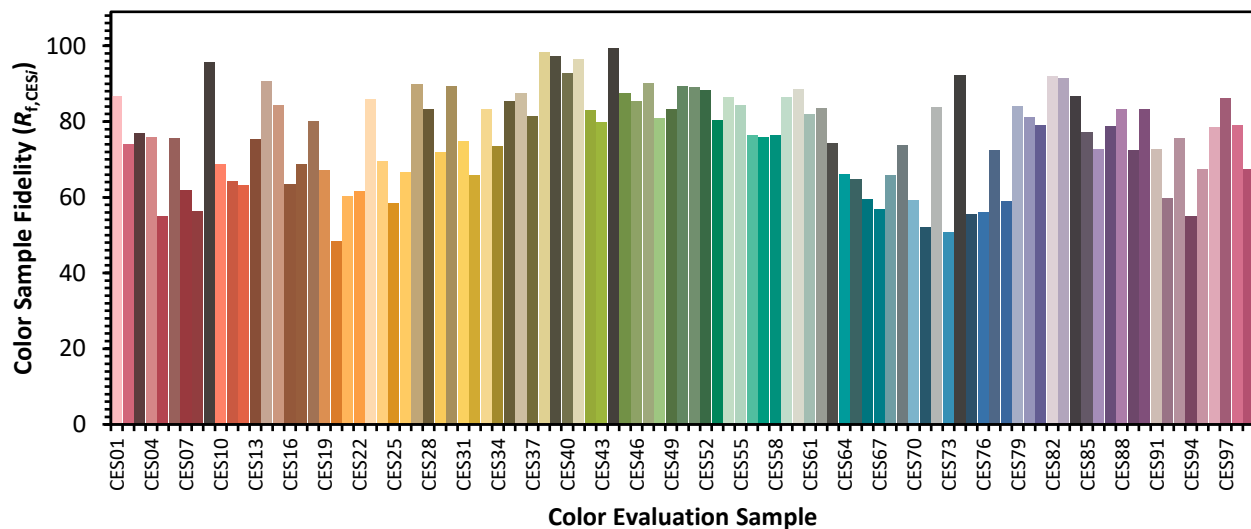


REPORT NUMBER: SP1-2406-133-1

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

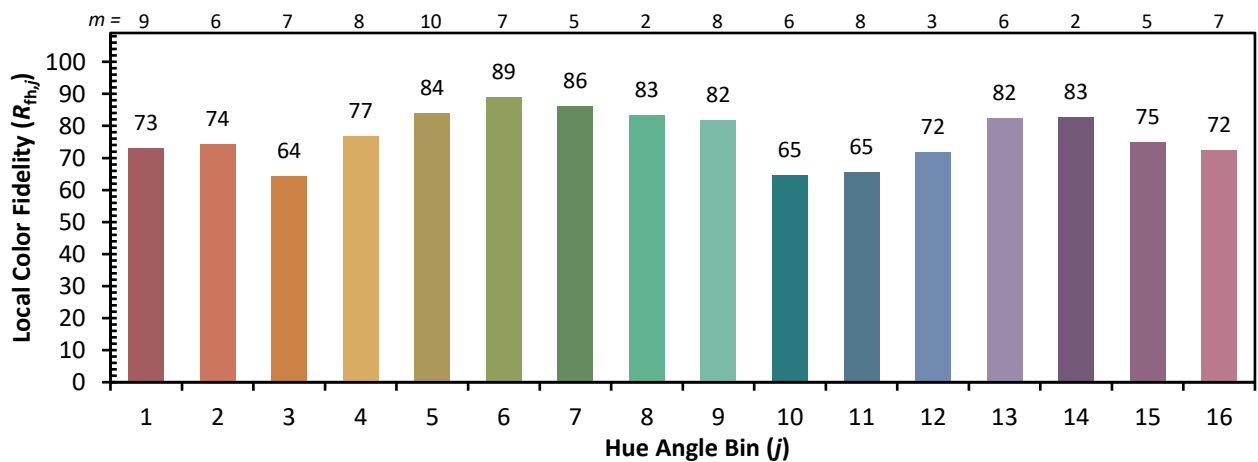
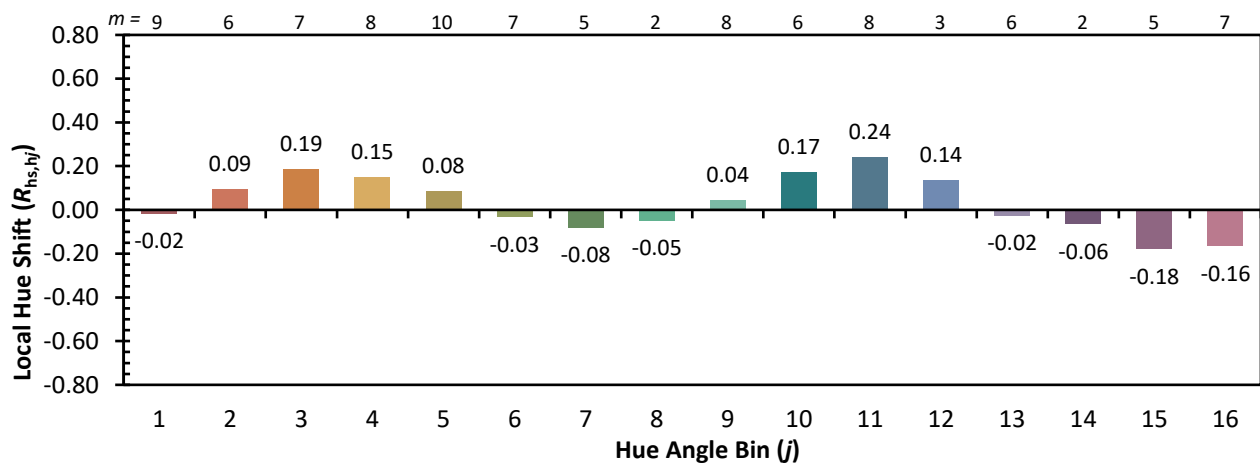
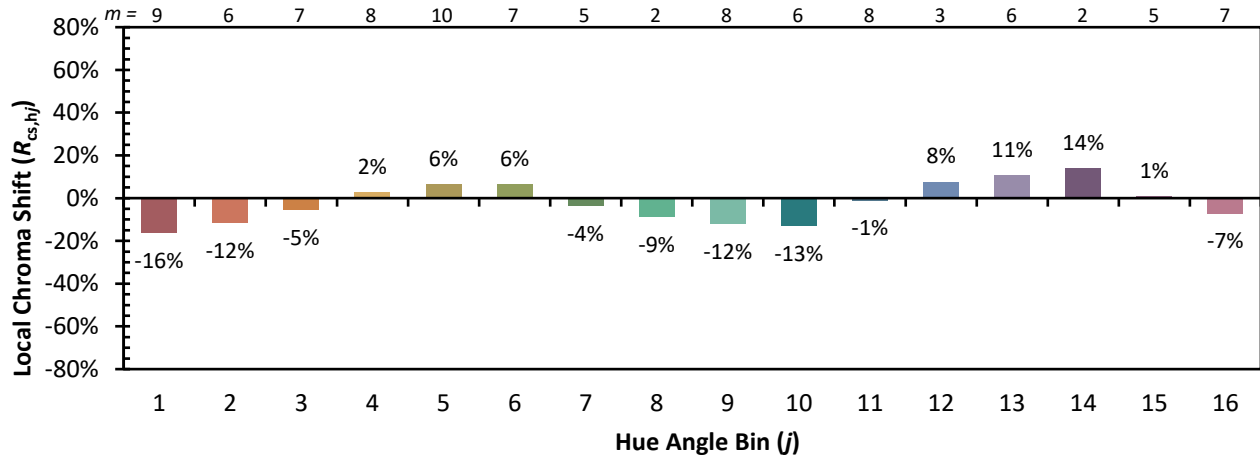
CES01 = 85	CES26 = 67	CES51 = 89	CES76 = 56
CES02 = 61	CES27 = 90	CES52 = 88	CES77 = 72
CES03 = 30	CES28 = 83	CES53 = 80	CES78 = 59
CES04 = 70	CES29 = 72	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 89	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 75	CES56 = 77	CES81 = 79
CES07 = 40	CES32 = 66	CES57 = 76	CES82 = 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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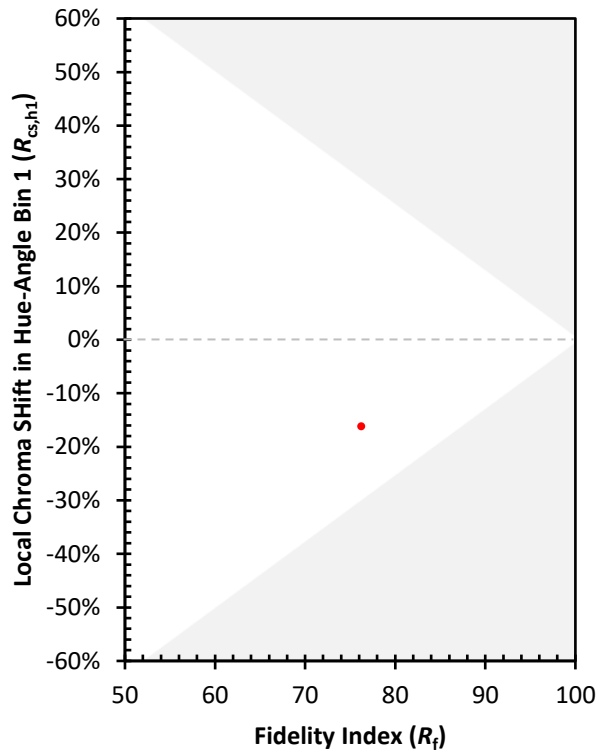
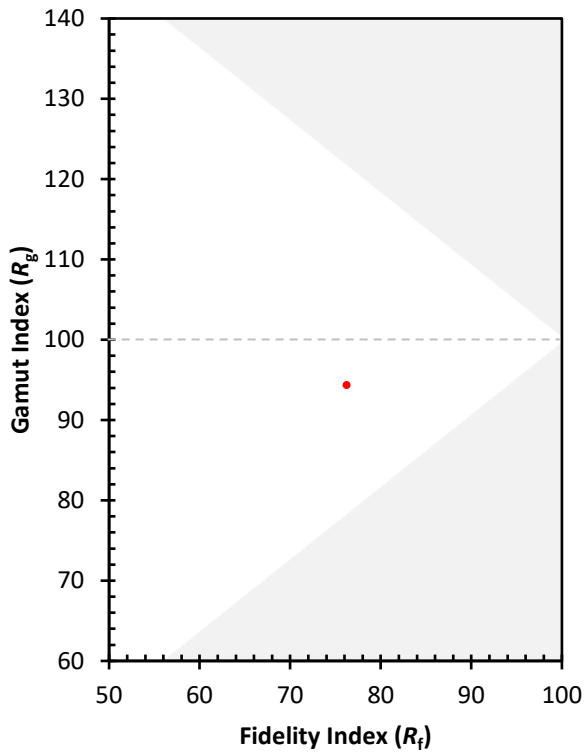
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2406-133-1

TM-30-18

Measure Comparisons



(END OF REPORT)