

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: P856199

Luminaire Tested: **FFX-CLB-20-722-U-FR-T3-UPLR**

Issue Date: 07/16/2024



Test Information

Test Method: LM-79-08
Report Number: P856199
Test Lab: INNOVATION CENTER(G3)
Issue Date: 07/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: FFX-CLB-20-722-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

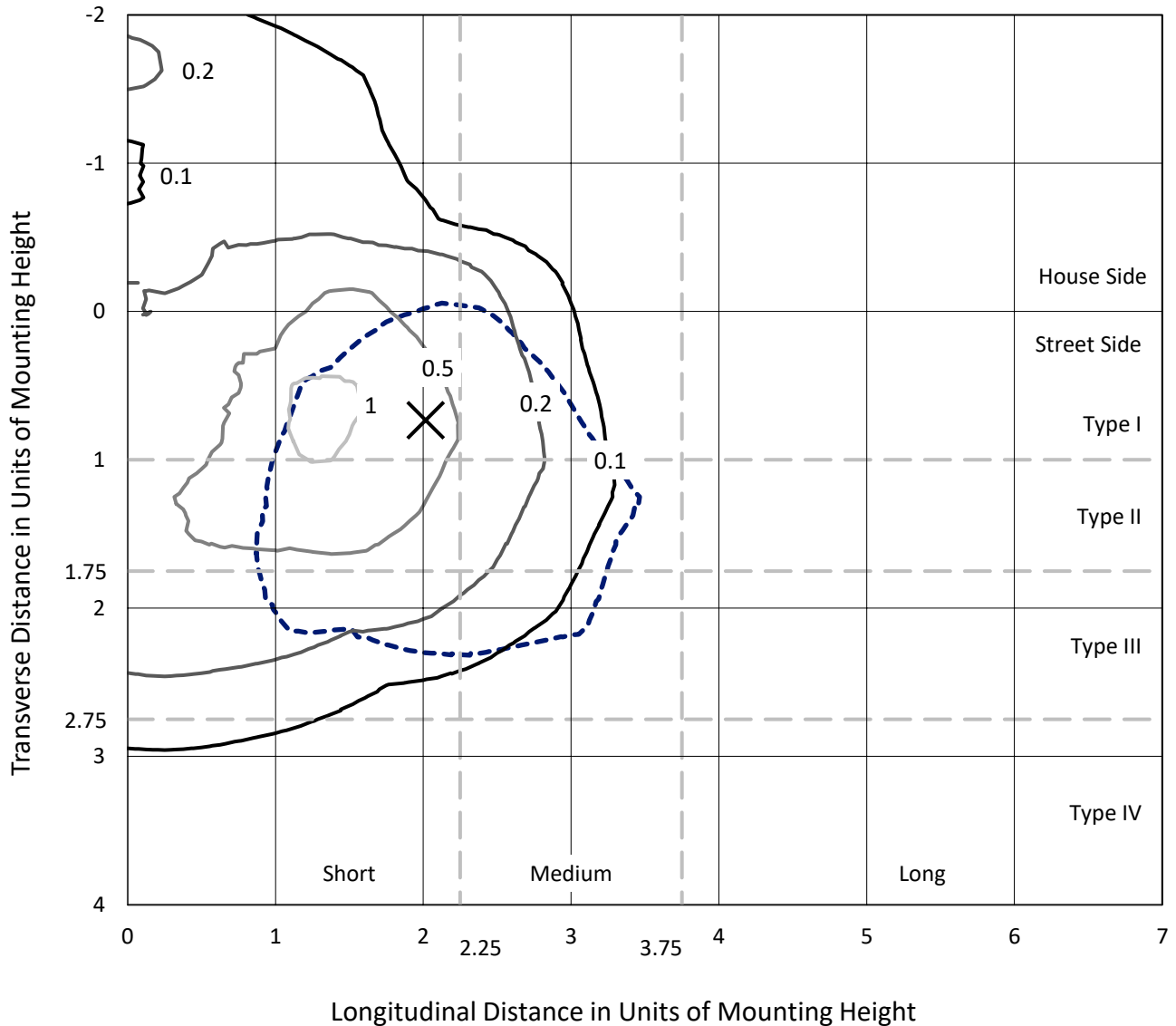
Lumens per Lamp: N/A
Luminaire Lumens: 2663 lumens
Efficiency: N/A
Efficacy: 136.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.17' x H: 1.67')
IES Classification: Type III - Short
BUG Rating: B1 - U3 - G2

Input Watts (W): 19.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 9.8%%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

REPORT NUMBER: P856199
 CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

Iso-Footcandle Lines of Horizontal Illumination

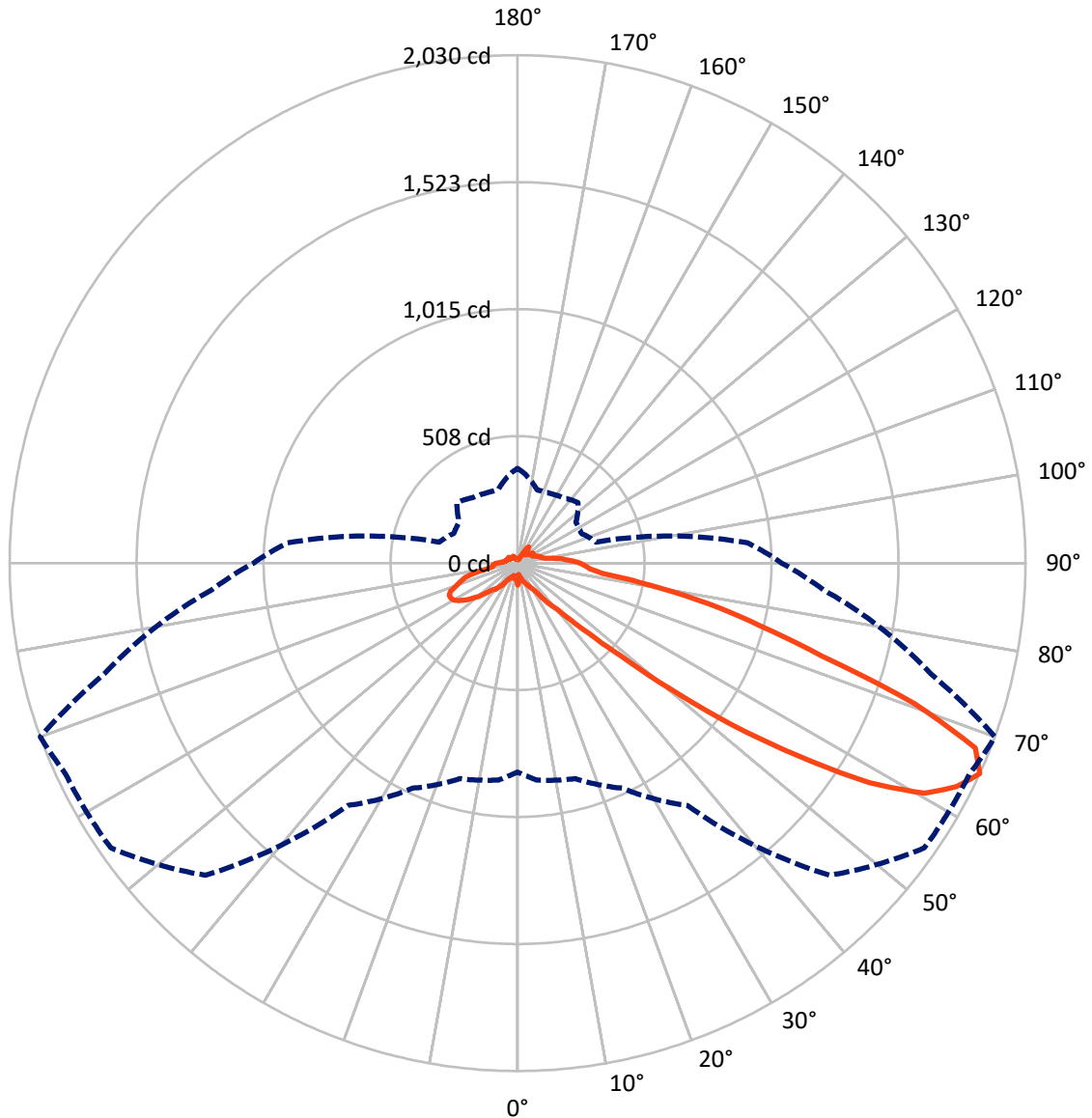
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.1 fc
 Type III - Short - N/A

REPORT NUMBER: P856199
CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

Luminous Intensity Polar Plot



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

REPORT NUMBER: P856199
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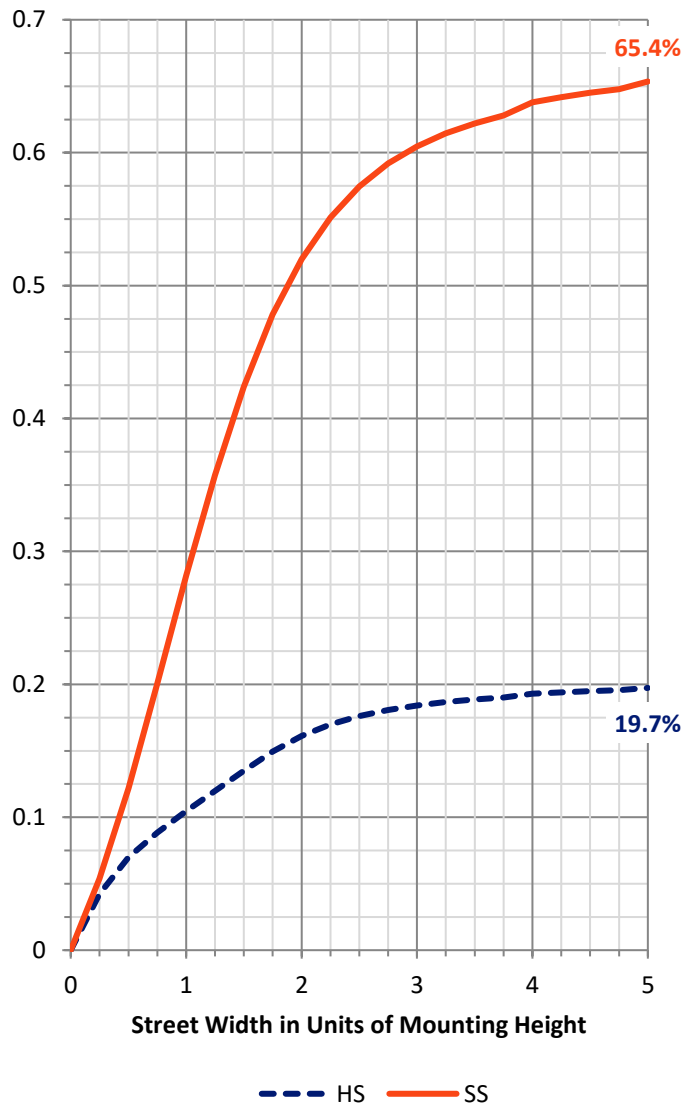
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	546.2	102.3	648.5
	% Fixture	20.5	3.8	24.4
Street Side	Lumens	1801.1	213.5	2014.5
	% Fixture	67.6	8.0	75.6
Total	Lumens	2347.2	315.8	2663.0
	% Fixture	88.1	11.9	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.7	0.2
10°-20°	17.8	0.7
20°-30°	35.9	1.3
30°-40°	76.1	2.9
40°-50°	177.3	6.7
50°-60°	528.5	19.8
60°-70°	846.9	31.8
70°-80°	486.5	18.3
80°-90°	172.5	6.5
90°-100°	101.8	3.8
100°-110°	61.5	2.3
110°-120°	46.2	1.7
120°-130°	39.1	1.5
130°-140°	26.0	1.0
140°-150°	24.4	0.9
150°-160°	10.8	0.4
160°-170°	4.5	0.2
170°-180°	1.5	0.1
0°-90°	2347.2	88.1
0°-180°	2663.0	100.0



REPORT NUMBER: P856199

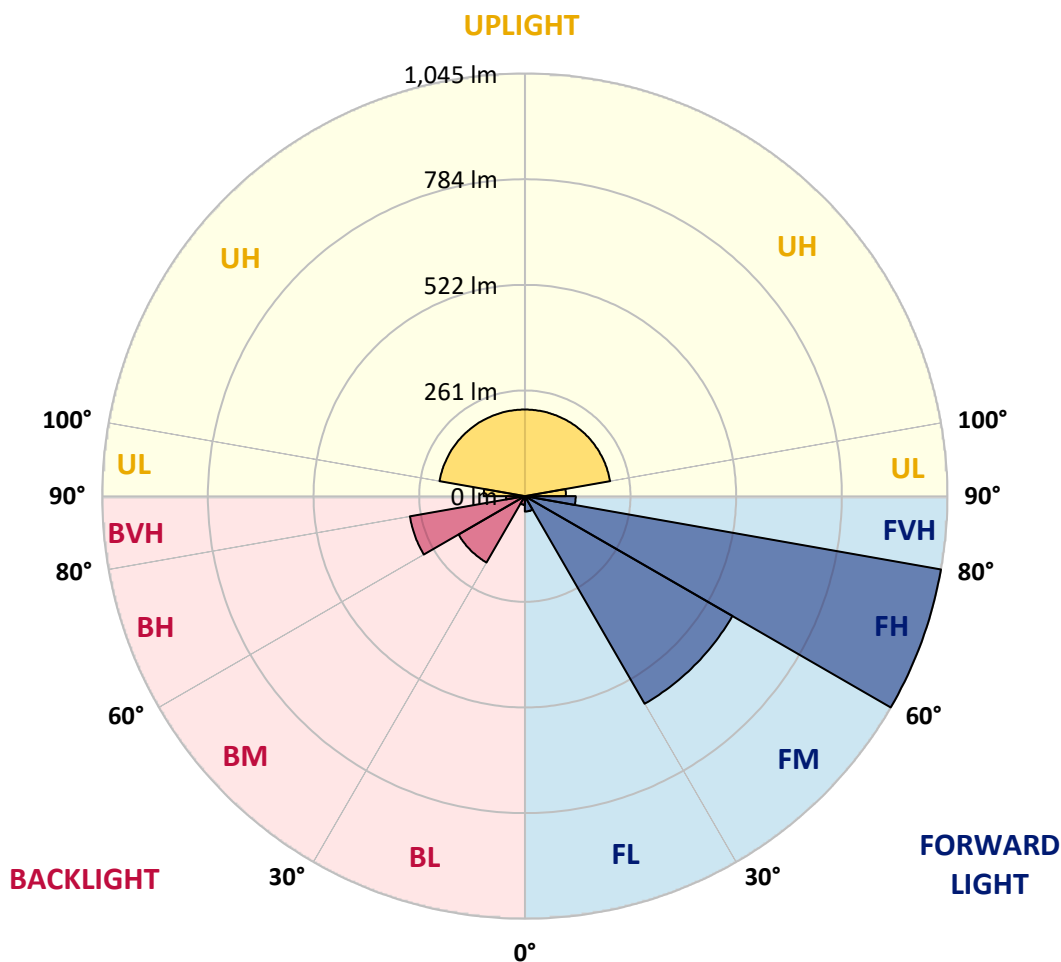
CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	38.2	1.4			
FM (30°-60°)	592.5	22.3			
FH (60°-80°)	1044.7	39.2			G1/1800
FVH (80°-90°)	125.7	4.7			G2/225
BL (0°-30°)	21.3	0.8	B0/110		
BM (30°-60°)	189.4	7.1	B0/220		
BH (60°-80°)	288.7	10.8	B1/500		G1/500
BVH (80°-90°)	46.8	1.8			G1/100
UL (90°-100°)	101.8	3.8		U3/500	
UH (100°-180°)	214.0	8.0		U3/500	

BUG Rating: B1-U3-G2

Type III Short





REPORT NUMBER: P856199

CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3
2.5°	73.7	73.1	74.5	75.6	77.0	75.1	71.7	75.1	76.2	79.6	82.1
5°	62.7	62.9	64.3	67.5	70.3	69.7	61.0	49.7	46.3	44.9	45.2
7.5°	62.1	61.8	61.0	60.7	62.4	68.6	67.7	59.5	53.3	48.0	42.6
10°	65.5	66.3	67.2	67.2	66.0	62.1	61.8	61.2	59.0	56.4	53.1
12.5°	81.0	82.1	83.0	80.2	76.5	72.5	69.4	64.3	62.1	60.7	58.1
15°	97.9	99.1	97.6	92.3	85.8	78.5	75.6	75.9	72.8	69.1	63.8
17.5°	107.0	106.4	100.5	94.3	89.2	83.5	79.6	77.0	75.9	74.5	69.1
20°	101.3	99.9	96.2	93.7	93.1	90.0	87.5	85.2	83.8	80.7	74.2
22.5°	97.1	97.1	96.5	96.0	99.3	97.9	96.8	93.7	91.7	87.8	78.2
25°	102.4	102.4	102.7	101.9	106.4	106.4	106.4	103.0	100.5	94.8	83.3
27.5°	110.1	109.8	110.6	110.1	114.0	114.9	116.6	114.0	110.3	103.6	88.9
30°	118.3	118.3	119.1	119.7	123.6	125.6	127.6	126.4	121.9	113.7	98.5
32.5°	127.0	126.7	129.3	132.1	134.3	138.0	138.9	141.7	137.2	127.6	112.6
35°	139.7	140.5	147.3	153.2	159.7	162.0	165.9	177.0	172.4	159.5	142.2
37.5°	202.1	197.8	196.1	189.4	188.5	201.8	206.6	217.0	208.0	190.5	164.3
40°	214.2	209.1	206.9	200.4	202.6	230.0	225.2	262.8	240.7	212.8	195.9
42.5°	201.8	200.9	227.5	232.6	229.7	273.2	263.9	333.3	309.9	245.0	226.1
45°	243.6	241.3	252.6	261.6	268.7	346.9	341.2	414.3	404.1	298.3	279.7
47.5°	274.9	272.6	285.6	315.8	357.0	441.7	474.7	585.0	550.6	410.4	368.0
50°	368.6	367.2	402.2	434.6	502.6	627.7	718.3	837.4	786.8	573.2	495.3
52.5°	457.2	461.7	502.6	565.0	637.0	862.8	992.0	1075.6	1075.0	746.5	635.8
55°	520.7	535.9	584.2	696.8	796.7	1071.3	1245.7	1307.5	1359.5	996.0	774.4
57.5°	644.0	670.6	716.8	828.3	957.3	1323.6	1572.6	1562.4	1655.8	1254.8	925.1
60°	770.8	801.8	817.3	919.8	1089.1	1566.6	1797.2	1773.5	1867.5	1480.0	1083.7
62.5°	810.3	840.7	856.0	967.5	1184.2	1704.3	1900.8	1910.1	1968.5	1640.6	1177.7
65°	835.1	870.1	892.1	992.6	1182.2	1764.5	1984.6	1993.3	2030.0	1709.7	1226.3
67.5°	830.6	869.8	898.0	988.1	1116.8	1714.5	1963.7	1924.2	1973.3	1660.3	1175.2
70°	740.8	775.0	803.2	872.6	932.2	1444.4	1699.0	1633.8	1684.6	1387.1	970.3
72.5°	605.4	619.5	644.0	676.8	706.4	1071.6	1296.0	1240.1	1269.4	1040.6	727.0
75°	497.3	494.5	516.5	540.2	530.9	782.9	1025.3	974.2	1001.6	790.2	580.0
77.5°	368.6	367.2	399.1	397.1	383.0	542.2	812.8	775.8	779.5	583.6	434.3
80°	221.5	225.8	256.8	263.0	246.4	340.1	580.3	562.8	536.5	398.8	304.5
82.5°	155.5	162.0	178.4	185.1	177.0	248.4	384.4	372.3	341.2	289.3	214.5
85°	158.6	159.7	161.7	162.3	158.6	223.0	298.3	291.5	289.6	242.4	177.0
87.5°	158.6	161.1	162.8	162.6	156.1	208.8	275.2	264.4	267.0	226.6	171.0
90°	142.2	146.8	146.5	147.3	142.0	188.8	249.5	240.7	244.1	204.3	155.5
92.5°	116.3	119.4	122.5	128.4	120.5	160.6	210.8	202.6	206.9	173.8	132.4
95°	108.1	110.9	112.9	116.0	108.1	142.8	186.5	176.7	178.4	147.6	112.0
97.5°	87.5	89.2	91.4	92.0	86.4	109.8	142.0	133.5	134.6	114.6	88.1
100°	73.4	74.8	76.8	76.8	73.1	90.9	112.3	107.8	107.2	93.7	74.5
102.5°	69.4	70.0	73.1	72.5	68.9	83.8	101.6	98.8	99.1	86.9	70.0
105°	68.3	68.3	71.4	70.0	66.9	79.9	95.1	94.3	94.0	82.7	67.2
107.5°	67.2	67.2	70.3	68.9	66.3	75.4	89.5	86.6	86.4	78.7	63.5
110°	62.7	63.5	66.9	65.2	63.2	71.1	82.1	80.2	80.2	74.2	60.7



REPORT NUMBER: P856199

CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
112.5°	55.6	56.2	59.3	57.9	56.4	63.2	72.8	70.3	70.6	66.6	56.7
115°	51.9	52.8	55.9	53.9	52.8	59.0	67.5	65.8	66.3	62.7	53.6
117.5°	52.2	52.5	54.8	55.0	52.8	57.9	62.4	62.9	63.8	61.5	54.5
120°	63.5	62.1	63.2	61.8	60.7	66.6	72.0	72.5	72.2	68.0	54.2
122.5°	64.1	61.2	64.3	62.4	61.2	67.7	73.7	75.1	73.7	70.0	55.3
125°	51.1	51.9	52.2	52.8	53.9	61.0	64.1	64.3	64.6	63.5	53.6
127.5°	44.9	44.6	43.2	43.5	46.0	52.2	54.5	56.2	55.0	54.5	48.3
130°	42.9	43.5	43.2	43.2	44.6	49.4	51.1	53.6	52.8	51.6	44.0
132.5°	39.5	40.1	42.6	45.7	45.2	46.8	47.4	50.0	50.2	50.2	44.3
135°	37.5	38.1	40.1	44.0	42.9	43.7	43.5	45.7	46.0	46.3	41.8
137.5°	38.4	38.7	37.5	38.1	38.9	42.6	43.7	46.0	46.0	44.9	38.9
140°	40.4	40.4	37.8	37.0	38.7	44.3	46.6	50.2	49.7	47.7	40.4
142.5°	37.3	37.8	39.2	40.9	44.6	60.1	60.1	67.2	69.4	70.0	48.8
145°	48.5	48.8	49.4	50.2	57.3	78.7	71.7	76.8	78.7	80.7	58.7
147.5°	55.9	56.4	55.9	53.6	60.1	67.5	64.1	66.3	68.6	69.1	59.0
150°	43.7	43.2	42.9	42.6	49.7	51.9	49.1	48.8	50.5	51.9	45.7
152.5°	31.9	31.6	31.3	31.0	37.3	35.8	33.9	33.9	34.4	34.7	32.2
155°	28.2	27.9	27.4	27.7	31.6	30.2	28.5	27.9	28.5	28.2	26.8
157.5°	23.1	22.6	22.6	23.7	25.7	24.0	22.9	22.0	22.3	22.0	22.3
160°	19.2	18.9	19.2	20.6	21.7	20.3	19.2	18.6	18.6	19.2	20.3
162.5°	17.2	16.9	17.2	17.8	18.3	16.9	16.1	16.1	16.4	17.5	19.8
165°	15.0	15.0	15.2	15.5	15.8	15.0	14.7	14.7	15.2	16.9	19.5
167.5°	14.4	14.4	14.4	14.4	14.4	14.1	13.8	14.7	15.2	16.1	17.8
170°	14.1	13.8	14.1	14.1	14.1	14.1	14.1	15.0	15.0	15.2	16.1
172.5°	14.4	14.4	14.4	14.7	15.2	15.5	15.2	15.8	15.5	15.5	15.5
175°	14.7	14.7	15.0	15.2	15.5	15.8	16.1	16.1	16.1	16.4	16.4
177.5°	14.7	14.7	15.0	15.2	15.5	15.0	14.4	14.1	13.8	13.8	13.8
180°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0



REPORT NUMBER: P856199

CATALOG NUMBER: FFX-CLB-20-722-U-FR-T3-UPLR

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3	88.3
2.5°	79.9	72.8	62.9	67.2	80.2	77.6	64.6	56.7	57.3	62.9	63.5
5°	46.6	48.0	54.5	68.0	70.6	58.4	47.1	45.4	54.8	67.7	70.3
7.5°	42.1	42.1	47.4	66.0	74.2	61.0	46.0	41.5	48.5	59.3	61.0
10°	50.8	49.1	49.7	56.4	59.5	48.8	41.2	39.2	43.2	44.6	44.0
12.5°	57.3	58.4	63.8	62.4	48.8	39.8	37.3	37.0	39.2	40.6	40.4
15°	61.5	59.5	55.6	51.1	46.6	41.5	37.8	35.6	33.0	31.9	31.9
17.5°	65.5	61.5	54.5	50.2	45.7	42.1	38.7	35.3	34.1	34.4	34.4
20°	70.3	65.5	59.0	54.2	48.8	43.7	39.5	35.8	35.0	35.3	35.0
22.5°	73.9	69.7	62.9	56.7	51.1	45.4	41.2	37.5	36.4	36.1	36.1
25°	78.5	74.8	67.7	60.1	53.3	48.0	44.3	40.1	38.1	37.5	37.5
27.5°	84.4	81.3	73.4	65.2	57.3	51.1	47.1	42.6	39.8	38.7	38.4
30°	93.4	89.2	80.4	70.3	62.1	55.6	50.8	45.2	41.8	39.8	39.5
32.5°	107.0	101.6	90.0	77.3	67.5	60.7	54.8	47.7	43.5	41.2	40.9
35°	135.7	129.8	115.1	97.4	83.0	69.1	59.8	50.5	45.2	42.3	42.1
37.5°	153.8	143.1	125.3	109.2	91.7	83.5	71.7	59.3	47.4	43.7	43.2
40°	180.1	166.2	143.9	122.2	91.4	91.2	83.3	72.2	55.9	46.3	45.4
42.5°	199.5	181.8	153.8	129.5	92.3	94.8	88.1	78.5	66.3	53.9	52.5
45°	239.3	216.7	172.4	136.0	93.4	99.1	92.3	82.1	71.4	62.7	61.8
47.5°	313.8	282.5	208.6	148.4	106.1	113.2	101.0	89.2	78.7	70.0	68.0
50°	418.0	380.4	252.3	159.5	127.8	143.9	124.2	106.1	93.7	86.9	84.9
52.5°	540.2	498.1	279.7	176.7	154.1	181.8	160.0	138.9	122.5	123.6	122.5
55°	676.5	626.8	303.7	202.6	187.7	223.8	200.1	181.8	173.0	197.6	199.0
57.5°	808.0	754.9	318.6	230.0	225.2	272.3	244.7	231.7	235.1	307.1	324.0
60°	933.6	849.8	330.2	255.7	256.8	310.4	289.3	286.7	297.2	389.5	415.2
62.5°	1006.1	898.3	329.6	272.3	276.6	333.9	315.2	316.7	324.6	403.0	424.5
65°	1055.5	922.9	324.0	280.8	285.0	342.3	318.3	307.3	302.3	355.9	378.7
67.5°	1025.9	875.5	310.4	273.5	279.1	328.8	298.9	271.2	262.5	291.5	305.1
70°	867.3	731.5	276.6	248.6	252.3	277.4	252.0	221.8	213.1	228.3	234.5
72.5°	655.3	561.6	248.1	229.7	221.0	229.4	204.6	173.0	171.0	179.2	180.3
75°	523.5	440.8	226.1	207.2	183.7	192.5	162.6	128.7	126.2	126.7	123.9
77.5°	394.5	327.9	190.2	163.1	139.1	153.5	120.8	88.9	84.7	83.0	79.9
80°	270.1	227.8	129.3	109.2	98.8	112.6	86.1	65.2	64.9	64.3	61.0
82.5°	191.6	175.8	105.6	92.9	83.8	88.6	74.8	61.0	59.5	59.8	56.2
85°	167.6	159.2	101.9	94.0	85.2	84.9	71.4	57.0	56.4	56.7	53.3
87.5°	160.3	151.0	99.6	89.7	81.3	77.0	62.9	50.2	51.6	52.5	49.4
90°	143.7	134.1	90.3	80.2	72.0	64.6	53.3	45.4	47.7	48.3	45.4
92.5°	121.1	111.2	70.3	64.3	60.4	59.3	50.0	43.2	44.9	45.2	42.9
95°	102.4	93.4	61.2	56.7	53.9	53.6	45.2	39.2	40.1	39.8	37.8
97.5°	82.4	75.9	53.6	49.4	46.3	44.6	38.7	34.1	35.3	35.8	34.4
100°	70.3	66.6	50.0	46.3	42.6	40.4	35.3	31.6	32.7	33.9	32.7
102.5°	66.0	63.2	49.1	45.2	41.2	38.4	33.6	29.6	30.2	31.6	30.8
105°	62.7	60.1	47.7	43.5	39.8	36.7	32.7	27.9	27.7	29.1	28.8
107.5°	59.0	56.7	46.8	41.8	37.8	35.0	31.3	26.8	25.7	26.5	26.2
110°	57.0	54.8	45.2	39.8	35.6	33.0	29.6	26.0	24.6	24.8	24.8



REPORT NUMBER: P856199
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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	53.1	50.5	41.5	36.4	33.0	30.8	27.4	24.8	23.1	23.7	24.0
115°	50.5	47.1	38.1	34.4	30.8	28.8	26.8	24.6	22.6	22.6	22.9
117.5°	52.2	45.7	35.6	32.7	30.8	30.2	29.6	26.2	22.3	22.0	22.0
120°	50.0	46.0	38.7	37.8	35.8	34.1	30.5	26.0	21.7	21.2	21.2
122.5°	48.8	48.0	43.7	40.9	37.3	33.9	28.5	23.7	20.9	20.3	20.3
125°	48.3	47.4	42.3	37.0	32.2	28.8	25.4	22.3	20.6	19.8	19.8
127.5°	44.3	40.4	34.1	31.0	27.9	26.5	23.7	21.7	19.8	18.6	18.6
130°	40.9	37.3	31.9	28.5	26.0	24.8	22.9	20.9	18.9	17.8	17.5
132.5°	40.4	36.7	31.0	26.8	24.6	23.4	22.3	20.0	17.8	16.7	16.4
135°	37.5	33.3	27.7	25.4	24.0	23.1	22.3	19.5	17.2	16.1	16.1
137.5°	34.7	30.5	26.2	25.1	24.0	23.1	20.6	17.8	16.1	15.2	15.2
140°	35.0	30.2	26.8	26.0	24.3	21.7	19.5	17.5	16.1	15.0	14.7
142.5°	37.3	31.3	27.1	24.6	23.4	22.0	21.2	18.9	16.1	14.1	13.5
145°	40.9	33.9	30.5	29.4	27.4	24.8	21.7	17.5	14.7	13.0	12.7
147.5°	45.2	38.1	34.1	31.0	27.1	22.9	18.6	15.2	13.0	12.4	12.1
150°	39.2	32.5	29.4	25.1	21.7	18.3	15.2	13.5	12.4	12.1	12.1
152.5°	29.6	24.3	21.7	19.8	17.8	16.1	14.4	13.3	12.4	11.9	11.9
155°	25.7	22.9	20.3	18.3	16.4	14.7	13.3	12.7	11.9	11.9	11.6
157.5°	22.6	21.2	17.8	16.1	14.7	13.8	13.3	12.4	12.1	11.9	11.9
160°	20.6	19.8	16.4	15.0	14.1	13.5	13.5	13.0	12.1	11.9	11.9
162.5°	20.0	19.2	15.8	14.4	13.5	13.8	14.4	14.1	13.0	12.4	12.4
165°	19.8	19.2	16.1	14.1	13.5	13.8	15.2	15.5	14.1	13.3	13.0
167.5°	18.1	17.8	16.9	15.5	14.7	14.7	15.5	15.8	15.2	15.2	15.0
170°	16.4	16.4	16.7	16.9	16.4	15.5	15.0	15.0	15.8	16.7	16.9
172.5°	15.8	16.1	16.7	17.5	17.5	16.4	15.5	15.2	16.1	17.2	17.5
175°	16.7	16.9	17.2	17.2	16.7	16.4	16.1	15.8	16.4	17.5	17.8
177.5°	13.8	13.8	14.1	14.1	13.8	14.1	13.8	13.3	13.3	13.3	13.3
180°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0

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.

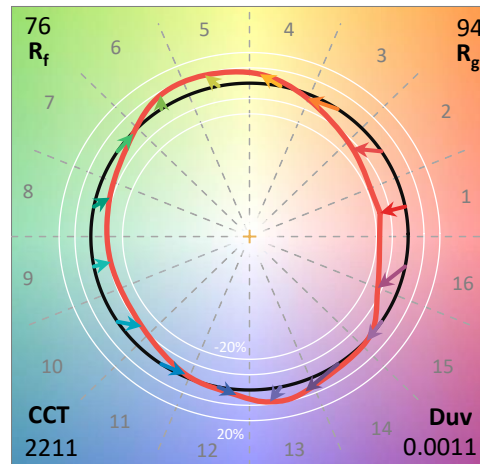
Test Information

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

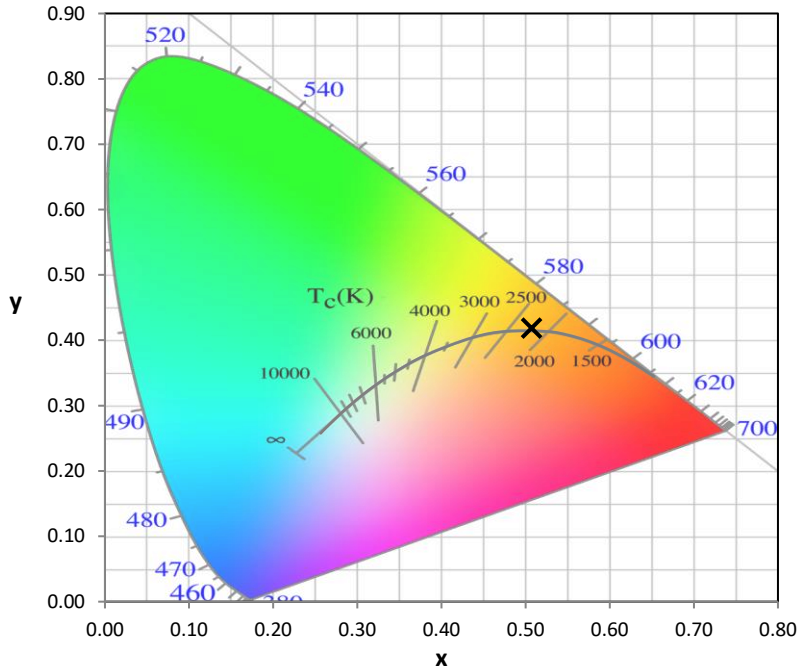
Stabilization Time: 0.813563M
 Operation Time: 1H
 Sphere Temperature (°C): 24.7

REPORT NUMBER: SP1-2406-133-2

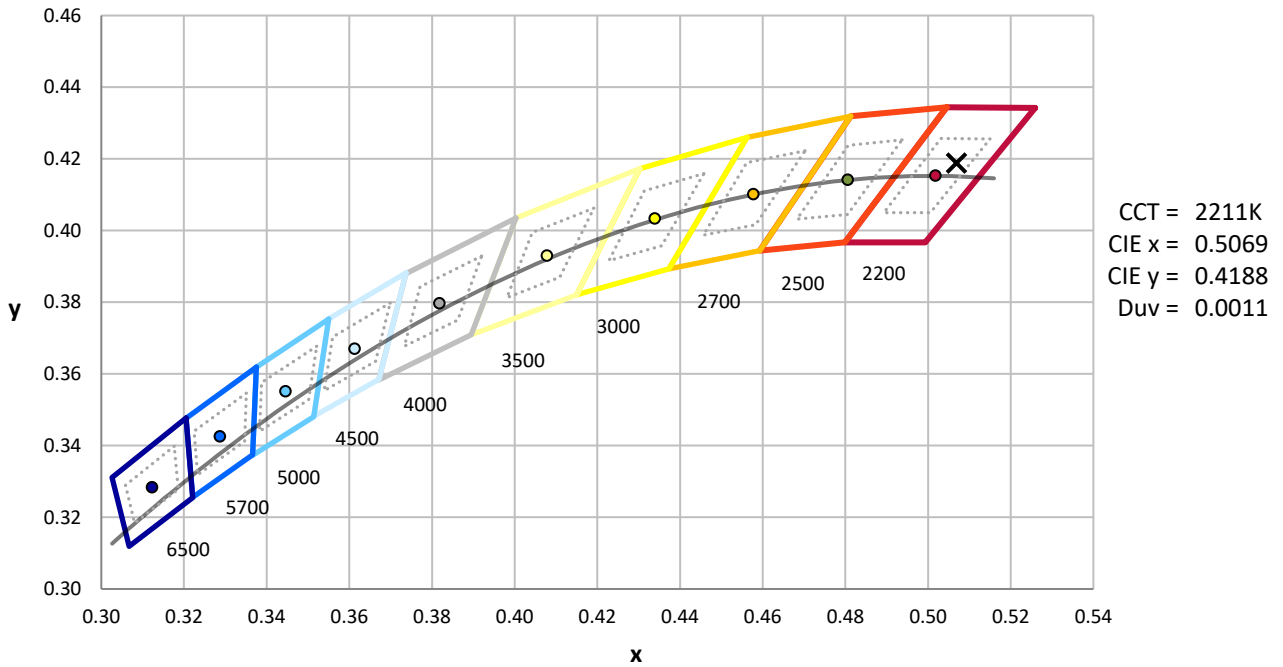
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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



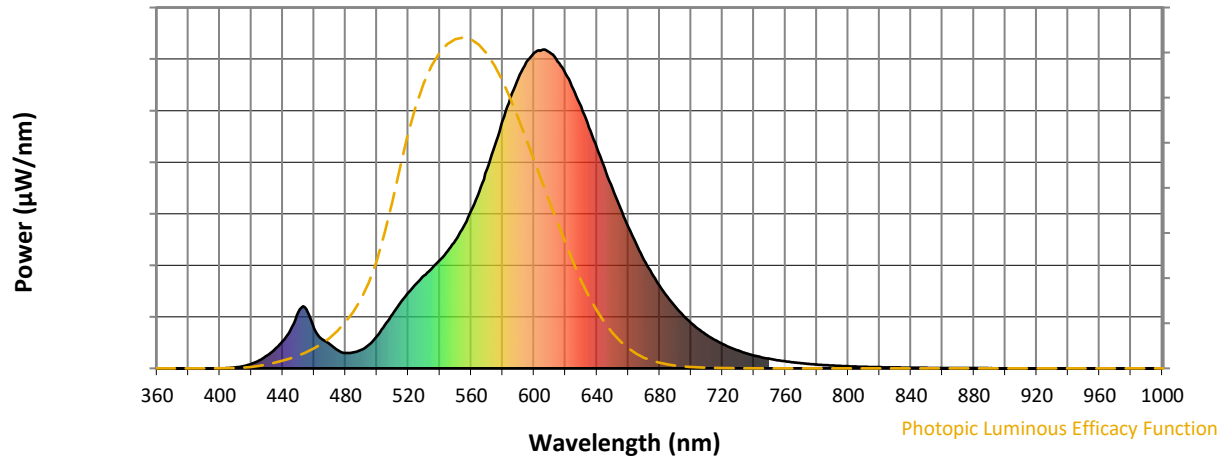
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-2406-133-2

Photopic Flux vs. Wavelength

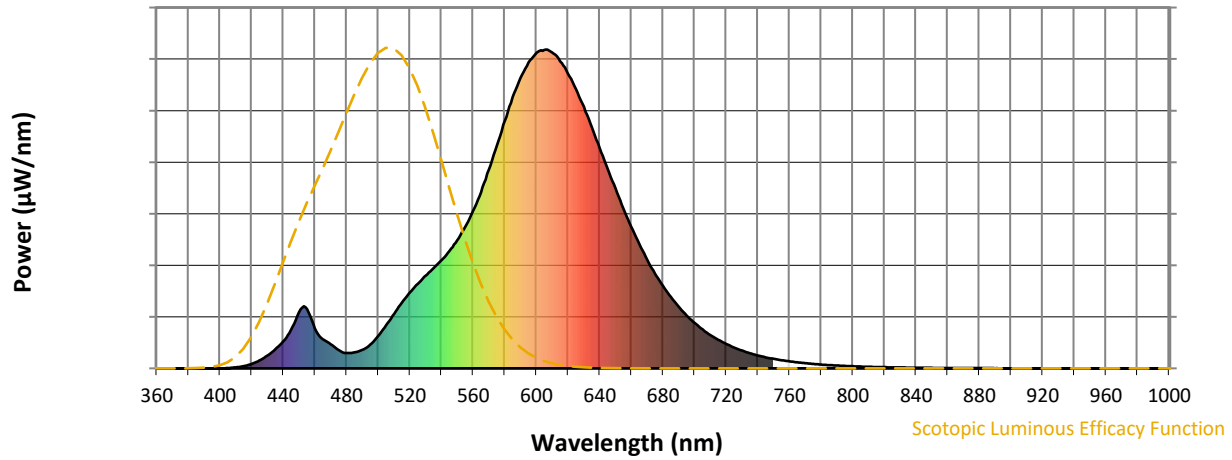


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	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



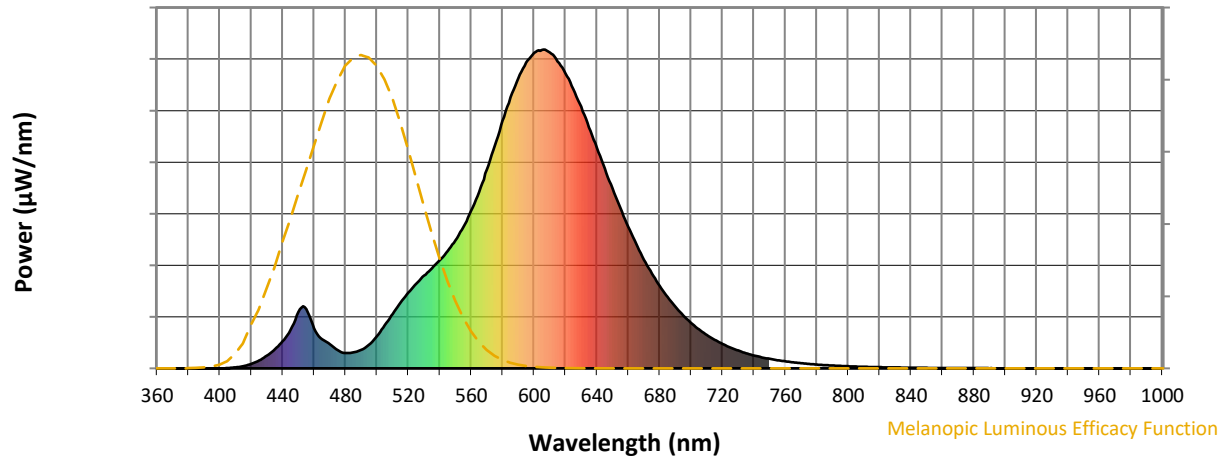
Scotopic Lumens: NR

S/P: 0.87

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	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

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 1.42

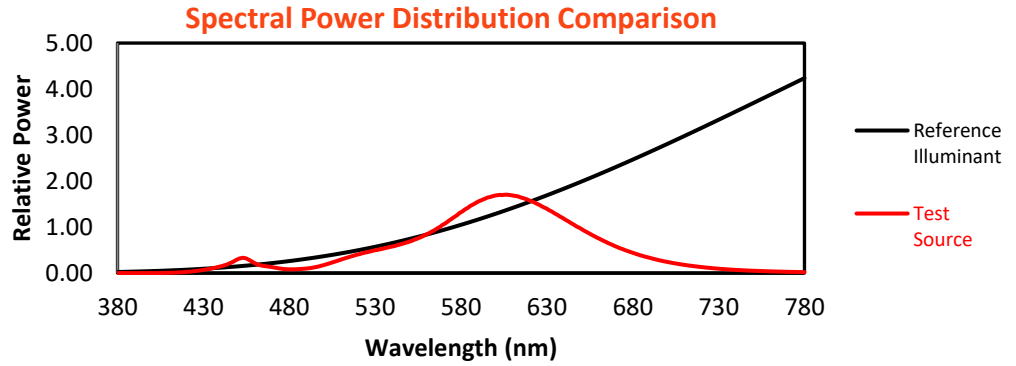
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	58	NR	620	925	NR	750	30	NR	880	1	NR
365	0	NR	495	75	NR	625	877	NR	755	26	NR	885	1	NR
370	0	NR	500	101	NR	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

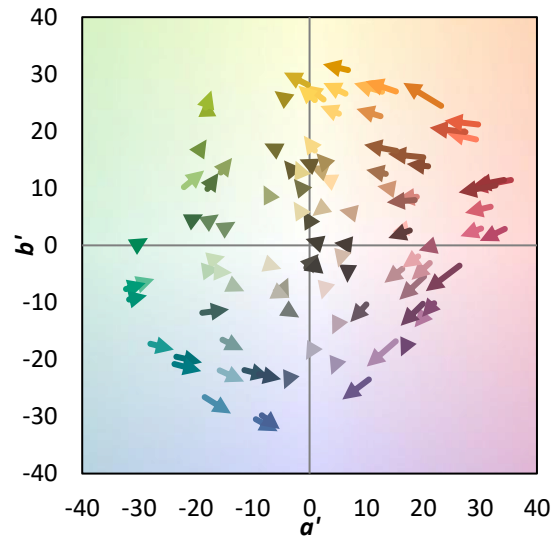
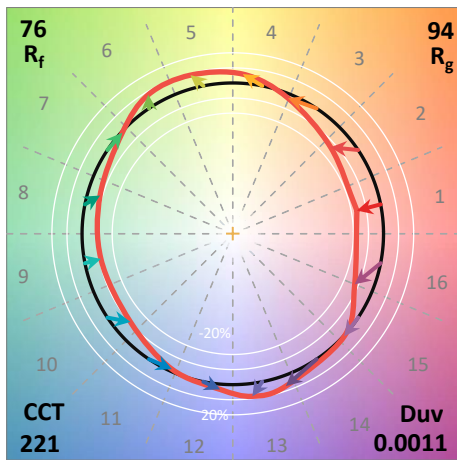
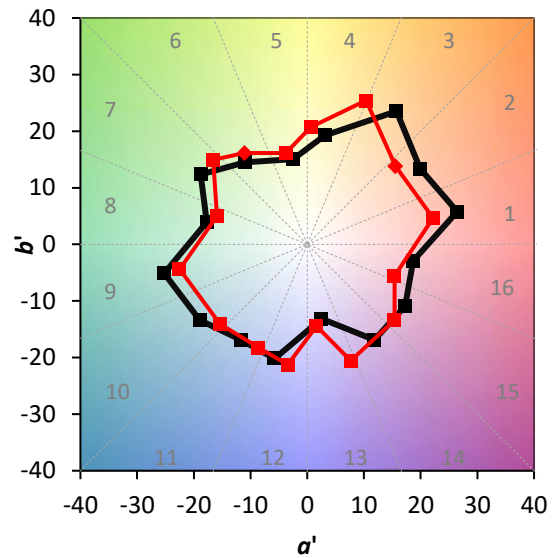
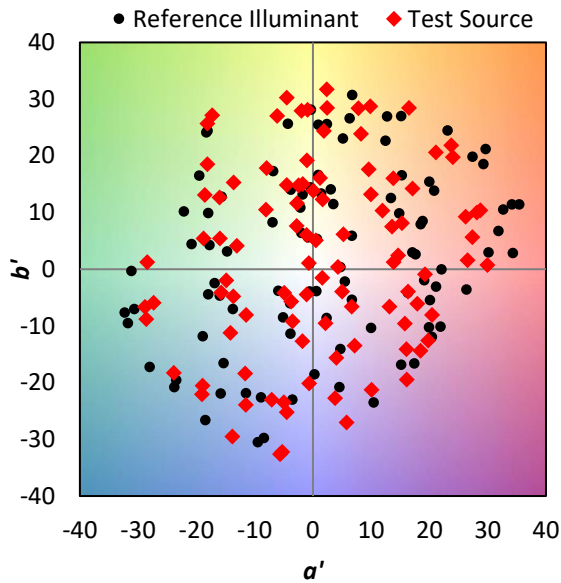
TM-30-18

Summary

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



Color Vector Graphics

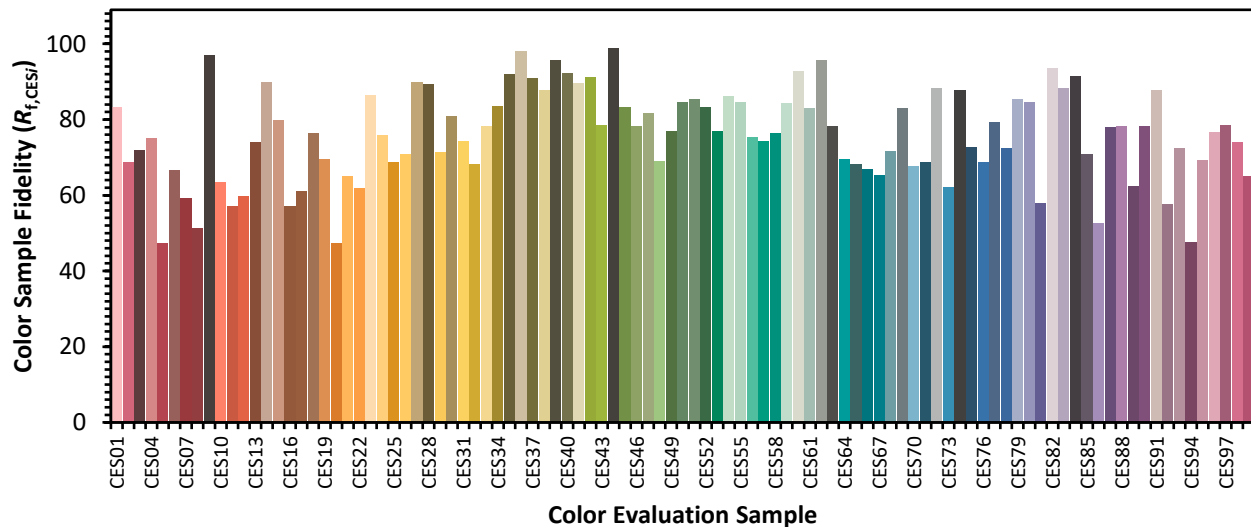


REPORT NUMBER: SP1-2406-133-2

TM-30-18

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

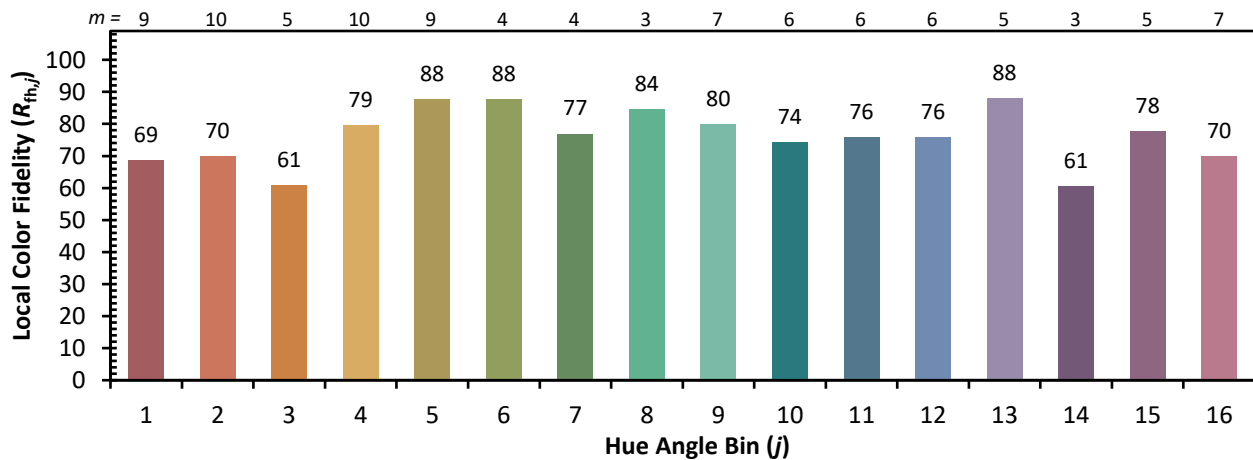
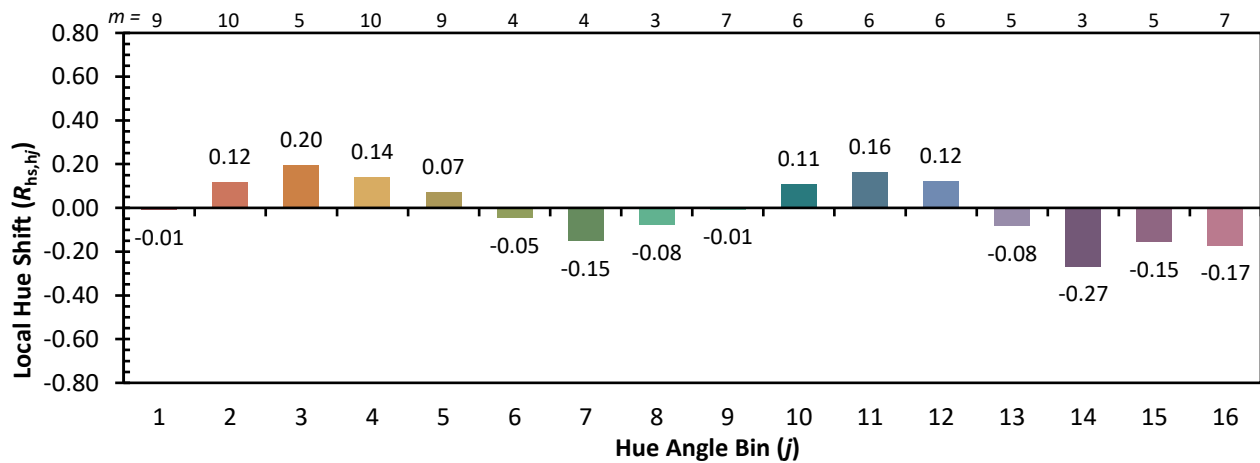
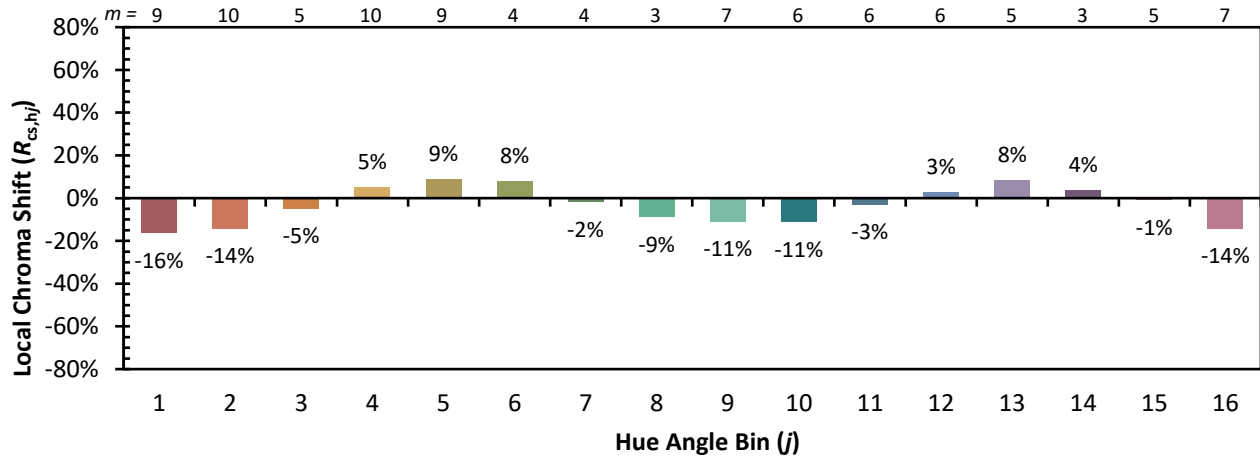
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CES02 = 65	CES27 = 90	CES52 = 83	CES77 = 79
CES03 = 32	CES28 = 89	CES53 = 77	CES78 = 72
CES04 = 72	CES29 = 71	CES54 = 86	CES79 = 86
CES05 = 52	CES30 = 81	CES55 = 85	CES80 = 85
CES06 = 52	CES31 = 74	CES56 = 75	CES81 = 58
CES07 = 44	CES32 = 68	CES57 = 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	



REPORT NUMBER: SP1-2406-133-2

TM-30-18

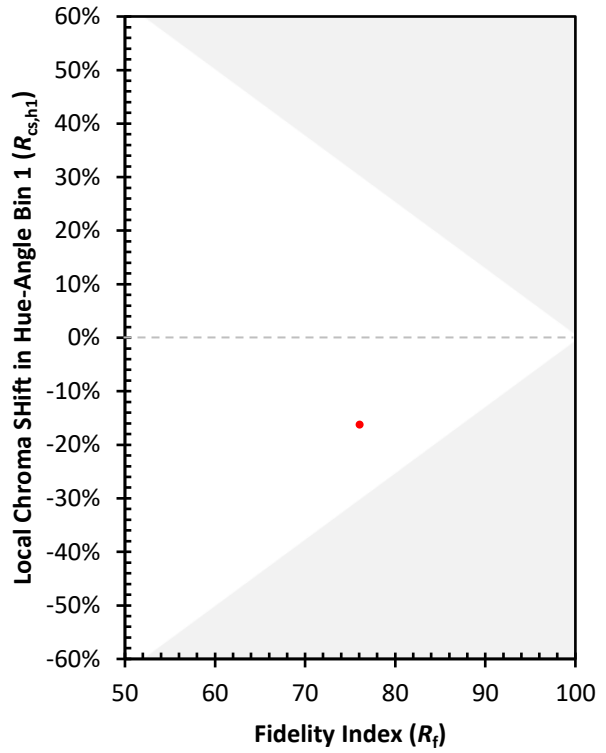
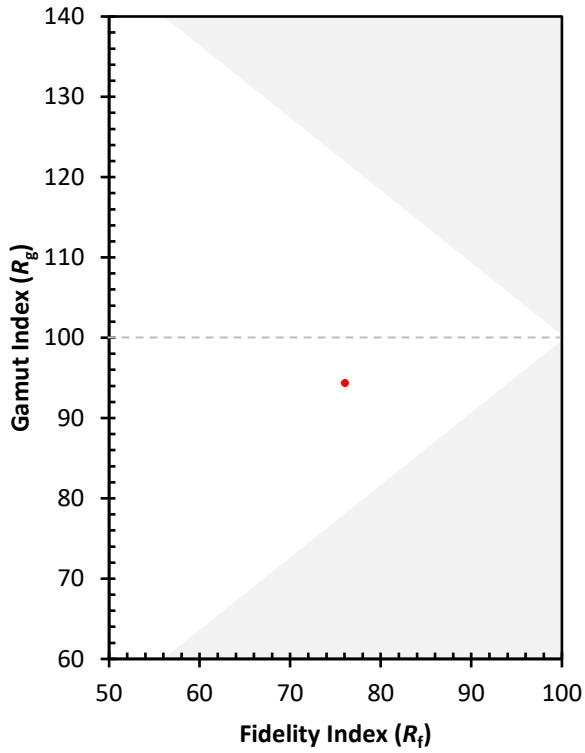
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2406-133-2

TM-30-18

Measure Comparisons



(END OF REPORT)