Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: INVUE

Report Number: P1442046

Luminaire Tested: ABB-C3-827-X-U-S-GM

Issue Date: 4/23/2026

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2024
Report Number:	P1442046
	TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-539-29)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	4/24/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	INVUE
Catalog Number:	ABB-C3-827-X-U-S-GM
Description:	ARBOR OUTDOOR ARCHITECTURAL BOLLARD LUMINAIRE
	SYMMETRIC OPTIC, GRAPHITE METALLIC PAINTED FINISH
Light Source:	2700K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1310.1 lumens
Efficiency:	N/A
Efficacy:	38.4 lumens/watt
Luminous Opening:	Circular (Dia: 0.4' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B1 - U0 - G1

Input Watts (W):	34.1
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.9934
Total Harmonic Distortion (THDi):	0.0961153
Frequency (hertz):	60
Stabilization Time:	0.5 HR
Operation Time:	3 HR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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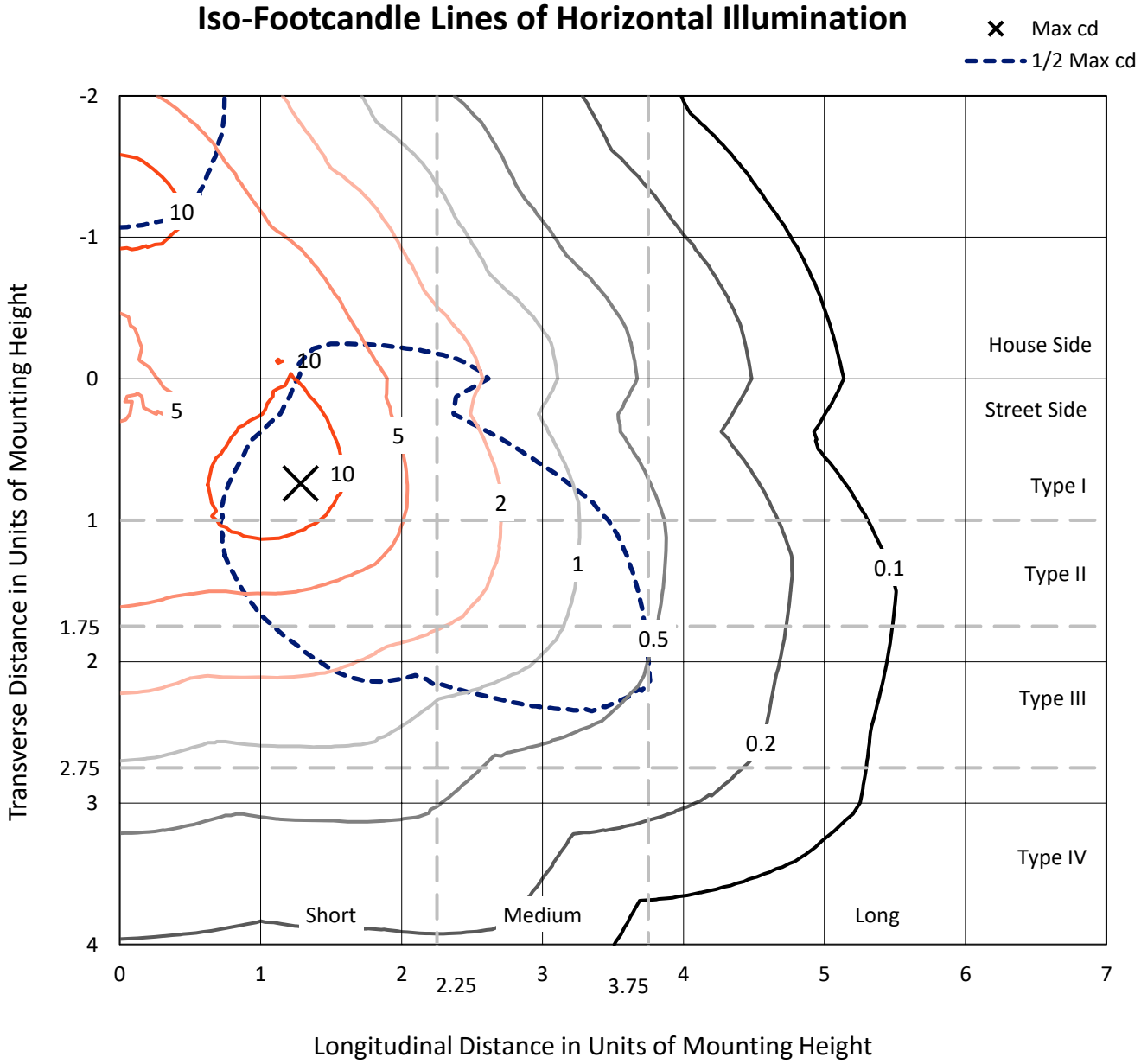
Iso-Footcandle Lines of Horizontal Illumination



Based on 3 foot mounting height. Maximum calculated value = 17.5 fc
Type III - Short - N/A

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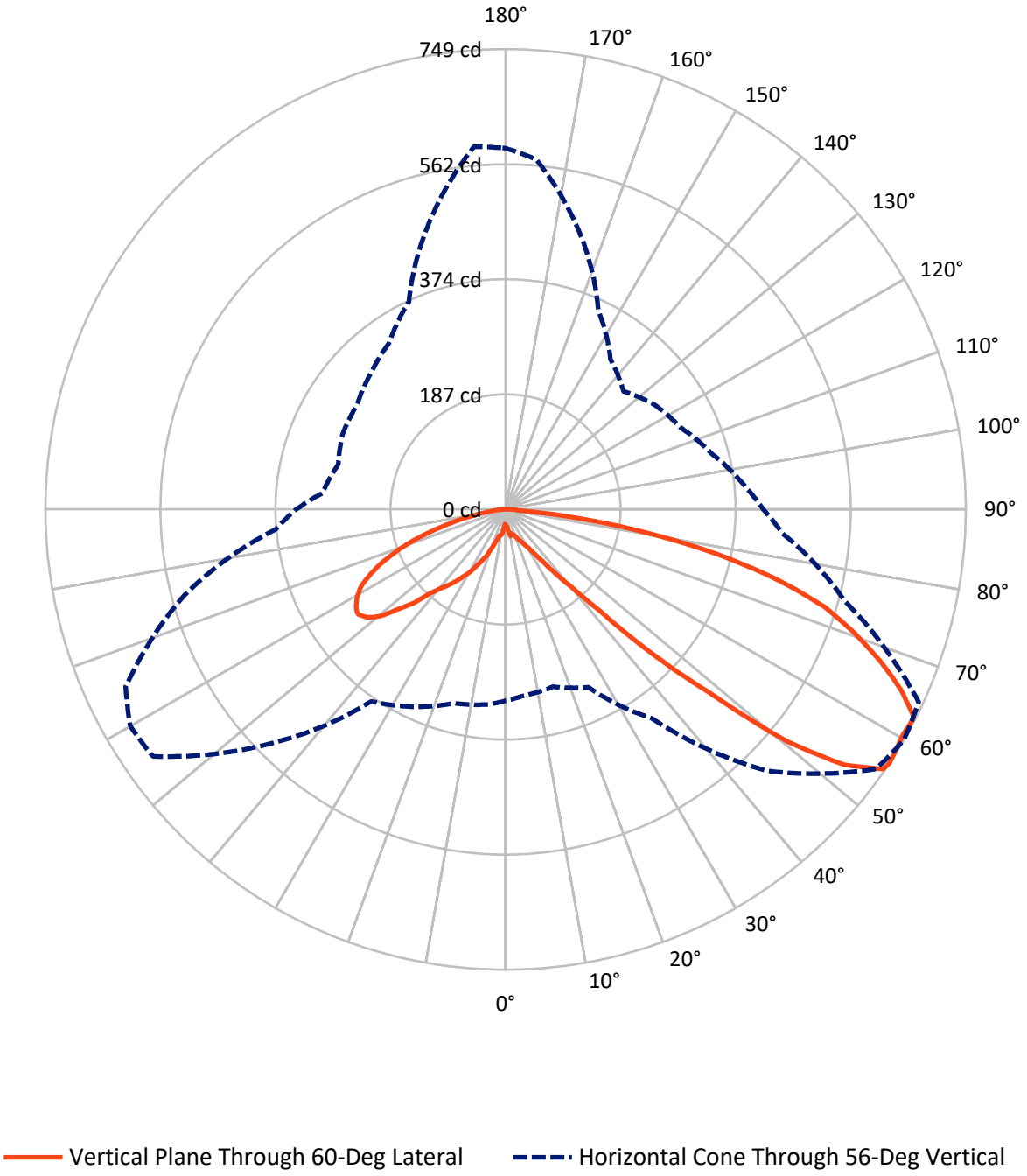
Luminous Intensity Polar Plot



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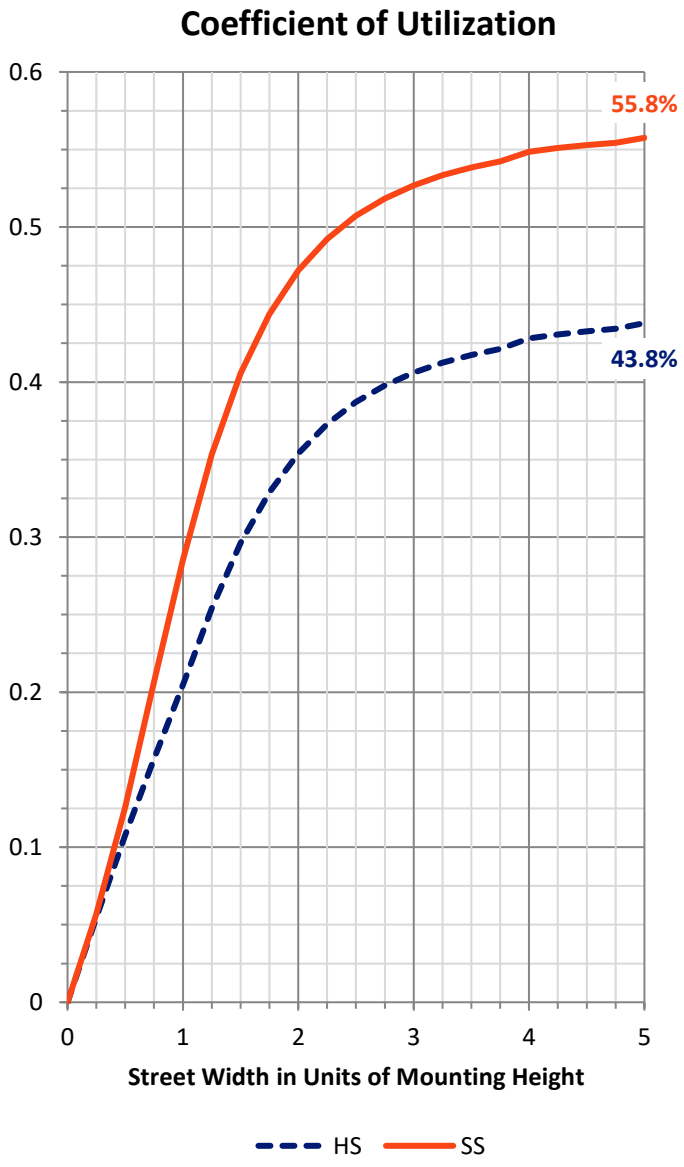
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	575.4	0.0	575.4
	% Fixture	43.9	0.0	43.9
Street Side	Lumens	734.7	0.0	734.7
	% Fixture	56.1	0.0	56.1
Total	Lumens	1310.1	0.0	1310.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.3	0.2
10°-20°	14.1	1.1
20°-30°	34.7	2.6
30°-40°	76.4	5.8
40°-50°	189.8	14.5
50°-60°	365.9	27.9
60°-70°	371.5	28.4
70°-80°	221.7	16.9
80°-90°	32.7	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1310.1	100.0
0°-180°	1310.1	100.0



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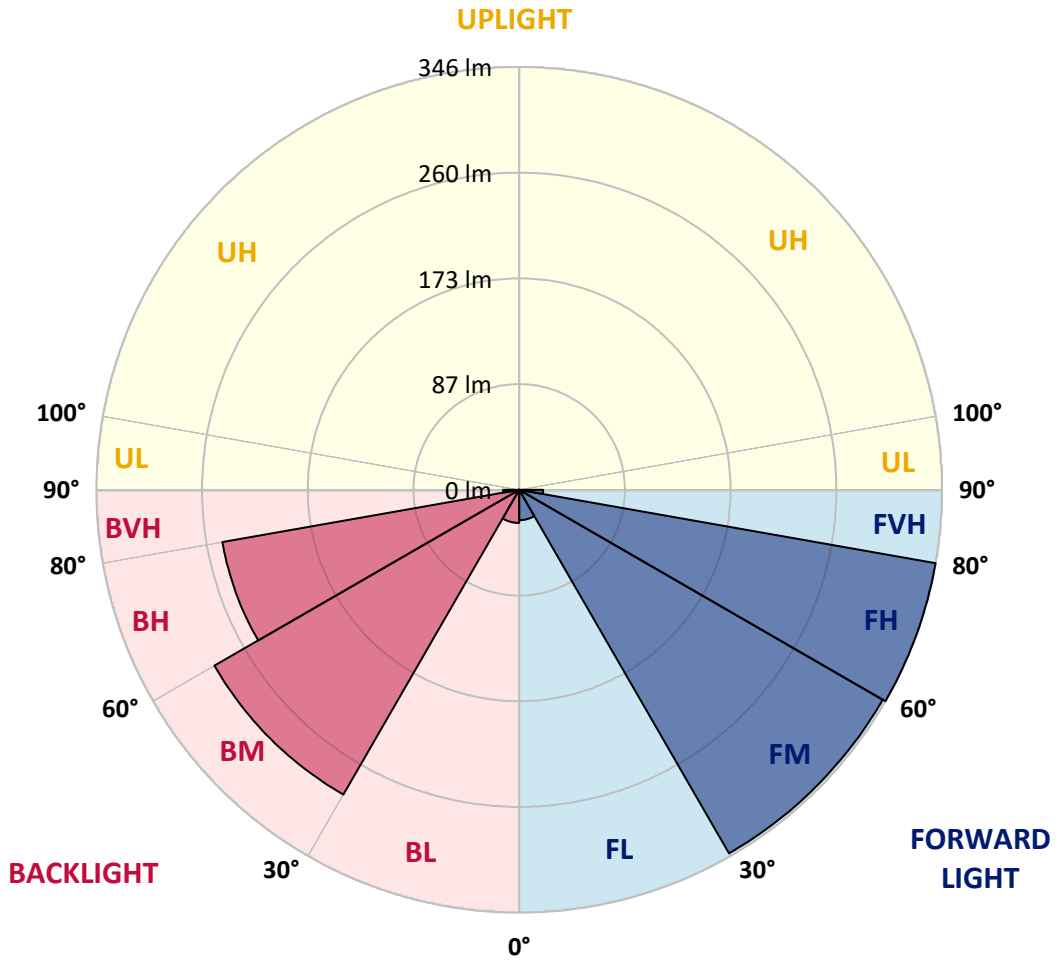
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	24.9	1.9			
FM	(30°-60°)	343.9	26.2			
FH	(60°-80°)	346.3	26.4			G0/660
FVH	(80°-90°)	19.6	1.5			G1/100
BL	(0°-30°)	27.1	2.1	B0/110		
BM	(30°-60°)	288.2	22.0	B1/1000		
BH	(60°-80°)	246.9	18.8	B1/500		G1/500
BVH	(80°-90°)	13.2	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	26.2	26.2	26.2	26.2	26.2	26.2	26.2	*26.2*	26.2	26.2	26.2
2.5°	31.0	31.8	34.9	35.7	33.3	31.8	30.2	*30.2*	29.4	27.8	26.2
5°	45.3	41.3	36.5	36.5	35.7	32.6	28.6	*28.6*	29.4	26.2	24.6
7.5°	44.5	47.6	49.2	48.4	46.1	46.8	41.3	*38.1*	34.1	33.3	36.5
10°	46.1	46.1	44.5	53.2	48.4	49.2	46.1	*44.5*	41.3	41.3	42.1
12.5°	43.7	42.1	44.5	48.4	43.7	47.6	42.9	*39.7*	39.7	42.9	45.3
15°	44.5	46.8	47.6	53.2	53.2	48.4	42.9	*42.9*	43.7	49.2	50.0
17.5°	50.8	55.6	54.8	56.4	58.0	50.8	42.1	*43.7*	46.1	49.2	55.6
20°	60.3	59.6	59.6	60.3	61.1	54.8	46.1	*47.6*	50.0	52.4	59.6
22.5°	69.9	72.3	74.6	69.1	68.3	58.8	54.0	*53.2*	57.2	55.6	63.5
25°	86.5	94.5	85.8	74.6	74.6	61.9	57.2	*57.2*	60.3	66.7	69.1
27.5°	103.2	107.2	92.1	79.4	82.6	70.7	64.3	*64.3*	67.5	75.4	81.0
30°	112.7	115.1	101.6	88.1	92.1	80.2	73.0	*72.3*	75.4	84.2	94.5
32.5°	123.9	128.6	113.5	99.2	102.4	98.5	88.1	*85.0*	85.8	93.7	102.4
35°	139.7	139.7	123.1	108.8	114.3	117.5	110.4	*104.0*	105.6	103.2	117.5
37.5°	152.4	152.4	139.7	122.3	127.0	137.4	138.2	*132.6*	131.8	117.5	131.8
40°	165.2	169.1	153.2	136.6	147.7	170.7	176.3	*168.3*	167.5	141.3	147.7
42.5°	181.0	187.4	173.9	160.4	181.0	223.9	238.2	*226.3*	226.3	178.6	176.3
45°	216.8	224.7	212.8	198.5	227.1	300.9	335.9	*335.9*	331.1	241.4	227.1
47.5°	241.4	249.3	235.8	226.3	270.0	378.7	434.3	*443.1*	469.3	307.3	284.3
50°	277.9	278.7	270.8	272.3	336.7	498.6	576.4	*593.1*	616.1	416.1	363.7
52.5°	297.8	294.6	290.6	301.7	384.3	557.4	668.5	*690.0*	709.0	497.8	416.1
55°	309.7	304.9	299.3	317.6	408.9	595.5	728.1	*745.6*	738.4	557.4	445.4
56°	*311.2*	*304.9*	*298.5*	*319.2*	*414.5*	*601.1*	*736.0*	*748.7*	*741.6*	*570.1*	*452.6*
57.5°	310.5	303.3	295.4	321.6	417.6	602.6	737.6	*746.4*	743.2	584.4	462.1
60°	302.5	296.2	284.3	321.6	419.2	588.4	728.1	*743.2*	747.9	588.4	460.5
62.5°	290.6	286.6	270.0	316.0	414.5	560.6	724.1	*745.6*	732.9	577.2	438.3
65°	269.2	266.8	246.1	305.7	393.8	517.7	689.2	*706.7*	683.6	548.7	396.2
67.5°	240.6	239.0	220.7	285.8	373.2	466.9	636.8	*656.6*	633.6	512.9	351.7
70°	210.4	207.2	193.7	260.4	349.4	408.1	579.6	*601.9*	586.0	471.6	308.1
72.5°	174.7	173.9	165.2	227.9	319.2	343.0	509.7	*542.3*	518.5	416.1	254.9
75°	135.0	134.2	133.4	188.2	270.0	268.4	424.8	*457.3*	428.8	350.9	198.5
77.5°	96.9	94.5	101.6	141.3	220.7	184.2	324.7	*354.1*	323.2	270.8	136.6
80°	63.5	58.8	66.7	88.1	148.5	108.8	210.4	*238.2*	206.4	177.1	76.2
82.5°	37.3	33.3	37.3	40.5	63.5	46.1	99.2	*119.1*	90.5	82.6	31.8
85°	18.3	15.9	16.7	15.9	16.7	18.3	19.1	*19.8*	16.7	14.3	13.5
87.5°	13.5	11.1	11.1	11.9	11.9	14.3	13.5	*14.3*	13.5	9.5	10.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.0

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REPORT NUMBER: P1442046
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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2
2.5°	24.6	23.0	23.0	23.0	21.4	24.6	27.0	26.2	25.4	26.2	25.4
5°	25.4	27.8	29.4	31.8	34.1	31.8	30.2	27.0	23.8	22.2	22.2
7.5°	38.1	40.5	35.7	38.1	38.1	35.7	36.5	35.7	31.8	30.2	29.4
10°	42.9	42.9	50.0	48.4	46.1	46.1	43.7	42.9	38.9	36.5	35.7
12.5°	47.6	49.2	50.0	46.1	50.8	49.2	47.6	43.7	41.3	38.1	38.1
15°	48.4	54.0	54.0	54.8	52.4	54.0	50.0	46.1	45.3	38.1	37.3
17.5°	59.6	59.6	61.9	61.1	56.4	59.6	56.4	53.2	48.4	42.1	41.3
20°	60.3	67.5	69.1	69.1	66.7	66.7	68.3	63.5	56.4	52.4	50.8
22.5°	67.5	73.0	77.8	84.2	76.2	77.0	74.6	64.3	54.8	56.4	52.4
25°	73.8	80.2	83.4	94.5	88.1	80.2	81.0	72.3	62.7	61.9	59.6
27.5°	84.2	91.3	98.5	112.0	96.9	91.3	88.1	80.2	69.1	67.5	67.5
30°	101.6	102.4	112.0	120.7	117.5	96.1	96.1	86.5	78.6	74.6	76.2
32.5°	116.7	115.9	127.0	131.8	130.2	105.6	104.8	98.5	95.3	88.9	86.5
35°	129.4	137.4	139.0	143.7	141.3	124.7	114.3	108.8	108.0	106.4	104.8
37.5°	142.9	152.4	152.4	157.2	153.2	138.2	128.6	122.3	126.2	131.8	126.2
40°	162.0	173.9	167.5	170.7	166.7	154.8	146.9	142.9	153.2	168.3	161.2
42.5°	185.0	201.7	191.4	188.2	183.4	172.3	169.9	175.5	198.5	220.7	213.6
45°	229.5	243.0	228.7	221.5	215.2	202.5	203.3	220.7	266.8	304.1	310.5
47.5°	268.4	291.4	261.2	250.9	241.4	222.3	230.3	254.1	325.5	384.3	392.2
50°	339.8	351.7	312.0	285.0	270.8	254.1	264.4	315.2	401.8	461.3	480.4
52.5°	393.0	381.1	335.9	306.5	288.2	269.2	284.3	347.0	445.4	524.0	543.1
55°	415.3	393.0	348.6	315.2	296.2	273.1	296.2	357.3	464.5	566.1	586.0
56°	*419.2*	*393.8*	*347.8*	*314.4*	*296.2*	*271.5*	*297.8*	*357.3*	*466.1*	*571.7*	*587.6*
57.5°	427.2	393.0	344.6	312.0	293.8	267.6	297.0	353.3	464.5	573.3	590.7
60°	440.7	392.2	331.1	304.1	284.3	258.8	293.0	353.3	457.3	565.3	592.3
62.5°	445.4	387.5	311.2	285.8	273.1	246.1	282.7	350.2	440.7	557.4	589.9
65°	426.4	376.4	281.9	260.4	250.9	227.1	262.8	337.4	412.1	531.2	555.8
67.5°	397.8	358.9	251.7	226.3	221.5	201.7	243.0	315.2	370.0	479.6	501.0
70°	358.1	335.1	219.9	192.1	191.4	173.9	216.8	288.2	315.2	422.4	443.1
72.5°	305.7	292.2	191.4	154.8	158.8	145.3	185.0	254.9	256.5	361.3	383.5
75°	241.4	229.5	156.4	118.3	118.3	115.1	142.9	209.6	197.7	287.4	304.9
77.5°	172.3	160.4	115.1	83.4	85.8	83.4	101.6	156.4	138.2	206.4	228.7
80°	99.2	85.0	71.5	54.0	54.0	54.0	61.1	97.7	81.8	131.8	142.9
82.5°	34.9	27.0	34.9	30.2	31.0	29.4	27.0	38.1	34.9	54.0	61.9
85°	13.5	11.9	16.7	15.9	15.1	14.3	14.3	15.1	17.5	17.5	16.7
87.5°	10.3	8.7	13.5	13.5	11.1	11.1	11.1	11.1	14.3	14.3	13.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2
2.5°	26.2	27.0	27.8	27.0	25.4	24.6	23.8	25.4	26.2	26.2	26.2
5°	23.0	24.6	26.2	26.2	28.6	30.2	29.4	27.8	22.2	22.2	23.0
7.5°	29.4	33.3	31.8	30.2	32.6	38.9	37.3	35.7	31.0	28.6	28.6
10°	38.1	43.7	39.7	43.7	46.8	44.5	40.5	36.5	43.7	41.3	38.1
12.5°	38.9	42.1	42.9	51.6	55.6	43.7	41.3	44.5	44.5	42.9	40.5
15°	38.9	46.1	49.2	54.0	58.8	51.6	42.1	47.6	50.0	48.4	46.8
17.5°	42.1	48.4	51.6	59.6	64.3	59.6	50.8	51.6	55.6	60.3	58.0
20°	49.2	52.4	54.8	64.3	66.7	70.7	61.1	59.6	58.0	61.9	61.1
22.5°	55.6	61.1	61.9	70.7	70.7	83.4	77.8	62.7	58.8	65.1	66.7
25°	59.6	65.9	69.9	76.2	79.4	92.1	88.9	75.4	68.3	70.7	71.5
27.5°	68.3	73.0	78.6	85.0	92.9	99.2	105.6	84.2	77.8	77.8	78.6
30°	74.6	81.0	88.1	100.0	106.4	112.7	120.7	93.7	84.2	85.8	86.5
32.5°	88.1	88.9	97.7	112.7	115.9	127.0	129.4	107.2	95.3	94.5	94.5
35°	102.4	100.0	108.0	129.4	129.4	143.7	139.0	120.7	105.6	104.8	105.6
37.5°	124.7	117.5	121.5	142.1	145.3	157.2	150.9	135.8	119.1	119.1	122.3
40°	150.1	139.0	136.6	160.4	159.6	169.9	163.6	151.7	136.6	136.6	141.3
42.5°	194.5	169.1	162.8	182.6	177.9	187.4	180.2	173.1	159.6	166.7	174.7
45°	286.6	233.4	212.0	223.1	216.0	217.6	209.6	207.2	194.5	203.3	219.1
47.5°	372.4	295.4	260.4	263.6	245.3	239.8	233.4	234.2	216.8	239.0	254.9
50°	460.5	374.8	320.8	304.9	289.0	268.4	266.0	263.6	262.0	289.0	311.2
52.5°	537.5	437.5	360.5	328.7	308.9	288.2	282.7	278.7	285.0	324.0	350.9
55°	589.9	477.2	370.8	331.9	312.8	296.2	292.2	283.5	298.5	338.2	372.4
56°	*592.3*	*482.0*	*372.4*	*330.3*	*311.2*	*295.4*	*292.2*	*281.9*	*299.3*	*340.6*	*375.6*
57.5°	590.7	487.5	370.0	329.5	306.5	290.6	289.0	275.5	299.3	342.2	377.9
60°	578.8	484.3	360.5	327.9	293.0	280.3	280.3	262.8	295.4	346.2	383.5
62.5°	581.2	474.0	344.6	316.8	272.3	263.6	268.4	244.6	285.0	346.2	380.3
65°	559.8	456.6	318.4	299.3	248.5	239.0	246.9	219.9	268.4	330.3	362.9
67.5°	508.2	420.8	287.4	278.7	220.7	210.4	219.9	194.5	244.6	309.7	343.8
70°	451.0	370.0	249.3	246.9	192.9	178.6	188.2	165.9	218.4	283.5	321.6
72.5°	391.4	312.8	203.3	210.4	162.8	143.7	152.4	139.7	189.0	246.9	285.0
75°	317.6	246.9	153.2	165.9	129.4	109.6	113.5	108.8	153.2	200.9	239.0
77.5°	233.4	178.6	102.4	116.7	92.1	76.2	78.6	78.6	112.7	148.5	183.4
80°	144.5	107.2	57.2	66.7	57.2	50.0	48.4	50.0	70.7	88.9	117.5
82.5°	59.6	40.5	25.4	25.4	28.6	28.6	27.8	26.2	33.3	37.3	42.9
85°	16.7	11.1	12.7	11.1	14.3	15.1	13.5	11.9	13.5	12.7	13.5
87.5°	13.5	8.7	10.3	7.9	11.1	11.9	10.3	9.5	10.3	9.5	10.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1442046
CATALOG NUMBER: ABB-C3-827-X-U-S-GM

CANDELA DISTRIBUTION (continued):

	285°	295°	300°	305°	315°	325°	335°	345°	355°	360°
0°	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2
2.5°	25.4	25.4	26.2	28.6	31.0	31.0	31.0	31.8	31.0	31.0
5°	23.8	22.2	21.4	20.6	23.0	25.4	29.4	32.6	39.7	45.3
7.5°	28.6	28.6	27.8	27.8	27.8	29.4	32.6	38.1	43.7	44.5
10°	38.1	37.3	36.5	38.1	38.1	34.1	39.7	46.1	50.0	46.1
12.5°	39.7	38.1	34.9	34.9	37.3	38.9	46.8	52.4	42.9	43.7
15°	42.9	40.5	38.9	38.9	38.1	45.3	50.8	54.8	44.5	44.5
17.5°	47.6	41.3	38.9	40.5	42.9	48.4	55.6	55.6	50.0	50.8
20°	51.6	46.1	43.7	46.1	46.8	56.4	57.2	60.3	59.6	60.3
22.5°	56.4	48.4	46.8	47.6	52.4	61.1	64.3	73.0	64.3	69.9
25°	62.7	54.0	54.0	52.4	57.2	65.9	73.0	78.6	81.0	86.5
27.5°	70.7	63.5	64.3	61.9	63.5	71.5	85.0	88.9	97.7	103.2
30°	82.6	77.8	77.0	71.5	72.3	77.8	93.7	106.4	116.7	112.7
32.5°	92.1	93.7	90.5	89.7	83.4	87.3	104.8	119.9	124.7	123.9
35°	108.0	111.2	110.4	104.0	98.5	101.6	117.5	135.0	139.7	139.7
37.5°	133.4	135.0	137.4	123.9	114.3	114.3	133.4	146.9	153.2	152.4
40°	163.6	173.9	172.3	152.4	135.0	131.8	150.9	160.4	166.7	165.2
42.5°	206.4	222.3	233.4	202.5	160.4	150.1	171.5	181.8	182.6	181.0
45°	279.5	323.2	348.6	308.1	224.7	195.3	219.1	226.3	223.1	216.8
47.5°	344.6	393.8	451.0	404.1	285.8	231.8	251.7	258.0	249.3	241.4
50°	447.0	531.2	559.8	536.0	397.0	297.0	303.3	302.5	285.0	277.9
52.5°	501.0	616.1	651.1	628.1	474.8	347.8	337.4	321.6	306.5	297.8
55°	535.2	674.9	703.5	694.8	525.6	378.7	353.3	328.7	316.8	309.7
56°	*541.5*	*682.0*	*705.1*	*700.3*	*537.5*	*381.1*	*354.1*	*326.3*	*318.4*	*311.2*
57.5°	543.1	683.6	697.1	697.1	548.7	382.7	353.3	322.4	316.0	310.5
60°	527.2	673.3	685.2	679.7	552.6	381.1	350.9	308.1	306.5	302.5
62.5°	492.3	665.4	689.2	685.2	547.1	367.6	350.9	288.2	291.4	290.6
65°	455.8	631.2	657.4	658.2	524.8	342.2	343.0	261.2	262.0	269.2
67.5°	407.3	576.4	598.7	605.0	486.7	304.1	326.3	235.8	228.7	240.6
70°	346.2	512.1	536.7	543.1	439.1	265.2	303.3	207.2	193.7	210.4
72.5°	281.1	440.7	469.3	478.0	381.9	223.1	267.6	183.4	158.0	174.7
75°	214.4	356.5	381.9	394.6	318.4	177.1	216.0	153.2	122.3	135.0
77.5°	147.7	265.2	285.8	299.3	241.4	127.0	159.6	115.1	86.5	96.9
80°	85.8	170.7	184.2	197.7	158.8	78.6	96.1	73.8	56.4	63.5
82.5°	32.6	77.0	80.2	94.5	71.5	38.1	36.5	37.3	31.8	37.3
85°	15.1	16.7	15.9	19.1	13.5	15.1	12.7	17.5	16.7	18.3
87.5°	11.9	12.7	11.9	13.5	9.5	10.3	9.5	12.7	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Invue

Report Number: SP1-2509-539-6

Test Date: 04/15/2026

Luminaire Tested: Luxscape Bollard

Data in this report applies to families of products including ;Luxscape

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

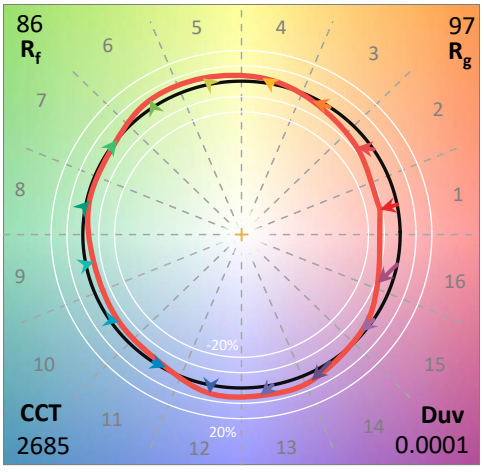
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2509-539-6
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	04/15/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Invue
Catalog Number:	**Luxscape Bollard**
Description:	ARB-C1-827-LED-XX-Dx-S-GM-SPECULAR REFLECTOR

Spectral Parameters

CCT (K):	2685
CIE u':	0.2631
CIE v':	0.5278
Duv:	0.0001
CIE x:	0.4613
CIE y:	0.4112
CIE z:	0.1276
Peak Wavelength (nm):	607
Dominant Wavelength (nm):	584
Purity:	61.87869
Rf:	85.8
Rg:	97.1

CRI (Ra):	83.3				
R1:	82.0	R9:	7.2		
R2:	92.1	R10:	83.2		
R3:	95.4	R11:	84.1		
R4:	82.6	R12:	80.9		
R5:	82.9	R13:	84.4		
R6:	92.4	R14:	98.1		
R7:	81.6	R15:	73.2		
R8:	57.2				



Test Conditions

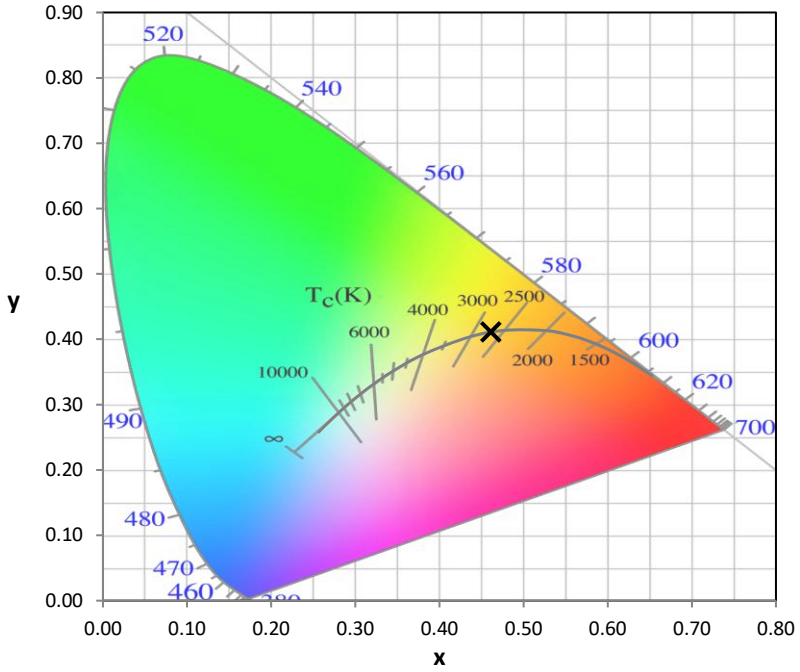
Stabilization Time:	29M
Operation Time:	1H 29M
Sphere Temperature (°C):	25.1

REPORT NUMBER: SP1-2509-539-6

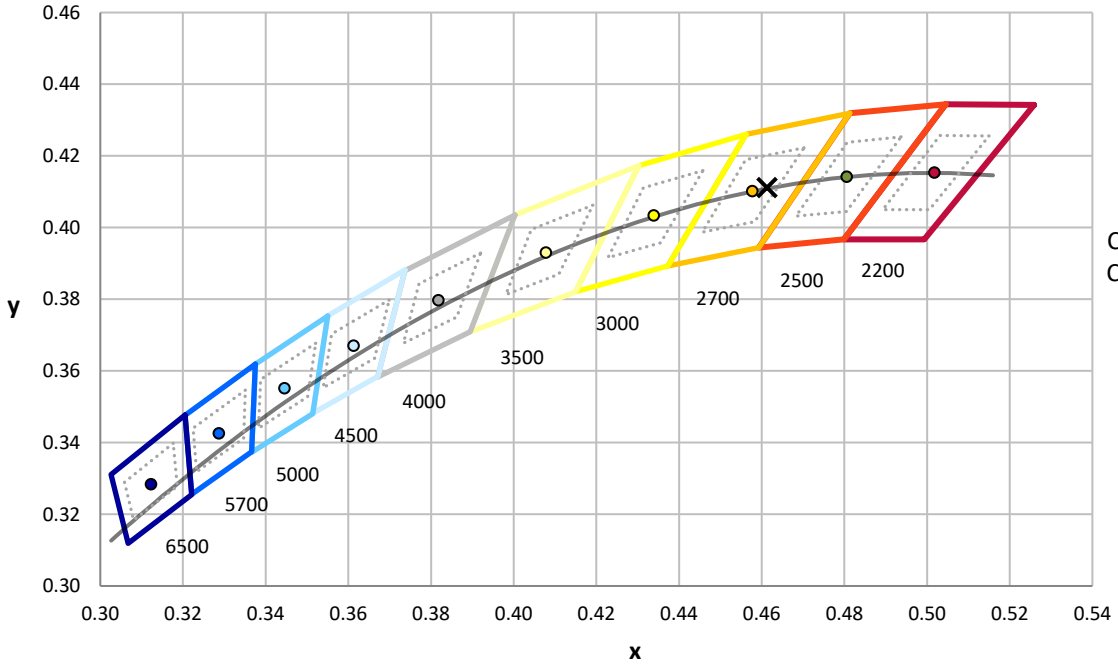
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

REPORT NUMBER: SP1-2509-539-6

CIE 1931 Chromaticity Diagram



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

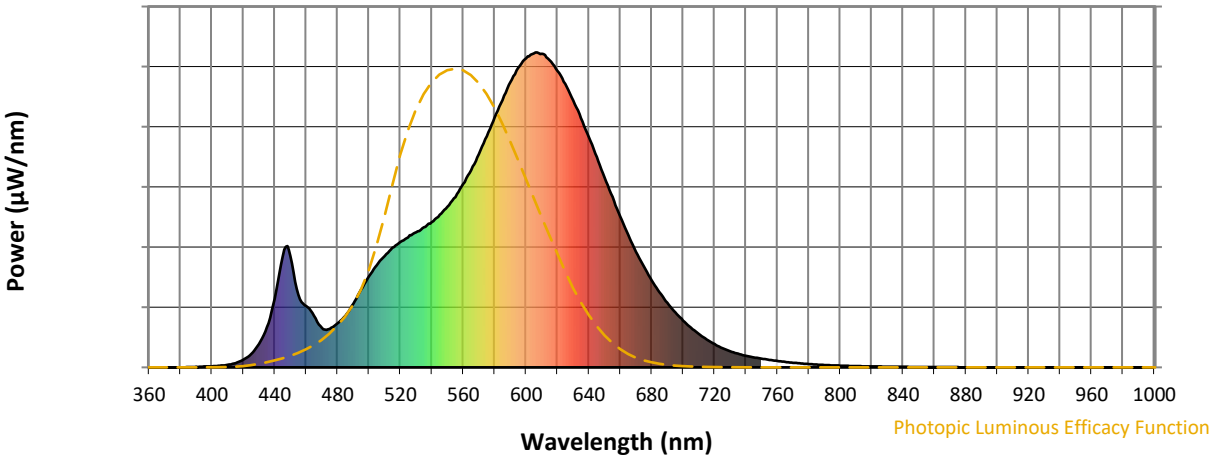


CCT = 2685K
CIE x = 0.4613
CIE y = 0.4112
Duv = 0.0001

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2509-539-6

Photopic Flux vs. Wavelength

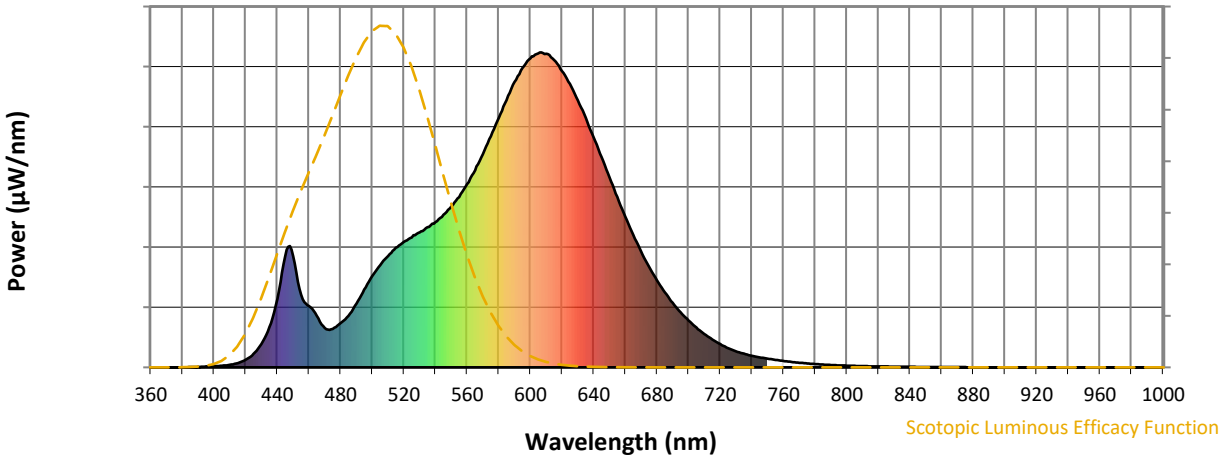


Photopic Lumens: NR

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	202	NR	620	941	NR	750	28	NR	880	0	NR
365	0	NR	495	247	NR	625	900	NR	755	24	NR	885	0	NR
370	0	NR	500	290	NR	630	847	NR	760	20	NR	890	0	NR
375	0	NR	505	324	NR	635	791	NR	765	17	NR	895	0	NR
380	0	NR	510	354	NR	640	730	NR	770	15	NR	900	0	NR
385	1	NR	515	380	NR	645	668	NR	775	13	NR	905	0	NR
390	2	NR	520	398	NR	650	602	NR	780	11	NR	910	0	NR
395	3	NR	525	413	NR	655	541	NR	785	9	NR	915	0	NR
400	3	NR	530	428	NR	660	478	NR	790	8	NR	920	0	NR
405	5	NR	535	445	NR	665	421	NR	795	6	NR	925	0	NR
410	8	NR	540	461	NR	670	367	NR	800	5	NR	930	0	NR
415	14	NR	545	485	NR	675	320	NR	805	5	NR	935	0	NR
420	24	NR	550	510	NR	680	277	NR	810	4	NR	940	0	NR
425	43	NR	555	541	NR	685	238	NR	815	3	NR	945	0	NR
430	74	NR	560	582	NR	690	205	NR	820	3	NR	950	0	NR
435	128	NR	565	626	NR	695	175	NR	825	3	NR	955	0	NR
440	218	NR	570	677	NR	700	148	NR	830	2	NR	960	0	NR
445	352	NR	575	734	NR	705	126	NR	835	2	NR	965	0	NR
450	354	NR	580	793	NR	710	106	NR	840	2	NR	970	0	NR
455	230	NR	585	849	NR	715	89	NR	845	1	NR	975	0	NR
460	195	NR	590	907	NR	720	74	NR	850	1	NR	980	0	NR
465	164	NR	595	951	NR	725	61	NR	855	1	NR	985	0	NR
470	125	NR	600	981	NR	730	51	NR	860	1	NR	990	0	NR
475	122	NR	605	997	NR	735	43	NR	865	1	NR	995	0	NR
480	140	NR	610	996	NR	740	37	NR	870	1	NR	1000	0	NR
485	164	NR	615	976	NR	745	32	NR	875	1	NR			

REPORT NUMBER: SP1-2509-539-6

Scotopic Flux vs. Wavelength

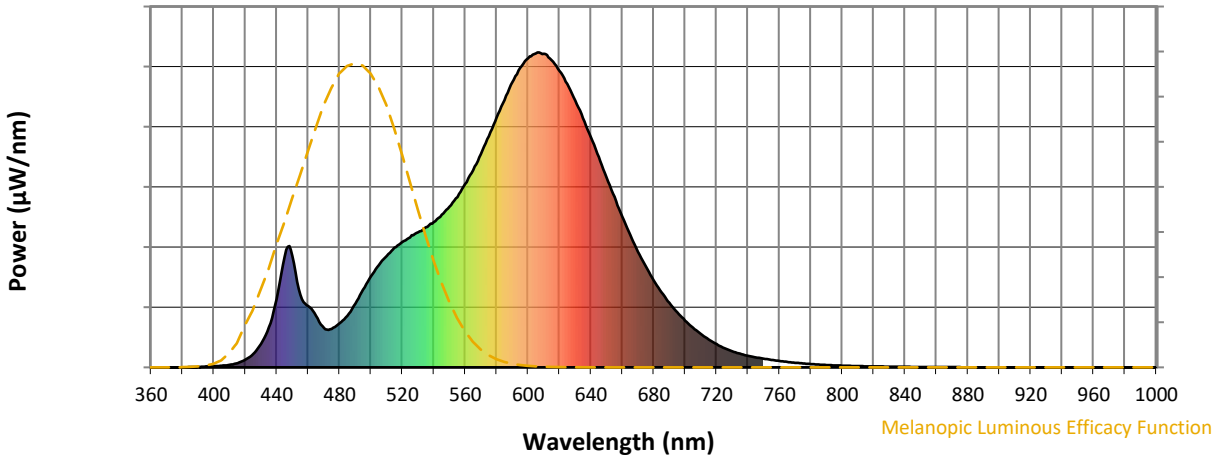


Scotopic Lumens: NR **S/P: 1.22**

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	202	NR	620	941	NR	750	28	NR	880	0	NR
365	0	NR	495	247	NR	625	900	NR	755	24	NR	885	0	NR
370	0	NR	500	290	NR	630	847	NR	760	20	NR	890	0	NR
375	0	NR	505	324	NR	635	791	NR	765	17	NR	895	0	NR
380	0	NR	510	354	NR	640	730	NR	770	15	NR	900	0	NR
385	1	NR	515	380	NR	645	668	NR	775	13	NR	905	0	NR
390	2	NR	520	398	NR	650	602	NR	780	11	NR	910	0	NR
395	3	NR	525	413	NR	655	541	NR	785	9	NR	915	0	NR
400	3	NR	530	428	NR	660	478	NR	790	8	NR	920	0	NR
405	5	NR	535	445	NR	665	421	NR	795	6	NR	925	0	NR
410	8	NR	540	461	NR	670	367	NR	800	5	NR	930	0	NR
415	14	NR	545	485	NR	675	320	NR	805	5	NR	935	0	NR
420	24	NR	550	510	NR	680	277	NR	810	4	NR	940	0	NR
425	43	NR	555	541	NR	685	238	NR	815	3	NR	945	0	NR
430	74	NR	560	582	NR	690	205	NR	820	3	NR	950	0	NR
435	128	NR	565	626	NR	695	175	NR	825	3	NR	955	0	NR
440	218	NR	570	677	NR	700	148	NR	830	2	NR	960	0	NR
445	352	NR	575	734	NR	705	126	NR	835	2	NR	965	0	NR
450	354	NR	580	793	NR	710	106	NR	840	2	NR	970	0	NR
455	230	NR	585	849	NR	715	89	NR	845	1	NR	975	0	NR
460	195	NR	590	907	NR	720	74	NR	850	1	NR	980	0	NR
465	164	NR	595	951	NR	725	61	NR	855	1	NR	985	0	NR
470	125	NR	600	981	NR	730	51	NR	860	1	NR	990	0	NR
475	122	NR	605	997	NR	735	43	NR	865	1	NR	995	0	NR
480	140	NR	610	996	NR	740	37	NR	870	1	NR	1000	0	NR
485	164	NR	615	976	NR	745	32	NR	875	1	NR			

REPORT NUMBER: SP1-2509-539-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.26**

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	202	NR	620	941	NR	750	28	NR	880	0	NR
365	0	NR	495	247	NR	625	900	NR	755	24	NR	885	0	NR
370	0	NR	500	290	NR	630	847	NR	760	20	NR	890	0	NR
375	0	NR	505	324	NR	635	791	NR	765	17	NR	895	0	NR
380	0	NR	510	354	NR	640	730	NR	770	15	NR	900	0	NR
385	1	NR	515	380	NR	645	668	NR	775	13	NR	905	0	NR
390	2	NR	520	398	NR	650	602	NR	780	11	NR	910	0	NR
395	3	NR	525	413	NR	655	541	NR	785	9	NR	915	0	NR
400	3	NR	530	428	NR	660	478	NR	790	8	NR	920	0	NR
405	5	NR	535	445	NR	665	421	NR	795	6	NR	925	0	NR
410	8	NR	540	461	NR	670	367	NR	800	5	NR	930	0	NR
415	14	NR	545	485	NR	675	320	NR	805	5	NR	935	0	NR
420	24	NR	550	510	NR	680	277	NR	810	4	NR	940	0	NR
425	43	NR	555	541	NR	685	238	NR	815	3	NR	945	0	NR
430	74	NR	560	582	NR	690	205	NR	820	3	NR	950	0	NR
435	128	NR	565	626	NR	695	175	NR	825	3	NR	955	0	NR
440	218	NR	570	677	NR	700	148	NR	830	2	NR	960	0	NR
445	352	NR	575	734	NR	705	126	NR	835	2	NR	965	0	NR
450	354	NR	580	793	NR	710	106	NR	840	2	NR	970	0	NR
455	230	NR	585	849	NR	715	89	NR	845	1	NR	975	0	NR
460	195	NR	590	907	NR	720	74	NR	850	1	NR	980	0	NR
465	164	NR	595	951	NR	725	61	NR	855	1	NR	985	0	NR
470	125	NR	600	981	NR	730	51	NR	860	1	NR	990	0	NR
475	122	NR	605	997	NR	735	43	NR	865	1	NR	995	0	NR
480	140	NR	610	996	NR	740	37	NR	870	1	NR	1000	0	NR
485	164	NR	615	976	NR	745	32	NR	875	1	NR			

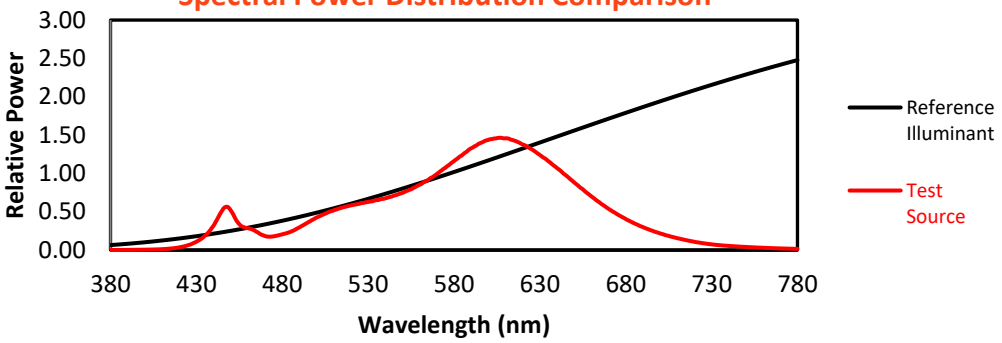
REPORT NUMBER: SP1-2509-539-6

TM-30-18

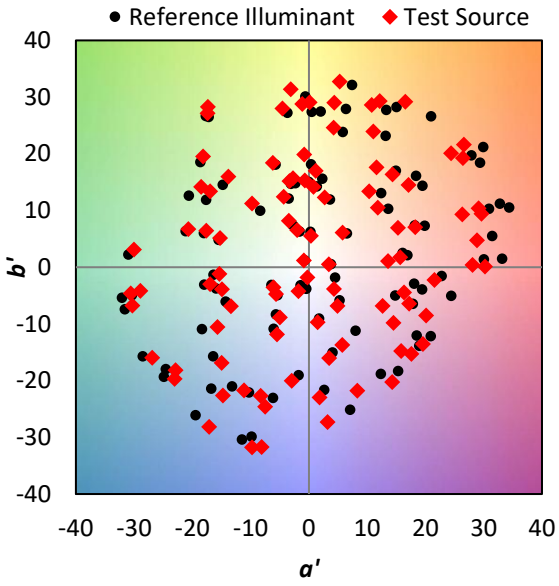
Summary

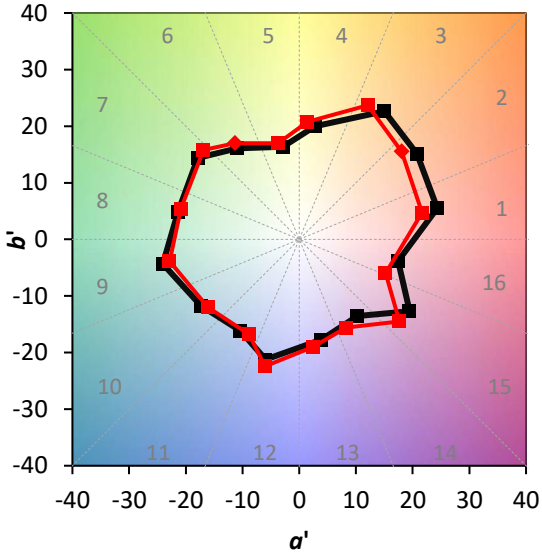
R_f = 85.8
R_g = 97.1
CIE R_a = 83.3
R_9 = 7.2

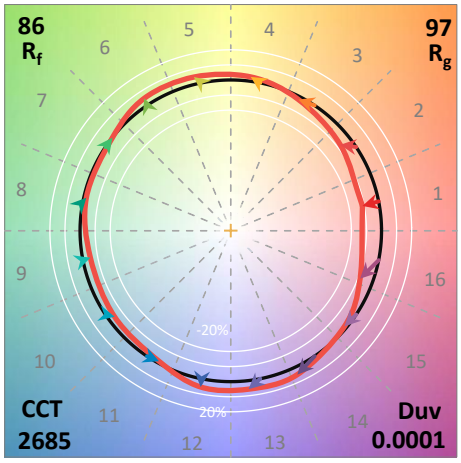
Spectral Power Distribution Comparison

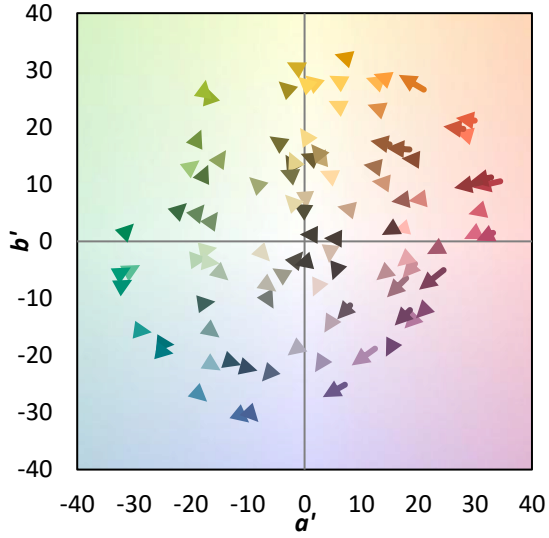


Color Vector Graphics







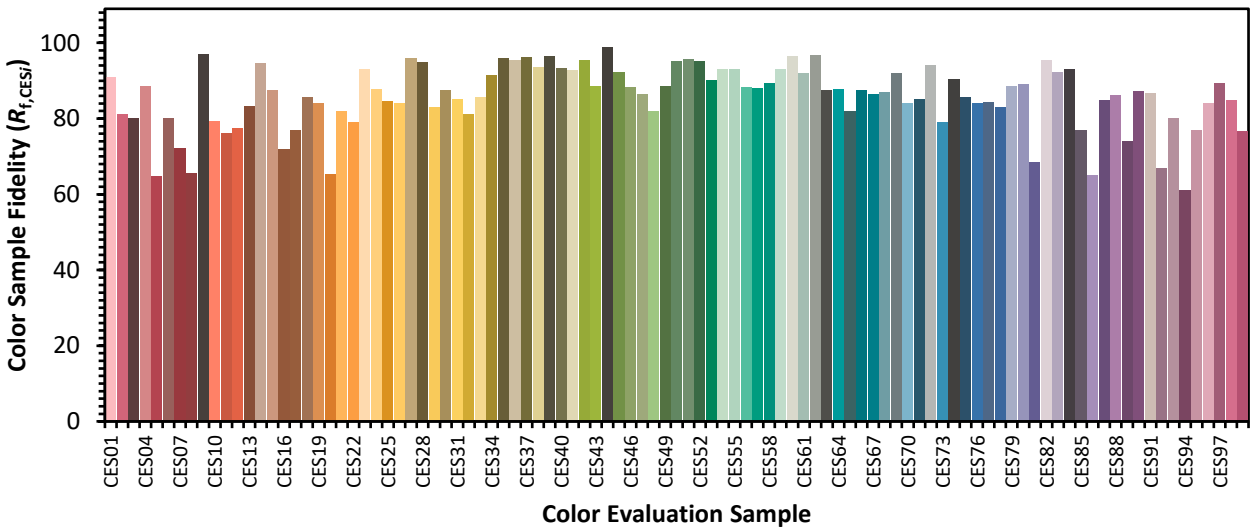


REPORT NUMBER: SP1-2509-539-6

TM-30-18

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

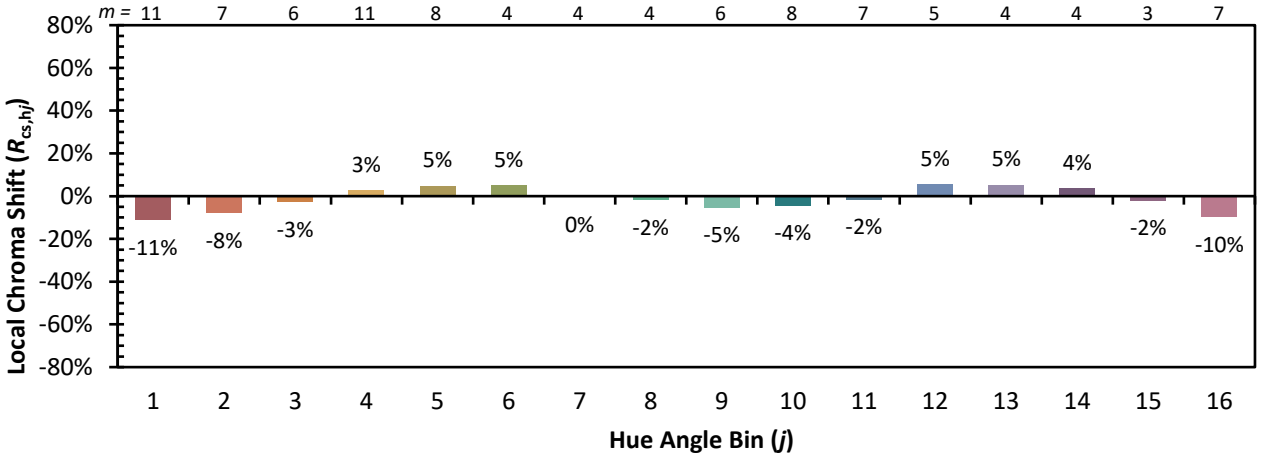
CES01 = 86	CES26 = 84	CES51 = 96	CES76 = 84
CES02 = 64	CES27 = 96	CES52 = 95	CES77 = 84
CES03 = 32	CES28 = 95	CES53 = 90	CES78 = 83
CES04 = 71	CES29 = 83	CES54 = 93	CES79 = 89
CES05 = 51	CES30 = 87	CES55 = 93	CES80 = 89
CES06 = 52	CES31 = 85	CES56 = 88	CES81 = 69
CES07 = 43	CES32 = 81	CES57 = 88	CES82 = 95
CES08 = 42	CES33 = 86	CES58 = 89	CES83 = 92
CES09 = 29	CES34 = 91	CES59 = 93	CES84 = 93
CES10 = 77	CES35 = 96	CES60 = 97	CES85 = 77
CES11 = 60	CES36 = 95	CES61 = 92	CES86 = 65
CES12 = 66	CES37 = 96	CES62 = 97	CES87 = 85
CES13 = 44	CES38 = 94	CES63 = 87	CES88 = 86
CES14 = 74	CES39 = 96	CES64 = 88	CES89 = 74
CES15 = 72	CES40 = 93	CES65 = 82	CES90 = 87
CES16 = 48	CES41 = 93	CES66 = 87	CES91 = 87
CES17 = 50	CES42 = 95	CES67 = 86	CES92 = 67
CES18 = 57	CES43 = 89	CES68 = 87	CES93 = 80
CES19 = 73	CES44 = 99	CES69 = 92	CES94 = 61
CES20 = 67	CES45 = 92	CES70 = 84	CES95 = 77
CES21 = 87	CES46 = 88	CES71 = 85	CES96 = 84
CES22 = 79	CES47 = 86	CES72 = 94	CES97 = 89
CES23 = 92	CES48 = 82	CES73 = 79	CES98 = 85
CES24 = 91	CES49 = 89	CES74 = 90	CES99 = 77
CES25 = 72	CES50 = 95	CES75 = 86	

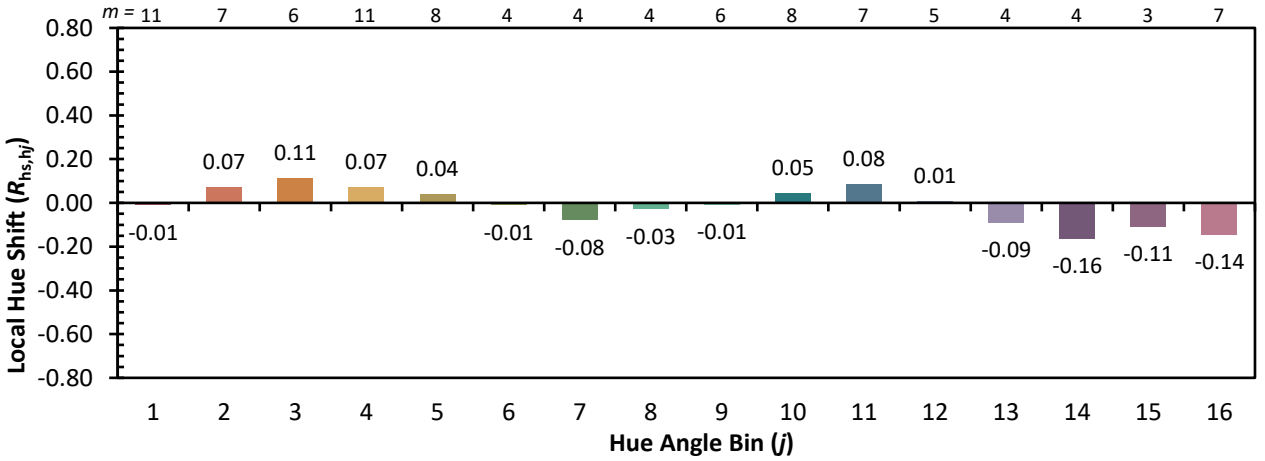


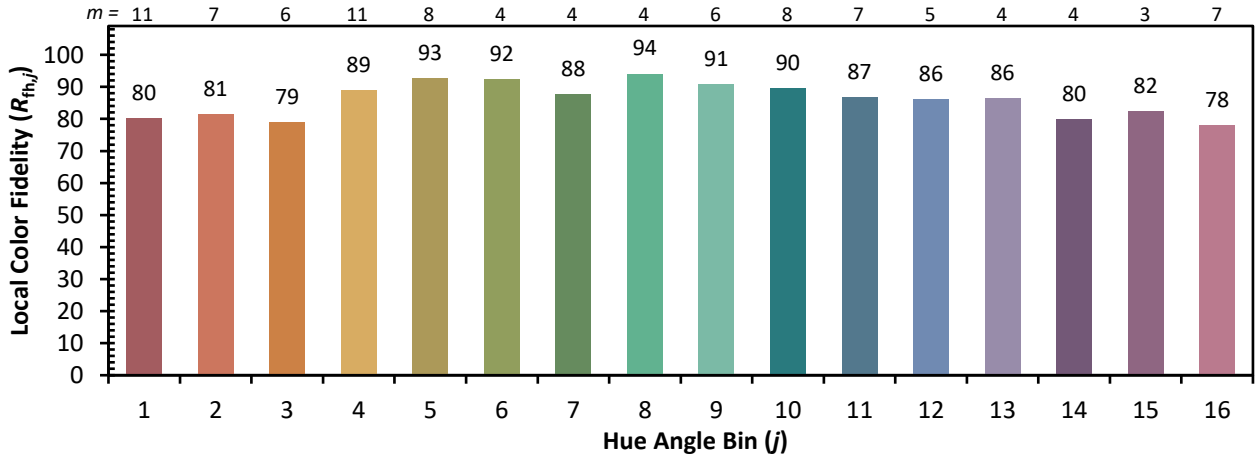
REPORT NUMBER: SP1-2509-539-6

TM-30-18

Color Rendition by Hue-Angle Bin







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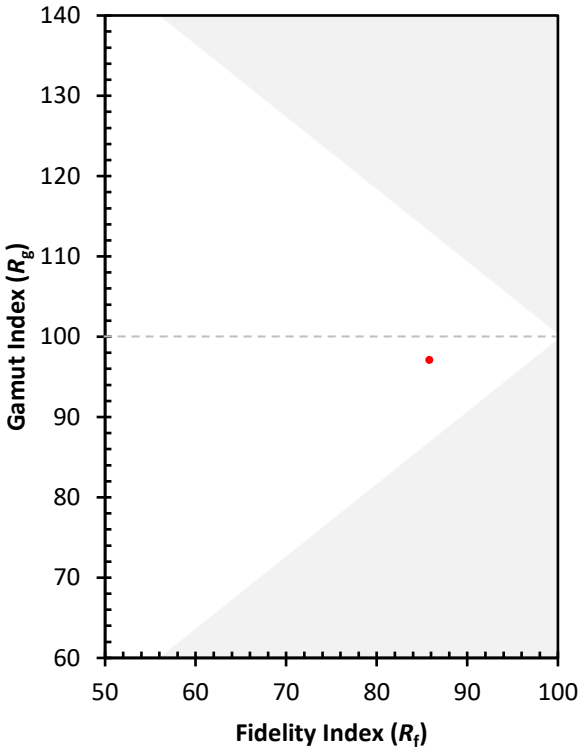
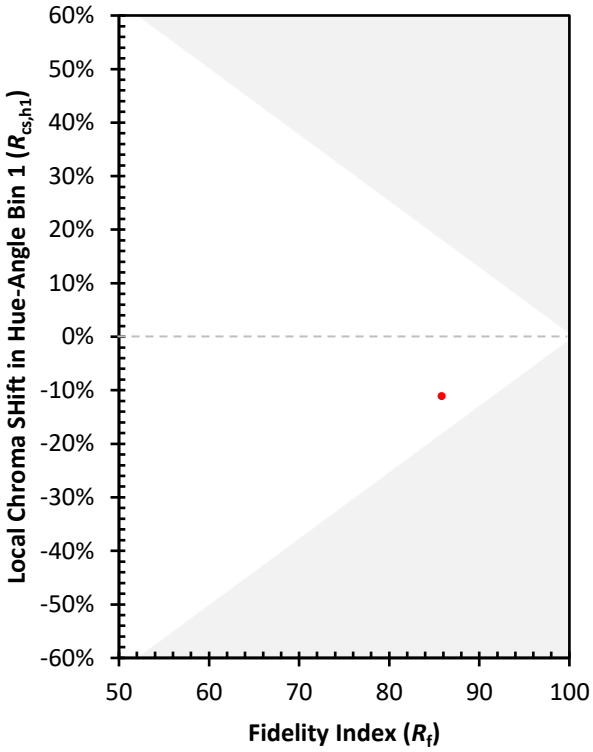
Measure Comparisons





(END OF REPORT)