

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: P1442034

Luminaire Tested: ABB-C2-827-X-U-S-GM

Issue Date: 4/23/2026

Test Information

Test Method: LM-79-2024
Report Number: P1442034
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-539-30)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 4/24/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: INVUE
Catalog Number: ABB-C2-827-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

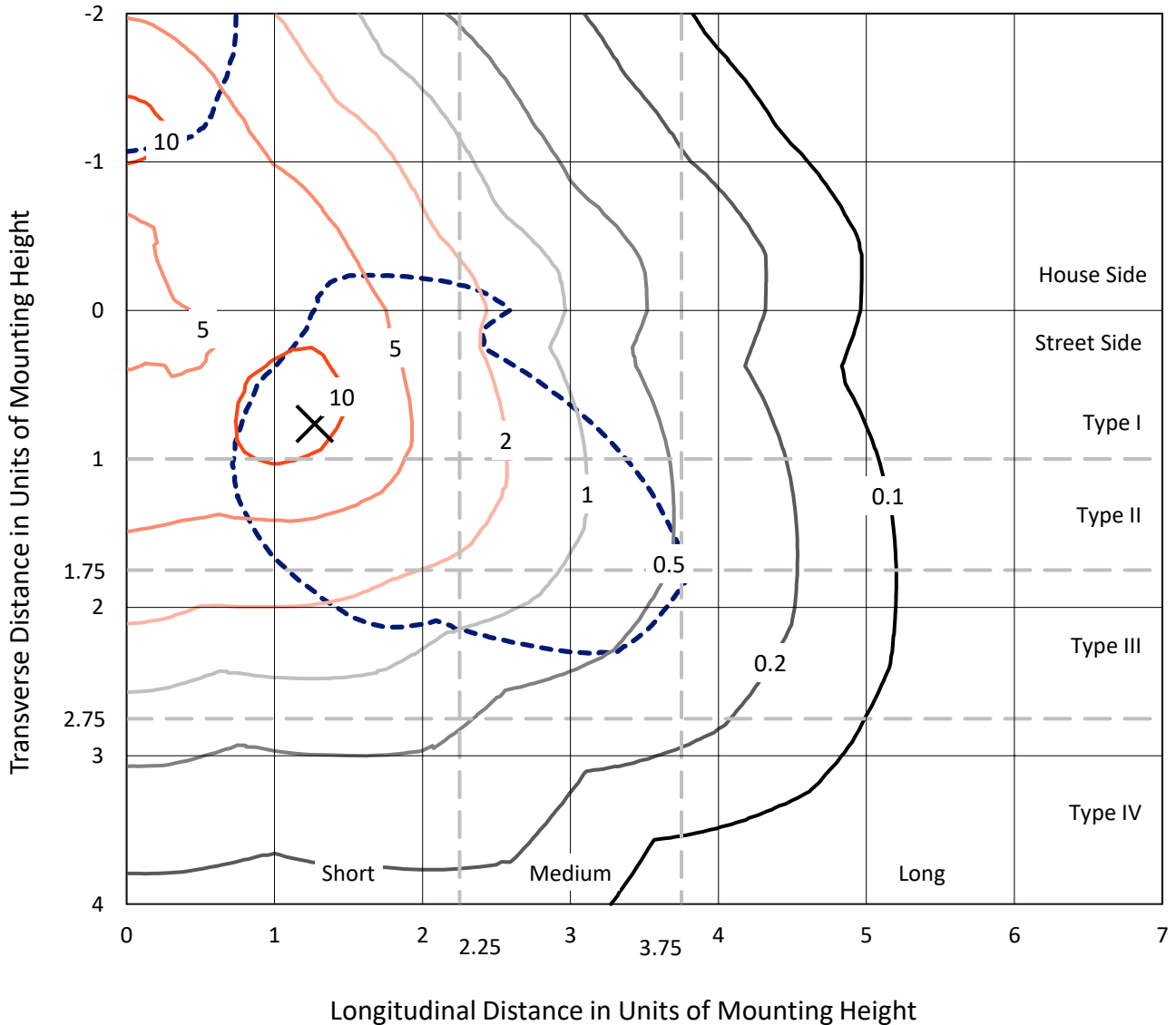
Lumens per Lamp: N/A
Luminaire Lumens: 1094.1 lumens
Efficiency: N/A
Efficacy: 39.9 lumens/watt
Luminous Opening: Circular (Dia: 0.4' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

Input Watts (W): 27.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.9937
Total Harmonic Distortion (THDi): 0.0861672
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

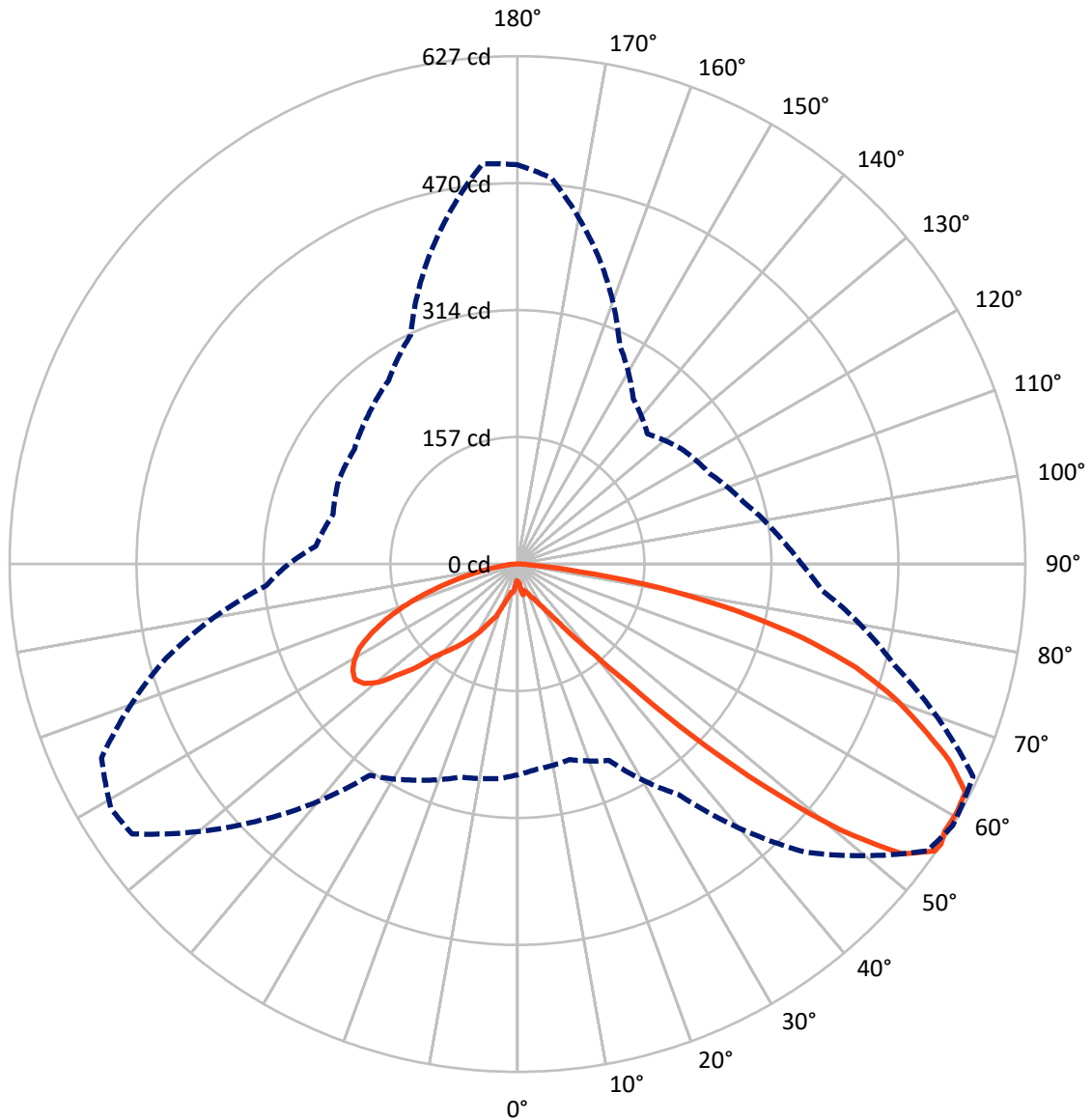
× Max cd
 - - - 1/2 Max cd



Based on 3 foot mounting height. Maximum calculated value = 14.9 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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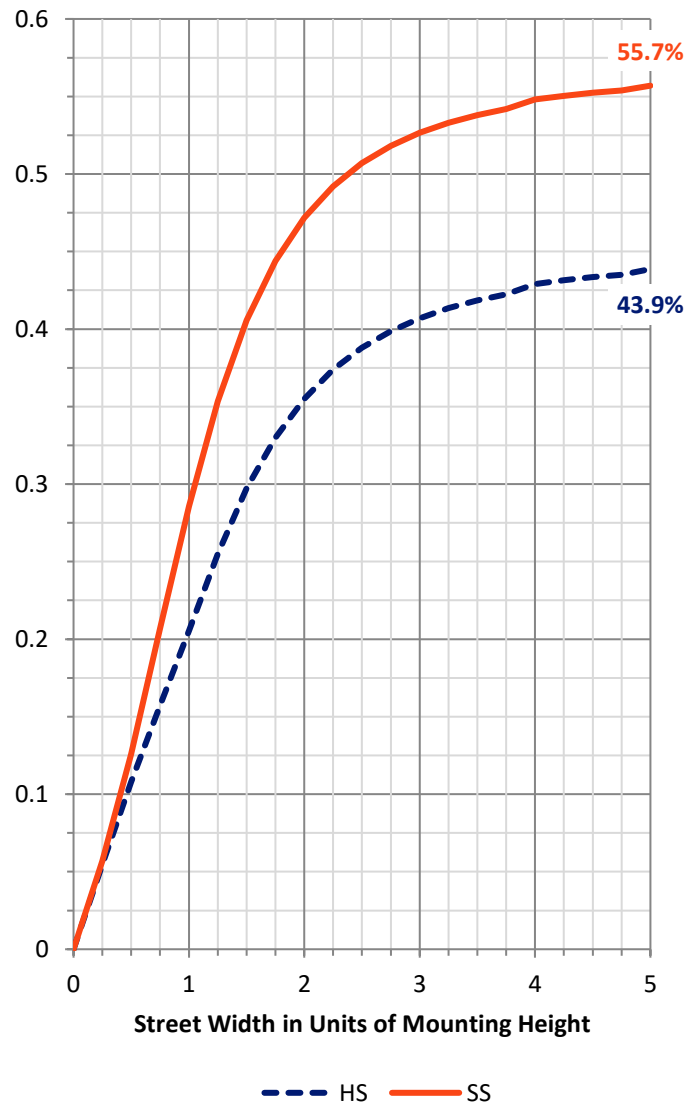
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	481.1	0.0	481.1
	% Fixture	44.0	0.0	44.0
Street Side	Lumens	613.0	0.0	613.0
	% Fixture	56.0	0.0	56.0
Total	Lumens	1094.1	0.0	1094.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.3
10°-20°	11.8	1.1
20°-30°	29.0	2.7
30°-40°	63.9	5.8
40°-50°	158.6	14.5
50°-60°	306.0	28.0
60°-70°	310.5	28.4
70°-80°	184.8	16.9
80°-90°	26.8	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°	1094.1	100.0
0°-180°	1094.1	100.0



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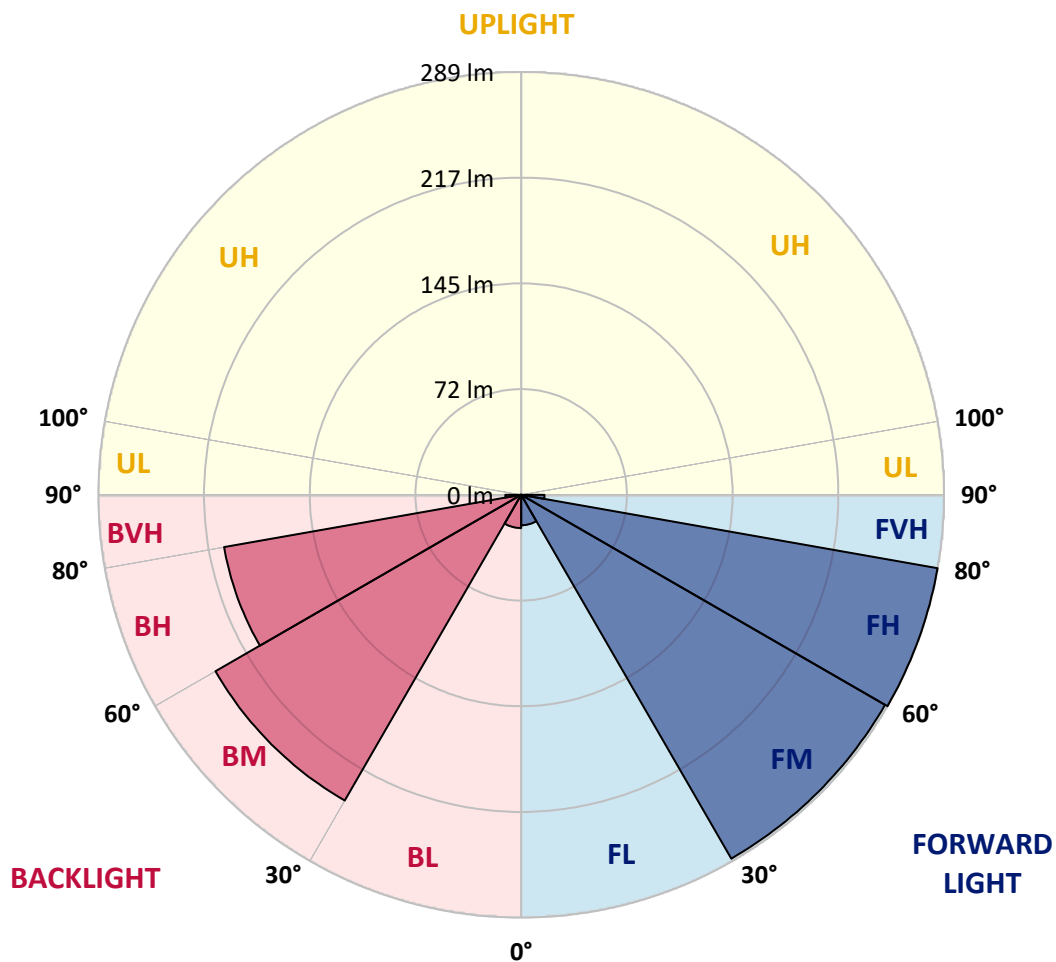
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	20.8	1.9			
FM	(30°-60°)	287.2	26.3			
FH	(60°-80°)	289.1	26.4			G0/660
FVH	(80°-90°)	15.9	1.5			G1/100
BL	(0°-30°)	22.7	2.1	B0/110		
BM	(30°-60°)	241.3	22.1	B1/1000		
BH	(60°-80°)	206.2	18.8	B1/500		G1/500
BVH	(80°-90°)	10.9	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°	59°	65°	75°	85°
0°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	26.2	27.0	29.4	29.4	28.6	27.0	25.4	25.4	24.6	23.0	21.4
5°	38.1	34.9	30.2	30.2	30.2	27.8	24.6	23.8	23.8	21.4	20.6
7.5°	37.3	39.7	41.3	39.7	38.9	38.9	34.9	34.1	30.2	27.8	30.2
10°	38.1	38.1	37.3	44.5	41.3	42.1	38.9	38.9	36.5	35.7	35.7
12.5°	36.5	34.9	37.3	40.5	36.5	39.7	35.7	33.3	33.3	35.7	38.1
15°	37.3	38.9	39.7	44.5	42.9	40.5	35.7	35.7	36.5	41.3	41.3
17.5°	42.9	46.1	46.1	46.8	46.8	42.9	35.7	36.5	38.9	42.1	46.8
20°	50.0	50.0	50.8	50.0	50.0	46.1	38.1	39.7	42.1	44.5	49.2
22.5°	58.0	59.6	62.7	58.0	56.4	48.4	45.3	44.5	48.4	46.8	53.2
25°	72.3	77.0	72.3	61.9	61.1	52.4	47.6	47.6	50.8	56.4	57.2
27.5°	86.5	88.9	77.0	66.7	68.3	58.8	54.8	54.8	57.2	63.5	66.7
30°	93.7	96.1	85.8	73.8	75.4	66.7	61.1	61.9	63.5	71.5	79.4
32.5°	103.2	107.2	95.3	83.4	84.2	82.6	73.8	73.8	71.5	79.4	85.8
35°	116.7	115.9	104.0	91.3	93.7	98.5	92.1	90.5	86.5	88.1	97.7
37.5°	127.0	127.0	117.5	102.4	104.0	115.1	115.9	115.9	108.0	101.6	109.6
40°	137.4	141.3	129.4	113.5	123.1	139.7	146.9	148.5	135.8	119.9	122.3
42.5°	150.1	157.2	147.7	132.6	150.9	182.6	199.3	203.3	181.8	160.4	145.3
45°	180.2	188.2	180.2	164.4	189.0	245.3	280.3	303.3	266.8	209.6	185.8
47.5°	200.9	206.4	199.3	186.6	223.9	304.1	363.7	408.9	372.4	273.1	229.5
50°	231.1	231.1	227.9	225.5	281.1	411.3	490.7	516.1	504.2	359.7	298.5
52.5°	247.7	246.1	244.6	251.7	321.6	461.3	567.7	594.7	587.6	428.0	345.4
55°	258.0	254.9	250.1	265.2	343.0	497.8	612.2	625.7	618.5	470.8	370.8
56°	260.4	254.9	250.1	267.6	347.8	503.4	617.7	627.3	620.9	482.0	377.9
57.5°	259.6	253.3	246.9	270.0	349.4	504.2	617.7	622.5	623.3	490.7	384.3
60°	253.3	247.7	237.4	270.0	351.7	493.1	610.6	623.3	627.3	491.5	386.7
62.5°	243.8	240.6	224.7	266.0	348.6	470.0	605.8	620.9	618.5	480.4	373.2
65°	226.3	223.1	204.9	257.3	331.1	433.5	574.1	586.8	578.8	454.2	339.0
67.5°	202.5	199.3	182.6	241.4	313.6	390.6	529.6	539.1	536.7	424.8	302.5
70°	174.7	173.1	160.4	220.7	293.8	341.4	482.0	493.1	497.0	384.3	266.0
72.5°	144.5	146.1	136.6	193.7	265.2	287.4	422.4	437.5	443.8	336.7	223.1
75°	111.2	112.7	109.6	161.2	227.9	225.5	350.2	363.7	370.0	278.7	175.5
77.5°	79.4	79.4	79.4	122.3	181.8	154.8	264.4	273.9	282.7	207.2	124.7
80°	51.6	49.2	50.8	77.8	119.9	90.5	167.5	176.3	174.7	127.0	73.0
82.5°	30.2	27.8	27.8	36.5	48.4	38.9	74.6	76.2	77.8	50.8	31.8
85°	15.1	13.5	12.7	14.3	13.5	15.1	15.1	14.3	14.3	10.3	12.7
87.5°	11.1	9.5	8.7	10.3	9.5	11.9	11.1	11.1	11.1	7.1	9.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	20.6	20.6	19.1	18.3	17.5	19.8	22.2	22.2	21.4	21.4	21.4
5°	21.4	22.2	24.6	28.6	29.4	27.0	25.4	23.0	20.6	19.1	18.3
7.5°	31.0	31.8	31.0	32.6	32.6	30.2	31.0	30.2	26.2	25.4	24.6
10°	36.5	37.3	42.1	40.5	38.9	37.3	37.3	35.7	32.6	31.0	29.4
12.5°	39.7	40.5	42.1	38.9	42.9	41.3	40.5	36.5	34.9	31.8	31.8
15°	41.3	45.3	46.1	46.1	43.7	45.3	42.1	38.9	38.1	32.6	31.8
17.5°	49.2	49.2	51.6	50.8	46.8	50.0	47.6	44.5	40.5	34.9	34.9
20°	50.8	56.4	57.2	58.0	55.6	55.6	57.2	53.2	46.8	43.7	42.9
22.5°	56.4	61.9	65.1	69.9	63.5	64.3	62.7	54.0	46.1	46.8	44.5
25°	61.1	65.1	69.1	79.4	73.8	67.5	67.5	60.3	52.4	51.6	50.0
27.5°	69.9	73.8	81.8	93.7	81.0	76.2	73.0	67.5	58.8	57.2	57.2
30°	84.2	84.2	93.7	100.8	98.5	80.2	81.0	73.0	66.7	62.7	64.3
32.5°	97.7	96.1	106.4	110.4	109.6	88.1	87.3	82.6	80.2	73.8	73.0
35°	107.2	114.3	115.9	120.7	118.3	103.2	94.5	91.3	91.3	88.1	88.1
37.5°	119.1	126.2	128.6	131.8	128.6	115.1	106.4	102.4	106.4	109.6	106.4
40°	134.2	144.5	141.3	142.9	139.7	128.6	122.3	119.9	130.2	139.7	135.0
42.5°	153.2	165.9	161.2	157.2	154.8	142.9	141.3	146.9	167.5	182.6	179.4
45°	189.0	200.1	191.4	185.0	181.8	167.5	169.1	185.0	223.9	250.9	259.6
47.5°	225.5	227.9	219.9	208.8	205.6	185.8	189.8	219.1	277.1	316.8	328.7
50°	285.0	285.8	261.2	237.4	227.9	212.8	219.9	263.6	337.4	384.3	403.4
52.5°	329.5	316.0	281.9	256.5	243.0	226.3	237.4	292.2	374.8	437.5	456.6
55°	347.0	325.5	291.4	263.6	247.7	228.7	247.7	299.3	389.1	473.2	491.5
56°	350.9	328.7	290.6	262.8	247.7	227.1	249.3	298.5	390.6	478.8	493.1
57.5°	357.3	327.9	287.4	261.2	244.6	223.1	248.5	296.2	389.1	481.2	495.5
60°	370.0	327.9	276.3	254.9	237.4	216.0	246.1	296.2	383.5	474.8	496.2
62.5°	371.6	324.7	259.6	239.8	227.9	205.6	236.6	293.8	369.2	468.5	493.9
65°	354.1	316.0	235.8	219.1	208.0	189.0	220.7	282.7	344.6	447.8	461.3
67.5°	329.5	301.7	209.6	193.7	183.4	167.5	202.5	263.6	309.7	404.9	415.3
70°	300.1	283.5	182.6	165.2	157.2	144.5	181.0	241.4	263.6	357.3	371.6
72.5°	254.9	249.3	159.6	134.2	127.0	120.7	154.0	213.6	214.4	306.5	321.6
75°	201.7	202.5	129.4	102.4	96.1	95.3	122.3	175.5	164.4	244.6	256.5
77.5°	143.7	147.7	95.3	73.8	65.9	69.1	87.3	131.8	115.1	177.1	185.0
80°	81.8	84.2	58.8	48.4	40.5	44.5	53.2	81.8	67.5	107.2	112.0
82.5°	28.6	29.4	28.6	27.8	24.6	23.8	26.2	32.6	28.6	42.1	45.3
85°	11.1	10.3	14.3	14.3	11.9	11.9	12.7	12.7	15.1	14.3	13.5
87.5°	8.7	7.1	11.1	11.1	9.5	9.5	9.5	9.5	11.9	11.1	11.1
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°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	22.2	23.0	23.0	22.2	20.6	20.6	20.6	20.6	21.4	22.2	22.2
5°	19.1	20.6	22.2	22.2	24.6	25.4	24.6	23.0	19.1	18.3	19.1
7.5°	25.4	28.6	25.4	25.4	27.8	33.3	31.0	30.2	27.0	23.8	22.2
10°	31.0	37.3	33.3	36.5	38.9	37.3	34.1	31.0	36.5	34.9	34.1
12.5°	31.8	34.9	36.5	42.9	46.8	36.5	34.1	37.3	38.1	35.7	33.3
15°	32.6	38.9	41.3	45.3	49.2	43.7	35.7	39.7	42.9	40.5	38.9
17.5°	35.7	41.3	43.7	50.0	54.0	50.8	41.3	43.7	46.8	50.0	46.8
20°	40.5	43.7	46.1	53.2	55.6	59.6	50.0	50.0	48.4	52.4	50.8
22.5°	46.8	52.4	51.6	58.8	59.6	71.5	65.1	53.2	50.0	54.0	54.8
25°	49.2	54.8	58.0	63.5	66.7	77.8	73.8	63.5	58.0	58.8	58.8
27.5°	57.2	61.9	65.9	69.9	78.6	83.4	88.9	70.7	65.9	65.1	65.1
30°	61.9	68.3	73.0	81.8	89.7	94.5	101.6	77.8	71.5	70.7	71.5
32.5°	73.0	74.6	81.8	93.7	97.7	107.2	108.8	88.1	80.2	78.6	78.6
35°	84.2	85.0	89.7	106.4	108.8	120.7	115.9	100.0	88.9	86.5	87.3
37.5°	104.8	98.5	101.6	117.5	122.3	131.8	126.2	112.0	100.8	98.5	100.0
40°	129.4	118.3	113.5	134.2	134.2	142.9	137.4	126.2	115.9	112.0	115.9
42.5°	171.5	140.5	135.0	152.4	152.4	157.2	150.9	142.9	135.8	135.8	142.1
45°	252.5	192.9	176.3	186.6	183.4	182.6	175.5	171.5	164.4	165.9	177.9
47.5°	329.5	243.8	207.2	219.9	213.6	201.7	196.1	191.4	184.2	191.4	210.4
50°	393.8	312.0	267.6	254.9	244.6	225.5	223.1	218.4	219.9	235.8	258.0
52.5°	459.7	370.0	299.3	275.5	260.4	241.4	237.4	232.6	239.8	267.6	291.4
55°	495.5	401.0	310.5	278.7	262.0	247.7	243.8	236.6	250.1	281.1	310.5
56°	496.2	404.9	312.0	277.1	260.4	246.1	243.8	235.8	250.1	282.7	312.0
57.5°	493.1	408.1	310.5	275.5	255.7	243.0	241.4	231.8	250.1	285.0	315.2
60°	484.3	404.9	304.1	274.7	244.6	233.4	234.2	220.7	246.1	288.2	319.2
62.5°	487.5	394.6	291.4	266.0	226.3	219.1	223.9	208.8	235.8	289.0	316.0
65°	464.5	378.7	270.0	250.9	204.9	196.9	205.6	188.2	222.3	277.1	301.7
67.5°	420.8	346.2	243.8	233.4	181.0	173.1	182.6	165.2	203.3	259.6	285.0
70°	371.6	303.3	214.4	207.2	158.0	146.1	156.4	140.5	181.0	239.8	266.0
72.5°	321.6	254.1	175.5	173.9	135.0	116.7	127.0	119.9	156.4	210.4	235.8
75°	257.3	198.5	134.2	135.0	106.4	88.1	94.5	91.3	126.2	173.1	196.1
77.5°	186.6	139.7	92.1	93.7	76.2	61.1	65.1	69.1	92.9	131.0	150.9
80°	111.2	80.2	53.2	56.4	46.1	39.7	39.7	42.1	57.2	81.8	94.5
82.5°	41.3	26.2	23.8	21.4	22.2	21.4	23.0	23.8	26.2	33.3	32.6
85°	13.5	8.7	11.1	9.5	11.9	11.9	11.1	10.3	11.1	11.1	11.1
87.5°	11.1	7.1	8.7	7.1	9.5	10.3	8.7	7.9	8.7	8.7	7.9
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):

	285°	295°	301°	305°	315°	325°	335°	345°	355°	360°
0°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
2.5°	21.4	22.2	22.2	23.0	25.4	26.2	26.2	26.2	26.2	26.2
5°	19.8	18.3	18.3	17.5	19.1	21.4	24.6	27.8	33.3	38.1
7.5°	23.8	23.8	23.8	23.0	23.0	24.6	27.8	31.8	36.5	37.3
10°	32.6	31.8	30.2	31.8	31.8	28.6	33.3	38.9	42.1	38.1
12.5°	33.3	31.0	28.6	29.4	31.0	31.8	38.9	43.7	35.7	36.5
15°	35.7	34.1	32.6	31.8	31.8	37.3	42.1	46.1	37.3	37.3
17.5°	39.7	34.9	33.3	34.1	36.5	40.5	46.1	46.8	42.1	42.9
20°	42.9	38.1	37.3	38.1	39.7	46.8	47.6	50.8	50.0	50.0
22.5°	46.8	40.5	39.7	39.7	44.5	50.8	54.0	61.1	54.0	58.0
25°	50.8	45.3	45.3	44.5	48.4	54.8	61.1	65.9	67.5	72.3
27.5°	58.0	53.2	52.4	52.4	53.2	60.3	70.7	73.8	83.4	86.5
30°	65.9	65.1	61.1	60.3	61.1	65.1	77.8	88.9	98.5	93.7
32.5°	77.0	77.8	73.0	75.4	69.9	73.8	87.3	100.0	104.8	103.2
35°	90.5	92.1	88.1	88.1	82.6	85.0	97.7	112.7	118.3	116.7
37.5°	112.0	112.0	107.2	105.6	96.1	96.1	111.2	123.1	129.4	127.0
40°	136.6	143.7	135.8	128.6	113.5	110.4	126.2	134.2	141.3	137.4
42.5°	173.1	183.4	181.8	173.1	135.0	126.2	143.7	151.7	154.8	150.1
45°	232.6	265.2	271.5	260.4	188.2	164.4	181.8	187.4	185.8	180.2
47.5°	287.4	335.1	345.4	343.0	249.3	195.3	209.6	214.4	208.8	200.9
50°	371.6	445.4	450.2	449.4	339.0	249.3	252.5	249.3	238.2	231.1
52.5°	417.6	516.1	529.6	525.6	397.0	291.4	281.1	266.8	257.3	247.7
55°	443.1	561.4	583.6	577.2	437.5	316.0	293.8	273.9	264.4	258.0
56°	449.4	566.9	586.0	581.2	447.0	318.4	294.6	272.3	266.0	260.4
57.5°	451.8	567.7	580.4	578.0	455.8	319.2	294.6	269.2	263.6	259.6
60°	439.9	559.8	570.9	565.3	458.9	317.6	293.0	258.0	256.5	253.3
62.5°	412.1	553.4	576.4	568.5	453.4	306.5	292.2	241.4	243.8	243.8
65°	381.9	525.6	550.2	544.7	434.3	284.3	285.8	220.7	220.7	226.3
67.5°	343.0	480.4	500.2	500.2	402.6	252.5	271.5	199.3	193.7	202.5
70°	292.2	427.2	450.2	447.8	362.1	219.9	253.3	176.3	165.2	174.7
72.5°	239.0	367.6	397.0	393.8	314.4	185.0	223.9	154.0	135.0	144.5
75°	184.2	298.5	325.5	323.2	261.2	146.9	185.0	129.4	104.8	111.2
77.5°	123.1	223.9	245.3	243.8	197.7	104.8	139.0	97.7	75.4	79.4
80°	70.7	144.5	159.6	158.8	127.0	64.3	86.5	62.7	51.6	51.6
82.5°	27.0	65.9	72.3	72.3	55.6	30.2	35.7	31.8	30.2	30.2
85°	12.7	14.3	14.3	14.3	11.1	11.9	11.9	15.1	15.1	15.1
87.5°	10.3	10.3	10.3	11.1	7.9	8.7	7.9	11.1	11.9	11.1
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

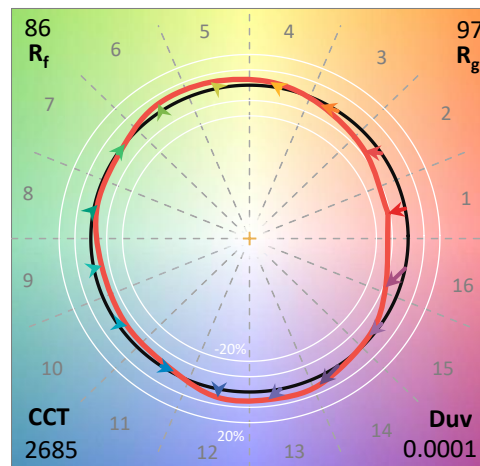
Test Information

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

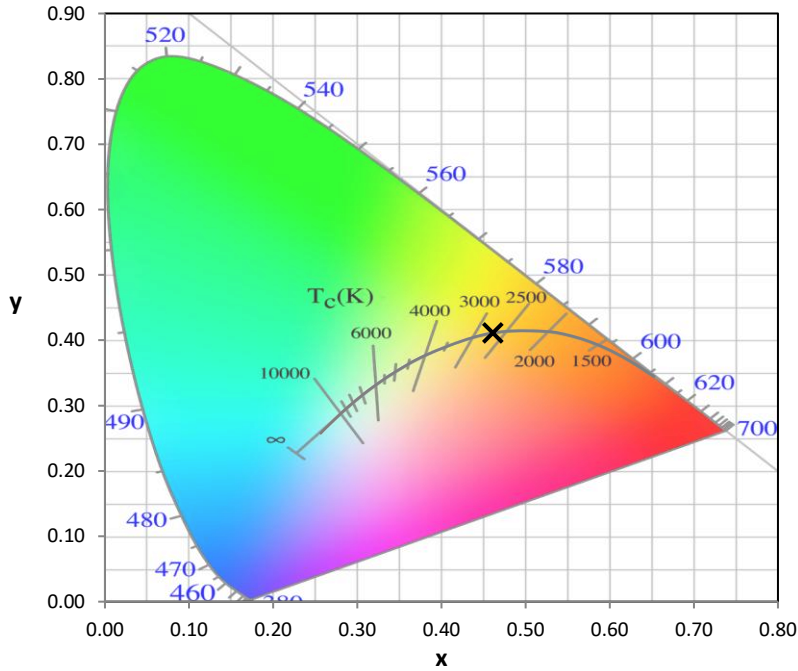
Stabilization Time: 29M
 Operation Time: 1H 29M
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2509-539-6

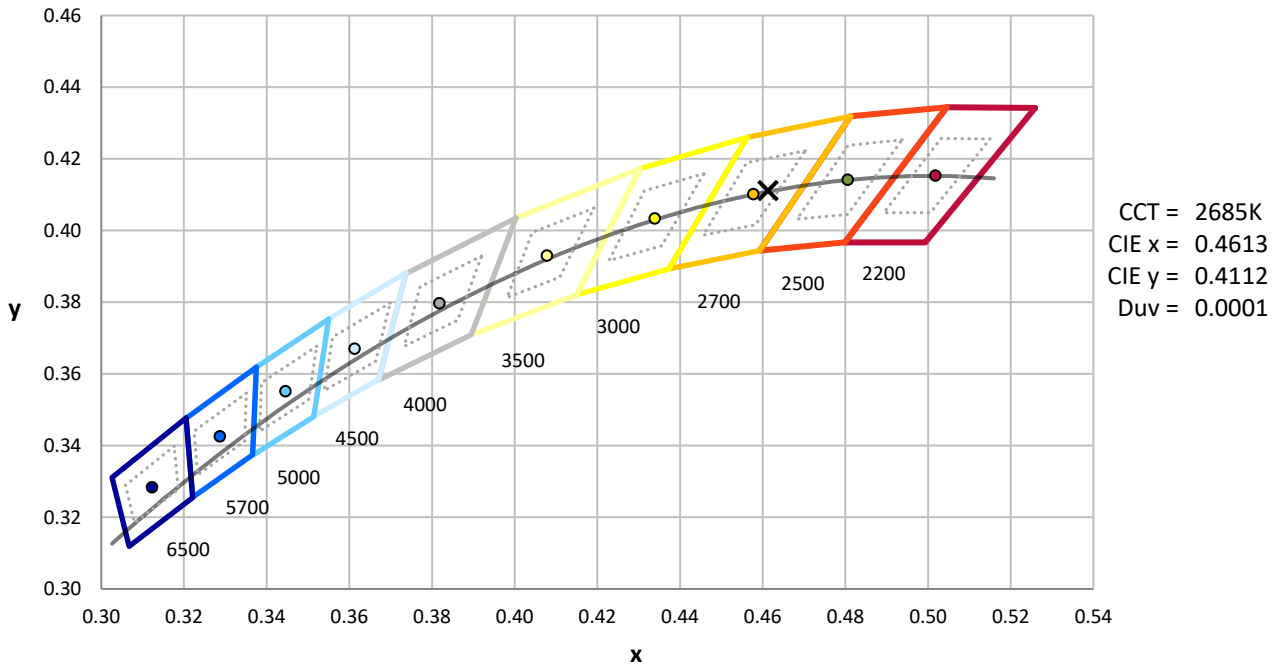
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



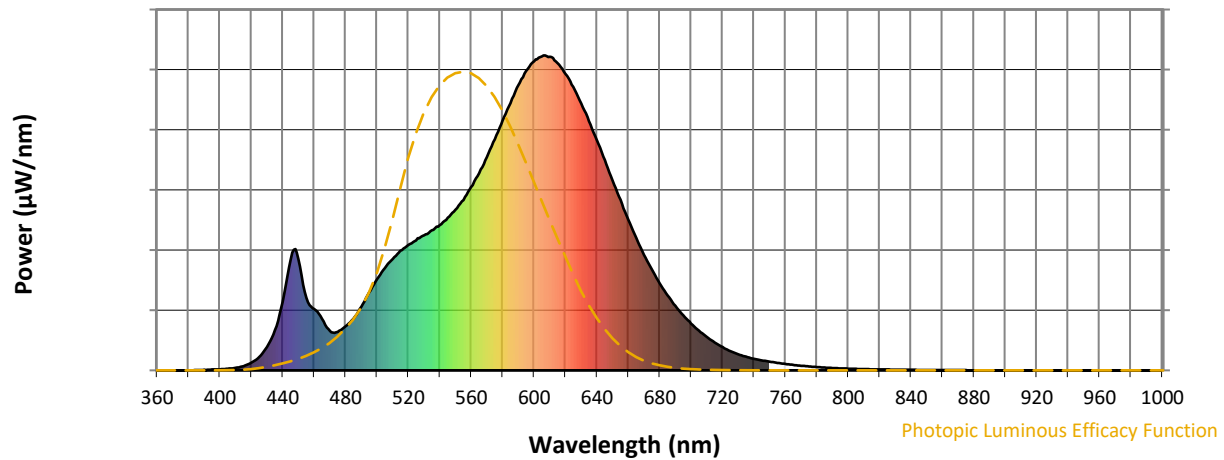
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2509-539-6

Photopic Flux vs. Wavelength

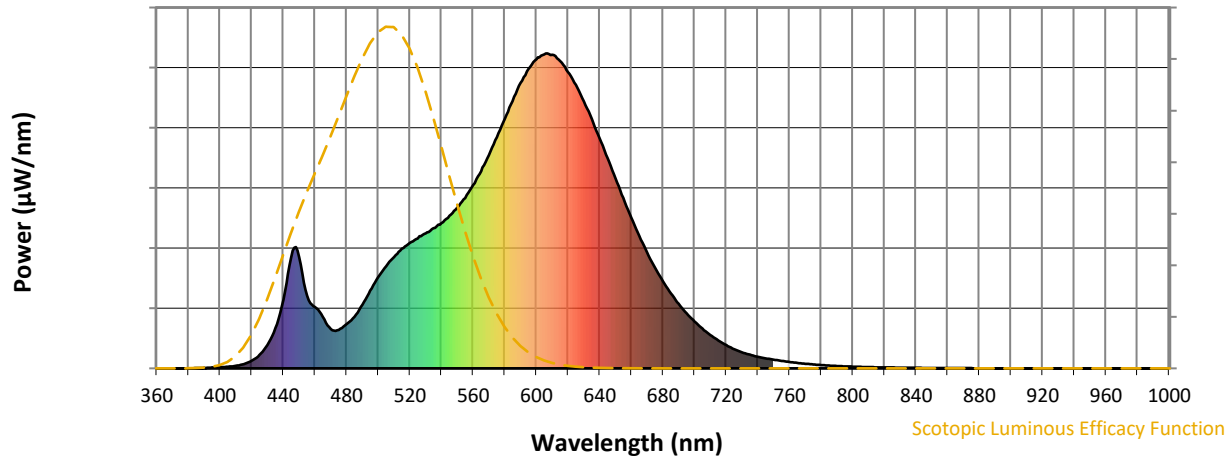


Photopic Lumens: NR

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



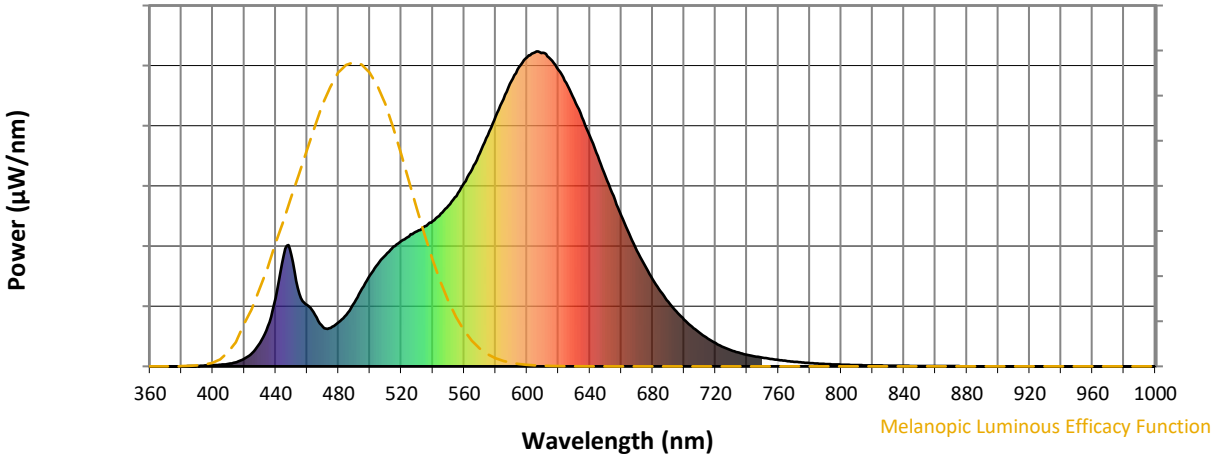
Scotopic Lumens: NR

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



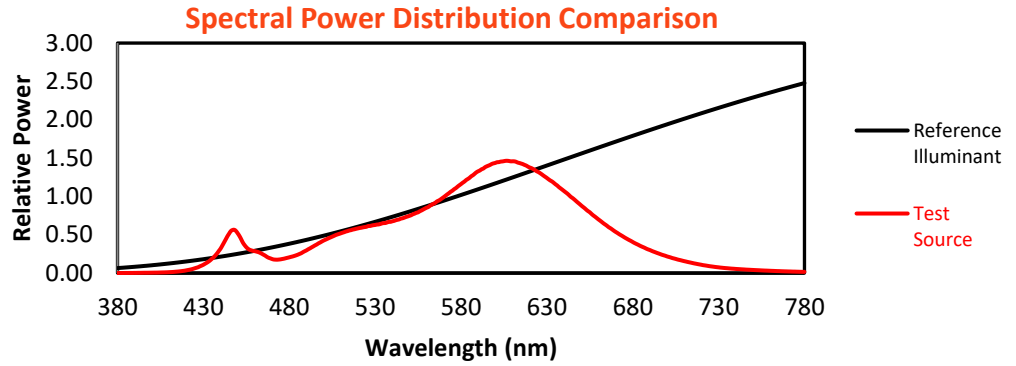
Melanopic Lumens: NR

M/P: 2.26

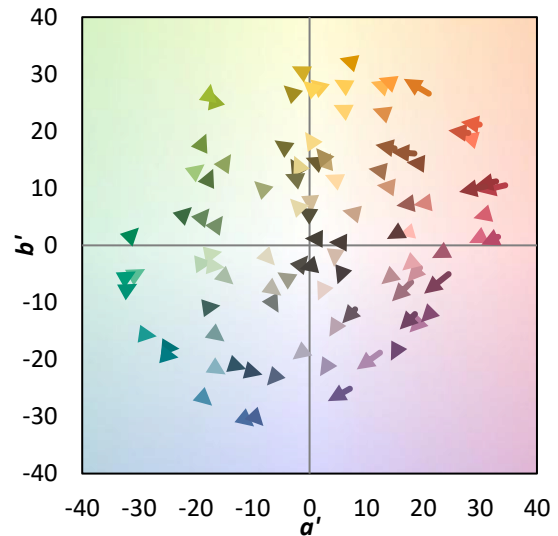
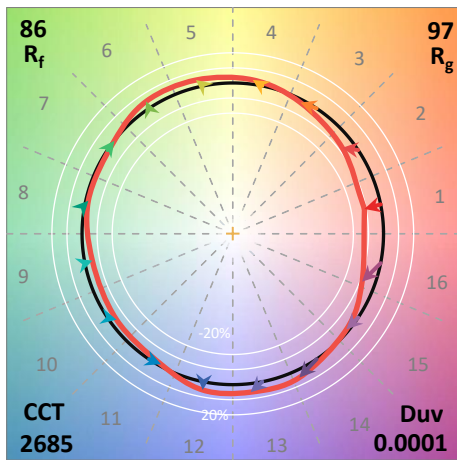
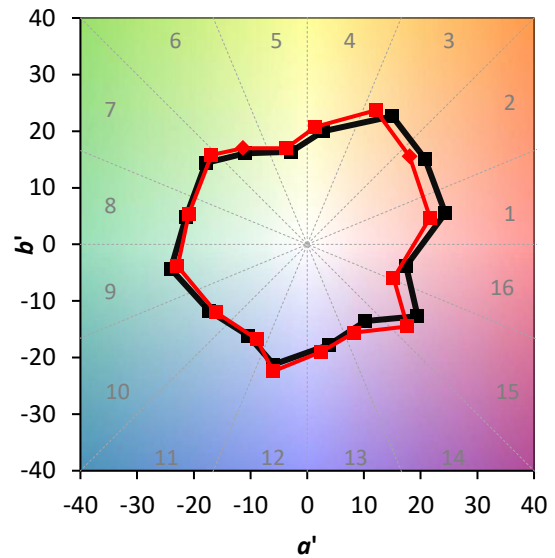
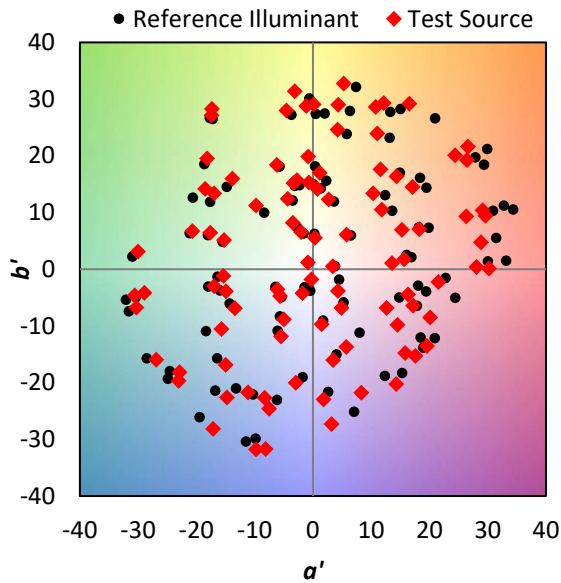
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	202	NR	620	941	NR	750	28	NR	880	0	NR
365	0	NR	495	247	NR	625	900	NR	755	24	NR	885	0	NR
370	0	NR	500	290	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			

Summary

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

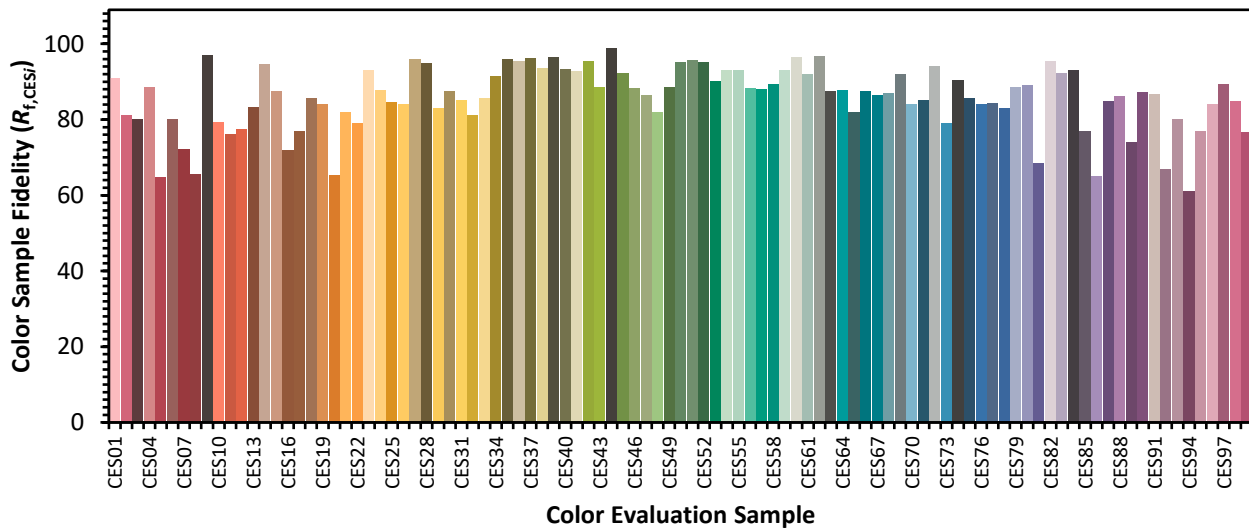


Color Vector Graphics

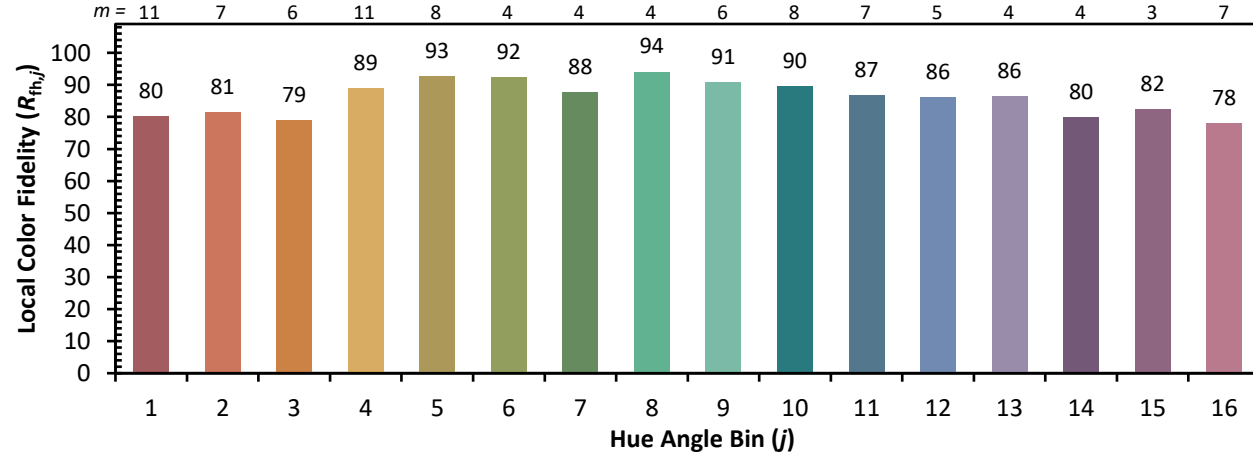
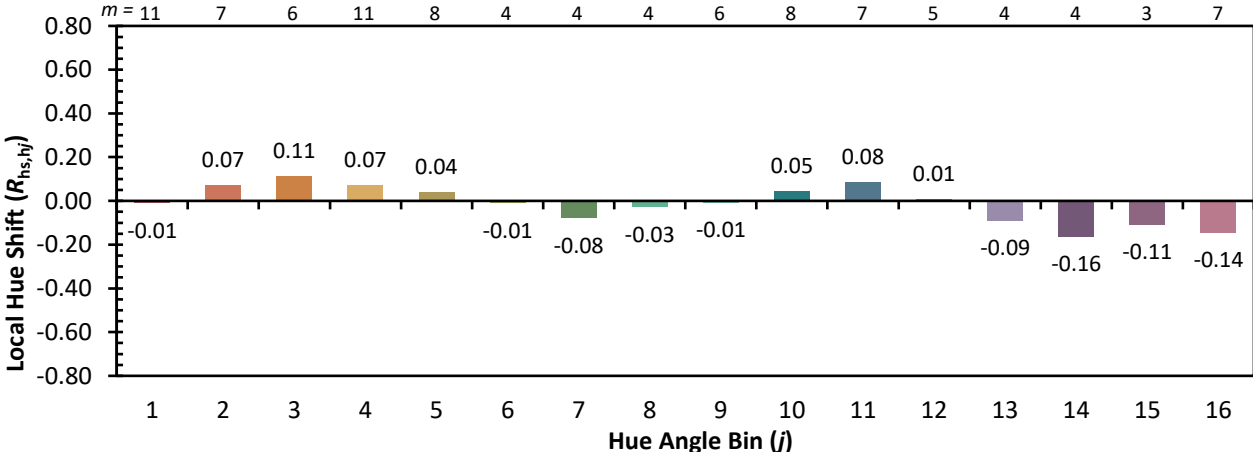
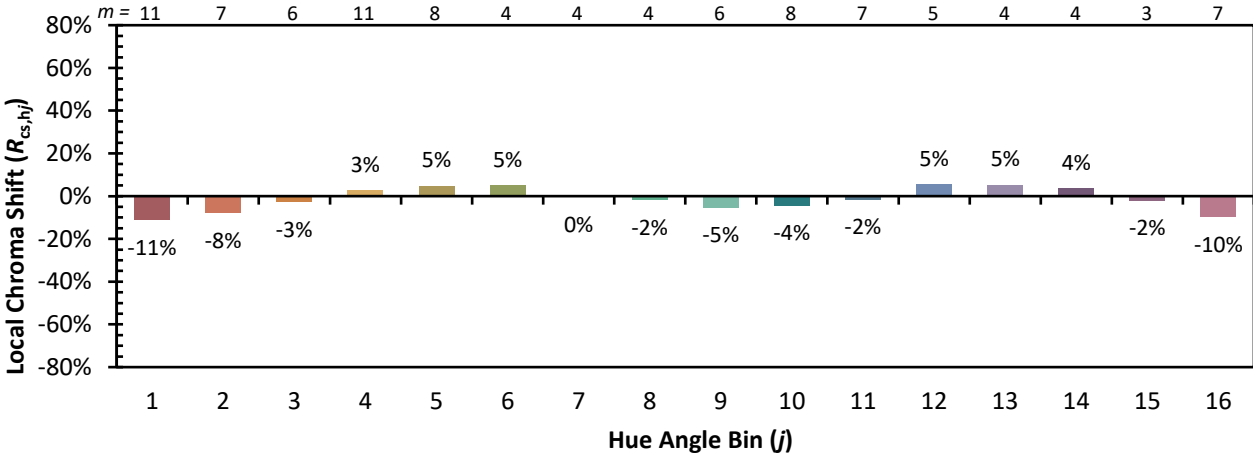


Individual Sample Fidelity Index ($R_{f,i}$)

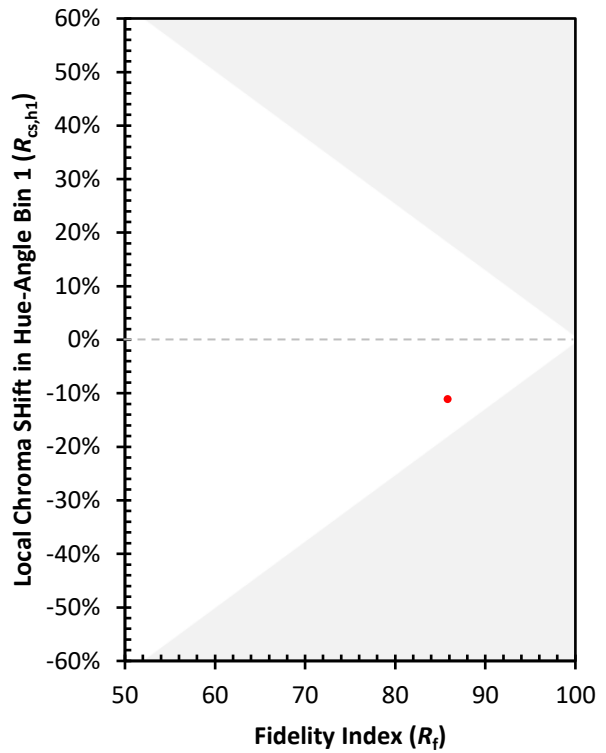
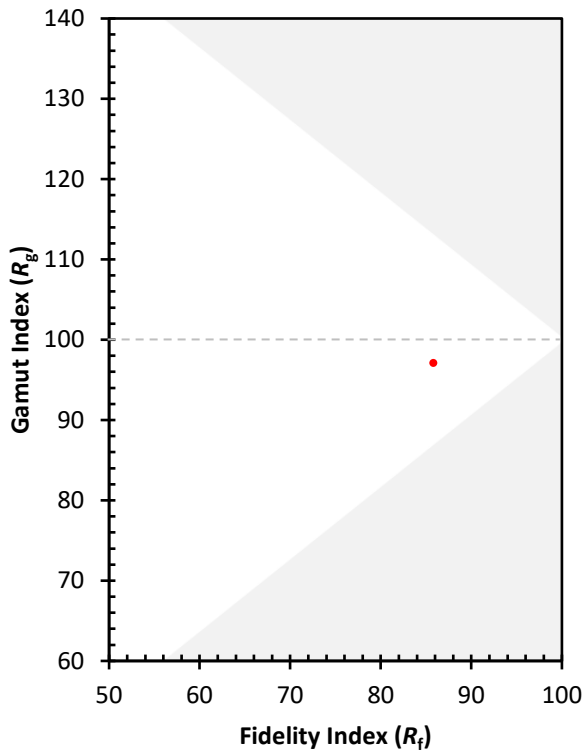
CES01 = 86	CES26 = 84	CES51 = 96	CES76 = 84
CES02 = 64	CES27 = 96	CES52 = 95	CES77 = 84
CES03 = 32	CES28 = 95	CES53 = 90	CES78 = 83
CES04 = 71	CES29 = 83	CES54 = 93	CES79 = 89
CES05 = 51	CES30 = 87	CES55 = 93	CES80 = 89
CES06 = 52	CES31 = 85	CES56 = 88	CES81 = 69
CES07 = 43	CES32 = 81	CES57 = 88	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)