

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: LUMARK

Report Number: P1449768

Luminaire Tested: **AXCS2ARL-W**

Issue Date: 5/12/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449768  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2310-196-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/12/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: AXCS2ARL-W  
Description: 2A AXCENT LED REFRACTIVE LENS WALLPACK WITH 3000K 80CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2320 lumens  
Efficiency: N/A  
Efficacy: 149.7 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 0.5' x H: 0.17')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U3 - G2

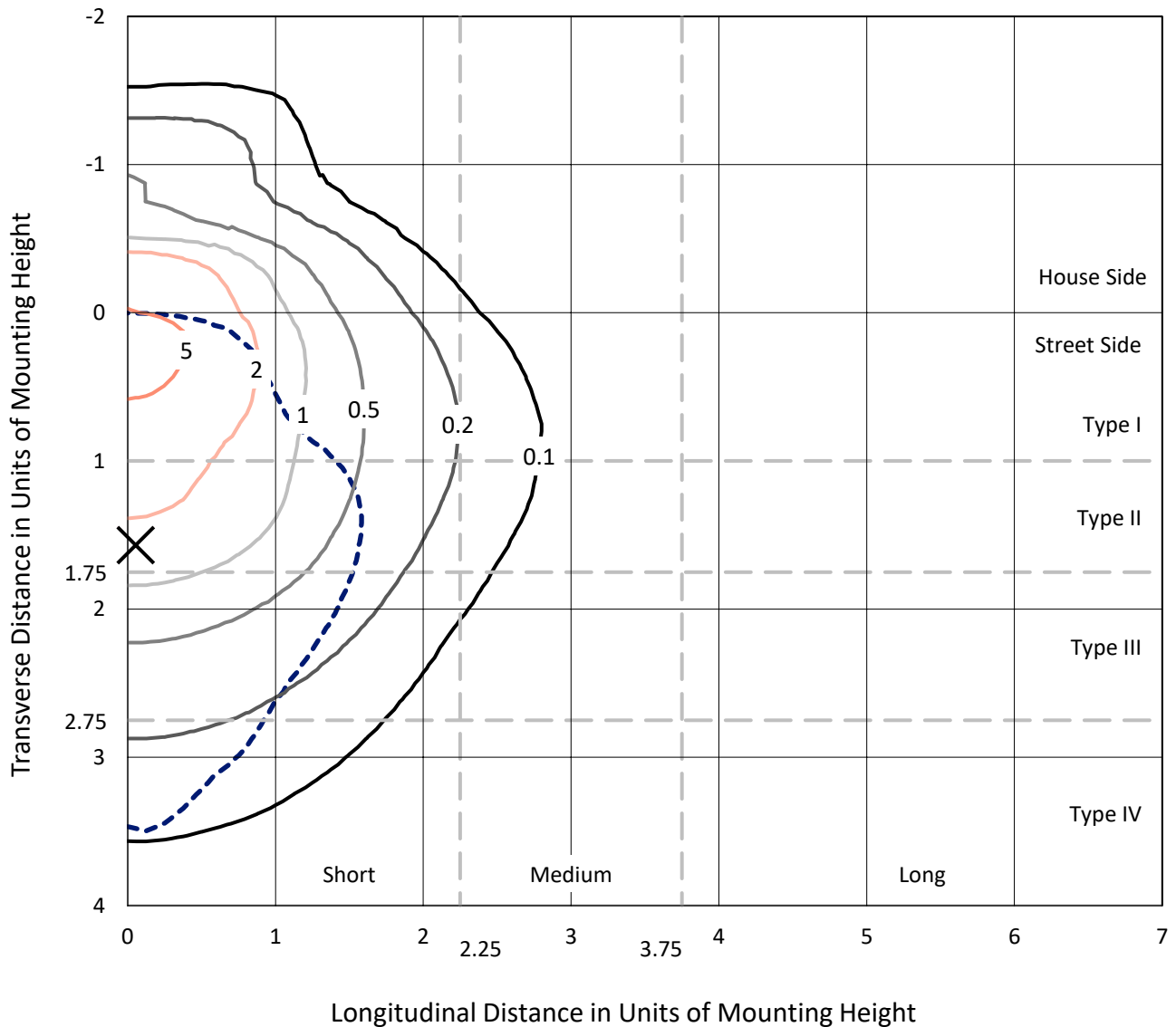
Input Watts (W): 15.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

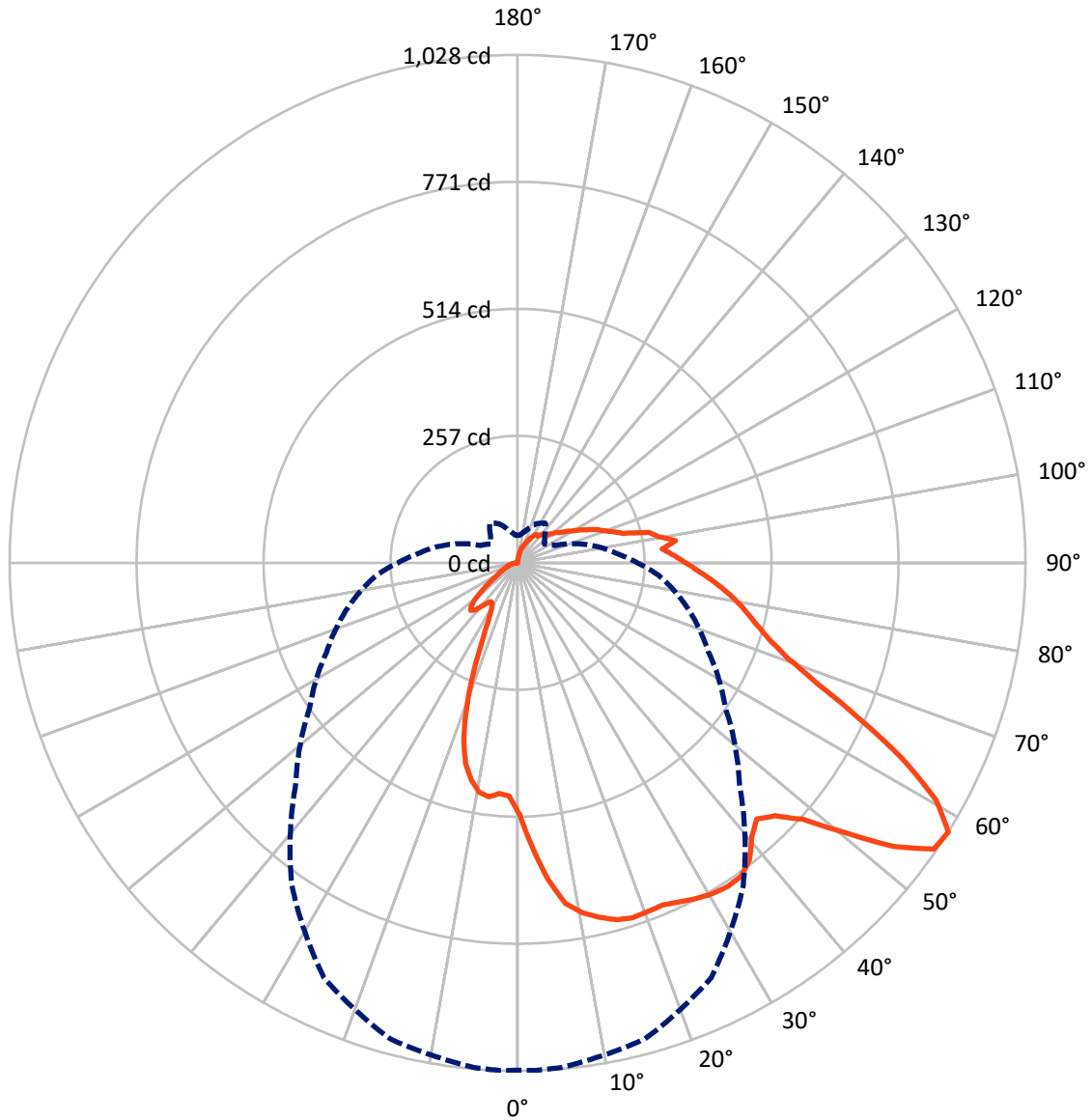
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 2-Deg Lateral      - - - Horizontal Cone Through 57.5-Deg Vertical

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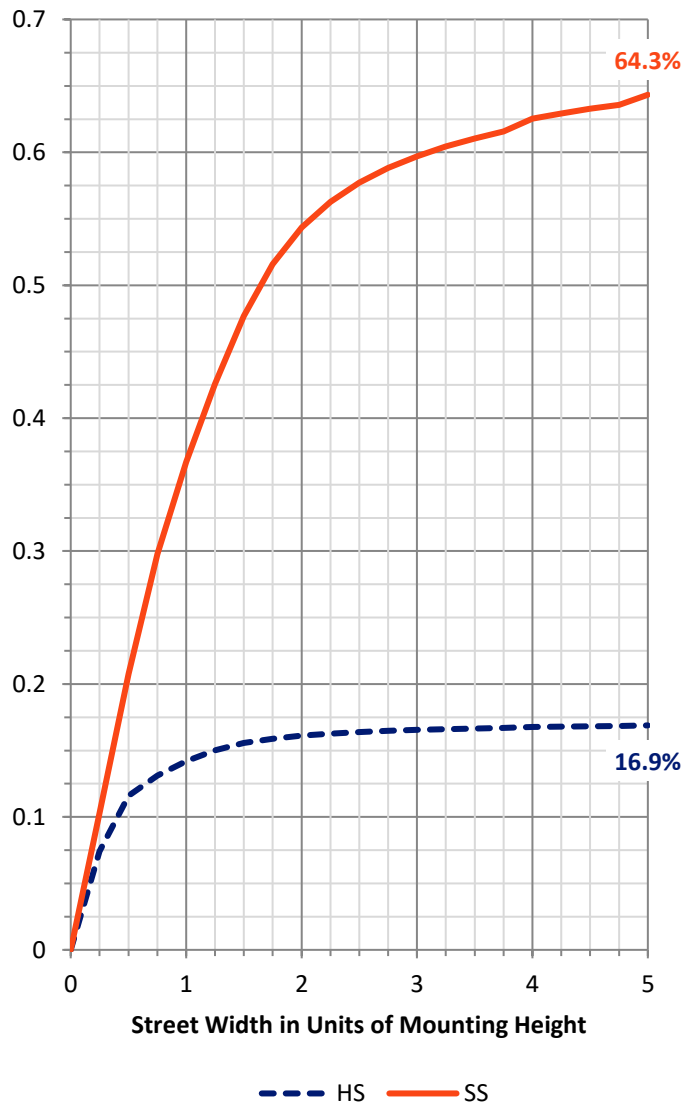
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	399.9	29.8	429.6
	% Fixture	17.2	1.3	18.5
<b>Street Side</b>	Lumens	1580.8	309.6	1890.4
	% Fixture	68.1	13.3	81.5
<b>Total</b>	Lumens	1980.7	339.3	2320.0
	% Fixture	85.4	14.6	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.0	2.2
10°-20°	158.3	6.8
20°-30°	230.2	9.9
30°-40°	272.1	11.7
40°-50°	296.2	12.8
50°-60°	338.8	14.6
60°-70°	294.0	12.7
70°-80°	197.4	8.5
80°-90°	141.7	6.1
90°-100°	109.4	4.7
100°-110°	81.7	3.5
110°-120°	56.1	2.4
120°-130°	38.0	1.6
130°-140°	25.9	1.1
140°-150°	16.7	0.7
150°-160°	8.5	0.4
160°-170°	2.9	0.1
170°-180°	0.2	0.0
0°-90°	1980.7	85.4
0°-180°	2320.0	100.0

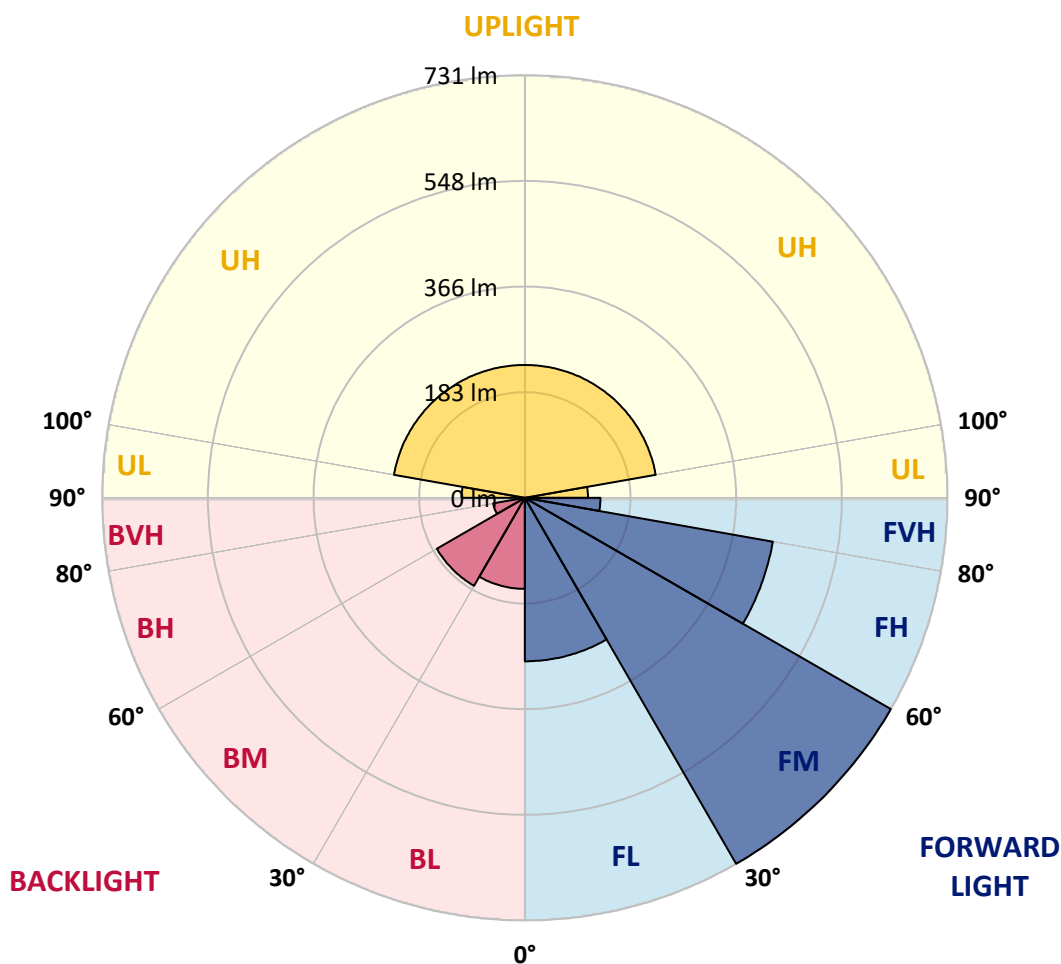


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	282.9	12.2			
FM (30°-60°)	731.3	31.5			
FH (60°-80°)	435.8	18.8			G0/660
FVH (80°-90°)	130.8	5.6			G2/225
BL (0°-30°)	157.6	6.8	B1/500		
BM (30°-60°)	175.8	7.6	B0/220		
BH (60°-80°)	55.6	2.4	B0/110		G0/110
BVH (80°-90°)	10.9	0.5			G1/100
UL (90°-100°)	109.4	4.7		U3/500	
UH (100°-180°)	229.9	9.9		U3/500	

**BUG Rating: B1-U3-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3
2.5°	578.9	577.0	576.1	575.1	570.4	564.6	556.1	546.5	536.0	523.6	511.2
5°	644.8	643.8	642.9	639.0	631.4	620.9	602.8	587.5	565.6	540.8	517.9
7.5°	697.2	696.3	695.3	691.5	682.9	666.7	645.7	622.8	592.3	558.0	522.7
10°	720.1	720.1	720.1	717.2	710.6	699.1	679.1	650.5	614.2	571.3	523.6
12.5°	736.3	736.3	735.4	732.5	725.8	714.4	700.1	675.3	634.3	582.8	525.5
15°	748.7	749.7	749.7	745.9	739.2	726.8	712.5	690.5	652.4	594.2	528.4
17.5°	754.4	755.4	754.4	751.6	744.9	732.5	717.2	697.2	661.9	601.8	527.4
20°	753.5	753.5	752.5	749.7	744.0	732.5	717.2	695.3	662.9	603.7	523.6
22.5°	752.5	752.5	752.5	747.8	739.2	727.7	713.4	691.5	660.0	603.7	517.9
25°	760.2	760.2	759.2	752.5	741.1	724.9	707.7	685.8	654.3	601.8	512.2
27.5°	768.8	769.7	767.8	761.1	745.9	723.9	702.0	678.1	646.7	596.1	506.5
30°	777.3	777.3	776.4	767.8	749.7	724.9	695.3	666.7	634.3	587.5	496.9
32.5°	781.2	781.2	780.2	772.6	753.5	723.9	689.6	653.3	620.0	574.2	483.6
35°	778.3	779.2	779.2	772.6	757.3	726.8	685.8	641.9	603.7	558.0	468.3
37.5°	763.0	763.0	763.0	761.1	752.5	728.7	682.9	630.5	585.6	537.9	450.2
40°	727.7	729.6	729.6	729.6	730.6	721.1	682.9	620.0	564.6	516.0	430.2
42.5°	709.6	709.6	709.6	702.0	696.3	694.4	672.4	611.4	542.7	491.2	408.2
45°	730.6	730.6	729.6	715.3	683.9	661.9	646.7	596.1	521.7	465.4	386.3
47.5°	778.3	775.4	774.5	749.7	709.6	654.3	616.1	571.3	499.8	442.6	367.2
50°	860.3	857.5	854.6	819.3	752.5	678.1	601.8	543.7	475.0	419.7	344.3
52.5°	957.6	954.7	948.1	909.0	822.2	714.4	607.6	522.7	453.0	394.9	322.4
55°	1022.5	1022.5	1017.7	981.4	891.8	761.1	622.8	515.0	437.8	372.9	304.3
57.5°	1027.2	1028.2	1025.3	997.7	927.1	796.4	635.2	514.1	426.3	356.7	286.1
60°	971.0	972.9	973.8	947.1	896.6	790.7	631.4	506.5	417.8	342.4	268.0
62.5°	871.8	874.6	875.6	848.9	806.9	729.6	597.1	488.3	408.2	331.0	252.8
65°	756.4	759.2	759.2	730.6	689.6	630.5	533.2	454.0	392.0	321.4	236.5
67.5°	653.3	655.3	655.3	624.7	580.9	524.6	455.9	404.4	369.1	311.9	223.2
70°	578.9	580.9	578.9	551.3	498.8	439.7	381.5	352.9	339.5	295.7	207.0
72.5°	531.3	533.2	529.4	499.8	444.5	381.5	323.3	305.2	304.3	276.6	191.7
75°	497.9	499.8	496.0	464.5	408.2	343.4	283.3	267.1	275.6	258.5	176.5
77.5°	470.2	472.1	468.3	436.8	379.6	316.7	256.6	240.4	253.7	235.6	156.4
80°	443.5	445.4	441.6	410.1	355.8	297.6	235.6	216.5	224.1	204.1	131.6
82.5°	415.9	416.8	413.0	384.4	335.7	281.4	221.3	201.2	207.9	183.1	104.9
85°	385.3	387.2	384.4	357.7	314.7	267.1	207.9	190.8	193.6	159.3	79.2
87.5°	357.7	359.6	356.7	332.9	295.7	251.8	197.4	179.3	179.3	141.2	60.1
90°	334.8	335.7	332.9	312.8	278.5	239.4	187.9	168.8	165.0	124.9	47.7
92.5°	314.7	313.8	310.9	294.7	263.2	228.0	180.3	161.2	150.7	109.7	42.0
95°	292.8	293.8	291.9	276.6	249.9	215.6	173.6	152.6	135.4	92.5	37.2
97.5°	323.3	323.3	322.4	305.2	271.8	228.0	178.4	147.8	122.1	80.1	35.3
100°	293.8	290.0	290.0	276.6	251.8	216.5	170.7	137.3	109.7	70.6	34.3
102.5°	270.9	272.8	271.8	257.5	232.7	198.4	152.6	120.2	94.4	62.9	35.3
105°	226.0	222.2	219.4	209.8	192.7	169.8	135.4	108.7	84.9	59.1	36.2
107.5°	205.1	203.2	202.2	194.6	180.3	158.3	127.8	104.0	81.1	56.3	37.2
110°	186.0	185.0	184.1	177.4	165.0	144.0	119.2	99.2	77.3	53.4	37.2



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**CANDELA DISTRIBUTION (continued):**

	0°	2°	5°	15°	25°	35°	45°	55°	65°	75°	85°
112.5°	172.6	172.6	170.7	165.0	151.7	131.6	110.6	94.4	71.5	51.5	37.2
115°	156.4	155.5	154.5	149.7	138.3	122.1	103.0	86.8	65.8	50.6	37.2
117.5°	141.2	141.2	141.2	135.4	124.9	110.6	97.3	81.1	62.0	48.6	36.2
120°	126.9	126.9	126.9	122.1	113.5	102.1	89.7	75.3	58.2	47.7	34.3
122.5°	117.3	116.4	116.4	111.6	104.0	93.5	83.0	70.6	56.3	45.8	32.4
125°	105.9	104.9	104.9	101.1	95.4	86.8	80.1	67.7	55.3	44.8	30.5
127.5°	101.1	100.1	100.1	96.3	90.6	83.0	76.3	63.9	53.4	42.0	28.6
130°	90.6	90.6	90.6	87.7	83.0	79.2	70.6	61.0	50.6	40.1	26.7
132.5°	83.9	83.9	83.0	82.0	80.1	76.3	66.8	59.1	48.6	37.2	24.8
135°	79.2	79.2	79.2	81.1	78.2	71.5	63.9	56.3	45.8	34.3	22.9
137.5°	79.2	78.2	78.2	77.3	73.4	67.7	62.9	53.4	42.9	32.4	21.0
140°	73.4	73.4	72.5	70.6	67.7	66.8	60.1	50.6	40.1	30.5	18.1
142.5°	66.8	66.8	66.8	66.8	68.7	63.9	56.3	47.7	37.2	27.7	17.2
145°	69.6	69.6	69.6	67.7	65.8	61.0	52.5	43.9	35.3	25.8	15.3
147.5°	66.8	66.8	66.8	64.9	61.0	55.3	47.7	40.1	32.4	23.8	13.4
150°	62.0	61.0	61.0	59.1	55.3	49.6	43.9	37.2	30.5	21.0	11.4
152.5°	54.4	54.4	54.4	52.5	49.6	45.8	39.1	34.3	26.7	19.1	10.5
155°	49.6	49.6	48.6	47.7	43.9	39.1	35.3	30.5	23.8	16.2	8.6
157.5°	42.0	42.0	42.0	40.1	38.2	35.3	32.4	26.7	20.0	14.3	6.7
160°	37.2	37.2	37.2	36.2	35.3	32.4	28.6	22.9	18.1	12.4	5.7
162.5°	33.4	33.4	33.4	32.4	30.5	27.7	23.8	19.1	14.3	9.5	4.8
165°	28.6	28.6	27.7	26.7	24.8	22.9	19.1	15.3	11.4	7.6	3.8
167.5°	21.9	21.9	21.9	21.0	20.0	18.1	15.3	12.4	8.6	4.8	2.9
170°	16.2	16.2	16.2	15.3	14.3	12.4	9.5	7.6	4.8	2.9	1.9
172.5°	10.5	8.6	7.6	6.7	6.7	5.7	4.8	3.8	1.9	1.9	1.9
175°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3
2.5°	506.5	501.7	495.0	487.4	481.7	476.9	475.0	474.0	473.1	473.1	472.1
5°	506.5	498.8	485.5	475.9	470.2	467.4	467.4	467.4	468.3	468.3	468.3
7.5°	506.5	493.1	477.8	468.3	464.5	466.4	470.2	473.1	475.9	476.9	477.8
10°	501.7	484.5	468.3	461.6	462.6	468.3	474.0	474.0	473.1	471.2	470.2
12.5°	497.9	477.8	460.7	457.8	464.5	468.3	463.5	458.8	454.0	450.2	449.2
15°	495.0	471.2	454.0	456.9	463.5	456.9	446.4	435.9	426.3	420.6	418.7
17.5°	488.3	462.6	447.3	453.0	450.2	436.8	418.7	400.6	385.3	373.9	371.0
20°	479.8	452.1	437.8	445.4	432.1	411.1	380.6	351.9	327.1	310.0	305.2
22.5°	470.2	440.6	428.3	431.1	410.1	377.7	331.9	290.0	254.7	234.6	236.5
25°	461.6	430.2	418.7	413.0	383.4	337.6	273.7	221.3	186.9	168.8	169.8
27.5°	452.1	418.7	408.2	395.8	354.8	289.0	211.7	165.0	139.3	126.9	127.8
30°	440.6	406.3	393.9	371.0	316.7	235.6	163.1	127.8	112.5	106.8	105.9
32.5°	427.3	391.1	377.7	345.3	276.6	186.0	129.7	107.8	99.2	97.3	96.3
35°	412.0	375.8	358.6	317.6	233.7	147.8	109.7	98.2	95.4	95.4	95.4
37.5°	393.9	357.7	337.6	287.1	191.7	121.1	98.2	94.4	97.3	101.1	102.1
40°	374.8	339.5	315.7	253.7	157.4	104.0	92.5	96.3	105.9	113.5	114.5
42.5°	356.7	322.4	292.8	220.3	130.7	93.5	90.6	102.1	117.3	126.9	128.8
45°	336.7	305.2	269.0	186.9	109.7	86.8	91.6	110.6	127.8	134.5	135.4
47.5°	317.6	285.2	243.2	158.3	95.4	83.0	95.4	119.2	129.7	127.8	128.8
50°	298.5	265.2	215.6	132.6	84.9	80.1	99.2	121.1	120.2	112.5	111.6
52.5°	278.5	247.0	189.8	112.5	76.3	78.2	103.0	114.5	103.0	90.6	89.7
55°	258.5	226.0	166.0	96.3	70.6	77.3	103.0	102.1	83.9	71.5	70.6
57.5°	242.3	204.1	143.1	83.0	65.8	77.3	98.2	86.8	67.7	56.3	55.3
60°	221.3	185.0	123.0	73.4	62.0	75.3	89.7	71.5	54.4	45.8	44.8
62.5°	202.2	167.9	105.9	64.9	58.2	73.4	78.2	59.1	44.8	38.2	38.2
65°	185.0	150.7	90.6	59.1	55.3	68.7	67.7	48.6	37.2	32.4	32.4
67.5°	170.7	133.5	77.3	53.4	52.5	63.9	57.2	40.1	32.4	27.7	27.7
70°	154.5	117.3	65.8	48.6	48.6	57.2	47.7	34.3	27.7	23.8	22.9
72.5°	137.3	99.2	56.3	44.8	44.8	50.6	39.1	28.6	22.9	20.0	19.1
75°	119.2	80.1	48.6	41.0	42.0	43.9	32.4	24.8	20.0	17.2	16.2
77.5°	100.1	62.0	42.0	38.2	38.2	37.2	26.7	21.0	16.2	14.3	13.4
80°	79.2	47.7	35.3	34.3	34.3	31.5	21.9	17.2	13.4	11.4	10.5
82.5°	58.2	36.2	30.5	31.5	30.5	25.8	18.1	14.3	10.5	8.6	7.6
85°	42.0	28.6	26.7	28.6	26.7	21.9	15.3	11.4	7.6	5.7	4.8
87.5°	32.4	23.8	23.8	26.7	23.8	17.2	12.4	8.6	4.8	2.9	1.9
90°	26.7	21.9	21.9	23.8	19.1	13.4	8.6	5.7	2.9	1.0	1.0
92.5°	25.8	21.0	21.9	22.9	19.1	13.4	8.6	4.8	2.9	1.0	1.0
95°	24.8	21.9	21.9	21.9	18.1	12.4	7.6	4.8	2.9	1.0	0.0
97.5°	25.8	22.9	22.9	21.9	18.1	12.4	7.6	4.8	2.9	1.0	0.0
100°	26.7	23.8	22.9	21.9	18.1	12.4	7.6	4.8	1.9	1.0	0.0
102.5°	28.6	25.8	23.8	21.9	17.2	12.4	7.6	4.8	1.9	1.0	0.0
105°	29.6	26.7	23.8	21.9	17.2	11.4	7.6	4.8	1.9	1.0	0.0
107.5°	30.5	26.7	23.8	21.0	17.2	11.4	7.6	4.8	1.9	1.0	0.0
110°	30.5	27.7	22.9	21.0	16.2	11.4	6.7	3.8	1.9	0.0	0.0



REPORT NUMBER: P1449768  
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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	30.5	26.7	22.9	20.0	16.2	11.4	6.7	3.8	1.9	0.0	0.0
115°	30.5	26.7	21.9	19.1	15.3	10.5	6.7	3.8	1.9	0.0	0.0
117.5°	29.6	25.8	21.0	18.1	14.3	10.5	6.7	3.8	1.9	0.0	0.0
120°	27.7	24.8	20.0	17.2	14.3	9.5	5.7	3.8	1.9	0.0	0.0
122.5°	26.7	22.9	19.1	16.2	13.4	9.5	5.7	3.8	1.9	0.0	0.0
125°	24.8	21.9	18.1	15.3	12.4	8.6	5.7	3.8	1.9	0.0	0.0
127.5°	22.9	20.0	17.2	14.3	12.4	8.6	4.8	2.9	1.9	0.0	0.0
130°	21.0	19.1	16.2	13.4	11.4	7.6	4.8	2.9	1.9	0.0	0.0
132.5°	20.0	18.1	15.3	13.4	10.5	7.6	4.8	2.9	1.9	0.0	0.0
135°	18.1	16.2	13.4	11.4	9.5	6.7	4.8	2.9	1.0	0.0	0.0
137.5°	16.2	15.3	12.4	11.4	8.6	6.7	3.8	1.9	1.0	0.0	0.0
140°	15.3	13.4	11.4	10.5	8.6	5.7	3.8	1.9	1.0	0.0	0.0
142.5°	13.4	12.4	10.5	9.5	7.6	5.7	3.8	1.9	1.0	0.0	0.0
145°	12.4	11.4	9.5	8.6	6.7	4.8	2.9	1.9	1.0	0.0	0.0
147.5°	11.4	10.5	8.6	7.6	6.7	4.8	2.9	1.9	1.0	0.0	0.0
150°	10.5	9.5	8.6	6.7	5.7	3.8	1.9	1.0	1.0	0.0	0.0
152.5°	8.6	8.6	7.6	6.7	4.8	3.8	1.9	1.0	1.0	0.0	0.0
155°	7.6	7.6	6.7	5.7	3.8	2.9	1.9	1.0	0.0	0.0	0.0
157.5°	6.7	6.7	5.7	4.8	3.8	2.9	1.9	1.0	0.0	0.0	0.0
160°	5.7	5.7	4.8	3.8	2.9	1.9	1.0	1.0	0.0	0.0	0.0
162.5°	4.8	4.8	3.8	2.9	2.9	1.9	1.0	0.0	0.0	0.0	0.0
165°	3.8	3.8	2.9	2.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
167.5°	2.9	2.9	2.9	1.9	1.9	1.0	1.0	1.0	0.0	0.0	0.0
170°	1.9	1.9	1.9	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0
172.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

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

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2512-637-1

Test Date: 01/12/2026

Luminaire Tested: AXCS4A-W

Data in this report applies to families of products including AXCS4A-W

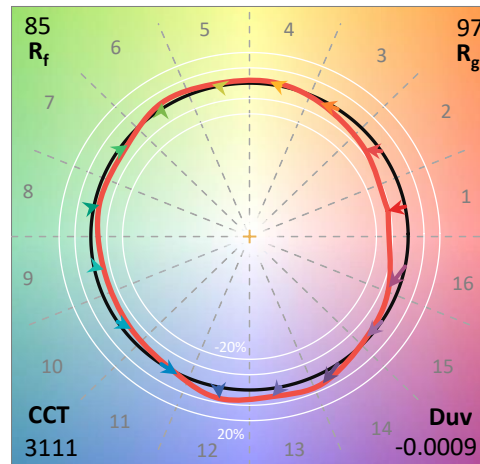
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2512-637-1  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 01/13/2026  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Lumark  
 Catalog Number: **AXCS4A-W**  
 Description: 4A AXCENT SMALL WALLPACK, FULL CUTOFF, 3000K

**Spectral Parameters**

CCT (K): 3111  
 CIE u': 0.2472  
 CIE v': 0.5179  
 Duv: -0.0009  
 CIE x: 0.4280  
 CIE y: 0.3986  
 CIE z: 0.1733  
 Peak Wavelength (nm): 601  
 Dominant Wavelength (nm): 582  
 Purity: 48.11977  
 Rf: 85.3  
 Rg: 96.7

CRI (Ra):	83.4		
R1:	82.0	R9:	8.9
R2:	91.4	R10:	80.6
R3:	96.3	R11:	81.8
R4:	81.9	R12:	73.2
R5:	82.5	R13:	84.3
R6:	89.7	R14:	98.6
R7:	83.1	R15:	74.6
R8:	60.2		



**Test Conditions**

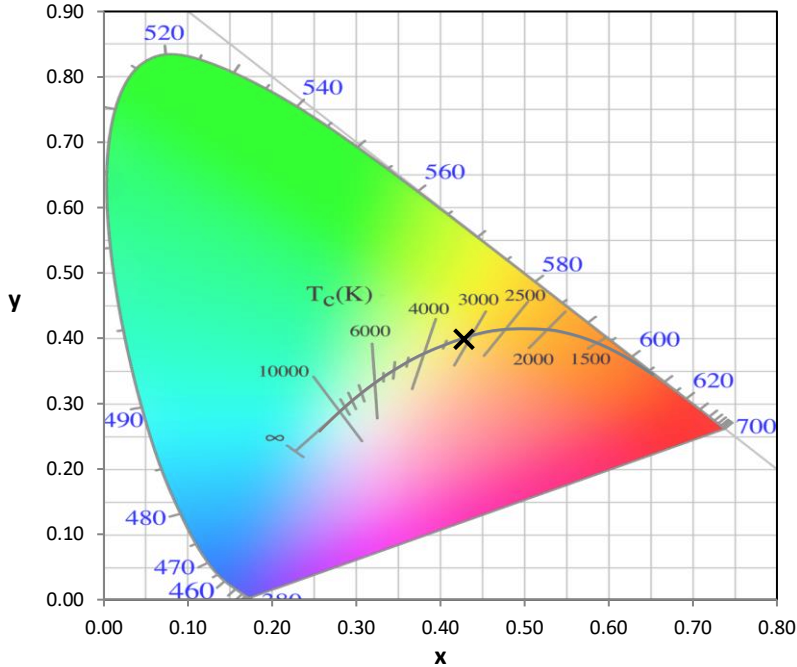
Stabilization Time: 52M  
 Operation Time: 1H 52M  
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2512-637-1

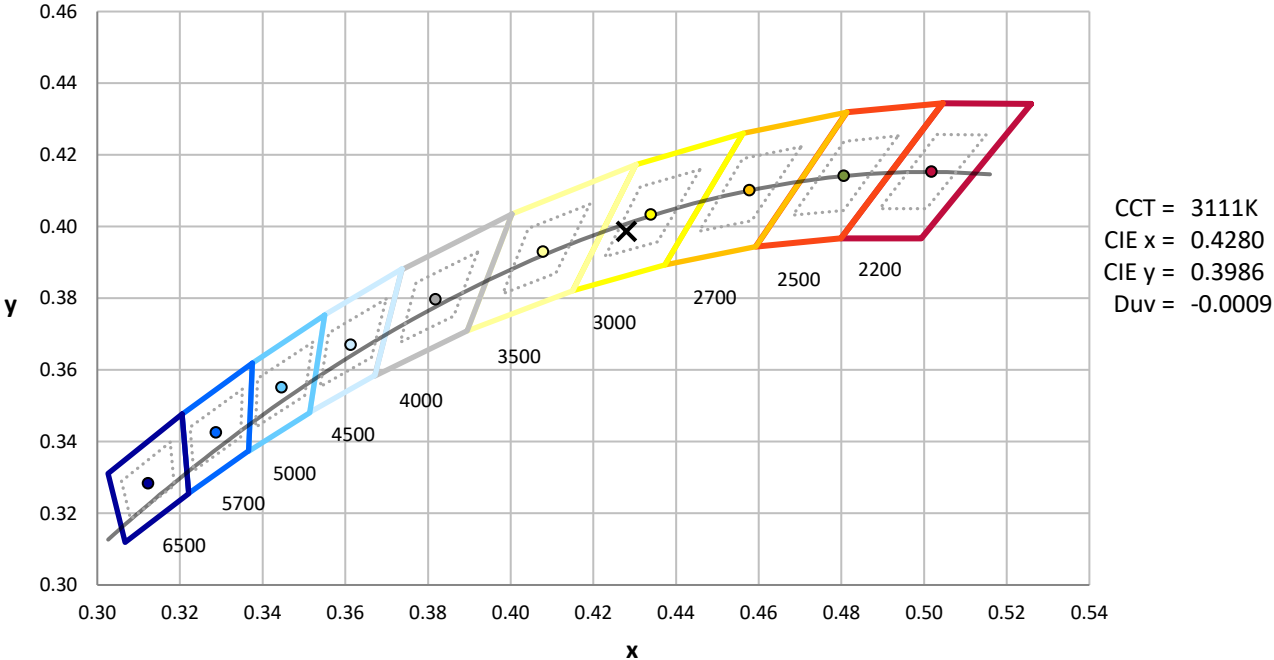
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2512-637-1

CIE 1931 Chromaticity Diagram



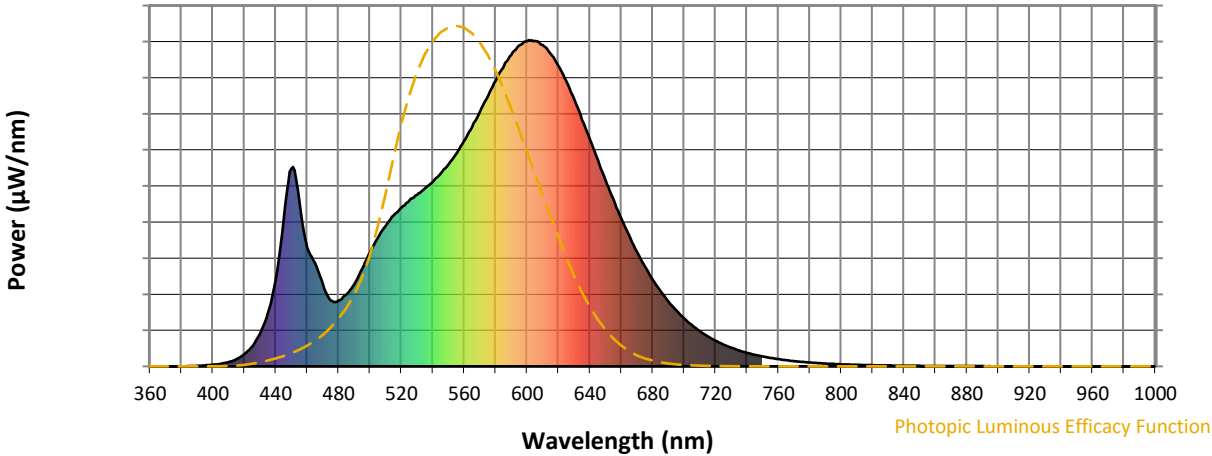
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2512-637-1

**Photopic Flux vs. Wavelength**

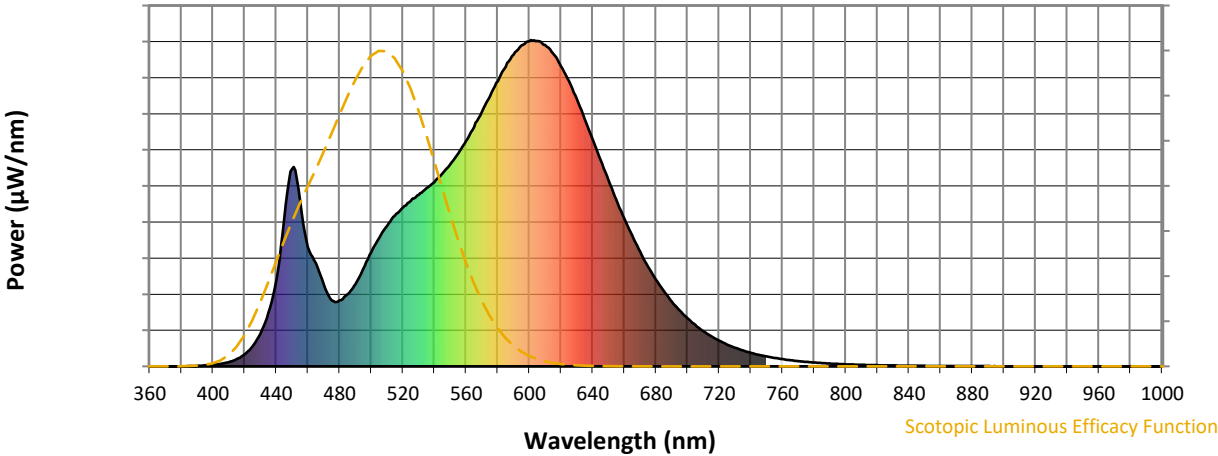


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	252	NR	620	920	NR	750	30	NR	880	1	NR
365	0	NR	495	298	NR	625	875	NR	755	26	NR	885	1	NR
370	0	NR	500	349	NR	630	819	NR	760	22	NR	890	1	NR
375	0	NR	505	394	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	431	NR	640	696	NR	770	16	NR	900	1	NR
385	1	NR	515	462	NR	645	633	NR	775	14	NR	905	0	NR
390	2	NR	520	487	NR	650	570	NR	780	12	NR	910	0	NR
395	3	NR	525	507	NR	655	511	NR	785	10	NR	915	0	NR
400	5	NR	530	525	NR	660	453	NR	790	9	NR	920	0	NR
405	8	NR	535	546	NR	665	401	NR	795	7	NR	925	0	NR
410	13	NR	540	565	NR	670	352	NR	800	6	NR	930	0	NR
415	22	NR	545	591	NR	675	306	NR	805	6	NR	935	0	NR
420	38	NR	550	619	NR	680	266	NR	810	5	NR	940	0	NR
425	61	NR	555	652	NR	685	230	NR	815	4	NR	945	0	NR
430	100	NR	560	691	NR	690	199	NR	820	4	NR	950	0	NR
435	165	NR	565	734	NR	695	171	NR	825	3	NR	955	0	NR
440	265	NR	570	780	NR	700	147	NR	830	3	NR	960	0	NR
445	450	NR	575	826	NR	705	126	NR	835	2	NR	965	0	NR
450	605	NR	580	874	NR	710	108	NR	840	2	NR	970	0	NR
455	508	NR	585	917	NR	715	92	NR	845	2	NR	975	0	NR
460	366	NR	590	956	NR	720	79	NR	850	2	NR	980	0	NR
465	317	NR	595	983	NR	725	67	NR	855	1	NR	985	0	NR
470	251	NR	600	997	NR	730	57	NR	860	1	NR	990	0	NR
475	202	NR	605	997	NR	735	49	NR	865	1	NR	995	0	NR
480	202	NR	610	984	NR	740	42	NR	870	1	NR	1000	0	NR
485	220	NR	615	958	NR	745	35	NR	875	1	NR			

REPORT NUMBER: SP1-2512-637-1

Scotopic Flux vs. Wavelength



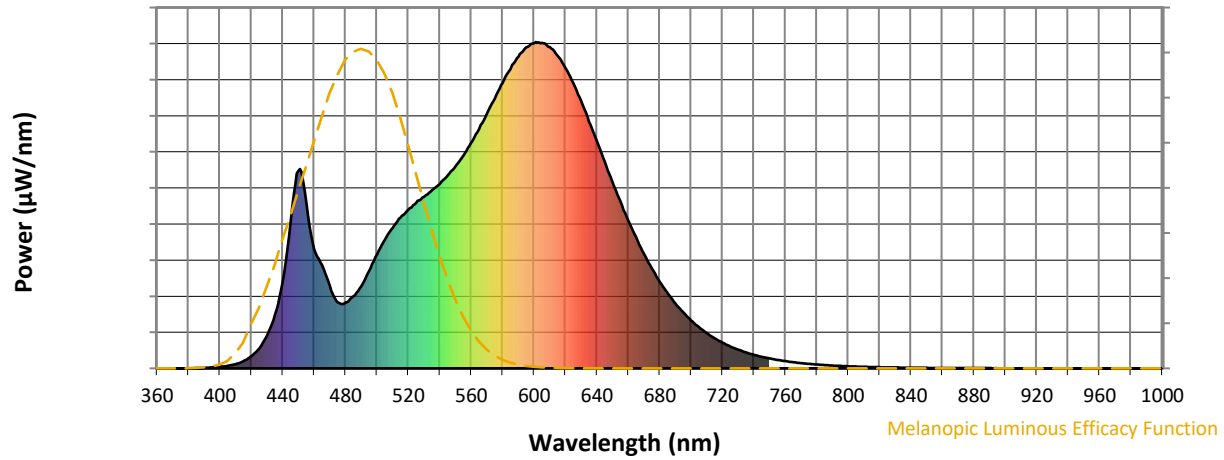
Scotopic Lumens: NR

S/P: 1.4

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	252	NR	620	920	NR	750	30	NR	880	1	NR
365	0	NR	495	298	NR	625	875	NR	755	26	NR	885	1	NR
370	0	NR	500	349	NR	630	819	NR	760	22	NR	890	1	NR
375	0	NR	505	394	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	431	NR	640	696	NR	770	16	NR	900	1	NR
385	1	NR	515	462	NR	645	633	NR	775	14	NR	905	0	NR
390	2	NR	520	487	NR	650	570	NR	780	12	NR	910	0	NR
395	3	NR	525	507	NR	655	511	NR	785	10	NR	915	0	NR
400	5	NR	530	525	NR	660	453	NR	790	9	NR	920	0	NR
405	8	NR	535	546	NR	665	401	NR	795	7	NR	925	0	NR
410	13	NR	540	565	NR	670	352	NR	800	6	NR	930	0	NR
415	22	NR	545	591	NR	675	306	NR	805	6	NR	935	0	NR
420	38	NR	550	619	NR	680	266	NR	810	5	NR	940	0	NR
425	61	NR	555	652	NR	685	230	NR	815	4	NR	945	0	NR
430	100	NR	560	691	NR	690	199	NR	820	4	NR	950	0	NR
435	165	NR	565	734	NR	695	171	NR	825	3	NR	955	0	NR
440	265	NR	570	780	NR	700	147	NR	830	3	NR	960	0	NR
445	450	NR	575	826	NR	705	126	NR	835	2	NR	965	0	NR
450	605	NR	580	874	NR	710	108	NR	840	2	NR	970	0	NR
455	508	NR	585	917	NR	715	92	NR	845	2	NR	975	0	NR
460	366	NR	590	956	NR	720	79	NR	850	2	NR	980	0	NR
465	317	NR	595	983	NR	725	67	NR	855	1	NR	985	0	NR
470	251	NR	600	997	NR	730	57	NR	860	1	NR	990	0	NR
475	202	NR	605	997	NR	735	49	NR	865	1	NR	995	0	NR
480	202	NR	610	984	NR	740	42	NR	870	1	NR	1000	0	NR
485	220	NR	615	958	NR	745	35	NR	875	1	NR			

REPORT NUMBER: SP1-2512-637-1

**Melanopic Flux vs. Wavelength**



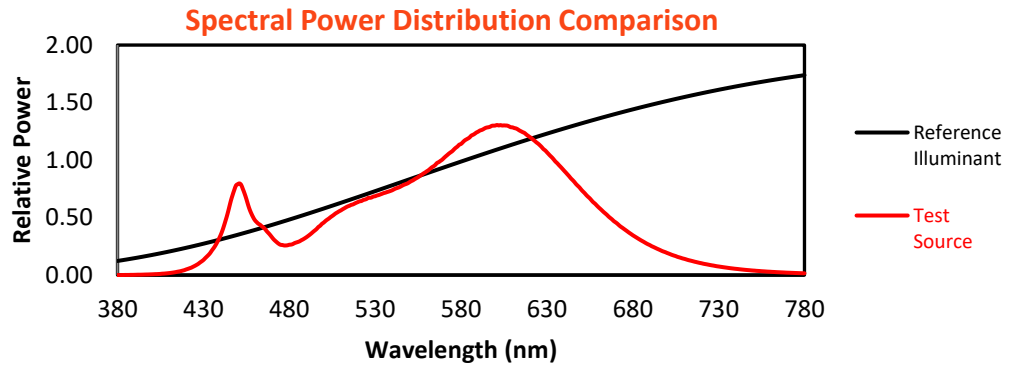
**Melanopic Lumens: NR**

**M/P: 2.73**

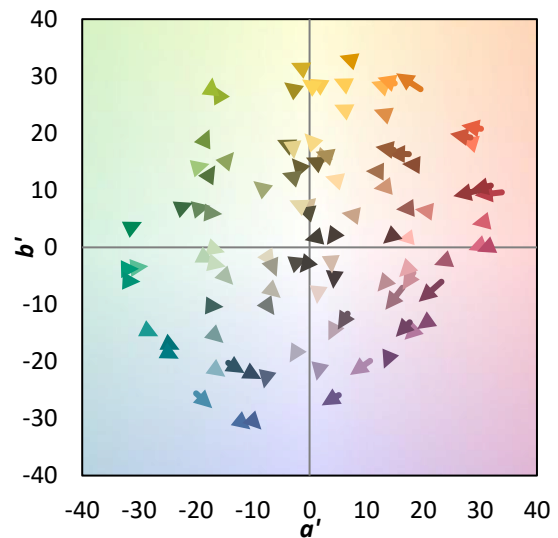
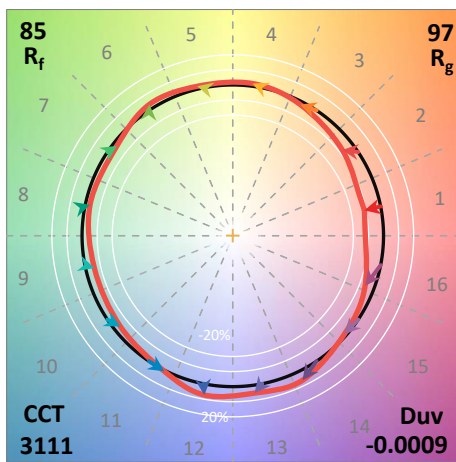
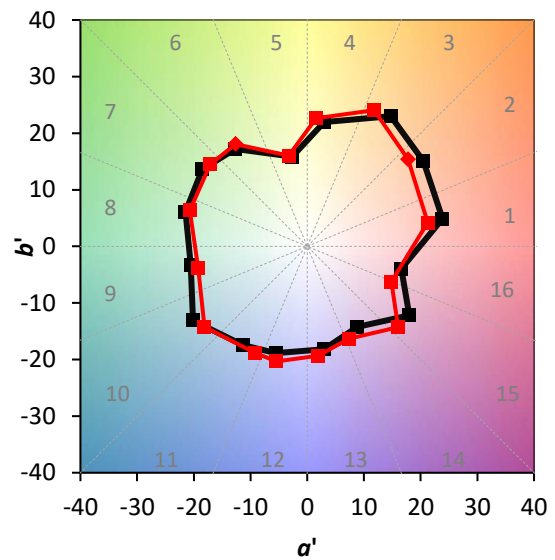
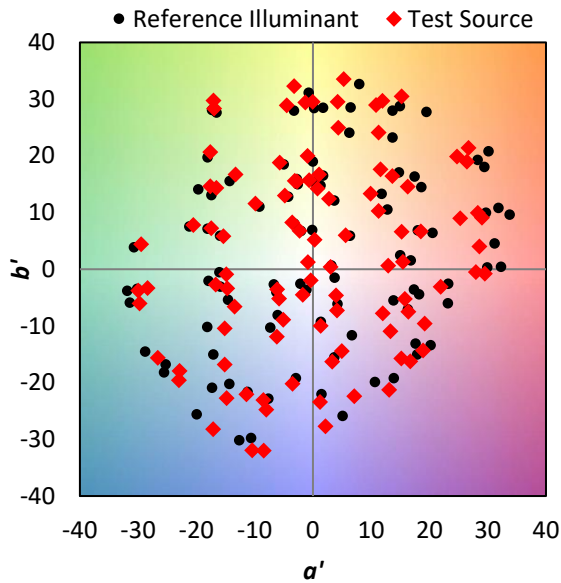
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	252	NR	620	920	NR	750	30	NR	880	1	NR
365	0	NR	495	298	NR	625	875	NR	755	26	NR	885	1	NR
370	0	NR	500	349	NR	630	819	NR	760	22	NR	890	1	NR
375	0	NR	505	394	NR	635	756	NR	765	19	NR	895	0	NR
380	0	NR	510	431	NR	640	696	NR	770	16	NR	900	1	NR
385	1	NR	515	462	NR	645	633	NR	775	14	NR	905	0	NR
390	2	NR	520	487	NR	650	570	NR	780	12	NR	910	0	NR
395	3	NR	525	507	NR	655	511	NR	785	10	NR	915	0	NR
400	5	NR	530	525	NR	660	453	NR	790	9	NR	920	0	NR
405	8	NR	535	546	NR	665	401	NR	795	7	NR	925	0	NR
410	13	NR	540	565	NR	670	352	NR	800	6	NR	930	0	NR
415	22	NR	545	591	NR	675	306	NR	805	6	NR	935	0	NR
420	38	NR	550	619	NR	680	266	NR	810	5	NR	940	0	NR
425	61	NR	555	652	NR	685	230	NR	815	4	NR	945	0	NR
430	100	NR	560	691	NR	690	199	NR	820	4	NR	950	0	NR
435	165	NR	565	734	NR	695	171	NR	825	3	NR	955	0	NR
440	265	NR	570	780	NR	700	147	NR	830	3	NR	960	0	NR
445	450	NR	575	826	NR	705	126	NR	835	2	NR	965	0	NR
450	605	NR	580	874	NR	710	108	NR	840	2	NR	970	0	NR
455	508	NR	585	917	NR	715	92	NR	845	2	NR	975	0	NR
460	366	NR	590	956	NR	720	79	NR	850	2	NR	980	0	NR
465	317	NR	595	983	NR	725	67	NR	855	1	NR	985	0	NR
470	251	NR	600	997	NR	730	57	NR	860	1	NR	990	0	NR
475	202	NR	605	997	NR	735	49	NR	865	1	NR	995	0	NR
480	202	NR	610	984	NR	740	42	NR	870	1	NR	1000	0	NR
485	220	NR	615	958	NR	745	35	NR	875	1	NR			

**Summary**

$R_f = 85.3$   
 $R_g = 96.7$   
 $CIE R_a = 83.4$   
 $R_9 = 8.9$

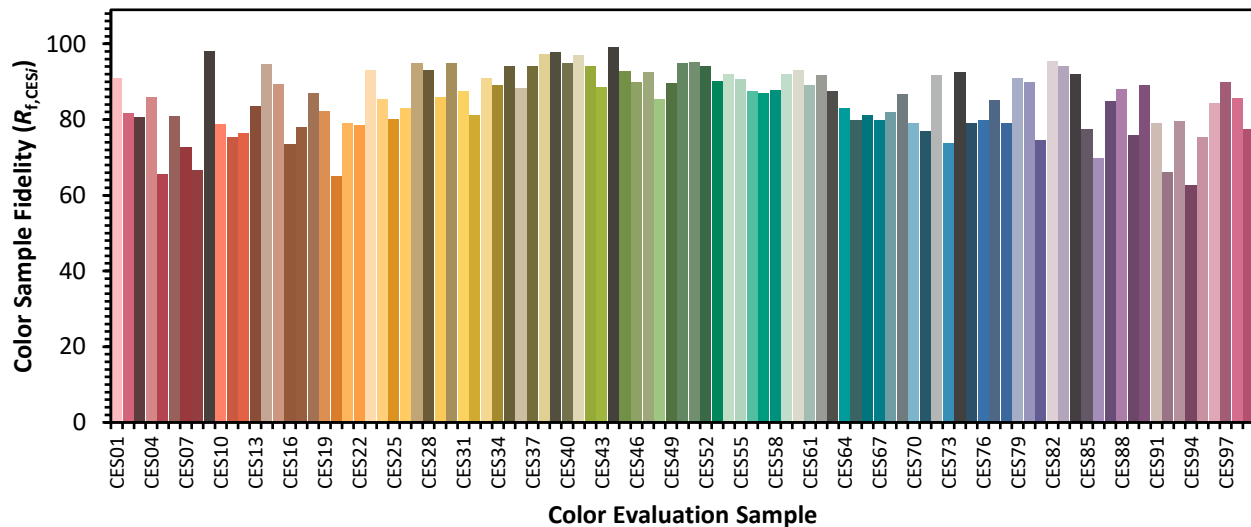


**Color Vector Graphics**

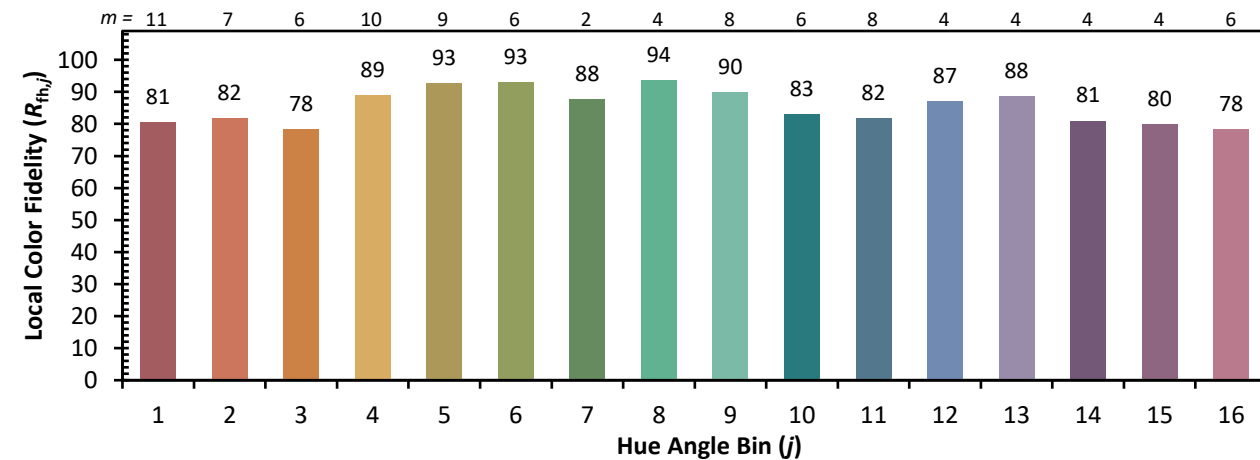
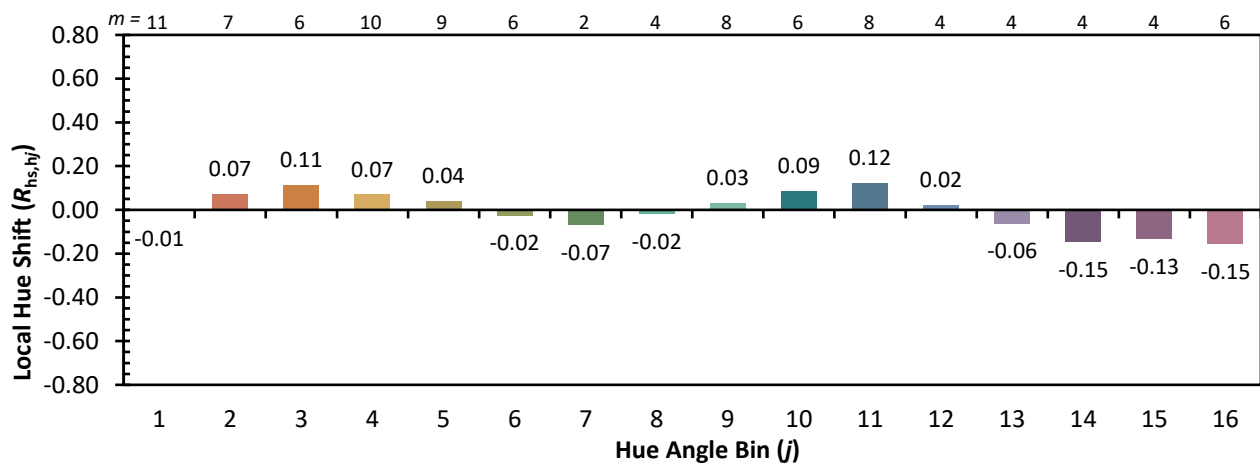
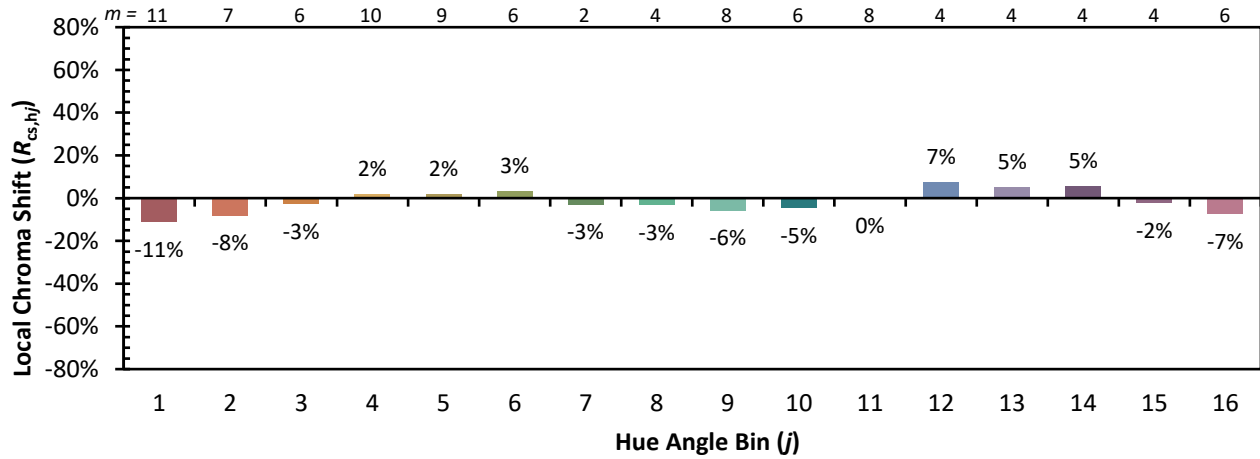


Individual Sample Fidelity Index ( $R_{f,i}$ )

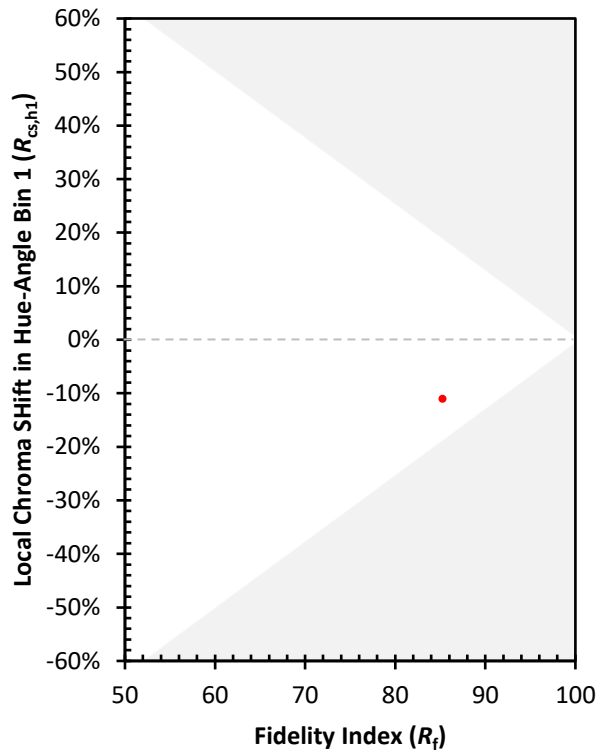
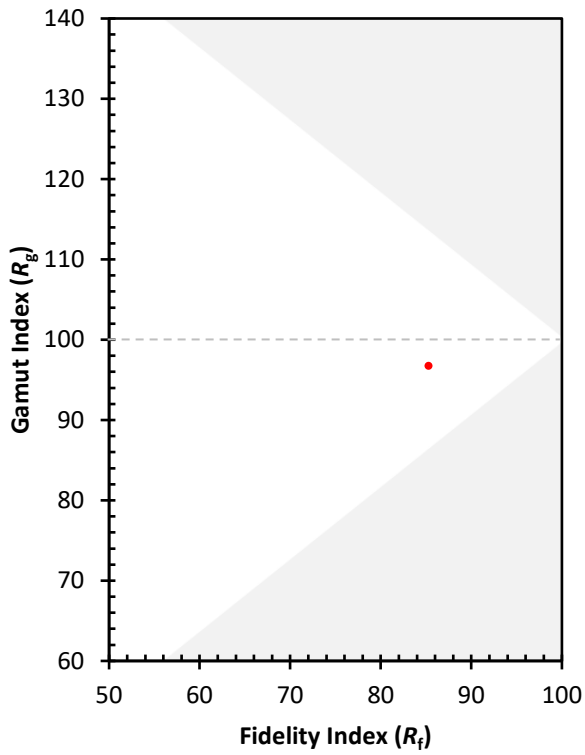
CES01 = 86	CES26 = 83	CES51 = 95	CES76 = 80
CES02 = 63	CES27 = 95	CES52 = 94	CES77 = 85
CES03 = 31	CES28 = 93	CES53 = 90	CES78 = 79
CES04 = 70	CES29 = 86	CES54 = 92	CES79 = 91
CES05 = 49	CES30 = 95	CES55 = 91	CES80 = 90
CES06 = 51	CES31 = 87	CES56 = 88	CES81 = 74
CES07 = 42	CES32 = 81	CES57 = 87	CES82 = 95
CES08 = 41	CES33 = 91	CES58 = 88	CES83 = 94
CES09 = 29	CES34 = 89	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 94	CES60 = 93	CES85 = 78
CES11 = 59	CES36 = 88	CES61 = 89	CES86 = 70
CES12 = 65	CES37 = 94	CES62 = 92	CES87 = 85
CES13 = 43	CES38 = 97	CES63 = 87	CES88 = 88
CES14 = 74	CES39 = 98	CES64 = 83	CES89 = 76
CES15 = 71	CES40 = 95	CES65 = 80	CES90 = 89
CES16 = 47	CES41 = 97	CES66 = 81	CES91 = 79
CES17 = 50	CES42 = 94	CES67 = 80	CES92 = 66
CES18 = 56	CES43 = 89	CES68 = 82	CES93 = 80
CES19 = 72	CES44 = 99	CES69 = 87	CES94 = 63
CES20 = 66	CES45 = 93	CES70 = 79	CES95 = 75
CES21 = 87	CES46 = 90	CES71 = 77	CES96 = 84
CES22 = 79	CES47 = 93	CES72 = 92	CES97 = 90
CES23 = 92	CES48 = 86	CES73 = 74	CES98 = 86
CES24 = 91	CES49 = 90	CES74 = 93	CES99 = 77
CES25 = 72	CES50 = 95	CES75 = 79	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)