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: P1440219

Luminaire Tested: **MPB-A4-D-U-SYM-U-7030**

Issue Date: 04/14/2026

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Report Generated By 670245763

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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P1440219
Test Lab:	INNOVATION CENTER(G3)
Issue Date:	04/14/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	STREETWORKS
Catalog Number:	MPB-A4-D-U-SYM-U-7030
Description:	BRECKENRIDGE POST TOP LUMINAIRE w/ SYMMETRIC DISTRIBUTION 03000K CCT 70 CRI LIGHT ENGINE
Light Source:	(1) 03000K CCT, 70 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Luminaire Equipment:

Sample No.	Condition	Description
a	good	reflector
b	good	lens
c	good	housing
d	good	cord

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4226.3 lumens
Efficiency:	N/A
Efficacy:	104.9 lumens/watt
Luminous Opening:	Vertical Cylinder (Dia: 1' x H: 0.57')
IES Classification:	Type V - V Long
BUG Rating:	B2 - U4 - G3

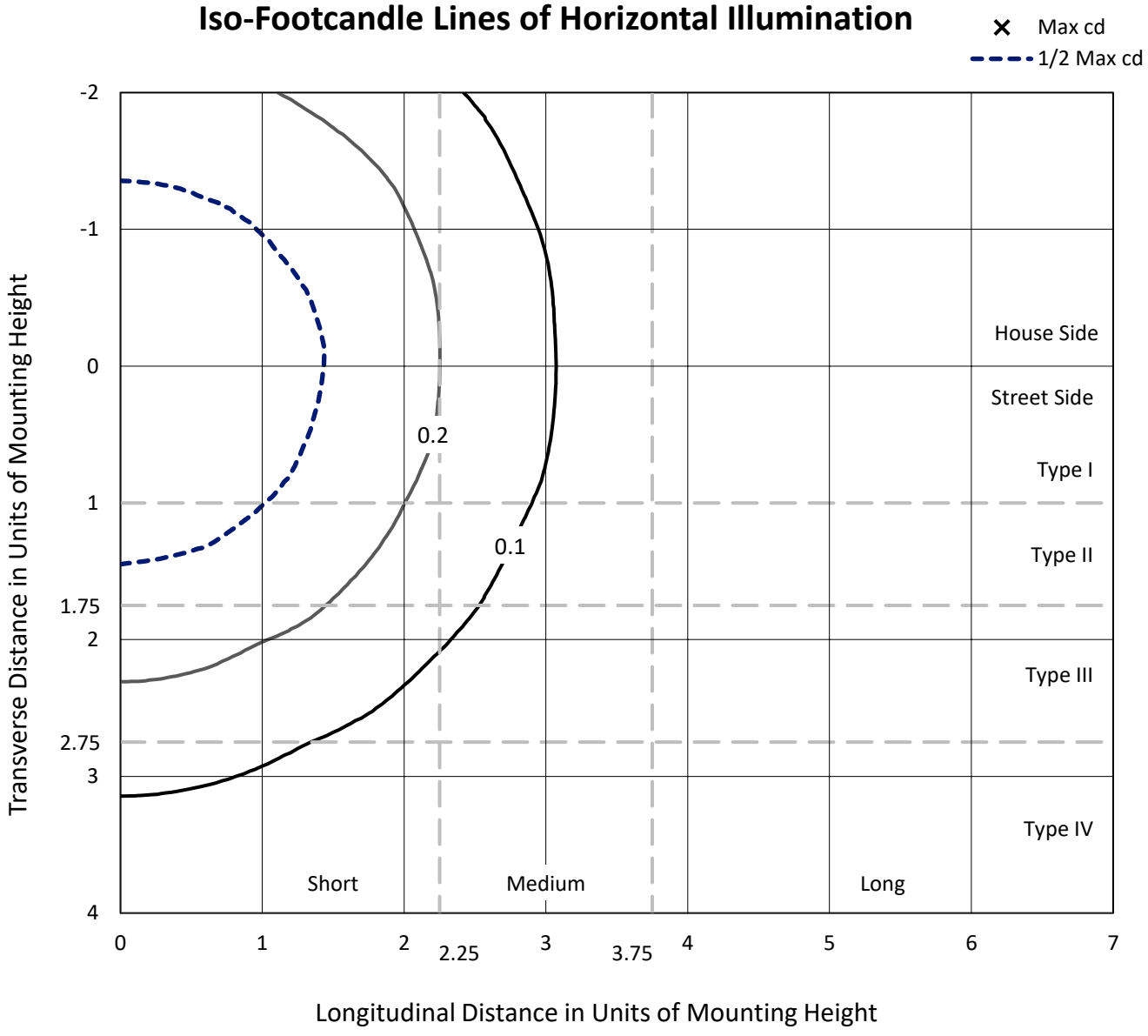
Input Watts (W):	40.3
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.95
Total Harmonic Distortion (THDi):	8.7%
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination



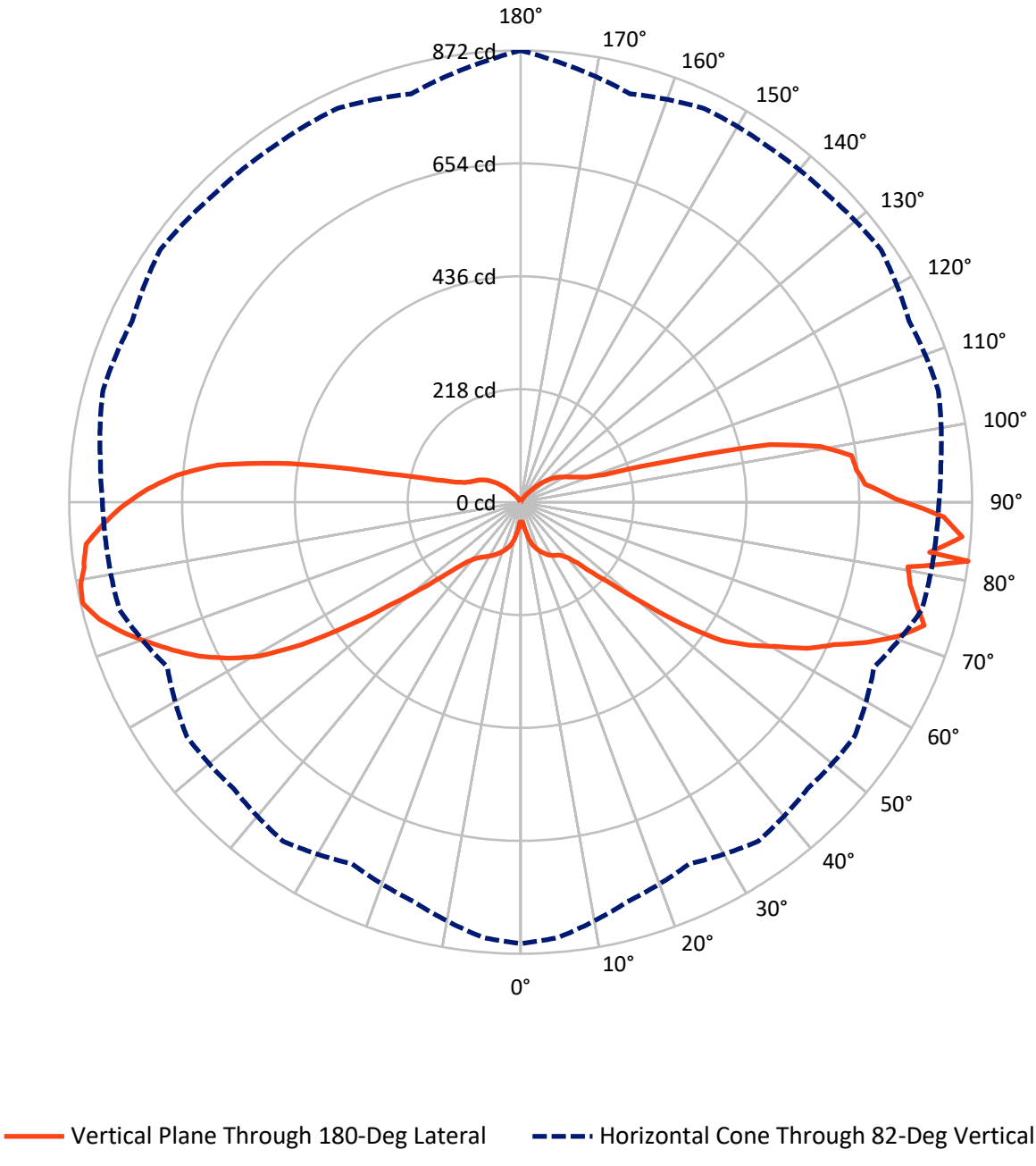
Based on 15 foot mounting height. Maximum calculated value = 0.4 fc
Type V - V Long - N/A

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Luminous Intensity Polar Plot



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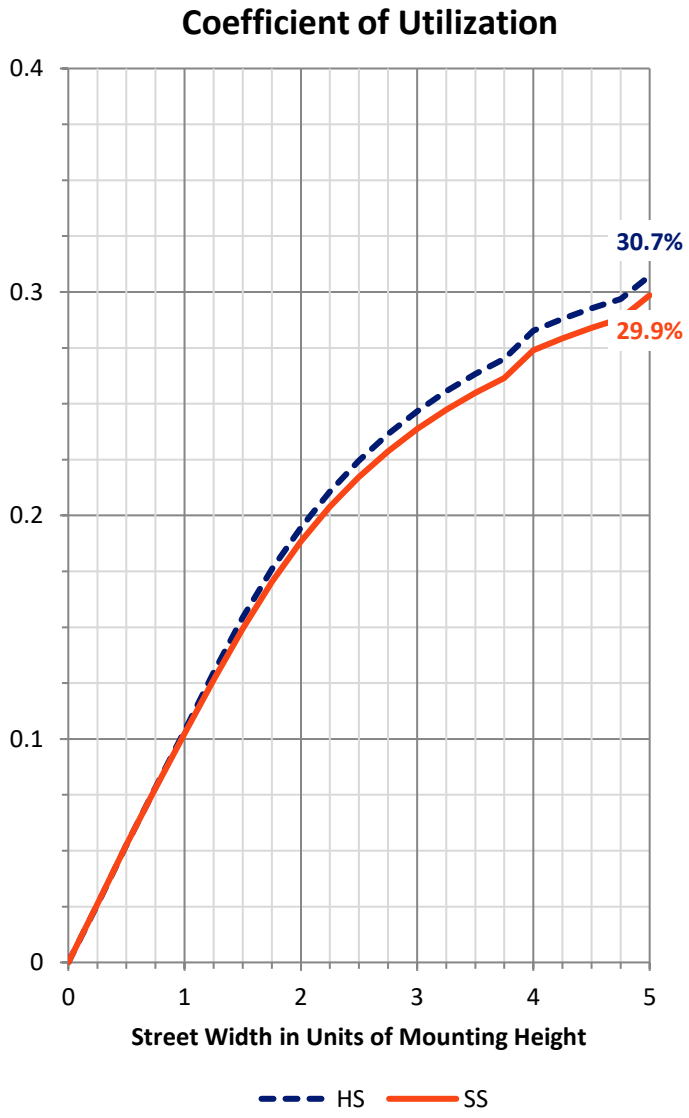
REPORT NUMBER: P1440219
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1549.0	612.7	2161.7
	% Fixture	36.7	14.5	51.1
Street Side	Lumens	1510.2	554.4	2064.6
	% Fixture	35.7	13.1	48.9
Total	Lumens	3059.1	1167.1	4226.3
	% Fixture	72.4	27.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.1	0.1
10°-20°	24.6	0.6
20°-30°	51.2	1.2
30°-40°	80.7	1.9
40°-50°	151.6	3.6
50°-60°	391.8	9.3
60°-70°	663.6	15.7
70°-80°	836.7	19.8
80°-90°	853.9	20.2
90°-100°	684.1	16.2
100°-110°	271.3	6.4
110°-120°	103.9	2.5
120°-130°	68.1	1.6
130°-140°	31.2	0.7
140°-150°	8.0	0.2
150°-160°	0.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	3059.1	72.4
0°-180°	4226.3	100.0



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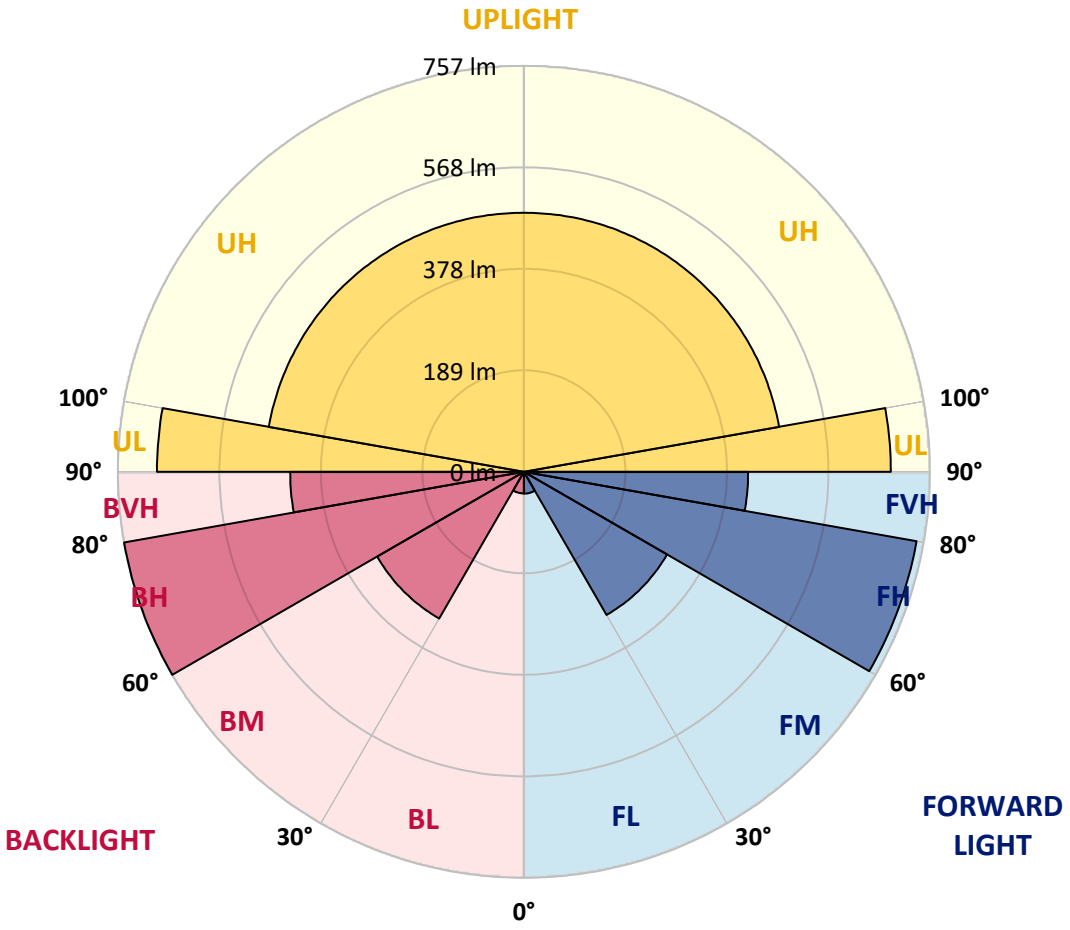
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	40.7	1.0			
FM	(30°-60°)	308.1	7.3			
FH	(60°-80°)	743.3	17.6			G1/1800
FVH	(80°-90°)	418.1	9.9			G3/500
BL	(0°-30°)	40.3	1.0	B0/110		
BM	(30°-60°)	315.9	7.5	B1/1000		
BH	(60°-80°)	757.0	17.9	B2/1000		G1/1800
BVH	(80°-90°)	435.8	10.3			G3/500
UL	(90°-100°)	684.1	16.2		U4/1000	
UH	(100°-180°)	483.0	11.4		U3/500	

BUG Rating: B2-U4-G3
Type V V Long



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3
2.5°	38.5	38.5	38.5	40.1	41.3	43.5	44.0	44.6	44.0	44.0	44.6
5°	49.6	48.5	48.5	48.5	48.5	49.1	49.1	48.5	47.9	47.9	47.4
7.5°	60.2	59.7	60.2	59.1	59.1	58.5	57.4	56.9	58.0	60.2	59.7
10°	71.9	71.9	71.9	71.9	70.8	69.7	68.6	68.0	68.0	68.0	68.0
12.5°	82.0	82.5	82.0	81.4	80.8	80.3	79.2	78.1	78.1	78.1	77.5
15°	88.6	89.2	89.2	89.2	88.6	88.1	87.0	86.4	86.4	87.0	86.4
17.5°	94.8	94.8	94.8	94.8	94.2	93.7	92.6	92.6	92.6	93.1	93.1
20°	99.8	99.8	99.8	99.8	99.8	99.2	98.1	98.7	99.2	99.2	98.7
22.5°	105.4	105.4	104.8	104.8	105.4	104.3	104.3	105.4	105.4	104.8	104.8
25°	109.8	110.4	109.8	109.8	110.9	109.8	109.3	110.4	110.4	110.4	109.8
27.5°	114.9	114.9	114.3	114.3	114.9	114.3	113.7	114.9	114.9	114.3	114.9
30°	119.3	118.8	118.8	118.8	119.3	118.2	117.6	118.8	118.8	118.8	118.2
32.5°	123.8	123.8	123.2	123.8	123.2	122.7	121.5	122.1	122.7	121.5	122.1
35°	128.8	128.2	127.7	128.2	127.7	127.1	125.4	126.0	126.6	124.9	124.9
37.5°	134.4	134.4	133.8	133.8	134.4	133.2	131.0	131.6	131.0	129.9	129.3
40°	142.2	142.7	142.2	142.7	143.3	143.3	141.1	141.6	141.1	138.3	137.7
42.5°	155.6	156.1	156.1	157.8	160.0	160.6	157.2	161.1	159.5	155.0	153.9
45°	179.5	179.5	180.1	184.0	187.9	188.4	185.1	190.1	189.0	185.1	181.2
47.5°	216.3	213.0	218.0	221.3	226.4	229.7	225.8	232.5	229.7	223.0	220.2
50°	265.4	265.4	268.2	271.5	277.1	282.1	275.4	286.0	282.7	275.4	272.6
52.5°	326.7	334.0	339.0	332.3	347.3	348.5	341.8	354.6	351.8	344.6	341.2
55°	413.1	420.9	422.6	413.7	427.1	427.6	422.1	434.3	436.0	433.2	426.5
57.5°	504.6	511.3	512.9	494.5	511.8	506.2	499.0	507.4	511.8	510.7	502.9
60°	586.0	587.1	582.1	553.1	569.8	567.0	562.5	564.2	571.5	568.1	563.1
62.5°	641.7	639.5	635.0	604.9	625.5	616.1	608.8	611.1	615.5	616.1	611.6
65°	689.7	686.9	678.5	650.6	672.9	659.6	655.1	648.4	660.1	657.3	656.8
67.5°	730.4	731.5	721.4	694.7	712.0	700.3	698.0	688.5	705.8	696.9	696.9
70°	769.9	773.9	757.1	727.6	744.3	734.3	738.7	720.9	743.7	734.8	734.3
72.5°	810.1	808.4	789.5	754.9	772.7	758.8	766.6	746.5	772.7	764.9	763.8
75°	844.7	840.2	813.4	776.1	795.0	780.0	788.9	762.7	798.4	788.3	787.2
77.5°	868.1	860.8	825.7	786.7	806.7	785.0	793.4	763.3	805.1	800.6	804.0
80°	864.2	856.4	816.2	777.2	801.2	775.5	780.0	748.2	799.5	796.7	802.8
82°	*852.5*	*843.5*	*798.4*	*770.5*	*799.5*	*783.3*	*787.8*	*753.2*	*802.3*	*805.1*	*807.9*
82.5°	851.9	843.0	798.9	767.2	791.7	771.6	775.5	745.4	793.9	796.7	801.2
85°	843.0	831.3	784.4	754.9	779.4	761.0	767.7	732.0	778.9	784.4	790.6
87.5°	807.3	798.9	750.4	726.5	753.2	734.3	740.4	713.6	753.2	758.8	763.3
90°	767.7	758.2	711.4	688.5	714.2	699.7	705.8	679.1	714.8	713.6	719.8
92.5°	720.9	713.6	671.8	647.3	671.8	658.4	667.4	642.8	673.5	670.2	675.7
95°	665.1	658.4	625.5	599.9	623.3	612.7	620.5	598.8	629.5	626.7	634.5
97.5°	589.3	582.6	558.6	535.8	558.1	553.1	560.3	548.6	577.0	575.9	584.3
100°	450.5	443.2	433.2	427.1	450.5	460.0	468.9	462.8	488.4	485.6	494.0
102.5°	261.5	264.8	262.0	260.9	283.2	293.3	305.5	310.5	328.9	337.3	340.7
105°	172.8	170.6	170.6	167.8	174.5	179.0	183.4	184.0	196.8	197.9	202.4
107.5°	131.0	129.9	130.5	128.8	133.8	134.4	138.8	137.2	141.6	145.0	147.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	113.7	113.2	112.6	110.9	115.4	117.1	118.2	117.1	120.4	121.0	123.8
112.5°	104.8	104.3	103.1	102.0	105.9	107.0	108.2	107.6	109.3	109.3	110.4
115°	98.1	97.6	97.0	95.3	98.7	99.8	100.9	100.9	102.6	102.6	104.3
117.5°	93.1	92.0	91.4	89.8	92.6	93.1	94.8	95.3	96.5	95.9	97.0
120°	87.5	86.4	85.9	84.7	87.0	87.5	88.1	88.6	89.2	89.8	90.3
122.5°	80.3	79.7	79.2	78.1	80.3	81.4	82.0	82.5	83.1	82.5	83.1
125°	73.0	71.9	71.9	71.9	73.6	74.2	75.3	75.8	75.8	75.3	75.3
127.5°	64.1	64.1	64.1	64.1	65.8	66.3	68.0	68.6	68.0	67.5	67.5
130°	55.2	55.2	55.8	55.8	57.4	58.0	59.7	60.2	59.7	58.5	58.5
132.5°	45.7	45.7	46.3	46.3	47.9	49.6	50.2	50.7	50.2	49.1	47.9
135°	36.8	36.8	37.4	37.9	39.0	40.1	41.3	41.3	40.7	39.6	39.0
137.5°	27.3	27.9	28.4	28.4	29.5	30.7	31.2	31.2	30.1	29.5	29.0
140°	20.1	20.1	20.1	20.6	21.2	22.3	22.3	22.3	21.7	21.2	20.6
142.5°	15.1	14.5	15.1	15.1	15.6	16.2	16.2	16.7	15.6	15.6	15.1
145°	11.2	11.2	11.2	11.2	11.7	11.7	12.3	12.3	12.3	11.7	11.2
147.5°	8.4	8.4	8.4	8.4	8.4	8.9	8.9	8.9	8.4	8.4	7.8
150°	5.6	5.6	5.6	5.0	5.6	5.6	5.6	5.6	5.6	5.6	5.0
152.5°	2.8	2.8	2.2	2.2	2.2	2.8	2.2	1.7	1.7	1.7	1.1
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	*46.3*
2.5°	44.0	43.5	43.5	41.8	39.0	37.9	37.4	39.0	38.5	*38.5*
5°	45.7	44.0	42.9	41.8	40.7	40.7	39.0	39.0	37.9	*38.5*
7.5°	59.1	57.4	56.3	54.1	53.5	51.9	50.2	49.6	48.5	*48.5*
10°	68.0	67.5	67.5	66.9	65.2	64.1	62.4	60.8	60.8	*60.2*
12.5°	77.5	76.9	76.9	76.9	75.8	76.4	75.3	75.3	74.2	*74.7*
15°	85.9	85.3	85.3	86.4	85.9	86.4	85.3	85.3	85.3	*85.3*
17.5°	92.6	92.6	92.6	93.1	92.6	93.1	92.6	92.6	92.6	*92.6*
20°	98.7	98.7	98.7	99.2	98.7	99.2	98.7	98.7	98.7	*99.2*
22.5°	104.3	104.3	104.8	105.4	105.4	105.4	105.4	105.4	105.4	*105.4*
25°	109.8	109.8	110.9	111.5	110.9	110.9	111.5	110.9	110.9	*110.4*
27.5°	114.3	114.3	116.0	117.1	116.0	116.0	116.0	116.0	115.4	*115.4*
30°	118.8	119.3	120.4	121.5	120.4	120.4	121.0	119.9	119.3	*119.3*
32.5°	122.1	122.7	124.3	125.4	124.3	123.8	124.3	123.2	122.7	*122.7*
35°	124.9	126.0	128.2	129.3	127.7	127.1	127.1	126.0	124.9	*125.4*
37.5°	129.3	129.9	132.1	133.2	131.6	132.1	132.7	132.1	131.6	*131.6*
40°	137.2	136.6	138.3	139.4	139.4	138.8	140.5	141.6	140.5	*141.6*
42.5°	152.2	151.1	152.8	152.8	153.9	153.3	156.7	162.2	160.6	*160.6*
45°	179.5	177.3	176.2	176.7	181.2	181.8	187.3	192.9	192.3	*194.0*
47.5°	218.0	214.6	214.6	220.2	220.8	225.2	231.4	237.5	237.0	*234.2*
50°	268.2	271.0	271.5	279.9	281.0	284.9	293.8	303.9	308.3	*303.9*
52.5°	336.2	339.5	347.9	363.5	363.0	368.5	384.1	391.4	397.0	*393.1*
55°	419.8	427.6	434.9	458.8	457.7	457.7	473.3	468.3	472.2	*472.2*
57.5°	499.5	512.4	517.9	538.6	535.2	525.2	532.4	514.0	519.1	*520.7*
60°	564.2	574.8	582.1	603.8	594.3	577.6	581.5	562.0	564.2	*565.3*
62.5°	616.1	629.5	632.8	653.4	641.2	623.3	627.2	608.8	612.7	*621.6*
65°	660.1	676.3	682.4	703.6	689.7	671.8	672.9	659.0	660.7	*664.0*
67.5°	700.8	720.3	724.8	747.1	734.3	720.9	723.7	711.4	722.0	*722.0*
70°	734.3	756.6	756.6	781.7	769.4	762.7	769.9	757.7	769.9	*775.0*
72.5°	764.4	788.9	787.8	811.2	801.2	795.6	792.3	794.5	809.5	*815.1*
75°	786.1	816.8	808.4	830.7	817.3	809.5	803.4	791.1	814.0	*789.5*
77.5°	804.0	831.8	829.6	845.2	824.0	806.2	780.0	742.6	769.9	*769.4*
80°	811.2	839.6	830.7	845.2	831.8	816.2	792.8	740.4	754.3	*758.2*
82°	*814.6*	*835.2*	*827.9*	*849.7*	*839.1*	*836.3*	*838.5*	*816.2*	*852.5*	*872.0*
82.5°	811.8	831.8	821.8	846.9	836.9	826.8	814.0	779.4	811.2	*795.6*
85°	800.6	821.8	811.2	831.8	824.0	818.5	820.1	798.4	841.3	*855.3*
87.5°	772.7	788.3	782.2	796.7	785.6	773.3	776.1	759.9	803.4	*817.3*
90°	727.0	740.4	737.6	750.4	738.7	718.1	715.9	685.8	722.0	*723.7*
92.5°	680.2	695.2	691.3	705.3	690.2	679.1	667.4	635.6	659.6	*666.2*
95°	638.9	657.9	652.9	661.2	656.2	652.9	649.5	626.1	650.6	*651.8*
97.5°	595.4	604.4	604.9	612.2	607.2	613.3	636.1	615.0	644.5	*645.6*
100°	508.5	519.6	524.6	539.7	538.6	550.8	577.0	560.3	586.0	*588.8*
102.5°	350.1	354.6	362.4	380.8	405.9	427.6	456.1	460.5	480.6	*493.4*
105°	205.7	215.8	214.1	224.7	230.3	240.9	264.3	268.2	296.6	*292.7*
107.5°	148.9	151.1	151.1	155.6	155.6	157.2	163.4	162.2	166.7	*172.3*

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

Scaled Data Report

REPORT NUMBER: P1440219
CATALOG NUMBER: MPB-A4-D-U-SYM-U-7030

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	123.8	126.0	126.6	128.2	129.3	128.8	131.0	131.0	136.6	*137.7*
112.5°	110.9	113.7	114.3	116.5	116.0	114.9	117.1	118.2	122.7	*123.8*
115°	104.8	105.9	107.0	108.2	107.0	105.9	107.6	109.3	111.5	*112.1*
117.5°	97.6	98.7	100.4	100.9	99.8	98.7	100.4	100.9	103.7	*103.7*
120°	90.3	91.4	93.7	94.2	93.1	92.0	93.7	94.8	95.3	*95.9*
122.5°	83.1	84.2	85.9	87.0	85.9	85.3	87.0	88.1	88.1	*88.6*
125°	75.8	76.4	78.1	78.6	78.1	77.5	80.3	80.3	81.4	*80.8*
127.5°	66.9	68.0	69.7	69.7	69.1	69.1	71.9	72.5	72.5	*72.5*
130°	58.0	59.1	60.2	59.7	59.7	59.7	62.4	63.0	63.0	*62.4*
132.5°	48.5	48.5	50.2	49.6	48.5	49.6	52.4	53.0	53.0	*52.4*
135°	37.9	38.5	38.5	38.5	38.5	39.6	41.3	42.4	42.4	*41.8*
137.5°	28.4	27.9	28.4	29.0	28.4	30.1	31.8	31.8	31.2	*31.8*
140°	20.6	20.6	20.6	21.2	21.2	22.3	24.0	24.0	23.4	*23.4*
142.5°	15.1	15.1	15.6	15.6	15.6	16.7	17.8	18.4	17.8	*17.8*
145°	11.2	10.6	11.2	11.2	11.2	12.3	12.8	13.4	13.4	*13.4*
147.5°	7.8	7.2	7.8	7.8	7.2	8.4	8.9	9.5	8.9	*8.9*
150°	4.5	3.9	3.9	3.9	3.9	4.5	5.0	5.6	5.0	*5.6*
152.5°	1.1	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	*0.6*
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
180°	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

Streetworks

Report Number: SP3-2602-694-3

Test Date: 04/02/2026

Luminaire Tested: MPB-A2-D-U-SYM-7030

Data in this report applies to families of products including MPB*

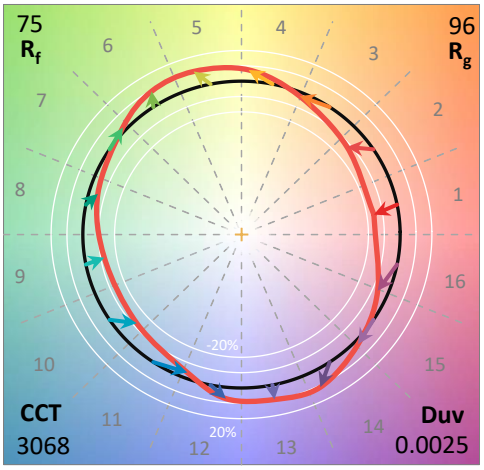
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Version: v7.05

Test Information

Test Method:	LM-79-2019
Report Number:	SP3-2602-694-3
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP3 - 3M SPHERE
Measurement Geometry:	4π
Issue Date:	04/02/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Streetworks
Catalog Number:	**MPB-A2-D-U-SYM-7030**
Description:	MPB Breckenridge 20W DECORATIVE POSTTOP SYMMETRIC DISTRIBUTION

Spectral Parameters

CCT (K):	3068	CRI (Ra):	72.2		
CIE u':	0.2473	R1:	68.9	R9:	-29.3
CIE v':	0.5235	R2:	80.4	R10:	54.9
Duv:	0.0025	R3:	91.3	R11:	66.0
CIE x:	0.4358	R4:	70.3	R12:	45.5
CIE y:	0.4100	R5:	67.7	R13:	70.6
CIE z:	0.1542	R6:	72.8	R14:	94.9
Peak Wavelength (nm):	595	R7:	79.6	R15:	60.6
Dominant Wavelength (nm):	581	R8:	46.8		
Purity:	53.8707				
Rf:	75				
Rg:	95.5				



Test Conditions

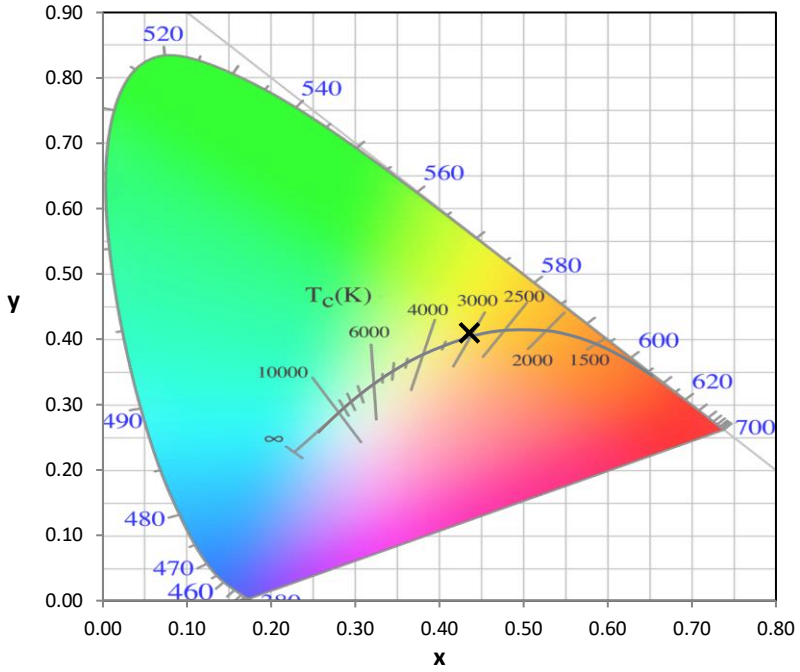
Stabilization Time:	28M
Operation Time:	1H 28M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP3-2602-694-3

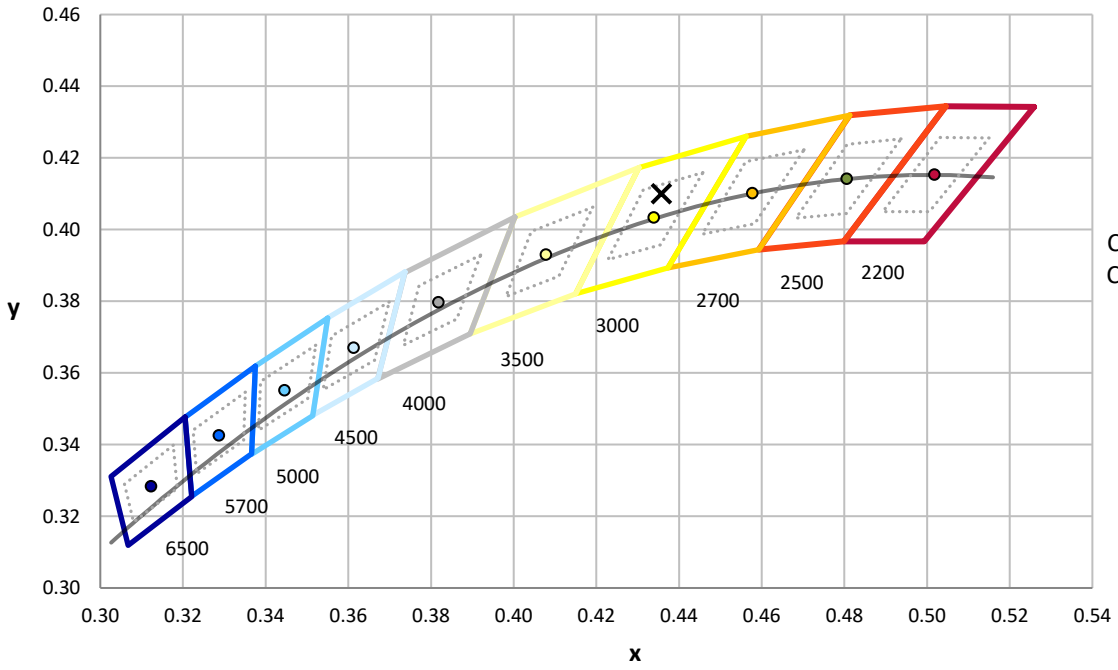
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	3M SPHERE IN02505	1/10/2026	7/10/2026
Power Meter	XITRON INXT2011006	10/21/2025	10/21/2026
AC Power Source	CHROMA 61604 IN6064A	10/20/2025	10/20/2026
DC Power Source	EYSIGHT N5770A IN0534	10/20/2025	10/20/2026
Sphere Thermometer	TANDD IN4036E	10/21/2025	10/21/2026

REPORT NUMBER: SP3-2602-694-3

CIE 1931 Chromaticity Diagram



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

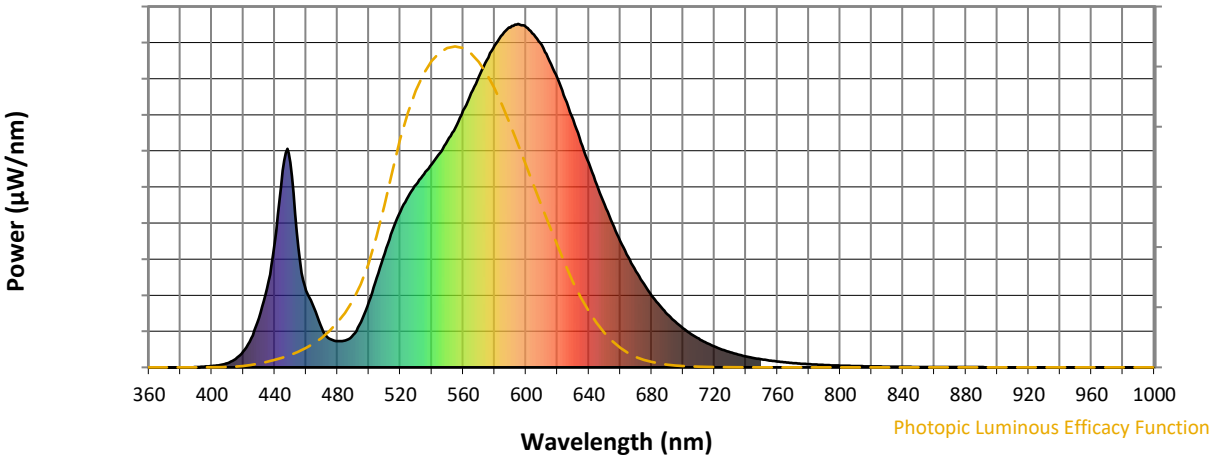


CCT = 3068K
CIE x = 0.4358
CIE y = 0.4100
Duv = 0.0025

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP3-2602-694-3

Photopic Flux vs. Wavelength

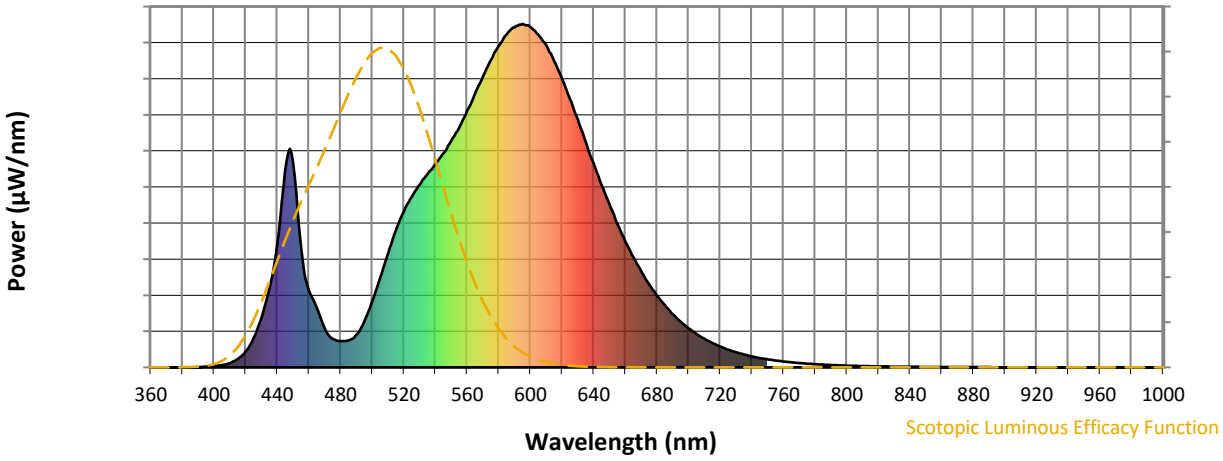


Photopic Lumens: NR

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	95	NR	620	841	NR	750	23	NR	880	1	NR
365	0	NR	495	132	NR	625	781	NR	755	20	NR	885	1	NR
370	0	NR	500	192	NR	630	721	NR	760	17	NR	890	1	NR
375	0	NR	505	261	NR	635	655	NR	765	15	NR	895	0	NR
380	0	NR	510	332	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	399	NR	645	531	NR	775	11	NR	905	0	NR
390	1	NR	520	453	NR	650	474	NR	780	9	NR	910	0	NR
395	2	NR	525	497	NR	655	418	NR	785	8	NR	915	0	NR
400	4	NR	530	532	NR	660	367	NR	790	7	NR	920	0	NR
405	7	NR	535	563	NR	665	322	NR	795	6	NR	925	0	NR
410	12	NR	540	592	NR	670	280	NR	800	5	NR	930	0	NR
415	24	NR	545	624	NR	675	243	NR	805	4	NR	935	0	NR
420	47	NR	550	659	NR	680	209	NR	810	4	NR	940	0	NR
425	85	NR	555	698	NR	685	181	NR	815	3	NR	945	0	NR
430	144	NR	560	748	NR	690	155	NR	820	3	NR	950	0	NR
435	229	NR	565	798	NR	695	133	NR	825	2	NR	955	0	NR
440	361	NR	570	846	NR	700	114	NR	830	2	NR	960	0	NR
445	573	NR	575	895	NR	705	97	NR	835	2	NR	965	0	NR
450	596	NR	580	936	NR	710	83	NR	840	2	NR	970	0	NR
455	350	NR	585	969	NR	715	71	NR	845	1	NR	975	0	NR
460	224	NR	590	990	NR	720	61	NR	850	1	NR	980	0	NR
465	173	NR	595	1000	NR	725	52	NR	855	1	NR	985	0	NR
470	113	NR	600	990	NR	730	44	NR	860	1	NR	990	0	NR
475	83	NR	605	969	NR	735	38	NR	865	1	NR	995	0	NR
480	77	NR	610	939	NR	740	32	NR	870	1	NR	1000	0	NR
485	78	NR	615	892	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP3-2602-694-3

Scotopic Flux vs. Wavelength

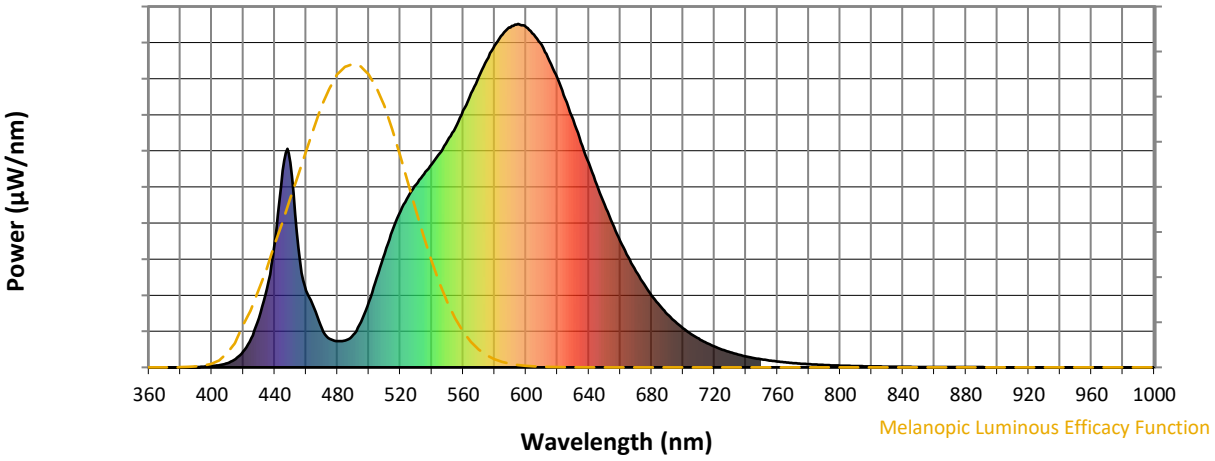


Scotopic Lumens: NR **S/P: 1.21**

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	95	NR	620	841	NR	750	23	NR	880	1	NR
365	0	NR	495	132	NR	625	781	NR	755	20	NR	885	1	NR
370	0	NR	500	192	NR	630	721	NR	760	17	NR	890	1	NR
375	0	NR	505	261	NR	635	655	NR	765	15	NR	895	0	NR
380	0	NR	510	332	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	399	NR	645	531	NR	775	11	NR	905	0	NR
390	1	NR	520	453	NR	650	474	NR	780	9	NR	910	0	NR
395	2	NR	525	497	NR	655	418	NR	785	8	NR	915	0	NR
400	4	NR	530	532	NR	660	367	NR	790	7	NR	920	0	NR
405	7	NR	535	563	NR	665	322	NR	795	6	NR	925	0	NR
410	12	NR	540	592	NR	670	280	NR	800	5	NR	930	0	NR
415	24	NR	545	624	NR	675	243	NR	805	4	NR	935	0	NR
420	47	NR	550	659	NR	680	209	NR	810	4	NR	940	0	NR
425	85	NR	555	698	NR	685	181	NR	815	3	NR	945	0	NR
430	144	NR	560	748	NR	690	155	NR	820	3	NR	950	0	NR
435	229	NR	565	798	NR	695	133	NR	825	2	NR	955	0	NR
440	361	NR	570	846	NR	700	114	NR	830	2	NR	960	0	NR
445	573	NR	575	895	NR	705	97	NR	835	2	NR	965	0	NR
450	596	NR	580	936	NR	710	83	NR	840	2	NR	970	0	NR
455	350	NR	585	969	NR	715	71	NR	845	1	NR	975	0	NR
460	224	NR	590	990	NR	720	61	NR	850	1	NR	980	0	NR
465	173	NR	595	1000	NR	725	52	NR	855	1	NR	985	0	NR
470	113	NR	600	990	NR	730	44	NR	860	1	NR	990	0	NR
475	83	NR	605	969	NR	735	38	NR	865	1	NR	995	0	NR
480	77	NR	610	939	NR	740	32	NR	870	1	NR	1000	0	NR
485	78	NR	615	892	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP3-2602-694-3

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.16**

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	95	NR	620	841	NR	750	23	NR	880	1	NR
365	0	NR	495	132	NR	625	781	NR	755	20	NR	885	1	NR
370	0	NR	500	192	NR	630	721	NR	760	17	NR	890	1	NR
375	0	NR	505	261	NR	635	655	NR	765	15	NR	895	0	NR
380	0	NR	510	332	NR	640	595	NR	770	13	NR	900	0	NR
385	0	NR	515	399	NR	645	531	NR	775	11	NR	905	0	NR
390	1	NR	520	453	NR	650	474	NR	780	9	NR	910	0	NR
395	2	NR	525	497	NR	655	418	NR	785	8	NR	915	0	NR
400	4	NR	530	532	NR	660	367	NR	790	7	NR	920	0	NR
405	7	NR	535	563	NR	665	322	NR	795	6	NR	925	0	NR
410	12	NR	540	592	NR	670	280	NR	800	5	NR	930	0	NR
415	24	NR	545	624	NR	675	243	NR	805	4	NR	935	0	NR
420	47	NR	550	659	NR	680	209	NR	810	4	NR	940	0	NR
425	85	NR	555	698	NR	685	181	NR	815	3	NR	945	0	NR
430	144	NR	560	748	NR	690	155	NR	820	3	NR	950	0	NR
435	229	NR	565	798	NR	695	133	NR	825	2	NR	955	0	NR
440	361	NR	570	846	NR	700	114	NR	830	2	NR	960	0	NR
445	573	NR	575	895	NR	705	97	NR	835	2	NR	965	0	NR
450	596	NR	580	936	NR	710	83	NR	840	2	NR	970	0	NR
455	350	NR	585	969	NR	715	71	NR	845	1	NR	975	0	NR
460	224	NR	590	990	NR	720	61	NR	850	1	NR	980	0	NR
465	173	NR	595	1000	NR	725	52	NR	855	1	NR	985	0	NR
470	113	NR	600	990	NR	730	44	NR	860	1	NR	990	0	NR
475	83	NR	605	969	NR	735	38	NR	865	1	NR	995	0	NR
480	77	NR	610	939	NR	740	32	NR	870	1	NR	1000	0	NR
485	78	NR	615	892	NR	745	27	NR	875	1	NR			

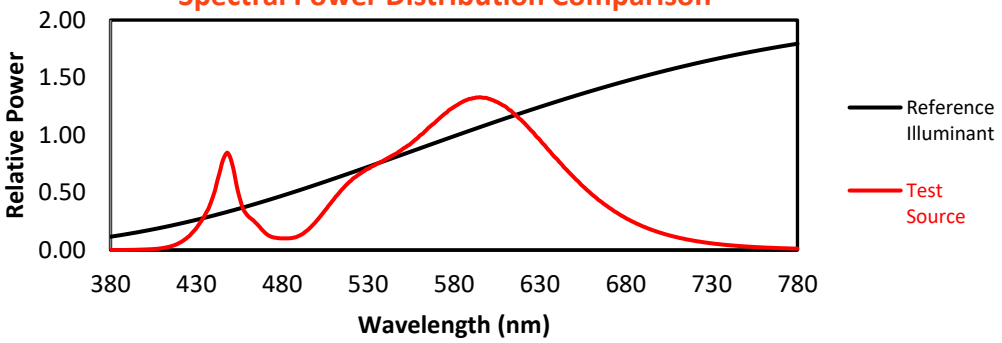
REPORT NUMBER: SP3-2602-694-3

TM-30-18

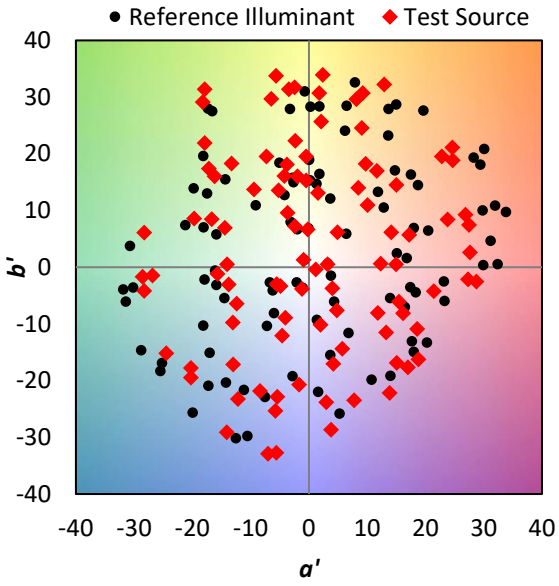
Summary

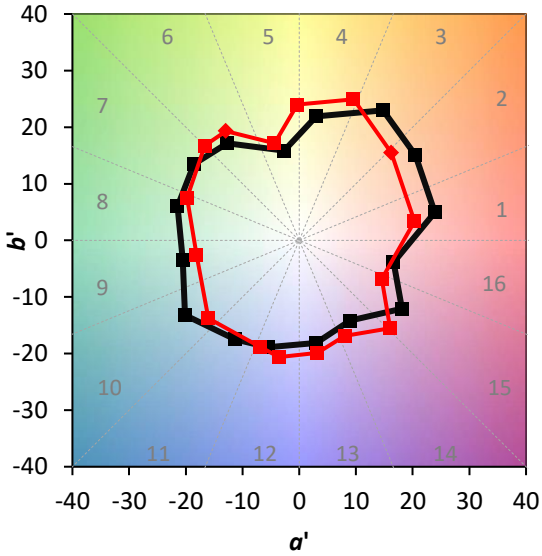
R_f = 75
R_g = 95.5
CIE R_a = 72.2
R_9 = -29.3

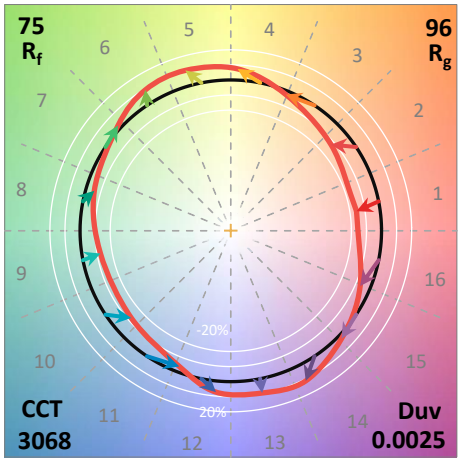
Spectral Power Distribution Comparison

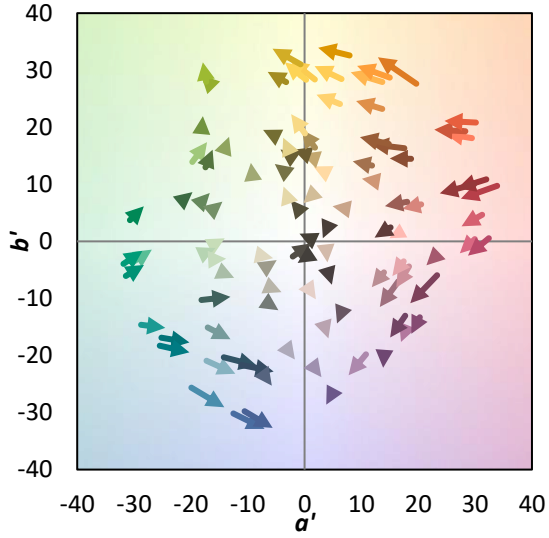


Color Vector Graphics







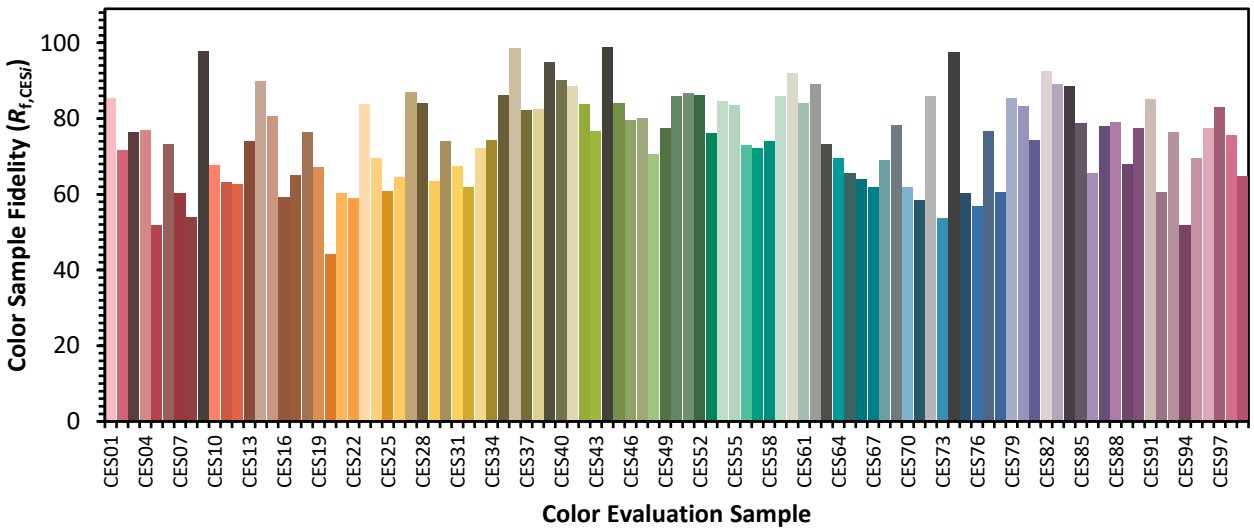


REPORT NUMBER: SP3-2602-694-3

TM-30-18

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

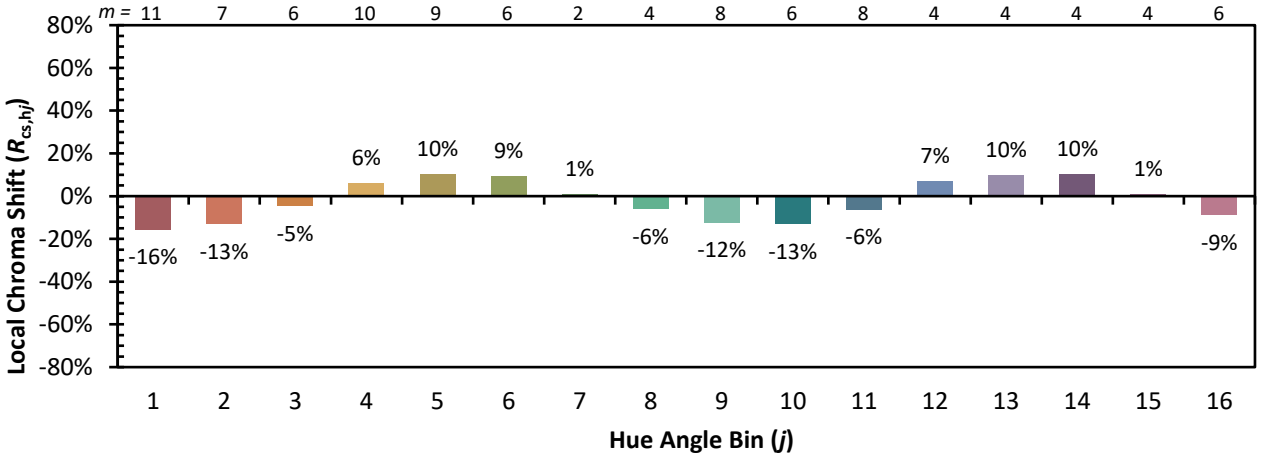
CES01 = 86	CES26 = 64	CES51 = 87	CES76 = 57
CES02 = 62	CES27 = 87	CES52 = 86	CES77 = 77
CES03 = 31	CES28 = 84	CES53 = 76	CES78 = 60
CES04 = 71	CES29 = 63	CES54 = 84	CES79 = 85
CES05 = 49	CES30 = 74	CES55 = 83	CES80 = 83
CES06 = 51	CES31 = 68	CES56 = 73	CES81 = 74
CES07 = 41	CES32 = 62	CES57 = 72	CES82 = 93
CES08 = 40	CES33 = 72	CES58 = 74	CES83 = 89
CES09 = 29	CES34 = 74	CES59 = 86	CES84 = 89
CES10 = 76	CES35 = 86	CES60 = 92	CES85 = 79
CES11 = 59	CES36 = 99	CES61 = 84	CES86 = 66
CES12 = 65	CES37 = 82	CES62 = 89	CES87 = 78
CES13 = 43	CES38 = 83	CES63 = 73	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 69	CES89 = 68
CES15 = 71	CES40 = 90	CES65 = 66	CES90 = 77
CES16 = 47	CES41 = 88	CES66 = 64	CES91 = 85
CES17 = 50	CES42 = 84	CES67 = 62	CES92 = 61
CES18 = 56	CES43 = 77	CES68 = 69	CES93 = 76
CES19 = 72	CES44 = 99	CES69 = 78	CES94 = 52
CES20 = 66	CES45 = 84	CES70 = 62	CES95 = 69
CES21 = 87	CES46 = 80	CES71 = 58	CES96 = 78
CES22 = 79	CES47 = 80	CES72 = 86	CES97 = 83
CES23 = 92	CES48 = 71	CES73 = 54	CES98 = 76
CES24 = 91	CES49 = 78	CES74 = 97	CES99 = 65
CES25 = 73	CES50 = 86	CES75 = 60	

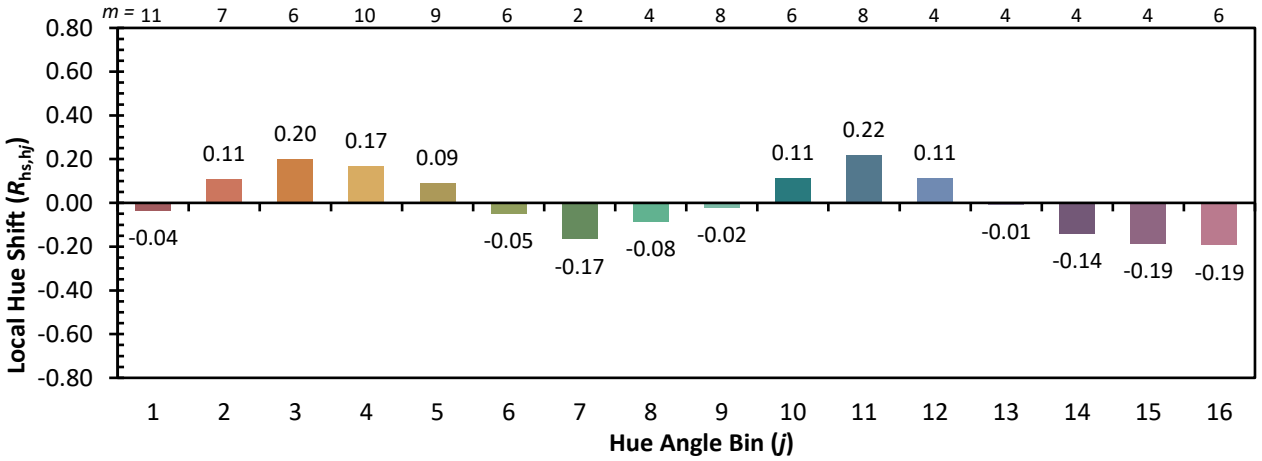


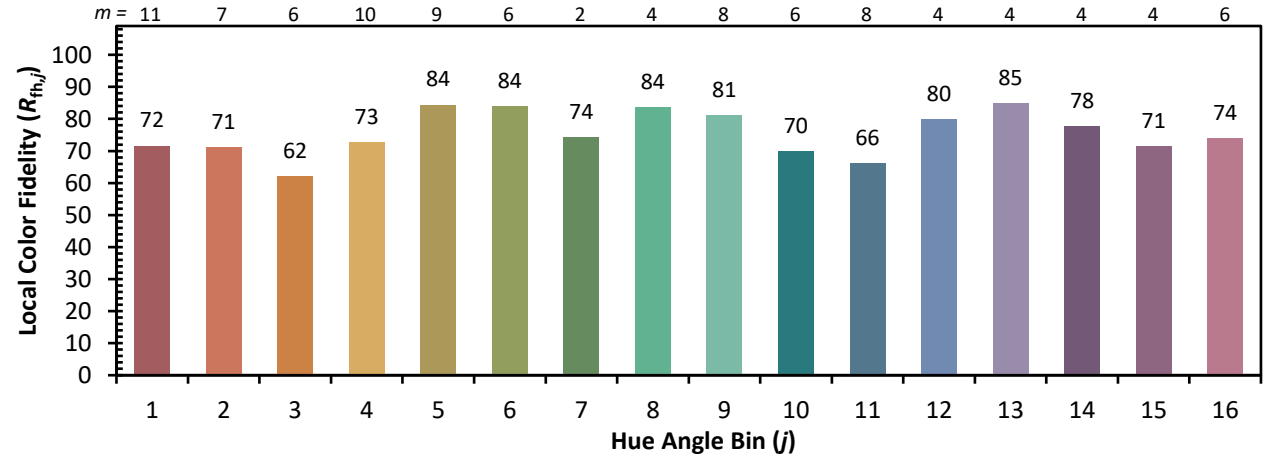
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Color Rendition by Hue-Angle Bin



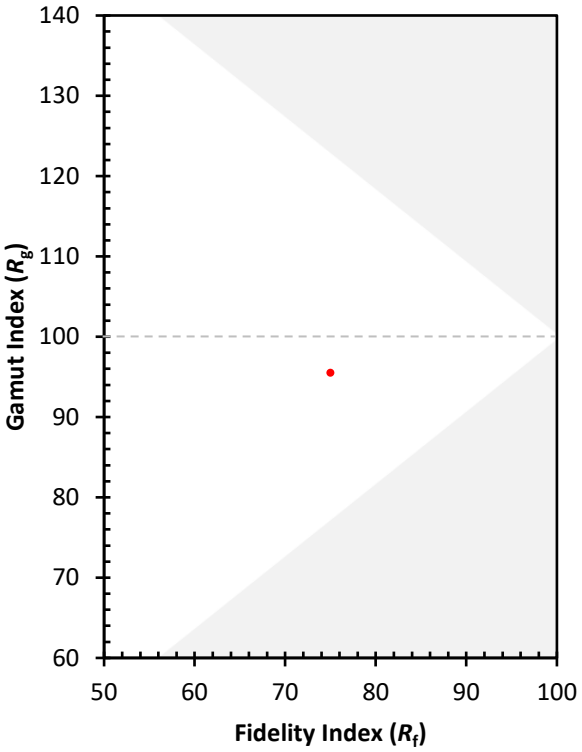


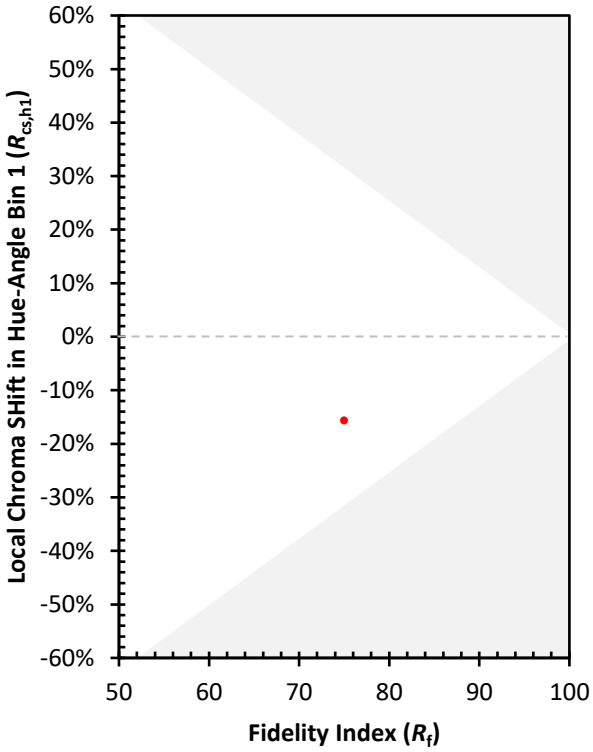


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Measure Comparisons





(END OF REPORT)