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: McGRAW-EDISON

Report Number: P438283

Luminaire Tested: **ISW-SA1B-830-U-SLR**

Issue Date: 12/10/2020

Report Generated By 670245982

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P438283
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-22)
Test Lab:	INNOVATION CENTER
Issue Date:	12/10/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	ISW-SA1B-830-U-SLR
Description:	IMPACT ELITE LED WEDGE LUMINAIRE
	(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	2450 lumens
Efficiency:	N/A
Efficacy:	96.5 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U0 - G1

Input Watts (W):	25.4
Input Voltage (V):	NR
Input Current (Ain):	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:	28.75 FT

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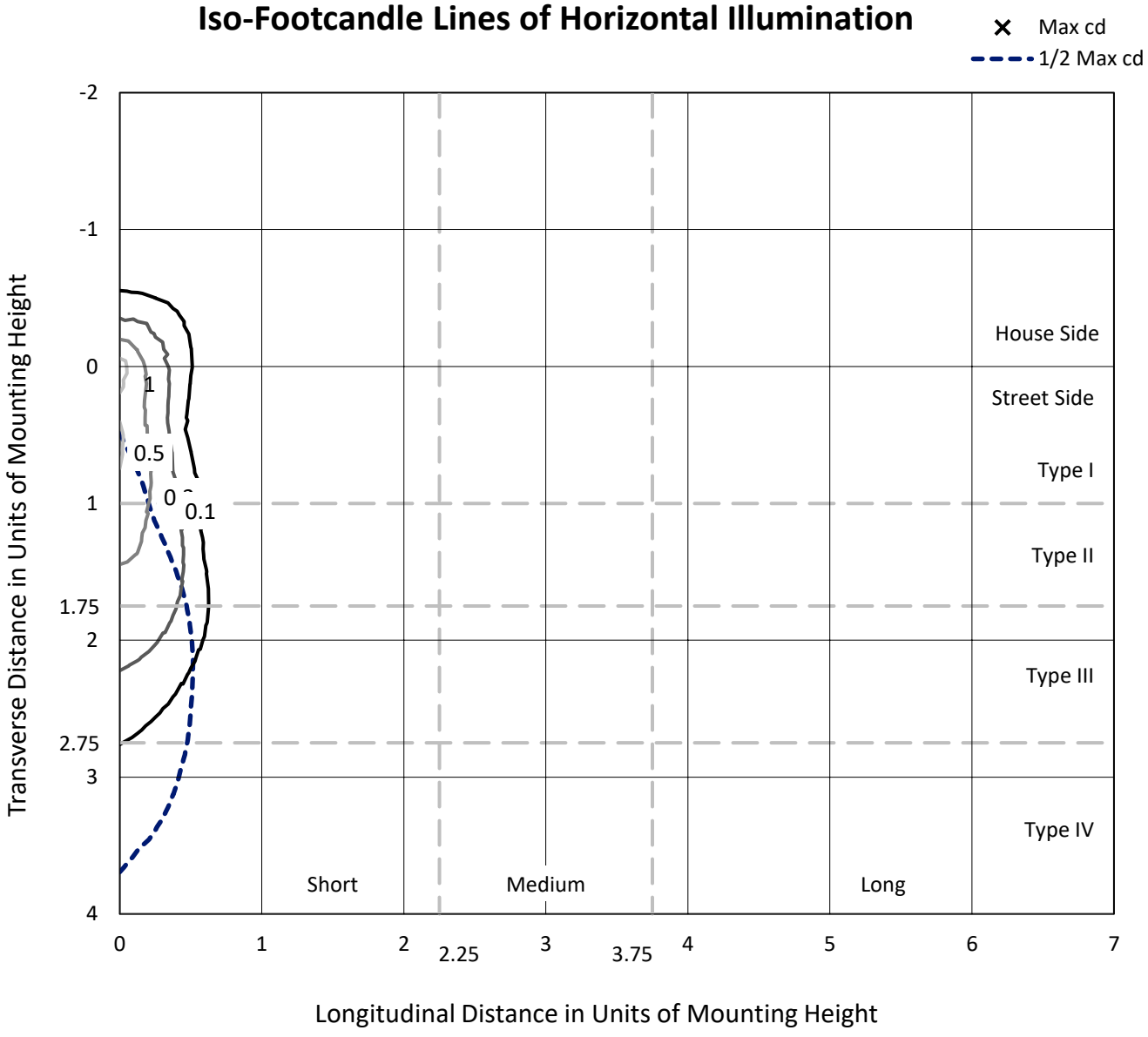
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
Type IV - Short - N/A

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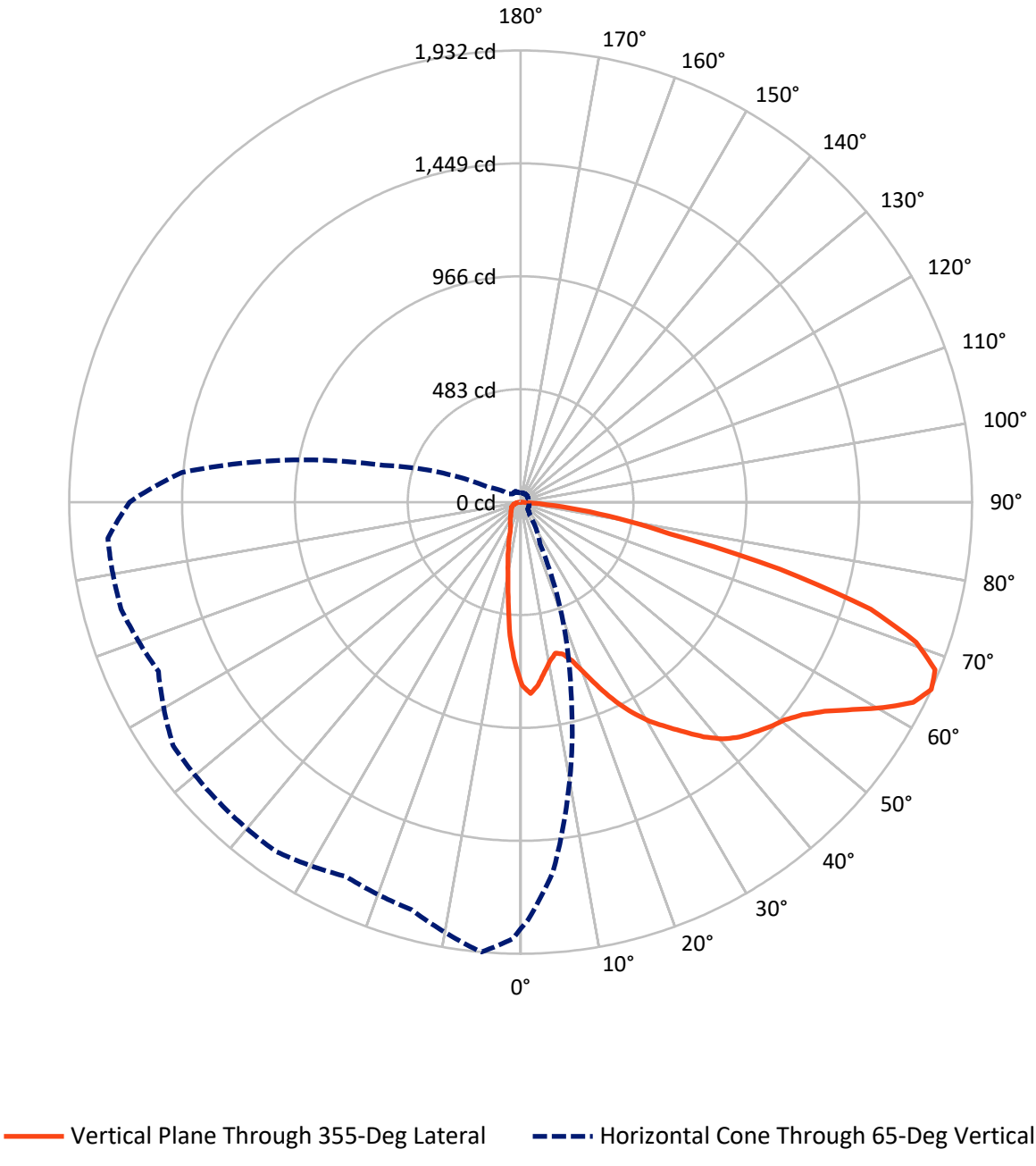
Luminous Intensity Polar Plot



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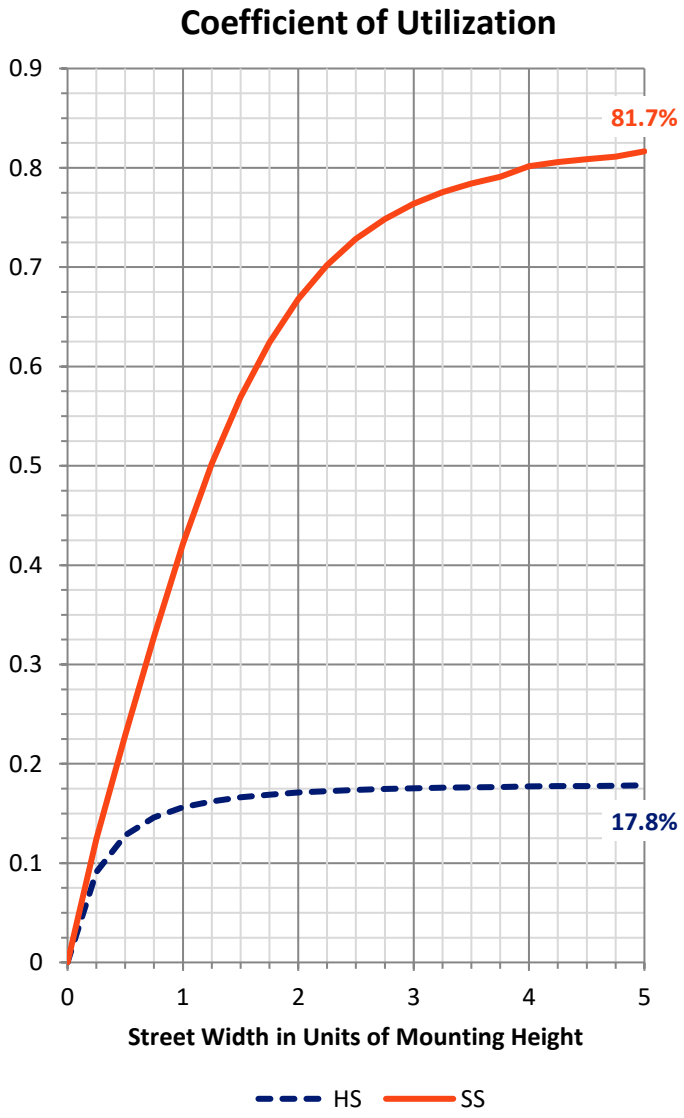
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	441.7	0.0	441.7
	% Fixture	18.0	0.0	18.0
Street Side	Lumens	2008.3	0.0	2008.3
	% Fixture	82.0	0.0	82.0
Total	Lumens	2450.0	0.0	2450.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	2.4
10°-20°	122.2	5.0
20°-30°	174.2	7.1
30°-40°	249.0	10.2
40°-50°	347.7	14.2
50°-60°	483.6	19.7
60°-70°	589.1	24.0
70°-80°	362.8	14.8
80°-90°	62.3	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°	2450.0	100.0
0°-180°	2450.0	100.0



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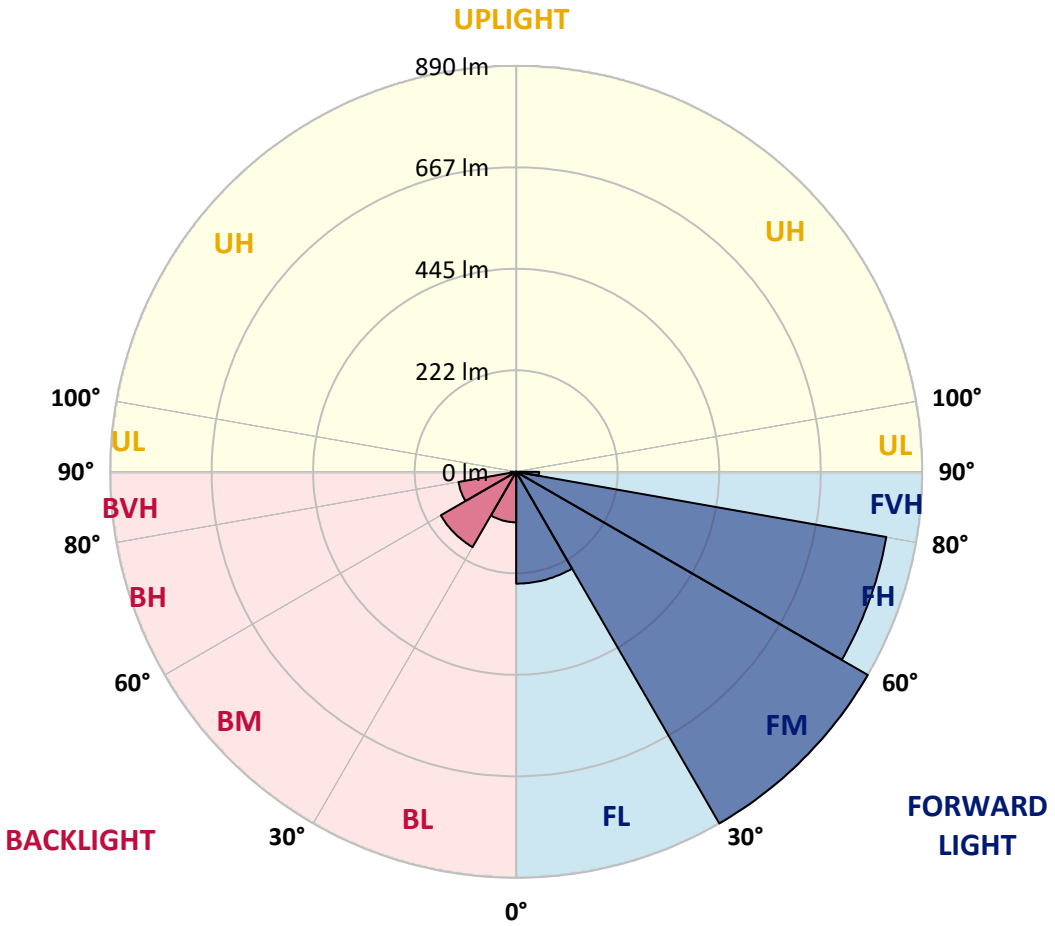
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	245.0	10.0			
FM	(30°-60°)	889.6	36.3			
FH	(60°-80°)	823.6	33.6			G1/1800
FVH	(80°-90°)	50.1	2.0			G1/100
BL	(0°-30°)	110.6	4.5	B1/500		
BM	(30°-60°)	190.6	7.8	B0/220		
BH	(60°-80°)	128.3	5.2	B1/500		G1/500
BVH	(80°-90°)	12.2	0.5			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 IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9
2.5°	803.8	803.8	793.8	769.0	746.2	722.4	714.5	692.6	678.7	665.8	670.8
5°	757.1	754.1	736.3	684.7	645.0	606.3	582.5	546.8	542.8	511.0	509.0
7.5°	694.6	692.6	665.8	607.3	561.6	501.1	465.4	434.6	407.8	389.0	383.0
10°	651.9	645.0	612.2	540.8	474.3	430.7	410.8	384.0	361.2	337.4	317.5
12.5°	624.2	616.2	583.5	505.1	440.6	410.8	383.0	351.3	320.5	292.7	272.9
15°	629.1	616.2	579.5	496.1	428.7	386.0	347.3	309.6	273.9	243.1	218.3
17.5°	664.8	649.0	608.3	502.1	409.8	353.3	300.7	257.0	213.3	181.6	161.7
20°	727.3	704.5	652.9	519.0	395.9	322.5	253.0	195.5	149.8	128.0	122.1
22.5°	803.8	783.9	713.5	532.9	381.0	287.8	200.4	140.9	118.1	107.2	104.2
25°	883.1	861.3	782.9	555.7	369.1	256.0	157.8	112.1	101.2	96.3	94.3
27.5°	964.5	942.7	851.4	592.4	355.2	222.3	127.0	98.2	90.3	86.3	86.3
30°	1022.1	1004.2	912.9	625.1	339.4	195.5	112.1	91.3	84.3	80.4	79.4
32.5°	1086.6	1061.8	970.5	647.0	327.5	174.6	102.2	85.3	79.4	74.4	74.4
35°	1159.0	1131.2	1024.0	668.8	315.5	164.7	95.3	81.4	75.4	70.5	69.5
37.5°	1238.4	1202.7	1078.6	687.7	302.6	159.8	91.3	77.4	71.4	67.5	65.5
40°	1325.7	1288.0	1151.1	703.5	293.7	153.8	88.3	74.4	68.5	63.5	62.5
42.5°	1399.1	1365.4	1201.7	713.5	289.7	145.9	87.3	71.4	66.5	60.5	58.5
45°	1436.8	1408.1	1263.2	716.4	287.8	140.9	82.4	71.4	64.5	58.5	55.6
47.5°	1469.6	1448.7	1307.8	731.3	282.8	135.9	76.4	75.4	63.5	55.6	52.6
50°	1525.2	1503.3	1377.3	759.1	276.8	130.0	70.5	72.4	63.5	53.6	50.6
52.5°	1591.6	1585.7	1468.6	802.8	267.9	122.1	64.5	68.5	63.5	52.6	48.6
55°	1688.9	1680.0	1589.7	859.3	257.0	111.1	58.5	62.5	62.5	49.6	45.6
57.5°	1771.2	1772.2	1700.8	899.0	247.1	93.3	54.6	53.6	59.5	46.6	42.7
60°	1808.9	1808.9	1736.5	913.9	234.2	78.4	51.6	47.6	61.5	43.7	39.7
62.5°	1832.8	1812.9	1686.9	900.0	219.3	70.5	46.6	43.7	49.6	40.7	36.7
65°	*1825.8*	*1788.1*	*1587.7*	*829.6*	*197.5*	*68.5*	*43.7*	*39.7*	*39.7*	*37.7*	*34.7*
67.5°	1763.3	1704.8	1441.8	710.5	174.6	67.5	39.7	36.7	35.7	33.7	31.8
70°	1593.6	1551.9	1268.1	579.5	159.8	67.5	36.7	32.7	31.8	29.8	28.8
72.5°	1302.9	1241.4	1012.1	434.6	147.9	67.5	33.7	28.8	27.8	26.8	25.8
75°	890.1	819.6	711.5	266.9	116.1	58.5	29.8	23.8	23.8	22.8	21.8
77.5°	491.2	475.3	400.9	140.9	72.4	35.7	22.8	18.9	19.8	18.9	17.9
80°	284.8	267.9	238.2	68.5	41.7	20.8	13.9	13.9	14.9	14.9	13.9
82.5°	137.9	120.1	123.0	27.8	14.9	8.9	6.0	6.9	7.9	9.9	9.9
85°	5.0	5.0	9.9	2.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9
2.5°	654.9	654.9	658.9	675.8	661.9	659.9	663.8	670.8	673.8	687.7	686.7
5°	505.1	502.1	514.0	529.9	538.8	543.8	551.7	569.6	562.6	573.5	571.6
7.5°	373.1	378.1	373.1	391.0	404.9	425.7	441.6	437.6	438.6	429.7	442.6
10°	304.6	302.6	290.7	296.7	304.6	317.5	328.4	330.4	340.4	324.5	335.4
12.5°	260.0	252.0	240.1	234.2	232.2	242.1	245.1	250.1	256.0	261.0	263.0
15°	208.4	202.4	194.5	185.6	183.6	183.6	190.5	197.5	205.4	207.4	214.3
17.5°	155.8	152.8	149.8	149.8	149.8	149.8	155.8	158.8	162.7	168.7	167.7
20°	118.1	118.1	119.1	124.0	127.0	129.0	133.0	134.0	133.0	134.0	134.0
22.5°	104.2	103.2	106.2	108.2	113.1	118.1	120.1	119.1	116.1	114.1	116.1
25°	94.3	95.3	96.3	99.2	103.2	108.2	109.2	108.2	105.2	105.2	105.2
27.5°	86.3	87.3	89.3	92.3	96.3	100.2	101.2	99.2	96.3	97.2	96.3
30°	80.4	82.4	83.4	86.3	89.3	93.3	93.3	91.3	89.3	89.3	89.3
32.5°	73.4	75.4	77.4	80.4	84.3	86.3	86.3	85.3	83.4	82.4	82.4
35°	69.5	69.5	71.4	75.4	77.4	79.4	80.4	79.4	77.4	75.4	74.4
37.5°	65.5	65.5	66.5	68.5	72.4	74.4	75.4	73.4	71.4	69.5	69.5
40°	61.5	61.5	62.5	63.5	67.5	70.5	70.5	67.5	65.5	66.5	65.5
42.5°	58.5	58.5	59.5	59.5	61.5	66.5	65.5	63.5	62.5	62.5	61.5
45°	55.6	54.6	55.6	55.6	56.6	61.5	61.5	58.5	58.5	59.5	58.5
47.5°	52.6	51.6	52.6	52.6	53.6	56.6	56.6	55.6	55.6	55.6	56.6
50°	49.6	49.6	49.6	49.6	50.6	51.6	53.6	52.6	52.6	52.6	53.6
52.5°	46.6	46.6	46.6	47.6	47.6	49.6	50.6	49.6	50.6	50.6	50.6
55°	44.7	43.7	43.7	45.6	45.6	47.6	48.6	47.6	48.6	48.6	48.6
57.5°	41.7	41.7	41.7	42.7	43.7	45.6	47.6	45.6	46.6	46.6	47.6
60°	38.7	38.7	38.7	40.7	41.7	43.7	44.7	43.7	44.7	44.7	44.7
62.5°	35.7	36.7	36.7	37.7	38.7	41.7	42.7	41.7	42.7	42.7	42.7
65°	*33.7*	*33.7*	*34.7*	*35.7*	*36.7*	*38.7*	*39.7*	*39.7*	*39.7*	*40.7*	*39.7*
67.5°	30.8	30.8	31.8	32.7	33.7	36.7	36.7	36.7	37.7	36.7	36.7
70°	27.8	27.8	28.8	29.8	30.8	33.7	33.7	33.7	34.7	32.7	32.7
72.5°	24.8	24.8	25.8	26.8	28.8	31.8	30.8	30.8	30.8	29.8	29.8
75°	21.8	21.8	22.8	23.8	24.8	28.8	27.8	26.8	26.8	25.8	25.8
77.5°	17.9	17.9	18.9	20.8	21.8	24.8	23.8	22.8	21.8	21.8	21.8
80°	13.9	14.9	15.9	16.9	17.9	19.8	18.9	17.9	16.9	16.9	16.9
82.5°	9.9	10.9	11.9	12.9	13.9	13.9	13.9	13.9	12.9	11.9	11.9
85°	4.0	6.0	7.9	7.9	8.9	7.9	8.9	7.9	6.9	6.9	6.0
87.5°	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.0	3.0	3.0	3.0
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°	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9	783.9
2.5°	694.6	710.5	719.4	735.3	752.2	775.0	793.8	820.6	844.4	849.4	855.4
5°	575.5	596.4	606.3	632.1	671.8	696.6	736.3	778.0	829.6	845.4	866.3
7.5°	432.6	448.5	474.3	497.1	543.8	585.5	639.0	699.6	760.1	794.8	828.6
10°	329.4	349.3	377.1	403.9	449.5	491.2	554.7	622.2	699.6	731.3	767.0
12.5°	273.9	289.7	317.5	354.2	396.9	436.6	484.2	557.7	639.0	679.7	723.4
15°	221.3	238.2	272.9	313.6	355.2	399.9	445.5	516.0	615.2	656.9	698.6
17.5°	176.6	191.5	221.3	264.9	310.6	360.2	415.8	505.1	620.2	671.8	720.4
20°	136.9	149.8	172.7	212.4	259.0	317.5	389.0	501.1	650.0	722.4	771.0
22.5°	118.1	123.0	135.9	163.7	211.4	279.8	364.2	504.1	697.6	790.9	846.4
25°	105.2	109.2	114.1	131.0	168.7	241.1	342.3	510.0	748.2	868.3	931.8
27.5°	97.2	99.2	102.2	110.1	137.9	209.4	320.5	518.0	816.7	946.6	1008.2
30°	89.3	89.3	92.3	100.2	121.1	186.6	304.6	533.9	884.1	1014.1	1074.7
32.5°	81.4	81.4	86.3	93.3	110.1	167.7	288.8	538.8	934.7	1073.7	1122.3
35°	74.4	76.4	80.4	88.3	103.2	153.8	273.9	529.9	971.5	1124.3	1173.9
37.5°	70.5	71.4	76.4	83.4	94.3	140.9	259.0	518.0	1021.1	1191.7	1230.4
40°	65.5	67.5	72.4	79.4	88.3	131.0	242.1	505.1	1064.7	1267.2	1287.0
42.5°	62.5	64.5	68.5	75.4	84.3	119.1	226.2	495.2	1111.4	1331.7	1345.5
45°	59.5	61.5	66.5	72.4	84.3	110.1	210.4	488.2	1157.0	1381.3	1392.2
47.5°	56.6	58.5	63.5	71.4	83.4	105.2	199.5	481.3	1185.8	1423.9	1426.9
50°	54.6	56.6	62.5	73.4	80.4	103.2	194.5	488.2	1234.4	1457.7	1448.7
52.5°	51.6	54.6	61.5	76.4	76.4	101.2	190.5	513.0	1294.9	1507.3	1484.5
55°	50.6	52.6	59.5	73.4	69.5	96.3	190.5	531.9	1375.3	1605.5	1567.8
57.5°	47.6	49.6	57.6	68.5	63.5	88.3	188.5	562.6	1489.4	1713.7	1680.0
60°	44.7	47.6	55.6	61.5	57.6	78.4	179.6	596.4	1567.8	1772.2	1778.2
62.5°	42.7	45.6	55.6	53.6	52.6	68.5	165.7	617.2	1559.9	1753.4	1809.9
65°	*39.7*	*42.7*	*50.6*	*48.6*	*49.6*	*61.5*	*147.9*	*607.3*	*1455.7*	*1674.0*	*1773.2*
67.5°	36.7	39.7	43.7	43.7	45.6	59.5	129.0	549.7	1342.6	1577.7	1691.9
70°	33.7	35.7	37.7	39.7	41.7	58.5	114.1	471.3	1212.6	1485.5	1575.8
72.5°	29.8	30.8	32.7	34.7	38.7	55.6	108.2	383.0	1033.0	1286.0	1425.9
75°	25.8	26.8	28.8	30.8	33.7	52.6	99.2	290.7	851.4	1016.1	1152.1
77.5°	21.8	22.8	24.8	25.8	28.8	46.6	85.3	210.4	662.9	732.3	842.5
80°	16.9	17.9	19.8	19.8	23.8	34.7	66.5	146.9	465.4	519.0	576.5
82.5°	11.9	12.9	13.9	14.9	17.9	23.8	43.7	88.3	315.5	356.2	346.3
85°	6.9	7.9	7.9	9.9	10.9	15.9	24.8	45.6	206.4	162.7	160.8
87.5°	3.0	3.0	3.0	4.0	4.0	6.0	7.9	8.9	19.8	6.9	5.0
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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Scaled Data Report

REPORT NUMBER: P438283
CATALOG NUMBER: ISW-SA1B-830-U-SLR

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	783.9	783.9	783.9	783.9	783.9	783.9	783.9	*783.9*	783.9	783.9
2.5°	864.3	871.2	876.2	874.2	871.2	854.4	837.5	*819.6*	803.8	803.8
5°	900.0	928.8	940.7	930.8	908.9	874.2	830.5	*784.9*	763.1	757.1
7.5°	881.2	935.7	964.5	951.6	922.8	859.3	792.8	*733.3*	700.6	694.6
10°	843.4	914.9	947.6	943.7	911.9	838.5	758.1	*690.6*	655.9	651.9
12.5°	799.8	869.2	910.9	912.9	892.1	827.6	743.2	*662.9*	632.1	624.2
15°	773.0	833.5	862.3	855.4	861.3	818.6	749.2	*673.8*	636.1	629.1
17.5°	774.0	799.8	806.7	795.8	818.6	816.7	782.9	*713.5*	671.8	664.8
20°	799.8	778.0	756.1	754.1	783.9	823.6	836.5	*779.9*	732.3	727.3
22.5°	844.4	772.0	726.4	719.4	757.1	830.5	888.1	*861.3*	816.7	803.8
25°	894.1	778.0	707.5	698.6	732.3	835.5	943.7	*944.7*	895.0	883.1
27.5°	947.6	796.8	707.5	697.6	733.3	843.4	980.4	*1020.1*	974.4	964.5
30°	995.3	823.6	714.5	703.5	745.2	851.4	1005.2	*1087.6*	1036.0	1022.1
32.5°	1024.0	846.4	731.3	711.5	766.0	867.3	1028.0	*1145.1*	1105.4	1086.6
35°	1046.9	873.2	759.1	733.3	796.8	893.1	1046.9	*1207.6*	1169.9	1159.0
37.5°	1063.7	905.0	787.9	763.1	837.5	927.8	1073.7	*1274.1*	1262.2	1238.4
40°	1091.5	924.8	839.5	830.5	907.9	982.4	1105.4	*1331.7*	1339.6	1325.7
42.5°	1116.3	963.5	912.9	922.8	998.2	1042.9	1148.1	*1374.3*	1417.0	1399.1
45°	1136.2	1017.1	1005.2	1037.9	1102.4	1120.3	1171.9	*1404.1*	1448.7	1436.8
47.5°	1164.0	1087.6	1128.2	1170.9	1224.5	1200.7	1196.7	*1435.8*	1481.5	1469.6
50°	1203.7	1169.9	1251.3	1306.8	1341.6	1266.2	1227.5	*1464.6*	1532.1	1525.2
52.5°	1244.3	1265.2	1376.3	1427.9	1450.7	1347.5	1271.1	*1510.3*	1591.6	1591.6
55°	1319.7	1358.4	1509.3	1542.0	1572.8	1421.0	1329.7	*1578.7*	1683.9	1688.9
57.5°	1429.9	1458.7	1610.5	1648.2	1656.1	1503.3	1422.0	*1674.0*	1762.3	1771.2
60°	1544.0	1557.9	1710.7	1744.4	1717.7	1609.5	1530.1	*1785.1*	1813.9	1808.9
62.5°	1670.0	1654.2	1780.2	1804.0	1797.0	1702.8	1666.1	*1886.3*	1851.6	1832.8
65°	*1770.2*	*1710.7*	*1815.9*	*1820.9*	*1824.8*	*1767.3*	*1805.0*	*1932.0*	*1867.5*	*1825.8*
67.5°	1830.8	1719.6	1743.5	1720.6	1736.5	1750.4	1899.2	*1913.1*	1800.0	1763.3
70°	1816.9	1593.6	1486.5	1460.7	1461.6	1558.9	1838.7	*1795.1*	1646.2	1593.6
72.5°	1688.9	1339.6	1183.8	1149.1	1156.0	1165.0	1546.0	*1566.8*	1330.7	1302.9
75°	1422.0	1032.0	852.4	844.4	834.5	873.2	1236.4	*1145.1*	883.1	890.1
77.5°	1160.0	760.1	626.1	585.5	579.5	585.5	843.4	*653.9*	513.0	491.2
80°	836.5	506.1	467.4	458.4	430.7	346.3	441.6	*420.7*	289.7	284.8
82.5°	550.7	349.3	357.2	297.7	279.8	219.3	267.9	*214.3*	144.9	137.9
85°	285.8	181.6	149.8	65.5	73.4	61.5	58.5	*47.6*	5.0	5.0
87.5°	9.9	4.0	3.0	3.0	2.0	1.0	1.0	*0.0*	0.0	0.0
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

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

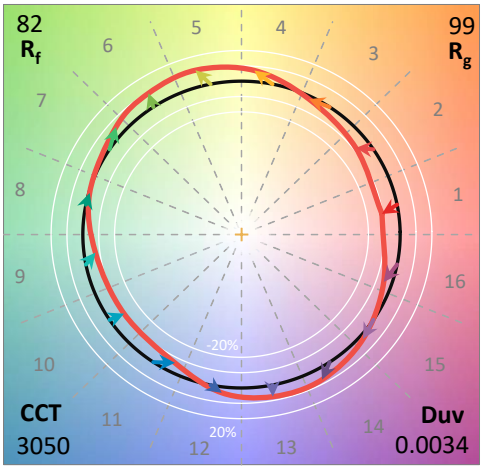
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2408-195-9
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	08/07/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	MCGRAW EDISON
Catalog Number:	**GALN-SB1A-830-U-5WQ**
Description:	GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K):	3050	CRI (Ra):	81.0		
CIE u':	0.2476	R1:	79.6	R9:	7.1
CIE v':	0.5251	R2:	85.6	R10:	67.0
Duv:	0.0034	R3:	92.0	R11:	82.7
CIE x:	0.4383	R4:	82.6	R12:	63.2
CIE y:	0.4131	R5:	78.9	R13:	80.3
CIE z:	0.1487	R6:	81.7	R14:	95.0
Peak Wavelength (nm):	603	R7:	85.2	R15:	71.7
Dominant Wavelength (nm):	581	R8:	62.0		
Purity:	55.55201				
Rf:	81.5				
Rg:	99.2				



Test Conditions

Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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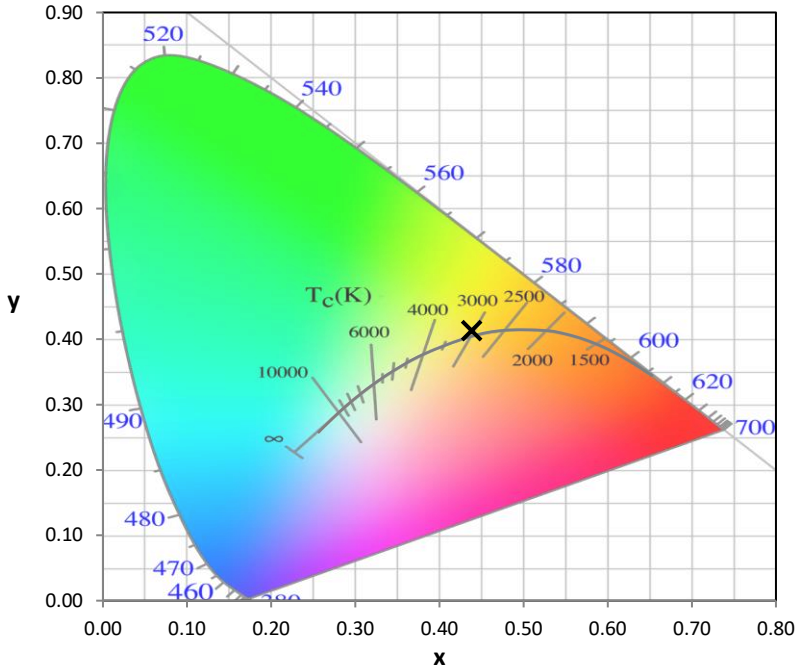
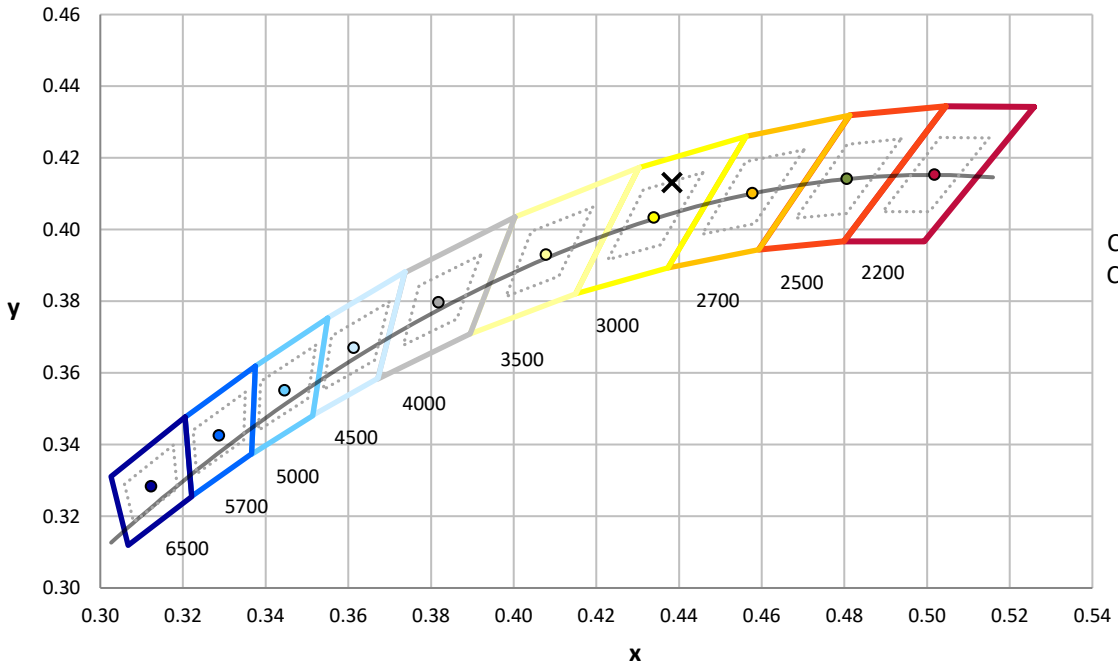
CIE 1931 Chromaticity Diagram



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



CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

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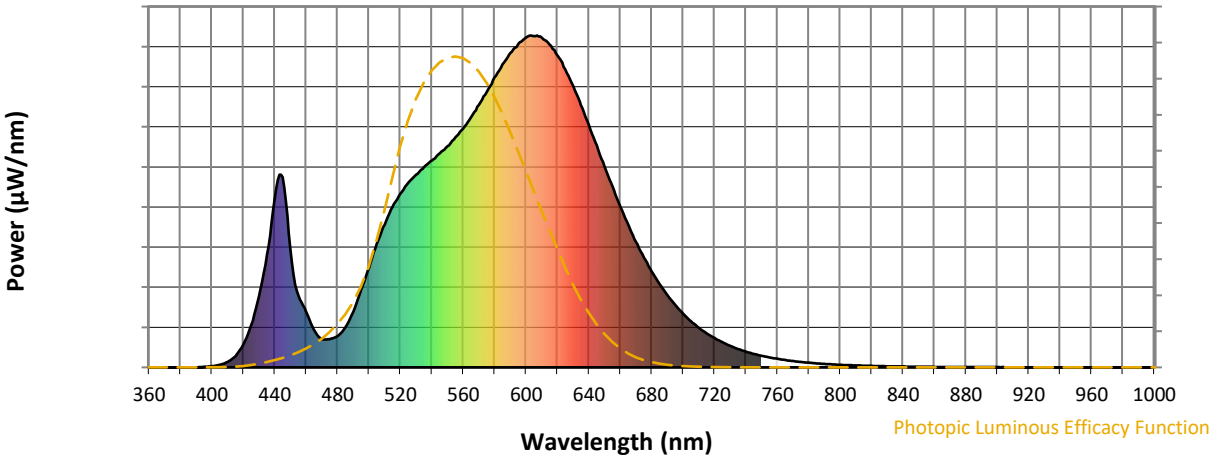
Photopic Flux vs. Wavelength



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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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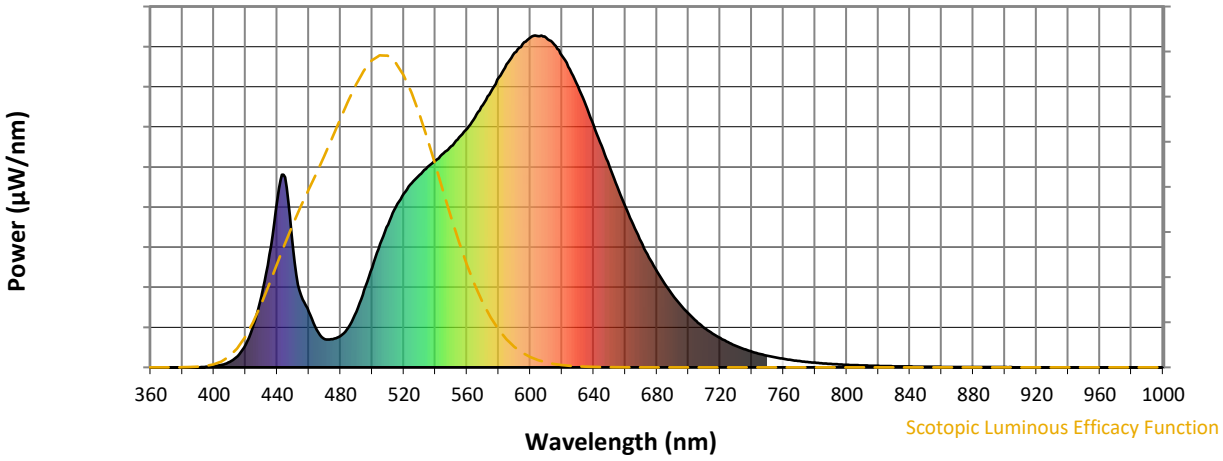
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.27**

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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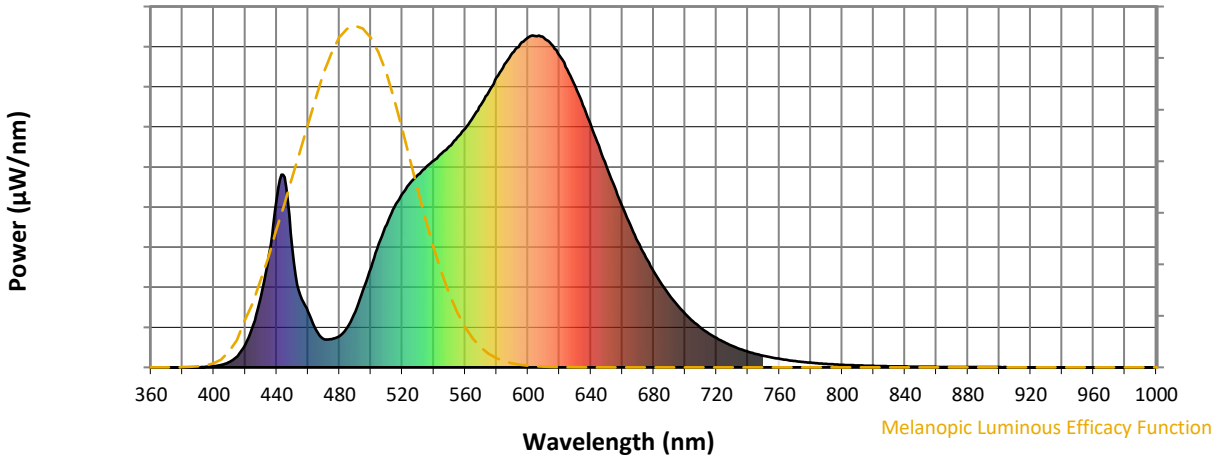
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.32**

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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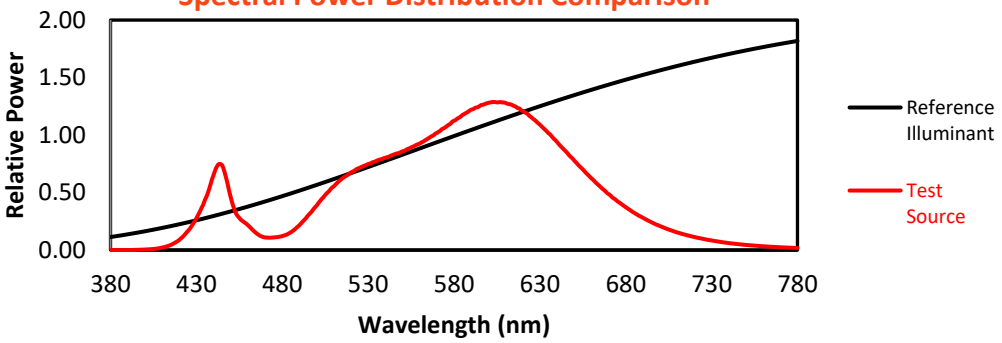
TM-30-18

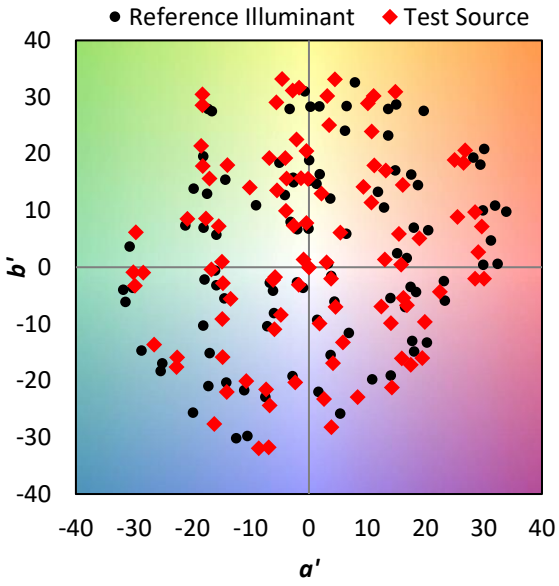
Summary

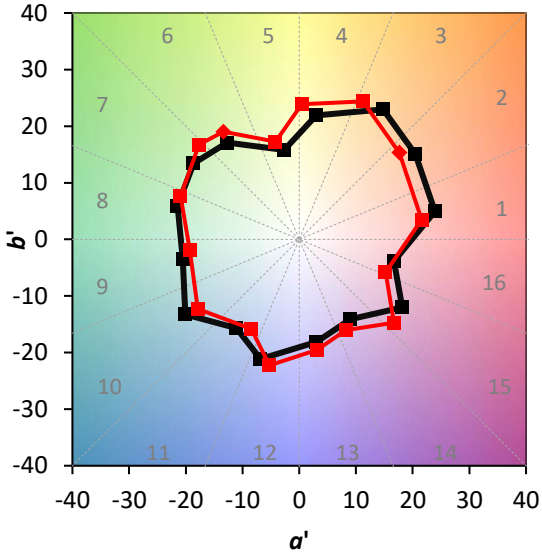
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

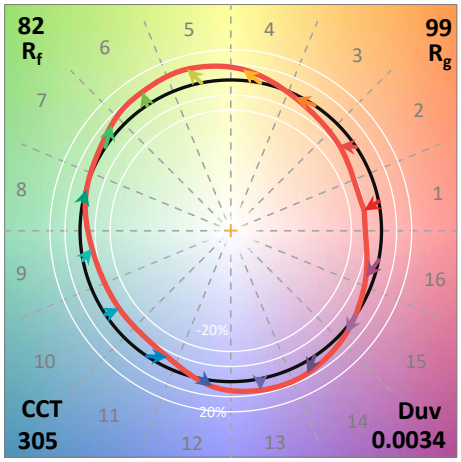
Spectral Power Distribution Comparison

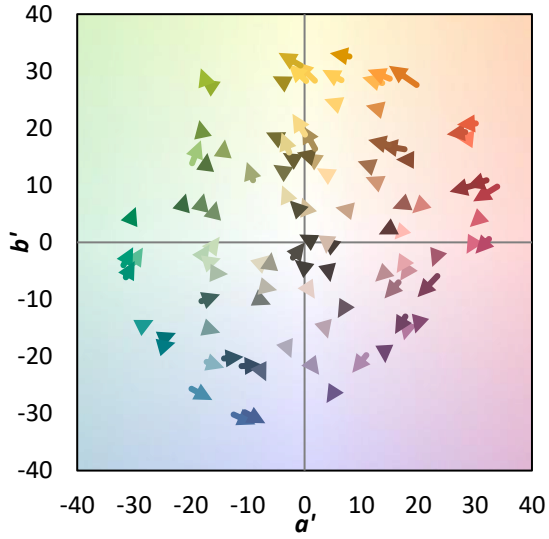


Color Vector Graphics









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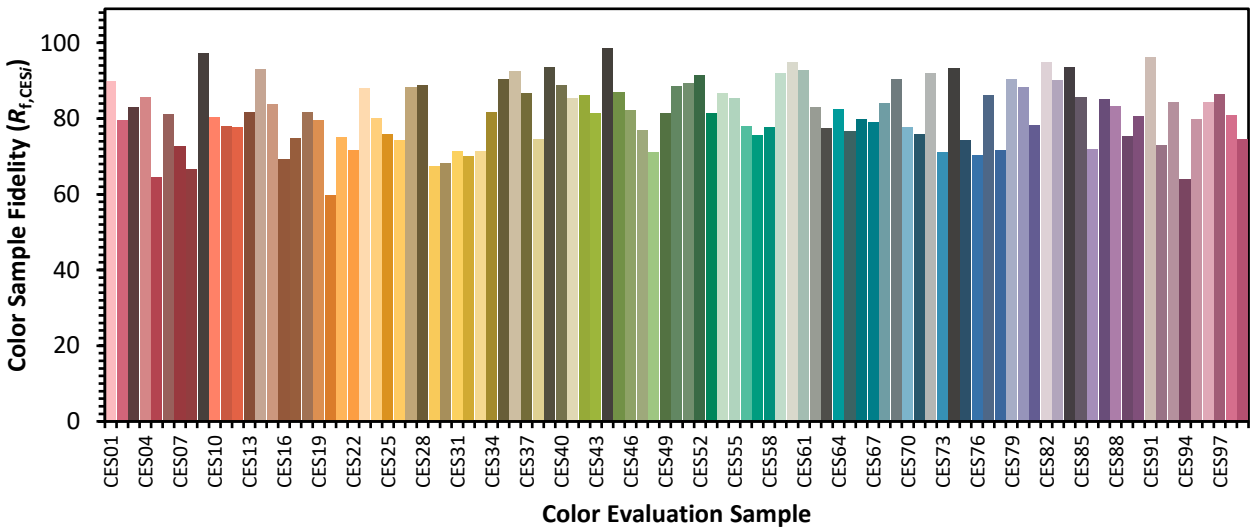
TM-30-18

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

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



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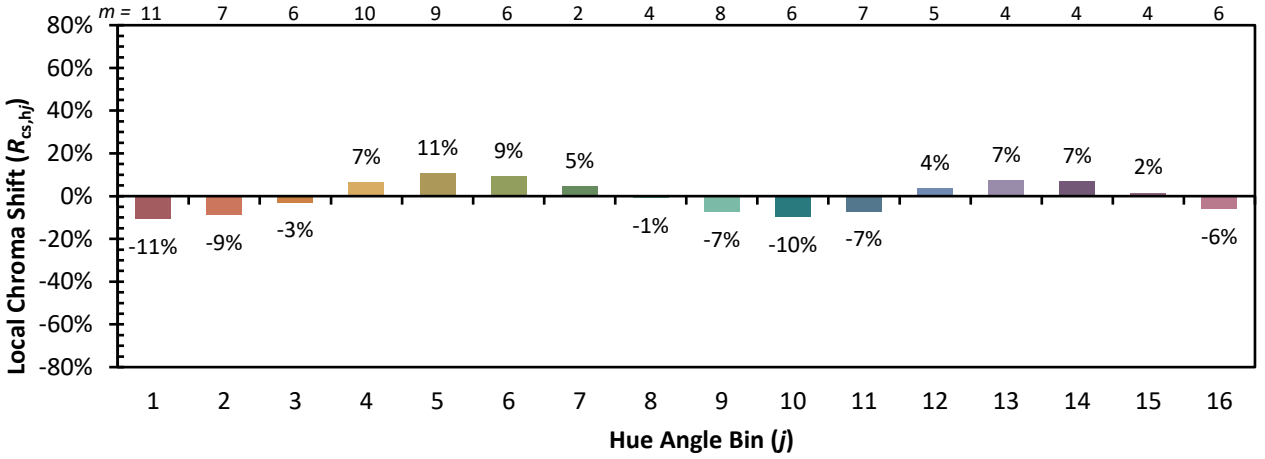
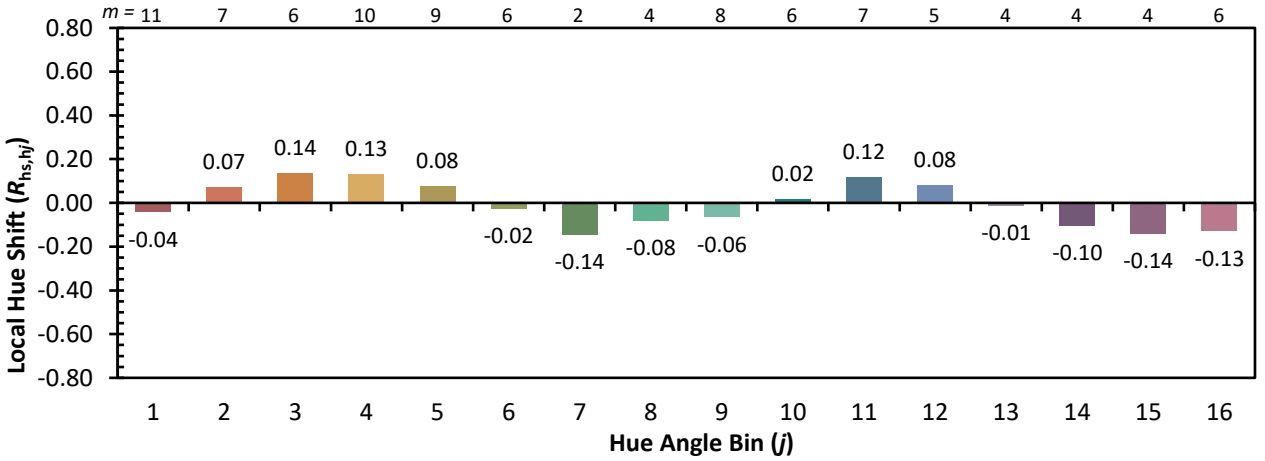
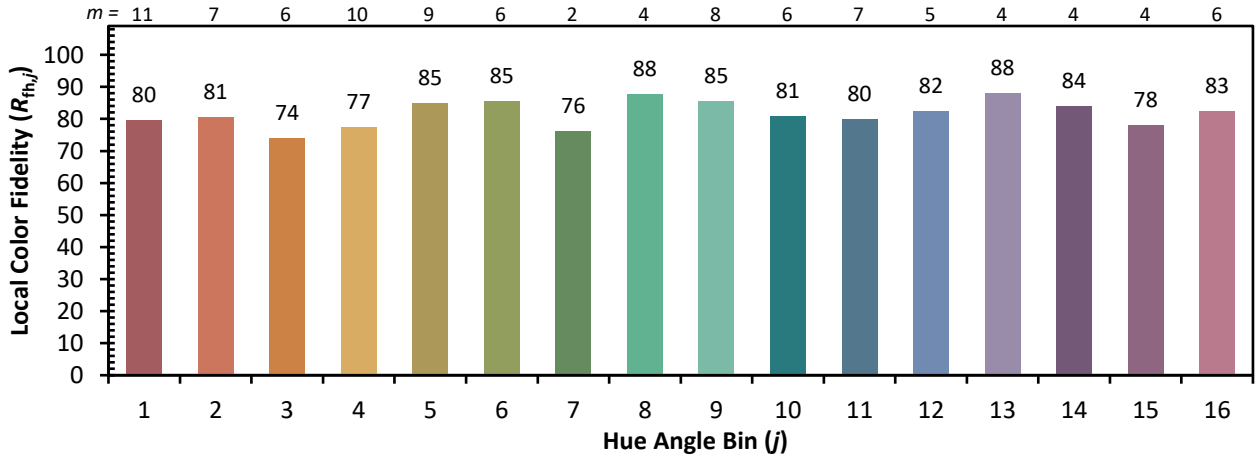
Color Rendition by Hue-Angle Bin







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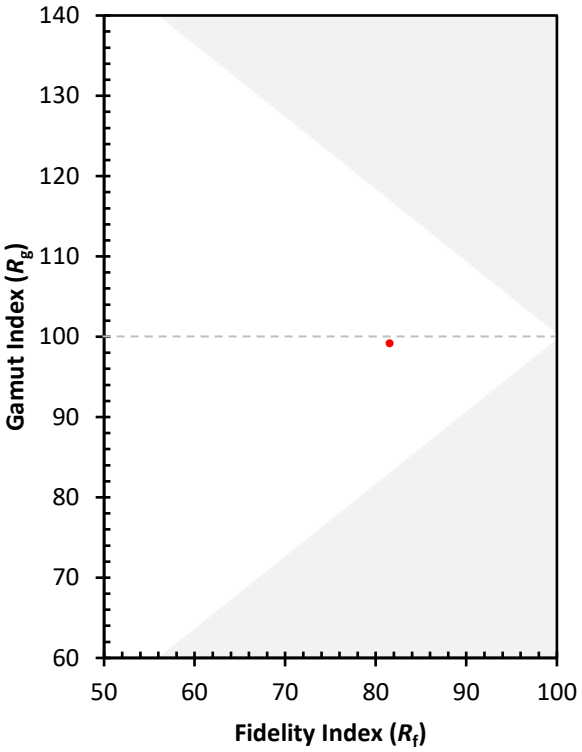
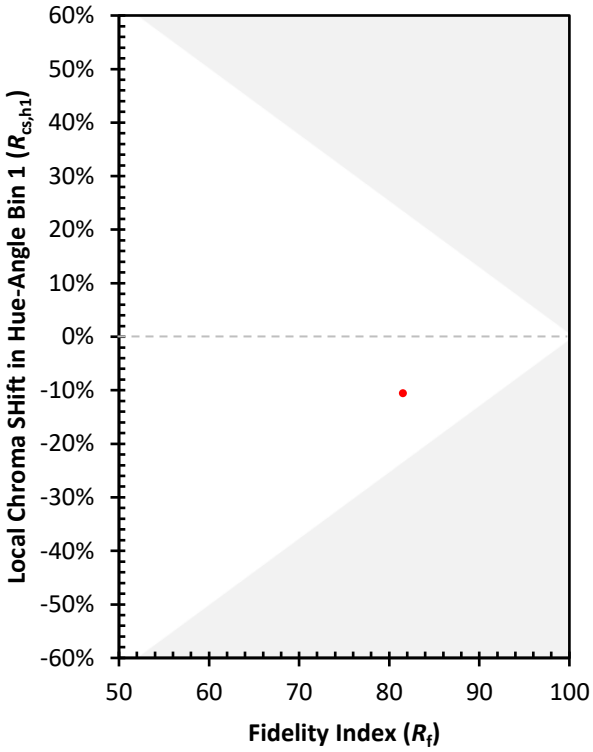
Measure Comparisons





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