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: P821212

Luminaire Tested: **TT-D2-735-24VDC-RW-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821212
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-5)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D2-735-24VDC-RW-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3500K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3145 lumens
Efficiency:	N/A
Efficacy:	82.8 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U2 - G2

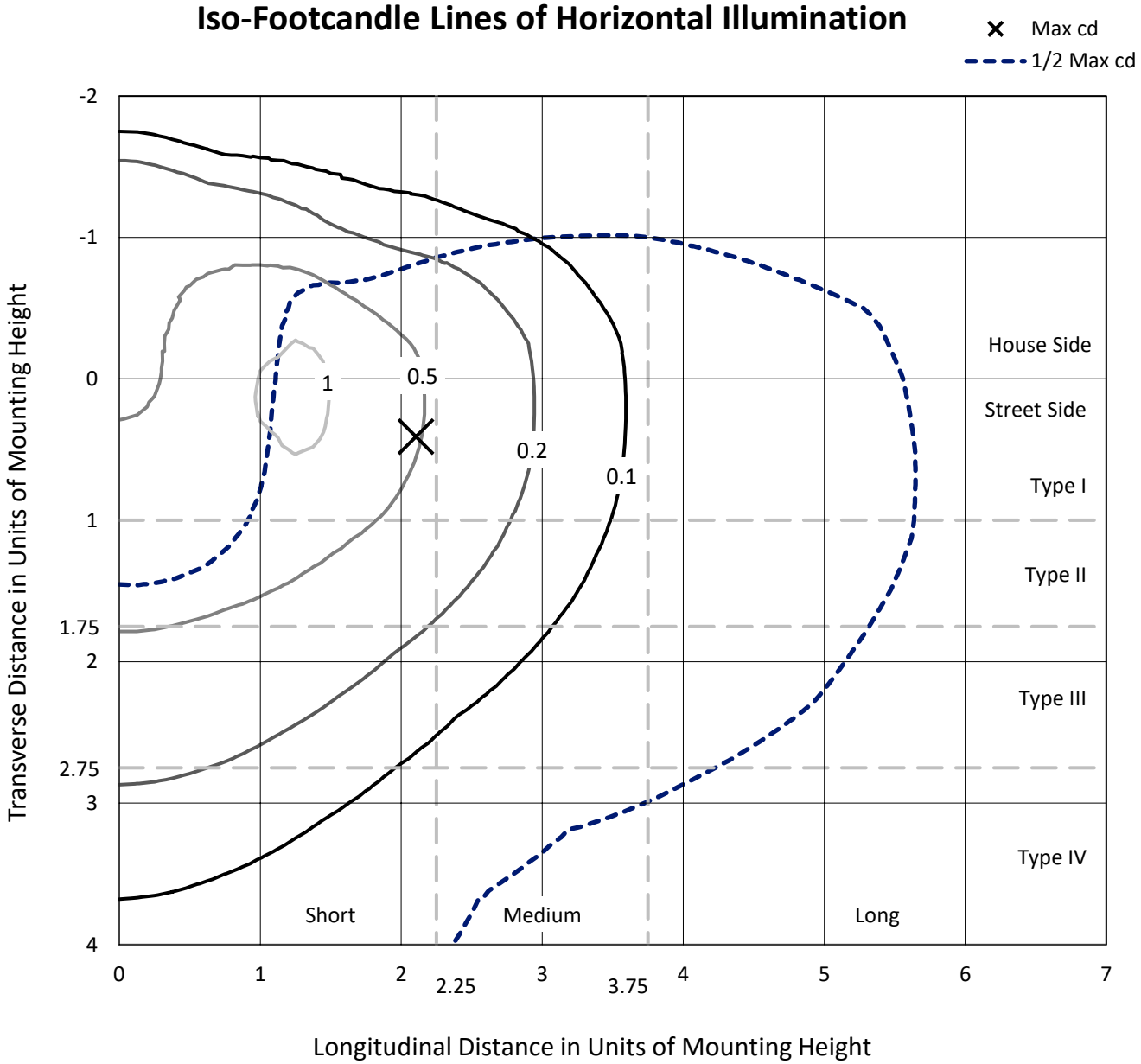
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



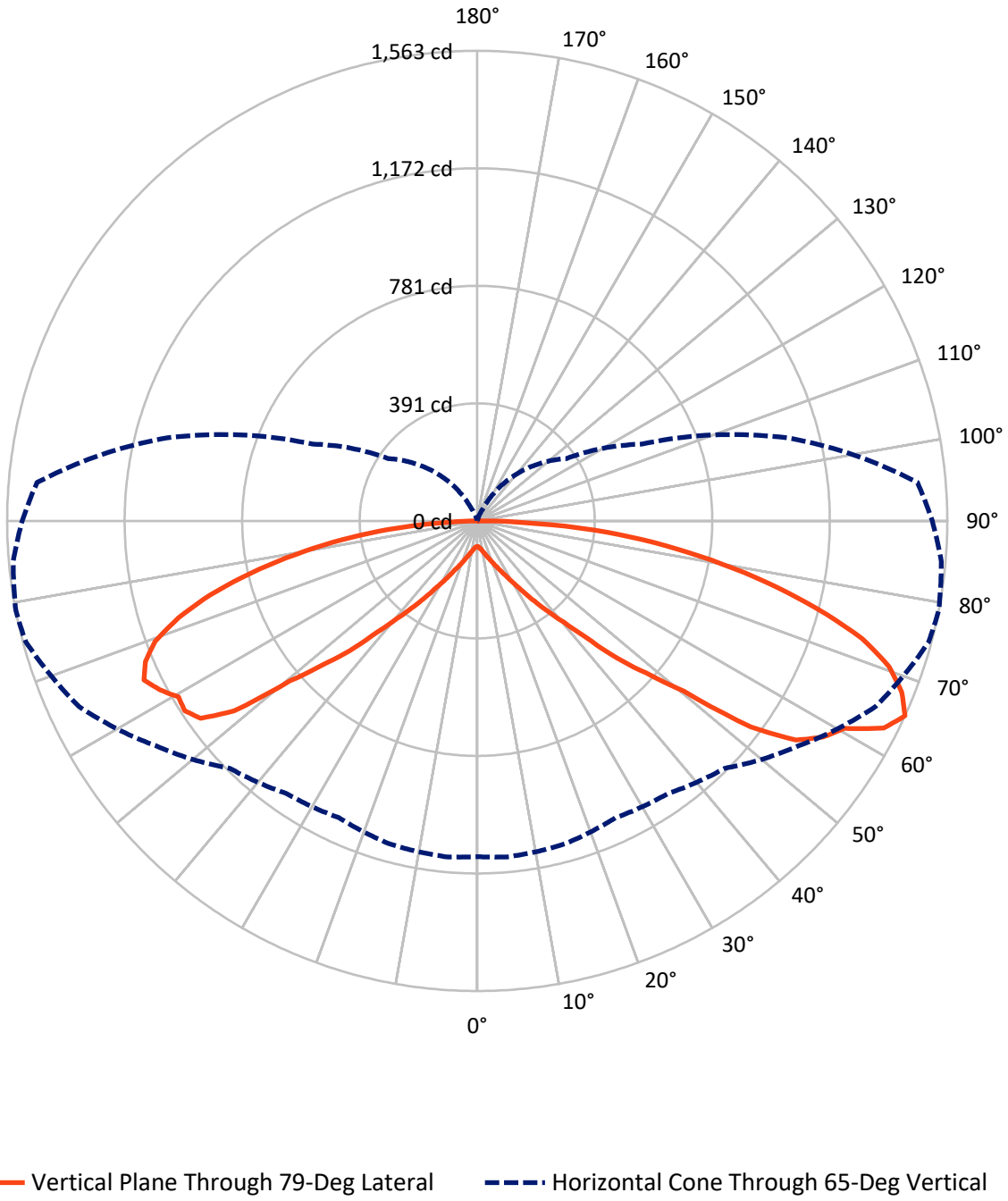
Based on 15 foot mounting height. Maximum calculated value = 1.1 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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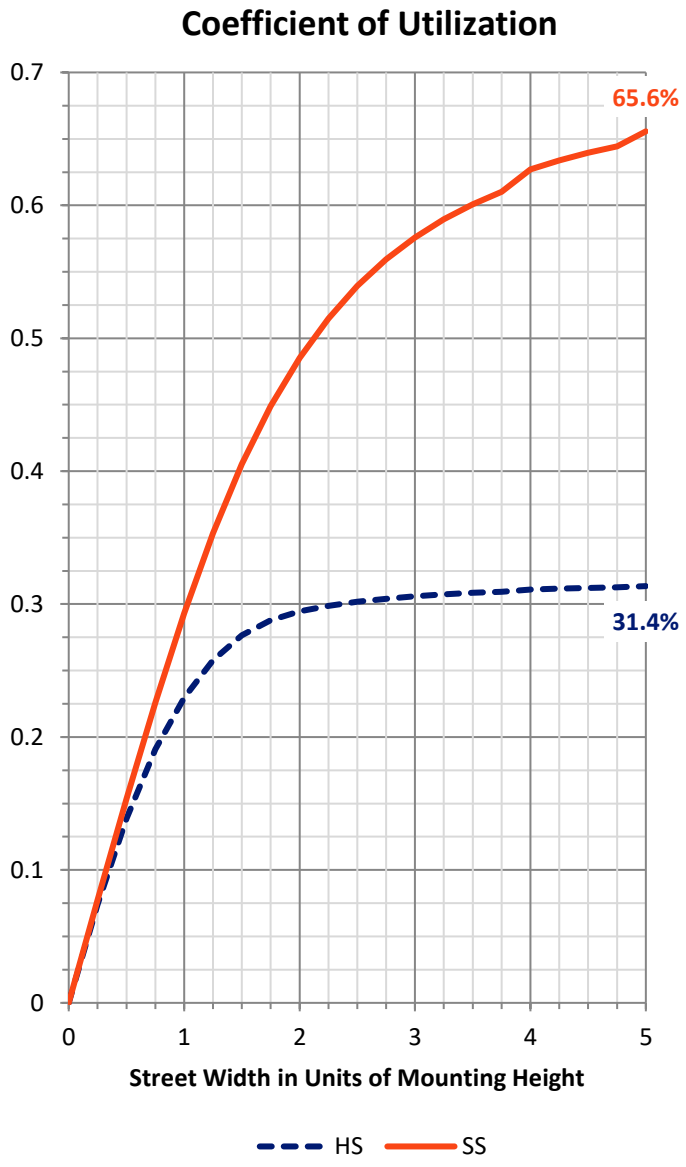
REPORT NUMBER: P821212
CATALOG NUMBER: TT-D2-735-24VDC-RW-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	993.1	1.3	994.4
	% Fixture	31.6	0.0	31.6
Street Side	Lumens	2136.7	13.9	2150.6
	% Fixture	67.9	0.4	68.4
Total	Lumens	3129.9	15.2	3145.0
	% Fixture	99.5	0.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.0	0.3
10°-20°	33.9	1.1
20°-30°	78.1	2.5
30°-40°	167.4	5.3
40°-50°	358.6	11.4
50°-60°	677.2	21.5
60°-70°	841.6	26.8
70°-80°	720.5	22.9
80°-90°	243.7	7.7
90°-100°	10.5	0.3
100°-110°	3.0	0.1
110°-120°	0.7	0.0
120°-130°	0.4	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	3129.9	99.5
0°-180°	3145.0	100.0



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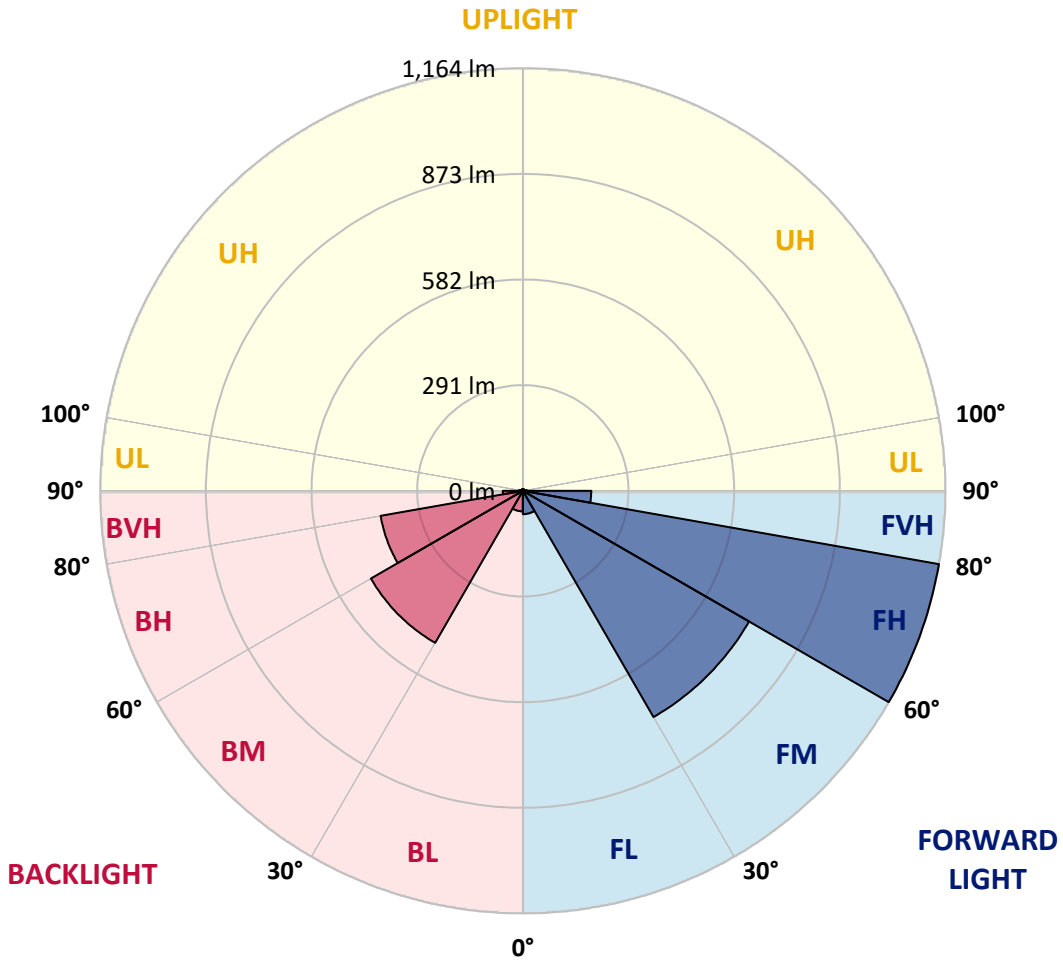
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	64.3	2.0			
FM	(30°-60°)	719.7	22.9			
FH	(60°-80°)	1164.2	37.0			G1/1800
FVH	(80°-90°)	188.5	6.0			G2/225
BL	(0°-30°)	56.7	1.8	B0/110		
BM	(30°-60°)	483.4	15.4	B1/1000		
BH	(60°-80°)	397.9	12.7	B1/500		G1/500
BVH	(80°-90°)	55.2	1.8			G1/100
UL	(90°-100°)	10.5	0.3		U2/50	
UH	(100°-180°)	4.6	0.1		U1/10	

BUG Rating: B1-U2-G2
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	*85.4*	85.4
2.5°	90.1	90.1	90.1	89.3	89.3	89.3	88.6	87.8	87.0	*87.0*	87.0
5°	94.8	94.8	94.8	94.8	94.0	93.3	92.5	91.7	90.9	*90.9*	90.1
7.5°	101.1	100.3	101.1	100.3	100.3	99.5	98.7	98.0	96.4	*96.4*	95.6
10°	107.4	107.4	107.4	107.4	107.4	106.6	105.8	105.0	104.2	*103.4*	102.7
12.5°	115.2	115.2	115.2	114.4	115.2	114.4	113.6	113.6	112.8	*111.3*	111.3
15°	123.0	123.0	123.0	123.0	123.8	123.8	123.8	123.0	123.0	*122.3*	121.5
17.5°	132.4	131.7	132.4	132.4	133.2	134.0	134.8	135.6	135.6	*134.8*	134.8
20°	142.6	141.8	142.6	142.6	144.2	145.8	148.1	149.7	150.5	*148.9*	148.9
22.5°	153.6	152.8	154.4	154.4	156.7	159.1	163.0	164.6	166.9	*166.1*	166.1
25°	166.9	166.1	166.9	167.7	170.8	174.8	179.5	183.4	185.7	*185.7*	186.5
27.5°	181.8	181.8	182.6	183.4	186.5	192.8	199.8	206.9	212.4	*211.6*	212.4
30°	202.2	202.2	203.8	204.5	208.5	215.5	224.9	234.3	242.2	*242.2*	243.7
32.5°	224.9	224.1	226.5	227.3	231.2	240.6	253.9	268.8	279.0	*279.0*	280.6
35°	252.3	251.6	253.9	253.9	258.6	271.9	289.2	309.6	326.8	*327.6*	329.9
37.5°	286.8	285.3	285.3	287.6	293.1	310.3	333.8	362.1	380.1	*381.7*	385.6
40°	327.6	326.8	328.4	327.6	334.6	355.8	385.6	418.5	439.6	*443.6*	448.3
42.5°	377.7	379.3	376.9	376.9	385.6	409.9	445.1	483.5	521.9	*526.6*	529.0
45°	438.9	442.0	438.9	438.1	445.9	474.1	522.7	590.1	634.8	*650.5*	655.2
47.5°	512.5	514.1	510.2	508.6	517.2	553.3	616.0	691.2	743.7	*755.5*	768.0
50°	594.8	592.5	589.3	587.0	603.4	648.1	721.0	798.6	888.7	*890.3*	895.0
52.5°	679.4	672.4	673.2	672.4	695.1	743.7	840.9	972.5	1109.7	*1137.9*	1141.0
55°	764.1	755.5	754.7	762.5	794.6	864.4	986.6	1157.5	1268.8	*1286.0*	1283.7
57.5°	848.7	844.8	843.2	850.3	897.3	980.4	1118.3	1262.5	1357.3	*1355.8*	1339.3
60°	936.5	939.6	934.1	947.5	996.1	1079.1	1179.4	1319.7	1407.5	*1400.4*	1384.0
62.5°	1026.6	1034.5	1029.0	1030.5	1061.9	1123.0	1221.8	1384.8	1506.2	*1516.4*	1497.6
65°	*1116.0*	*1121.4*	*1112.8*	*1088.5*	*1105.8*	*1163.0*	*1304.0*	*1460.8*	*1553.2*	*1562.6*	*1548.5*
67.5°	1191.2	1196.7	1166.9	1128.5	1130.8	1172.4	1296.2	1445.9	1528.2	*1521.9*	1499.2
70°	1255.4	1245.3	1196.7	1130.8	1103.4	1123.0	1239.8	1372.2	1456.1	*1452.9*	1426.3
72.5°	1276.6	1263.3	1181.0	1079.1	1025.0	1032.1	1145.7	1264.1	1332.2	*1337.7*	1305.6
75°	1242.9	1220.2	1107.3	979.6	909.8	914.5	1011.7	1120.7	1175.5	*1169.2*	1144.2
77.5°	1121.4	1098.7	976.5	840.1	771.9	779.0	855.8	941.2	986.6	*984.3*	967.1
80°	931.0	910.6	803.3	676.3	614.4	618.3	677.1	744.5	779.8	*787.6*	778.2
82.5°	688.1	674.0	597.9	495.3	445.1	444.3	489.0	540.7	575.2	*591.7*	585.4
85°	425.5	418.5	376.2	309.6	274.3	273.5	300.1	338.5	369.9	*391.8*	377.7
87.5°	169.3	166.9	154.4	124.6	108.9	103.4	97.2	121.5	123.8	*146.5*	145.8
90°	41.5	40.8	40.0	37.6	33.7	29.0	23.5	17.2	11.0	*8.6*	4.7
92.5°	36.8	36.8	36.0	33.7	30.6	25.9	21.2	15.7	10.2	*7.8*	3.9
95°	29.8	29.8	29.0	27.4	24.3	21.2	16.5	12.5	7.8	*6.3*	3.1
97.5°	22.7	21.9	21.9	20.4	18.8	15.7	12.5	9.4	6.3	*4.7*	2.4
100°	16.5	16.5	15.7	14.9	13.3	11.8	9.4	7.1	3.9	*3.1*	1.6
102.5°	11.8	11.0	11.0	11.0	9.4	7.8	6.3	4.7	3.1	*2.4*	0.8
105°	7.8	7.1	7.1	7.1	6.3	5.5	3.9	3.1	1.6	*1.6*	0.8
107.5°	4.7	4.7	4.7	4.7	3.9	3.1	2.4	1.6	0.8	*0.8*	0.8
110°	2.4	2.4	2.4	3.1	2.4	2.4	1.6	0.8	0.8	*0.8*	0.8

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
112.5°	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.8	*0.8*	0.8
115°	0.8	0.8	0.8	1.6	1.6	0.8	0.8	0.0	0.0	*0.8*	0.8
117.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
120°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
122.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
125°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
127.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
130°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
132.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8
135°	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0
137.5°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0
140°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0
142.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	*0.0*	0.0
145°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	*0.0*	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	*0.0*	0.0
150°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0
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	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0
160°	0.0	0.0	0.0	0.0	0.8	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	0.8	0.0	0.8	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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
2.5°	86.2	86.2	86.2	85.4	85.4	85.4	84.6	84.6	83.9	83.9	83.9
5°	89.3	89.3	88.6	88.6	87.8	87.0	87.0	86.2	86.2	85.4	85.4
7.5°	94.8	94.8	94.0	93.3	91.7	90.9	90.1	89.3	89.3	88.6	88.6
10°	101.9	101.9	100.3	98.7	97.2	95.6	94.8	93.3	92.5	92.5	92.5
12.5°	110.5	109.7	108.1	105.8	104.2	101.9	100.3	98.7	97.2	97.2	97.2
15°	120.7	120.7	117.6	115.2	112.1	108.9	106.6	104.2	102.7	101.9	101.9
17.5°	133.2	133.2	129.3	125.4	121.5	117.6	114.4	111.3	109.7	108.9	108.9
20°	147.3	147.3	143.4	138.7	133.2	127.7	123.0	119.1	116.8	116.0	116.0
22.5°	164.6	164.6	159.1	152.8	145.8	137.9	131.7	127.0	124.6	123.0	123.0
25°	184.2	182.6	177.1	169.3	159.1	149.7	141.1	136.4	133.2	130.9	131.7
27.5°	210.8	208.5	201.4	188.1	175.5	163.0	152.8	146.5	142.6	141.1	141.8
30°	241.4	239.0	228.8	213.9	195.1	178.7	166.1	159.1	155.2	152.8	153.6
32.5°	278.2	275.1	262.5	242.2	220.2	196.7	181.0	172.4	168.5	166.1	165.4
35°	326.8	322.9	307.2	279.0	248.4	220.2	198.3	187.3	183.4	181.0	181.8
37.5°	381.7	376.2	355.0	320.5	282.1	246.1	221.0	206.9	202.2	198.3	198.3
40°	444.3	438.1	410.6	365.2	319.0	274.3	242.2	226.5	221.0	221.0	221.0
42.5°	522.7	516.4	485.1	418.5	357.4	304.8	266.4	248.4	242.9	244.5	244.5
45°	644.2	635.6	585.4	497.6	407.5	336.2	291.5	271.2	267.2	271.2	271.2
47.5°	755.5	744.5	670.8	571.3	456.9	367.5	316.6	293.1	291.5	300.1	300.1
50°	880.1	866.0	788.4	630.9	496.9	402.0	339.3	311.1	311.9	324.4	328.4
52.5°	1121.4	1106.5	972.5	739.0	540.0	414.6	348.7	315.0	315.0	329.1	334.6
55°	1264.9	1234.3	1059.5	809.5	558.0	429.5	344.8	299.4	297.8	313.5	318.2
57.5°	1311.9	1280.5	1077.6	789.2	546.2	410.6	322.1	257.0	253.9	274.3	272.7
60°	1350.3	1308.7	1048.6	721.0	479.6	370.7	278.2	191.2	177.9	195.9	195.1
62.5°	1458.4	1413.8	1050.1	641.0	401.2	309.6	209.2	107.4	79.9	94.0	87.8
65°	*1512.5*	*1468.6*	*1066.6*	*603.4*	*361.3*	*256.3*	*149.7*	*43.9*	*3.1*	*3.1*	*1.6*
67.5°	1466.3	1427.1	1045.4	594.0	355.8	254.7	152.0	43.1	0.0	0.0	0.0
70°	1398.9	1361.2	996.8	561.1	337.8	245.3	148.9	43.1	0.0	0.0	0.0
72.5°	1280.5	1242.1	913.0	514.1	310.3	224.9	137.9	40.8	0.0	0.0	0.0
75°	1124.6	1095.6	806.4	453.0	273.5	198.3	122.3	36.0	0.0	0.0	0.0
77.5°	952.2	917.7	676.3	376.9	228.8	164.6	103.4	29.8	0.0	0.0	0.0
80°	764.1	739.0	532.9	295.4	177.1	128.5	80.7	22.7	0.0	0.0	0.0
82.5°	568.2	547.0	394.2	211.6	126.2	89.3	55.6	14.9	0.0	0.0	0.0
85°	373.0	367.5	253.1	128.5	75.2	49.4	29.8	7.1	0.0	0.0	0.0
87.5°	134.8	139.5	92.5	36.8	20.4	8.6	3.9	0.8	0.0	0.0	0.0
90°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
92.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
95°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
97.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
100°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
102.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
105°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
107.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
110°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report

REPORT NUMBER: P821212
CATALOG NUMBER: TT-D2-735-24VDC-RW-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
115°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
117.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
120°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
122.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
125°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
127.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
130°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
135°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.8	0.8	0.8	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

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: SP1-2407-176-4

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-735-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-735-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

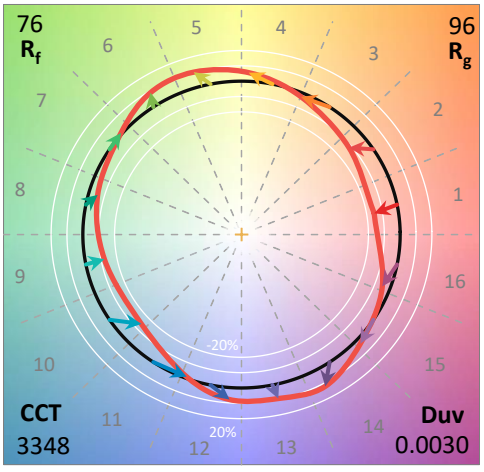
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-4
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	09/27/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Streetworks
Catalog Number:	**MEM2-HTN-VA-30-735-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	3348	CRI (Ra):	73.4		
CIE u':	0.2384	R1:	70.8	R9:	-19.2
CIE v':	0.5184	R2:	79.9	R10:	52.5
Duv:	0.0030	R3:	87.6	R11:	68.0
CIE x:	0.4177	R4:	72.6	R12:	42.6
CIE y:	0.4036	R5:	69.3	R13:	72.0
CIE z:	0.1787	R6:	71.3	R14:	92.6
Peak Wavelength (nm):	593	R7:	82.1	R15:	63.8
Dominant Wavelength (nm):	580	R8:	53.3		
Purity:	46.5223				

Rf:	75.8
Rg:	95.8



Test Conditions

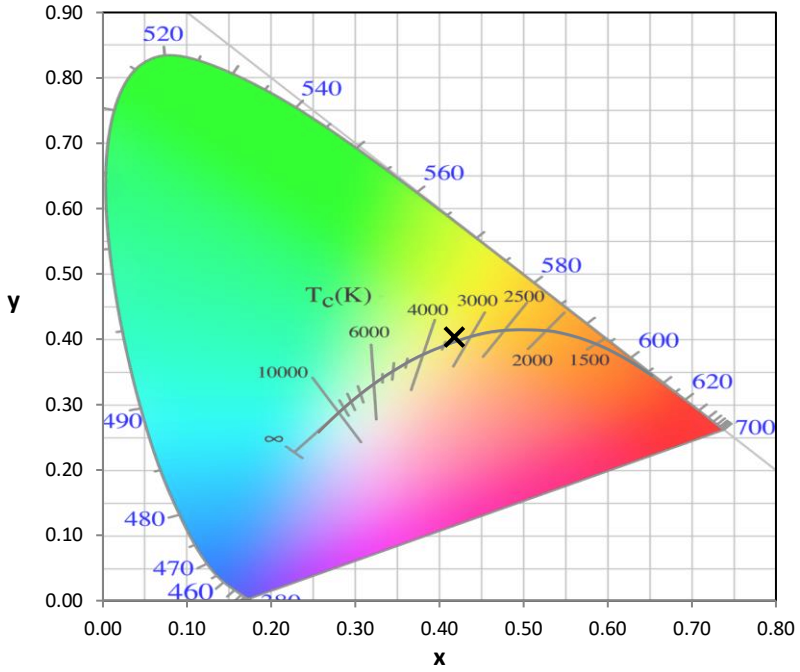
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

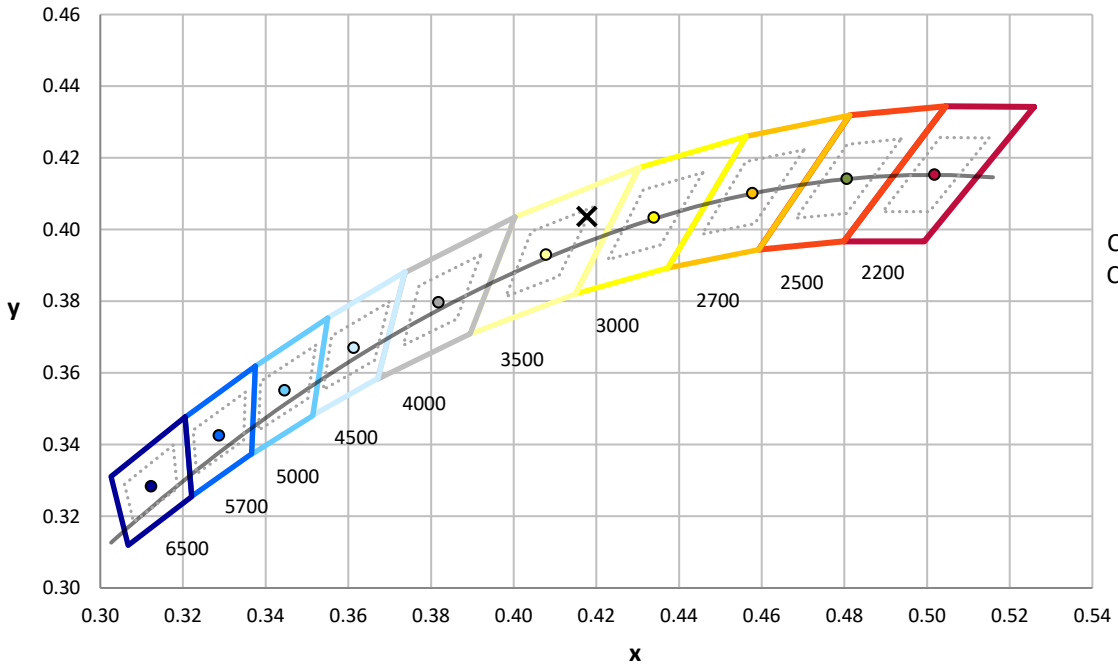
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-4

CIE 1931 Chromaticity Diagram



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

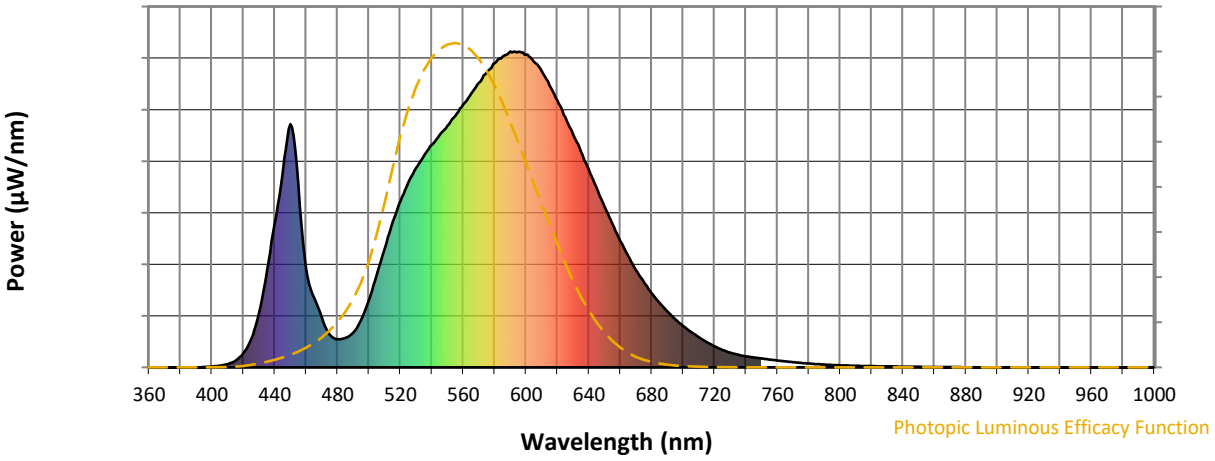


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

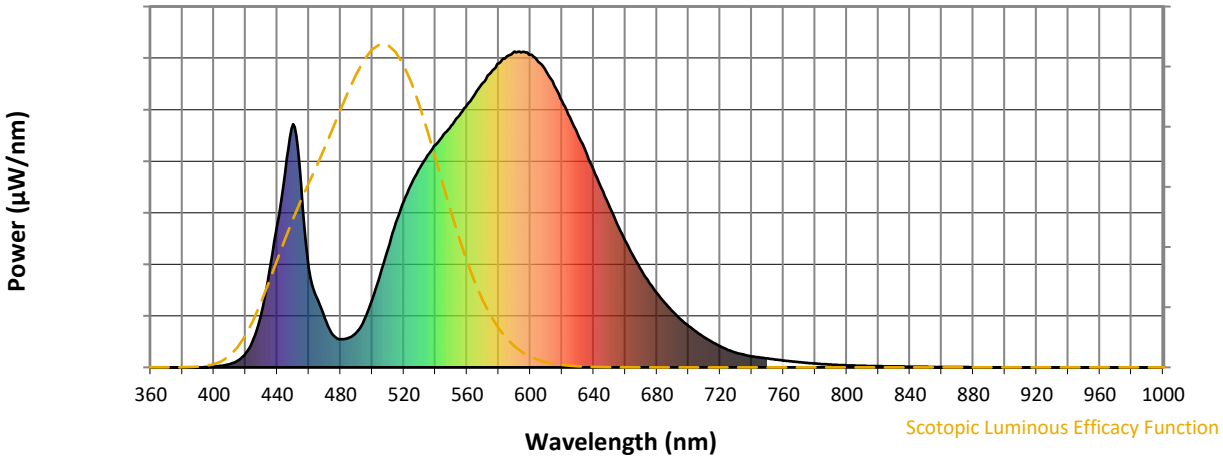


Photopic Lumens: NR

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	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Scotopic Flux vs. Wavelength

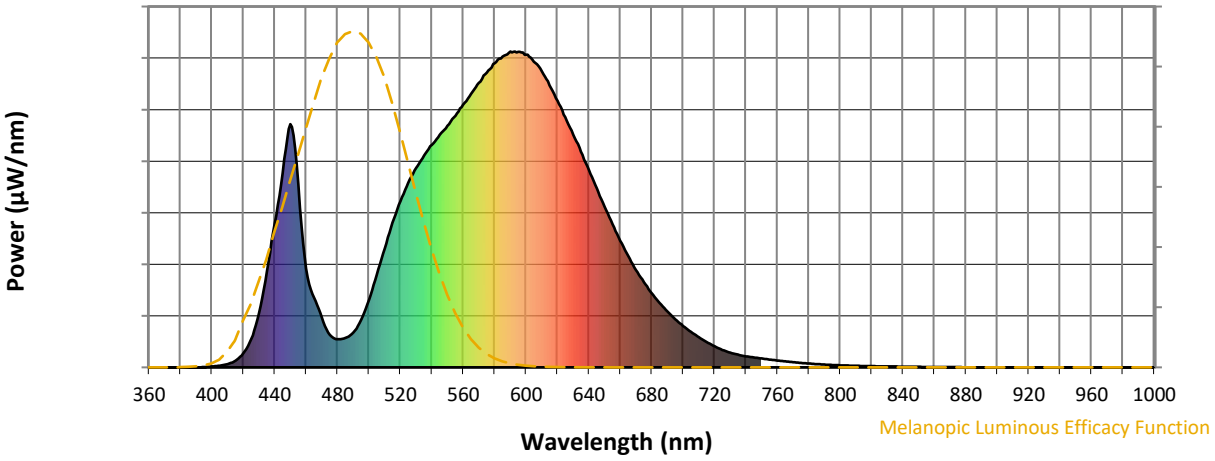


Scotopic Lumens: NR **S/P: 1.31**

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	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.4**

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	110	NR	620	844	NR	750	28	NR	880	0	NR
365	0	NR	495	150	NR	625	792	NR	755	25	NR	885	0	NR
370	0	NR	500	214	NR	630	737	NR	760	22	NR	890	0	NR
375	0	NR	505	293	NR	635	683	NR	765	19	NR	895	0	NR
380	0	NR	510	376	NR	640	625	NR	770	16	NR	900	0	NR
385	0	NR	515	458	NR	645	566	NR	775	14	NR	905	0	NR
390	0	NR	520	526	NR	650	509	NR	780	12	NR	910	0	NR
395	1	NR	525	584	NR	655	453	NR	785	10	NR	915	0	NR
400	3	NR	530	631	NR	660	401	NR	790	9	NR	920	0	NR
405	5	NR	535	671	NR	665	353	NR	795	8	NR	925	0	NR
410	10	NR	540	704	NR	670	308	NR	800	7	NR	930	0	NR
415	21	NR	545	737	NR	675	269	NR	805	6	NR	935	0	NR
420	44	NR	550	766	NR	680	235	NR	810	5	NR	940	0	NR
425	90	NR	555	797	NR	685	204	NR	815	4	NR	945	0	NR
430	171	NR	560	832	NR	690	177	NR	820	4	NR	950	0	NR
435	305	NR	565	866	NR	695	152	NR	825	3	NR	955	0	NR
440	455	NR	570	901	NR	700	131	NR	830	3	NR	960	0	NR
445	615	NR	575	933	NR	705	112	NR	835	3	NR	965	0	NR
450	771	NR	580	963	NR	710	96	NR	840	2	NR	970	0	NR
455	579	NR	585	984	NR	715	80	NR	845	2	NR	975	0	NR
460	313	NR	590	1000	NR	720	67	NR	850	2	NR	980	0	NR
465	221	NR	595	999	NR	725	55	NR	855	1	NR	985	0	NR
470	156	NR	600	990	NR	730	46	NR	860	1	NR	990	0	NR
475	103	NR	605	968	NR	735	40	NR	865	1	NR	995	0	NR
480	89	NR	610	937	NR	740	35	NR	870	1	NR	1000	0	NR
485	93	NR	615	893	NR	745	31	NR	875	1	NR			

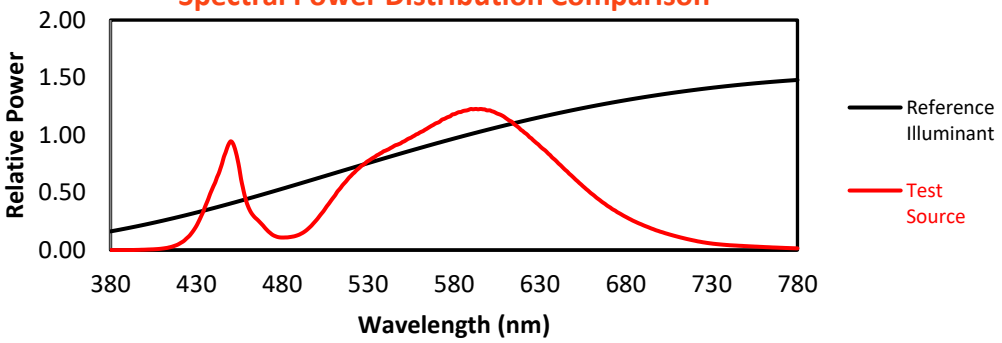
REPORT NUMBER: SP1-2407-176-4

TM-30-18

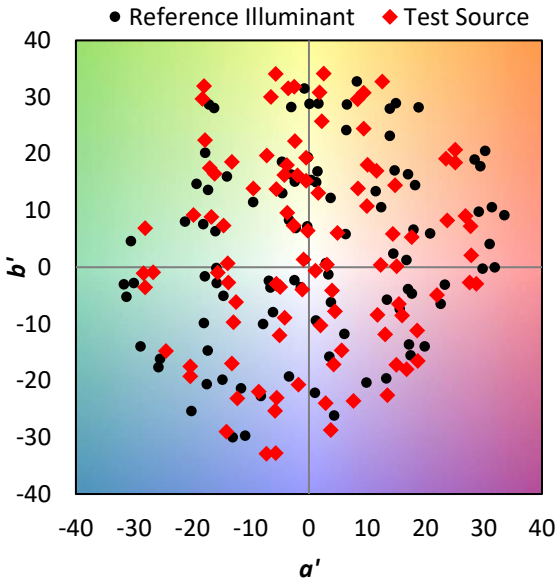
Summary

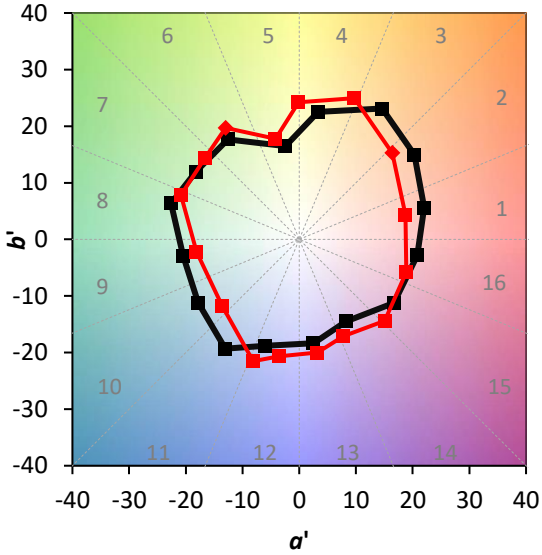
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

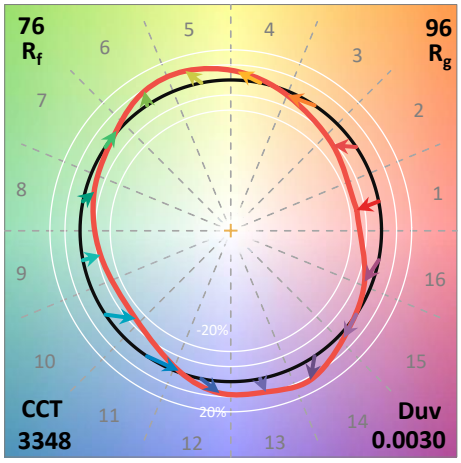
Spectral Power Distribution Comparison

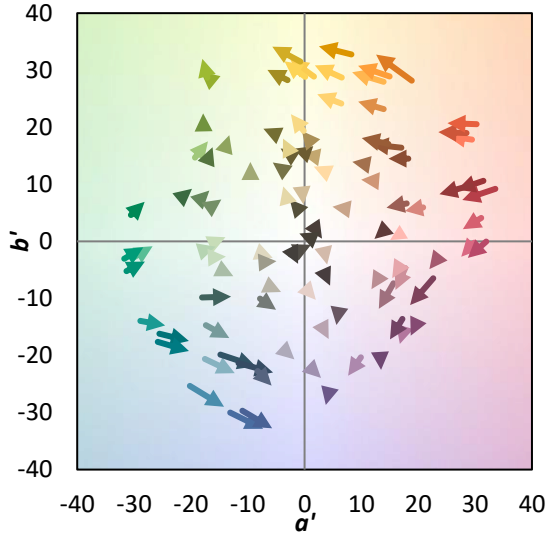


Color Vector Graphics







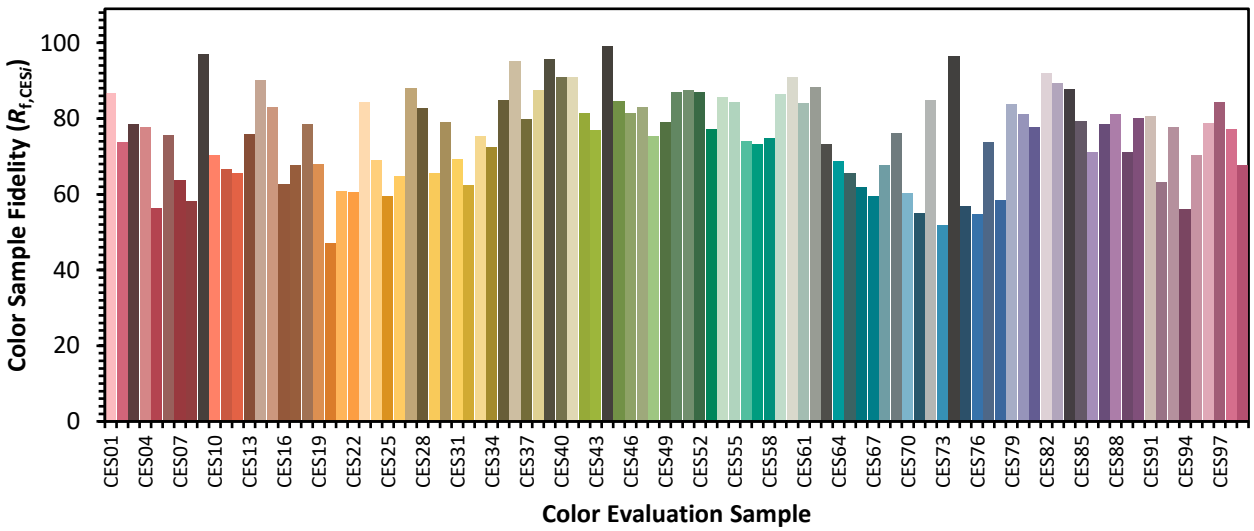


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

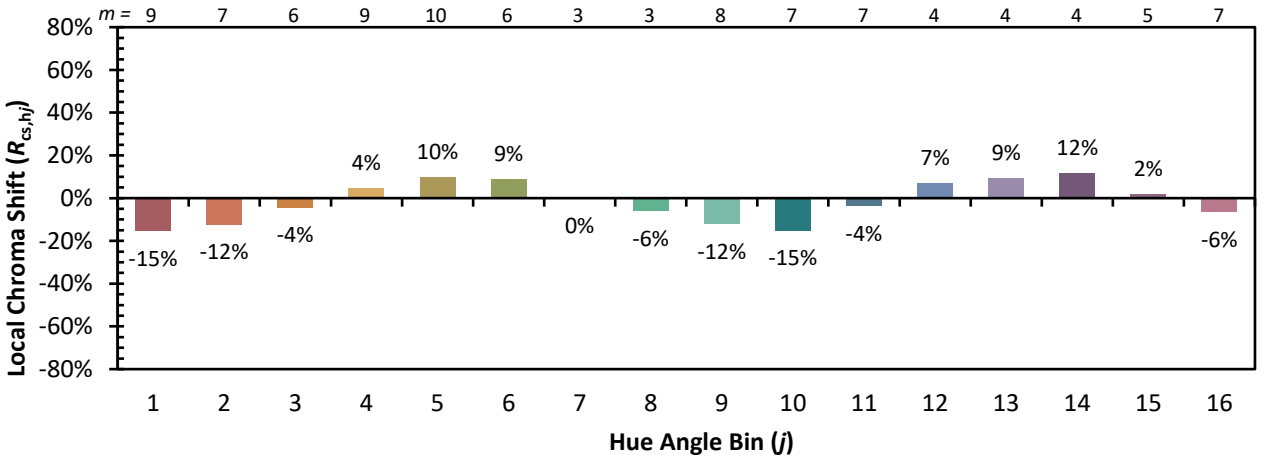
CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82 = 92
CES08 = 40	CES33 = 75	CES58 = 75	CES83 = 89
CES09 = 29	CES34 = 73	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 85	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 95	CES61 = 84	CES86 = 71
CES12 = 64	CES37 = 80	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 88	CES63 = 73	CES88 = 81
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 71
CES15 = 71	CES40 = 91	CES65 = 66	CES90 = 80
CES16 = 47	CES41 = 91	CES66 = 62	CES91 = 81
CES17 = 50	CES42 = 81	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 77	CES68 = 68	CES93 = 78
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 85	CES70 = 60	CES95 = 70
CES21 = 87	CES46 = 82	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 83	CES72 = 85	CES97 = 84
CES23 = 92	CES48 = 75	CES73 = 52	CES98 = 77
CES24 = 91	CES49 = 79	CES74 = 96	CES99 = 68
CES25 = 72	CES50 = 87	CES75 = 57	

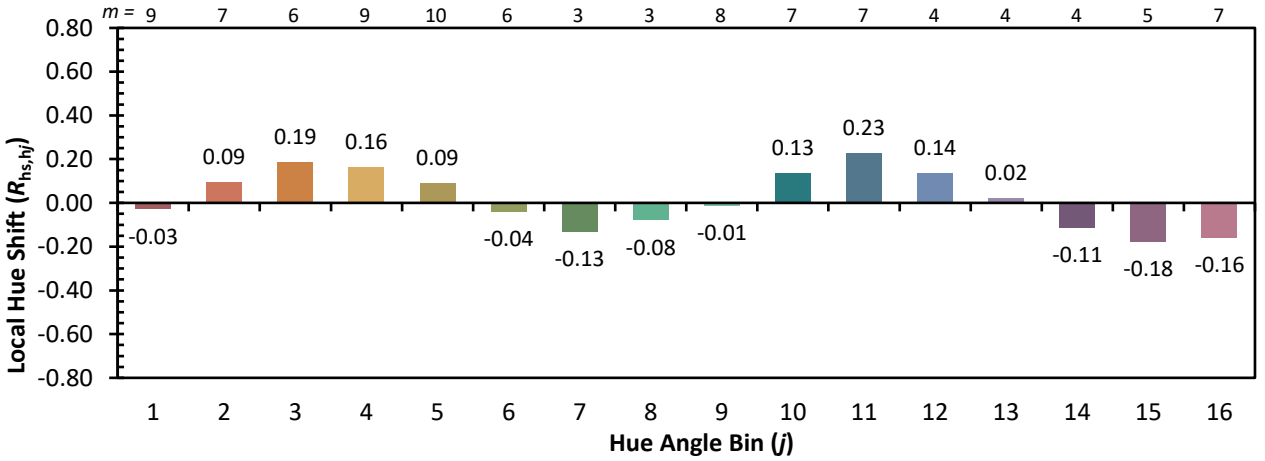


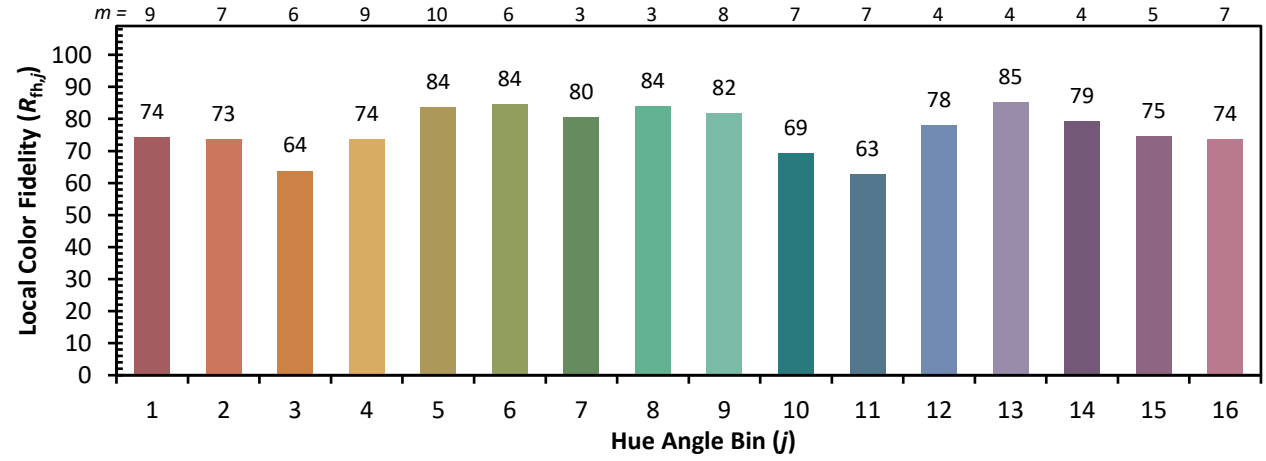
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Color Rendition by Hue-Angle Bin



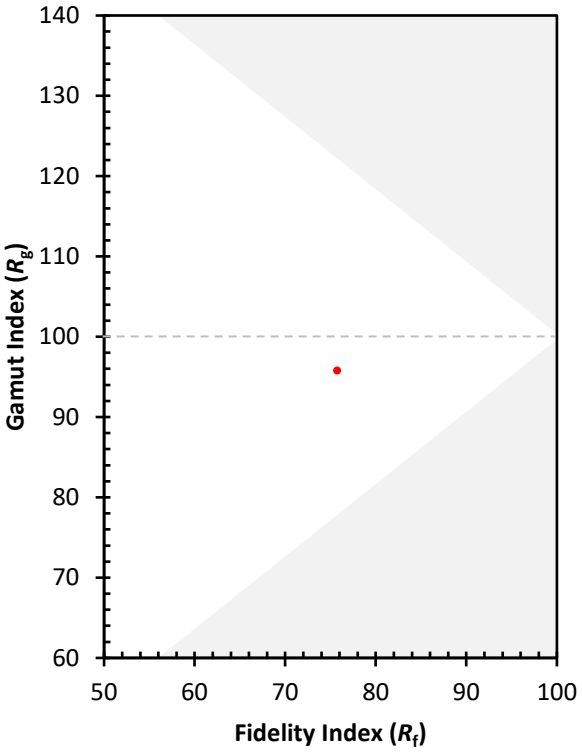


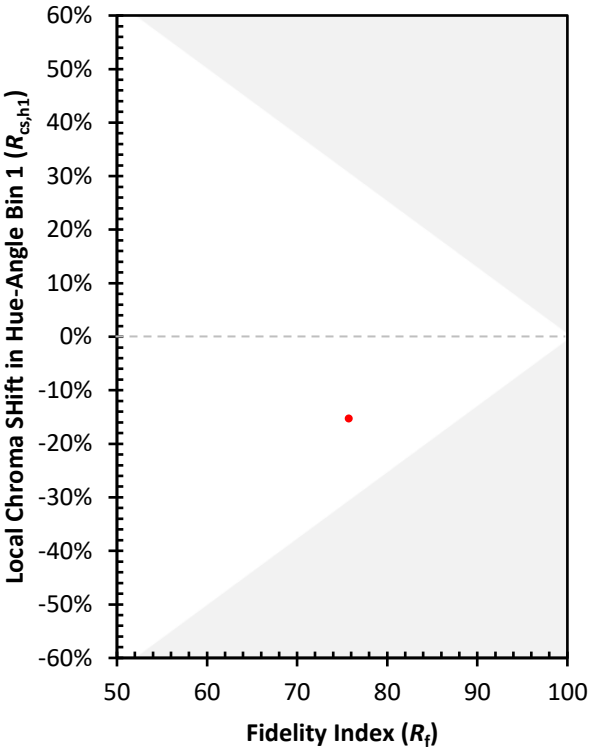


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Measure Comparisons





(END OF REPORT)