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: P821538

Luminaire Tested: **TT-D2-740-12VDC-RW-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P821538
	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-D2-740-12VDC-RW-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	4000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3327.9 lumens
Efficiency:	N/A
Efficacy:	87.6 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U2 - G2

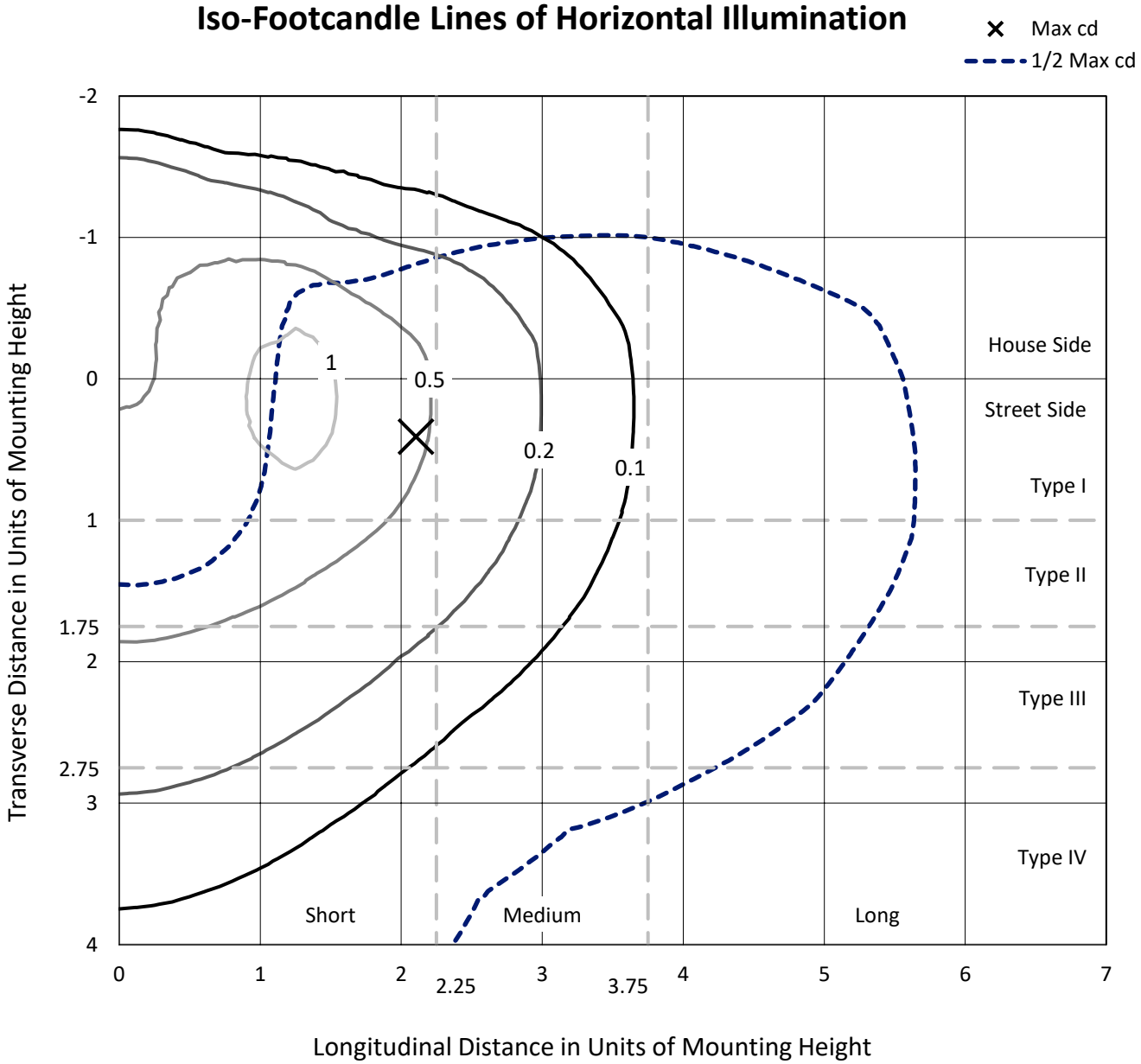
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



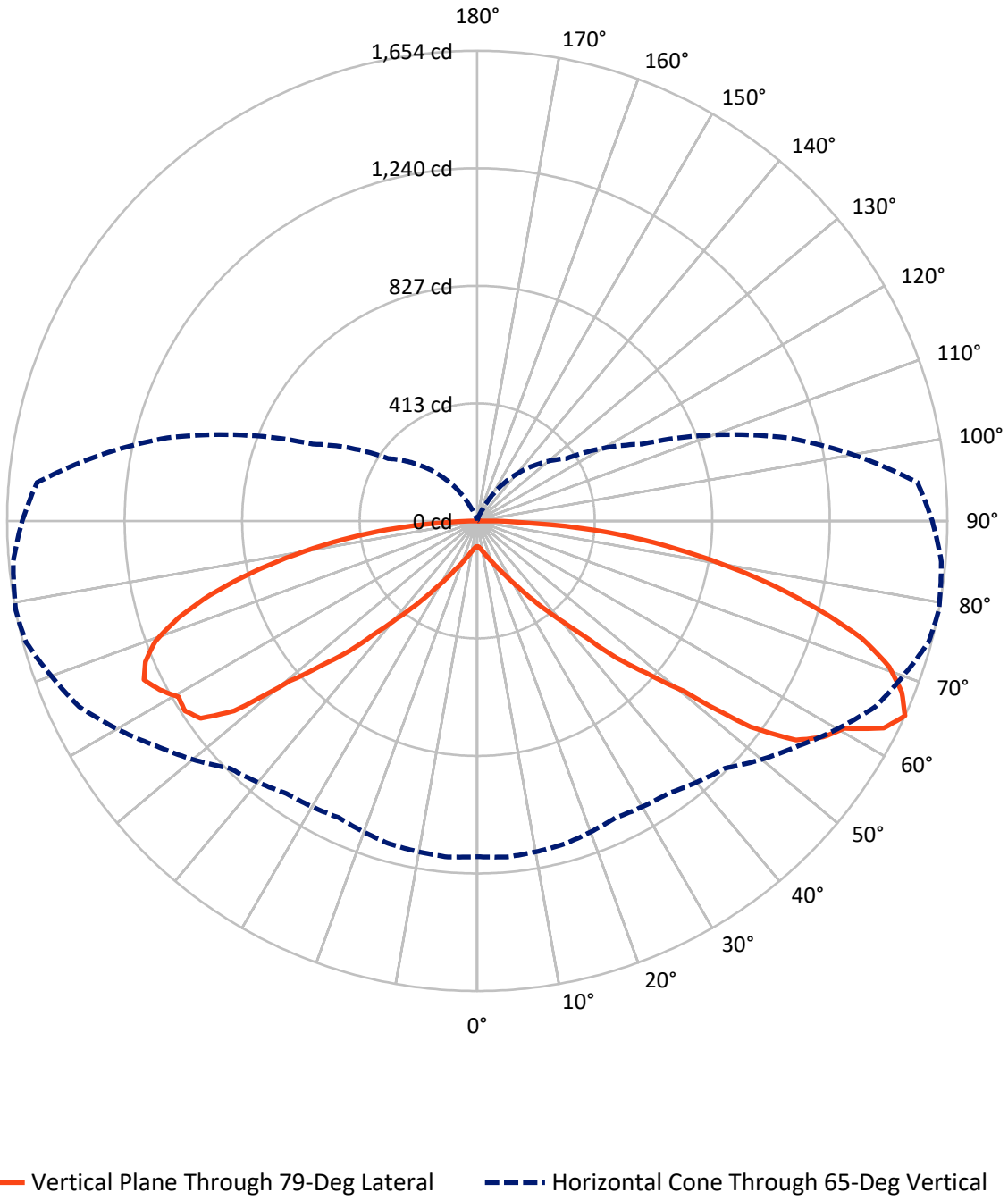
Based on 15 foot mounting height. Maximum calculated value = 1.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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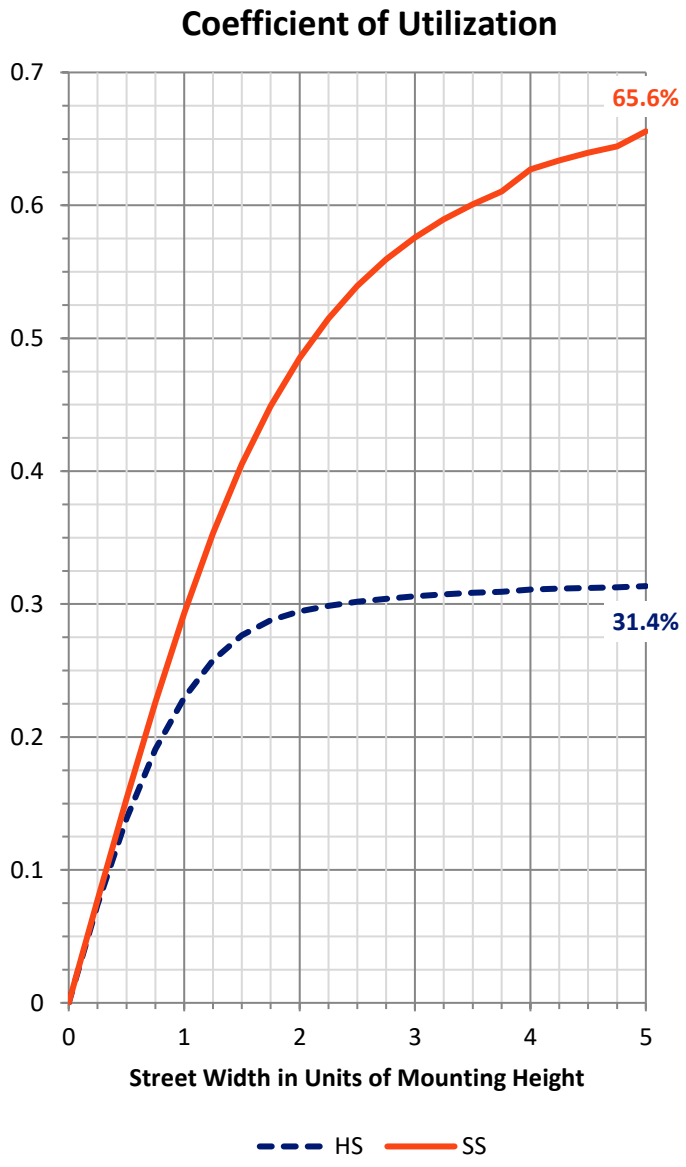
REPORT NUMBER: P821538
CATALOG NUMBER: TT-D2-740-12VDC-RW-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1050.9	1.3	1052.2
	% Fixture	31.6	0.0	31.6
Street Side	Lumens	2261.1	14.7	2275.7
	% Fixture	67.9	0.4	68.4
Total	Lumens	3312.0	15.9	3327.9
	% Fixture	99.5	0.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.5	0.3
10°-20°	35.8	1.1
20°-30°	82.7	2.5
30°-40°	177.1	5.3
40°-50°	379.4	11.4
50°-60°	716.6	21.5
60°-70°	890.6	26.8
70°-80°	762.4	22.9
80°-90°	257.9	7.7
90°-100°	11.1	0.3
100°-110°	3.2	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°	3312.0	99.5
0°-180°	3327.9	100.0



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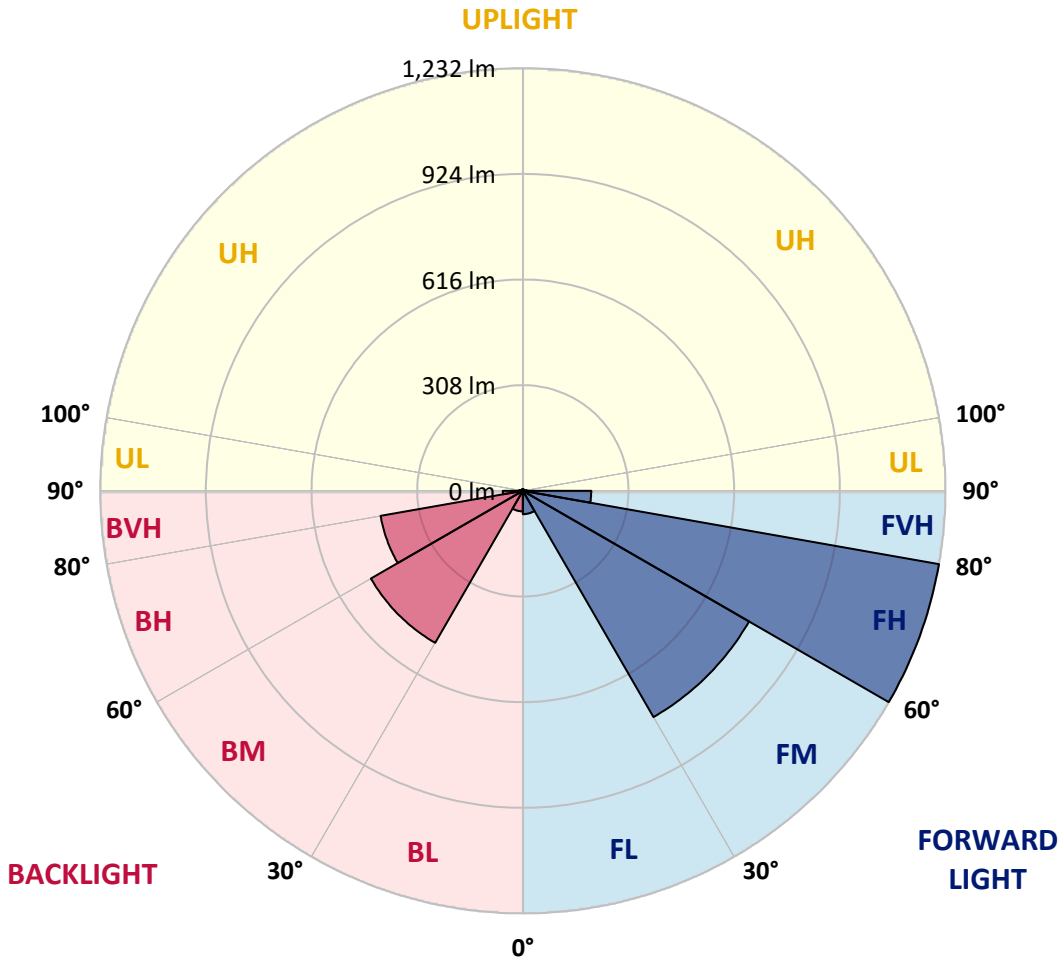
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	68.1	2.0			
FM	(30°-60°)	761.6	22.9			
FH	(60°-80°)	1231.9	37.0			G1/1800
FVH	(80°-90°)	199.5	6.0			G2/225
BL	(0°-30°)	60.0	1.8	B0/110		
BM	(30°-60°)	511.5	15.4	B1/1000		
BH	(60°-80°)	421.0	12.7	B1/500		G1/500
BVH	(80°-90°)	58.4	1.8			G1/100
UL	(90°-100°)	11.1	0.3		U2/50	
UH	(100°-180°)	4.8	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°	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	*90.4*	90.4
2.5°	95.4	95.4	95.4	94.5	94.5	94.5	93.7	92.9	92.0	*92.0*	92.0
5°	100.3	100.3	100.3	100.3	99.5	98.7	97.9	97.0	96.2	*96.2*	95.4
7.5°	107.0	106.1	107.0	106.1	106.1	105.3	104.5	103.7	102.0	*102.0*	101.2
10°	113.6	113.6	113.6	113.6	113.6	112.8	112.0	111.1	110.3	*109.5*	108.6
12.5°	121.9	121.9	121.9	121.1	121.9	121.1	120.2	120.2	119.4	*117.8*	117.8
15°	130.2	130.2	130.2	130.2	131.0	131.0	131.0	130.2	130.2	*129.4*	128.5
17.5°	140.1	139.3	140.1	140.1	141.0	141.8	142.6	143.5	143.5	*142.6*	142.6
20°	150.9	150.1	150.9	150.9	152.6	154.2	156.7	158.4	159.2	*157.6*	157.6
22.5°	162.5	161.7	163.4	163.4	165.9	168.3	172.5	174.1	176.6	*175.8*	175.8
25°	176.6	175.8	176.6	177.5	180.8	184.9	189.9	194.1	196.5	*196.5*	197.4
27.5°	192.4	192.4	193.2	194.1	197.4	204.0	211.5	218.9	224.7	*223.9*	224.7
30°	214.0	214.0	215.6	216.4	220.6	228.1	238.0	248.0	256.2	*256.2*	257.9
32.5°	238.0	237.2	239.7	240.5	244.6	254.6	268.7	284.4	295.2	*295.2*	296.9
35°	267.0	266.2	268.7	268.7	273.7	287.8	306.0	327.6	345.8	*346.6*	349.1
37.5°	303.5	301.9	301.9	304.3	310.1	328.4	353.3	383.1	402.2	*403.9*	408.0
40°	346.6	345.8	347.5	346.6	354.1	376.5	408.0	442.8	465.2	*469.4*	474.3
42.5°	399.7	401.4	398.9	398.9	408.0	433.7	471.0	511.7	552.3	*557.3*	559.8
45°	464.4	467.7	464.4	463.6	471.9	501.7	553.1	624.4	671.7	*688.3*	693.3
47.5°	542.3	544.0	539.9	538.2	547.3	585.5	651.8	731.4	787.0	*799.4*	812.7
50°	629.4	626.9	623.6	621.1	638.5	685.8	762.9	845.0	940.4	*942.1*	947.0
52.5°	719.0	711.5	712.3	711.5	735.6	787.0	889.8	1029.1	1174.3	*1204.1*	1207.4
55°	808.5	799.4	798.6	806.9	840.9	914.7	1044.1	1224.8	1342.6	*1360.8*	1358.4
57.5°	898.1	894.0	892.3	899.8	949.5	1037.4	1183.4	1336.0	1436.3	*1434.6*	1417.2
60°	991.0	994.3	988.5	1002.6	1054.0	1141.9	1248.1	1396.5	1489.4	*1481.9*	1464.5
62.5°	1086.4	1094.6	1088.8	1090.5	1123.7	1188.4	1292.8	1465.3	1593.9	*1604.6*	1584.7
65°	*1180.9*	*1186.7*	*1177.6*	*1151.9*	*1170.1*	*1230.6*	*1379.9*	*1545.8*	*1643.6*	*1653.6*	*1638.6*
67.5°	1260.5	1266.3	1234.8	1194.2	1196.6	1240.6	1371.6	1530.0	1617.1	*1610.5*	1586.4
70°	1328.5	1317.7	1266.3	1196.6	1167.6	1188.4	1311.9	1452.1	1540.8	*1537.5*	1509.3
72.5°	1350.9	1336.8	1249.7	1141.9	1084.7	1092.2	1212.4	1337.6	1409.8	*1415.6*	1381.6
75°	1315.2	1291.2	1171.8	1036.6	962.8	967.8	1070.6	1185.9	1243.9	*1237.3*	1210.7
77.5°	1186.7	1162.6	1033.3	889.0	816.8	824.3	905.6	996.0	1044.1	*1041.6*	1023.3
80°	985.2	963.6	850.0	715.7	650.2	654.3	716.5	787.8	825.1	*833.4*	823.5
82.5°	728.1	713.2	632.7	524.1	471.0	470.2	517.5	572.2	608.7	*626.1*	619.5
85°	450.3	442.8	398.1	327.6	290.2	289.4	317.6	358.2	391.4	*414.6*	399.7
87.5°	179.1	176.6	163.4	131.9	115.3	109.5	102.8	128.5	131.0	*155.1*	154.2
90°	44.0	43.1	42.3	39.8	35.7	30.7	24.9	18.2	11.6	*9.1*	5.0
92.5°	39.0	39.0	38.1	35.7	32.3	27.4	22.4	16.6	10.8	*8.3*	4.1
95°	31.5	31.5	30.7	29.0	25.7	22.4	17.4	13.3	8.3	*6.6*	3.3
97.5°	24.0	23.2	23.2	21.6	19.9	16.6	13.3	10.0	6.6	*5.0*	2.5
100°	17.4	17.4	16.6	15.8	14.1	12.4	10.0	7.5	4.1	*3.3*	1.7
102.5°	12.4	11.6	11.6	11.6	10.0	8.3	6.6	5.0	3.3	*2.5*	0.8
105°	8.3	7.5	7.5	7.5	6.6	5.8	4.1	3.3	1.7	*1.7*	0.8
107.5°	5.0	5.0	5.0	5.0	4.1	3.3	2.5	1.7	0.8	*0.8*	0.8
110°	2.5	2.5	2.5	3.3	2.5	2.5	1.7	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°	1.7	1.7	1.7	1.7	1.7	1.7	0.8	0.8	0.8	*0.8*	0.8
115°	0.8	0.8	0.8	1.7	1.7	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°	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4
2.5°	91.2	91.2	91.2	90.4	90.4	90.4	89.6	89.6	88.7	88.7	88.7
5°	94.5	94.5	93.7	93.7	92.9	92.0	92.0	91.2	91.2	90.4	90.4
7.5°	100.3	100.3	99.5	98.7	97.0	96.2	95.4	94.5	94.5	93.7	93.7
10°	107.8	107.8	106.1	104.5	102.8	101.2	100.3	98.7	97.9	97.9	97.9
12.5°	116.9	116.1	114.4	112.0	110.3	107.8	106.1	104.5	102.8	102.8	102.8
15°	127.7	127.7	124.4	121.9	118.6	115.3	112.8	110.3	108.6	107.8	107.8
17.5°	141.0	141.0	136.8	132.7	128.5	124.4	121.1	117.8	116.1	115.3	115.3
20°	155.9	155.9	151.8	146.8	141.0	135.2	130.2	126.0	123.6	122.7	122.7
22.5°	174.1	174.1	168.3	161.7	154.2	146.0	139.3	134.3	131.9	130.2	130.2
25°	194.9	193.2	187.4	179.1	168.3	158.4	149.3	144.3	141.0	138.5	139.3
27.5°	223.1	220.6	213.1	199.0	185.8	172.5	161.7	155.1	150.9	149.3	150.1
30°	255.4	252.9	242.1	226.4	206.5	189.1	175.8	168.3	164.2	161.7	162.5
32.5°	294.4	291.1	277.8	256.2	233.0	208.1	191.6	182.4	178.3	175.8	175.0
35°	345.8	341.7	325.1	295.2	262.9	233.0	209.8	198.2	194.1	191.6	192.4
37.5°	403.9	398.1	375.7	339.2	298.5	260.4	233.9	218.9	214.0	209.8	209.8
40°	470.2	463.6	434.5	386.4	337.5	290.2	256.2	239.7	233.9	233.9	233.9
42.5°	553.1	546.5	513.3	442.8	378.1	322.6	282.0	262.9	257.1	258.7	258.7
45°	681.7	672.5	619.5	526.6	431.2	355.8	308.5	286.9	282.8	286.9	286.9
47.5°	799.4	787.8	709.9	604.5	483.5	388.9	335.0	310.1	308.5	317.6	317.6
50°	931.3	916.3	834.3	667.6	525.8	425.4	359.1	329.2	330.1	343.3	347.5
52.5°	1186.7	1170.9	1029.1	782.0	571.4	438.7	369.0	333.4	333.4	348.3	354.1
55°	1338.5	1306.1	1121.2	856.6	590.4	454.4	364.9	316.8	315.1	331.7	336.7
57.5°	1388.2	1355.0	1140.3	835.1	578.0	434.5	340.8	272.0	268.7	290.2	288.6
60°	1428.8	1384.9	1109.6	762.9	507.5	392.2	294.4	202.3	188.2	207.3	206.5
62.5°	1543.3	1496.0	1111.2	678.3	424.6	327.6	221.4	113.6	84.6	99.5	92.9
65°	*1600.5*	*1554.1*	*1128.6*	*638.5*	*382.3*	*271.2*	*158.4*	*46.4*	*3.3*	*3.3*	*1.7*
67.5°	1551.6	1510.1	1106.3	628.6	376.5	269.5	160.9	45.6	0.0	0.0	0.0
70°	1480.3	1440.5	1054.8	593.8	357.4	259.6	157.6	45.6	0.0	0.0	0.0
72.5°	1355.0	1314.4	966.1	544.0	328.4	238.0	146.0	43.1	0.0	0.0	0.0
75°	1190.0	1159.3	853.3	479.3	289.4	209.8	129.4	38.1	0.0	0.0	0.0
77.5°	1007.6	971.1	715.7	398.9	242.1	174.1	109.5	31.5	0.0	0.0	0.0
80°	808.5	782.0	563.9	312.6	187.4	136.0	85.4	24.0	0.0	0.0	0.0
82.5°	601.2	578.8	417.1	223.9	133.5	94.5	58.9	15.8	0.0	0.0	0.0
85°	394.7	388.9	267.9	136.0	79.6	52.2	31.5	7.5	0.0	0.0	0.0
87.5°	142.6	147.6	97.9	39.0	21.6	9.1	4.1	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: P821538
CATALOG NUMBER: TT-D2-740-12VDC-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: SP1-2407-176-5

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-740-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-740-U-WQ

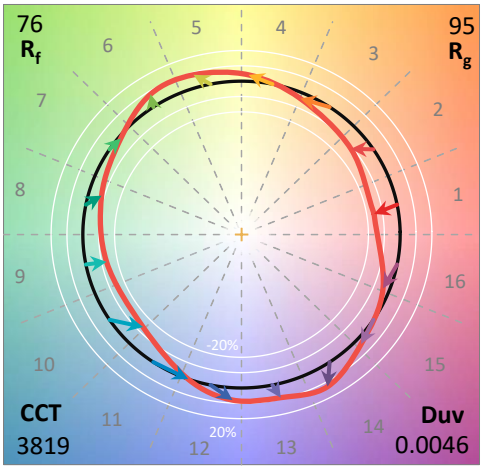
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-5
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-30-740-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	3819	CRI (Ra):	72.9		
CIE u':	0.2261	R1:	70.1	R9:	-21.5
CIE v':	0.5108	R2:	78.4	R10:	48.5
Duv:	0.0046	R3:	85.0	R11:	68.4
CIE x:	0.3926	R4:	72.9	R12:	39.0
CIE y:	0.3942	R5:	69.1	R13:	71.1
CIE z:	0.2132	R6:	69.2	R14:	91.3
Peak Wavelength (nm):	450	R7:	82.8	R15:	63.2
Dominant Wavelength (nm):	577	R8:	55.4		
Purity:	36.15483				
Rf:	75.6				
Rg:	94.8				



Test Conditions

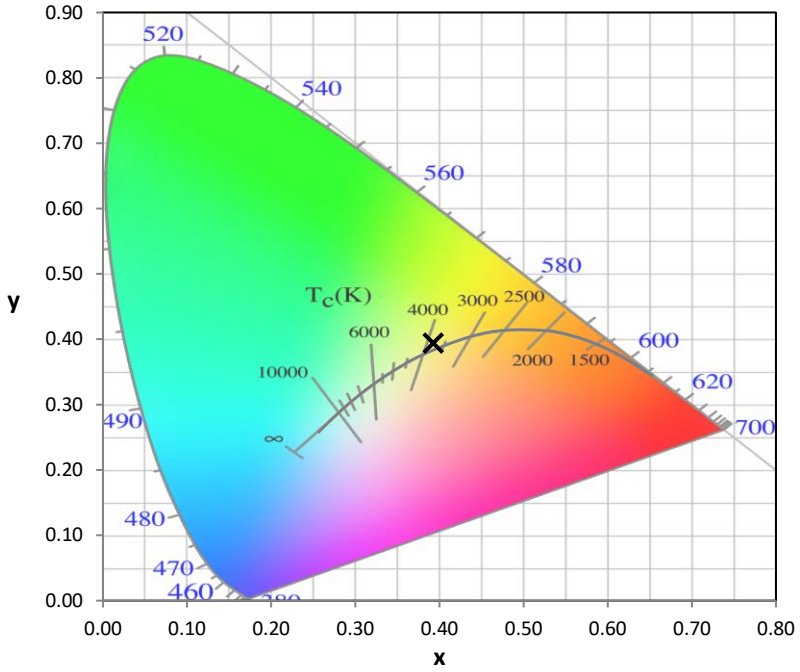
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-5

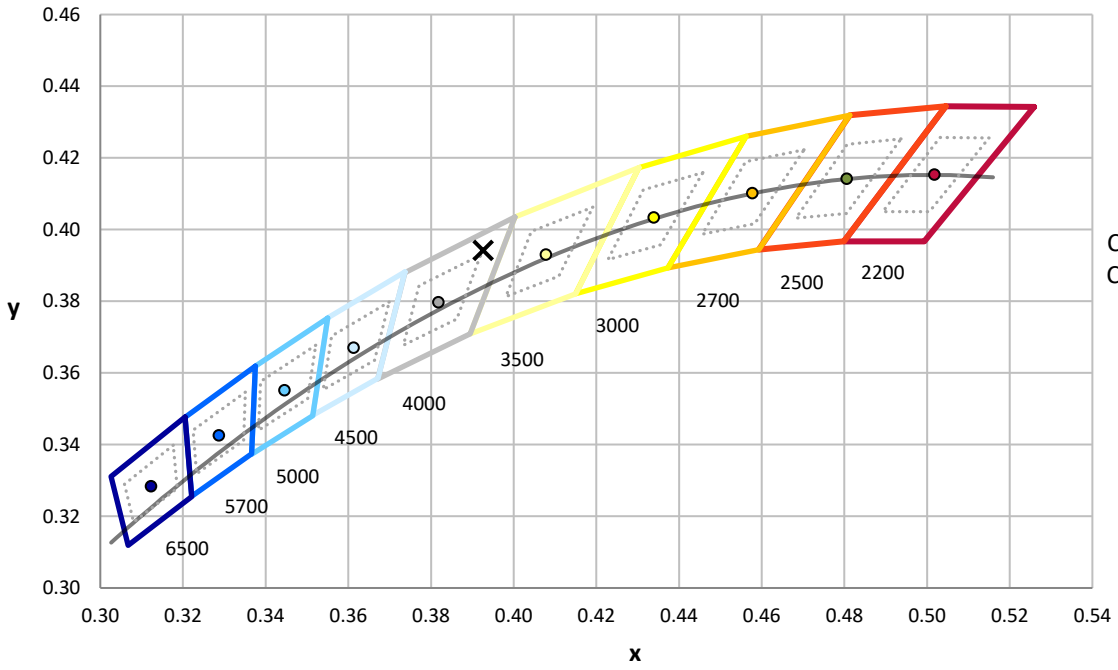
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-5

CIE 1931 Chromaticity Diagram



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

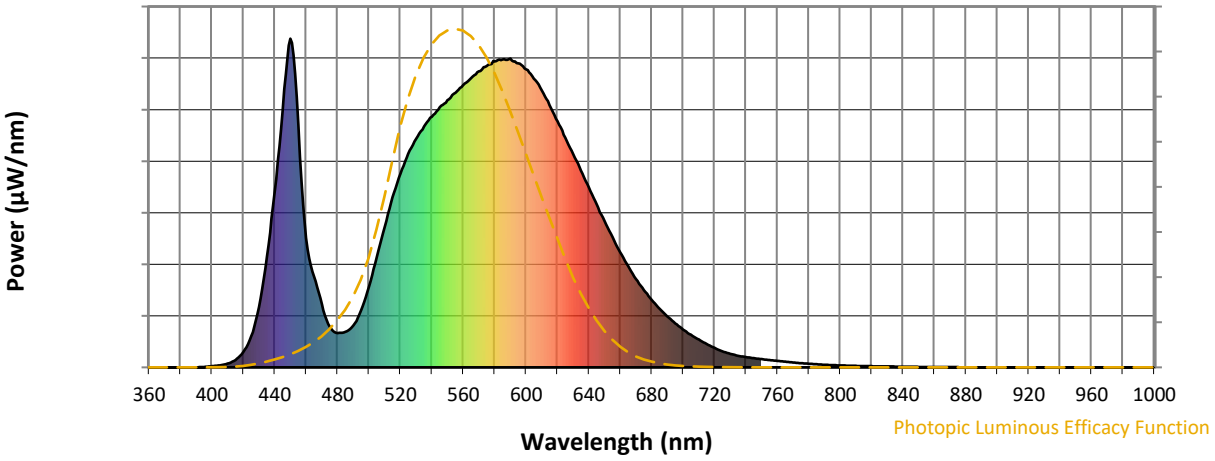


CCT = 3819K
CIE x = 0.3926
CIE y = 0.3942
Duv = 0.0046

Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

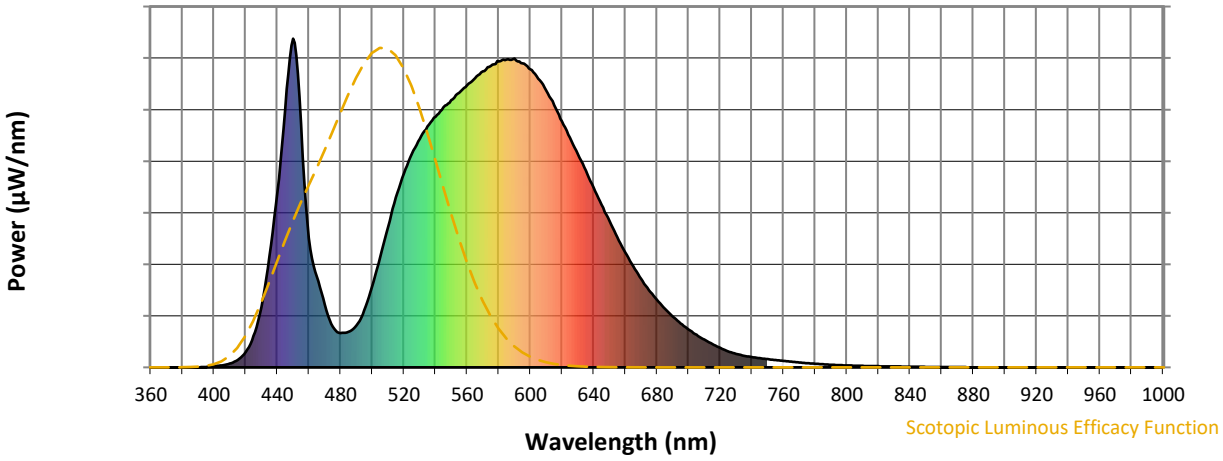


Photopic Lumens: NR

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-5

Scotopic Flux vs. Wavelength

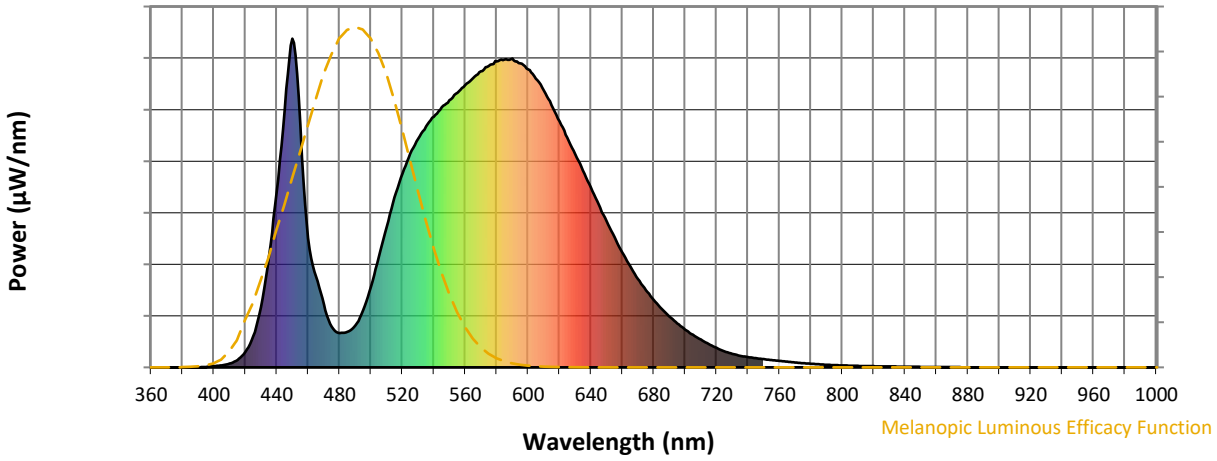


Scotopic Lumens: NR **S/P: 1.45**

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

REPORT NUMBER: SP1-2407-176-5

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.76**

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

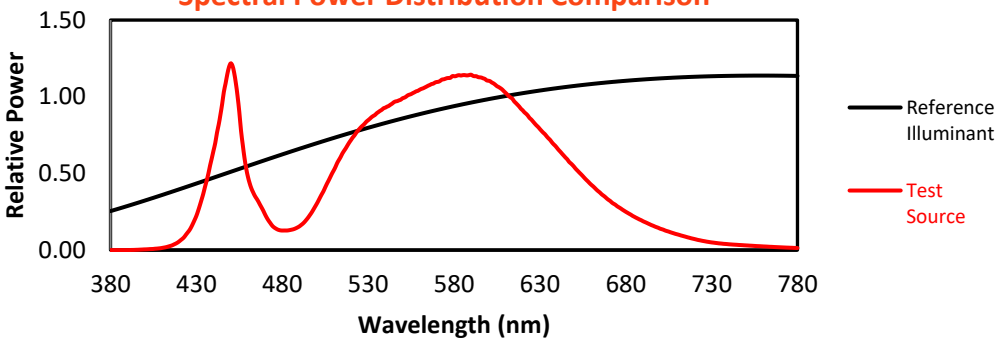
REPORT NUMBER: SP1-2407-176-5

TM-30-18

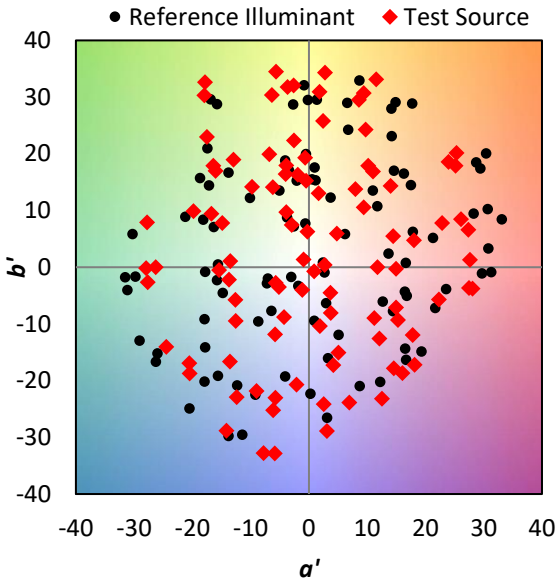
Summary

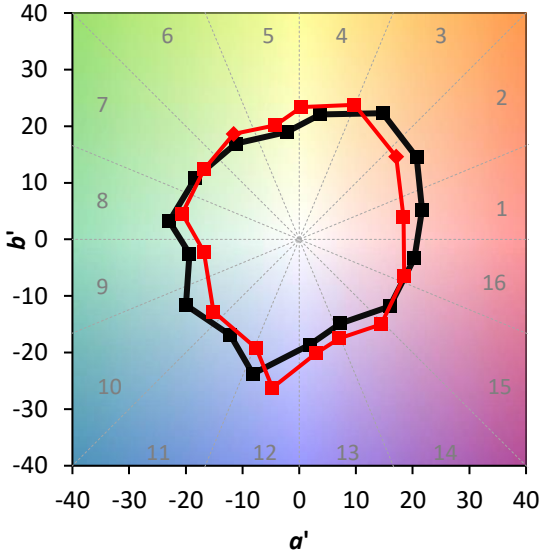
R_f = 75.6
R_g = 94.8
CIE R_a = 72.9
R_9 = -21.5

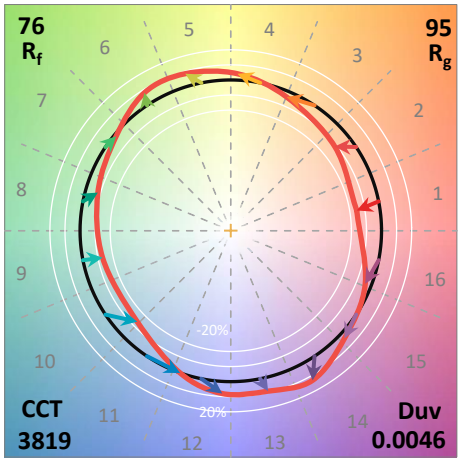
Spectral Power Distribution Comparison

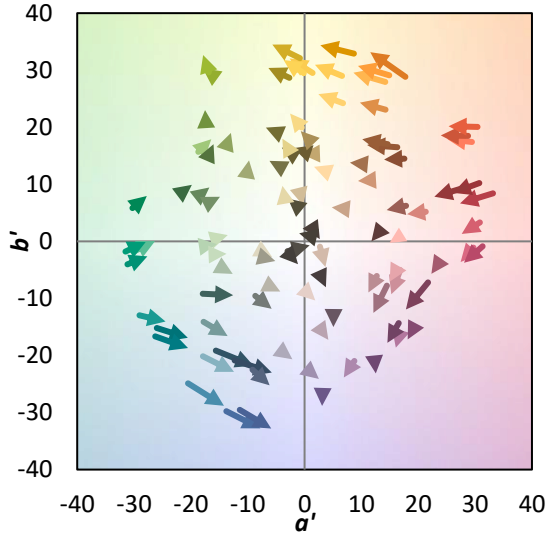


Color Vector Graphics







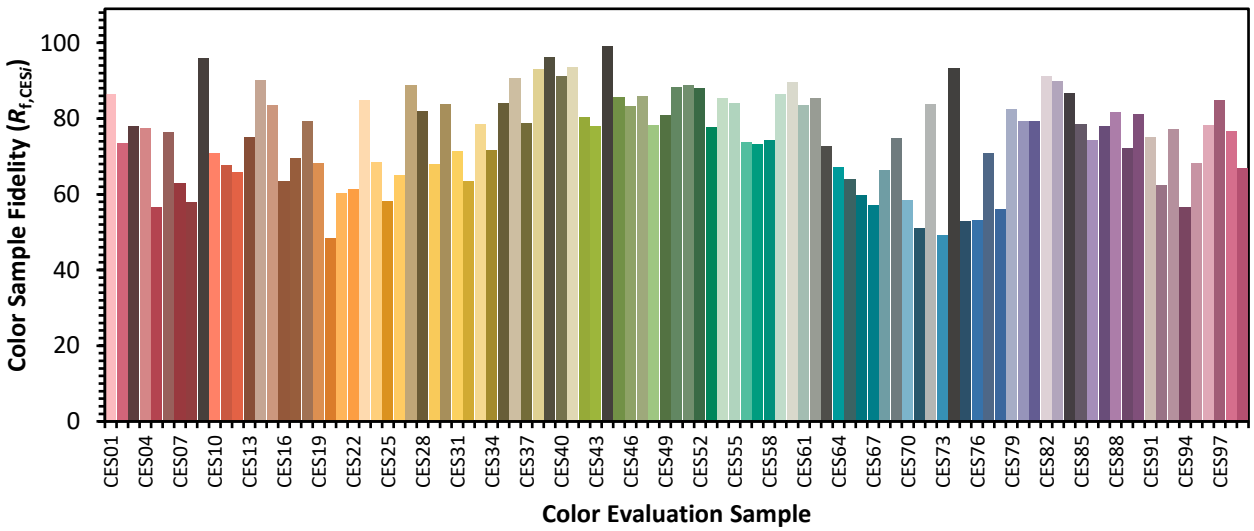


REPORT NUMBER: SP1-2407-176-5

TM-30-18

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

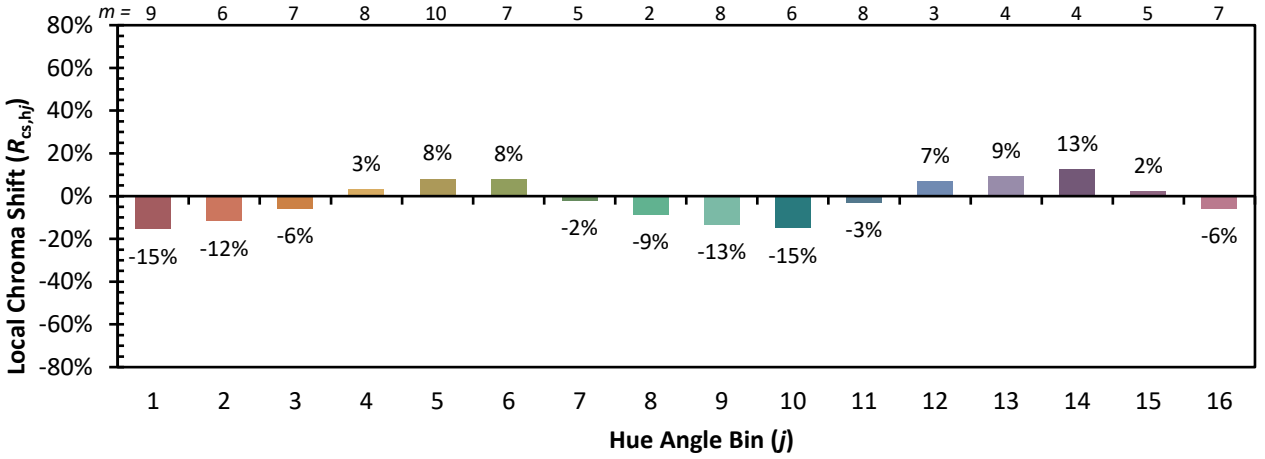
CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82 = 91
CES08 = 39	CES33 = 79	CES58 = 74	CES83 = 90
CES09 = 29	CES34 = 72	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 84	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 91	CES61 = 84	CES86 = 74
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 78
CES13 = 42	CES38 = 93	CES63 = 73	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 67	CES89 = 72
CES15 = 71	CES40 = 91	CES65 = 64	CES90 = 81
CES16 = 47	CES41 = 93	CES66 = 60	CES91 = 75
CES17 = 49	CES42 = 80	CES67 = 57	CES92 = 62
CES18 = 56	CES43 = 78	CES68 = 66	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 75	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 58	CES95 = 68
CES21 = 86	CES46 = 83	CES71 = 51	CES96 = 78
CES22 = 78	CES47 = 86	CES72 = 84	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 49	CES98 = 77
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 67
CES25 = 72	CES50 = 88	CES75 = 53	

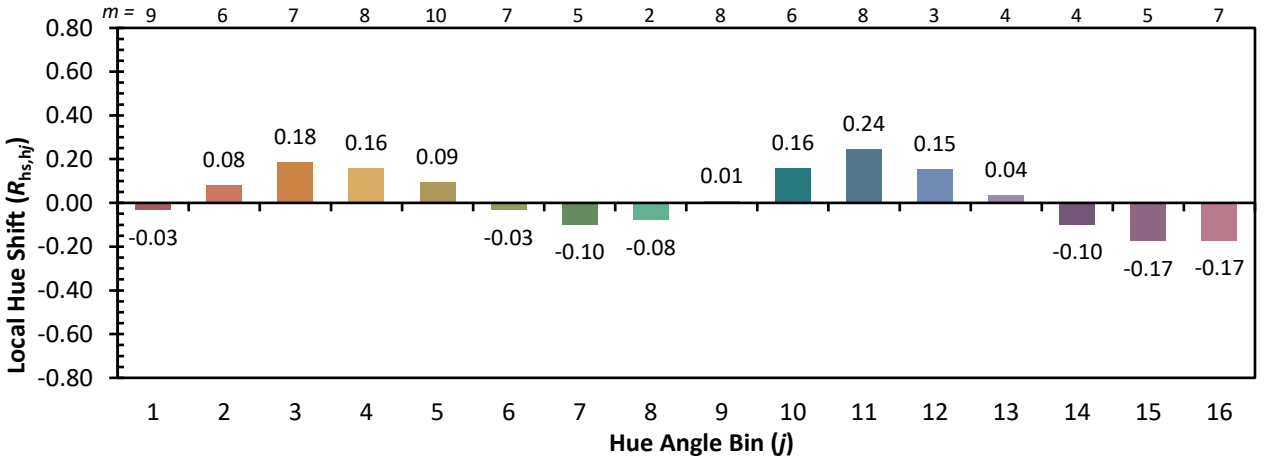


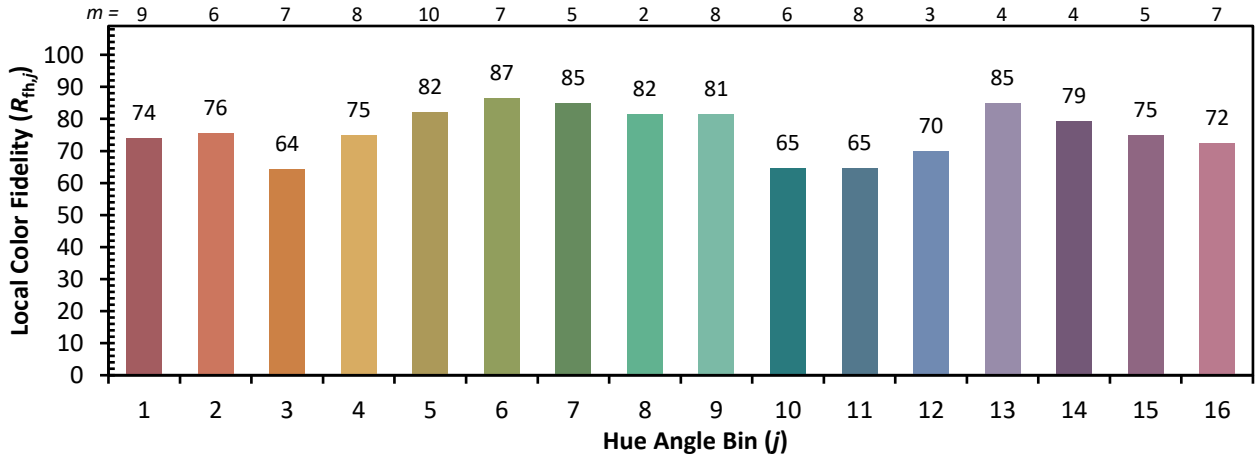
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Color Rendition by Hue-Angle Bin



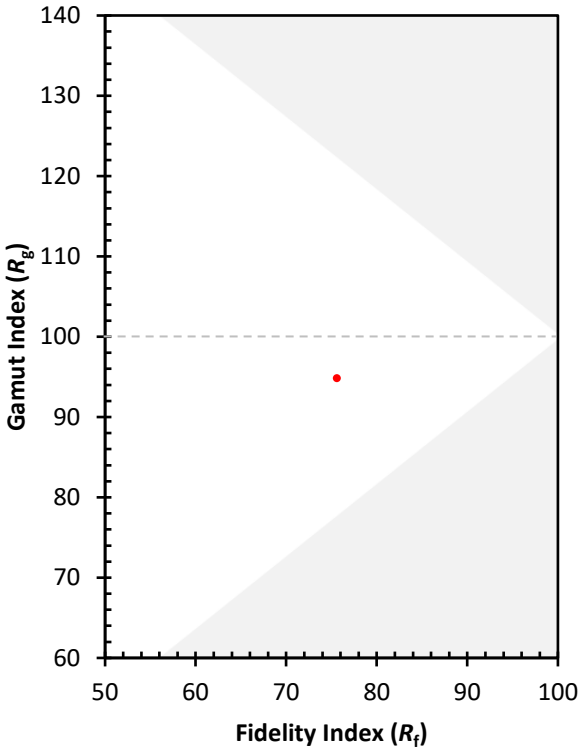


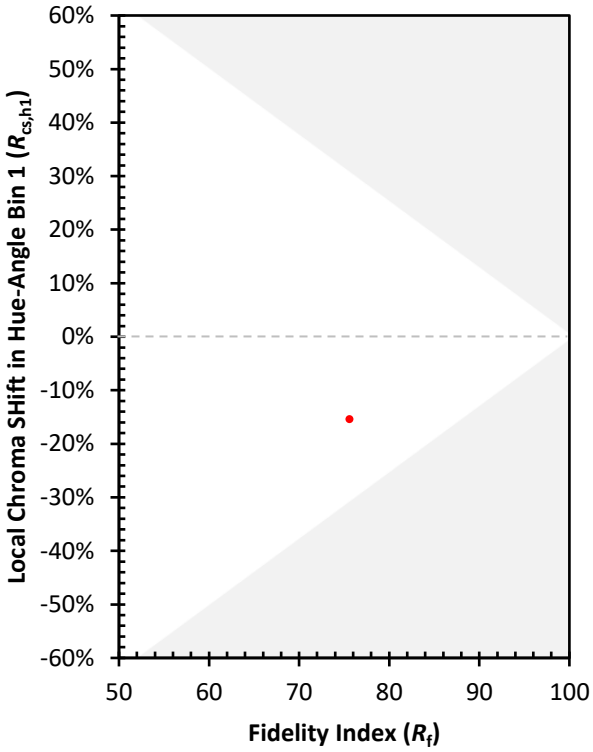


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Measure Comparisons





(END OF REPORT)