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: P821497

Luminaire Tested: **TT-D2-735-12VDC-WQ-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:	P821497
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-2)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D2-735-12VDC-WQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	3500K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	4015 lumens
Efficiency:	N/A
Efficacy:	105.7 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B1 - U2 - G2

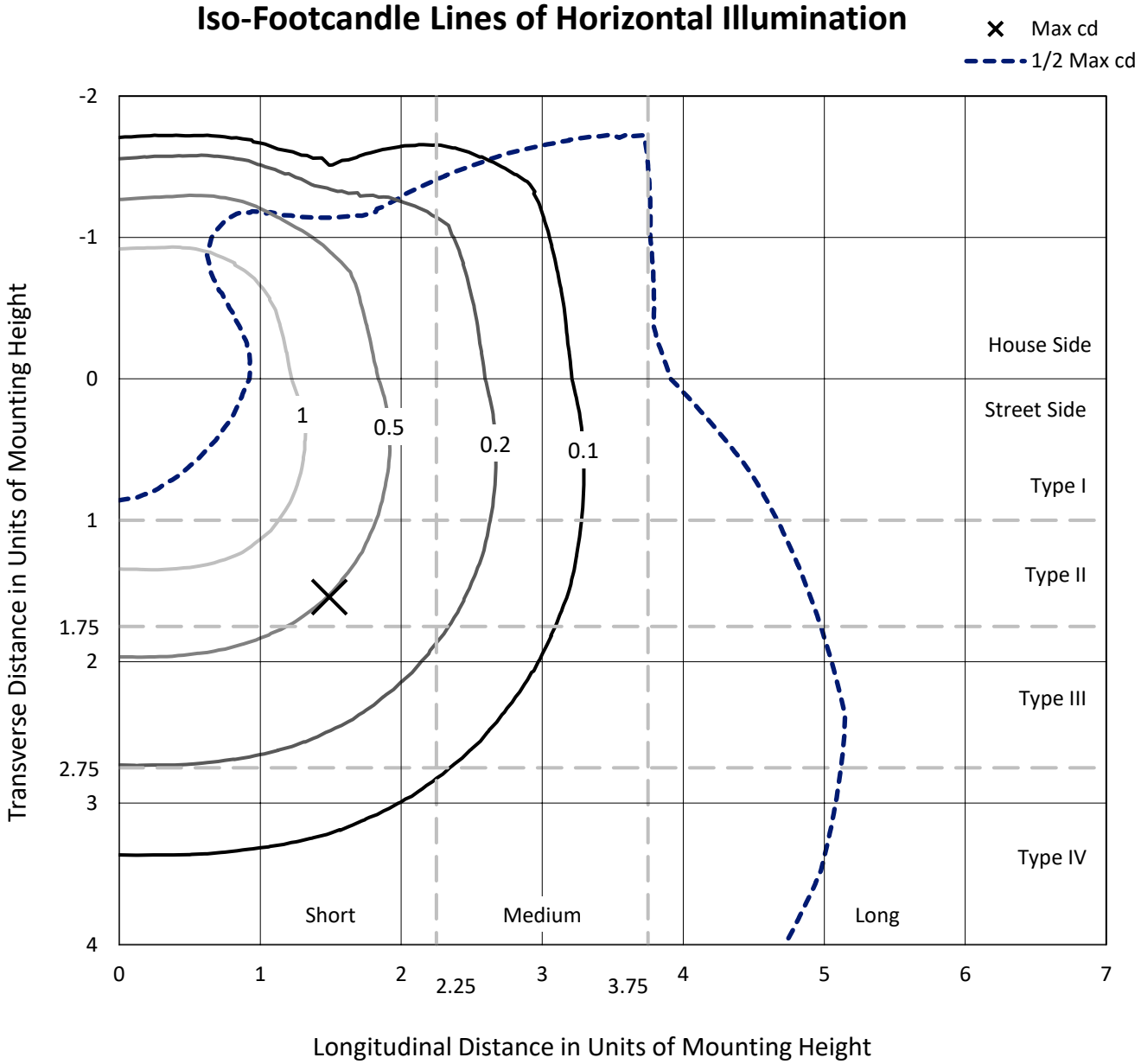
Input Watts (W):	38
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



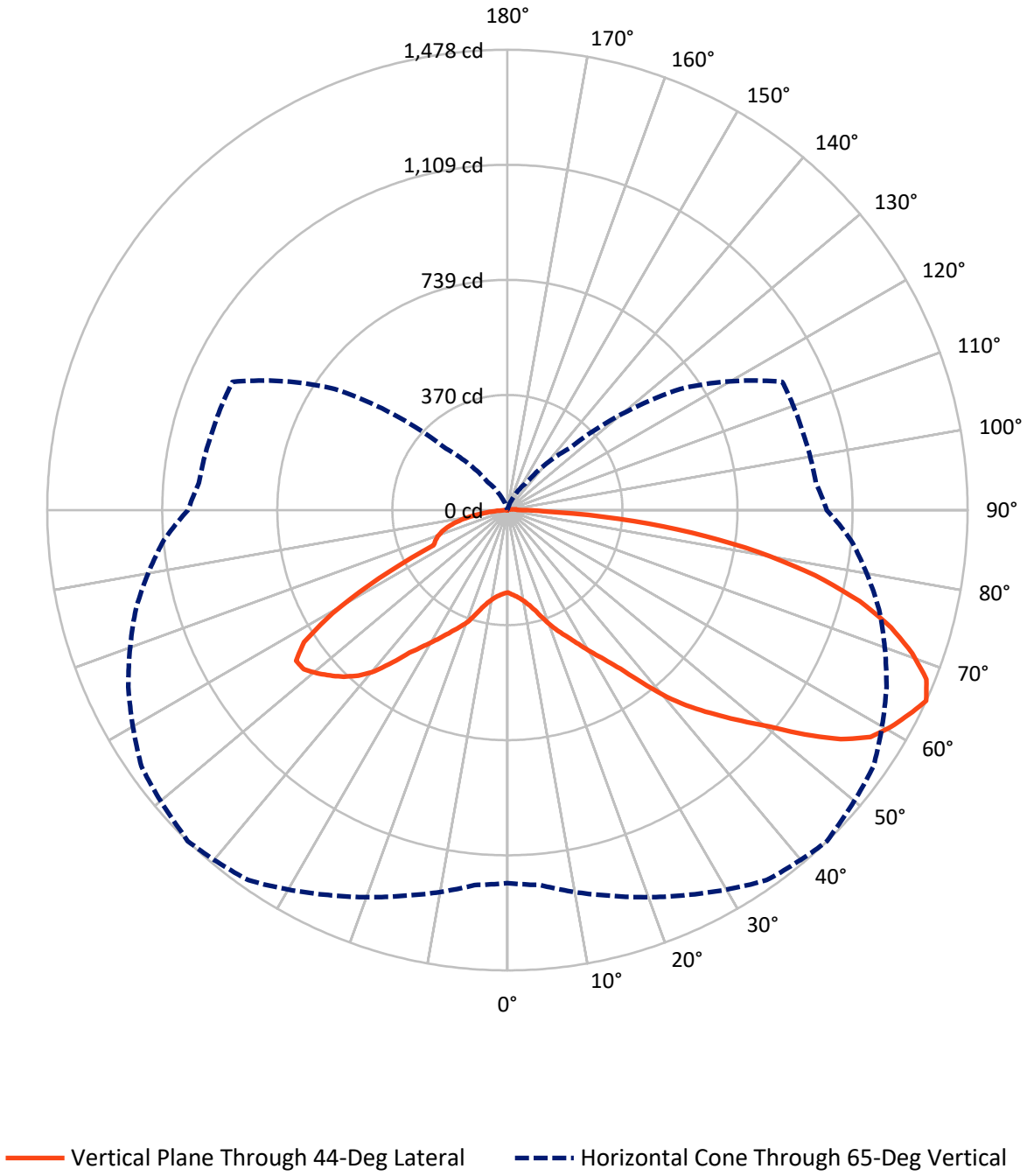
Based on 15 foot mounting height. Maximum calculated value = 1.6 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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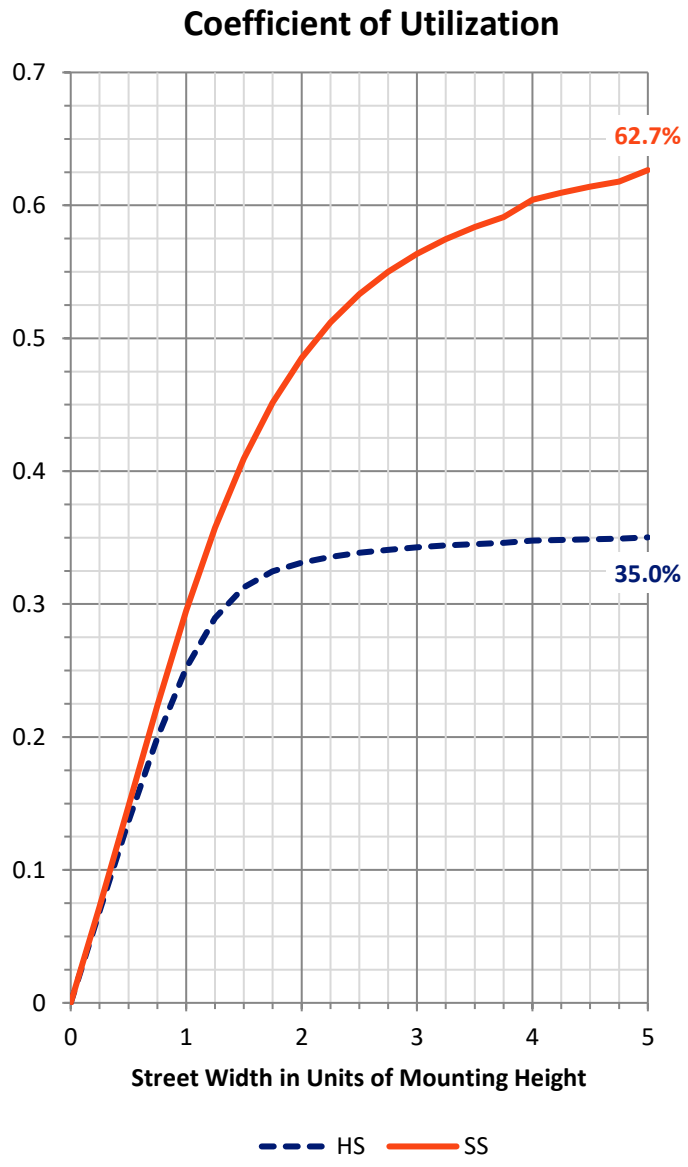
REPORT NUMBER: P821497
CATALOG NUMBER: TT-D2-735-12VDC-WQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1414.2	1.0	1415.1
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	2583.6	16.3	2599.9
	% Fixture	64.3	0.4	64.8
Total	Lumens	3997.8	17.2	4015.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	0.7
10°-20°	95.4	2.4
20°-30°	204.4	5.1
30°-40°	370.1	9.2
40°-50°	617.6	15.4
50°-60°	855.4	21.3
60°-70°	886.5	22.1
70°-80°	713.4	17.8
80°-90°	228.2	5.7
90°-100°	11.6	0.3
100°-110°	3.7	0.1
110°-120°	0.7	0.0
120°-130°	0.5	0.0
130°-140°	0.3	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	3997.8	99.6
0°-180°	4015.0	100.0



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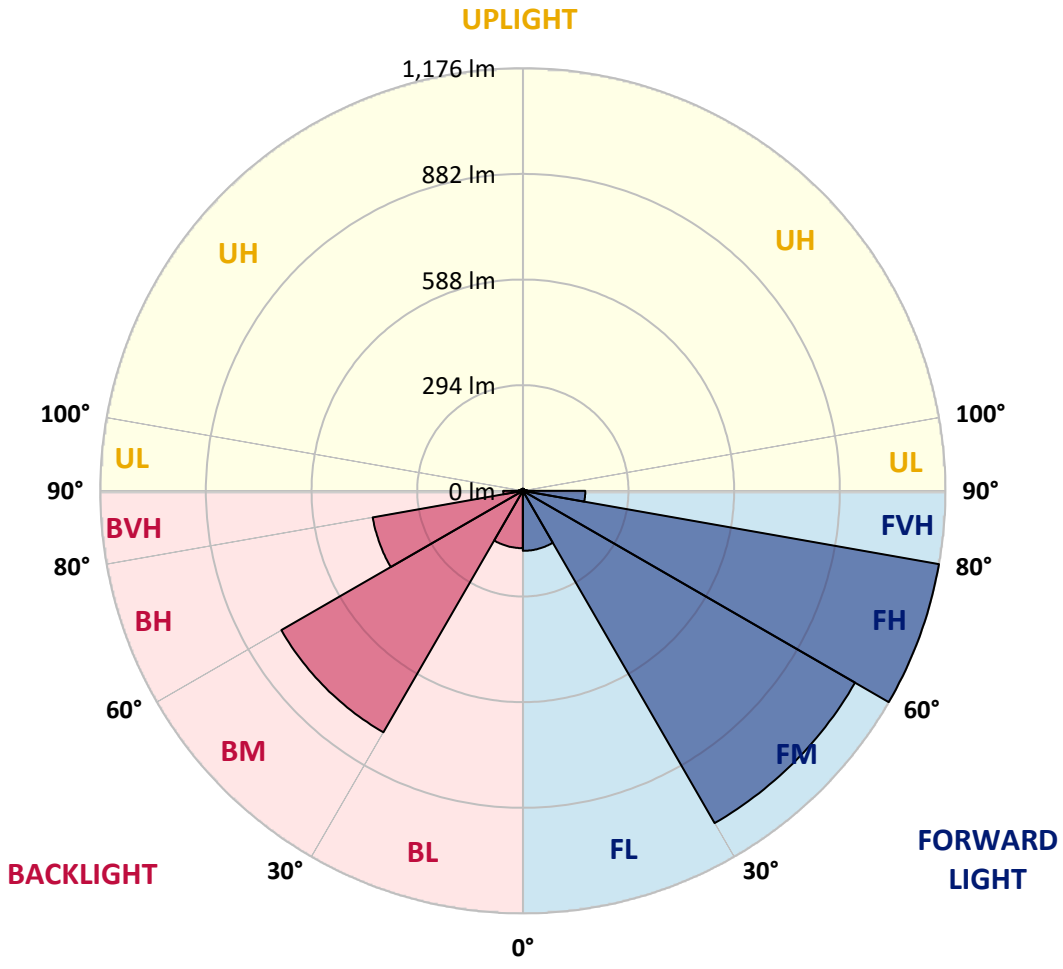
Scaled Data Report

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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°)	167.0	4.2			
FM	(30°-60°)	1067.4	26.6			
FH	(60°-80°)	1175.7	29.3			G1/1800
FVH	(80°-90°)	173.6	4.3			G2/225
BL	(0°-30°)	159.6	4.0	B1/500		
BM	(30°-60°)	775.7	19.3	B1/1000		
BH	(60°-80°)	424.3	10.6	B1/500		G1/500
BVH	(80°-90°)	54.6	1.4			G1/100
UL	(90°-100°)	11.6	0.3		U2/50	
UH	(100°-180°)	5.7	0.1		U1/10	

BUG Rating: B1-U2-G2
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	264.9	264.9	264.9	264.9	264.9	*264.9*	264.9	264.9	264.9	264.9	264.9
2.5°	272.8	272.0	272.0	271.2	271.2	*271.2*	271.2	271.2	270.4	269.6	268.9
5°	279.8	279.8	279.0	279.0	278.3	*277.5*	278.3	277.5	276.7	275.9	275.1
7.5°	289.2	288.5	288.5	286.9	286.9	*286.1*	286.1	286.1	285.3	283.7	283.0
10°	302.6	301.0	301.0	299.4	298.6	*297.9*	297.9	296.3	296.3	295.5	294.7
12.5°	317.5	315.9	317.5	316.7	315.1	*313.5*	313.5	312.0	311.2	310.4	307.3
15°	337.0	334.7	336.3	336.3	335.5	*334.7*	334.7	331.6	330.0	328.4	325.3
17.5°	360.6	359.0	359.8	360.6	362.9	*362.9*	363.7	359.8	356.6	351.2	348.8
20°	390.3	389.6	391.9	391.9	394.3	*394.3*	395.1	391.1	385.6	381.7	377.0
22.5°	419.4	419.4	422.5	422.5	424.8	*423.3*	423.3	421.7	415.4	410.7	406.0
25°	449.1	448.4	451.5	453.8	457.0	*453.1*	454.6	452.3	446.0	439.7	433.5
27.5°	482.1	480.5	482.1	485.2	490.7	*487.5*	489.1	485.2	478.9	470.3	464.8
30°	518.1	515.8	518.1	522.8	526.7	*528.3*	527.5	522.0	516.5	504.0	500.1
32.5°	553.4	553.4	558.9	567.5	572.2	*571.4*	572.2	567.5	559.7	544.0	534.6
35°	596.5	599.6	606.7	619.2	629.4	*625.5*	625.5	623.9	610.6	591.8	579.3
37.5°	653.7	656.9	671.0	685.9	704.7	*703.1*	703.9	699.2	673.3	653.7	635.7
40°	720.3	723.5	744.6	765.8	783.8	*789.3*	790.1	779.9	751.7	723.5	695.3
42.5°	781.5	785.4	807.3	837.1	856.7	*865.4*	866.9	850.5	820.7	788.5	753.3
45°	842.6	847.3	872.4	903.8	932.0	*935.9*	936.7	922.6	889.7	852.8	807.3
47.5°	905.3	909.2	935.1	972.7	1003.3	*1011.1*	1011.9	998.6	958.6	913.9	860.6
50°	962.5	970.4	1005.7	1045.6	1086.4	*1092.7*	1093.4	1078.6	1031.5	981.4	910.8
52.5°	1030.0	1033.9	1071.5	1138.1	1172.6	*1196.9*	1197.7	1168.7	1118.5	1051.1	960.2
55°	1108.3	1115.4	1153.8	1220.4	1282.4	*1298.8*	1303.5	1269.0	1202.4	1129.5	1022.9
57.5°	1153.8	1167.1	1223.6	1287.1	1364.7	*1375.6*	1378.0	1341.9	1268.2	1188.3	1069.9
60°	1178.1	1185.9	1245.5	1344.3	1404.6	*1414.8*	1414.0	1386.6	1312.9	1215.7	1091.9
62.5°	1205.5	1218.9	1269.0	1369.4	1421.9	*1447.0*	1443.0	1414.8	1339.6	1233.0	1113.0
65°	*1197.7*	*1208.7*	*1282.4*	*1363.9*	*1450.9*	*1478.3*	*1472.8*	*1435.2*	*1343.5*	*1236.1*	*1107.6*
67.5°	1166.3	1175.0	1247.9	1349.0	1432.1	*1451.7*	1461.1	1424.2	1321.5	1202.4	1073.1
70°	1102.1	1115.4	1185.9	1289.4	1365.4	*1379.5*	1381.1	1358.4	1265.9	1140.5	1015.8
72.5°	1013.5	1024.5	1101.3	1206.3	1272.2	*1288.6*	1290.2	1255.7	1185.9	1055.8	933.5
75°	907.7	917.9	977.4	1087.2	1152.2	*1168.7*	1167.1	1135.0	1061.3	938.2	824.6
77.5°	776.8	795.6	848.1	938.2	1001.7	*1010.4*	1011.9	976.7	917.1	810.5	700.0
80°	613.0	631.0	690.6	758.0	811.3	*818.3*	820.7	790.9	736.8	642.7	548.7
82.5°	435.8	451.5	498.5	553.4	598.1	*598.1*	599.6	575.3	533.8	453.1	379.4
85°	248.5	260.2	291.6	330.8	362.9	*359.0*	359.8	337.8	310.4	247.7	200.7
87.5°	81.5	87.0	94.1	109.0	123.8	*114.4*	119.1	98.8	89.4	66.6	51.7
90°	43.1	43.1	41.5	40.0	36.8	*32.1*	32.1	25.9	19.6	12.5	4.7
92.5°	39.2	39.2	37.6	36.1	32.9	*29.0*	29.0	23.5	17.2	11.0	3.9
95°	32.1	32.1	31.4	29.8	27.4	*24.3*	23.5	19.6	14.9	8.6	3.1
97.5°	25.1	25.1	24.3	23.5	21.2	*18.8*	18.8	14.9	11.0	7.1	2.4
100°	18.8	18.8	18.8	17.2	16.5	*14.1*	14.1	11.8	8.6	5.5	1.6
102.5°	13.3	14.1	13.3	12.5	11.8	*10.2*	10.2	8.6	6.3	3.9	1.6
105°	9.4	9.4	8.6	8.6	7.8	*7.1*	7.1	5.5	3.9	2.4	0.8
107.5°	5.5	5.5	5.5	5.5	4.7	*4.7*	4.7	3.9	2.4	1.6	0.8
110°	3.1	3.1	3.1	3.1	2.4	*2.4*	2.4	1.6	1.6	0.8	0.8

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	1.6	1.6	1.6	1.6	1.6	*1.6*	1.6	0.8	0.8	0.8	0.8
115°	0.8	0.8	0.8	1.6	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
117.5°	0.8	0.8	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
120°	0.0	0.0	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
122.5°	0.0	0.0	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
125°	0.0	0.0	0.8	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
127.5°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
130°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
132.5°	0.0	0.0	0.0	0.8	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
135°	0.0	0.0	0.0	0.0	0.8	*0.8*	0.8	0.8	0.8	0.8	0.8
137.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
140°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
142.5°	0.8	0.8	0.8	0.0	0.0	*0.8*	0.8	0.8	0.8	0.8	0.8
145°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
147.5°	0.8	0.8	0.8	0.0	0.0	*0.8*	0.8	0.8	0.8	0.8	0.8
150°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
152.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
155°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.8	0.8	0.8
157.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
160°	0.8	0.0	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
162.5°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
165°	0.8	0.0	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
167.5°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
170°	0.8	0.0	0.0	0.0	0.0	*0.8*	0.0	0.8	0.8	0.8	0.8
172.5°	0.8	0.8	0.0	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
175°	0.8	0.8	0.8	0.0	0.0	*0.0*	0.8	0.8	0.8	0.8	0.8
177.5°	0.0	0.8	0.0	0.0	0.0	*0.0*	0.0	0.8	0.8	0.8	0.8
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°	264.9	264.9	264.9	264.9	264.9	264.9	264.9	264.9	264.9	264.9	264.9
2.5°	268.9	268.9	268.1	267.3	267.3	267.3	266.5	266.5	266.5	265.7	265.7
5°	275.1	274.3	274.3	273.6	273.6	272.8	272.8	272.0	271.2	271.2	270.4
7.5°	283.7	283.0	281.4	282.2	280.6	279.8	279.0	279.0	279.0	278.3	278.3
10°	293.9	293.9	292.4	292.4	290.8	290.0	289.2	289.2	290.0	290.0	289.2
12.5°	307.3	306.5	306.5	305.7	304.9	304.1	304.9	304.9	304.1	303.3	302.6
15°	323.7	323.7	323.7	324.5	323.7	323.7	323.7	322.9	321.4	319.8	319.8
17.5°	348.8	348.0	346.5	347.2	348.8	351.2	348.8	346.5	344.1	344.1	343.3
20°	374.7	375.5	375.5	376.2	378.6	380.9	377.8	376.2	374.7	373.1	371.5
22.5°	402.9	403.7	403.7	402.9	404.5	403.7	402.1	400.5	399.0	396.6	395.1
25°	430.3	431.1	430.3	429.5	430.3	428.0	425.6	423.3	419.4	415.4	415.4
27.5°	460.9	460.1	457.0	457.8	456.2	454.6	449.9	444.4	438.9	435.0	435.0
30°	493.0	493.0	486.8	489.9	486.8	486.0	475.8	468.7	460.9	455.4	454.6
32.5°	528.3	526.7	522.0	525.2	522.0	518.9	506.4	497.0	483.6	475.8	475.0
35°	570.6	566.7	562.8	565.9	565.9	557.3	544.8	527.5	508.7	499.3	498.5
37.5°	622.4	620.0	615.3	619.2	622.4	613.7	594.9	569.8	543.2	529.1	528.3
40°	679.6	676.4	674.1	679.6	681.9	673.3	648.2	613.0	576.9	556.5	553.4
42.5°	733.7	726.6	722.7	730.5	728.2	718.8	684.3	643.5	594.1	570.6	566.7
45°	782.3	774.4	768.9	776.0	772.9	754.0	715.6	660.8	601.2	572.2	567.5
47.5°	830.1	818.3	809.7	819.1	812.8	783.8	736.8	669.4	593.4	558.9	551.0
50°	870.8	856.7	851.2	862.2	852.8	812.1	751.7	665.5	573.8	523.6	511.1
52.5°	919.4	898.3	892.8	913.9	892.8	838.7	754.8	656.1	529.1	468.7	457.0
55°	968.8	945.3	936.7	956.3	924.1	844.2	739.2	602.0	461.7	397.4	380.2
57.5°	994.7	972.7	964.9	979.0	919.4	790.9	669.4	501.7	360.6	288.5	269.6
60°	1018.2	979.8	969.6	988.4	870.8	667.0	518.1	359.8	217.9	163.8	149.7
62.5°	1034.7	997.8	976.7	985.3	781.5	485.2	297.9	173.2	82.3	57.2	56.4
65°	*1026.0*	*994.7*	*980.6*	*974.3*	*678.8*	*279.0*	*109.7*	*43.9*	*2.4*	*2.4*	*1.6*
67.5°	999.4	964.9	961.0	966.5	671.7	268.1	101.9	40.0	0.0	0.0	0.0
70°	940.6	916.3	916.3	935.1	641.2	254.0	94.8	36.8	0.0	0.0	0.0
72.5°	861.4	842.6	853.6	881.8	595.7	234.4	85.4	32.9	0.0	0.0	0.0
75°	766.6	747.0	761.1	792.5	539.3	209.3	74.5	28.2	0.0	0.0	0.0
77.5°	645.9	632.6	654.5	683.5	464.0	176.4	61.1	22.7	0.0	0.0	0.0
80°	503.2	496.2	525.2	551.0	374.7	138.7	46.2	16.5	0.0	0.0	0.0
82.5°	347.2	344.1	372.3	399.0	268.1	97.2	31.4	11.0	0.0	0.0	0.0
85°	181.8	181.8	203.8	228.1	149.7	52.5	15.7	4.7	0.0	0.0	0.0
87.5°	40.0	38.4	41.5	53.3	29.8	10.2	2.4	0.8	0.0	0.0	0.0
90°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.8	0.8	0.8	0.8	0.8	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.8	0.8	0.8	0.8	0.8	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

Scaled Data Report

REPORT NUMBER: P821497
CATALOG NUMBER: TT-D2-735-12VDC-WQ-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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.8	0.8	0.8	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

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

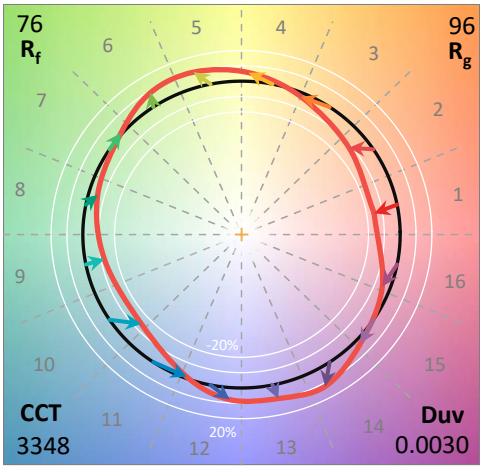
Test Information

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

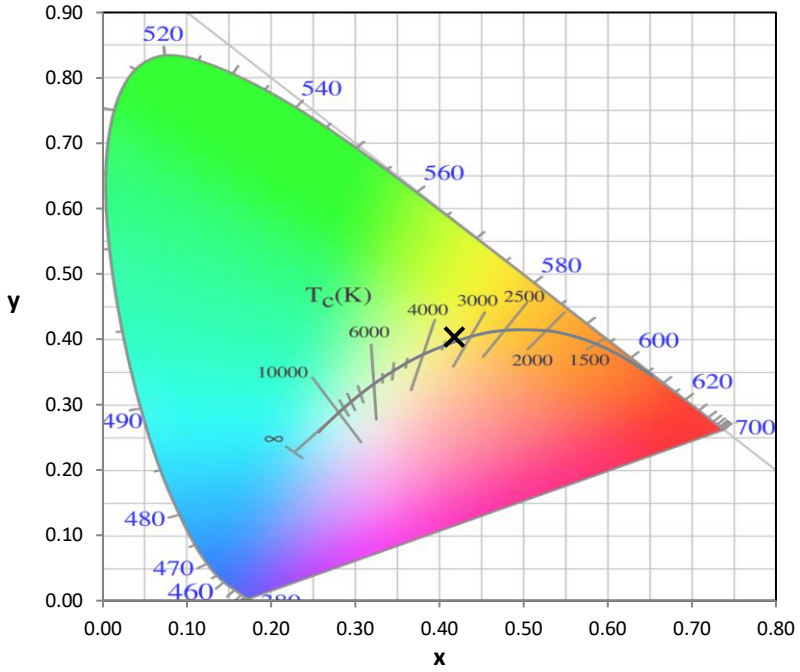
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

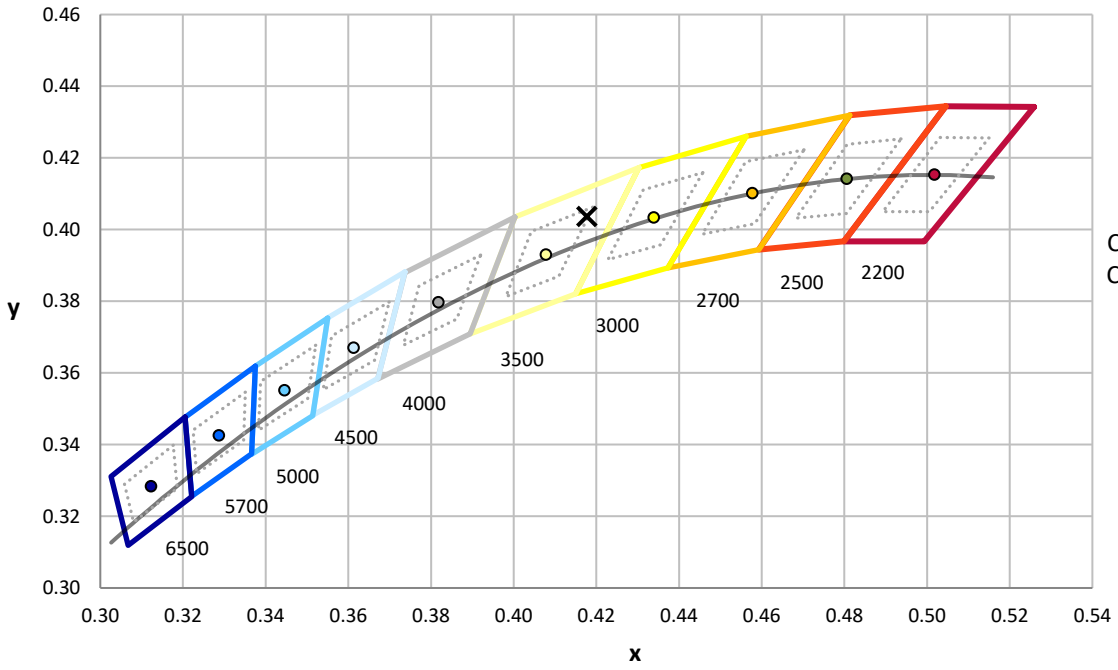
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

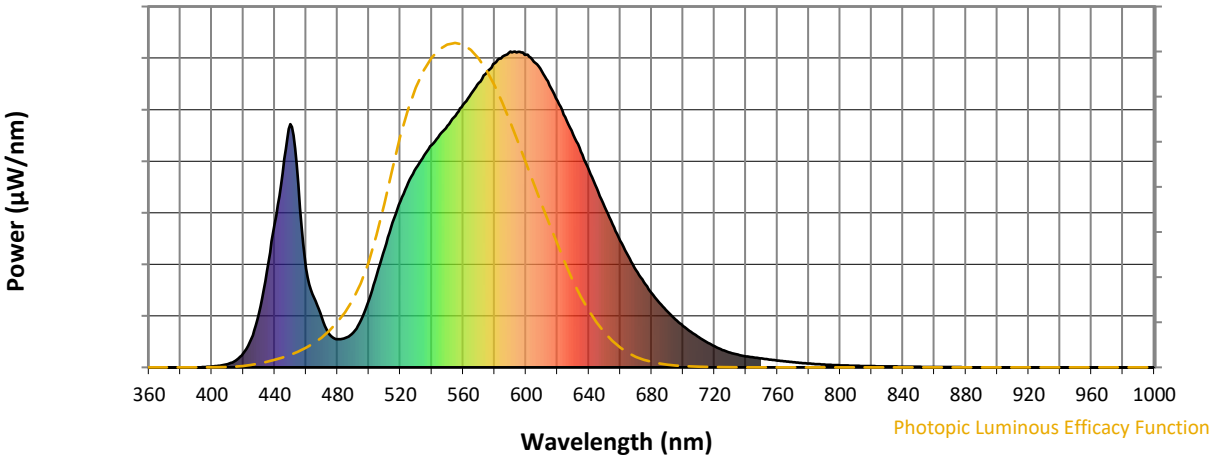


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

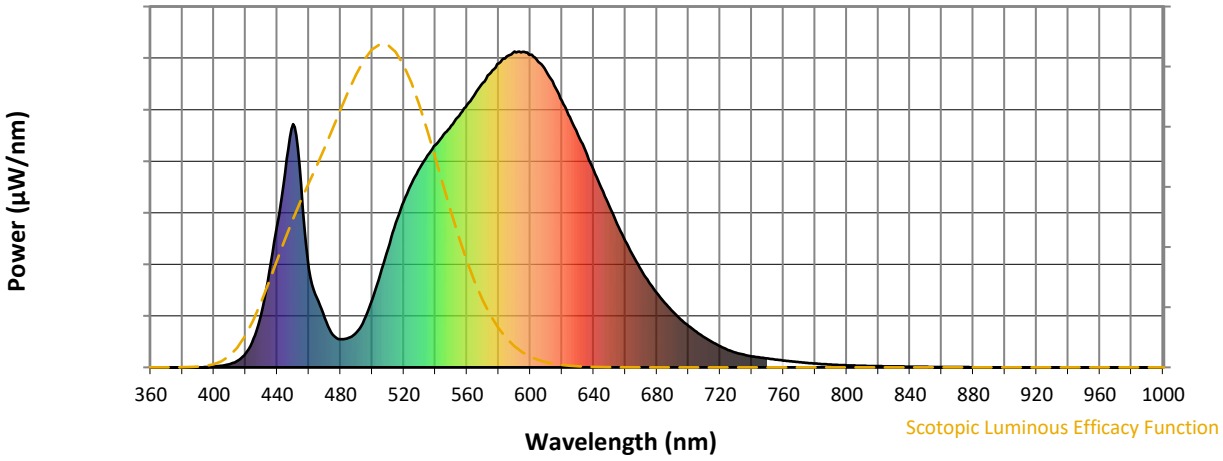


Photopic Lumens: NR

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

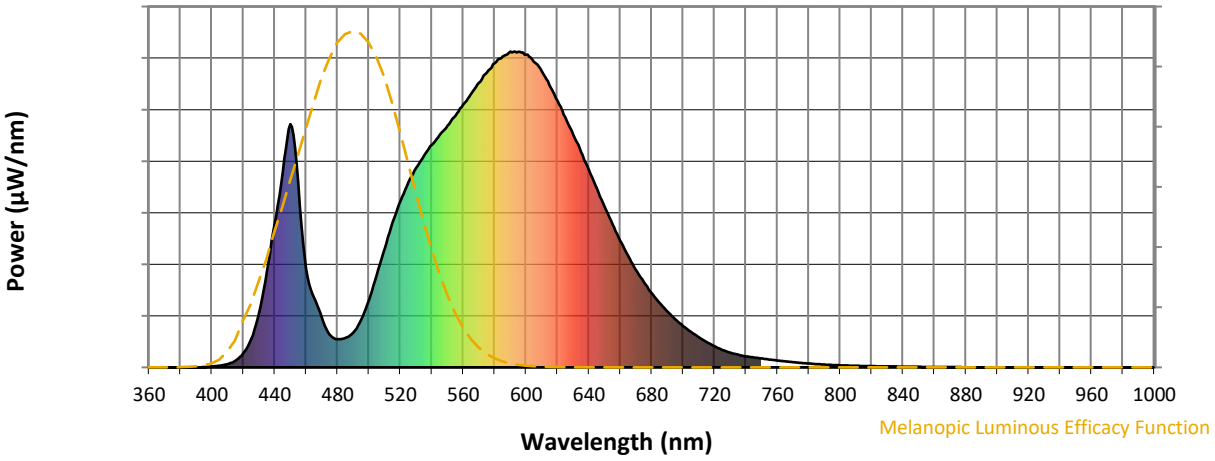


Scotopic Lumens: NR **S/P: 1.31**

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			

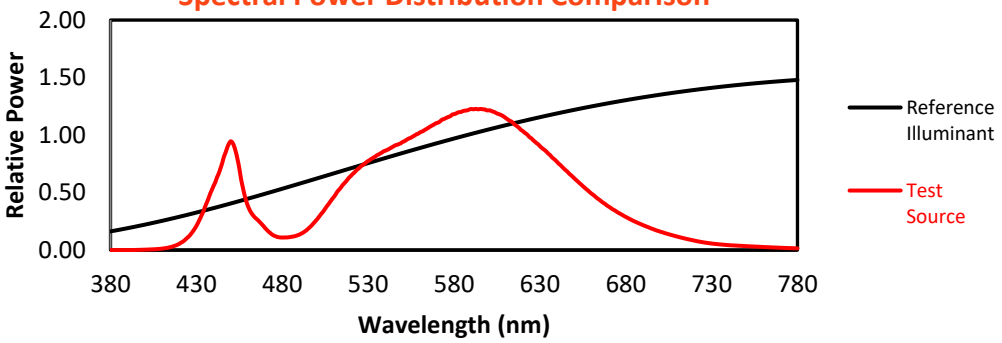
REPORT NUMBER: SP1-2407-176-4

TM-30-18

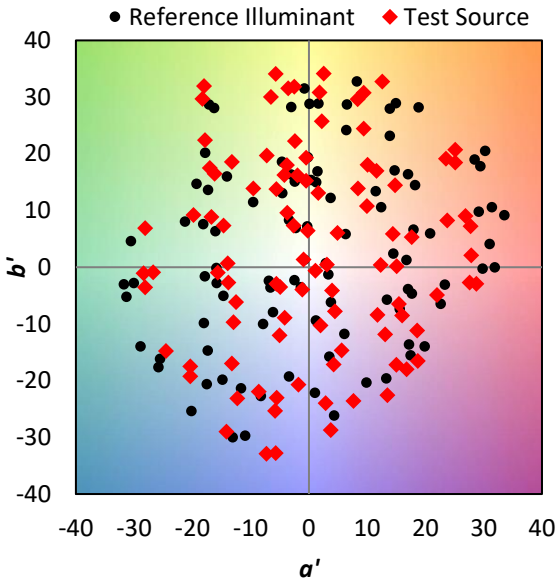
Summary

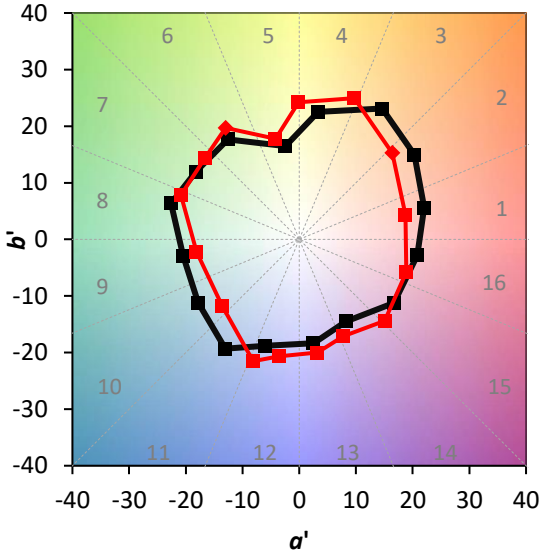
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

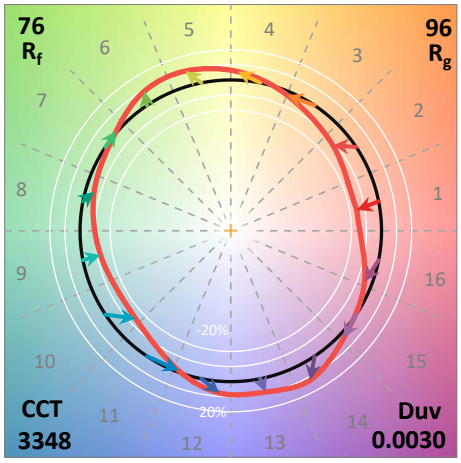
Spectral Power Distribution Comparison

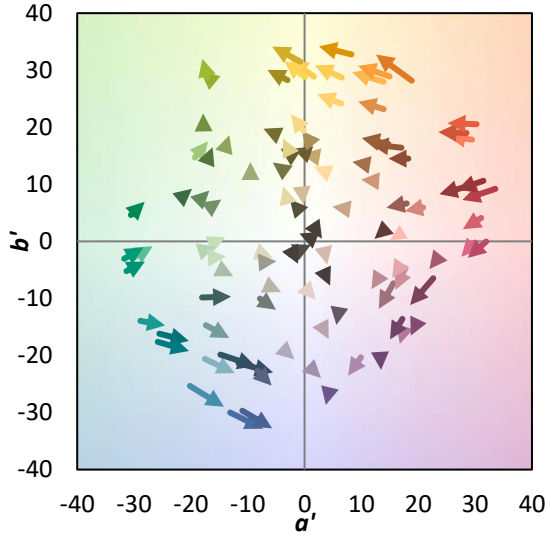


Color Vector Graphics







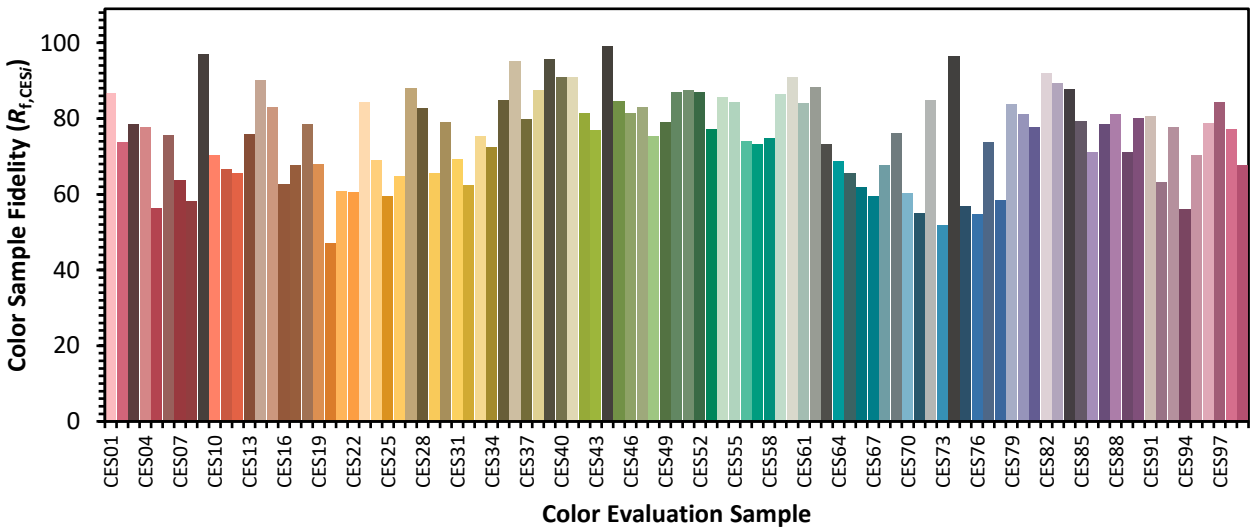


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

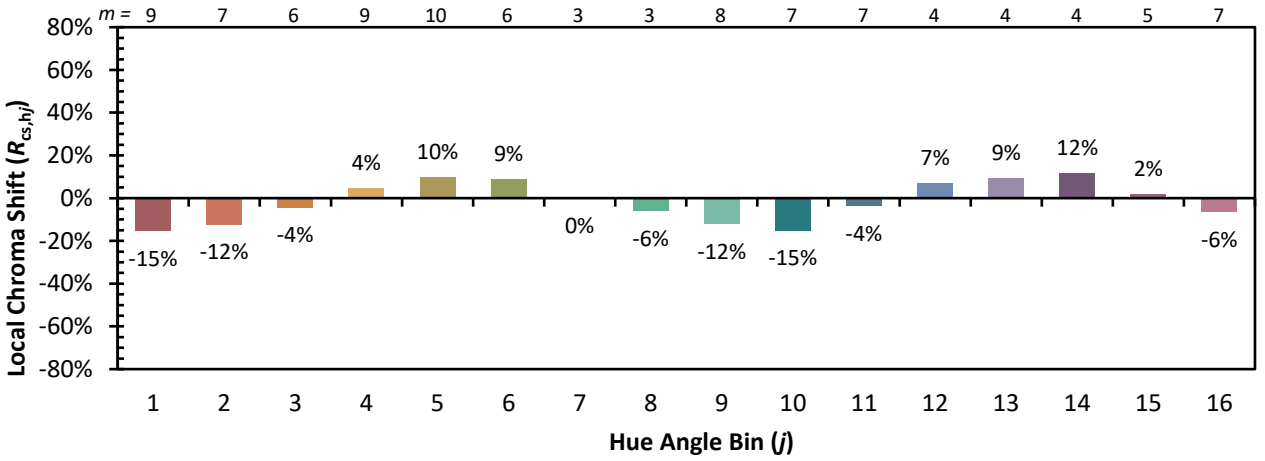
CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82 = 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	

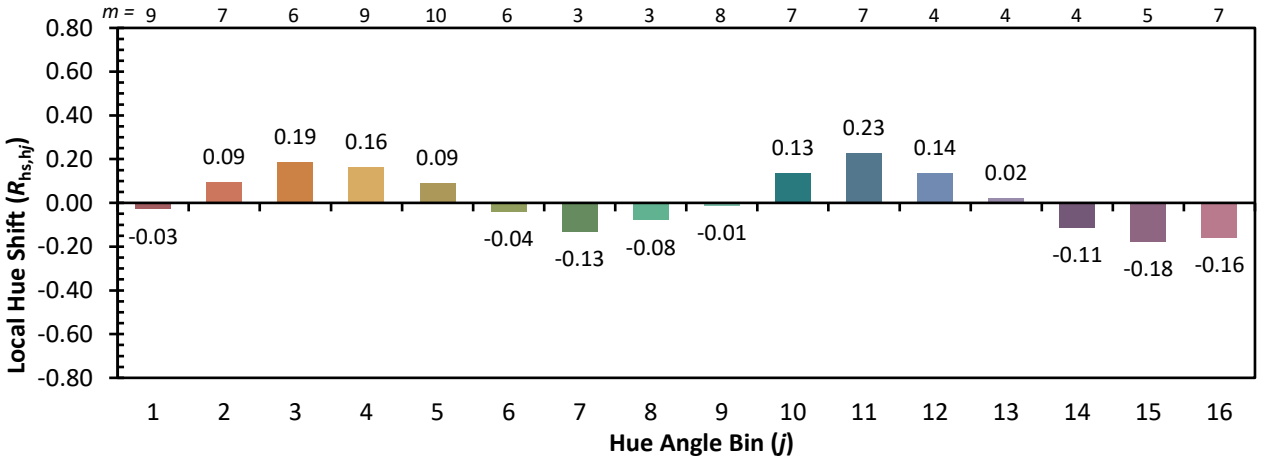


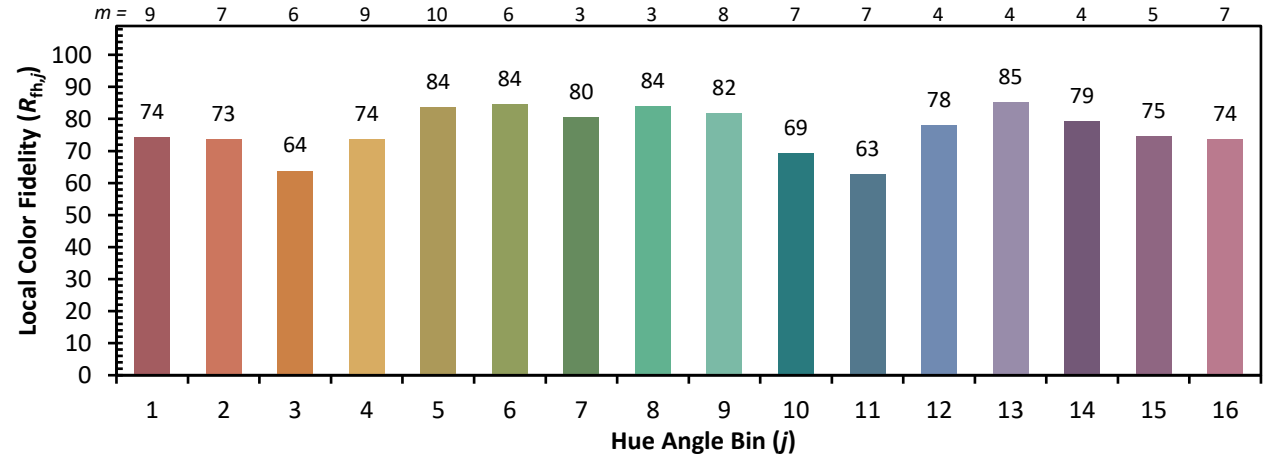
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Color Rendition by Hue-Angle Bin



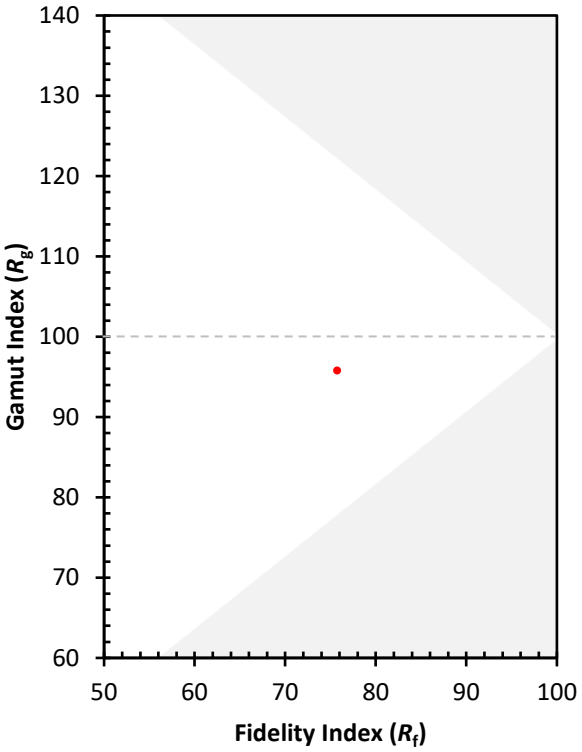


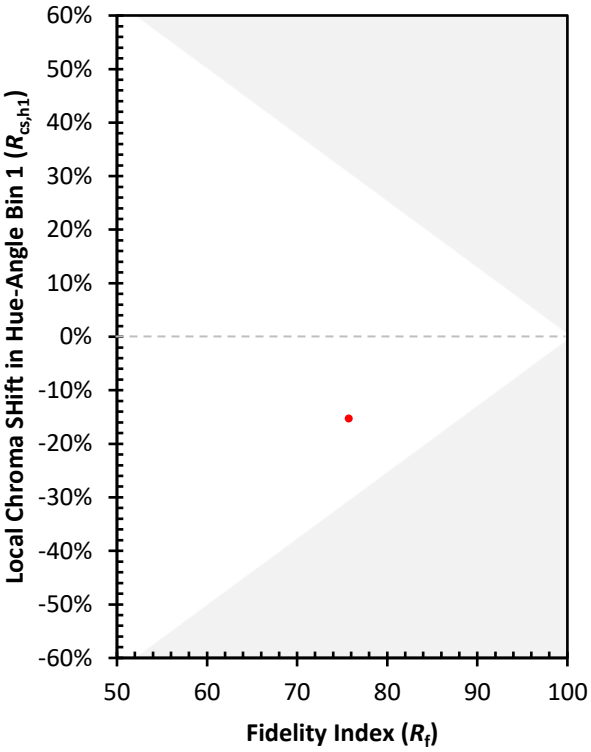


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Measure Comparisons





(END OF REPORT)