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: P821230

Luminaire Tested: **TT-D3-735-24VDC-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:	P821230
	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-D3-735-24VDC-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:	4840.9 lumens
Efficiency:	N/A
Efficacy:	105.2 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G2

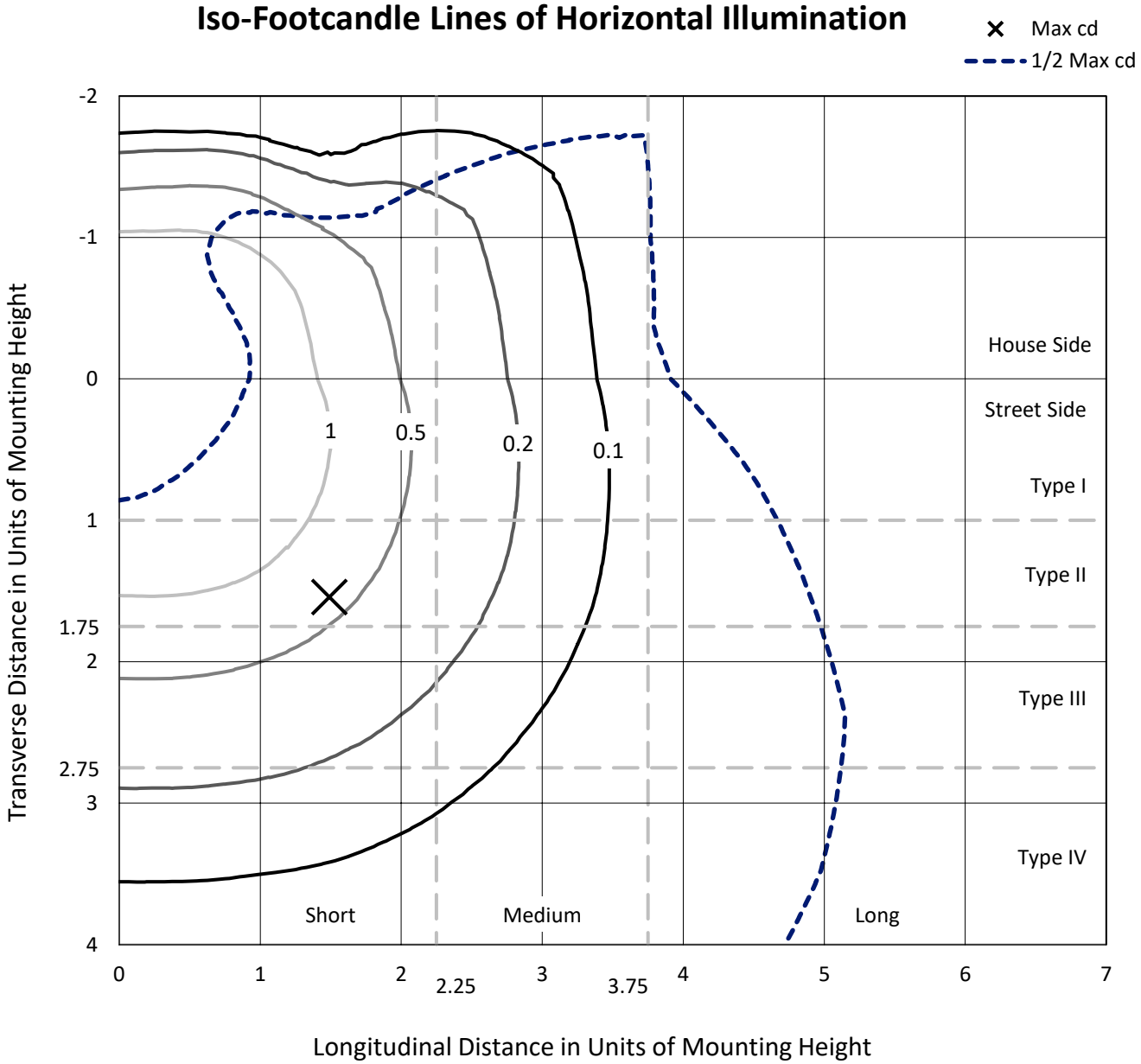
Input Watts (W):	46
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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Iso-Footcandle Lines of Horizontal Illumination



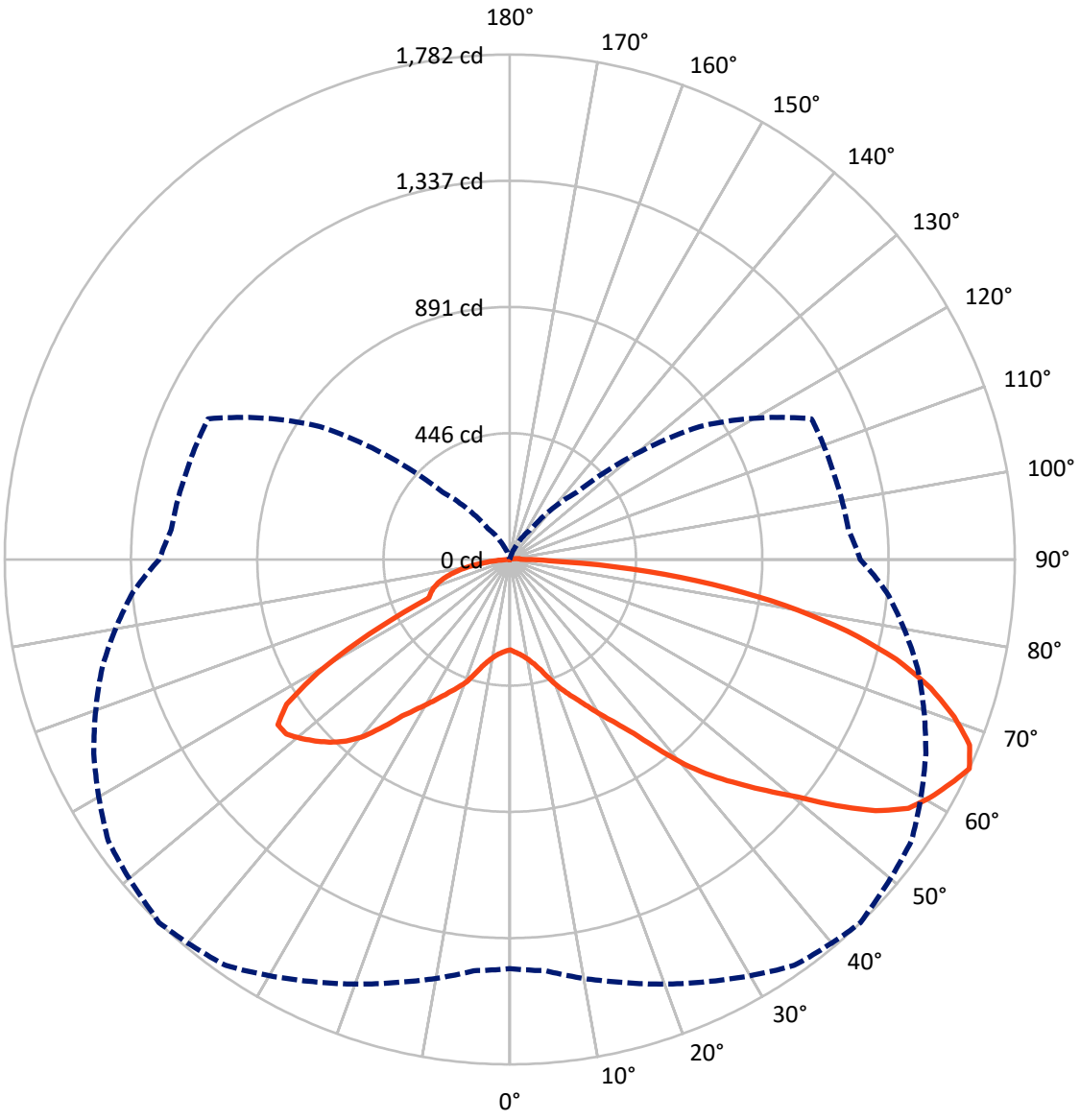
Based on 15 foot mounting height. Maximum calculated value = 1.9 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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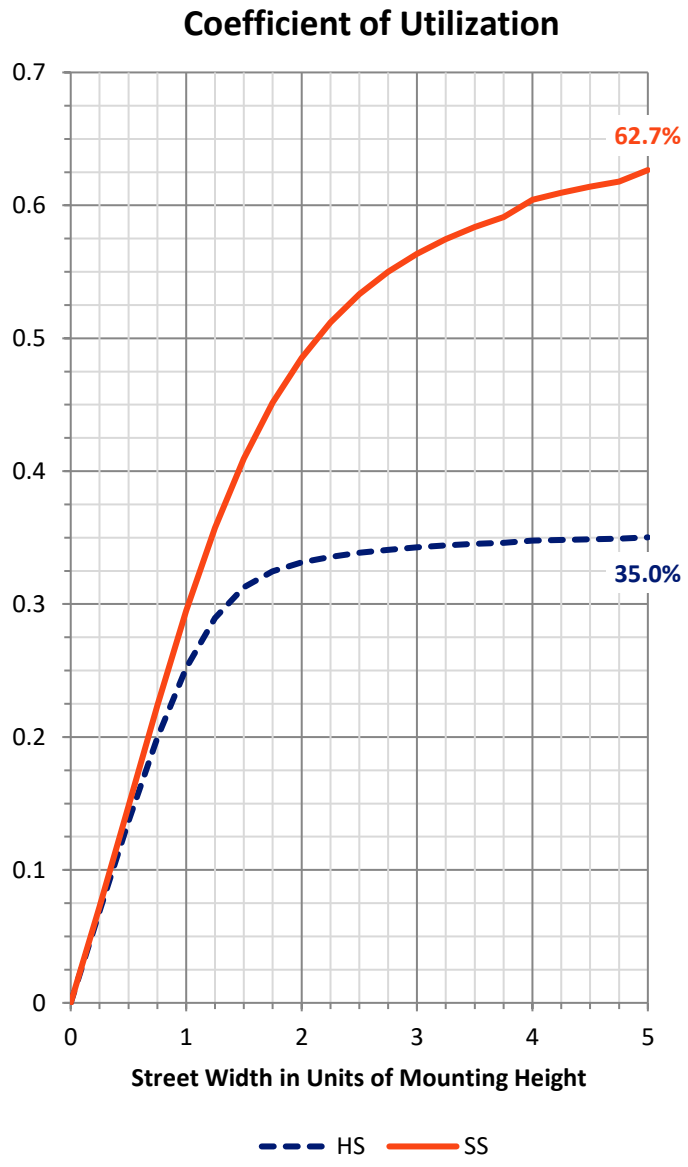
REPORT NUMBER: P821230
CATALOG NUMBER: TT-D3-735-24VDC-WQ-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1705.1	1.1	1706.2
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	3115.2	19.5	3134.7
	% Fixture	64.4	0.4	64.8
Total	Lumens	4820.3	20.6	4840.9
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.4	0.7
10°-20°	115.0	2.4
20°-30°	246.4	5.1
30°-40°	446.3	9.2
40°-50°	744.6	15.4
50°-60°	1031.4	21.3
60°-70°	1068.8	22.1
70°-80°	860.2	17.8
80°-90°	275.2	5.7
90°-100°	13.9	0.3
100°-110°	4.4	0.1
110°-120°	0.8	0.0
120°-130°	0.5	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	4820.3	99.6
0°-180°	4840.9	100.0



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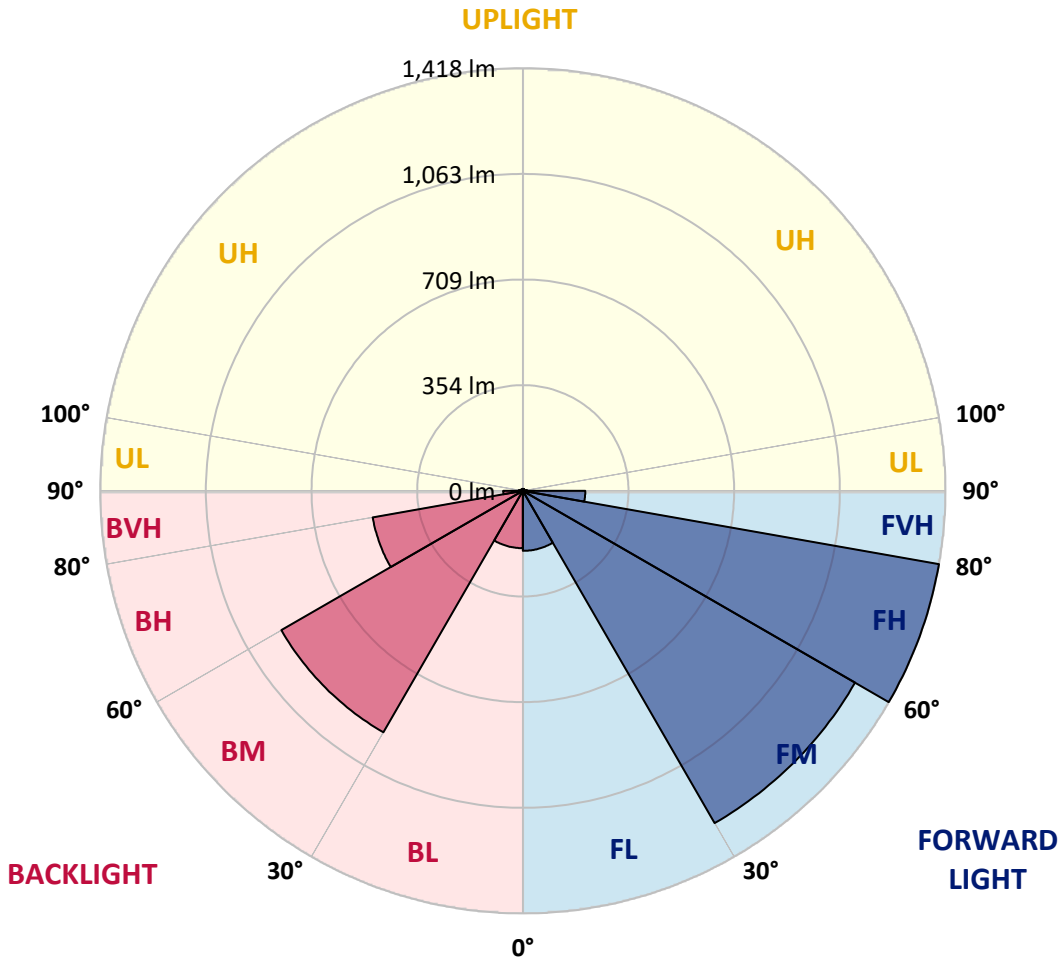
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	201.3	4.2			
FM	(30°-60°)	1287.0	26.6			
FH	(60°-80°)	1417.5	29.3			G1/1800
FVH	(80°-90°)	209.4	4.3			G2/225
BL	(0°-30°)	192.5	4.0	B1/500		
BM	(30°-60°)	935.3	19.3	B1/1000		
BH	(60°-80°)	511.5	10.6	B2/1000		G2/1000
BVH	(80°-90°)	65.8	1.4			G1/100
UL	(90°-100°)	13.9	0.3		U2/50	
UH	(100°-180°)	6.7	0.1		U1/10	

BUG Rating: B2-U2-G2
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4
2.5°	328.9	327.9	327.9	327.0	327.0	327.0	327.0	327.0	326.1	325.1	324.2
5°	337.4	337.4	336.5	336.5	335.5	334.6	335.5	334.6	333.6	332.7	331.7
7.5°	348.7	347.8	347.8	345.9	345.9	345.0	345.0	345.0	344.0	342.1	341.2
10°	364.8	362.9	362.9	361.0	360.1	359.1	359.1	357.2	357.2	356.3	355.4
12.5°	382.8	380.9	382.8	381.8	379.9	378.0	378.0	376.1	375.2	374.3	370.5
15°	406.4	403.6	405.4	405.4	404.5	403.6	403.6	399.8	397.9	396.0	392.2
17.5°	434.7	432.9	433.8	434.7	437.6	437.6	438.5	433.8	430.0	423.4	420.6
20°	470.7	469.7	472.5	472.5	475.4	475.4	476.3	471.6	465.0	460.3	454.6
22.5°	505.6	505.6	509.4	509.4	512.2	510.3	510.3	508.5	500.9	495.2	489.6
25°	541.5	540.6	544.4	547.2	551.0	546.3	548.2	545.3	537.8	530.2	522.6
27.5°	581.2	579.3	581.2	585.0	591.6	587.8	589.7	585.0	577.5	567.1	560.4
30°	624.7	621.9	624.7	630.4	635.1	637.0	636.0	629.4	622.8	607.7	603.0
32.5°	667.2	667.2	673.8	684.2	689.9	689.0	689.9	684.2	674.8	655.9	644.6
35°	719.2	723.0	731.5	746.6	758.9	754.2	754.2	752.3	736.2	713.5	698.4
37.5°	788.2	792.0	809.0	827.0	849.6	847.7	848.7	843.0	811.8	788.2	766.5
40°	868.5	872.3	897.8	923.4	945.1	951.7	952.7	940.4	906.3	872.3	838.3
42.5°	942.3	947.0	973.4	1009.4	1033.0	1043.4	1045.3	1025.4	989.5	950.8	908.2
45°	1016.0	1021.6	1051.9	1089.7	1123.7	1128.4	1129.4	1112.4	1072.7	1028.3	973.4
47.5°	1091.6	1096.3	1127.5	1172.9	1209.7	1219.2	1220.1	1204.0	1155.8	1102.0	1037.7
50°	1160.6	1170.0	1212.6	1260.8	1309.9	1317.5	1318.4	1300.4	1243.7	1183.3	1098.2
52.5°	1241.8	1246.6	1291.9	1372.3	1413.9	1443.2	1444.1	1409.1	1348.6	1267.4	1157.7
55°	1336.4	1344.9	1391.2	1471.5	1546.2	1566.0	1571.7	1530.1	1449.8	1361.9	1233.3
57.5°	1391.2	1407.2	1475.3	1551.8	1645.4	1658.6	1661.5	1618.0	1529.2	1432.8	1290.0
60°	1420.5	1429.9	1501.7	1620.8	1693.6	1705.9	1704.9	1671.9	1583.0	1465.8	1316.5
62.5°	1453.5	1469.6	1530.1	1651.1	1714.4	1744.6	1739.9	1705.9	1615.2	1486.6	1342.0
65°	1444.1	1457.3	1546.2	1644.5	1749.4	1782.4	1775.8	1730.5	1619.9	1490.4	1335.4
67.5°	1406.3	1416.7	1504.6	1626.5	1726.7	1750.3	1761.6	1717.2	1593.4	1449.8	1293.8
70°	1328.8	1344.9	1429.9	1554.7	1646.3	1663.4	1665.2	1637.8	1526.3	1375.1	1224.8
72.5°	1222.0	1235.2	1327.9	1454.5	1533.9	1553.7	1555.6	1514.0	1429.9	1273.0	1125.6
75°	1094.4	1106.7	1178.5	1310.8	1389.3	1409.1	1407.2	1368.5	1279.7	1131.3	994.2
77.5°	936.6	959.3	1022.6	1131.3	1207.8	1218.2	1220.1	1177.6	1105.8	977.2	844.0
80°	739.1	760.8	832.6	913.9	978.2	986.7	989.5	953.6	888.4	775.0	661.6
82.5°	525.5	544.4	601.1	667.2	721.1	721.1	723.0	693.7	643.6	546.3	457.4
85°	299.6	313.8	351.6	398.8	437.6	432.9	433.8	407.3	374.3	298.6	241.9
87.5°	98.3	104.9	113.4	131.4	149.3	138.0	143.7	119.1	107.7	80.3	62.4
90°	52.0	52.0	50.1	48.2	44.4	38.7	38.7	31.2	23.6	15.1	5.7
92.5°	47.3	47.3	45.4	43.5	39.7	35.0	35.0	28.4	20.8	13.2	4.7
95°	38.7	38.7	37.8	35.9	33.1	29.3	28.4	23.6	18.0	10.4	3.8
97.5°	30.2	30.2	29.3	28.4	25.5	22.7	22.7	18.0	13.2	8.5	2.8
100°	22.7	22.7	22.7	20.8	19.8	17.0	17.0	14.2	10.4	6.6	1.9
102.5°	16.1	17.0	16.1	15.1	14.2	12.3	12.3	10.4	7.6	4.7	1.9
105°	11.3	11.3	10.4	10.4	9.5	8.5	8.5	6.6	4.7	2.8	0.9
107.5°	6.6	6.6	6.6	6.6	5.7	5.7	5.7	4.7	2.8	1.9	0.9
110°	3.8	3.8	3.8	3.8	2.8	2.8	2.8	1.9	1.9	0.9	0.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	1.9	1.9	1.9	1.9	1.9	*1.9*	1.9	0.9	0.9	0.9	0.9
115°	0.9	0.9	0.9	1.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
117.5°	0.9	0.9	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
120°	0.0	0.0	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
122.5°	0.0	0.0	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
125°	0.0	0.0	0.9	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
127.5°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
130°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
132.5°	0.0	0.0	0.0	0.9	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
135°	0.0	0.0	0.0	0.0	0.9	*0.9*	0.9	0.9	0.9	0.9	0.9
137.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
140°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
142.5°	0.9	0.9	0.9	0.0	0.0	*0.9*	0.9	0.9	0.9	0.9	0.9
145°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
147.5°	0.9	0.9	0.9	0.0	0.0	*0.9*	0.9	0.9	0.9	0.9	0.9
150°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
152.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
155°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.9	0.9	0.9
157.5°	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
160°	0.9	0.0	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
162.5°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
165°	0.9	0.0	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
167.5°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
170°	0.9	0.0	0.0	0.0	0.0	*0.9*	0.0	0.9	0.9	0.9	0.9
172.5°	0.9	0.9	0.0	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
175°	0.9	0.9	0.9	0.0	0.0	*0.0*	0.9	0.9	0.9	0.9	0.9
177.5°	0.0	0.9	0.0	0.0	0.0	*0.0*	0.0	0.9	0.9	0.9	0.9
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°	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4	319.4
2.5°	324.2	324.2	323.2	322.3	322.3	322.3	321.3	321.3	321.3	320.4	320.4
5°	331.7	330.8	330.8	329.8	329.8	328.9	328.9	327.9	327.0	327.0	326.1
7.5°	342.1	341.2	339.3	340.2	338.3	337.4	336.5	336.5	336.5	335.5	335.5
10°	354.4	354.4	352.5	352.5	350.6	349.7	348.7	348.7	349.7	349.7	348.7
12.5°	370.5	369.5	369.5	368.6	367.6	366.7	367.6	367.6	366.7	365.7	364.8
15°	390.3	390.3	390.3	391.3	390.3	390.3	390.3	389.4	387.5	385.6	385.6
17.5°	420.6	419.6	417.7	418.7	420.6	423.4	420.6	417.7	414.9	414.9	413.9
20°	451.8	452.7	452.7	453.6	456.5	459.3	455.5	453.6	451.8	449.9	448.0
22.5°	485.8	486.7	486.7	485.8	487.7	486.7	484.8	482.9	481.1	478.2	476.3
25°	518.9	519.8	518.9	517.9	518.9	516.0	513.2	510.3	505.6	500.9	500.9
27.5°	555.7	554.8	551.0	551.9	550.0	548.2	542.5	535.9	529.3	524.5	524.5
30°	594.5	594.5	586.9	590.7	586.9	586.0	573.7	565.2	555.7	549.1	548.2
32.5°	637.0	635.1	629.4	633.2	629.4	625.6	610.5	599.2	583.1	573.7	572.7
35°	688.0	683.3	678.6	682.4	682.4	672.0	656.8	636.0	613.4	602.0	601.1
37.5°	750.4	747.6	741.9	746.6	750.4	740.0	717.3	687.1	654.9	637.9	637.0
40°	819.4	815.6	812.8	819.4	822.2	811.8	781.6	739.1	695.6	671.0	667.2
42.5°	884.6	876.1	871.4	880.8	878.0	866.6	825.1	775.9	716.4	688.0	683.3
45°	943.2	933.7	927.1	935.6	931.9	909.2	862.9	796.7	724.9	689.9	684.2
47.5°	1000.9	986.7	976.3	987.6	980.1	945.1	888.4	807.1	715.4	673.8	664.4
50°	1050.0	1033.0	1026.4	1039.6	1028.3	979.1	906.3	802.4	691.8	631.3	616.2
52.5°	1108.6	1083.1	1076.5	1102.0	1076.5	1011.2	910.1	791.0	637.9	565.2	551.0
55°	1168.1	1139.8	1129.4	1153.0	1114.3	1017.9	891.2	725.8	556.7	479.2	458.4
57.5°	1199.3	1172.9	1163.4	1180.4	1108.6	953.6	807.1	604.9	434.7	347.8	325.1
60°	1227.7	1181.4	1169.1	1191.8	1050.0	804.3	624.7	433.8	262.7	197.5	180.5
62.5°	1247.5	1203.1	1177.6	1188.0	942.3	585.0	359.1	208.9	99.2	69.0	68.0
65°	*1237.1*	*1199.3*	*1182.3*	*1174.7*	*818.4*	*336.5*	*132.3*	*52.9*	*2.8*	*2.8*	*1.9*
67.5°	1205.0	1163.4	1158.7	1165.3	809.9	323.2	122.9	48.2	0.0	0.0	0.0
70°	1134.1	1104.8	1104.8	1127.5	773.1	306.2	114.4	44.4	0.0	0.0	0.0
72.5°	1038.7	1016.0	1029.2	1063.2	718.3	282.6	103.0	39.7	0.0	0.0	0.0
75°	924.3	900.7	917.7	955.5	650.2	252.3	89.8	34.0	0.0	0.0	0.0
77.5°	778.8	762.7	789.2	824.1	559.5	212.6	73.7	27.4	0.0	0.0	0.0
80°	606.7	598.2	633.2	664.4	451.8	167.3	55.8	19.8	0.0	0.0	0.0
82.5°	418.7	414.9	448.9	481.1	323.2	117.2	37.8	13.2	0.0	0.0	0.0
85°	219.3	219.3	245.7	275.0	180.5	63.3	18.9	5.7	0.0	0.0	0.0
87.5°	48.2	46.3	50.1	64.3	35.9	12.3	2.8	0.9	0.0	0.0	0.0
90°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.9	0.9	0.9	0.9	0.9	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: P821230
CATALOG NUMBER: TT-D3-735-24VDC-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
117.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
122.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
125°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	0.9	0.9	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

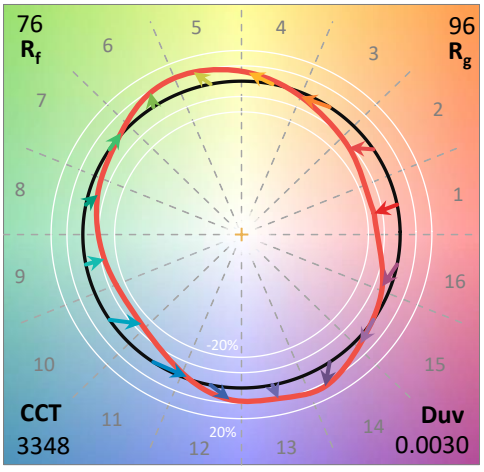
Test Information

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

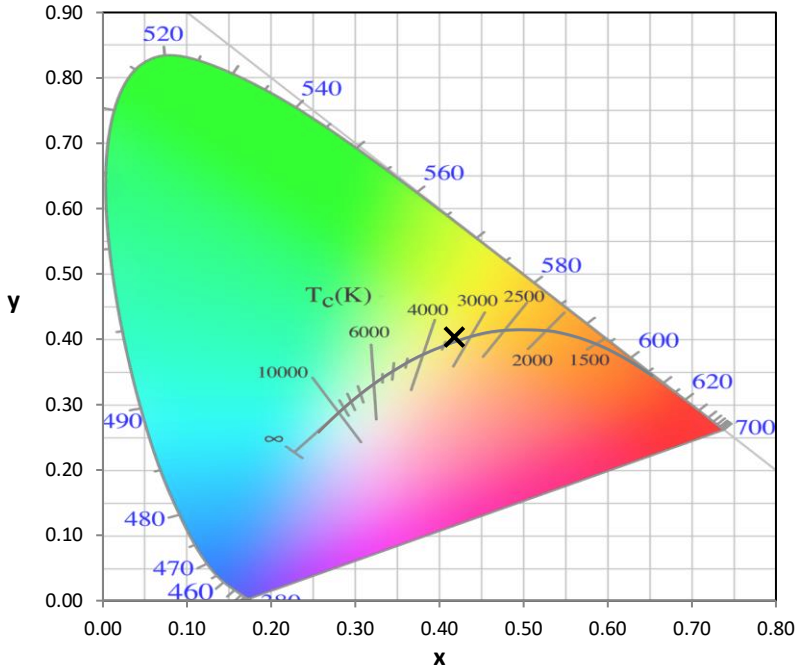
Stabilization Time:	30M
Operation Time:	1H 30M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-4

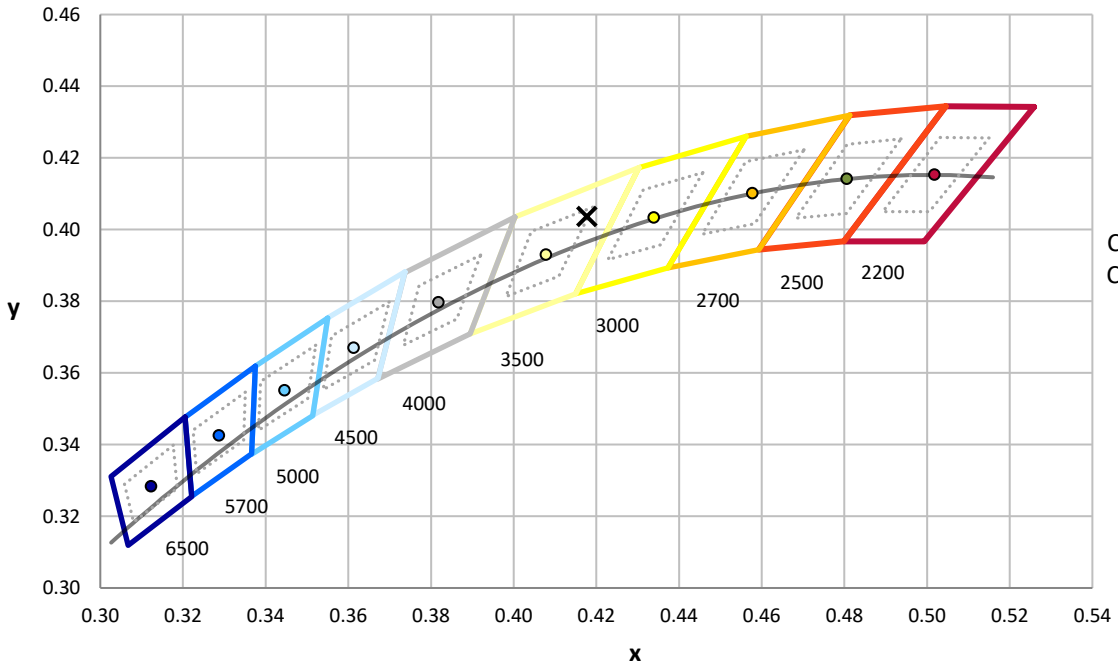
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

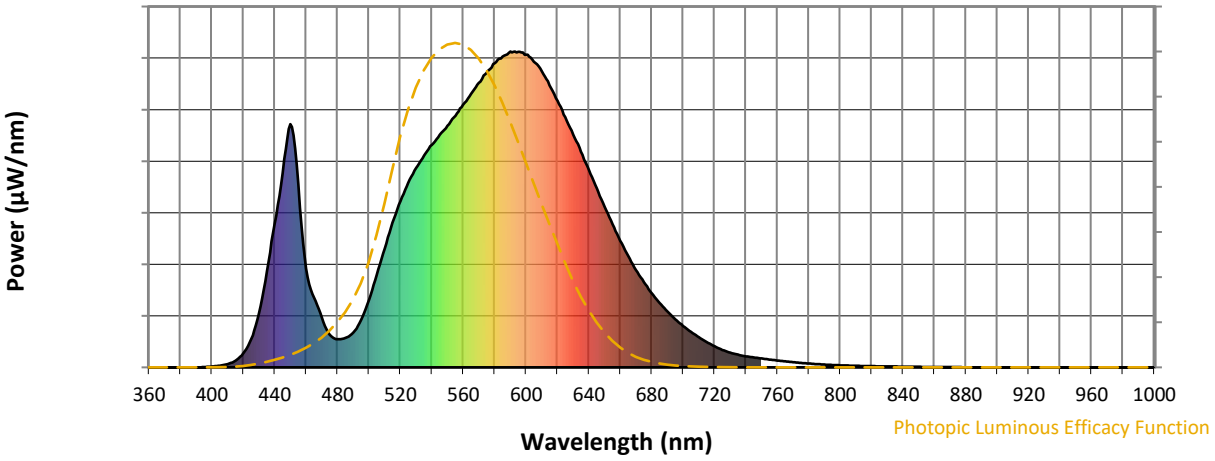


CCT = 3348K
CIE x = 0.4177
CIE y = 0.4036
Duv = 0.0030

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-176-4

Photopic Flux vs. Wavelength

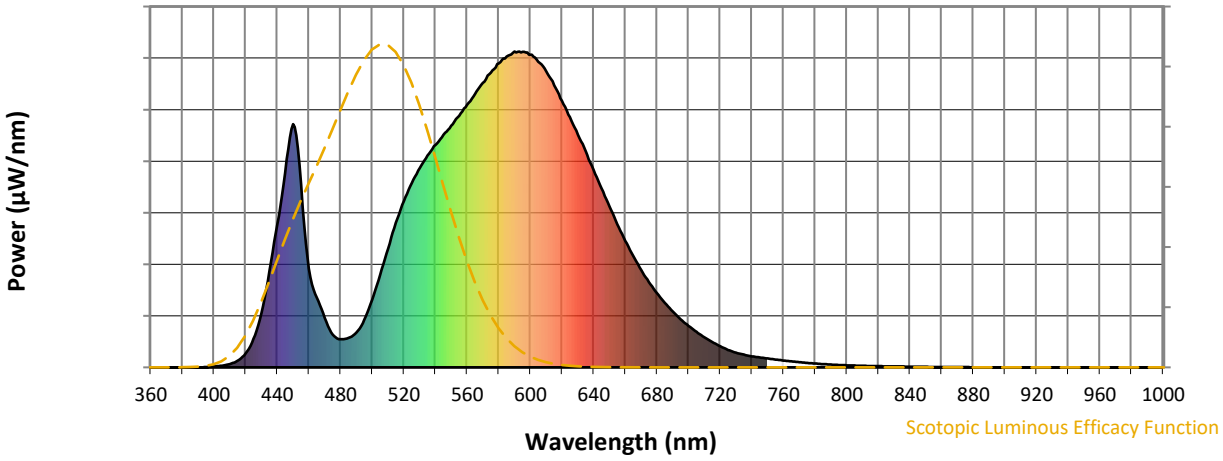


Photopic Lumens: NR

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

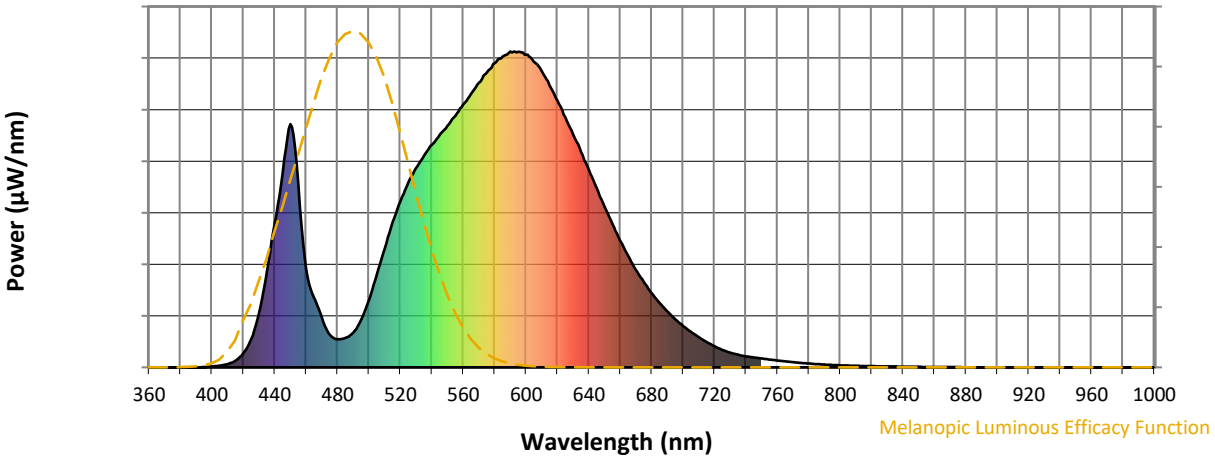


Scotopic Lumens: NR **S/P: 1.31**

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			

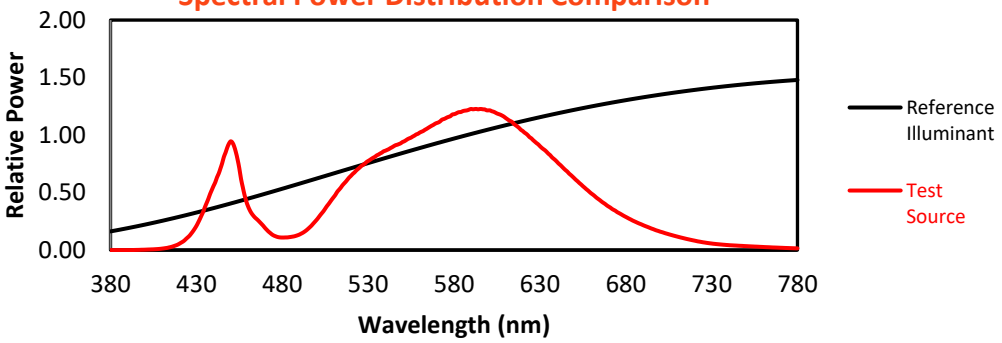
REPORT NUMBER: SP1-2407-176-4

TM-30-18

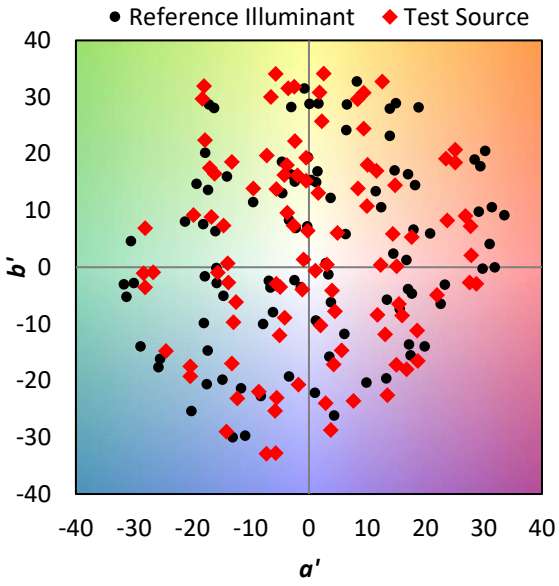
Summary

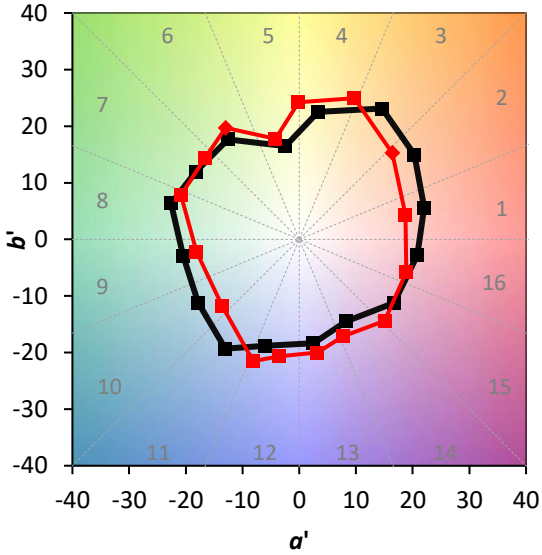
R_f = 75.8
R_g = 95.8
CIE R_a = 73.4
R_9 = -19.2

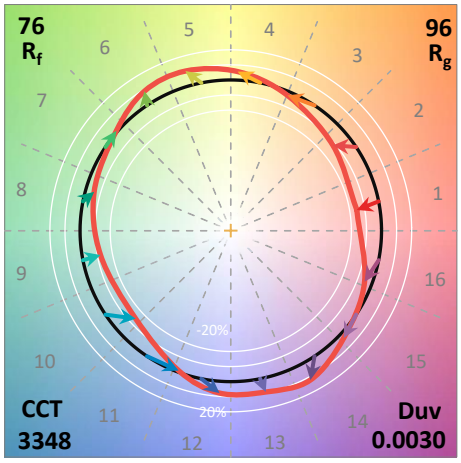
Spectral Power Distribution Comparison

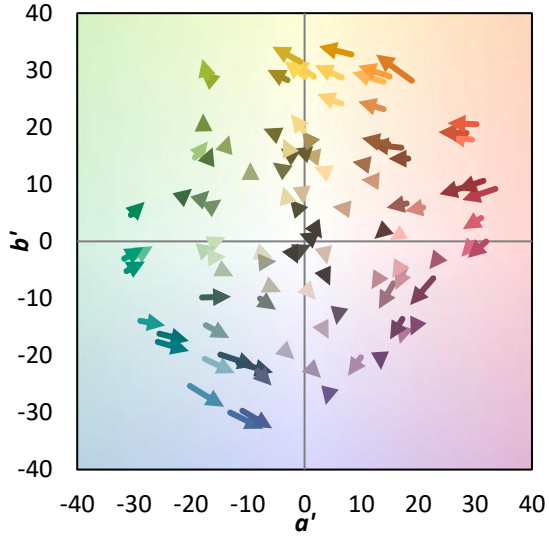


Color Vector Graphics







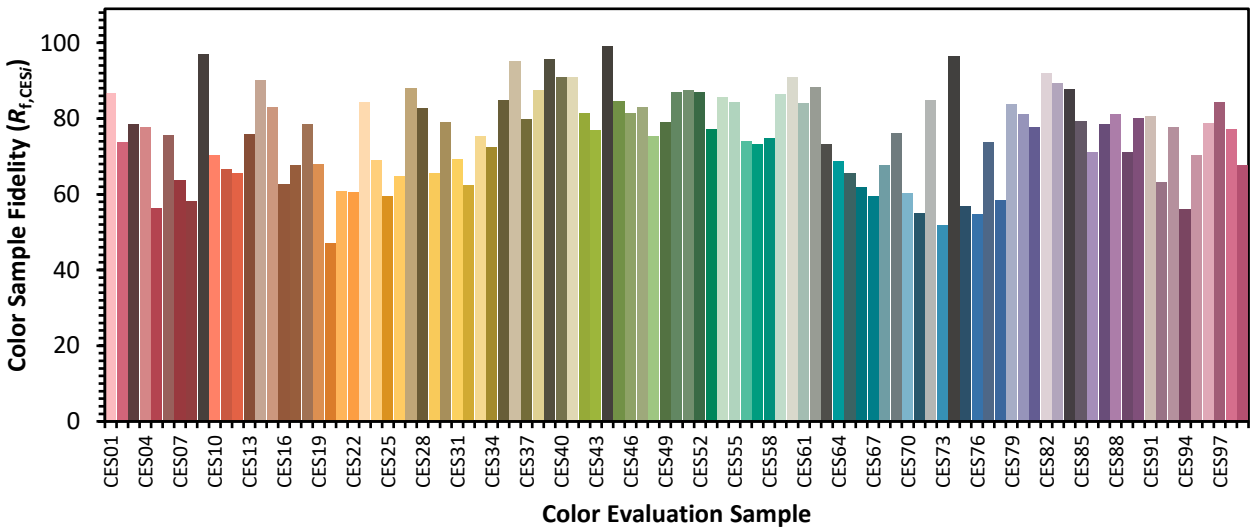


REPORT NUMBER: SP1-2407-176-4

TM-30-18

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

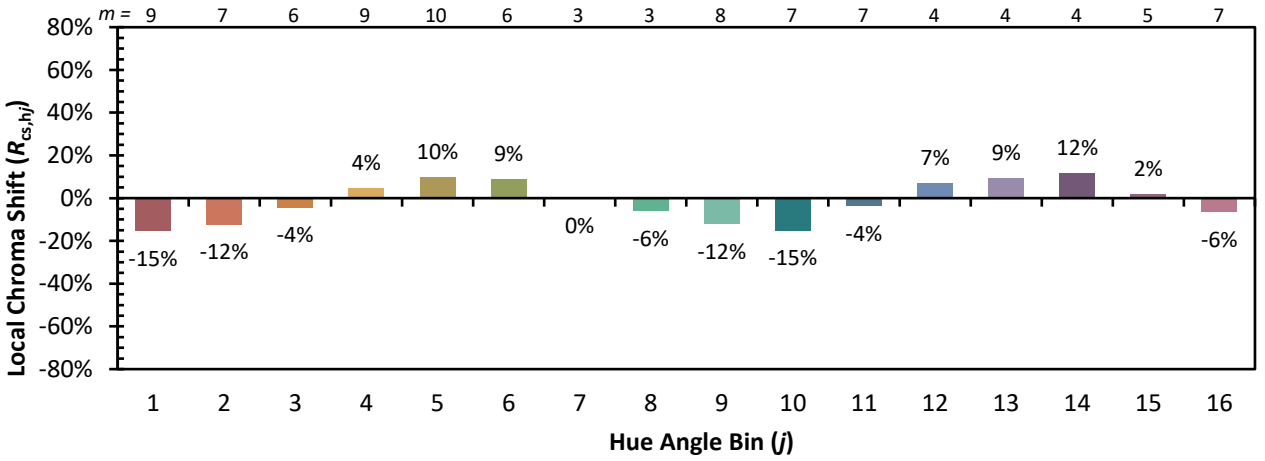
CES01 = 86	CES26 = 65	CES51 = 88	CES76 = 55
CES02 = 62	CES27 = 88	CES52 = 87	CES77 = 74
CES03 = 31	CES28 = 83	CES53 = 77	CES78 = 58
CES04 = 70	CES29 = 66	CES54 = 86	CES79 = 84
CES05 = 48	CES30 = 79	CES55 = 84	CES80 = 81
CES06 = 51	CES31 = 69	CES56 = 74	CES81 = 78
CES07 = 41	CES32 = 62	CES57 = 73	CES82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

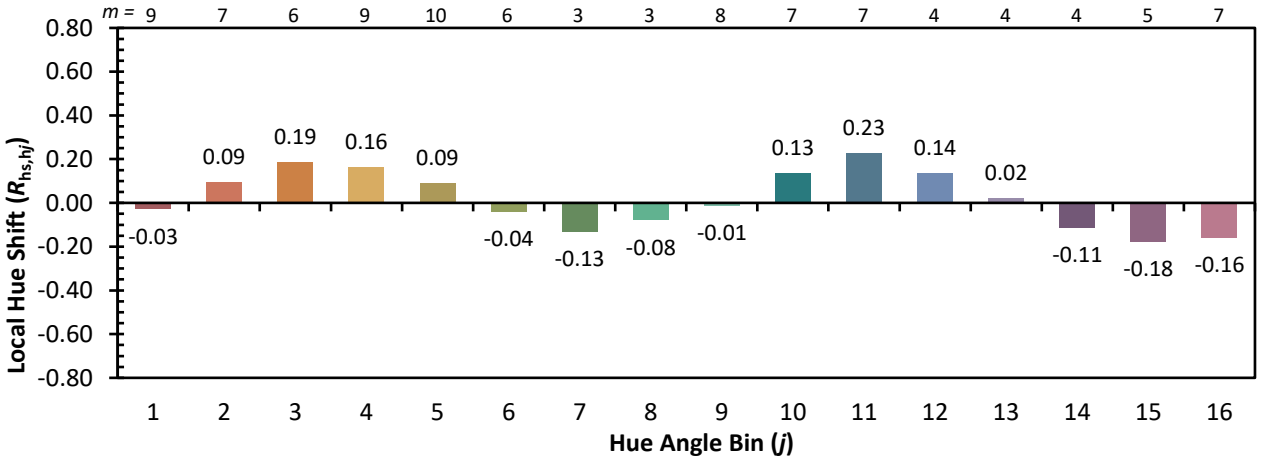


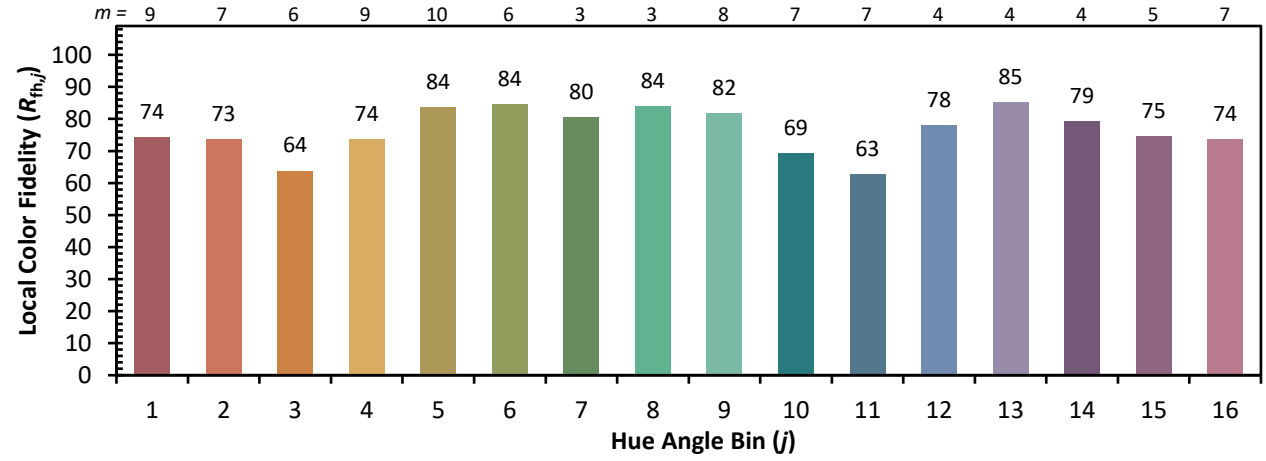
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Color Rendition by Hue-Angle Bin



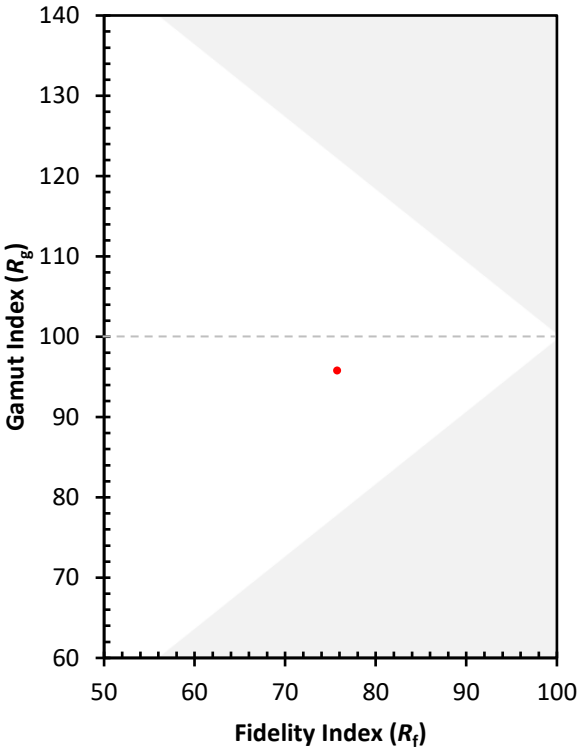


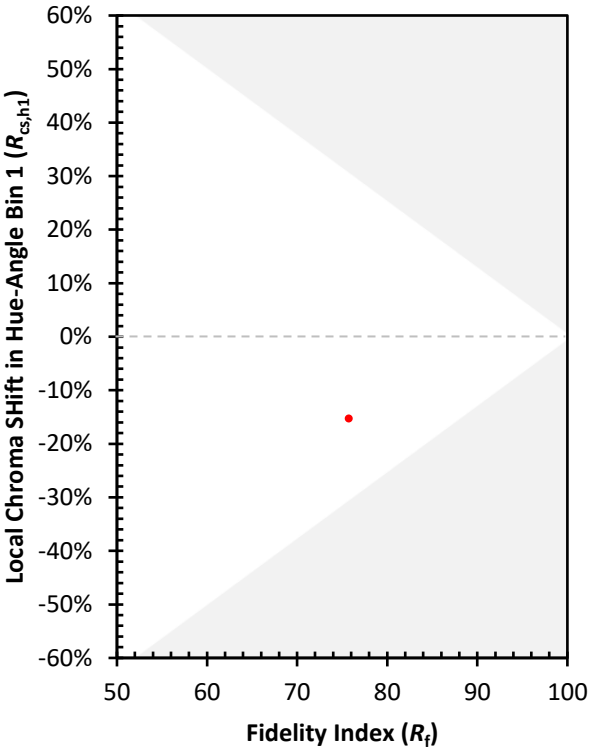


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Measure Comparisons





(END OF REPORT)