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: P821366

Luminaire Tested: **TT-D3-750-24VDC-CQ-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:	P821366
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-3)
Test Lab:	INNOVATION CENTER
Issue Date:	12/2/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	TT-D3-750-24VDC-CQ-HSS
Description:	TOPTIER LED PARKING GARAGE LUMINAIRE
	5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	5318 lumens
Efficiency:	N/A
Efficacy:	115.6 lumens/watt
Luminous Opening:	Circular (Dia: 1.12' x H: 0')
IES Classification:	Type IV - Short
BUG Rating:	B2 - U2 - G1

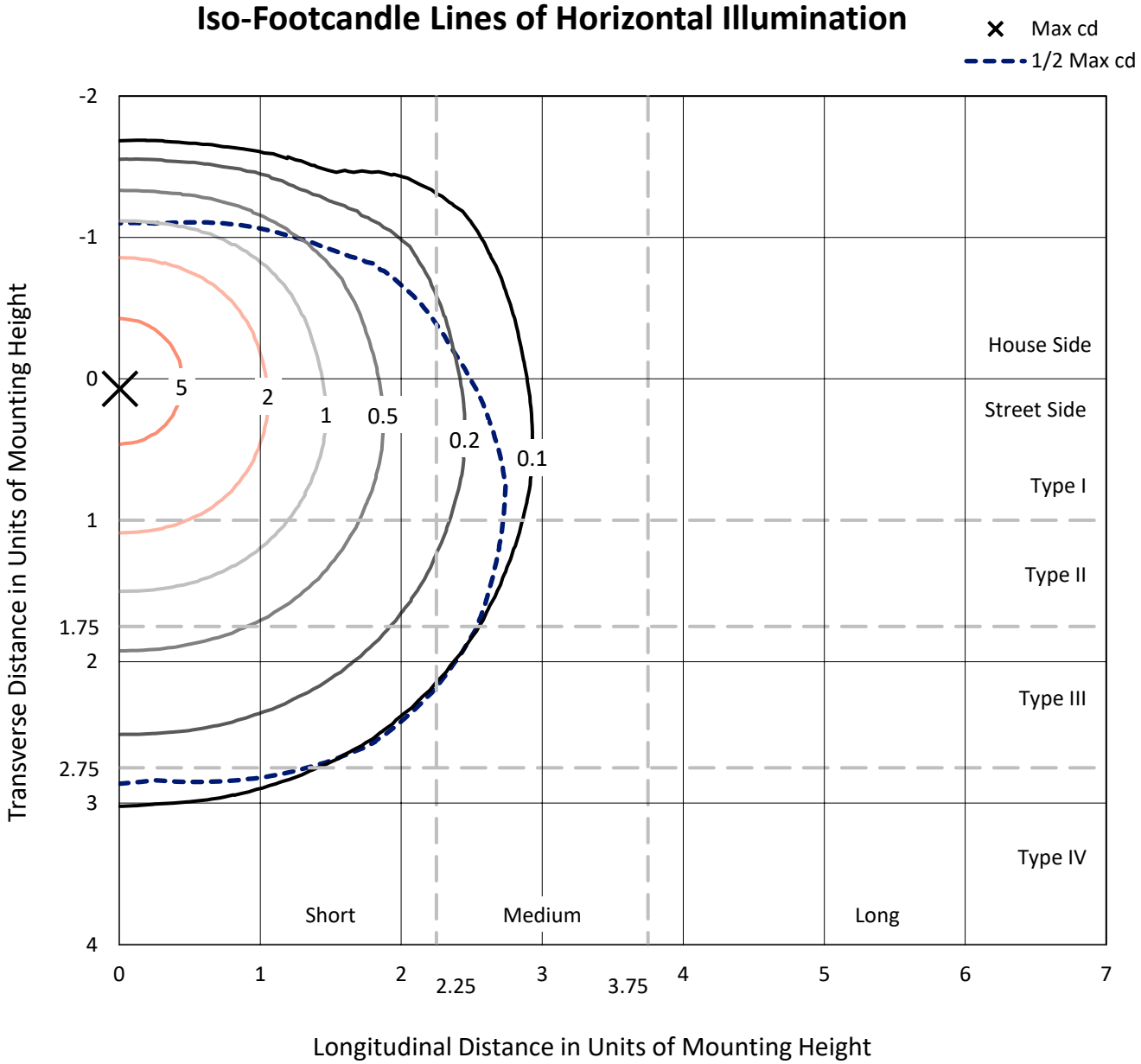
Input Watts (W):	46
Input Voltage (V):	NR
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	25 FT

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REPORT NUMBER: P821366
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Iso-Footcandle Lines of Horizontal Illumination



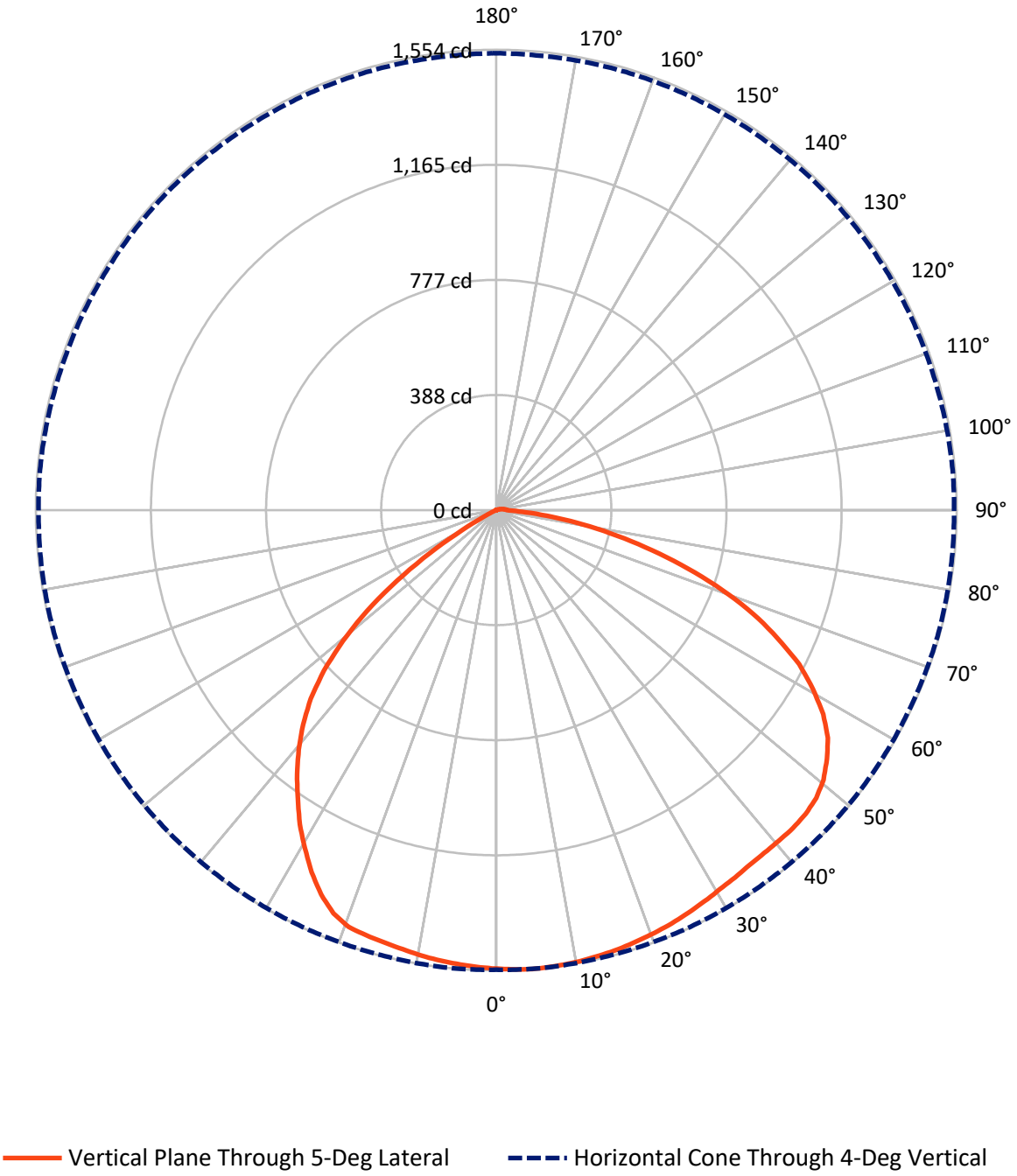
Based on 15 foot mounting height. Maximum calculated value = 6.9 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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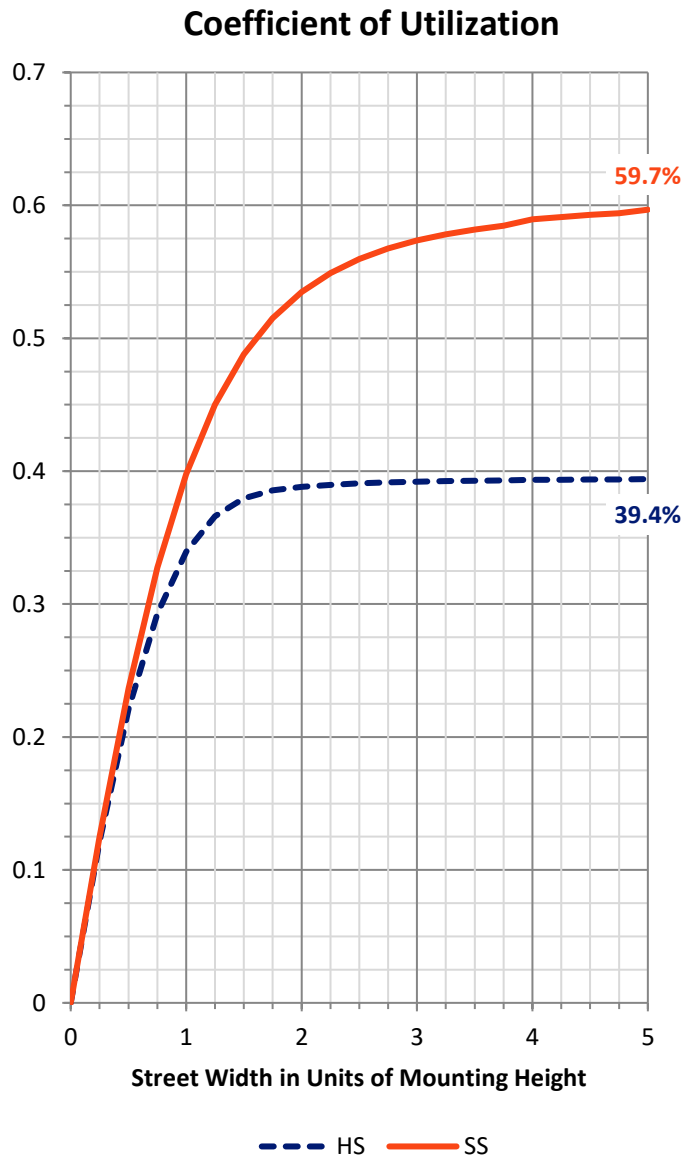
REPORT NUMBER: P821366
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2107.5	2.7	2110.2
	% Fixture	39.6	0.1	39.7
Street Side	Lumens	3193.0	14.8	3207.8
	% Fixture	60.0	0.3	60.3
Total	Lumens	5300.4	17.5	5318.0
	% Fixture	99.7	0.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.2	2.8
10°-20°	431.1	8.1
20°-30°	679.2	12.8
30°-40°	864.4	16.3
40°-50°	998.4	18.8
50°-60°	977.6	18.4
60°-70°	728.1	13.7
70°-80°	394.4	7.4
80°-90°	79.9	1.5
90°-100°	10.1	0.2
100°-110°	3.9	0.1
110°-120°	1.1	0.0
120°-130°	0.8	0.0
130°-140°	0.6	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	5300.4	99.7
0°-180°	5318.0	100.0



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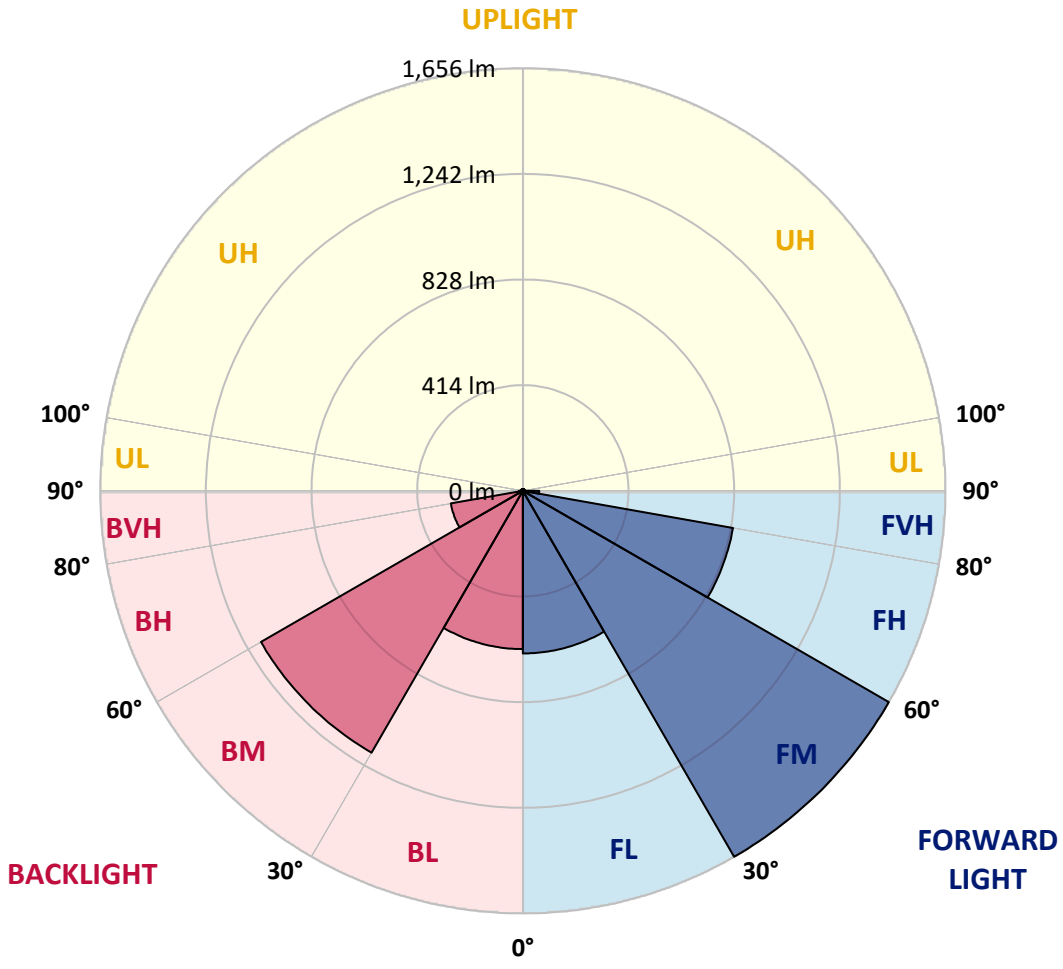
Scaled Data Report

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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°)	637.2	12.0			
FM	(30°-60°)	1655.8	31.1			
FH	(60°-80°)	836.1	15.7			G1/1800
FVH	(80°-90°)	63.8	1.2			G1/100
BL	(0°-30°)	620.3	11.7	B2/1000		
BM	(30°-60°)	1184.7	22.3	B2/2500		
BH	(60°-80°)	286.4	5.4	B1/500		G1/500
BVH	(80°-90°)	16.1	0.3			G1/100
UL	(90°-100°)	10.1	0.2		U2/50	
UH	(100°-180°)	7.4	0.1		U1/10	

BUG Rating: B2-U2-G1
Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9
2.5°	1550.9	1552.9	1551.9	1551.9	1549.9	1550.9	1549.9	1549.9	1548.9	1547.9	1547.9
4°	1551.9	1553.9	1551.9	1551.9	1550.9	1550.9	1549.9	1547.9	1548.9	1545.9	1544.9
5°	1552.9	1553.9	1552.9	1552.9	1550.9	1549.9	1547.9	1547.9	1546.9	1544.9	1544.9
7.5°	1550.9	1551.9	1551.9	1550.9	1548.9	1546.9	1545.9	1544.9	1543.9	1540.9	1540.9
10°	1546.9	1548.9	1546.9	1546.9	1545.9	1543.9	1540.9	1539.9	1536.9	1534.9	1533.9
12.5°	1542.9	1543.9	1542.9	1542.9	1540.9	1537.9	1536.9	1534.9	1530.9	1527.9	1527.9
15°	1536.9	1538.9	1537.9	1536.9	1535.9	1532.9	1529.9	1526.9	1523.9	1520.9	1520.9
17.5°	1529.9	1530.9	1531.9	1530.9	1528.9	1526.9	1523.9	1519.9	1516.9	1513.9	1512.9
20°	1521.9	1523.9	1523.9	1523.9	1521.9	1519.9	1515.9	1511.9	1509.9	1505.9	1504.9
22.5°	1513.9	1515.9	1514.9	1515.9	1514.9	1511.9	1507.9	1503.9	1499.9	1496.9	1494.9
25°	1505.9	1505.9	1505.9	1505.9	1505.9	1501.9	1497.9	1492.9	1488.9	1483.9	1483.9
27.5°	1495.9	1495.9	1496.9	1496.9	1495.9	1492.9	1487.9	1481.9	1475.9	1470.9	1468.9
30°	1486.9	1485.9	1487.9	1489.9	1488.9	1485.9	1479.9	1472.9	1463.9	1456.9	1450.9
32.5°	1475.9	1478.9	1480.9	1484.9	1485.9	1481.9	1474.9	1465.9	1456.9	1443.9	1432.9
35°	1471.9	1471.9	1476.9	1482.9	1484.9	1482.9	1472.9	1462.9	1449.9	1430.9	1417.9
37.5°	1467.9	1468.9	1476.9	1485.9	1488.9	1488.9	1477.9	1464.9	1446.9	1419.9	1403.9
40°	1465.9	1467.9	1477.9	1490.9	1498.9	1497.9	1484.9	1468.9	1446.9	1411.9	1391.9
42.5°	1463.9	1467.9	1478.9	1496.9	1508.9	1507.9	1493.9	1472.9	1444.9	1401.9	1378.9
45°	1460.9	1463.9	1478.9	1501.9	1517.9	1520.9	1504.9	1477.9	1444.9	1392.9	1362.9
47.5°	1451.9	1452.9	1472.9	1499.9	1523.9	1527.9	1511.9	1479.9	1440.9	1377.9	1342.9
50°	1427.9	1430.9	1453.9	1489.9	1517.9	1523.9	1509.9	1474.9	1430.9	1352.9	1310.9
52.5°	1396.9	1396.9	1424.9	1464.9	1498.9	1508.9	1495.9	1456.9	1405.9	1315.9	1267.9
55°	1350.9	1357.9	1386.9	1428.9	1465.9	1479.9	1461.9	1423.9	1364.9	1268.9	1215.9
57.5°	1298.9	1300.9	1330.9	1380.9	1418.9	1427.9	1412.9	1367.9	1310.9	1212.9	1149.9
60°	1223.9	1227.9	1265.9	1309.9	1350.9	1362.9	1343.9	1298.9	1238.9	1140.9	1076.9
62.5°	1140.9	1146.9	1180.9	1225.9	1264.9	1283.9	1260.9	1213.9	1154.9	1054.9	998.9
65°	1040.9	1042.9	1079.9	1130.9	1169.9	1176.9	1156.9	1110.9	1051.9	955.9	905.9
67.5°	925.9	935.9	971.9	1009.9	1043.9	1051.9	1037.9	984.9	937.9	852.9	804.0
70°	815.0	810.0	839.9	877.9	908.9	915.9	899.9	850.9	807.0	727.0	689.0
72.5°	681.0	677.0	709.0	738.0	768.0	764.0	748.0	709.0	671.0	603.0	568.0
75°	546.0	542.0	567.0	592.0	607.0	609.0	598.0	569.0	528.0	475.0	448.0
77.5°	414.0	418.0	429.0	450.0	464.0	470.0	451.0	422.0	396.0	355.0	335.0
80°	295.0	296.0	300.0	315.0	325.0	325.0	316.0	293.0	264.0	235.0	225.0
82.5°	186.0	190.0	190.0	205.0	205.0	197.0	193.0	178.0	163.0	140.0	126.0
85°	102.0	100.0	106.0	107.0	106.0	100.0	94.0	85.0	75.0	59.0	53.0
87.5°	45.0	44.0	44.0	44.0	43.0	39.0	33.0	26.0	18.0	11.0	8.0
90°	35.0	35.0	34.0	32.0	29.0	26.0	21.0	16.0	10.0	4.0	2.0
92.5°	32.0	32.0	31.0	30.0	27.0	24.0	19.0	14.0	9.0	4.0	2.0
95°	28.0	27.0	27.0	25.0	23.0	20.0	17.0	12.0	8.0	3.0	2.0
97.5°	23.0	22.0	22.0	21.0	19.0	16.0	14.0	10.0	7.0	3.0	2.0
100°	17.0	18.0	17.0	16.0	15.0	13.0	11.0	8.0	5.0	2.0	2.0
102.5°	13.0	13.0	12.0	12.0	11.0	10.0	8.0	6.0	4.0	2.0	1.0
105°	9.0	9.0	9.0	8.0	8.0	7.0	6.0	4.0	3.0	2.0	1.0
107.5°	5.0	5.0	5.0	5.0	5.0	5.0	4.0	3.0	2.0	1.0	1.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	3.0	*3.0*	3.0	3.0	3.0	3.0	2.0	2.0	1.0	1.0	1.0
112.5°	1.0	*1.0*	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
115°	1.0	*1.0*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
117.5°	0.0	*0.0*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
120°	0.0	*0.0*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
122.5°	0.0	*0.0*	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
125°	0.0	*0.0*	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
127.5°	0.0	*0.0*	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
130°	0.0	*0.0*	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
132.5°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
135°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
137.5°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
140°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
142.5°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
145°	1.0	*1.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
147.5°	1.0	*1.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
150°	1.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
152.5°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
155°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
157.5°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
160°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	0.0	*0.0*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
177.5°	0.0	*0.0*	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
180°	1.0	*1.0*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9	1548.9
2.5°	1546.9	1543.9	1545.9	1544.9	1545.9	1543.9	1543.9	1543.9	1544.9	1542.9
4°	*1545.9*	*1543.9*	*1543.9*	*1543.9*	*1543.9*	*1541.9*	*1541.9*	*1541.9*	*1540.9*	*1541.9*
5°	1543.9	1542.9	1541.9	1540.9	1541.9	1539.9	1538.9	1538.9	1538.9	1539.9
7.5°	1539.9	1536.9	1536.9	1533.9	1534.9	1533.9	1532.9	1533.9	1532.9	1532.9
10°	1532.9	1530.9	1529.9	1527.9	1527.9	1525.9	1524.9	1524.9	1524.9	1523.9
12.5°	1525.9	1523.9	1522.9	1520.9	1519.9	1517.9	1516.9	1517.9	1515.9	1515.9
15°	1517.9	1515.9	1514.9	1514.9	1512.9	1510.9	1509.9	1507.9	1507.9	1507.9
17.5°	1510.9	1508.9	1509.9	1507.9	1506.9	1504.9	1504.9	1500.9	1500.9	1499.9
20°	1503.9	1501.9	1501.9	1500.9	1500.9	1498.9	1495.9	1493.9	1492.9	1492.9
22.5°	1494.9	1491.9	1486.9	1479.9	1475.9	1472.9	1471.9	1468.9	1467.9	1465.9
25°	1480.9	1472.9	1461.9	1449.9	1437.9	1431.9	1429.9	1425.9	1425.9	1425.9
27.5°	1463.9	1448.9	1433.9	1415.9	1397.9	1385.9	1377.9	1373.9	1371.9	1371.9
30°	1441.9	1422.9	1401.9	1378.9	1358.9	1336.9	1322.9	1314.9	1310.9	1311.9
32.5°	1421.9	1397.9	1373.9	1344.9	1317.9	1291.9	1267.9	1255.9	1250.9	1248.9
35°	1401.9	1374.9	1345.9	1314.9	1279.9	1241.9	1209.9	1191.9	1181.9	1182.9
37.5°	1386.9	1354.9	1322.9	1284.9	1244.9	1198.9	1157.9	1128.9	1116.9	1118.9
40°	1370.9	1334.9	1299.9	1255.9	1208.9	1153.9	1100.9	1061.9	1047.9	1044.9
42.5°	1355.9	1313.9	1273.9	1226.9	1167.9	1105.9	1040.9	994.9	973.9	970.9
45°	1336.9	1289.9	1246.9	1192.9	1127.9	1050.9	974.9	914.9	892.9	883.9
47.5°	1311.9	1259.9	1211.9	1149.9	1078.9	991.9	896.9	822.9	795.0	788.0
50°	1274.9	1214.9	1165.9	1095.9	1009.9	913.9	808.0	717.0	680.0	675.0
52.5°	1225.9	1164.9	1109.9	1029.9	924.9	812.0	692.0	598.0	555.0	552.0
55°	1166.9	1100.9	1040.9	950.9	827.9	697.0	572.0	453.0	411.0	406.0
57.5°	1097.9	1029.9	964.9	853.9	712.0	566.0	421.0	307.0	267.0	257.0
60°	1021.9	951.9	878.9	744.0	556.0	401.0	255.0	163.0	133.0	123.0
62.5°	947.9	871.9	795.0	613.0	381.0	229.0	116.0	47.0	30.0	29.0
65°	860.9	789.0	710.0	494.0	241.0	103.0	34.0	1.0	0.0	0.0
67.5°	760.0	699.0	629.0	442.0	213.0	90.0	29.0	1.0	0.0	0.0
70°	652.0	604.0	542.0	380.0	183.0	76.0	25.0	0.0	0.0	0.0
72.5°	538.0	497.0	451.0	316.0	152.0	63.0	20.0	0.0	0.0	0.0
75°	422.0	396.0	355.0	250.0	118.0	48.0	15.0	0.0	0.0	0.0
77.5°	313.0	292.0	262.0	184.0	89.0	35.0	11.0	0.0	0.0	0.0
80°	211.0	195.0	178.0	125.0	60.0	23.0	7.0	0.0	0.0	0.0
82.5°	123.0	111.0	100.0	71.0	33.0	13.0	3.0	0.0	0.0	0.0
85°	50.0	46.0	44.0	30.0	13.0	4.0	1.0	0.0	0.0	0.0
87.5°	6.0	5.0	5.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0
90°	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
97.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
100°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
102.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
105°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
107.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

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

Scaled Data Report

REPORT NUMBER: P821366
CATALOG NUMBER: TT-D3-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
112.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
115°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
117.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
120°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
122.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
125°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
127.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
130°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
132.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
135°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
140°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
142.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
145°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
147.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	1.0
150°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
155°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
160°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
165°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
170°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
175°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

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: SP1-2407-176-6

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-30-750-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

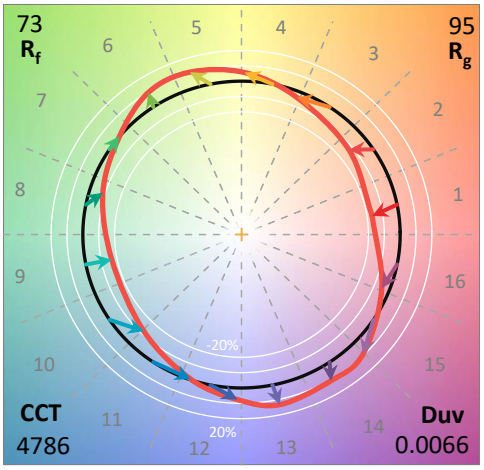
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2407-176-6
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-30-750-U-WQ**
Description:	EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K):	4786
CIE u':	0.2093
CIE v':	0.4953
Duv:	0.0066
CIE x:	0.3533
CIE y:	0.3716
CIE z:	0.2751
Peak Wavelength (nm):	449
Dominant Wavelength (nm):	570
Purity:	17.53512
Rf:	73
Rg:	94.6

CRI (Ra):	70.9				
R1:	67.8	R9:	-29.8		
R2:	75.1	R10:	40.9		
R3:	80.6	R11:	67.4		
R4:	71.6	R12:	35.3		
R5:	67.8	R13:	68.5		
R6:	65.4	R14:	89.0		
R7:	82.0	R15:	60.9		
R8:	57.0				



Test Conditions

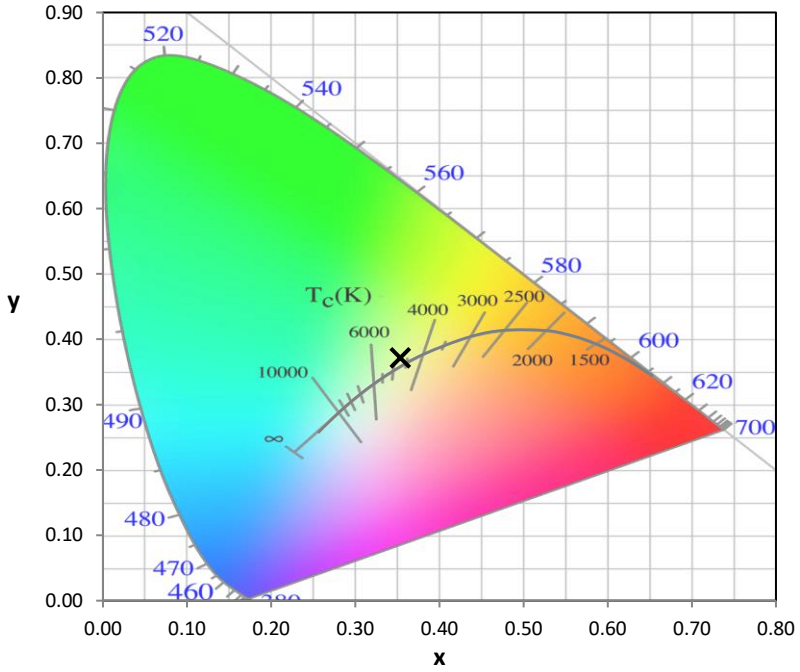
Stabilization Time:	45M
Operation Time:	1H 45M
Sphere Temperature (°C):	25.2

REPORT NUMBER: SP1-2407-176-6

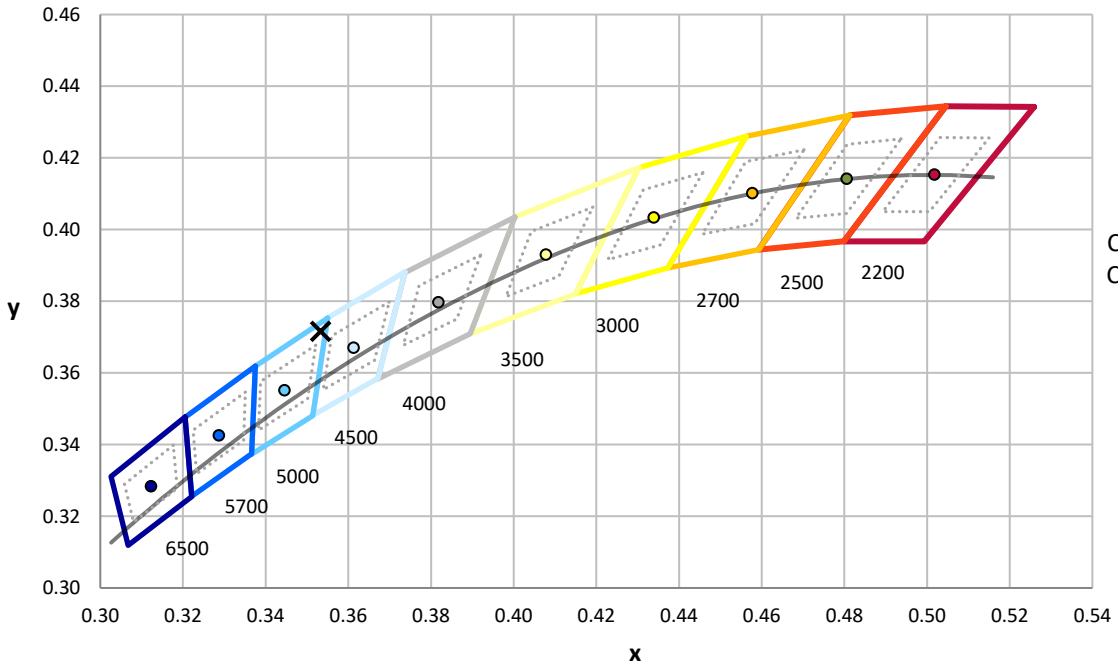
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-176-6

CIE 1931 Chromaticity Diagram



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

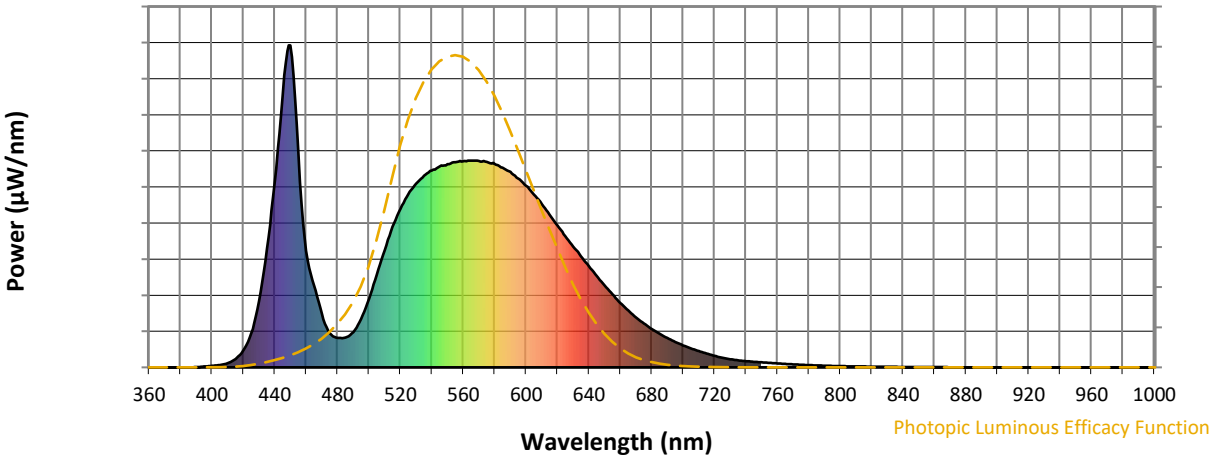


CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

Photopic Flux vs. Wavelength

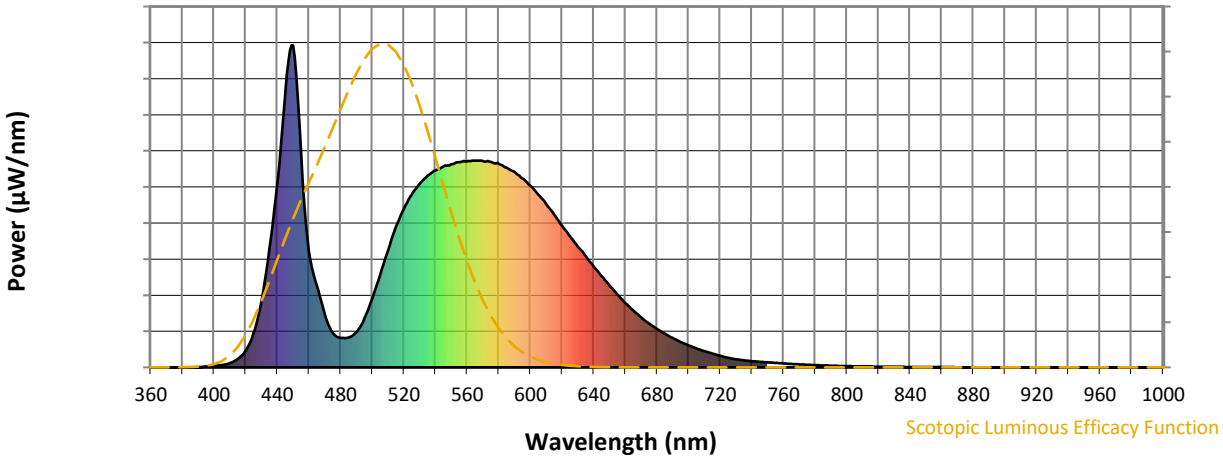


Photopic Lumens: NR

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-6

Scotopic Flux vs. Wavelength

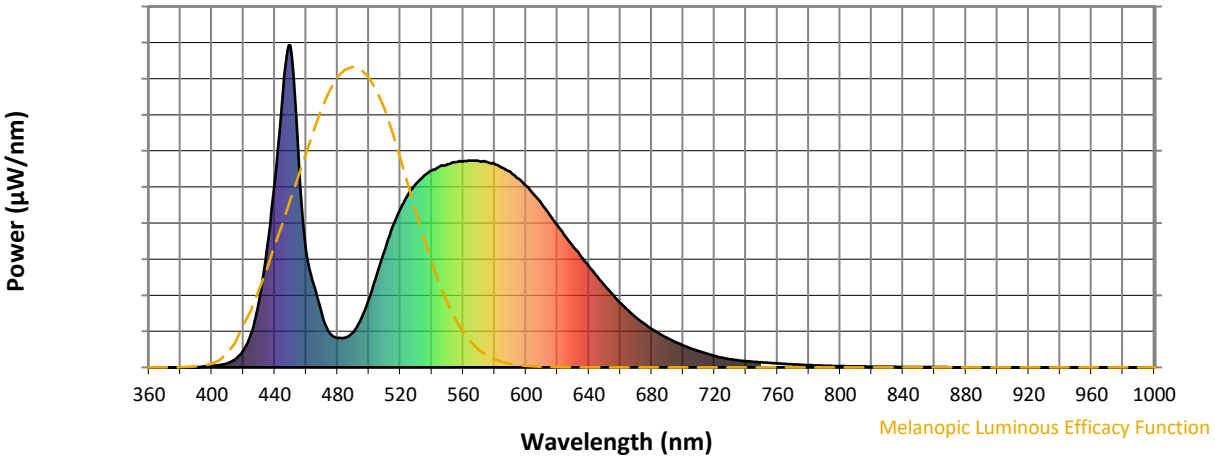


Scotopic Lumens: NR **S/P: 1.69**

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

REPORT NUMBER: SP1-2407-176-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.36**

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	440	NR	750	16	NR	880	0	NR
365	0	NR	495	150	NR	625	407	NR	755	14	NR	885	0	NR
370	0	NR	500	213	NR	630	375	NR	760	12	NR	890	0	NR
375	0	NR	505	288	NR	635	345	NR	765	11	NR	895	0	NR
380	0	NR	510	364	NR	640	314	NR	770	9	NR	900	0	NR
385	0	NR	515	436	NR	645	283	NR	775	8	NR	905	0	NR
390	1	NR	520	492	NR	650	254	NR	780	7	NR	910	0	NR
395	3	NR	525	537	NR	655	227	NR	785	6	NR	915	0	NR
400	5	NR	530	570	NR	660	200	NR	790	5	NR	920	0	NR
405	7	NR	535	595	NR	665	177	NR	795	4	NR	925	0	NR
410	13	NR	540	611	NR	670	155	NR	800	4	NR	930	0	NR
415	25	NR	545	624	NR	675	136	NR	805	3	NR	935	0	NR
420	52	NR	550	631	NR	680	119	NR	810	3	NR	940	0	NR
425	106	NR	555	637	NR	685	104	NR	815	3	NR	945	0	NR
430	204	NR	560	640	NR	690	91	NR	820	2	NR	950	0	NR
435	369	NR	565	642	NR	695	79	NR	825	2	NR	955	0	NR
440	573	NR	570	641	NR	700	68	NR	830	2	NR	960	0	NR
445	844	NR	575	638	NR	705	59	NR	835	2	NR	965	0	NR
450	999	NR	580	632	NR	710	50	NR	840	1	NR	970	0	NR
455	668	NR	585	620	NR	715	43	NR	845	1	NR	975	0	NR
460	361	NR	590	607	NR	720	36	NR	850	1	NR	980	0	NR
465	255	NR	595	586	NR	725	30	NR	855	1	NR	985	0	NR
470	165	NR	600	564	NR	730	25	NR	860	1	NR	990	0	NR
475	106	NR	605	537	NR	735	22	NR	865	1	NR	995	0	NR
480	91	NR	610	507	NR	740	19	NR	870	0	NR	1000	0	NR
485	93	NR	615	474	NR	745	17	NR	875	0	NR			

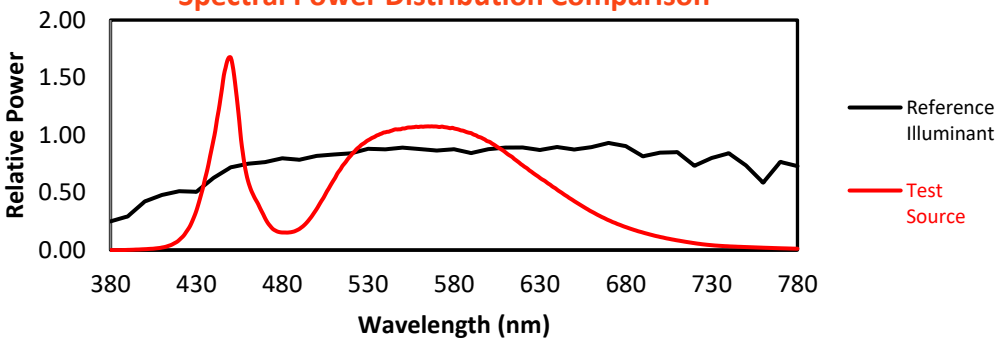
REPORT NUMBER: SP1-2407-176-6

TM-30-18

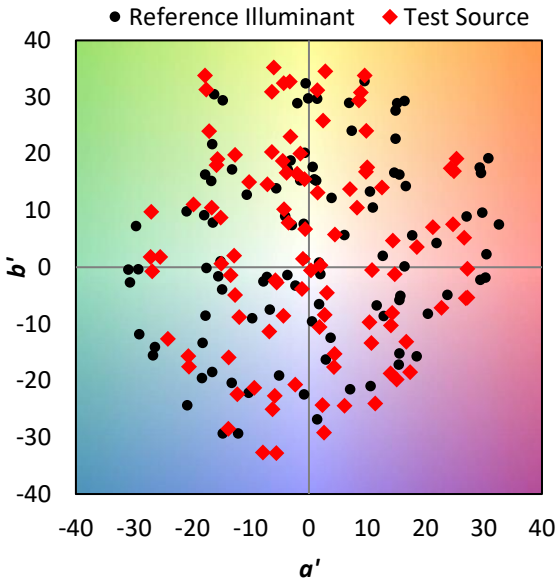
Summary

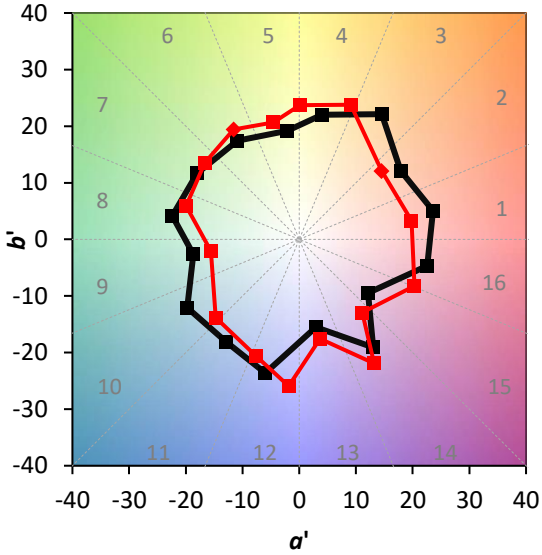
R_f = 73
R_g = 94.6
CIE R_a = 70.9
R_9 = -29.8

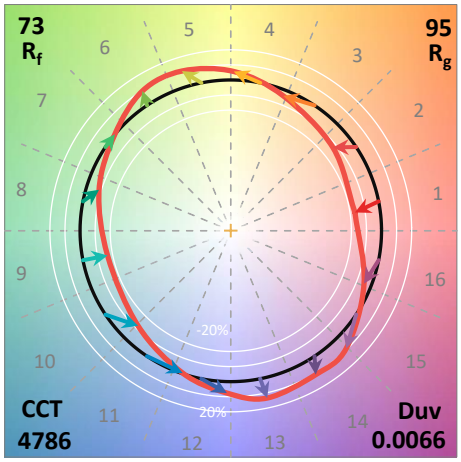
Spectral Power Distribution Comparison

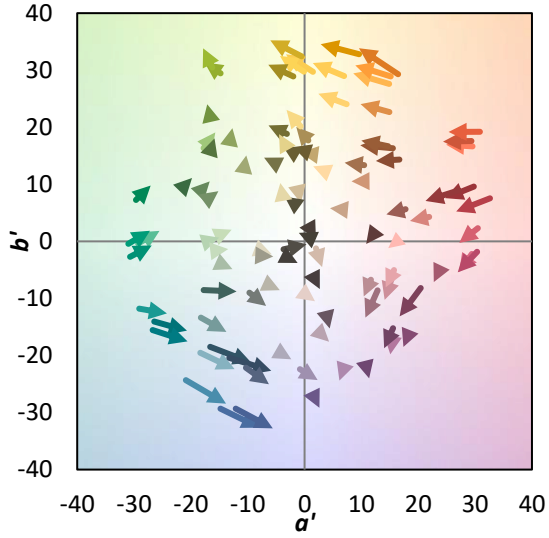


Color Vector Graphics







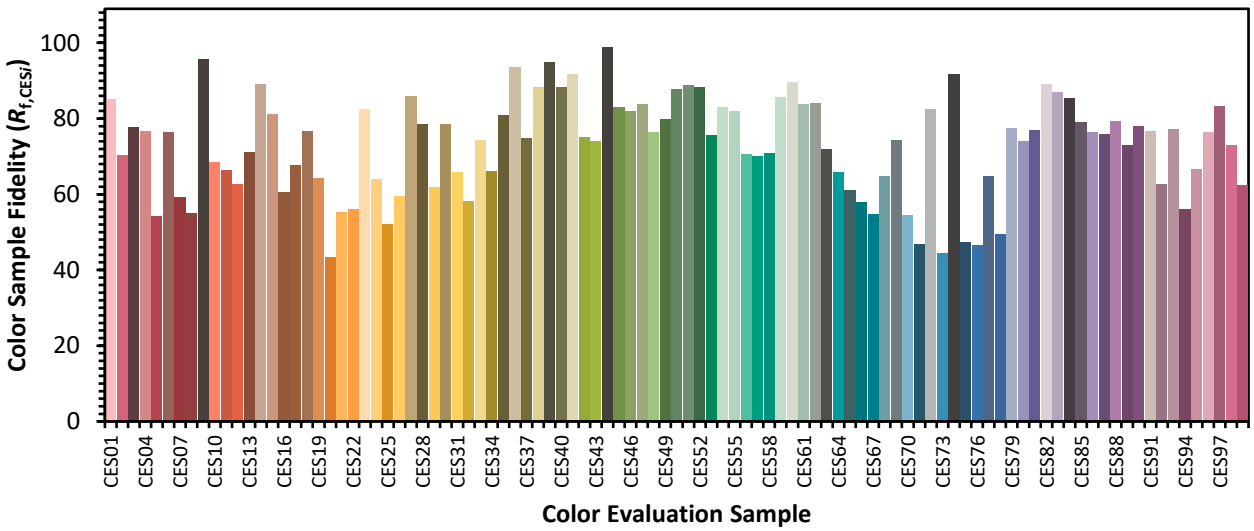


REPORT NUMBER: SP1-2407-176-6

TM-30-18

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

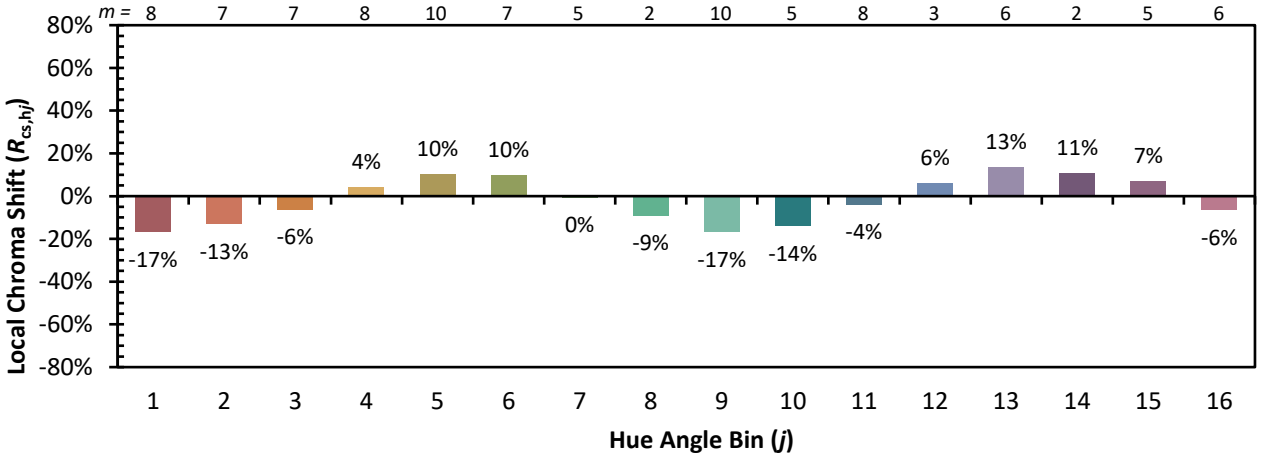
CES01 = 85	CES26 = 60	CES51 = 89	CES76 = 46
CES02 = 59	CES27 = 86	CES52 = 88	CES77 = 65
CES03 = 30	CES28 = 78	CES53 = 76	CES78 = 49
CES04 = 69	CES29 = 62	CES54 = 83	CES79 = 78
CES05 = 46	CES30 = 79	CES55 = 82	CES80 = 74
CES06 = 50	CES31 = 66	CES56 = 71	CES81 = 77
CES07 = 39	CES32 = 58	CES57 = 70	CES82 = 89
CES08 = 38	CES33 = 74	CES58 = 71	CES83 = 87
CES09 = 29	CES34 = 66	CES59 = 86	CES84 = 86
CES10 = 72	CES35 = 81	CES60 = 90	CES85 = 79
CES11 = 56	CES36 = 94	CES61 = 84	CES86 = 76
CES12 = 61	CES37 = 75	CES62 = 84	CES87 = 76
CES13 = 41	CES38 = 88	CES63 = 72	CES88 = 79
CES14 = 74	CES39 = 95	CES64 = 66	CES89 = 73
CES15 = 70	CES40 = 88	CES65 = 61	CES90 = 78
CES16 = 46	CES41 = 92	CES66 = 58	CES91 = 77
CES17 = 49	CES42 = 75	CES67 = 55	CES92 = 63
CES18 = 55	CES43 = 74	CES68 = 65	CES93 = 77
CES19 = 71	CES44 = 99	CES69 = 74	CES94 = 56
CES20 = 64	CES45 = 83	CES70 = 55	CES95 = 67
CES21 = 85	CES46 = 82	CES71 = 47	CES96 = 76
CES22 = 77	CES47 = 84	CES72 = 82	CES97 = 83
CES23 = 91	CES48 = 76	CES73 = 44	CES98 = 73
CES24 = 90	CES49 = 80	CES74 = 92	CES99 = 62
CES25 = 71	CES50 = 88	CES75 = 47	

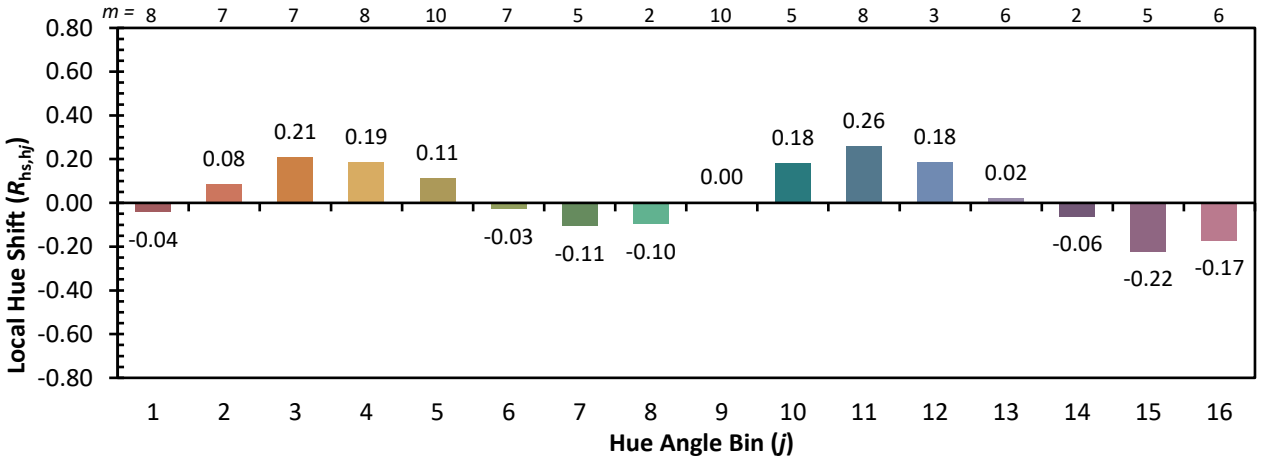


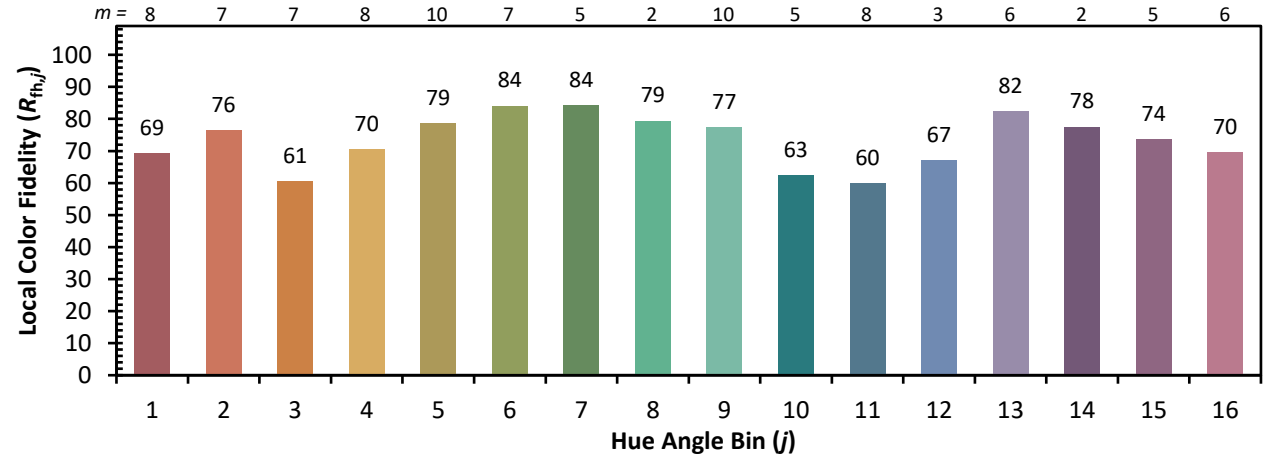
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Color Rendition by Hue-Angle Bin



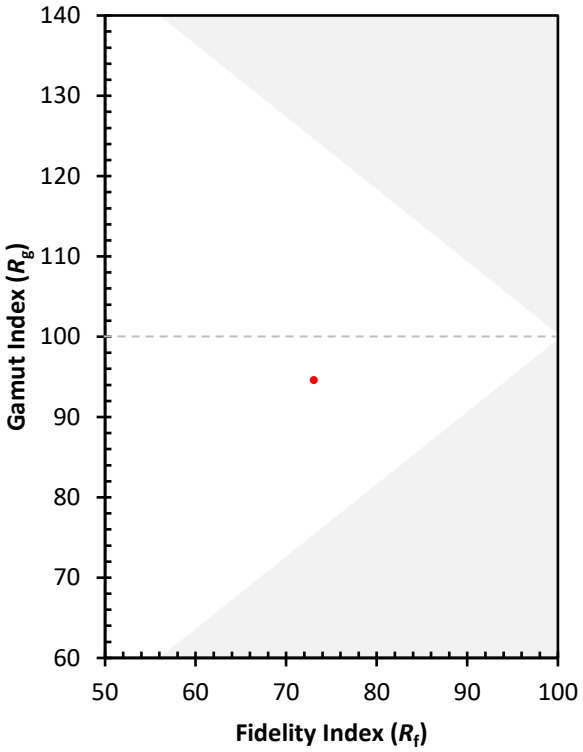


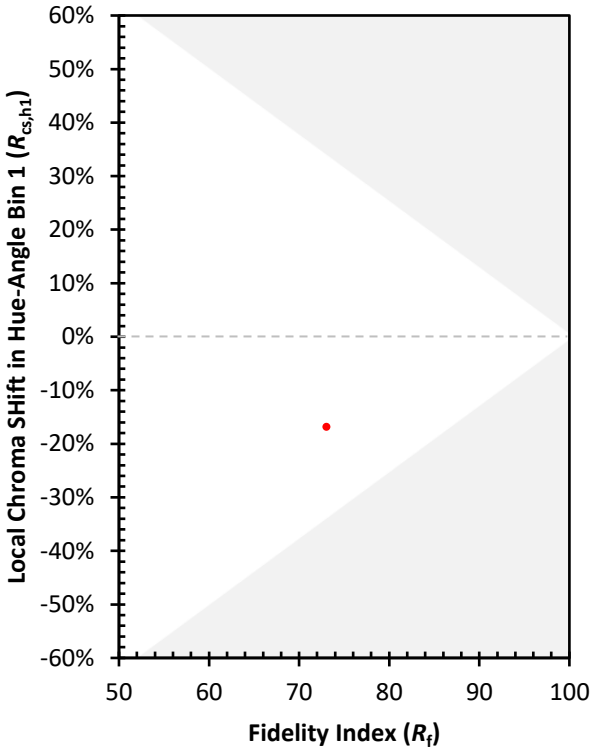


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Measure Comparisons





(END OF REPORT)