

Signify Classified - Internal
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: LUMARK

Report Number: P979133

Luminaire Tested: **WPSLED15S-30W-3000K**

Issue Date: 03/31/2025



Test Information

Test Method: LM-79-08
Report Number: P979133
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPSLED15S-30W-3000K
Description: LUMARK WALL PACK LED SMALL 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @30W-3000K
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

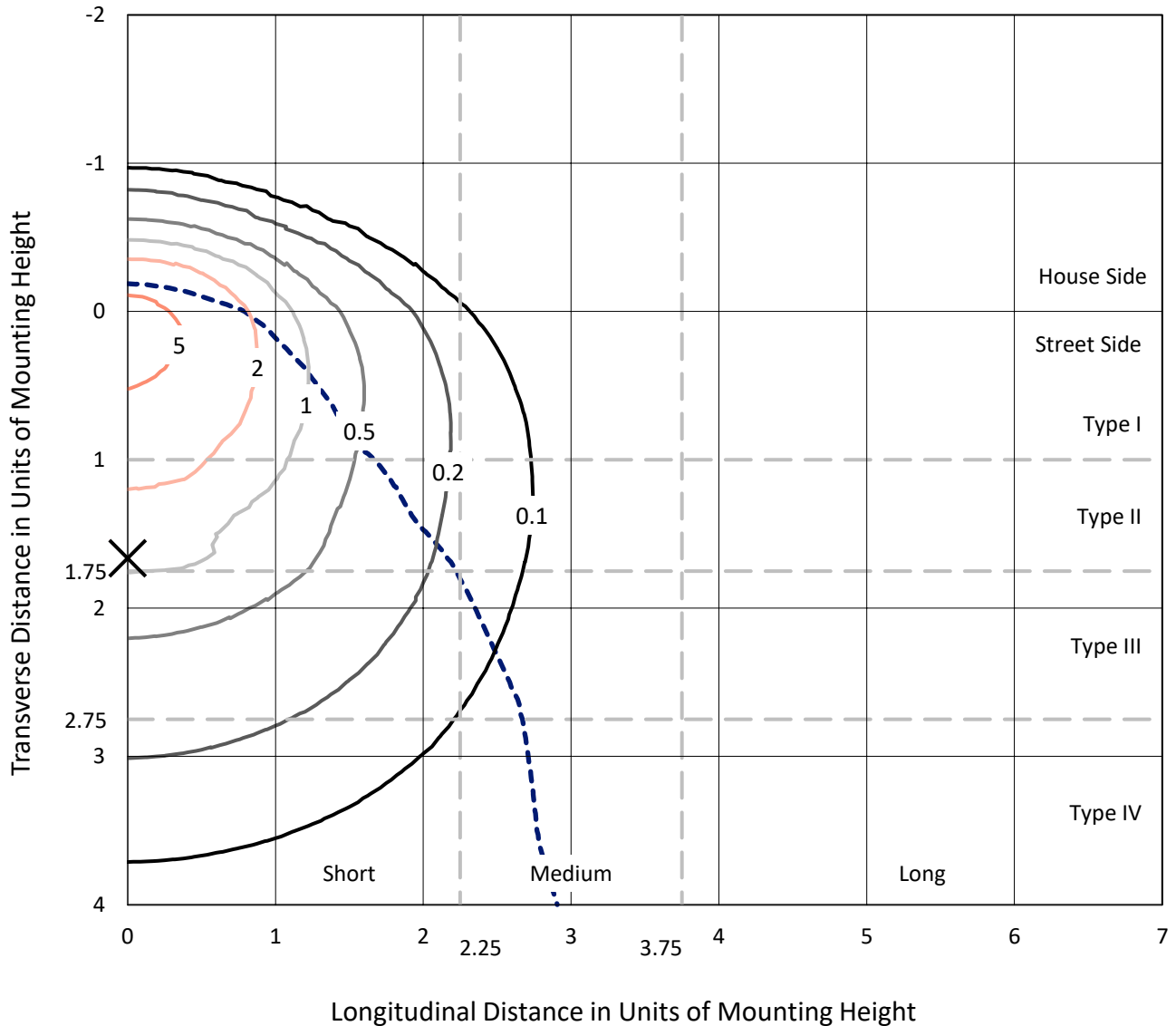
Lumens per Lamp: N/A
Luminaire Lumens: 4398.8 lumens
Efficiency: N/A
Efficacy: 142.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.61' x L: 0.12' x H: 0.44')
IES Classification: Type IV - Short
BUG Rating: B1 - U3 - G3

Input Watts (W): 30.8
Input Voltage (V): 120
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: 28.75 FT

REPORT NUMBER: P979133
 CATALOG NUMBER: WPSLED15S-30W-3000K

Iso-Footcandle Lines of Horizontal Illumination

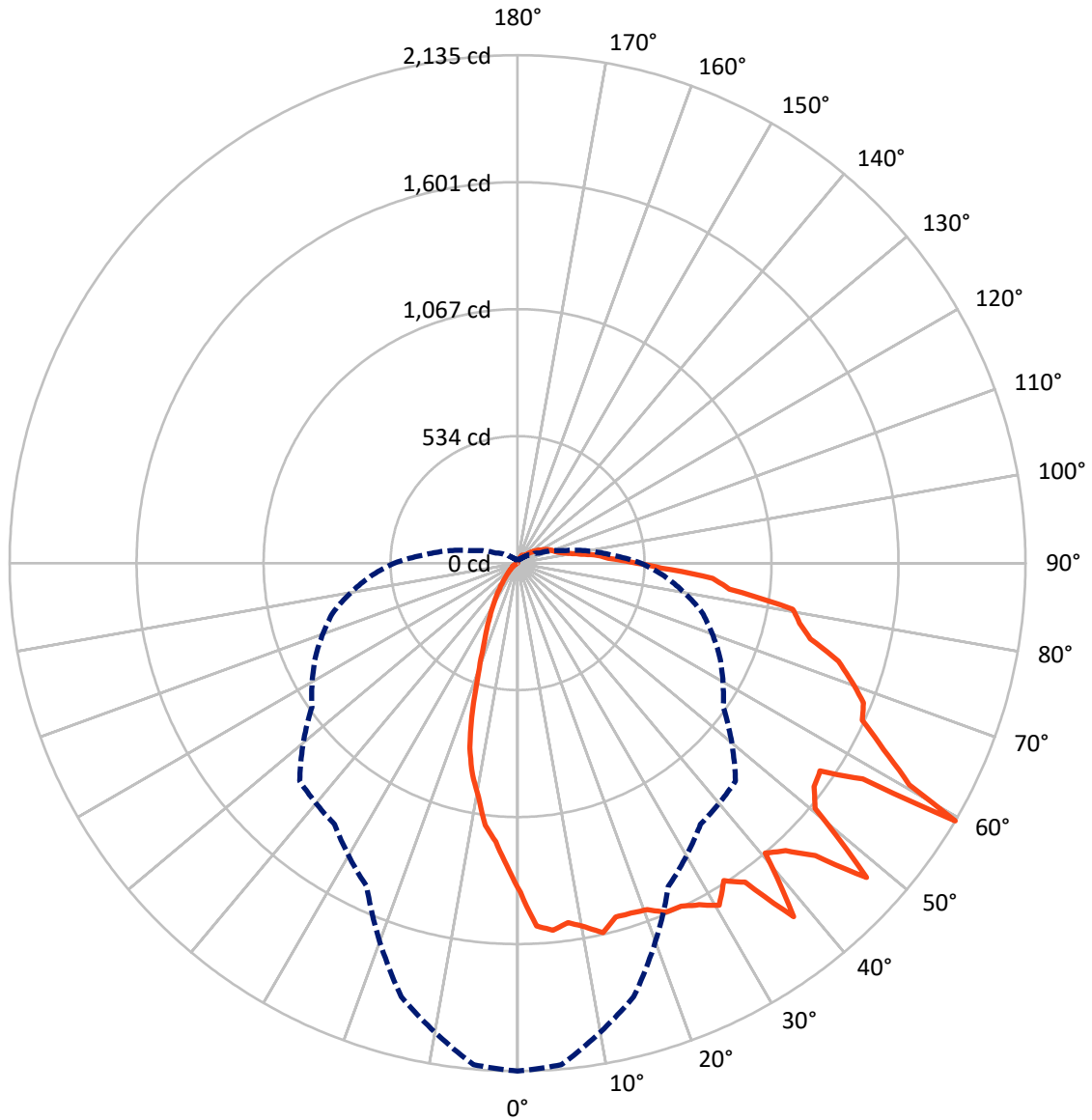
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 6.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P979133
CATALOG NUMBER: WPSLED15S-30W-3000K

Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 59-Deg Vertical

REPORT NUMBER: P979133
 CATALOG NUMBER: WPSLED15S-30W-3000K

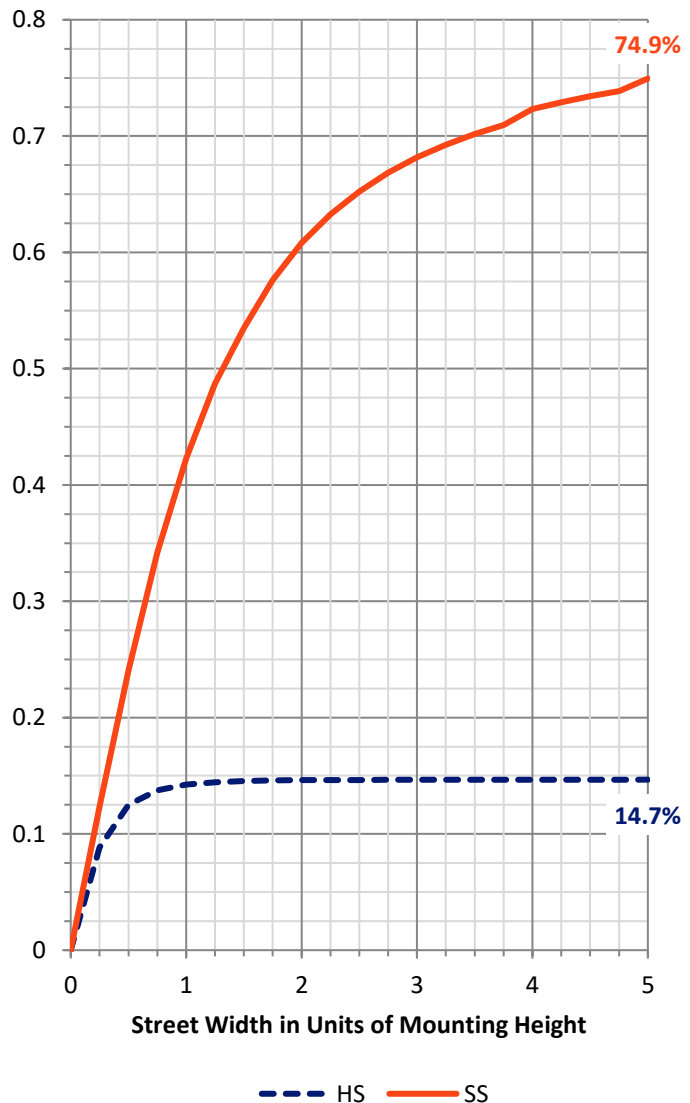
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	652.8	5.3	658.1
	% Fixture	14.8	0.1	15.0
Street Side	Lumens	3481.0	259.7	3740.7
	% Fixture	79.1	5.9	85.0
Total	Lumens	4133.8	265.0	4398.8
	% Fixture	94.0	6.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.7	2.9
10°-20°	342.9	7.8
20°-30°	481.1	10.9
30°-40°	570.1	13.0
40°-50°	618.4	14.1
50°-60°	617.8	14.0
60°-70°	604.1	13.7
70°-80°	483.5	11.0
80°-90°	287.1	6.5
90°-100°	117.0	2.7
100°-110°	60.7	1.4
110°-120°	39.1	0.9
120°-130°	23.0	0.5
130°-140°	12.8	0.3
140°-150°	8.1	0.2
150°-160°	3.5	0.1
160°-170°	0.9	0.0
170°-180°	0.1	0.0
0°-90°	4133.8	94.0
0°-180°	4398.8	100.0



REPORT NUMBER: P979133

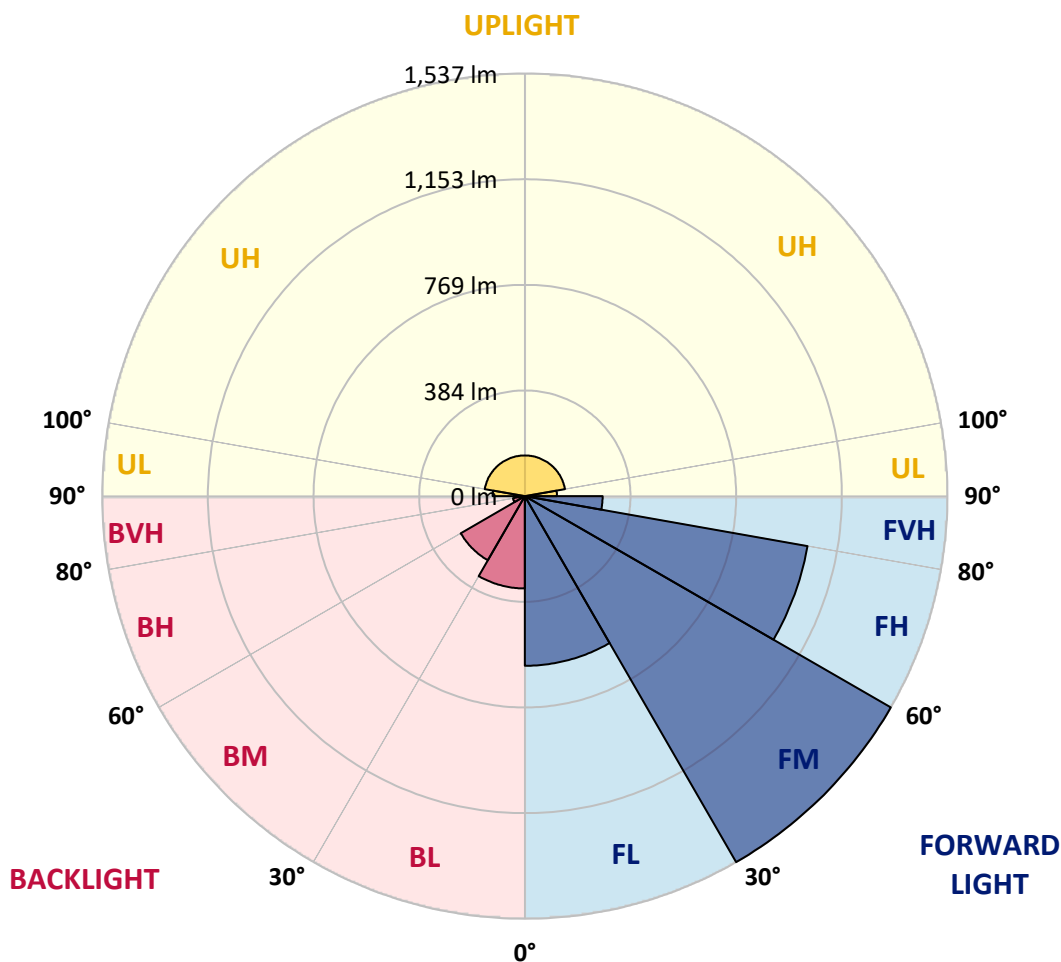
CATALOG NUMBER: WPSLED15S-30W-3000K

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	616.9	14.0			
FM (30°-60°)	1537.1	34.9			
FH (60°-80°)	1044.1	23.7			G1/1800
FVH (80°-90°)	282.9	6.4			G3/500
BL (0°-30°)	335.8	7.6	B1/500		
BM (30°-60°)	269.3	6.1	B1/1000		
BH (60°-80°)	43.6	1.0	B0/110		G0/110
BVH (80°-90°)	4.1	0.1			G0/10
UL (90°-100°)	117.0	2.7		U3/500	
UH (100°-180°)	148.0	3.4		U3/500	

BUG Rating: B1-U3-G3

Type IV Short





REPORT NUMBER: P979133

CATALOG NUMBER: WPSLED15S-30W-3000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6
2.5°	1527.0	1527.0	1525.9	1524.8	1524.8	1522.6	1517.0	1503.8	1468.5	1411.8	1383.1
5°	1549.6	1555.1	1540.2	1511.0	1485.1	1480.1	1504.4	1508.8	1499.4	1429.4	1373.7
7.5°	1524.8	1523.7	1517.0	1491.1	1514.3	1551.8	1463.6	1470.7	1481.2	1420.6	1341.8
10°	1554.5	1556.2	1552.3	1519.3	1507.7	1460.8	1513.7	1437.1	1460.8	1401.3	1306.5
12.5°	1593.7	1598.1	1579.9	1553.4	1503.8	1481.2	1445.9	1484.5	1436.6	1389.7	1283.9
15°	1543.0	1552.9	1512.1	1482.9	1554.5	1482.9	1454.2	1442.1	1405.1	1379.8	1268.4
17.5°	1546.3	1558.9	1553.4	1529.2	1474.6	1517.6	1451.4	1418.9	1397.4	1372.6	1266.2
20°	1554.0	1556.2	1525.9	1495.0	1522.0	1454.8	1457.5	1417.8	1400.7	1353.3	1242.5
22.5°	1593.7	1599.2	1555.1	1514.8	1475.2	1498.3	1472.4	1407.9	1383.1	1331.8	1210.6
25°	1597.0	1599.2	1569.4	1527.5	1499.4	1463.0	1421.1	1377.0	1354.4	1299.3	1176.4
27.5°	1626.2	1619.6	1551.8	1525.3	1502.2	1444.8	1436.6	1371.0	1318.0	1255.8	1148.3
30°	1669.2	1656.0	1634.5	1552.9	1490.0	1454.2	1414.5	1363.8	1282.8	1215.5	1119.6
32.5°	1590.9	1581.0	1558.9	1597.5	1525.9	1445.4	1371.0	1303.7	1258.5	1169.2	1084.3
35°	1647.1	1619.0	1542.4	1533.6	1565.6	1423.3	1353.9	1285.5	1220.5	1131.2	1049.6
37.5°	1885.3	1860.5	1702.3	1550.1	1510.4	1454.8	1347.8	1304.3	1181.3	1088.7	999.4
40°	1603.0	1591.5	1593.1	1711.1	1484.5	1446.5	1319.1	1285.0	1141.1	1041.9	950.9
42.5°	1651.6	1629.0	1566.7	1546.3	1598.1	1404.6	1310.9	1242.0	1093.7	987.3	889.7
45°	1753.5	1733.1	1631.7	1549.0	1484.5	1410.1	1282.8	1189.6	1059.0	923.3	832.9
47.5°	1974.0	1944.3	1705.6	1555.6	1445.9	1425.5	1282.2	1154.9	1014.9	862.2	771.2
50°	1619.6	1605.2	1705.0	1715.5	1417.3	1330.7	1258.5	1108.6	975.2	797.7	705.1
52.5°	1560.0	1548.5	1532.5	1554.0	1520.4	1292.1	1230.9	1060.1	924.5	746.4	652.1
55°	1542.4	1520.9	1493.3	1447.6	1479.6	1282.2	1149.4	1017.1	877.0	694.0	603.1
57.5°	1711.6	1664.8	1545.2	1441.5	1337.3	1347.3	1090.4	975.2	831.8	647.2	547.4
59°	2134.5	2116.3	1886.4	1499.4	1340.1	1294.9	1055.1	938.2	803.7	618.0	518.2
60°	1891.3	1867.1	1995.0	1614.6	1362.1	1243.1	1038.6	919.5	788.8	603.1	504.4
62.5°	1726.5	1710.5	1668.6	1674.7	1487.3	1204.5	1061.7	877.0	732.1	560.1	465.3
65°	1591.5	1582.6	1566.7	1508.8	1460.3	1235.4	1019.8	847.3	690.2	506.6	400.2
67.5°	1567.8	1557.3	1517.0	1445.4	1335.7	1218.3	952.0	786.6	634.5	450.9	337.9
70°	1489.5	1484.0	1439.3	1387.5	1281.1	1127.3	932.2	754.1	589.3	393.0	274.5
72.5°	1409.6	1399.1	1369.3	1320.3	1234.3	1049.6	875.4	713.9	524.2	332.4	219.4
75°	1270.6	1265.1	1248.6	1213.3	1130.1	984.5	805.4	633.4	463.6	277.8	168.1
77.5°	1211.7	1202.8	1154.3	1105.3	1022.0	885.3	715.5	568.3	402.4	218.8	123.5
80°	1172.5	1167.0	1125.1	1049.0	960.8	810.9	655.4	509.4	345.6	166.5	88.2
82.5°	896.3	903.0	869.9	852.8	796.0	690.7	549.6	437.1	280.0	119.6	63.9
85°	823.0	813.1	788.8	756.9	705.1	590.9	454.8	355.6	218.3	85.4	46.3
87.5°	604.7	599.2	595.9	592.6	548.5	468.0	361.6	271.2	167.0	60.6	33.6
90°	475.2	474.6	468.0	444.3	417.3	361.6	275.1	200.1	119.1	44.1	26.5
92.5°	381.5	382.6	372.6	358.3	328.0	282.2	208.9	145.5	88.8	33.1	22.6
95°	339.0	333.0	318.6	294.9	269.6	235.4	165.9	114.7	71.1	27.6	19.8
97.5°	269.0	267.4	261.3	252.5	232.6	197.9	136.7	94.8	57.9	23.7	18.2
100°	223.3	223.3	217.2	205.1	191.3	170.3	118.5	82.7	48.0	22.1	17.6
102.5°	191.8	191.3	189.1	178.1	165.4	138.9	103.1	72.8	39.7	20.9	17.6
105°	173.1	172.0	168.7	159.3	153.8	120.7	89.3	62.8	34.2	20.9	17.1
107.5°	162.1	162.1	159.9	149.9	136.7	107.5	78.8	52.9	30.3	20.4	17.1



REPORT NUMBER: P979133
 CATALOG NUMBER: WPSLED15S-30W-3000K

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	152.7	151.6	147.7	139.5	124.0	98.1	69.5	45.2	28.1	20.4	16.5
112.5°	143.9	143.9	138.9	129.0	110.8	87.1	61.2	39.1	27.0	19.8	16.0
115°	134.0	132.9	127.9	115.8	99.8	77.2	54.0	35.3	25.9	18.7	14.3
117.5°	119.6	119.6	115.8	105.8	88.8	68.4	49.1	33.1	25.4	17.6	13.2
120°	108.6	108.6	104.7	94.3	78.8	60.6	43.5	30.9	24.3	16.5	12.1
122.5°	98.7	98.7	93.7	83.2	68.4	52.9	38.0	29.2	23.2	15.4	10.5
125°	86.5	87.1	82.7	72.8	59.0	46.9	34.7	28.1	22.6	13.8	9.4
127.5°	77.2	76.1	71.7	62.3	51.3	40.8	32.5	27.0	21.5	12.7	8.3
130°	65.0	64.5	60.6	52.9	45.2	38.6	32.0	25.9	19.8	11.0	7.2
132.5°	55.7	54.6	51.3	46.3	40.8	36.9	30.9	24.8	18.2	9.4	6.1
135°	46.9	46.3	44.1	42.4	38.0	34.7	29.8	23.2	16.5	8.3	5.0
137.5°	41.3	41.3	40.2	39.1	36.4	33.1	28.1	22.1	14.9	6.6	3.9
140°	38.6	38.6	39.1	38.6	35.3	31.4	27.0	20.9	13.2	6.1	3.3
142.5°	39.1	39.1	39.1	37.5	34.2	30.3	25.4	19.3	11.6	5.0	2.8
145°	40.8	40.8	39.1	36.4	32.5	28.1	23.7	17.1	9.9	3.9	2.2
147.5°	39.7	39.1	36.9	33.1	29.2	25.9	20.9	14.3	8.3	3.3	2.2
150°	36.9	36.4	33.1	29.8	26.5	22.6	17.6	12.1	6.6	2.8	1.7
152.5°	32.5	32.0	29.2	25.4	22.1	18.7	14.9	9.4	5.0	2.2	1.7
155°	24.8	24.8	22.6	19.8	17.1	14.9	11.6	7.7	3.9	1.7	1.1
157.5°	18.2	18.2	17.1	15.4	13.8	12.1	9.4	6.1	2.8	1.1	1.1
160°	14.9	14.9	14.3	12.7	11.0	9.9	7.2	5.0	2.2	1.1	1.1
162.5°	12.7	12.1	11.6	10.5	8.8	7.2	5.0	3.3	2.2	1.1	1.1
165°	9.9	9.9	9.4	8.3	6.6	5.5	3.9	2.8	1.7	1.1	1.1
167.5°	7.2	7.2	6.6	5.5	4.4	3.3	2.2	1.7	1.7	1.1	1.1
170°	4.4	4.4	3.9	3.3	2.2	2.2	1.7	1.7	1.1	1.1	1.1
172.5°	1.7	1.7	1.1	1.1	1.7	1.7	1.1	1.1	1.1	1.1	1.1
175°	0.6	0.6	0.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.6
177.5°	0.0	0.0	0.0	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



REPORT NUMBER: P979133
 CATALOG NUMBER: WPSLED15S-30W-3000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6	1383.6
2.5°	1356.6	1318.0	1310.3	1303.7	1302.6	1290.5	1280.6	1270.6	1274.5	1272.3
5°	1324.7	1296.5	1281.1	1250.2	1228.2	1199.5	1192.4	1176.4	1172.0	1173.6
7.5°	1287.2	1264.0	1215.5	1180.2	1164.2	1185.2	1172.5	1130.6	1115.7	1109.7
10°	1254.1	1216.6	1160.9	1162.6	1109.7	1072.2	1046.8	1011.0	990.1	995.6
12.5°	1237.6	1176.4	1130.1	1082.7	1017.6	942.1	898.5	891.9	906.3	909.6
15°	1228.2	1141.1	1109.7	998.3	901.3	875.4	866.0	832.4	798.2	801.5
17.5°	1219.9	1114.6	1028.1	904.6	848.9	792.2	688.5	651.6	647.7	645.0
20°	1192.9	1086.0	963.0	851.7	774.0	634.5	590.4	529.2	495.6	490.1
22.5°	1156.0	1043.5	890.3	799.3	639.5	540.8	447.6	411.2	390.3	385.9
25°	1119.6	979.0	831.3	696.2	550.2	428.3	358.3	329.1	319.2	317.0
27.5°	1080.5	918.4	781.7	583.8	454.2	354.5	297.1	274.0	261.3	257.4
30°	1041.9	853.9	705.1	508.8	377.6	293.3	247.5	224.9	217.2	215.0
32.5°	991.2	796.0	613.5	437.1	312.0	248.1	204.5	184.7	175.8	175.3
35°	941.5	735.4	524.8	369.9	266.3	202.3	168.1	147.7	137.8	138.9
37.5°	884.8	678.6	459.2	308.2	217.2	167.6	133.4	119.1	110.3	109.7
40°	831.8	625.1	403.5	260.2	179.2	132.3	108.0	92.1	87.1	86.5
42.5°	771.2	559.0	349.5	220.0	147.2	109.1	86.0	73.9	69.5	69.5
45°	699.0	480.7	288.3	175.8	117.4	87.1	68.4	58.4	54.0	53.5
47.5°	627.9	410.1	234.8	143.3	95.4	68.9	54.0	45.8	43.0	42.4
50°	559.5	353.9	195.1	115.8	78.8	54.0	41.9	36.4	33.1	33.1
52.5°	505.5	310.9	165.9	95.4	63.4	42.4	33.6	28.1	28.7	29.2
55°	461.4	274.0	136.7	79.9	50.2	33.1	25.4	23.2	24.8	24.8
57.5°	418.4	226.6	113.0	67.3	39.1	27.0	18.7	19.3	20.4	20.4
59°	393.0	202.3	100.9	61.2	34.2	22.6	15.4	16.5	16.0	16.0
60°	373.7	188.0	94.3	55.7	30.3	19.8	13.8	13.8	13.2	13.2
62.5°	328.0	149.9	79.4	45.2	23.2	12.7	8.8	8.3	7.2	7.7
65°	269.0	119.1	65.6	35.8	17.1	7.2	3.3	2.2	1.7	1.1
67.5°	217.2	95.9	52.9	27.6	11.6	2.2	0.0	0.0	0.0	0.0
70°	170.3	77.2	43.0	20.9	6.1	0.0	0.0	0.0	0.0	0.0
72.5°	131.7	62.8	34.7	14.3	1.7	0.0	0.0	0.0	0.0	0.0
75°	97.6	50.7	26.5	9.4	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	71.7	38.6	20.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0
80°	54.6	30.3	15.4	3.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	41.9	23.7	11.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0
85°	31.4	18.2	8.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	24.3	14.9	7.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
90°	19.3	11.6	5.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	16.5	9.9	4.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0
95°	14.9	8.8	3.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	14.3	8.3	3.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0
100°	13.8	7.7	2.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	13.8	7.7	2.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
105°	13.8	7.2	2.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	13.8	6.6	2.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P979133
 CATALOG NUMBER: WPSLED15S-30W-3000K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	13.2	6.1	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	12.7	5.0	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
115°	11.0	3.9	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	9.4	2.8	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
120°	7.2	2.2	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	6.1	1.7	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
125°	5.5	1.1	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	5.0	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
130°	4.4	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	3.9	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
135°	3.3	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	2.8	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
140°	2.2	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	2.2	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
145°	2.2	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
147.5°	1.7	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
150°	1.7	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	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

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

Lumark

Report Number: SP1-2407-168-1

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 3000k

Data in this report applies to families of products including LSDL-92S-100W 3000k.

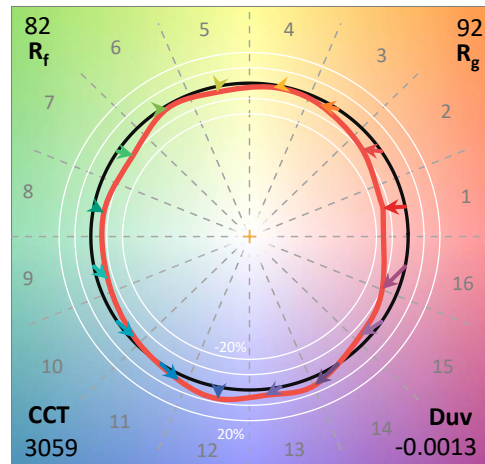
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-168-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/12/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Lumark
 Catalog Number: **LSDL-92S-100W 3000k**
 Description: Lumark Wallpack 100W

Spectral Parameters

CCT (K): 3059
 CIE u': 0.2490
 CIE v': 0.5184
 Duv: -0.0013
 CIE x: 0.4310
 CIE y: 0.3988
 CIE z: 0.1702
 Peak Wavelength (nm): 600
 Dominant Wavelength (nm): 583
 Purity: 49.0643
 Rf: 81.8
 Rg: 91.9

CRI (Ra):	79.3		
R1:	78.1	R9:	-8.3
R2:	92.3	R10:	82.8
R3:	91.2	R11:	73.1
R4:	74.6	R12:	70.5
R5:	78.8	R13:	81.8
R6:	90.5	R14:	95.7
R7:	77.6	R15:	69.8
R8:	50.9		



Test Conditions

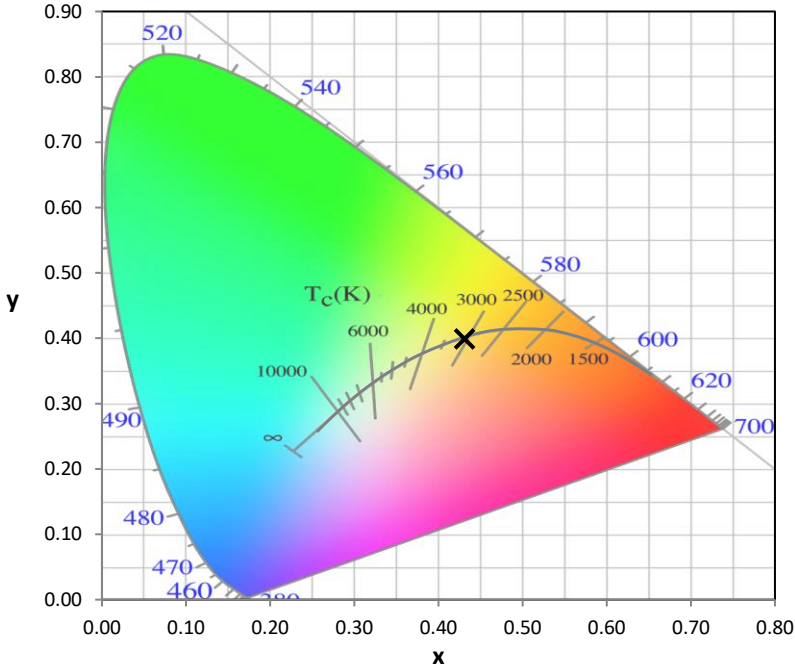
Stabilization Time: 51M
 Operation Time: 1H 51M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-1

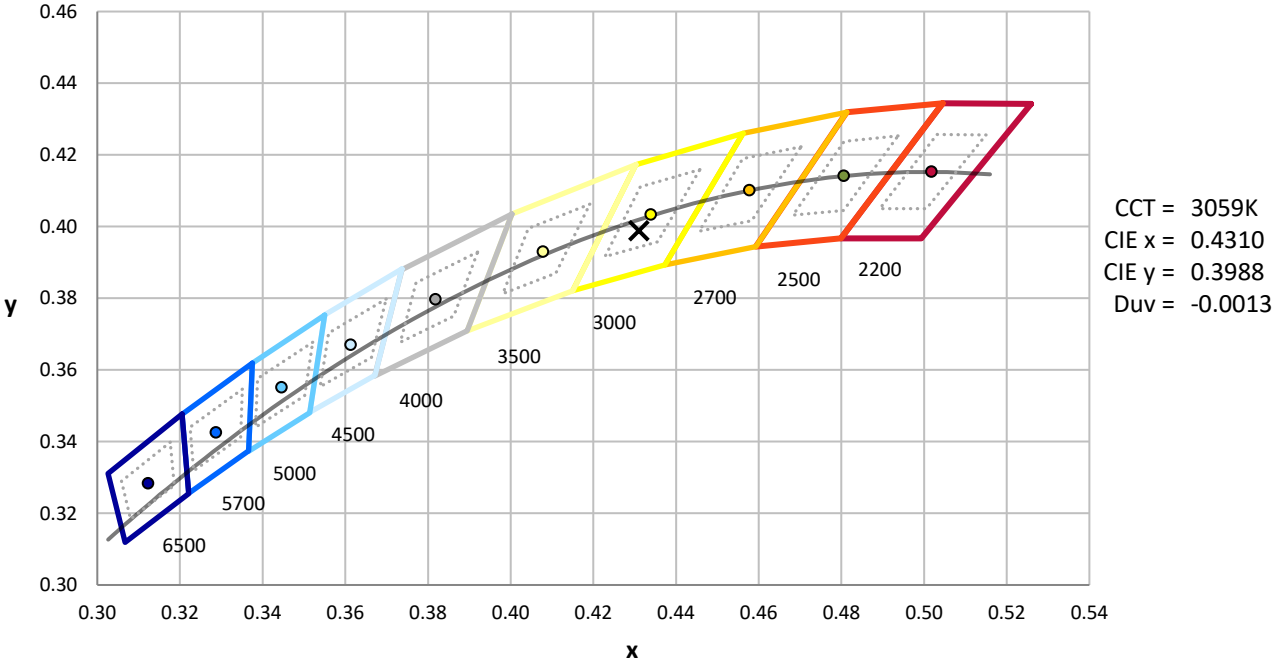
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-1

CIE 1931 Chromaticity Diagram



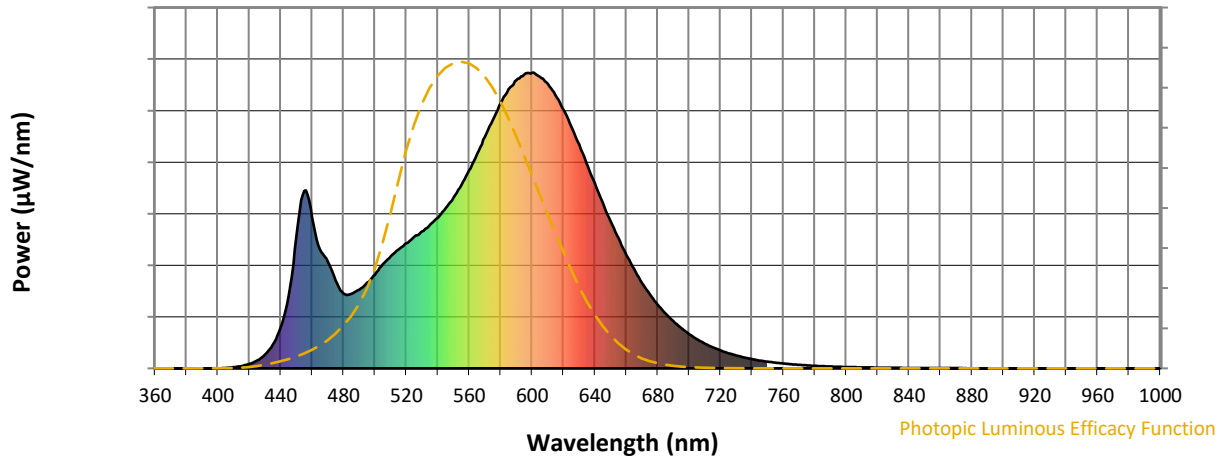
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-168-1

Photopic Flux vs. Wavelength

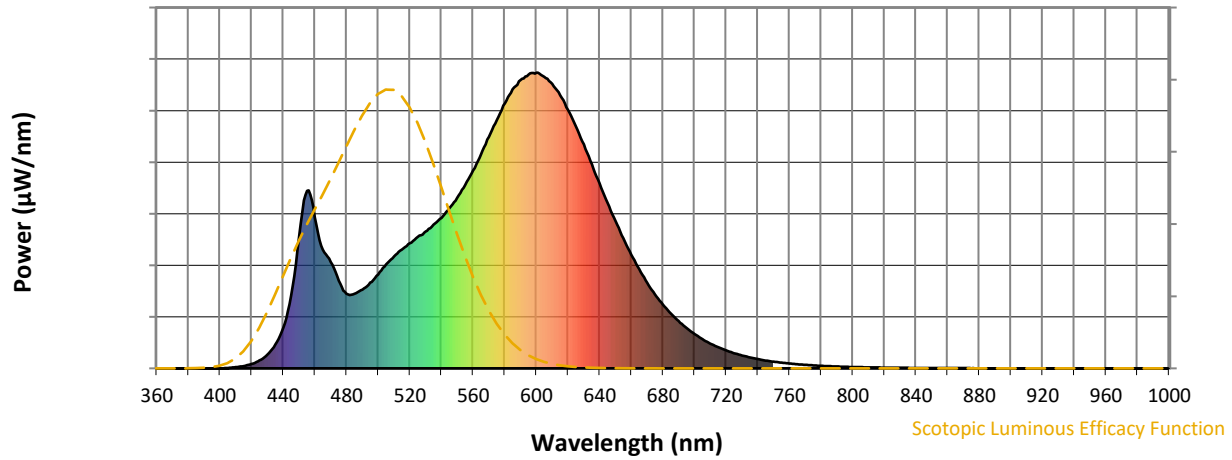


Photopic Lumens: NR

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	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-1

Scotopic Flux vs. Wavelength



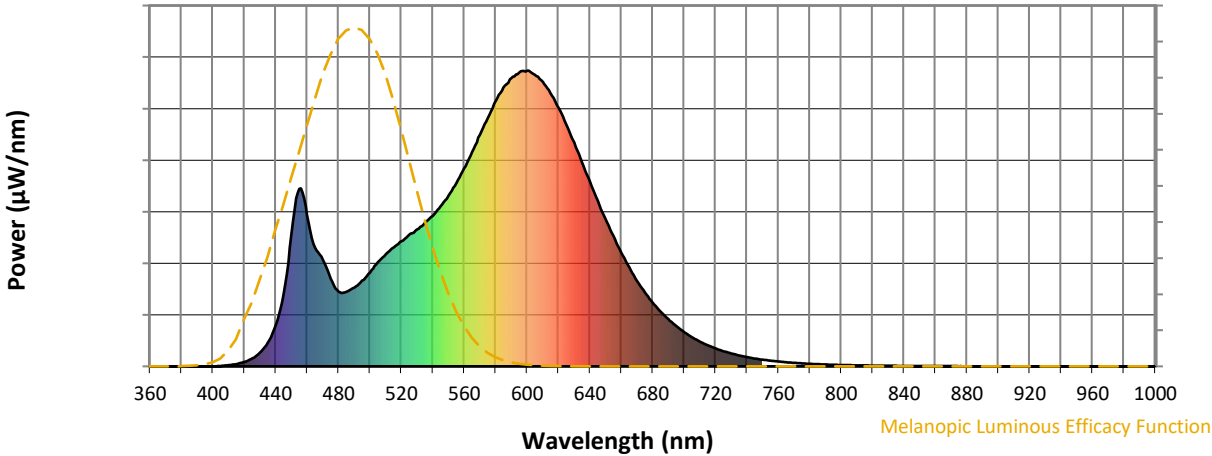
Scotopic Lumens: NR

S/P: 1.39

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	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

REPORT NUMBER: SP1-2407-168-1

Melanopic Flux vs. Wavelength



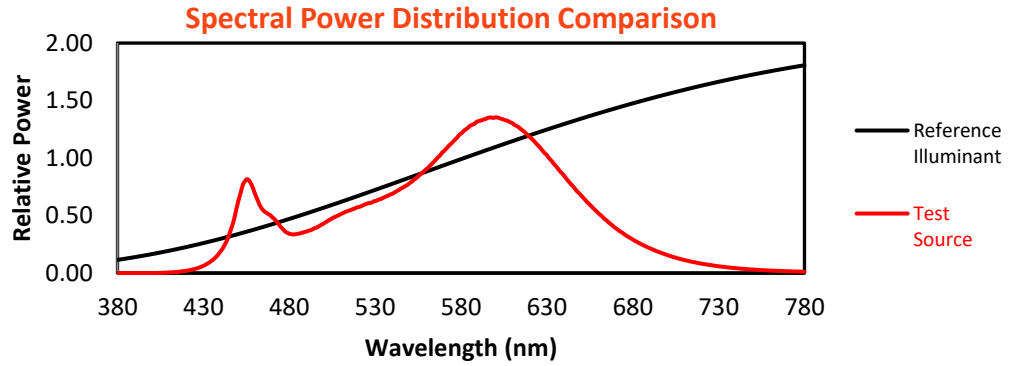
Melanopic Lumens: NR

M/P: 2.77

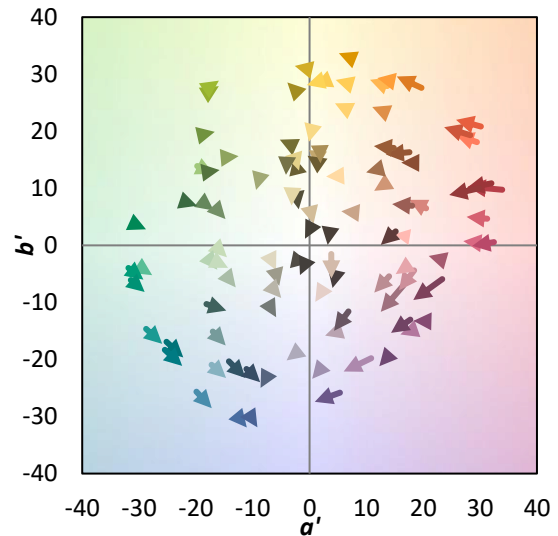
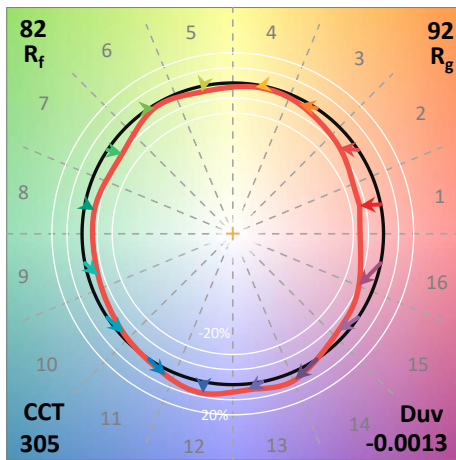
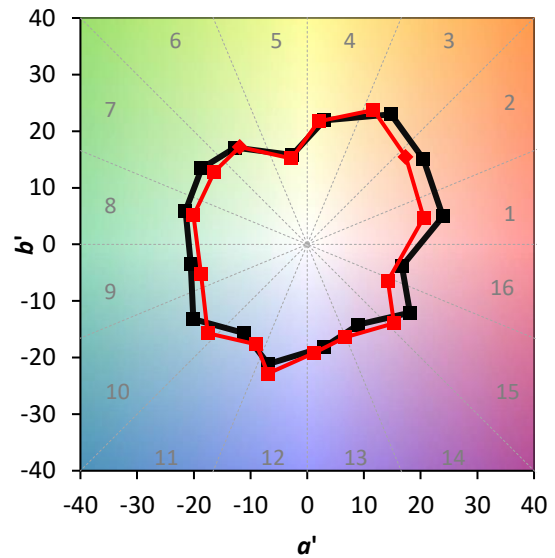
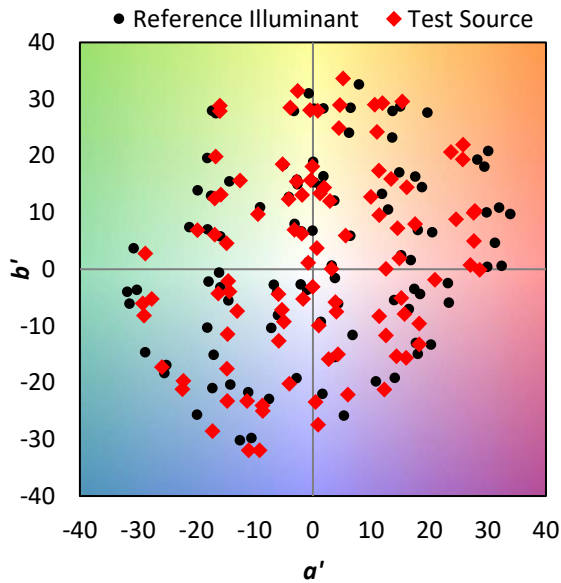
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	266	NR	620	875	NR	750	23	NR	880	0	NR
365	0	NR	495	290	NR	625	818	NR	755	19	NR	885	0	NR
370	0	NR	500	317	NR	630	758	NR	760	16	NR	890	0	NR
375	0	NR	505	352	NR	635	690	NR	765	14	NR	895	0	NR
380	0	NR	510	379	NR	640	625	NR	770	12	NR	900	0	NR
385	0	NR	515	402	NR	645	560	NR	775	10	NR	905	0	NR
390	0	NR	520	423	NR	650	498	NR	780	9	NR	910	0	NR
395	0	NR	525	445	NR	655	440	NR	785	7	NR	915	0	NR
400	0	NR	530	463	NR	660	385	NR	790	6	NR	920	0	NR
405	1	NR	535	486	NR	665	335	NR	795	5	NR	925	0	NR
410	4	NR	540	509	NR	670	289	NR	800	5	NR	930	0	NR
415	8	NR	545	542	NR	675	250	NR	805	4	NR	935	0	NR
420	15	NR	550	577	NR	680	216	NR	810	3	NR	940	0	NR
425	27	NR	555	620	NR	685	185	NR	815	3	NR	945	0	NR
430	46	NR	560	670	NR	690	160	NR	820	3	NR	950	0	NR
435	81	NR	565	725	NR	695	136	NR	825	2	NR	955	0	NR
440	139	NR	570	782	NR	700	116	NR	830	2	NR	960	0	NR
445	246	NR	575	840	NR	705	99	NR	835	2	NR	965	0	NR
450	446	NR	580	896	NR	710	84	NR	840	1	NR	970	0	NR
455	601	NR	585	944	NR	715	71	NR	845	1	NR	975	0	NR
460	511	NR	590	975	NR	720	61	NR	850	1	NR	980	0	NR
465	402	NR	595	994	NR	725	51	NR	855	1	NR	985	0	NR
470	359	NR	600	1000	NR	730	44	NR	860	1	NR	990	0	NR
475	297	NR	605	985	NR	735	37	NR	865	1	NR	995	0	NR
480	252	NR	610	962	NR	740	32	NR	870	1	NR	1000	0	NR
485	252	NR	615	923	NR	745	27	NR	875	1	NR			

Summary

$R_f = 81.8$
 $R_g = 91.9$
 $CIE R_a = 79.3$
 $R_9 = -8.3$

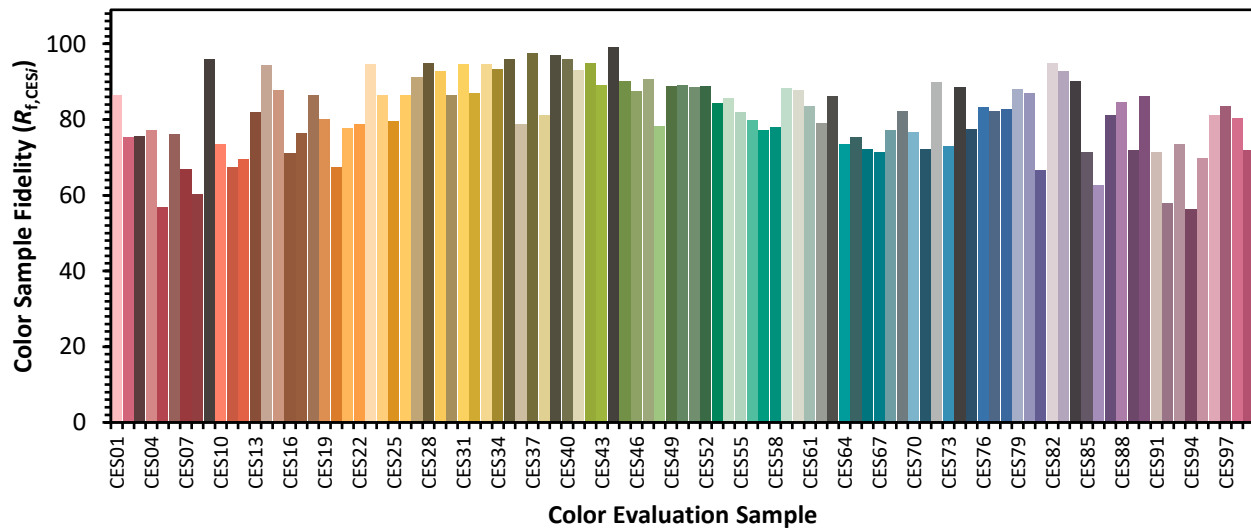


Color Vector Graphics

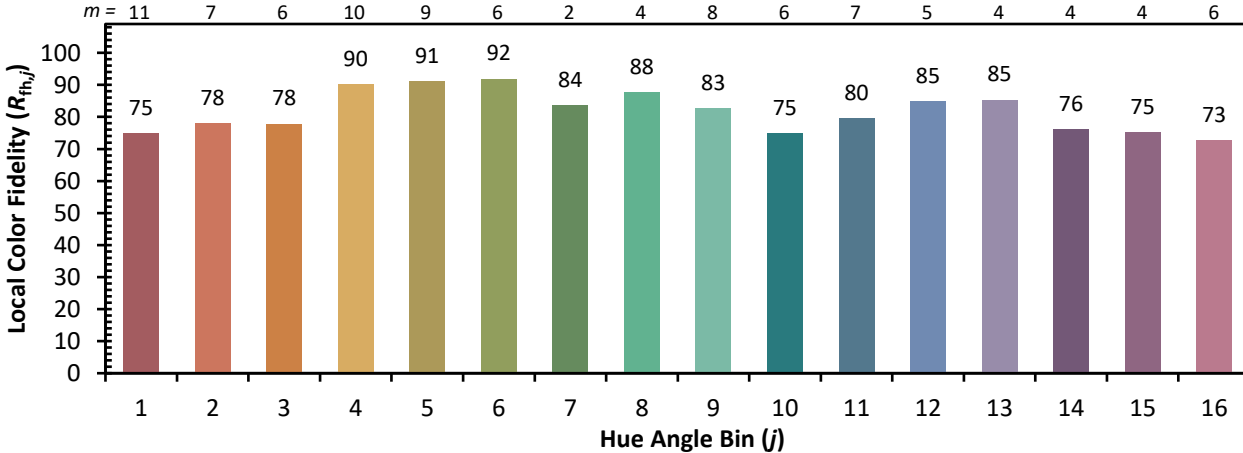
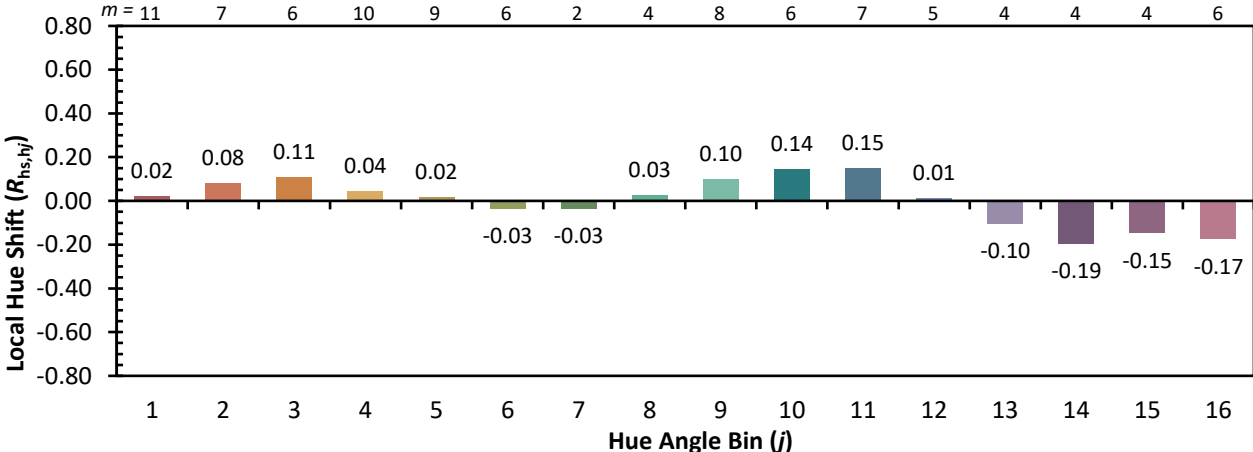
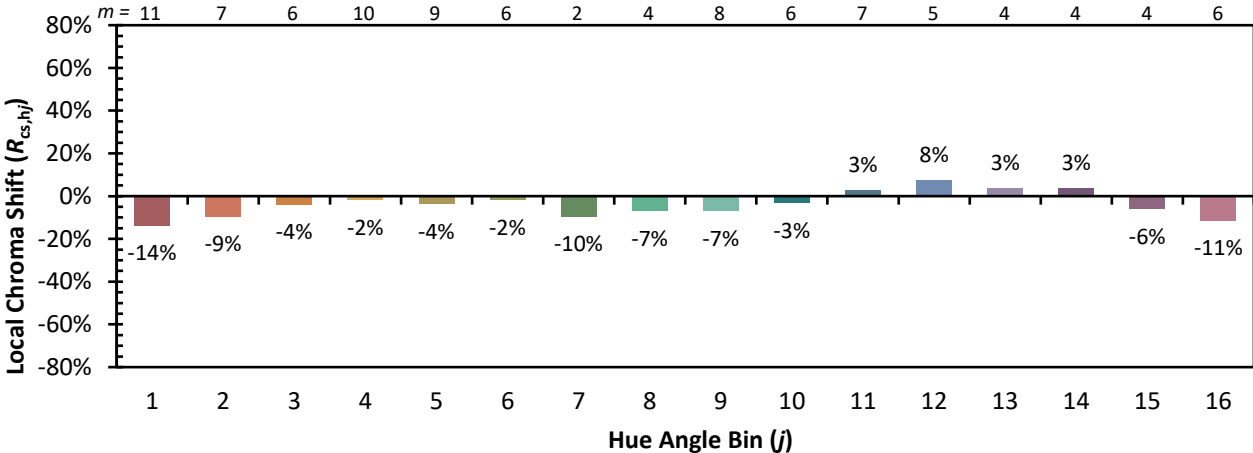


Individual Sample Fidelity Index ($R_{f,i}$)

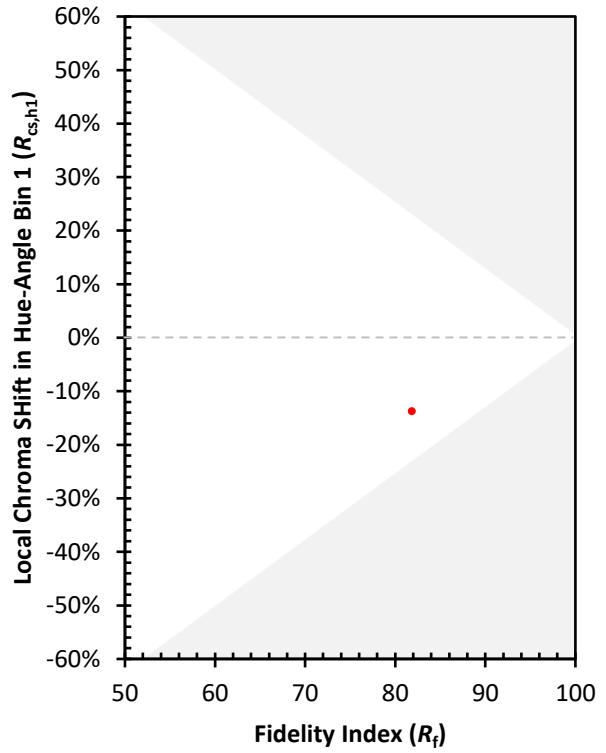
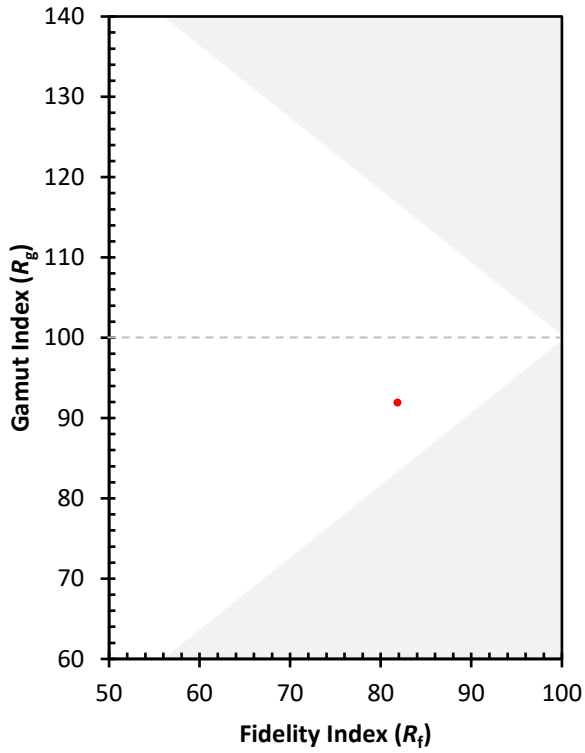
CES01 = 86	CES26 = 86	CES51 = 88	CES76 = 83
CES02 = 63	CES27 = 91	CES52 = 89	CES77 = 82
CES03 = 31	CES28 = 95	CES53 = 84	CES78 = 83
CES04 = 71	CES29 = 93	CES54 = 86	CES79 = 88
CES05 = 49	CES30 = 86	CES55 = 82	CES80 = 87
CES06 = 51	CES31 = 95	CES56 = 80	CES81 = 67
CES07 = 42	CES32 = 87	CES57 = 77	CES82 = 95
CES08 = 40	CES33 = 95	CES58 = 78	CES83 = 93
CES09 = 29	CES34 = 93	CES59 = 88	CES84 = 90
CES10 = 76	CES35 = 96	CES60 = 88	CES85 = 71
CES11 = 59	CES36 = 79	CES61 = 84	CES86 = 63
CES12 = 65	CES37 = 98	CES62 = 79	CES87 = 81
CES13 = 43	CES38 = 81	CES63 = 86	CES88 = 85
CES14 = 74	CES39 = 97	CES64 = 73	CES89 = 72
CES15 = 71	CES40 = 96	CES65 = 75	CES90 = 86
CES16 = 47	CES41 = 93	CES66 = 72	CES91 = 71
CES17 = 50	CES42 = 95	CES67 = 71	CES92 = 58
CES18 = 56	CES43 = 89	CES68 = 77	CES93 = 74
CES19 = 72	CES44 = 99	CES69 = 82	CES94 = 56
CES20 = 66	CES45 = 90	CES70 = 77	CES95 = 70
CES21 = 87	CES46 = 88	CES71 = 72	CES96 = 81
CES22 = 79	CES47 = 91	CES72 = 90	CES97 = 84
CES23 = 92	CES48 = 78	CES73 = 73	CES98 = 80
CES24 = 91	CES49 = 89	CES74 = 89	CES99 = 72
CES25 = 72	CES50 = 89	CES75 = 78	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)