

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: P979137

Luminaire Tested: **WPSLED15S-30W-6500K**

Issue Date: 03/31/2025



Test Information

Test Method: LM-79-08
Report Number: P979137
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPSLED15S-30W-6500K
Description: LUMARK WALL PACK LED SMALL 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @30W-6500K
Light Source: 6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

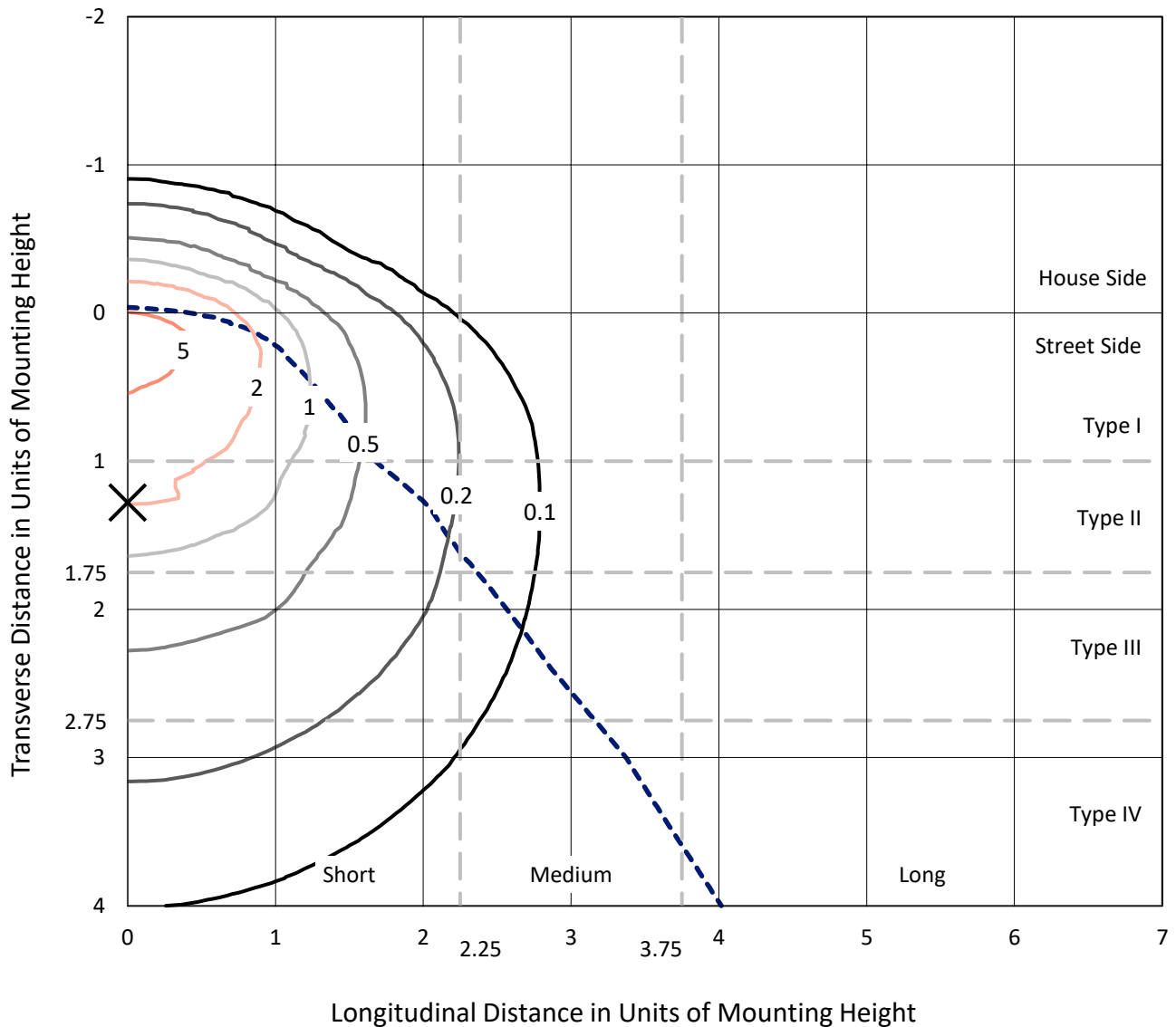
Lumens per Lamp: N/A
Luminaire Lumens: 4757.1 lumens
Efficiency: N/A
Efficacy: 154.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.61' x L: 0.12' x H: 0.44')
IES Classification: Type IV - Short
BUG Rating: B1 - U3 - G3

Input Watts (W): 30.9
Input Voltage (V): 120
Input Current (A_{in}): 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

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Iso-Footcandle Lines of Horizontal Illumination

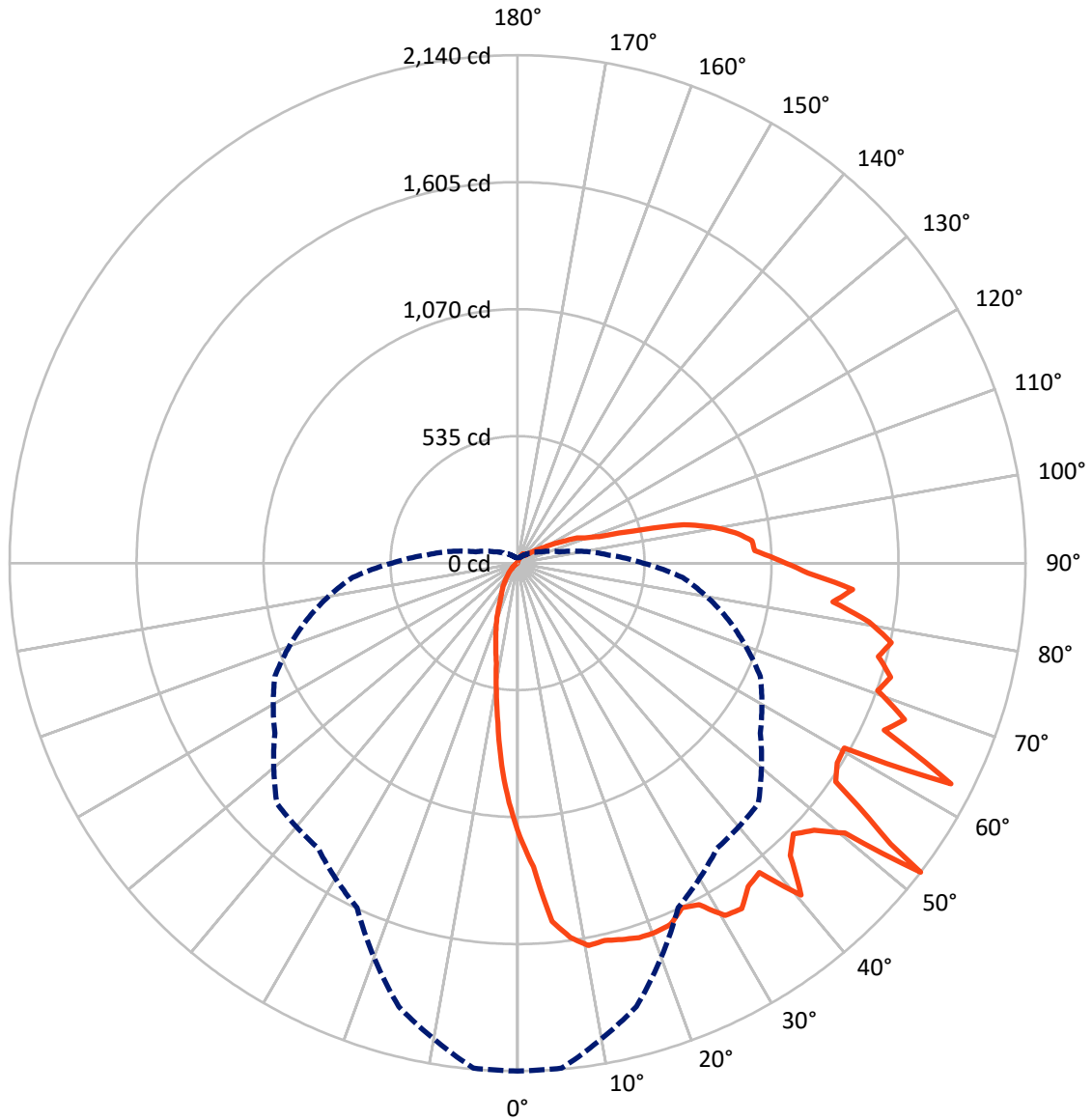
× Max cd
 - - - 1/2 Max cd



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



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 52-Deg Vertical

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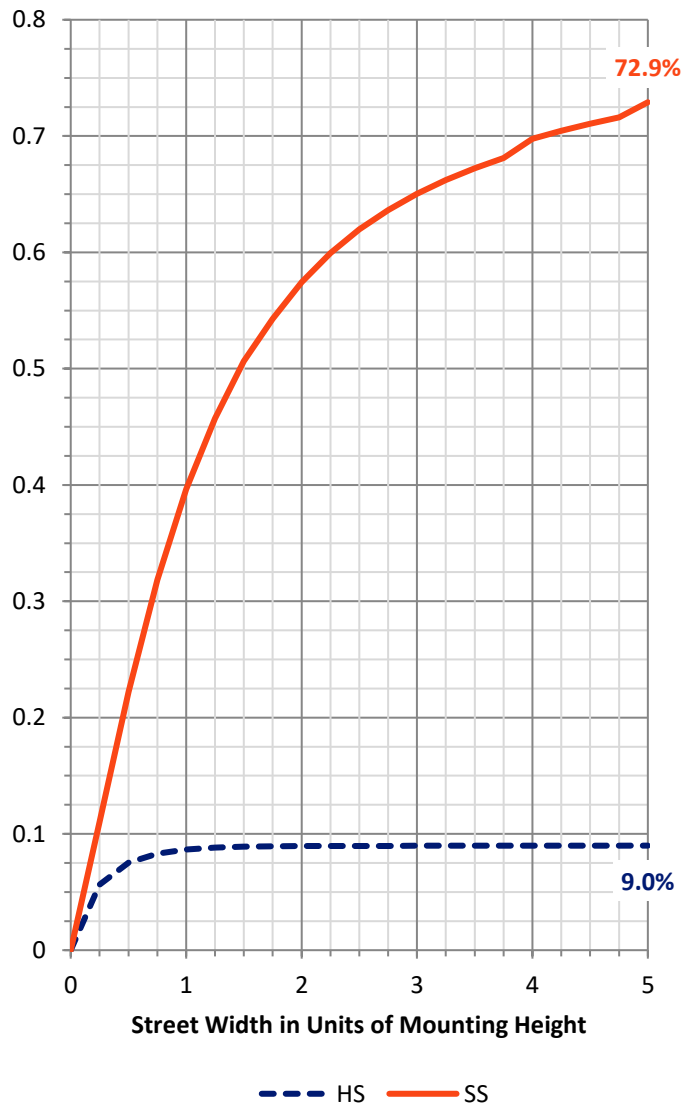
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	432.0	5.2	437.2
	% Fixture	9.1	0.1	9.2
Street Side	Lumens	3781.4	538.5	4319.9
	% Fixture	79.5	11.3	90.8
Total	Lumens	4213.4	543.7	4757.1
	% Fixture	88.6	11.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.1	2.3
10°-20°	293.3	6.2
20°-30°	430.5	9.0
30°-40°	532.5	11.2
40°-50°	595.0	12.5
50°-60°	624.5	13.1
60°-70°	624.2	13.1
70°-80°	563.3	11.8
80°-90°	441.0	9.3
90°-100°	292.9	6.2
100°-110°	139.6	2.9
110°-120°	56.9	1.2
120°-130°	25.0	0.5
130°-140°	14.0	0.3
140°-150°	9.5	0.2
150°-160°	4.4	0.1
160°-170°	1.2	0.0
170°-180°	0.1	0.0
0°-90°	4213.4	88.6
0°-180°	4757.1	100.0



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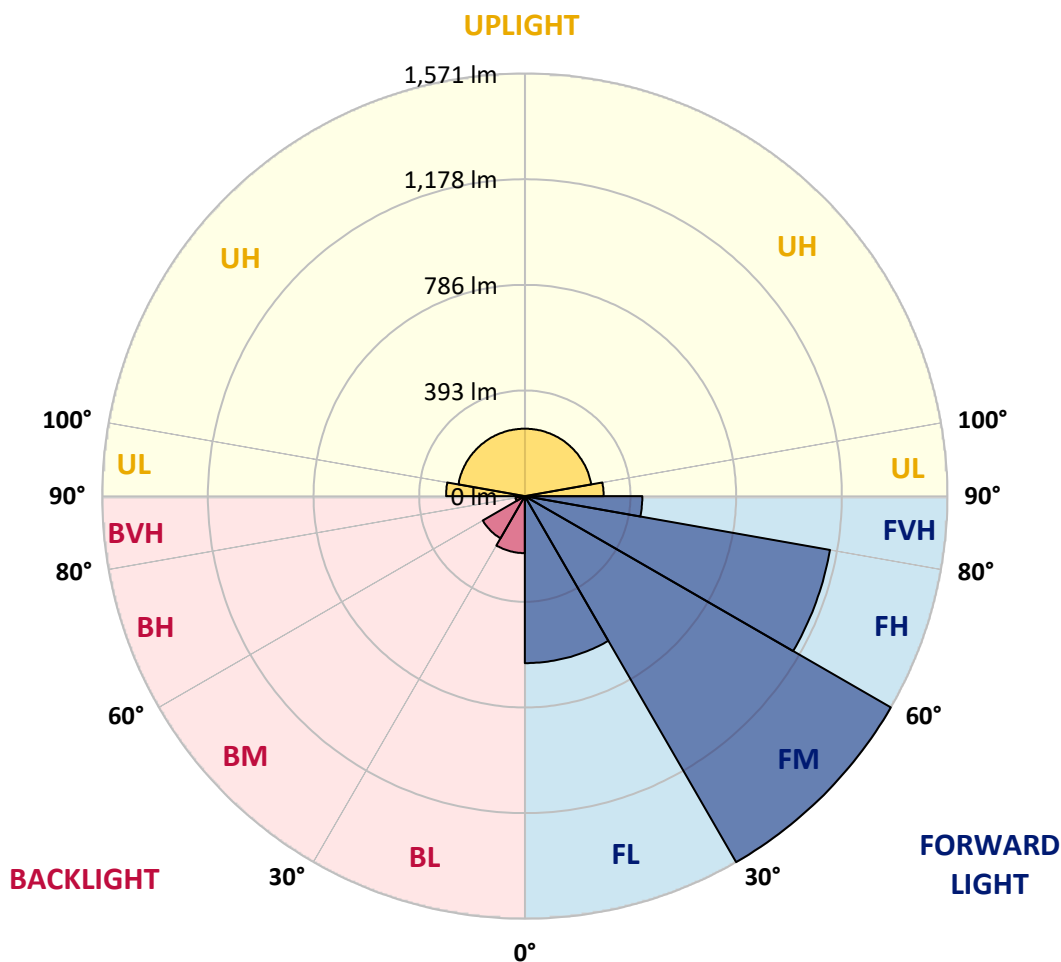
CATALOG NUMBER: WPSLED15S-30W-6500K

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	621.0	13.1			
FM (30°-60°)	1571.3	33.0			
FH (60°-80°)	1152.3	24.2			G1/1800
FVH (80°-90°)	436.8	9.2			G3/500
BL (0°-30°)	211.8	4.5	B1/500		
BM (30°-60°)	180.8	3.8	B0/220		
BH (60°-80°)	35.2	0.7	B0/110		G0/110
BVH (80°-90°)	4.2	0.1			G0/10
UL (90°-100°)	292.9	6.2		U3/500	
UH (100°-180°)	250.8	5.3		U3/500	

BUG Rating: B1-U3-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3
2.5°	1280.5	1282.8	1280.5	1275.5	1273.8	1269.8	1258.0	1231.6	1184.9	1156.8	1149.4
5°	1515.7	1512.3	1512.3	1478.6	1435.3	1365.5	1298.0	1260.3	1239.5	1159.6	1139.9
7.5°	1591.7	1596.7	1612.5	1601.8	1561.8	1514.6	1435.8	1299.1	1238.9	1156.2	1121.3
10°	1638.4	1643.4	1629.9	1596.7	1552.8	1571.4	1508.4	1397.0	1237.8	1157.9	1105.0
12.5°	1631.1	1631.1	1594.5	1566.9	1584.9	1552.3	1545.0	1455.5	1265.3	1165.2	1092.6
15°	1645.1	1641.2	1614.7	1604.6	1575.9	1547.8	1511.2	1489.3	1310.4	1164.6	1076.9
17.5°	1658.6	1660.9	1649.1	1617.5	1559.6	1547.2	1531.5	1500.0	1363.8	1163.5	1060.5
20°	1660.3	1650.2	1609.1	1600.7	1608.0	1536.0	1501.6	1466.8	1392.5	1152.8	1040.9
22.5°	1652.4	1650.2	1602.4	1608.0	1570.9	1556.2	1528.1	1475.2	1395.9	1137.1	1017.2
25°	1608.5	1609.7	1561.3	1582.1	1576.5	1544.4	1480.8	1460.0	1385.2	1123.6	995.3
27.5°	1629.4	1624.3	1579.3	1556.2	1560.2	1519.7	1474.1	1434.1	1364.9	1102.7	966.6
30°	1722.8	1714.3	1642.3	1573.1	1524.7	1521.9	1471.3	1408.3	1329.5	1073.5	934.5
32.5°	1735.1	1728.4	1696.9	1640.6	1529.8	1490.4	1419.5	1367.2	1295.7	1044.2	903.0
35°	1673.2	1663.1	1629.9	1640.1	1587.2	1474.6	1429.6	1318.8	1256.9	1016.1	864.8
37.5°	1654.1	1637.2	1615.3	1606.9	1591.7	1460.6	1416.1	1300.2	1227.6	982.9	822.0
40°	1839.2	1790.8	1644.0	1597.3	1537.1	1511.8	1380.7	1287.3	1200.6	941.8	780.9
42.5°	1683.9	1681.1	1803.8	1662.0	1537.7	1470.7	1362.7	1260.3	1159.6	895.7	735.4
45°	1628.2	1613.6	1574.2	1662.0	1555.1	1405.4	1353.7	1229.9	1098.8	847.9	685.8
47.5°	1680.6	1668.2	1617.0	1546.7	1588.9	1420.1	1331.2	1209.6	1030.7	798.4	625.1
50°	1788.0	1759.9	1658.1	1586.6	1472.4	1464.5	1292.4	1168.0	963.8	740.4	568.3
52°	2139.7	2135.7	1934.3	1601.2	1465.6	1433.6	1248.5	1128.1	918.2	698.2	529.4
52.5°	1967.5	2027.1	2049.1	1619.8	1466.8	1409.9	1248.5	1116.2	909.8	685.8	524.4
55°	1625.4	1620.4	1627.7	1866.8	1468.5	1328.9	1259.7	1058.3	853.5	643.6	485.0
57.5°	1587.7	1580.4	1566.9	1550.0	1642.9	1289.0	1226.0	1002.0	813.0	595.8	444.5
60°	1581.0	1576.5	1550.6	1517.4	1452.1	1327.2	1130.3	958.2	780.9	550.2	411.8
62.5°	2049.1	2036.7	1827.4	1514.0	1400.4	1365.5	1075.7	924.4	747.7	507.5	376.4
65°	1697.4	1691.8	1659.2	1766.6	1437.5	1249.6	1068.4	909.2	704.4	469.2	330.3
67.5°	1758.2	1757.1	1685.6	1575.9	1533.7	1249.6	1061.7	864.8	667.3	420.3	278.5
70°	1609.7	1612.5	1576.5	1533.2	1414.4	1264.2	995.8	796.1	618.9	365.1	230.7
72.5°	1642.9	1640.6	1583.2	1484.8	1367.2	1181.0	954.2	752.2	563.2	314.5	188.5
75°	1570.3	1569.7	1518.0	1436.9	1316.0	1117.9	910.3	731.4	502.4	260.5	151.9
77.5°	1609.1	1613.0	1565.8	1450.4	1301.4	1081.4	876.6	654.9	445.6	207.6	115.3
80°	1501.6	1502.2	1438.6	1353.1	1220.3	1015.5	793.3	585.7	379.2	160.9	86.1
82.5°	1338.5	1343.0	1294.6	1219.2	1123.6	928.9	721.8	534.5	321.3	121.0	64.1
85°	1415.6	1424.6	1357.1	1255.8	1126.4	900.8	665.0	463.0	257.1	88.3	49.5
87.5°	1225.4	1254.7	1192.8	1117.4	999.8	792.7	581.8	392.2	206.5	67.5	38.8
90°	1107.2	1114.0	1066.7	991.9	872.1	708.9	524.4	335.9	161.5	50.6	30.9
92.5°	999.8	1017.8	1001.5	943.5	830.4	649.3	456.3	279.6	124.9	39.9	26.4
95°	991.9	990.8	939.0	849.6	735.9	567.7	383.1	225.1	94.0	31.5	23.1
97.5°	925.0	932.3	889.5	768.0	652.6	490.0	307.2	162.6	72.6	27.0	19.7
100°	833.8	839.4	774.2	690.3	557.6	387.1	230.7	122.7	58.0	24.8	18.6
102.5°	718.5	727.5	645.9	539.0	431.0	302.1	171.6	96.8	47.8	23.1	17.4
105°	504.1	497.9	443.9	393.8	329.1	228.4	143.5	80.5	39.9	22.5	17.4
107.5°	360.6	365.1	341.5	299.9	249.2	185.1	114.2	66.4	34.9	21.9	17.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	303.3	307.2	285.8	257.1	210.4	145.7	91.7	54.6	32.6	21.9	16.9
112.5°	272.9	275.7	251.5	221.7	173.3	123.8	76.5	46.7	31.5	21.4	16.3
115°	212.7	214.4	199.2	177.2	137.8	99.6	64.1	41.6	30.9	20.3	15.2
117.5°	172.7	172.7	160.9	139.0	112.0	81.6	56.3	38.8	29.3	18.6	14.1
120°	133.3	135.0	126.0	110.8	89.5	67.5	48.9	36.0	28.1	17.4	12.9
122.5°	109.1	110.3	103.5	90.6	73.1	58.0	43.3	34.3	27.0	16.3	11.3
125°	89.5	89.5	84.4	74.3	61.3	50.1	39.9	33.2	27.0	15.2	10.1
127.5°	74.3	74.3	70.3	61.3	52.9	45.0	37.7	32.6	25.9	13.5	9.0
130°	62.5	62.5	58.5	52.9	47.3	42.8	37.7	31.5	23.6	11.8	7.9
132.5°	52.9	52.3	50.1	47.3	43.9	42.2	36.6	29.8	21.4	10.7	6.8
135°	45.6	46.1	45.6	44.4	42.8	40.5	35.4	28.1	19.1	9.0	5.6
137.5°	42.8	43.9	44.4	44.4	41.1	38.8	33.8	27.0	17.4	7.9	4.5
140°	46.7	45.6	45.0	44.4	41.1	37.1	32.6	25.3	15.8	6.8	3.9
142.5°	46.7	46.7	45.6	43.3	39.4	36.0	30.4	23.6	14.1	5.6	3.4
145°	45.6	45.6	43.9	41.1	37.7	33.2	28.7	20.8	11.8	5.1	2.8
147.5°	45.6	45.0	42.8	38.8	34.9	30.9	25.9	18.0	10.1	3.9	2.8
150°	42.8	42.2	38.8	34.3	32.1	27.6	21.9	15.8	9.0	3.4	2.3
152.5°	37.7	37.1	34.3	30.4	27.0	23.6	19.1	13.5	7.3	2.8	2.3
155°	30.4	29.8	27.0	24.2	21.9	20.3	16.3	11.3	6.2	2.8	1.7
157.5°	23.1	23.1	21.9	20.8	19.7	17.4	13.5	9.6	4.5	2.3	1.7
160°	21.4	20.8	19.7	18.0	16.3	13.5	10.7	7.3	3.4	1.7	1.7
162.5°	18.0	18.0	16.9	14.6	12.9	10.7	7.9	5.1	2.8	1.7	1.7
165°	14.1	14.1	12.9	11.3	9.6	7.3	5.6	3.9	2.3	1.7	1.1
167.5°	10.1	10.1	9.0	7.9	6.2	5.1	3.4	2.8	2.3	1.7	1.1
170°	5.6	5.6	5.6	4.5	3.4	2.8	2.8	2.3	1.7	1.7	1.1
172.5°	2.8	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.1	1.1
175°	0.6	0.6	1.1	1.7	1.7	1.7	1.7	1.7	1.7	1.1	1.1
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



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3	1152.3
2.5°	1144.4	1135.9	1093.7	1051.5	1025.1	1019.5	1017.8	1014.4	1013.3	1009.9
5°	1133.1	1054.4	1011.0	978.4	942.4	921.0	900.2	864.2	854.1	853.5
7.5°	1099.9	997.0	945.8	894.0	817.5	753.9	726.3	694.3	682.5	678.5
10°	1060.5	959.8	874.3	766.9	685.8	625.1	583.4	562.6	540.7	543.5
12.5°	1024.5	911.5	777.5	661.6	576.7	513.1	476.5	449.0	435.5	431.0
15°	991.9	859.1	700.5	572.2	490.0	432.1	391.6	373.0	365.1	364.6
17.5°	966.0	801.7	633.0	505.2	415.2	364.0	337.0	323.5	316.2	312.3
20°	942.4	742.7	577.8	447.9	359.5	315.6	289.8	274.6	268.4	267.8
22.5°	912.0	685.8	521.0	383.7	316.8	272.9	247.6	231.2	221.7	221.1
25°	879.4	636.3	461.9	337.6	276.8	235.7	207.0	187.4	178.9	177.8
27.5°	844.5	587.9	407.3	297.6	238.0	199.7	170.5	157.0	153.0	151.3
30°	804.0	542.4	359.0	260.5	209.3	167.1	147.4	135.0	132.2	131.1
32.5°	761.8	497.9	314.5	228.4	180.0	147.4	127.2	119.3	116.5	115.9
35°	716.8	450.7	280.8	202.0	155.8	128.8	111.4	100.7	95.1	94.0
37.5°	671.8	402.3	245.3	177.2	135.6	112.0	93.4	82.7	79.9	78.8
40°	625.6	358.4	214.4	155.3	118.2	92.8	77.1	68.1	65.3	64.1
42.5°	576.7	311.1	185.1	136.2	102.4	76.5	63.6	55.7	52.9	52.9
45°	528.3	272.3	162.0	118.7	86.1	63.6	52.9	45.0	41.6	41.1
47.5°	472.0	236.9	143.5	103.0	71.5	52.9	42.8	36.0	32.6	32.1
50°	420.8	204.2	125.5	86.6	60.2	43.9	33.8	28.7	25.3	25.3
52°	386.5	183.4	113.1	75.4	52.3	37.1	28.1	23.1	22.5	22.5
52.5°	377.5	178.4	110.3	73.7	50.1	35.4	27.0	21.9	21.9	21.9
55°	338.7	155.8	98.5	63.6	41.6	27.6	19.7	17.4	18.0	18.0
57.5°	307.2	136.2	85.5	54.6	34.3	21.4	14.1	14.1	13.5	12.9
60°	272.3	119.8	74.8	46.7	27.0	15.2	10.1	9.0	7.3	7.3
62.5°	234.6	103.0	65.8	39.9	20.3	9.6	5.6	3.9	3.4	2.8
65°	196.9	89.5	56.8	32.6	15.2	5.1	1.1	0.0	0.0	0.0
67.5°	164.3	77.6	48.4	25.9	10.1	1.1	0.0	0.0	0.0	0.0
70°	132.8	65.8	40.5	19.7	5.1	0.0	0.0	0.0	0.0	0.0
72.5°	106.9	56.3	33.2	13.5	1.7	0.0	0.0	0.0	0.0	0.0
75°	83.3	46.1	26.4	9.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	66.4	38.3	20.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0
80°	51.8	30.4	15.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	40.5	24.2	12.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0
85°	32.1	19.1	9.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	26.4	15.2	6.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
90°	21.9	11.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	18.6	9.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	15.8	7.9	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	14.1	6.8	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	13.5	6.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	12.9	6.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	12.9	5.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	12.9	5.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	12.4	4.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	11.8	3.9	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
115°	11.3	2.8	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	9.6	1.7	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
120°	7.9	1.1	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	6.8	0.6	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
125°	6.2	0.6	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	5.6	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
130°	5.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	4.5	1.7	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
135°	3.9	1.7	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	3.4	1.7	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
140°	2.8	1.7	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	2.3	1.7	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
145°	2.3	1.7	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0
147.5°	2.3	1.7	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0
150°	1.7	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0
152.5°	1.7	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0
155°	1.7	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
157.5°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.1	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
162.5°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.1	0.6	0.6	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

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2407-168-5

Test Date: 08/08/2024

Luminaire Tested: LSDL-92S-100W 6500k

Data in this report applies to families of products including LSDL-92S-100W 6500k.

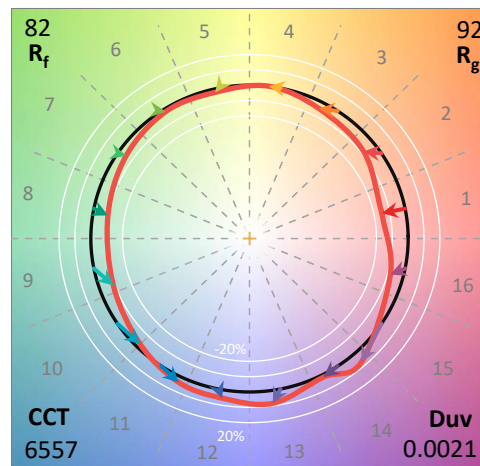
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-168-5
 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 6500k**
 Description: Lumark Wallpack 100W

Spectral Parameters

CCT (K): 6557
 CIE u': 0.1985
 CIE v': 0.4668
 Duv: 0.0021
 CIE x: 0.3121
 CIE y: 0.3263
 CIE z: 0.3616
 Peak Wavelength (nm): 453
 Dominant Wavelength (nm): 487
 Purity: 7.689333
 Rf: 81.6
 Rg: 92.3

CRI (Ra):	82.1		
R1:	80.1	R9:	-3.7
R2:	89.1	R10:	72.9
R3:	92.6	R11:	78.9
R4:	79.9	R12:	57.0
R5:	80.7	R13:	83.1
R6:	82.7	R14:	96.5
R7:	86.0	R15:	74.6
R8:	65.5		



Test Conditions

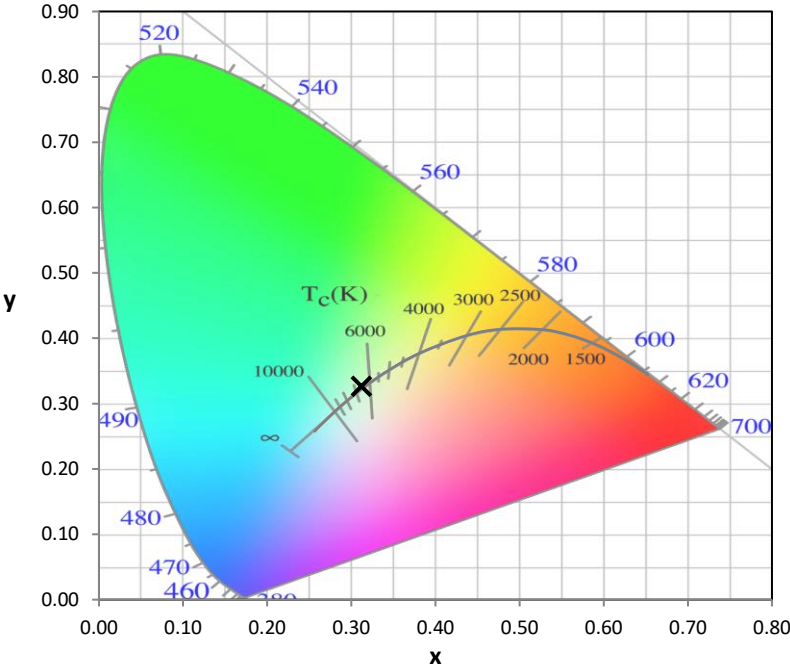
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-5

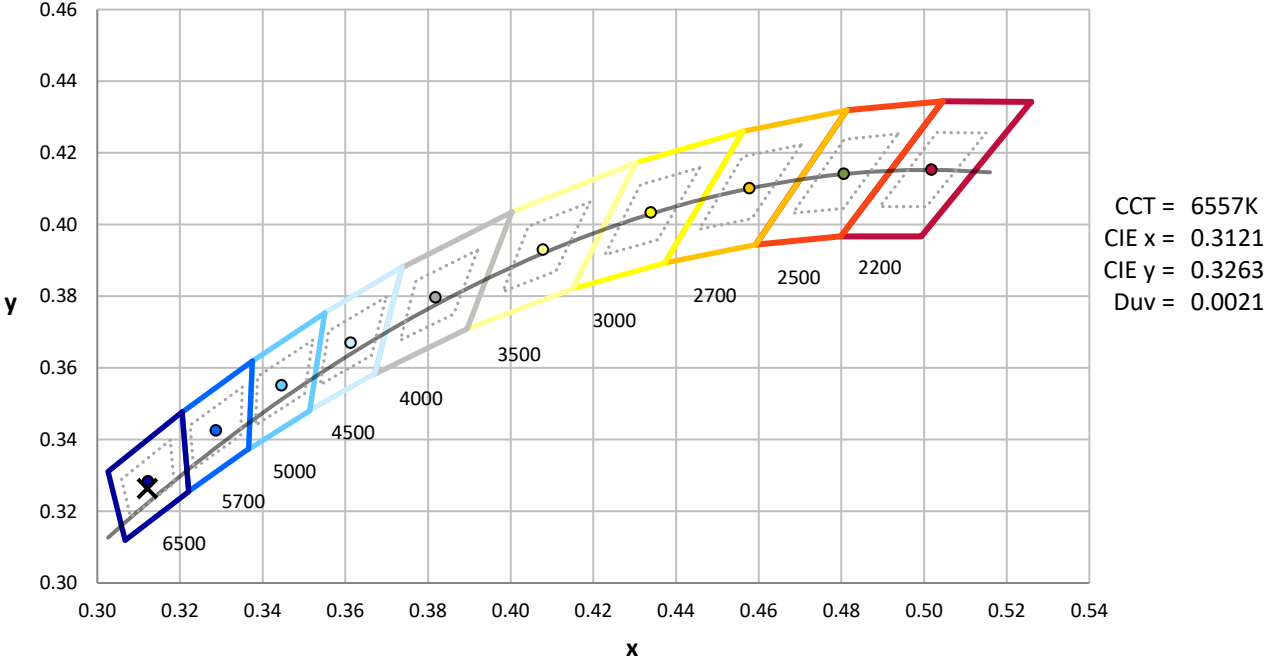
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2407-168-5

CIE 1931 Chromaticity Diagram



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

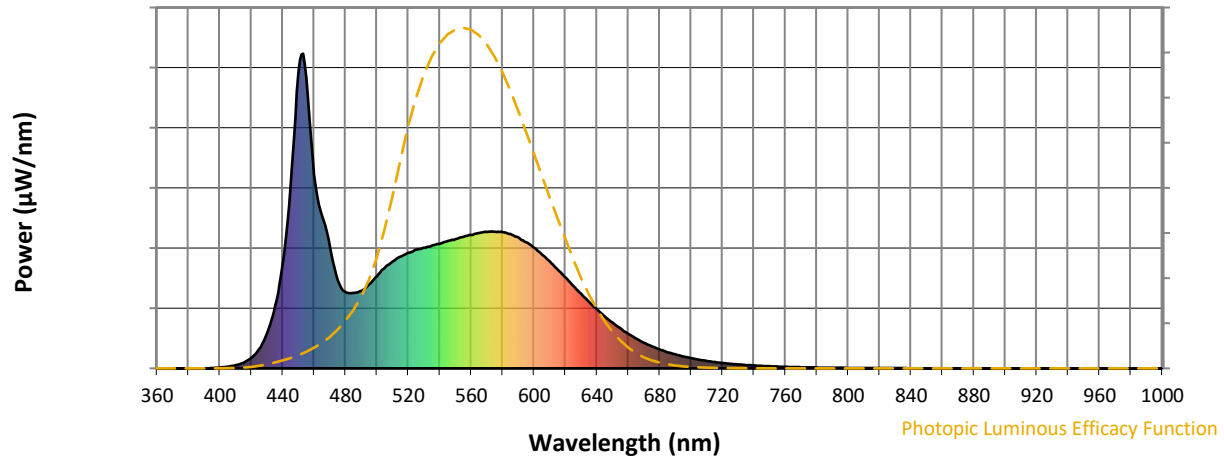


CCT = 6557K
 CIE x = 0.3121
 CIE y = 0.3263
 Duv = 0.0021

Point lies inside the ANSI 6500K 4-step quadrangle

REPORT NUMBER: SP1-2407-168-5

Photopic Flux vs. Wavelength

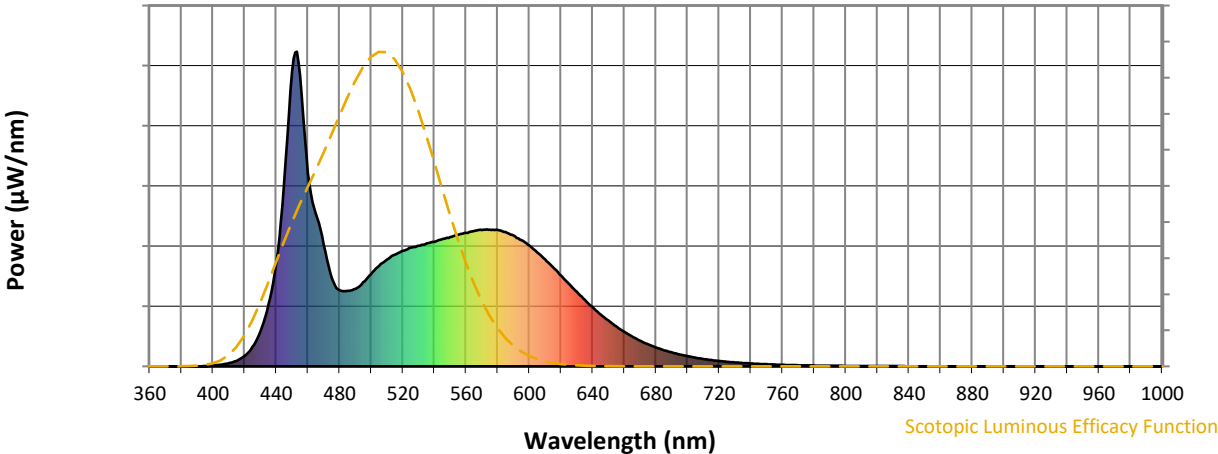


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-5

Scotopic Flux vs. Wavelength



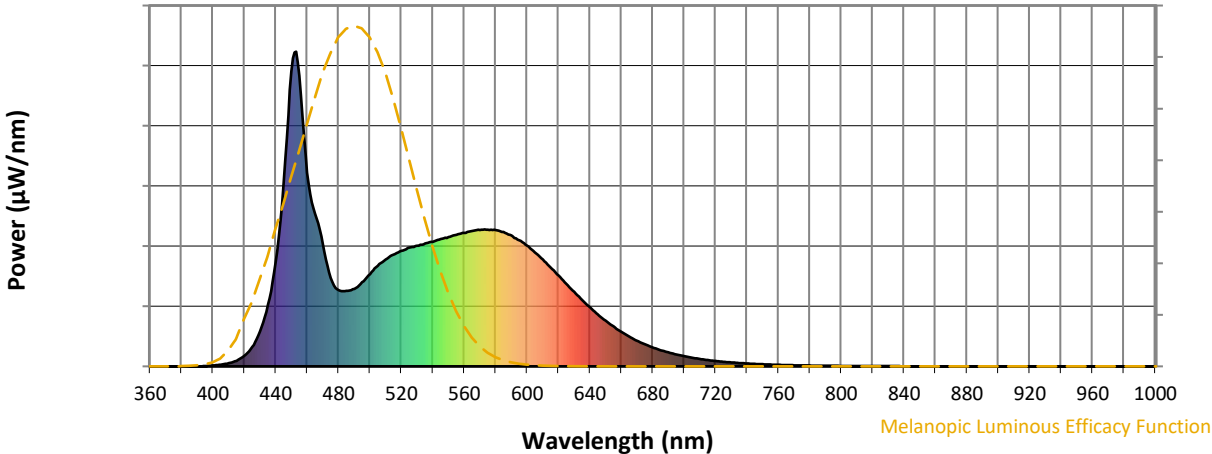
Scotopic Lumens: NR

S/P: 2.27

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	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

REPORT NUMBER: SP1-2407-168-5

Melanopic Flux vs. Wavelength



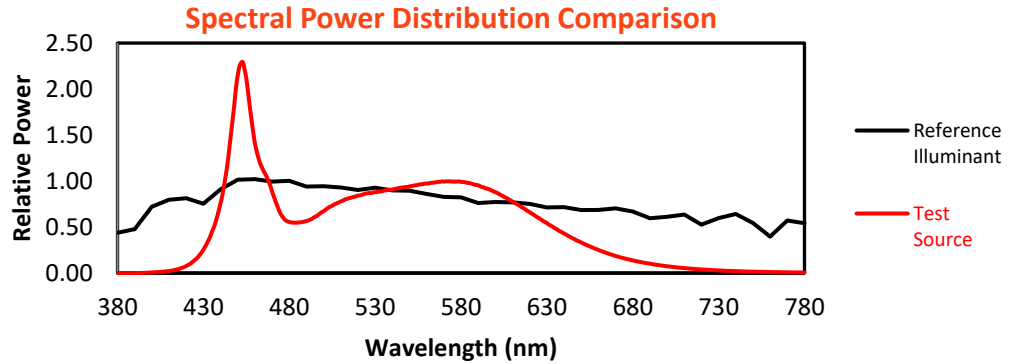
Melanopic Lumens: NR

M/P: 5.06

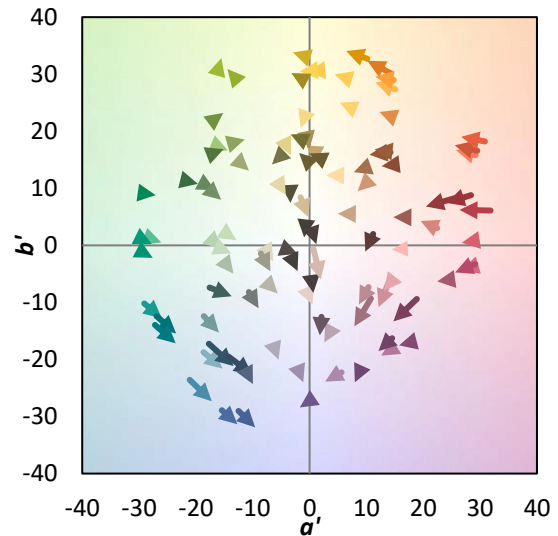
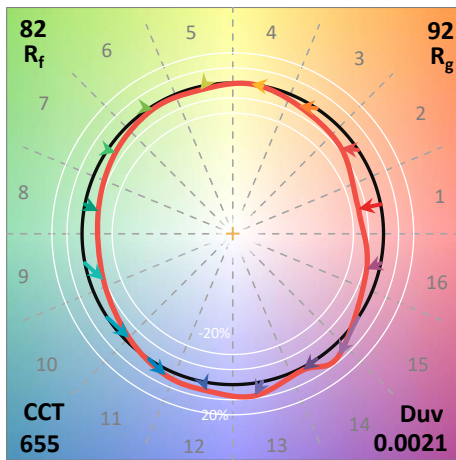
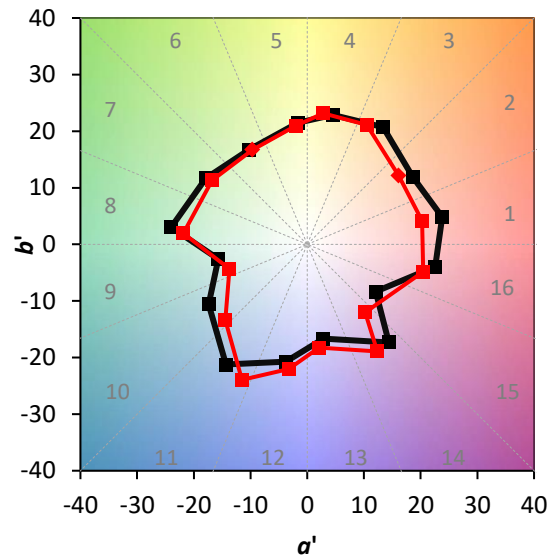
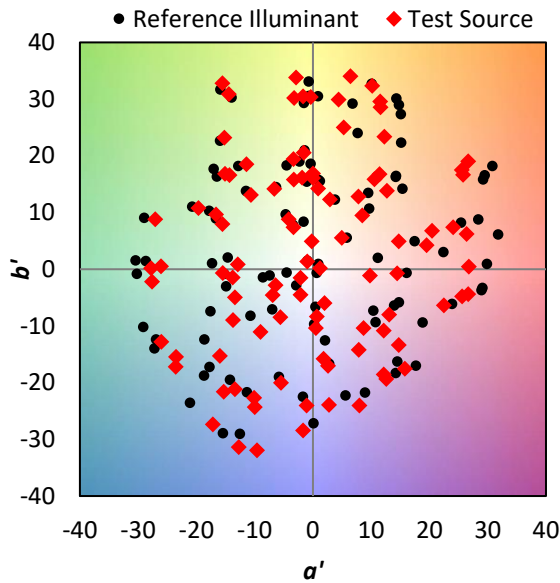
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	630	237	NR	760	5	NR	890	0	NR
375	0	NR	505	319	NR	635	211	NR	765	4	NR	895	0	NR
380	0	NR	510	339	NR	640	188	NR	770	4	NR	900	0	NR
385	0	NR	515	355	NR	645	165	NR	775	3	NR	905	0	NR
390	0	NR	520	367	NR	650	145	NR	780	3	NR	910	0	NR
395	1	NR	525	377	NR	655	127	NR	785	2	NR	915	0	NR
400	3	NR	530	384	NR	660	110	NR	790	2	NR	920	0	NR
405	5	NR	535	391	NR	665	95	NR	795	2	NR	925	0	NR
410	10	NR	540	396	NR	670	81	NR	800	1	NR	930	0	NR
415	18	NR	545	405	NR	675	70	NR	805	1	NR	935	0	NR
420	33	NR	550	411	NR	680	60	NR	810	1	NR	940	0	NR
425	62	NR	555	418	NR	685	51	NR	815	1	NR	945	0	NR
430	111	NR	560	425	NR	690	44	NR	820	1	NR	950	0	NR
435	196	NR	565	430	NR	695	38	NR	825	1	NR	955	0	NR
440	331	NR	570	434	NR	700	32	NR	830	1	NR	960	0	NR
445	583	NR	575	434	NR	705	28	NR	835	1	NR	965	0	NR
450	937	NR	580	433	NR	710	23	NR	840	1	NR	970	0	NR
455	923	NR	585	427	NR	715	20	NR	845	0	NR	975	0	NR
460	616	NR	590	416	NR	720	17	NR	850	0	NR	980	0	NR
465	485	NR	595	401	NR	725	15	NR	855	0	NR	985	0	NR
470	386	NR	600	384	NR	730	13	NR	860	0	NR	990	0	NR
475	280	NR	605	362	NR	735	11	NR	865	0	NR	995	0	NR
480	242	NR	610	339	NR	740	9	NR	870	0	NR	1000	0	NR
485	240	NR	615	314	NR	745	8	NR	875	0	NR			

Summary

$R_f = 81.6$
 $R_g = 92.3$
 CIE $R_a = 82.1$
 $R_9 = -3.7$

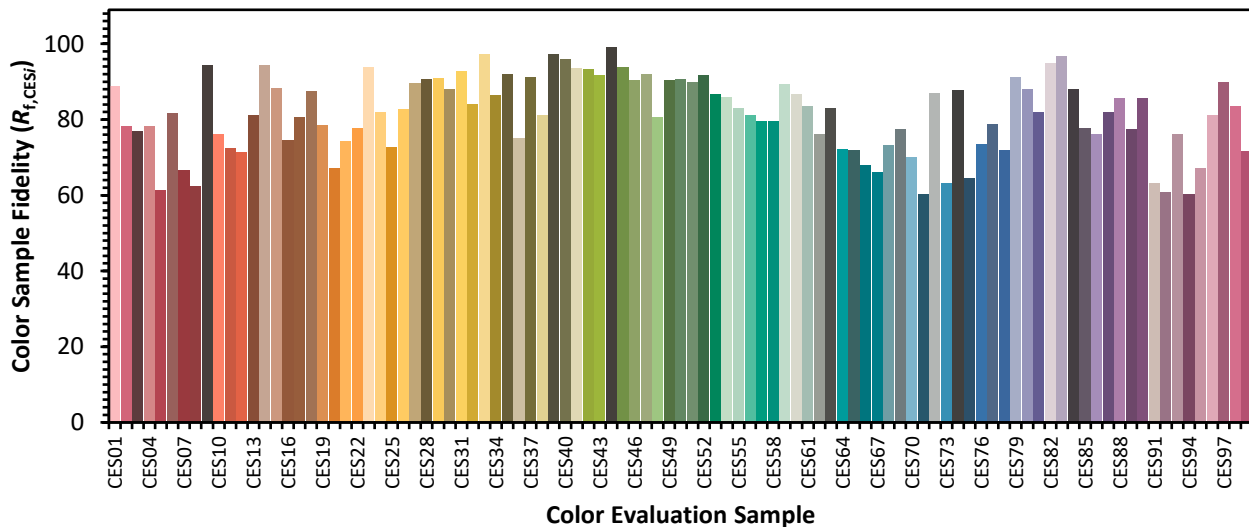


Color Vector Graphics

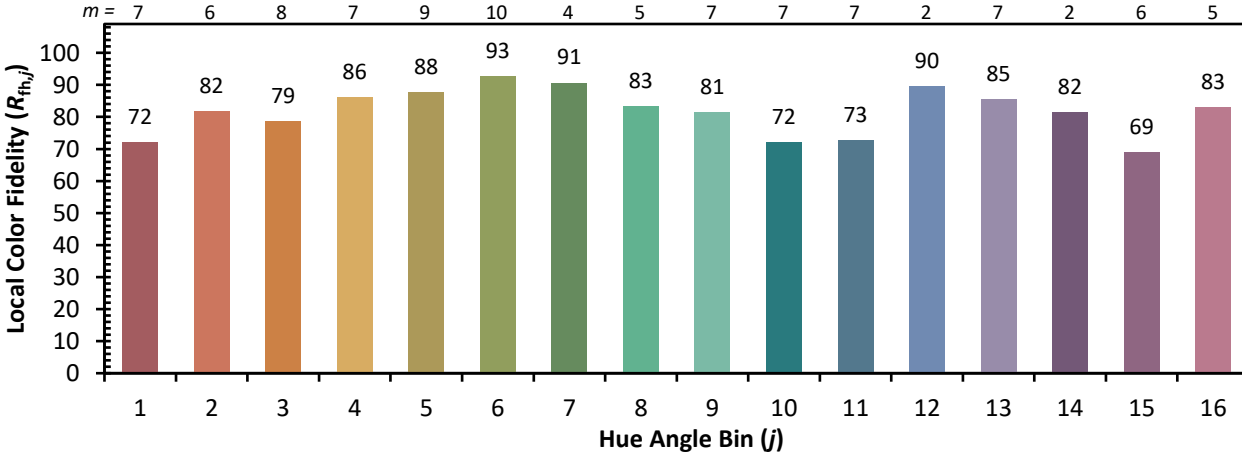
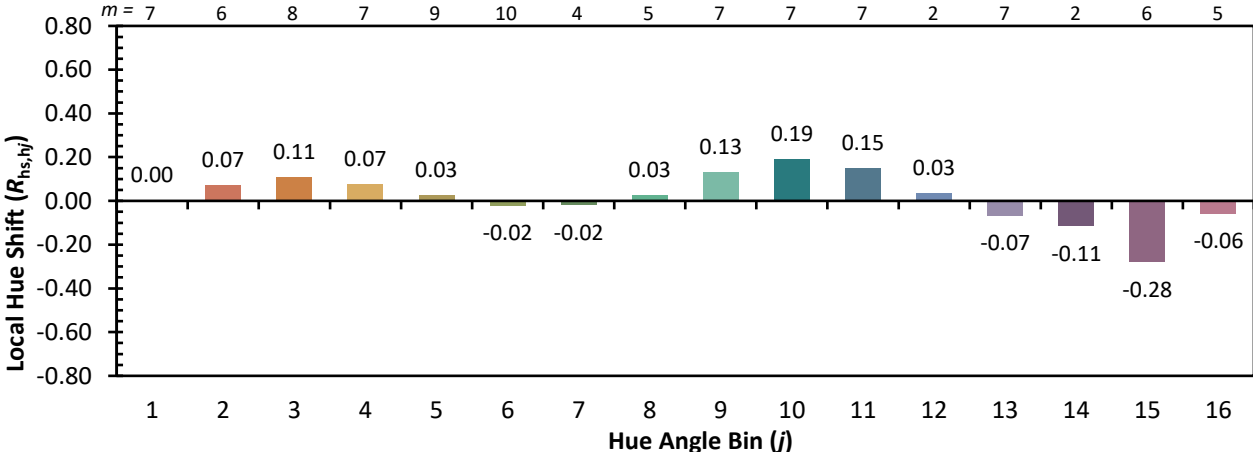
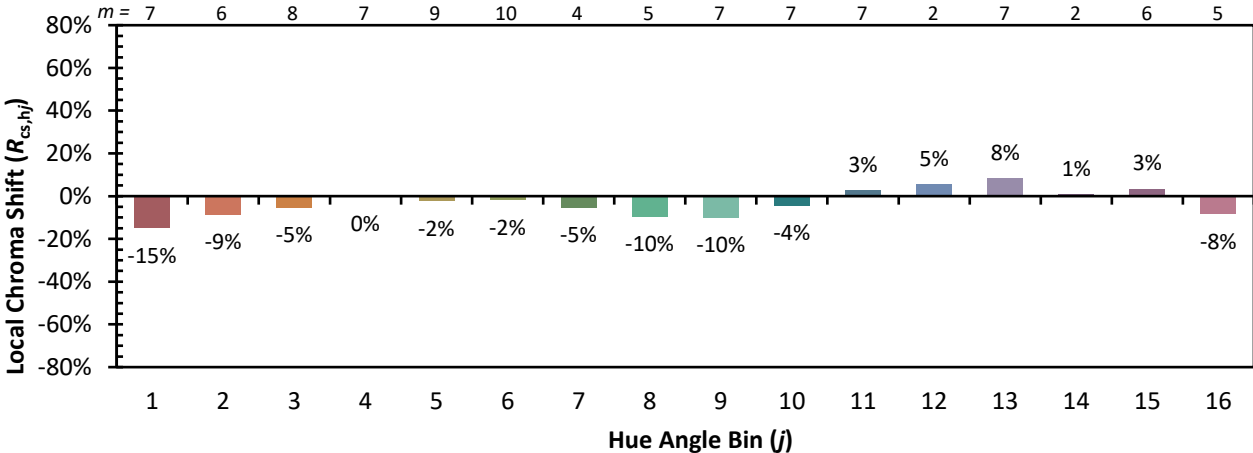


Individual Sample Fidelity Index ($R_{f,i}$)

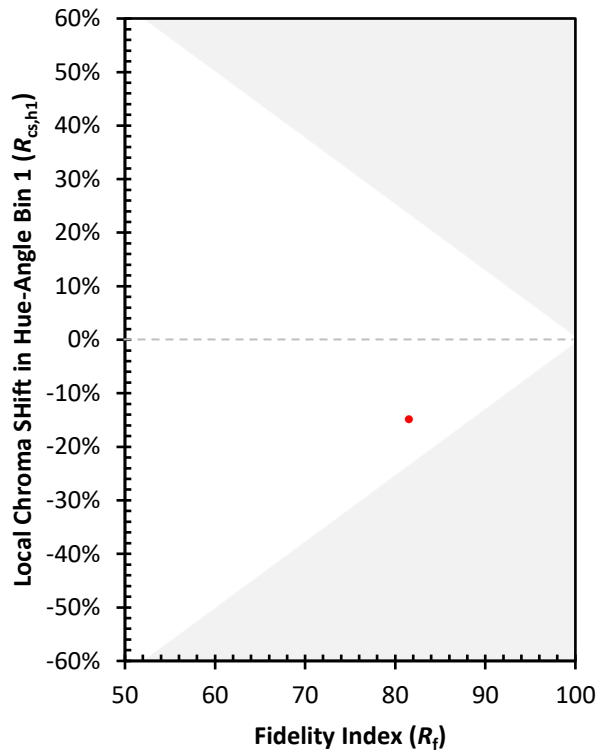
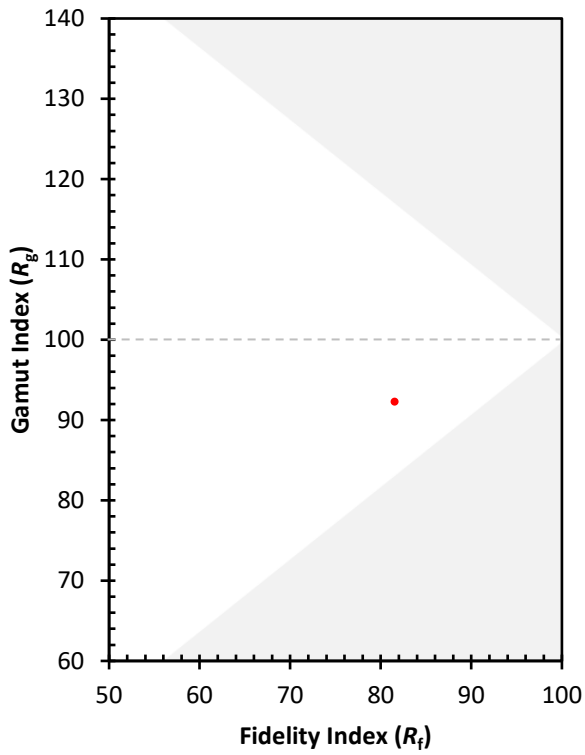
CES01 = 85	CES26 = 83	CES51 = 90	CES76 = 74
CES02 = 59	CES27 = 90	CES52 = 92	CES77 = 79
CES03 = 30	CES28 = 91	CES53 = 87	CES78 = 72
CES04 = 68	CES29 = 91	CES54 = 86	CES79 = 91
CES05 = 45	CES30 = 88	CES55 = 83	CES80 = 88
CES06 = 49	CES31 = 93	CES56 = 81	CES81 = 82
CES07 = 38	CES32 = 84	CES57 = 80	CES82 = 95
CES08 = 38	CES33 = 97	CES58 = 80	CES83 = 97
CES09 = 29	CES34 = 86	CES59 = 89	CES84 = 88
CES10 = 72	CES35 = 92	CES60 = 87	CES85 = 78
CES11 = 55	CES36 = 75	CES61 = 83	CES86 = 76
CES12 = 60	CES37 = 91	CES62 = 76	CES87 = 82
CES13 = 41	CES38 = 81	CES63 = 83	CES88 = 86
CES14 = 74	CES39 = 97	CES64 = 72	CES89 = 77
CES15 = 70	CES40 = 96	CES65 = 72	CES90 = 86
CES16 = 45	CES41 = 93	CES66 = 68	CES91 = 63
CES17 = 48	CES42 = 93	CES67 = 66	CES92 = 61
CES18 = 55	CES43 = 92	CES68 = 73	CES93 = 76
CES19 = 70	CES44 = 99	CES69 = 77	CES94 = 60
CES20 = 63	CES45 = 94	CES70 = 70	CES95 = 67
CES21 = 84	CES46 = 90	CES71 = 60	CES96 = 81
CES22 = 76	CES47 = 92	CES72 = 87	CES97 = 90
CES23 = 91	CES48 = 81	CES73 = 63	CES98 = 83
CES24 = 90	CES49 = 90	CES74 = 88	CES99 = 72
CES25 = 70	CES50 = 91	CES75 = 65	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)