

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: P979122

Luminaire Tested: **WPSLED15S-60W-6500K**

Issue Date: 03/31/2025



Test Information

Test Method: LM-79-08
Report Number: P979122
Test Lab: Cooper Lighting Solutions
Issue Date: 03/31/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: WPSLED15S-60W-6500K
Description: LUMARK WALL PACK LED SMALL 80CRI CCT AND LUMEN SELECTIVE FIXTURE
OPERATING @60W-6500K
Light Source: 6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

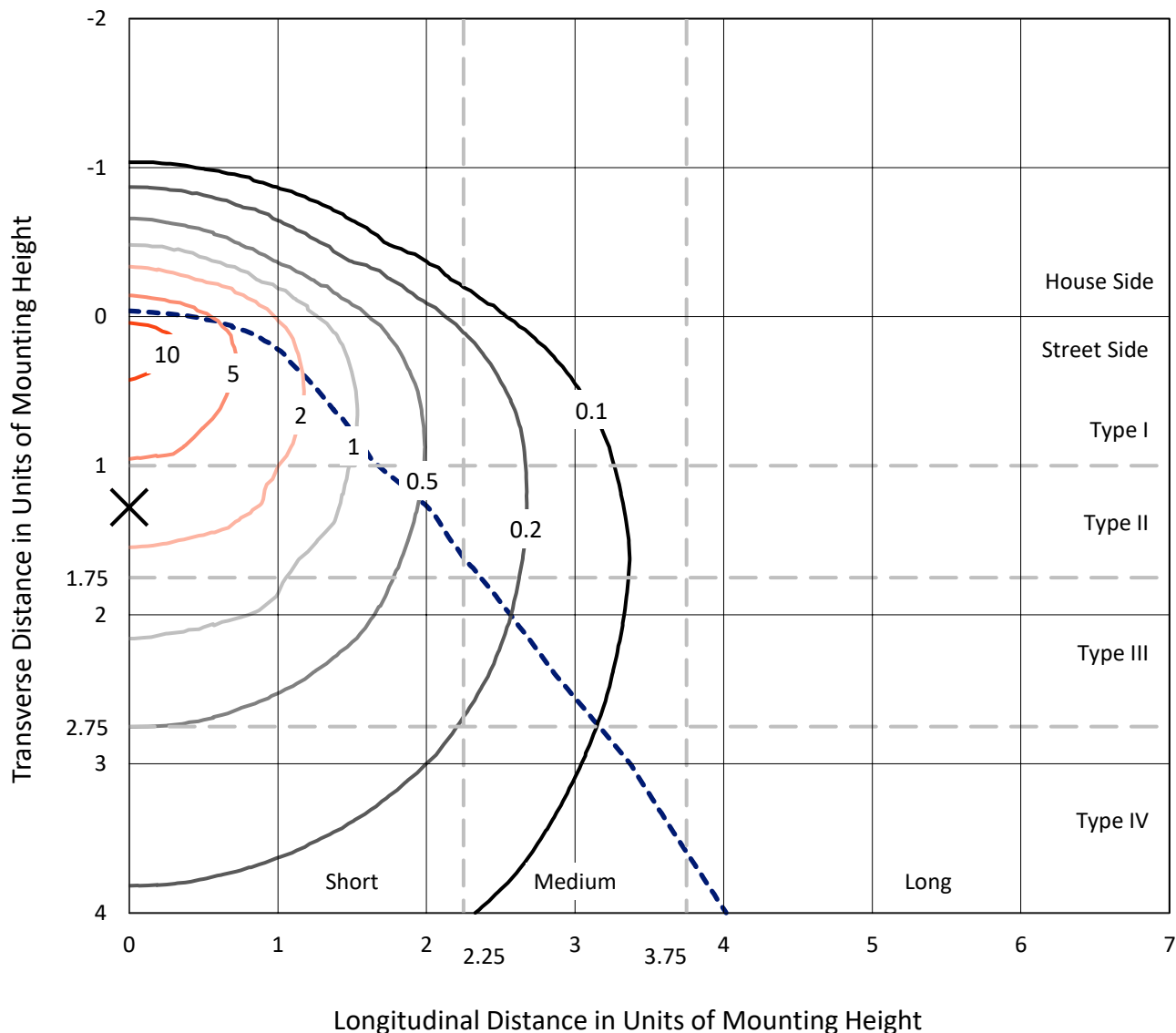
Lumens per Lamp: N/A
Luminaire Lumens: 8342.1 lumens
Efficiency: N/A
Efficacy: 135.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.61' x L: 0.12' x H: 0.44')
IES Classification: Type IV - Short
BUG Rating: B1 - U4 - G5

Input Watts (W): 61.7
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

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Iso-Footcandle Lines of Horizontal Illumination

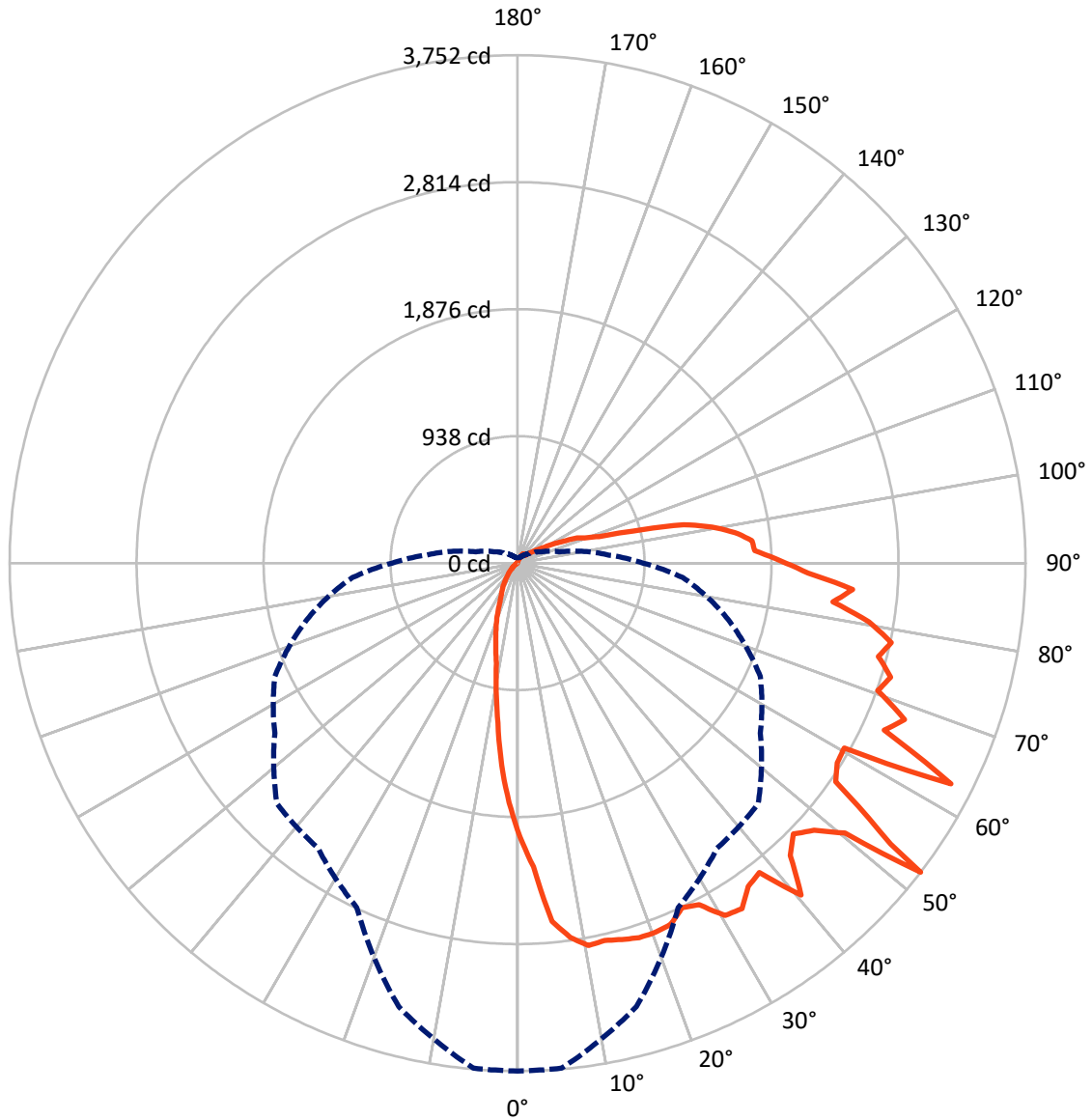
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 12 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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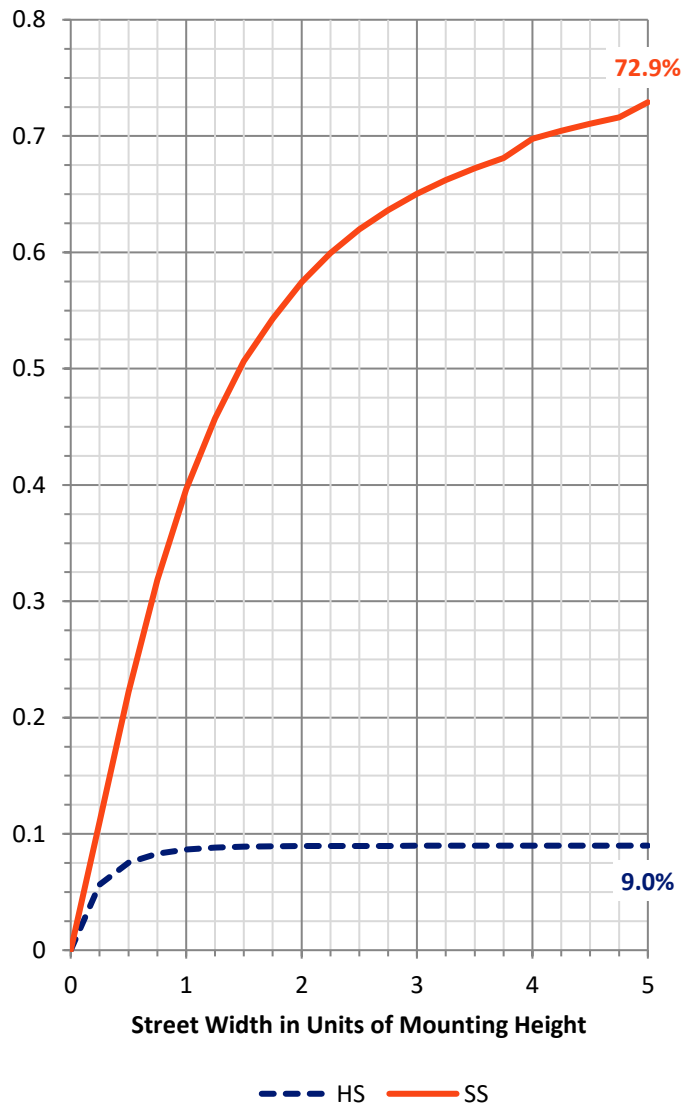
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	757.6	9.1	766.7
	% Fixture	9.1	0.1	9.2
Street Side	Lumens	6631.2	944.3	7575.5
	% Fixture	79.5	11.3	90.8
Total	Lumens	7388.7	953.4	8342.1
	% Fixture	88.6	11.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.3	2.3
10°-20°	514.3	6.2
20°-30°	754.9	9.0
30°-40°	933.9	11.2
40°-50°	1043.5	12.5
50°-60°	1095.2	13.1
60°-70°	1094.7	13.1
70°-80°	987.8	11.8
80°-90°	773.3	9.3
90°-100°	513.6	6.2
100°-110°	244.8	2.9
110°-120°	99.8	1.2
120°-130°	43.8	0.5
130°-140°	24.6	0.3
140°-150°	16.7	0.2
150°-160°	7.8	0.1
160°-170°	2.1	0.0
170°-180°	0.2	0.0
0°-90°	7388.7	88.6
0°-180°	8342.1	100.0



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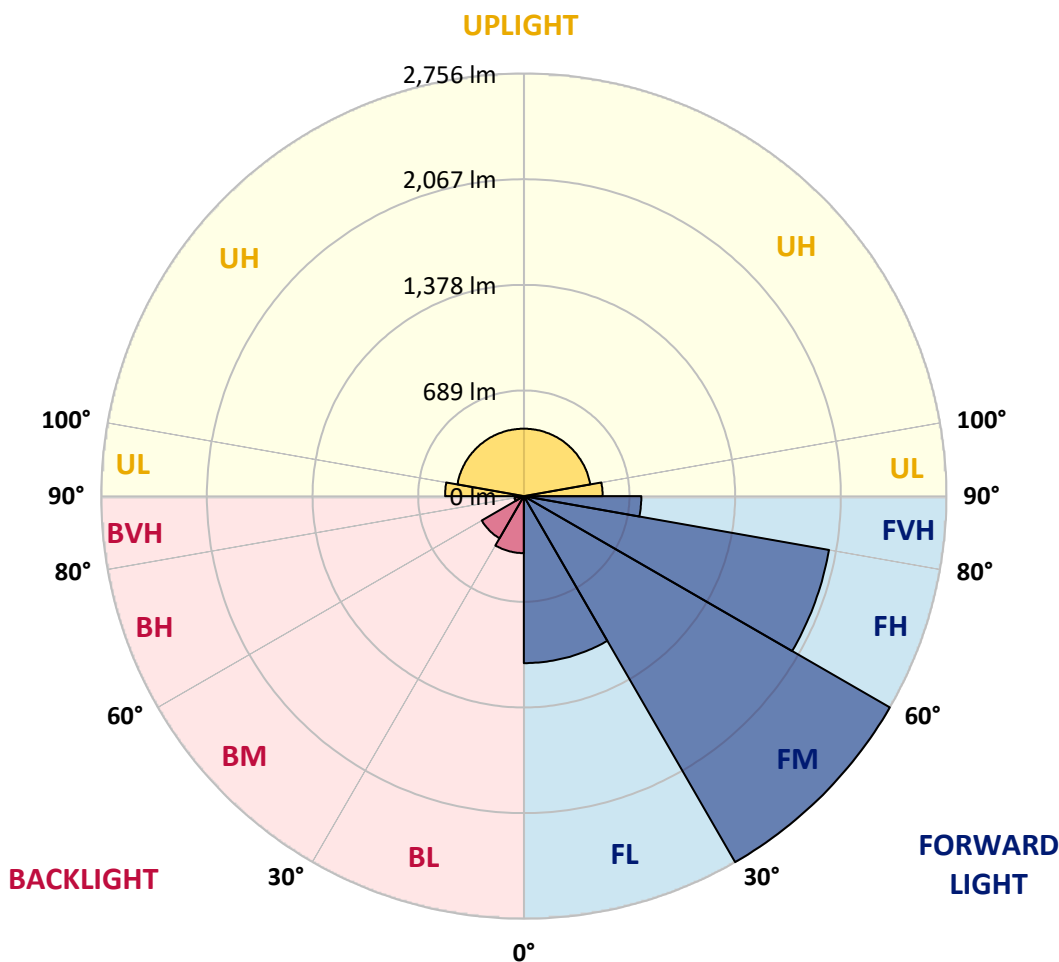
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1089.0	13.1			
FM (30°-60°)	2755.5	33.0			
FH (60°-80°)	2020.7	24.2			G2/5000
FVH (80°-90°)	765.9	9.2			G5
BL (0°-30°)	371.4	4.5	B1/500		
BM (30°-60°)	317.0	3.8	B1/1000		
BH (60°-80°)	61.8	0.7	B0/110		G0/110
BVH (80°-90°)	7.4	0.1			G0/10
UL (90°-100°)	513.6	6.2		U4/1000	
UH (100°-180°)	439.8	5.3		U3/500	

BUG Rating: B1-U4-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6
2.5°	2245.6	2249.5	2245.6	2236.7	2233.7	2226.8	2206.1	2159.7	2077.9	2028.5	2015.7
5°	2658.0	2652.1	2652.1	2592.9	2516.9	2394.6	2276.2	2210.1	2173.6	2033.5	1998.9
7.5°	2791.2	2800.1	2827.7	2809.0	2738.9	2656.0	2517.9	2278.1	2172.6	2027.5	1966.4
10°	2873.1	2882.0	2858.3	2800.1	2723.1	2755.7	2645.2	2449.8	2170.6	2030.5	1937.8
12.5°	2860.3	2860.3	2796.1	2747.8	2779.4	2722.1	2709.3	2552.4	2218.9	2043.3	1916.0
15°	2884.9	2878.0	2831.6	2813.9	2763.6	2714.2	2650.1	2611.6	2297.9	2042.3	1888.4
17.5°	2908.6	2912.5	2891.8	2836.6	2735.0	2713.2	2685.6	2630.4	2391.6	2040.4	1859.8
20°	2911.6	2893.8	2821.8	2807.0	2819.8	2693.5	2633.3	2572.2	2441.9	2021.6	1825.3
22.5°	2897.7	2893.8	2809.9	2819.8	2754.7	2729.0	2679.7	2587.0	2447.8	1994.0	1783.8
25°	2820.8	2822.8	2737.9	2774.4	2764.6	2708.3	2596.8	2560.3	2429.1	1970.3	1745.4
27.5°	2857.3	2848.4	2769.5	2729.0	2735.9	2664.9	2585.0	2514.9	2393.6	1933.8	1695.0
30°	3021.1	3006.3	2880.0	2758.6	2673.8	2668.8	2580.1	2469.5	2331.4	1882.5	1638.8
32.5°	3042.8	3030.9	2975.7	2877.0	2682.7	2613.6	2489.3	2397.5	2272.2	1831.2	1583.5
35°	2934.3	2916.5	2858.3	2876.0	2783.3	2586.0	2507.0	2312.7	2204.1	1781.9	1516.5
37.5°	2900.7	2871.1	2832.6	2817.8	2791.2	2561.3	2483.4	2280.1	2152.8	1723.7	1441.5
40°	3225.3	3140.5	2882.9	2801.1	2695.5	2651.1	2421.2	2257.4	2105.5	1651.6	1369.4
42.5°	2953.0	2948.1	3163.2	2914.5	2696.5	2579.1	2389.6	2210.1	2033.5	1570.7	1289.5
45°	2855.3	2829.7	2760.6	2914.5	2727.1	2464.6	2373.8	2156.8	1926.9	1486.9	1202.7
47.5°	2947.1	2925.4	2835.6	2712.3	2786.3	2490.3	2334.4	2121.3	1807.5	1400.0	1096.2
50°	3135.5	3086.2	2907.6	2782.3	2582.0	2568.2	2266.3	2048.3	1690.1	1298.4	996.5
52°	3752.2	3745.3	3392.1	2808.0	2570.2	2513.9	2189.3	1978.2	1610.2	1224.4	928.4
52.5°	3450.3	3554.8	3593.3	2840.5	2572.2	2472.5	2189.3	1957.5	1595.4	1202.7	919.5
55°	2850.4	2841.5	2854.3	3273.7	2575.1	2330.4	2209.1	1855.9	1496.7	1128.7	850.5
57.5°	2784.3	2771.5	2747.8	2718.2	2881.0	2260.4	2149.9	1757.2	1425.7	1044.8	779.4
60°	2772.4	2764.6	2719.2	2661.0	2546.5	2327.5	1982.1	1680.2	1369.4	964.9	722.2
62.5°	3593.3	3571.6	3204.6	2655.0	2455.7	2394.6	1886.4	1621.0	1311.2	889.9	660.1
65°	2976.7	2966.8	2909.6	3098.0	2520.9	2191.3	1873.6	1594.4	1235.3	822.9	579.2
67.5°	3083.2	3081.3	2956.0	2763.6	2689.6	2191.3	1861.8	1516.5	1170.1	737.0	488.4
70°	2822.8	2827.7	2764.6	2688.6	2480.4	2217.0	1746.3	1396.1	1085.3	640.3	404.5
72.5°	2881.0	2877.0	2776.4	2603.7	2397.5	2070.9	1673.3	1319.1	987.6	551.5	330.5
75°	2753.7	2752.7	2661.9	2519.9	2307.7	1960.4	1596.4	1282.6	881.1	456.8	266.4
77.5°	2821.8	2828.7	2745.8	2543.5	2282.1	1896.3	1537.2	1148.4	781.4	364.1	202.3
80°	2633.3	2634.3	2522.8	2372.9	2140.0	1780.9	1391.2	1027.1	665.0	282.2	151.0
82.5°	2347.2	2355.1	2270.2	2138.0	1970.3	1628.9	1265.9	937.3	563.4	212.1	112.5
85°	2482.4	2498.2	2379.8	2202.2	1975.2	1579.6	1166.2	812.0	450.9	154.9	86.8
87.5°	2148.9	2200.2	2091.7	1959.5	1753.3	1390.2	1020.2	687.7	362.1	118.4	68.1
90°	1941.7	1953.5	1870.7	1739.4	1529.3	1243.2	919.5	589.0	283.2	88.8	54.3
92.5°	1753.3	1784.8	1756.2	1654.6	1456.3	1138.6	800.2	490.4	219.0	70.1	46.4
95°	1739.4	1737.5	1646.7	1489.8	1290.5	995.5	671.9	394.7	164.8	55.3	40.5
97.5°	1622.0	1634.9	1559.9	1346.8	1144.5	859.4	538.7	285.1	127.3	47.4	34.5
100°	1462.2	1472.1	1357.6	1210.6	977.8	678.8	404.5	215.1	101.6	43.4	32.6
102.5°	1259.9	1275.7	1132.7	945.2	755.8	529.8	300.9	169.7	83.9	40.5	30.6
105°	884.0	873.2	778.5	690.6	577.2	400.6	251.6	141.1	70.1	39.5	30.6
107.5°	632.4	640.3	598.9	525.9	437.1	324.6	200.3	116.4	61.2	38.5	30.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	531.8	538.7	501.2	450.9	369.0	255.5	160.8	95.7	57.2	38.5	29.6
112.5°	478.5	483.5	441.0	388.7	303.9	217.1	134.2	81.9	55.3	37.5	28.6
115°	372.9	375.9	349.3	310.8	241.7	174.6	112.5	73.0	54.3	35.5	26.6
117.5°	302.9	302.9	282.2	243.7	196.3	143.1	98.7	68.1	51.3	32.6	24.7
120°	233.8	236.8	221.0	194.4	156.9	118.4	85.8	63.1	49.3	30.6	22.7
122.5°	191.4	193.4	181.5	158.8	128.3	101.6	76.0	60.2	47.4	28.6	19.7
125°	156.9	156.9	148.0	130.2	107.5	87.8	70.1	58.2	47.4	26.6	17.8
127.5°	130.2	130.2	123.3	107.5	92.7	78.9	66.1	57.2	45.4	23.7	15.8
130°	109.5	109.5	102.6	92.7	82.9	75.0	66.1	55.3	41.4	20.7	13.8
132.5°	92.7	91.8	87.8	82.9	77.0	74.0	64.1	52.3	37.5	18.7	11.8
135°	79.9	80.9	79.9	77.9	75.0	71.0	62.2	49.3	33.5	15.8	9.9
137.5°	75.0	77.0	77.9	77.9	72.0	68.1	59.2	47.4	30.6	13.8	7.9
140°	81.9	79.9	78.9	77.9	72.0	65.1	57.2	44.4	27.6	11.8	6.9
142.5°	81.9	81.9	79.9	76.0	69.1	63.1	53.3	41.4	24.7	9.9	5.9
145°	79.9	79.9	77.0	72.0	66.1	58.2	50.3	36.5	20.7	8.9	4.9
147.5°	79.9	78.9	75.0	68.1	61.2	54.3	45.4	31.6	17.8	6.9	4.9
150°	75.0	74.0	68.1	60.2	56.2	48.3	38.5	27.6	15.8	5.9	3.9
152.5°	66.1	65.1	60.2	53.3	47.4	41.4	33.5	23.7	12.8	4.9	3.9
155°	53.3	52.3	47.4	42.4	38.5	35.5	28.6	19.7	10.9	4.9	3.0
157.5°	40.5	40.5	38.5	36.5	34.5	30.6	23.7	16.8	7.9	3.9	3.0
160°	37.5	36.5	34.5	31.6	28.6	23.7	18.7	12.8	5.9	3.0	3.0
162.5°	31.6	31.6	29.6	25.7	22.7	18.7	13.8	8.9	4.9	3.0	3.0
165°	24.7	24.7	22.7	19.7	16.8	12.8	9.9	6.9	3.9	3.0	2.0
167.5°	17.8	17.8	15.8	13.8	10.9	8.9	5.9	4.9	3.9	3.0	2.0
170°	9.9	9.9	9.9	7.9	5.9	4.9	4.9	3.9	3.0	3.0	2.0
172.5°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.0	3.0	2.0	2.0
175°	1.0	1.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
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°	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6	2020.6
2.5°	2006.8	1992.0	1918.0	1844.0	1797.6	1787.8	1784.8	1778.9	1776.9	1771.0
5°	1987.1	1849.0	1773.0	1715.8	1652.6	1615.1	1578.6	1515.5	1497.7	1496.7
7.5°	1928.9	1748.3	1658.5	1567.8	1433.6	1322.1	1273.7	1217.5	1196.8	1189.9
10°	1859.8	1683.2	1533.2	1344.8	1202.7	1096.2	1023.1	986.6	948.2	953.1
12.5°	1796.7	1598.3	1363.5	1160.3	1011.3	899.8	835.7	787.3	763.7	755.8
15°	1739.4	1506.6	1228.4	1003.4	859.4	757.7	686.7	654.1	640.3	639.3
17.5°	1694.1	1406.0	1110.0	886.0	728.1	638.4	591.0	567.3	554.5	547.6
20°	1652.6	1302.4	1013.3	785.4	630.5	553.5	508.1	481.5	470.6	469.6
22.5°	1599.3	1202.7	913.6	672.9	555.5	478.5	434.1	405.5	388.7	387.7
25°	1542.1	1115.9	810.0	592.0	485.4	413.4	363.1	328.5	313.7	311.8
27.5°	1480.9	1031.0	714.3	521.9	417.3	350.3	299.0	275.3	268.4	265.4
30°	1409.9	951.1	629.5	456.8	367.0	293.0	258.5	236.8	231.9	229.9
32.5°	1335.9	873.2	551.5	400.6	315.7	258.5	223.0	209.2	204.2	203.2
35°	1257.0	790.3	492.3	354.2	273.3	225.9	195.4	176.6	166.7	164.8
37.5°	1178.0	705.4	430.2	310.8	237.8	196.3	163.8	145.0	140.1	138.1
40°	1097.1	628.5	375.9	272.3	207.2	162.8	135.2	119.4	114.4	112.5
42.5°	1011.3	545.6	324.6	238.8	179.6	134.2	111.5	97.7	92.7	92.7
45°	926.5	477.5	284.2	208.2	151.0	111.5	92.7	78.9	73.0	72.0
47.5°	827.8	415.4	251.6	180.6	125.3	92.7	75.0	63.1	57.2	56.2
50°	738.0	358.1	220.0	151.9	105.6	77.0	59.2	50.3	44.4	44.4
52°	677.8	321.6	198.3	132.2	91.8	65.1	49.3	40.5	39.5	39.5
52.5°	662.0	312.8	193.4	129.2	87.8	62.2	47.4	38.5	38.5	38.5
55°	594.0	273.3	172.7	111.5	73.0	48.3	34.5	30.6	31.6	31.6
57.5°	538.7	238.8	150.0	95.7	60.2	37.5	24.7	24.7	23.7	22.7
60°	477.5	210.2	131.2	81.9	47.4	26.6	17.8	15.8	12.8	12.8
62.5°	411.4	180.6	115.4	70.1	35.5	16.8	9.9	6.9	5.9	4.9
65°	345.3	156.9	99.7	57.2	26.6	8.9	2.0	0.0	0.0	0.0
67.5°	288.1	136.2	84.9	45.4	17.8	2.0	0.0	0.0	0.0	0.0
70°	232.8	115.4	71.0	34.5	8.9	0.0	0.0	0.0	0.0	0.0
72.5°	187.5	98.7	58.2	23.7	3.0	0.0	0.0	0.0	0.0	0.0
75°	146.0	80.9	46.4	15.8	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	116.4	67.1	36.5	9.9	0.0	0.0	0.0	0.0	0.0	0.0
80°	90.8	53.3	27.6	5.9	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	71.0	42.4	21.7	3.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	56.2	33.5	15.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	46.4	26.6	11.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	38.5	20.7	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	32.6	16.8	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	27.6	13.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	24.7	11.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	23.7	10.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	22.7	10.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	22.7	9.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	22.7	9.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P979122
 CATALOG NUMBER: WPSLED15S-60W-6500K

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	21.7	7.9	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	20.7	6.9	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	19.7	4.9	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	16.8	3.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	13.8	2.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	11.8	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	10.9	1.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	9.9	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	8.9	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	7.9	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	6.9	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	5.9	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	4.9	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	3.9	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
145°	3.9	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
147.5°	3.9	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
150°	3.0	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
152.5°	3.0	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
155°	3.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
157.5°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	2.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
162.5°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	2.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	2.0	1.0	1.0	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

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.

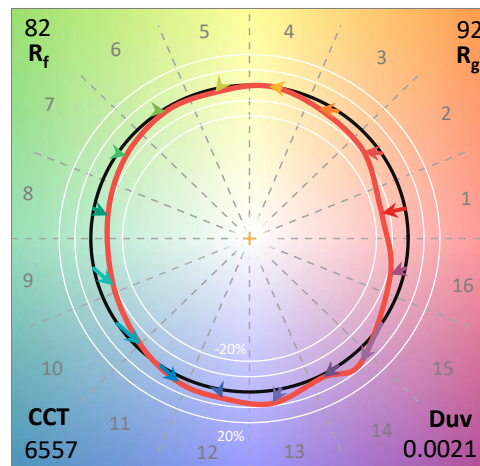
Test Information

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

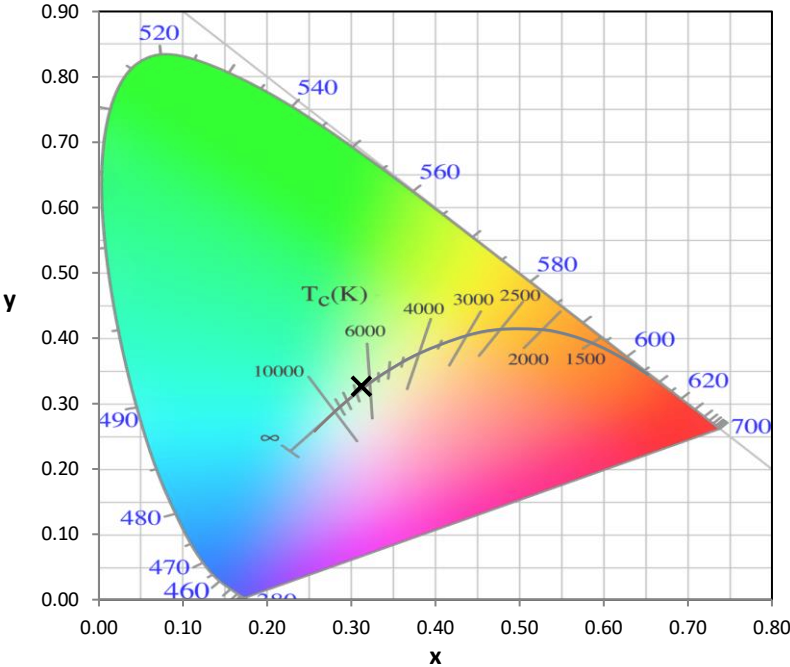
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2407-168-5

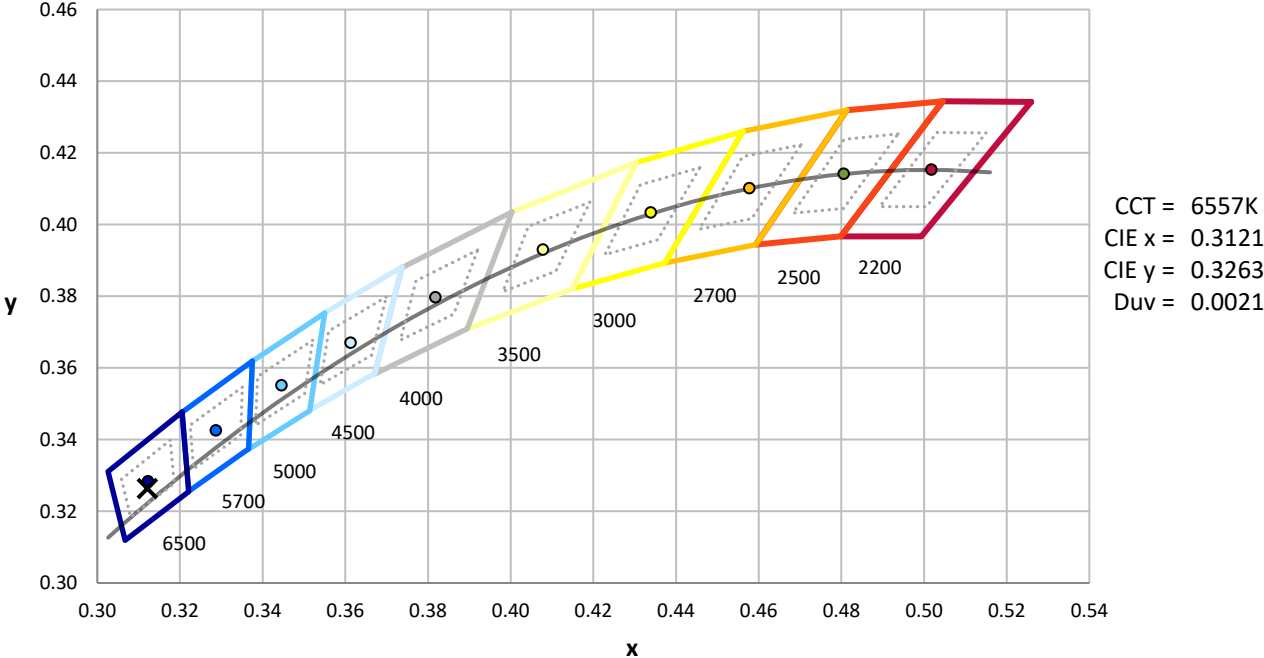
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



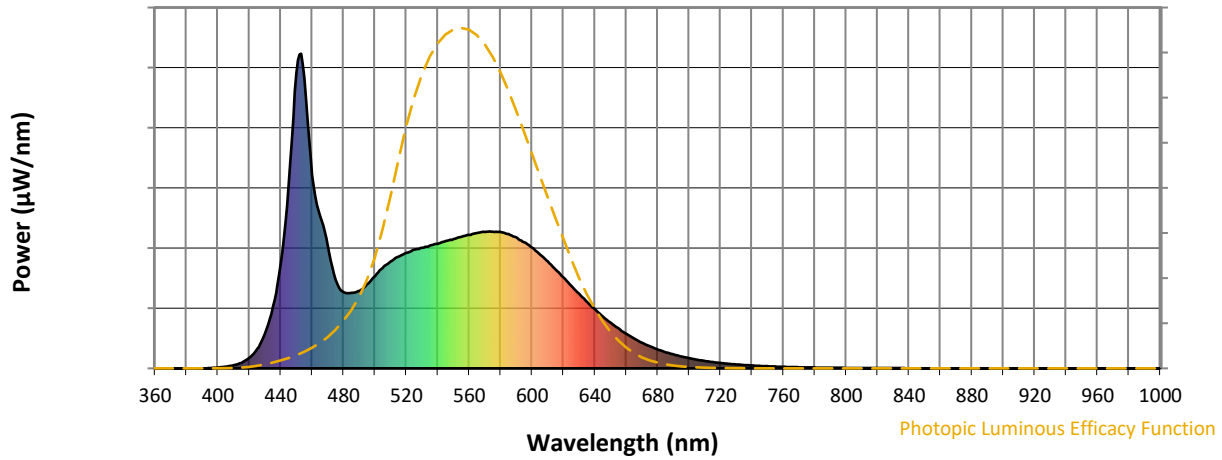
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 6500K 4-step quadrangle

REPORT NUMBER: SP1-2407-168-5

Photopic Flux vs. Wavelength

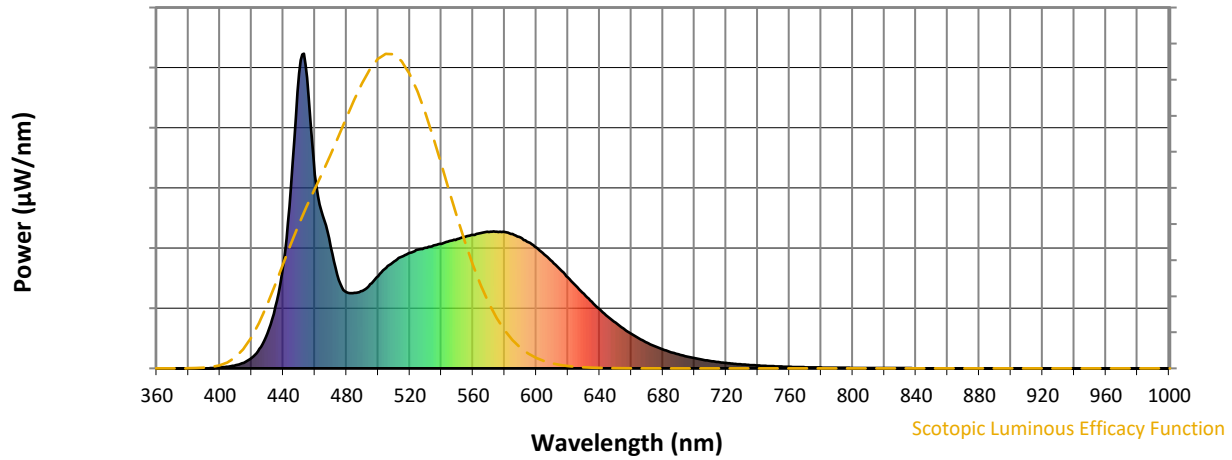


Photopic Lumens: NR

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



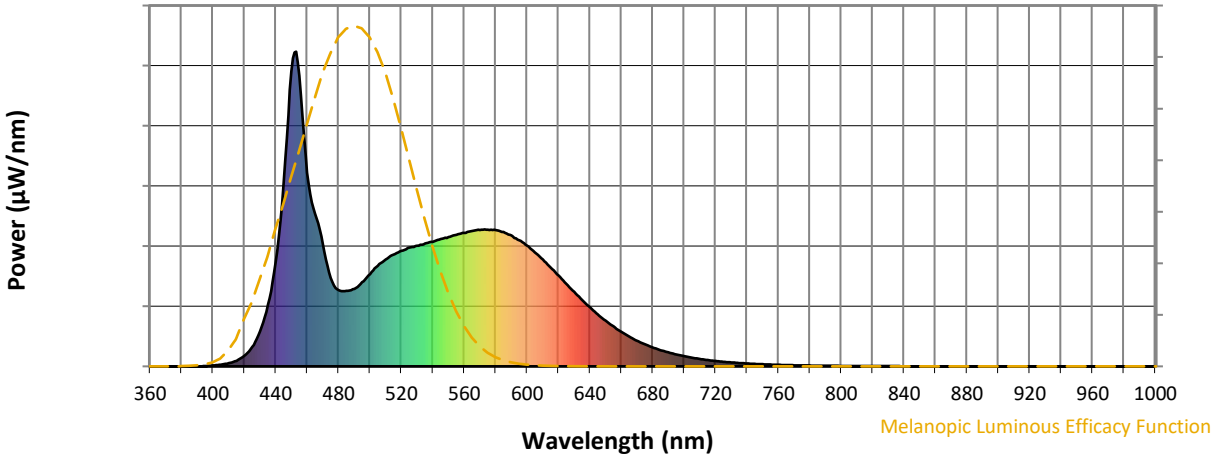
Scotopic Lumens: NR

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

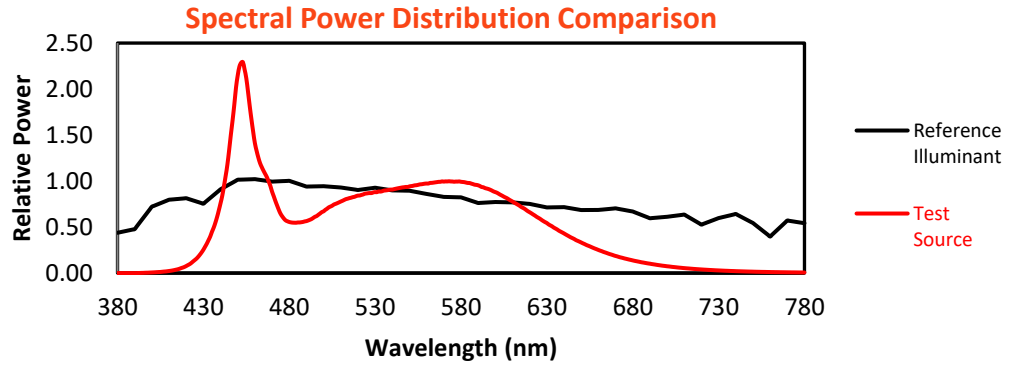


Melanopic Lumens: NR M/P: 5.06

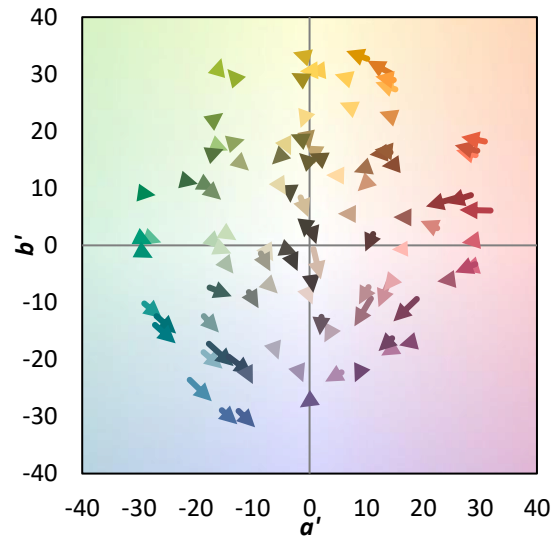
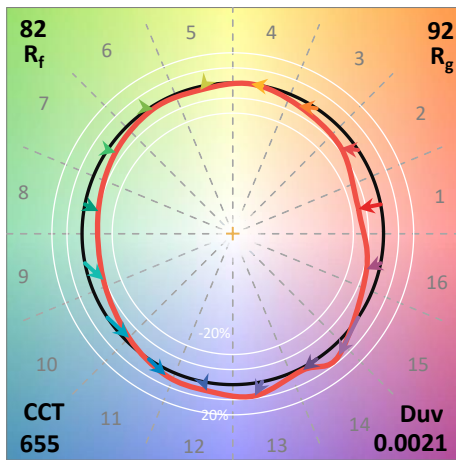
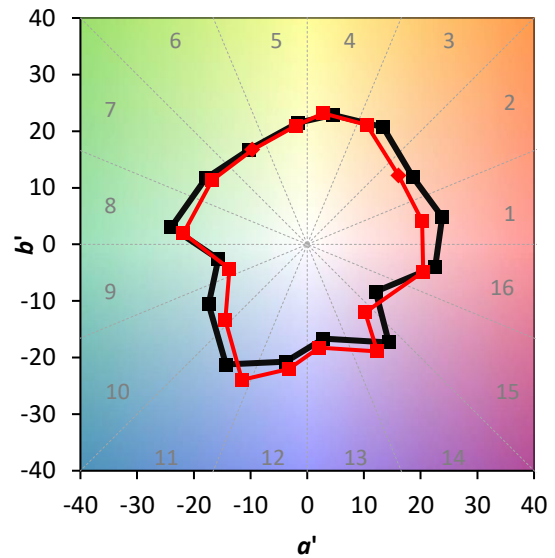
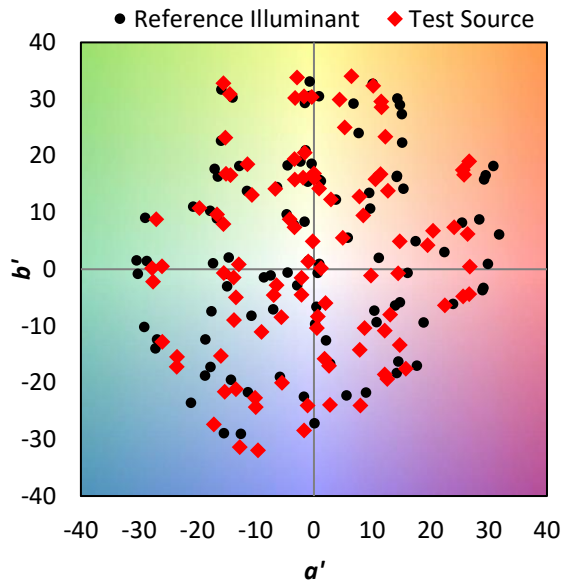
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	246	NR	620	288	NR	750	7	NR	880	0	NR
365	0	NR	495	267	NR	625	262	NR	755	6	NR	885	0	NR
370	0	NR	500	293	NR	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

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

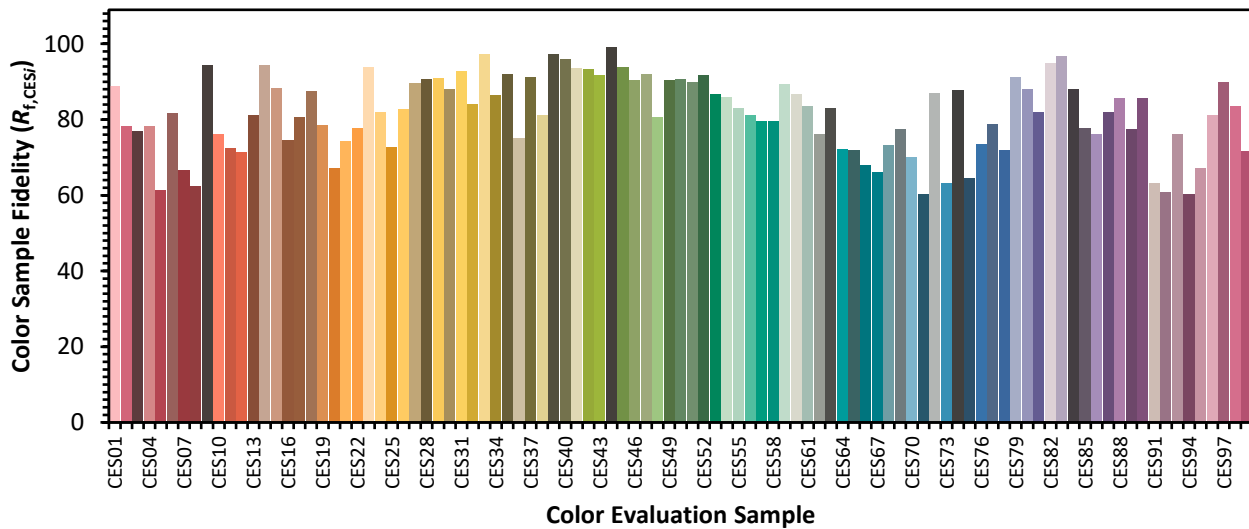


Color Vector Graphics

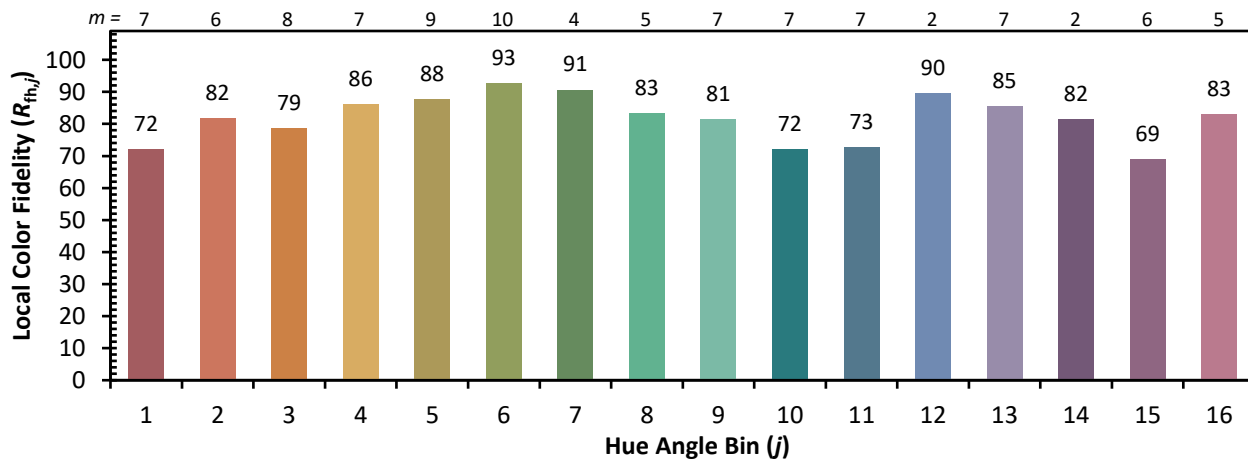
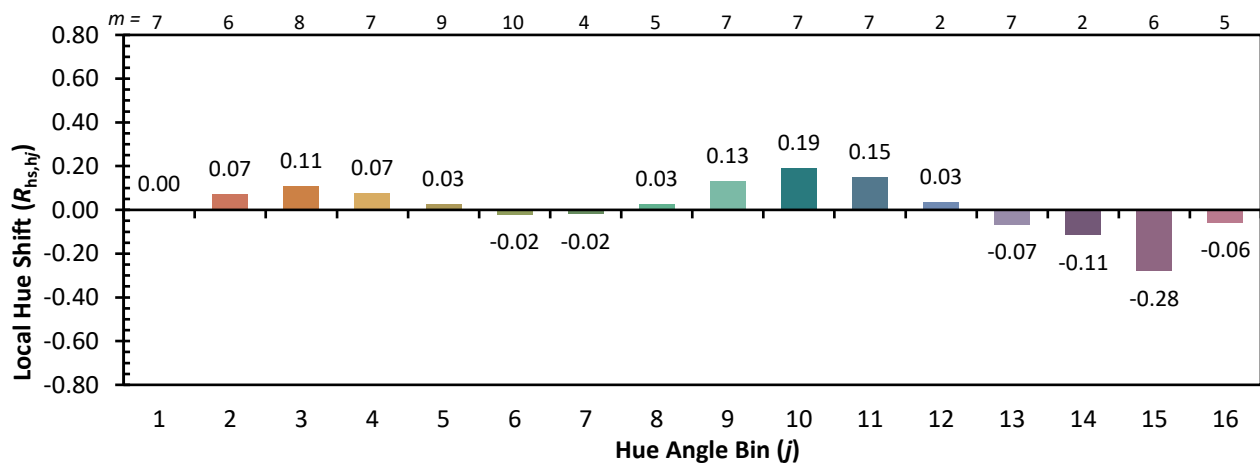
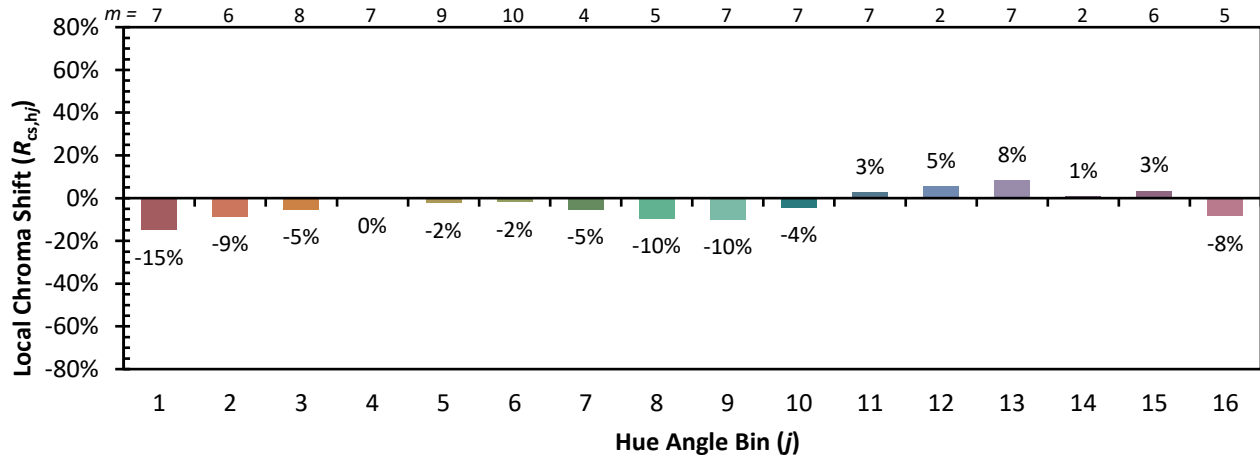


Individual Sample Fidelity Index ($R_{f,i}$)

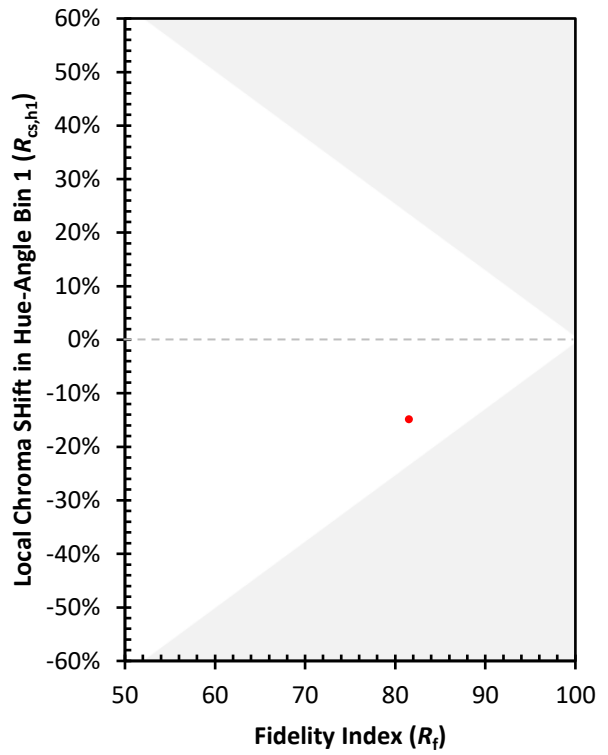
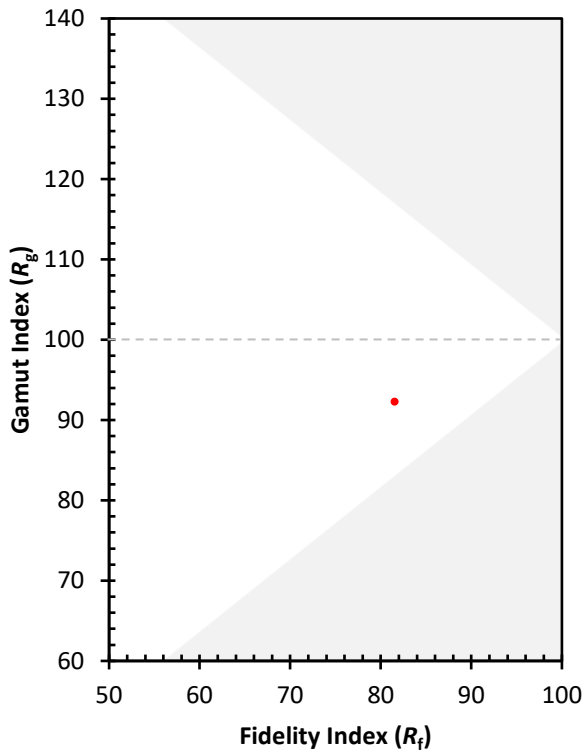
CES01 = 85	CES26 = 83	CES51 = 90	CES76 = 74
CES02 = 59	CES27 = 90	CES52 = 92	CES77 = 79
CES03 = 30	CES28 = 91	CES53 = 87	CES78 = 72
CES04 = 68	CES29 = 91	CES54 = 86	CES79 = 91
CES05 = 45	CES30 = 88	CES55 = 83	CES80 = 88
CES06 = 49	CES31 = 93	CES56 = 81	CES81 = 82
CES07 = 38	CES32 = 84	CES57 = 80	CES82 = 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)