

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: FAIL-SAFE

Report Number: P861211

Luminaire Tested: **8APVTLD-SL3C3 LO POWER 5000K 120V**

Issue Date: 1/11/2023



Test Information

Test Method: LM-79-08
Report Number: P861211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (NTCLR22090026)
Test Lab: INNOVATION CENTER
Issue Date: 1/11/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 8APVTLD-SL3C3 LO POWER 5000K 120V
Description: LOW POWER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

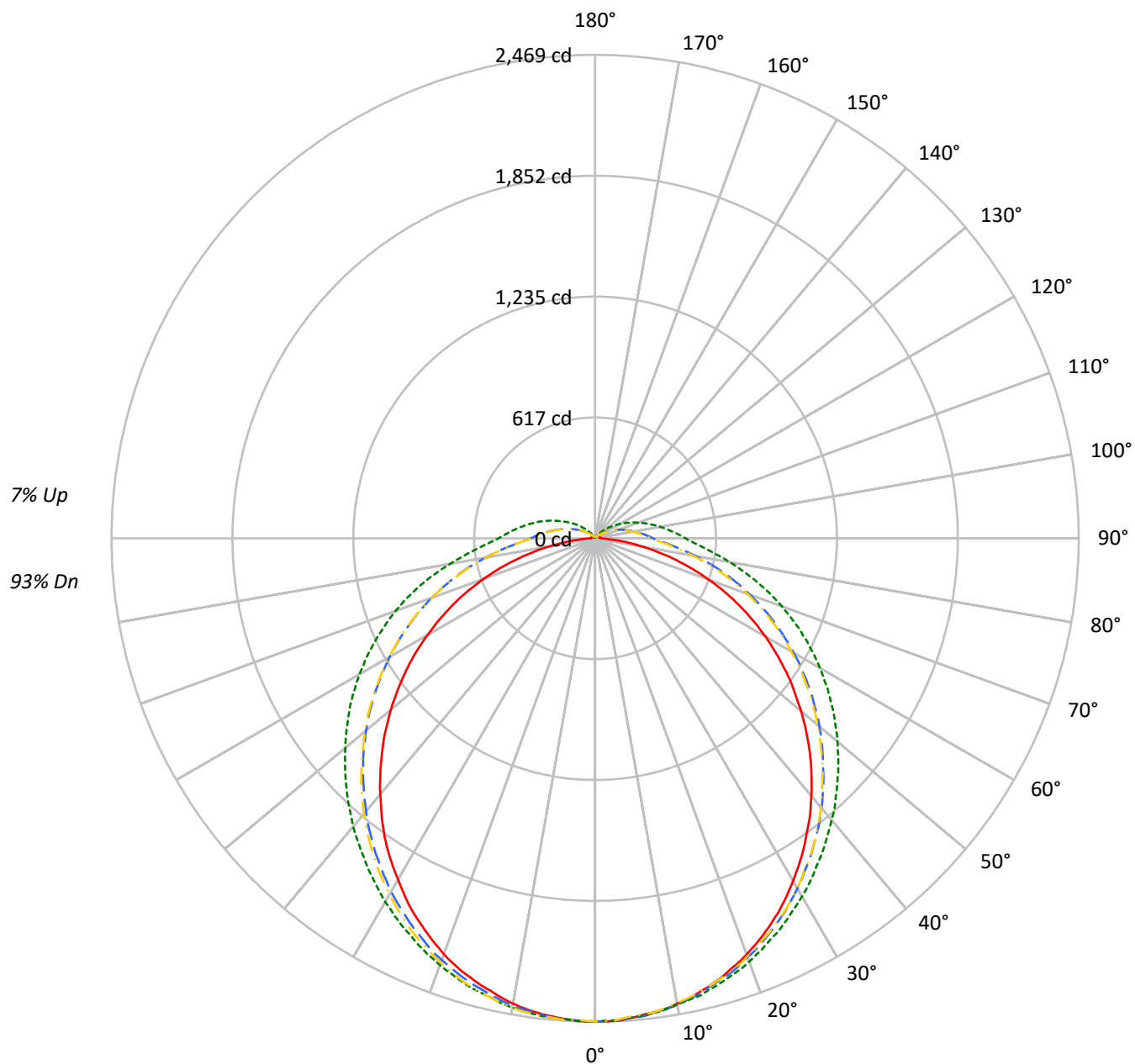
Lumens per Lamp: N/A
Luminaire Lumens: 8378.6 lumens
Efficiency: N/A
Efficacy: 142.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.28 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 8' x H: 0.08')
CIE Type: Direct

Input Watts (W): 59
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: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93		
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	74		
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	66	63	60		
3	86	75	67	60	83	73	65	59	69	62	57	65	59	55	62	57	53	50		
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43		
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37		
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28		
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25		
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24	22		
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9960	9960	9960	9960
5°	9929	9721	9927	9750
10°	9872	9491	9873	9554
15°	9790	9282	9777	9343
20°	9679	9060	9673	9131
25°	9539	8836	9512	8915
30°	9361	8605	9325	8734
35°	9166	8384	9155	8536
40°	8973	8182	8916	8372
45°	8761	7987	8686	8204
50°	8514	7816	8442	8058
55°	8261	7641	8165	7944
60°	7964	7471	7844	7827
65°	7600	7274	7466	7705
70°	7087	7090	6970	7578
75°	6418	6892	6215	7424
80°	5450	6678	5182	7233
85°	4209	6693	3787	7243



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.3	2.8
10°-20°	667.0	8.0
20°-30°	1009.0	12.0
30°-40°	1219.3	14.6
40°-50°	1283.4	15.3
50°-60°	1206.0	14.4
60°-70°	1005.5	12.0
70°-80°	717.3	8.6
80°-90°	420.1	5.0
90°-100°	261.4	3.1
100°-110°	171.8	2.0
110°-120°	100.9	1.2
120°-130°	51.3	0.6
130°-140°	19.7	0.2
140°-150°	6.2	0.1
150°-160°	3.5	0.0
160°-170°	2.2	0.0
170°-180°	0.8	0.0
0°-30°	1909.3	22.8
0°-40°	3128.6	37.3
0°-60°	5617.9	67.1
0°-90°	7760.8	92.6
90°-120°	534.1	6.4
90°-150°	611.2	7.3
90°-180°	618.0	7.4
0°-180°	8378.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2468	2468	2468	2468	2468	
5°	2453	2452	2452	2459	2453	233
15°	2349	2370	2346	2386	2349	663
25°	2152	2215	2146	2235	2152	991
35°	1874	1999	1871	2035	1874	1173
45°	1551	1749	1537	1796	1551	1195
55°	1191	1474	1178	1532	1191	1064
65°	814	1170	799	1239	814	803
75°	428	854	414	920	428	452
85°	102	558	92	603	102	113
90°	30	462	23	494	30	19
95°	27	397	21	427	27	21
105°	22	284	18	315	22	23
115°	18	189	15	211	18	18
125°	14	109	12	126	14	13
135°	10	49	8	60	10	8
145°	8	8	8	14	8	5
155°	7	6	6	9	7	3
165°	7	6	9	8	7	2
175°	8	6	11	7	8	1
180°	9	9	9	9	9	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5
1°	2467.6	2467.8	2468.6	2465.7	2465.0	2469.0	2467.6	2465.7	2467.8	2464.8	2466.7
2°	2467.6	2467.6	2468.0	2462.8	2465.0	2463.2	2466.5	2464.6	2467.1	2464.8	2465.3
3°	2466.3	2466.9	2462.1	2461.1	2461.7	2461.9	2459.0	2460.7	2462.3	2464.0	2462.6
4°	2459.0	2462.5	2457.1	2460.9	2455.9	2458.0	2450.2	2458.4	2458.8	2460.9	2460.7
5°	2452.7	2458.6	2455.7	2456.1	2451.7	2450.6	2446.9	2449.0	2452.3	2454.8	2456.3
6°	2444.2	2450.6	2452.7	2451.7	2447.5	2448.6	2445.0	2442.9	2447.5	2450.4	2453.6
7°	2439.6	2444.4	2442.5	2447.1	2444.8	2439.4	2440.0	2436.7	2440.8	2445.2	2445.2
8°	2432.1	2436.0	2437.3	2436.1	2435.6	2430.8	2430.6	2427.9	2432.9	2434.0	2436.9
9°	2425.8	2426.9	2428.9	2434.0	2425.8	2425.4	2419.6	2419.1	2424.1	2427.9	2431.9
10°	2412.9	2418.1	2417.9	2420.6	2417.7	2413.5	2410.6	2410.4	2413.1	2418.7	2421.7
11°	2407.5	2408.5	2406.4	2411.2	2409.6	2406.0	2399.3	2398.7	2401.0	2407.9	2414.1
12°	2393.1	2396.6	2396.4	2401.4	2402.2	2397.9	2389.1	2386.4	2388.1	2396.8	2402.2
13°	2377.4	2384.3	2385.8	2390.4	2395.2	2388.7	2378.2	2375.7	2372.0	2385.5	2389.5
14°	2364.5	2373.9	2368.4	2378.7	2380.3	2373.4	2363.4	2361.4	2360.9	2370.1	2377.0
15°	2349.3	2357.6	2355.5	2365.1	2369.9	2363.4	2351.3	2345.9	2346.1	2354.7	2366.2
16°	2334.9	2338.4	2341.5	2350.5	2356.1	2350.7	2337.6	2326.5	2330.1	2340.7	2352.6
17°	2315.9	2319.6	2329.8	2341.1	2342.8	2337.4	2323.0	2310.2	2315.4	2325.9	2338.2
18°	2298.1	2310.9	2313.8	2321.7	2330.1	2321.9	2307.5	2294.4	2297.7	2307.5	2322.3
19°	2281.9	2286.2	2295.8	2308.6	2317.3	2305.4	2292.1	2278.5	2280.0	2289.8	2306.9
20°	2261.8	2269.3	2275.8	2294.4	2301.0	2293.3	2272.7	2256.0	2260.4	2269.8	2291.5
21°	2242.0	2247.4	2261.6	2279.6	2283.1	2275.2	2257.2	2237.6	2237.4	2250.3	2276.0
22°	2220.3	2226.6	2240.7	2258.7	2267.4	2255.8	2235.9	2216.8	2215.3	2228.6	2256.4
23°	2199.2	2209.2	2220.5	2241.4	2248.3	2238.2	2214.7	2196.7	2192.8	2208.8	2235.5
24°	2176.5	2187.5	2201.3	2224.0	2229.5	2219.1	2198.6	2174.2	2169.4	2187.5	2213.4
25°	2152.1	2163.1	2178.8	2203.6	2215.3	2199.8	2175.7	2150.8	2146.0	2166.3	2194.6
26°	2128.9	2139.5	2158.3	2185.0	2193.4	2181.1	2155.8	2127.4	2122.6	2142.3	2173.1
27°	2103.2	2117.4	2136.6	2166.5	2173.8	2162.3	2134.7	2102.4	2097.8	2115.3	2150.0
28°	2076.9	2091.6	2113.0	2143.5	2151.2	2139.5	2111.4	2076.7	2069.2	2091.6	2128.7
29°	2047.7	2059.0	2089.5	2123.1	2133.7	2117.6	2086.6	2046.7	2040.2	2066.7	2106.8
30°	2020.4	2037.5	2065.7	2099.5	2112.6	2096.2	2063.6	2021.5	2012.7	2040.7	2083.8
31°	1992.2	2012.1	2041.9	2076.3	2091.4	2073.0	2039.2	1997.0	1986.2	2010.6	2057.6
32°	1964.5	1980.8	2012.7	2052.8	2069.4	2051.7	2010.2	1968.7	1957.4	1983.9	2032.5
33°	1935.7	1954.9	1988.5	2029.8	2045.9	2026.7	1987.0	1941.9	1930.3	1956.1	2007.1
34°	1905.9	1925.1	1963.7	2006.6	2020.8	2003.9	1961.4	1913.4	1901.1	1927.8	1981.8
35°	1873.7	1896.4	1937.1	1983.7	1999.3	1980.6	1935.3	1880.2	1871.4	1901.2	1957.0
36°	1843.2	1868.5	1909.2	1960.1	1976.8	1952.8	1909.6	1851.6	1838.8	1872.3	1930.3
37°	1814.7	1835.6	1882.7	1935.1	1951.6	1928.8	1880.4	1821.6	1806.5	1843.1	1902.4
38°	1783.6	1803.7	1855.6	1906.0	1927.4	1902.8	1851.7	1789.7	1772.6	1810.7	1877.8
39°	1750.4	1774.2	1825.6	1880.9	1903.2	1879.2	1821.0	1757.5	1737.4	1781.4	1850.0
40°	1717.7	1742.6	1798.9	1857.1	1878.6	1852.2	1795.4	1726.6	1706.9	1748.3	1820.1
41°	1684.4	1710.1	1767.8	1832.0	1855.4	1827.3	1763.0	1698.4	1674.6	1720.3	1791.1
42°	1651.5	1680.3	1738.8	1807.1	1831.1	1803.4	1732.1	1660.7	1639.7	1687.0	1762.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1550.7	1580.5	1645.3	1726.2	1749.0	1720.7	1642.4	1562.4	1537.4	1593.2	1674.2
46°	1515.7	1546.4	1615.9	1698.1	1724.8	1694.1	1610.1	1528.7	1503.7	1556.3	1646.3
47°	1480.2	1511.7	1586.3	1671.1	1697.4	1664.0	1577.1	1493.4	1469.4	1522.4	1618.4
48°	1444.5	1479.5	1556.3	1642.8	1670.6	1637.1	1546.1	1459.8	1431.7	1487.9	1587.4
49°	1407.6	1442.8	1525.5	1613.8	1640.7	1609.1	1514.7	1423.4	1396.1	1457.6	1555.7
50°	1372.7	1408.6	1494.8	1587.0	1615.5	1580.9	1482.6	1390.3	1361.1	1423.4	1525.9
51°	1334.6	1374.6	1464.6	1556.2	1588.4	1551.8	1451.6	1354.8	1324.1	1388.5	1493.7
52°	1298.1	1338.7	1431.0	1528.4	1557.3	1520.5	1419.1	1317.5	1286.8	1351.9	1467.0
53°	1263.6	1302.8	1398.4	1498.5	1530.0	1491.1	1386.4	1284.3	1251.3	1319.1	1433.2
54°	1228.4	1266.9	1367.7	1471.6	1502.9	1461.7	1355.3	1250.1	1214.7	1283.8	1403.1
55°	1191.4	1230.8	1333.4	1442.0	1473.5	1431.9	1322.0	1213.7	1177.5	1249.7	1371.5
56°	1152.2	1197.0	1302.6	1409.4	1443.7	1399.9	1288.5	1176.4	1141.5	1214.4	1338.1
57°	1116.6	1160.6	1267.6	1379.1	1415.5	1371.0	1258.4	1141.1	1103.8	1173.7	1306.0
58°	1078.8	1125.3	1238.7	1346.5	1383.1	1339.4	1225.3	1104.5	1065.8	1143.5	1274.2
59°	1040.5	1089.6	1204.4	1317.2	1355.2	1307.1	1190.1	1067.2	1027.9	1105.9	1243.3
60°	1004.3	1052.8	1169.5	1286.2	1326.2	1276.7	1156.8	1031.2	989.2	1070.3	1210.8
61°	964.3	1017.4	1137.7	1256.9	1295.1	1245.1	1125.8	996.0	951.3	1030.4	1178.0
62°	928.2	982.6	1104.4	1223.6	1265.3	1214.2	1092.8	958.5	913.8	996.9	1146.5
63°	889.2	947.3	1072.3	1191.6	1232.3	1181.3	1057.5	922.3	875.3	962.8	1114.6
64°	850.7	909.8	1038.8	1159.5	1205.1	1151.1	1025.8	886.7	837.0	924.6	1082.2
65°	813.5	875.3	1005.9	1128.4	1169.9	1116.1	991.1	850.2	799.1	891.4	1048.5
66°	774.8	838.2	973.3	1097.9	1143.8	1087.9	960.8	814.2	761.4	856.6	1017.4
67°	735.1	801.2	939.0	1068.0	1108.9	1055.9	925.6	777.4	722.1	819.7	985.7
68°	695.7	765.4	907.0	1032.3	1076.7	1023.3	891.5	744.2	682.4	784.2	953.2
69°	656.8	729.1	873.7	1001.9	1044.2	991.3	856.7	706.8	643.9	749.3	920.4
70°	617.7	694.2	840.5	968.2	1013.4	959.2	824.9	672.0	607.5	715.3	887.3
71°	579.5	659.9	808.4	935.9	981.4	927.3	792.3	637.5	566.3	679.5	855.1
72°	541.7	624.2	776.3	901.8	949.2	895.4	758.8	602.5	529.6	646.2	821.9
73°	502.2	589.3	743.7	866.6	917.9	863.6	726.6	568.7	490.0	609.9	789.6
74°	464.3	555.3	711.9	835.6	884.0	829.6	693.8	533.5	452.1	576.7	757.7
75°	427.5	521.9	679.6	802.5	854.2	799.2	661.2	499.5	414.0	542.6	726.5
76°	389.8	488.6	647.5	772.3	819.3	766.6	628.5	466.0	377.0	510.6	694.0
77°	353.2	456.0	614.1	740.5	791.0	737.2	598.7	434.1	340.8	477.2	662.7
78°	316.5	424.3	583.6	709.4	755.9	702.8	565.1	400.8	305.1	443.8	628.0
79°	282.1	392.4	552.6	679.2	728.3	675.3	535.8	370.8	269.9	412.5	597.5
80°	248.3	362.3	521.5	648.4	694.6	641.3	505.2	340.7	236.1	381.0	567.5
81°	215.6	333.0	491.9	618.5	668.0	614.0	477.3	311.1	202.4	351.2	538.3
82°	184.2	305.1	463.3	589.1	636.3	584.1	447.5	283.3	171.5	321.3	506.8
83°	154.2	277.7	435.3	559.5	608.0	557.2	421.1	255.6	142.5	294.1	480.9
84°	126.7	251.5	410.1	532.9	582.2	530.7	396.4	232.2	114.7	267.3	454.5
85°	101.7	227.4	386.0	507.4	557.5	506.4	373.5	209.3	91.5	243.1	428.5
86°	79.0	204.8	362.8	483.2	534.8	483.6	351.1	188.9	70.7	220.8	406.1
87°	59.2	183.6	340.1	459.5	511.7	461.0	329.9	168.9	52.1	200.6	382.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	30.1	143.2	294.8	411.1	461.8	413.5	286.0	128.6	23.1	155.0	330.3
91°	29.1	135.1	284.9	399.1	446.3	398.4	274.7	120.9	22.5	145.7	317.2
92°	28.4	127.5	274.7	387.3	435.2	387.9	265.3	114.1	22.3	137.7	306.6
93°	27.8	120.4	264.4	375.3	421.5	375.1	255.5	107.0	22.5	129.2	295.1
94°	26.9	113.7	255.1	363.9	409.6	364.2	246.9	100.3	22.1	121.1	284.4
95°	26.6	107.3	245.9	353.2	396.7	351.4	236.5	94.2	21.4	113.8	273.8
96°	25.7	100.6	236.0	342.2	384.6	342.0	227.9	88.5	20.5	106.8	263.6
97°	25.2	94.6	227.1	330.4	373.1	329.8	218.3	83.0	19.3	99.8	252.4
98°	24.8	89.6	218.2	320.4	360.5	319.3	210.4	77.7	18.8	93.8	242.5
99°	24.3	84.0	209.3	310.3	349.9	309.1	201.7	73.1	18.4	87.4	232.6
100°	23.9	78.7	201.0	300.0	336.7	298.7	193.0	68.9	18.4	81.6	222.8
101°	23.4	74.6	192.8	289.6	327.1	289.1	184.6	64.0	18.3	76.4	214.0
102°	23.4	70.4	184.0	280.0	313.6	277.7	177.4	59.6	18.2	71.8	204.5
103°	22.9	66.0	176.6	269.3	305.9	268.0	170.1	55.4	18.1	66.9	195.5
104°	22.5	61.8	168.7	259.2	293.0	256.9	162.0	51.3	18.0	62.3	187.5
105°	21.8	58.3	161.8	249.9	284.5	248.4	155.2	47.9	17.9	57.9	178.7
106°	21.6	54.4	154.0	240.3	271.7	238.1	147.3	44.0	17.9	54.0	170.3
107°	21.3	50.2	147.2	230.9	263.9	229.9	140.7	40.6	17.8	49.9	162.4
108°	20.9	47.2	139.9	221.5	251.0	220.1	132.6	37.4	17.7	45.8	154.6
109°	20.4	43.6	133.4	212.2	243.9	212.0	126.6	34.4	17.2	42.3	147.4
110°	20.0	40.3	126.7	203.1	232.5	203.1	119.4	31.6	16.5	38.4	139.3
111°	19.5	37.3	120.3	195.0	224.2	194.8	113.6	28.7	16.5	35.4	132.6
112°	19.0	34.3	114.2	186.2	213.9	185.4	107.1	25.7	16.1	32.2	125.2
113°	18.8	31.6	108.1	177.7	205.8	177.3	101.6	23.4	15.4	28.5	118.6
114°	18.6	29.1	102.1	169.6	196.5	168.0	95.3	21.1	15.6	25.8	112.3
115°	18.4	26.7	96.5	161.9	188.7	160.2	90.1	18.8	15.2	23.2	105.8
116°	17.7	24.2	90.9	154.0	179.5	151.5	84.4	17.4	14.7	21.2	99.4
117°	17.4	22.3	85.3	146.6	171.0	144.6	79.3	15.6	14.5	18.4	93.0
118°	16.8	20.5	79.9	139.2	163.0	136.6	74.1	14.4	14.2	16.5	87.7
119°	16.3	19.6	75.5	131.9	154.2	129.8	69.7	14.0	13.9	14.9	81.4
120°	16.1	18.6	70.4	124.8	147.4	122.9	64.4	14.0	13.7	14.0	76.1
121°	15.6	18.2	65.6	118.1	138.2	115.8	59.6	13.7	13.4	13.8	71.2
122°	15.2	17.7	61.0	111.4	132.1	109.0	54.7	13.5	13.1	13.8	65.8
123°	15.1	17.5	56.3	105.0	123.5	102.3	50.5	13.5	12.9	13.3	60.4
124°	14.4	17.3	51.7	98.6	117.6	95.7	45.5	13.3	12.0	13.1	55.5
125°	13.8	17.0	47.5	92.4	108.7	89.6	41.5	11.9	11.7	12.2	50.7
126°	13.3	16.6	43.0	86.1	103.1	83.2	36.9	11.9	11.0	12.2	45.8
127°	12.8	16.1	39.1	80.0	95.4	77.3	33.4	11.5	11.0	11.7	41.3
128°	12.6	15.7	34.9	74.9	89.9	72.0	29.7	11.2	10.7	11.5	37.0
129°	12.6	15.0	31.4	68.7	82.1	66.1	25.8	11.2	10.3	11.0	32.6
130°	11.9	14.7	27.7	63.7	77.6	61.0	22.5	11.0	9.9	10.8	28.6
131°	11.7	14.3	24.3	58.1	71.0	55.3	19.1	11.2	9.6	10.4	24.8
132°	11.2	14.0	21.0	52.8	65.8	50.0	16.2	10.8	9.2	10.6	21.0



TEST NUMBER: P861211

CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	10.3	12.9	13.9	38.5	48.6	35.6	10.0	10.1	7.8	10.1	11.5
136°	10.3	12.5	12.9	34.0	43.8	31.2	9.3	9.2	7.8	9.2	10.4
137°	9.9	12.2	12.7	29.7	38.3	26.7	8.8	8.5	7.8	8.5	9.7
138°	9.9	11.8	12.5	25.9	33.5	23.0	8.3	7.8	7.7	8.3	8.8
139°	9.4	11.4	12.0	21.8	28.8	19.1	8.1	7.8	7.7	7.8	8.3
140°	9.2	11.1	11.8	18.3	24.8	15.6	7.9	7.3	7.7	7.8	8.1
141°	9.2	10.6	11.1	15.0	20.5	12.3	7.6	7.2	7.7	7.7	7.4
142°	8.7	10.1	10.9	12.7	16.2	10.2	7.6	7.1	7.6	7.7	7.2
143°	8.7	9.9	10.9	11.6	13.2	8.4	7.5	6.9	7.6	7.6	6.9
144°	8.3	9.7	10.4	11.1	9.8	8.2	7.4	6.8	7.6	7.5	6.7
145°	8.0	9.4	10.2	10.9	7.9	7.9	7.4	6.7	7.6	7.5	6.5
146°	7.8	9.0	9.8	10.7	7.5	7.7	7.3	6.6	7.1	7.4	6.5
147°	7.6	8.7	9.5	10.4	7.2	7.7	7.2	6.5	6.9	7.3	6.5
148°	7.3	8.7	9.2	10.2	7.0	7.6	7.2	6.4	7.1	7.3	6.6
149°	7.3	8.5	8.9	10.0	6.8	7.5	7.1	6.4	6.7	7.2	6.6
150°	7.1	8.1	8.8	9.5	7.0	7.4	7.1	6.4	6.7	7.1	6.6
151°	7.1	8.1	8.7	9.5	6.8	7.3	7.1	6.4	6.0	7.0	6.6
152°	6.7	7.8	8.7	9.3	6.5	7.2	7.0	6.5	6.0	7.1	6.7
153°	6.9	7.4	8.6	9.3	6.3	7.1	7.0	6.5	6.0	7.2	6.7
154°	6.8	7.4	8.6	8.6	6.3	7.0	7.0	6.5	6.0	7.2	6.7
155°	6.8	7.4	8.6	8.5	6.2	6.9	6.9	6.5	6.0	7.3	6.8
156°	6.8	7.4	8.5	8.4	6.2	6.8	6.9	6.5	6.0	7.3	6.8
157°	6.8	7.4	8.5	8.3	6.2	6.7	6.9	6.6	6.0	7.4	6.8
158°	6.7	7.4	8.5	8.2	6.2	6.7	6.8	6.6	6.0	7.4	6.9
159°	6.7	7.4	8.5	8.1	6.2	6.7	6.8	6.6	6.0	7.5	6.9
160°	6.8	7.5	8.5	8.1	6.1	6.7	6.8	6.6	6.0	7.5	6.9
161°	6.8	7.5	8.4	8.3	6.1	6.6	6.8	6.6	6.9	7.6	7.2
162°	6.8	7.5	8.4	7.9	6.1	6.6	6.7	7.1	7.6	8.1	7.9
163°	6.9	7.5	8.4	7.6	6.1	6.6	6.7	7.5	8.0	8.3	8.3
164°	6.9	7.5	8.4	7.6	6.1	6.5	6.9	7.8	8.5	8.5	8.5
165°	6.9	7.5	8.3	7.5	6.2	6.5	7.2	8.0	8.9	8.5	9.0
166°	7.1	7.6	8.3	7.4	6.2	6.5	7.4	8.2	9.2	8.6	9.5
167°	7.1	7.6	8.3	7.4	6.2	6.5	7.4	8.3	9.9	8.6	9.7
168°	7.8	7.6	8.3	7.3	6.2	6.4	7.4	8.3	10.3	8.6	9.7
169°	7.8	7.8	8.3	7.2	6.2	6.4	7.4	8.3	10.8	8.6	9.8
170°	8.0	8.3	8.2	7.2	6.3	6.4	7.4	8.3	11.2	8.6	9.8
171°	7.8	8.5	8.2	7.1	6.4	6.3	7.4	8.3	11.2	8.6	9.9
172°	8.0	9.0	8.2	7.1	6.4	6.3	7.4	8.4	11.2	8.7	9.9
173°	8.1	9.4	8.2	7.1	6.5	6.3	7.4	8.4	11.1	8.7	10.0
174°	8.3	9.7	8.1	7.1	6.5	6.8	7.4	8.4	11.1	8.7	10.0
175°	8.4	9.7	8.1	7.1	6.5	6.8	7.9	8.4	11.1	8.7	10.1
176°	8.6	9.7	8.1	7.2	7.0	7.0	7.6	8.4	11.0	8.7	10.1
177°	8.7	9.9	8.1	7.2	7.2	7.2	7.6	8.5	11.0	8.7	10.2

TEST NUMBER: P861211
CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7



TEST NUMBER: P861211

CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2467.5	2467.5	2467.5	2467.5	2467.5	2467.5
1°	2469.0	2468.2	2469.8	2465.1	2467.6	2467.6
2°	2469.8	2467.3	2470.7	2461.5	2465.5	2467.6
3°	2468.4	2462.5	2468.0	2464.4	2464.8	2466.3
4°	2464.0	2460.0	2465.5	2463.4	2455.2	2459.0
5°	2461.3	2458.8	2461.1	2459.2	2454.6	2452.7
6°	2455.4	2456.1	2456.3	2455.4	2450.7	2444.2
7°	2450.2	2451.3	2454.0	2452.5	2445.6	2439.6
8°	2444.8	2447.5	2450.4	2446.7	2437.9	2432.1
9°	2436.7	2440.0	2441.7	2442.1	2427.1	2425.8
10°	2431.0	2433.8	2434.2	2434.0	2419.1	2412.9
11°	2421.0	2425.6	2426.2	2426.2	2405.4	2407.5
12°	2413.1	2416.2	2414.8	2415.6	2396.8	2393.1
13°	2404.3	2402.9	2410.8	2404.3	2385.5	2377.4
14°	2391.4	2393.7	2402.5	2393.5	2367.8	2364.5
15°	2380.5	2385.6	2392.0	2383.5	2355.3	2349.3
16°	2368.6	2373.4	2377.4	2369.3	2342.2	2334.9
17°	2356.8	2359.9	2366.6	2354.1	2321.7	2315.9
18°	2342.6	2346.5	2350.7	2338.4	2305.9	2298.1
19°	2329.2	2333.0	2338.8	2322.8	2286.7	2281.9
20°	2314.2	2319.2	2326.1	2306.7	2269.8	2261.8
21°	2294.6	2302.7	2309.0	2288.7	2250.1	2242.0
22°	2280.6	2288.9	2292.9	2268.9	2228.6	2220.3
23°	2264.3	2271.8	2276.4	2251.4	2207.8	2199.2
24°	2246.0	2255.6	2259.1	2233.6	2185.9	2176.5
25°	2230.7	2235.1	2237.4	2214.7	2164.0	2152.1
26°	2209.4	2219.5	2219.1	2193.0	2141.0	2128.9
27°	2191.5	2201.5	2198.2	2169.8	2117.8	2103.2
28°	2171.1	2182.7	2180.0	2146.6	2094.5	2076.9
29°	2150.8	2161.5	2160.0	2123.9	2070.7	2047.7
30°	2129.9	2144.3	2139.1	2100.5	2045.4	2020.4
31°	2107.8	2122.4	2117.4	2074.0	2017.3	1992.2
32°	2085.1	2099.9	2096.1	2051.3	1991.4	1964.5
33°	2064.2	2078.0	2074.4	2028.1	1963.6	1935.7
34°	2040.4	2058.0	2053.0	2001.8	1934.2	1905.9
35°	2016.2	2035.4	2030.6	1974.5	1904.2	1873.7
36°	1992.7	2010.8	2004.8	1948.6	1876.3	1843.2
37°	1969.1	1989.7	1981.2	1920.5	1847.2	1814.7
38°	1945.1	1967.2	1957.0	1893.9	1813.9	1783.6
39°	1919.2	1945.1	1934.6	1867.9	1784.9	1750.4
40°	1893.7	1922.1	1908.9	1837.3	1753.2	1717.7
41°	1868.4	1896.0	1885.0	1807.1	1721.5	1684.4
42°	1844.8	1871.5	1857.6	1778.1	1690.3	1651.5



TEST NUMBER: P861211

CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1765.7	1796.5	1776.9	1686.9	1593.2	1550.7
46°	1740.0	1770.3	1749.8	1657.7	1559.2	1515.7
47°	1714.3	1745.3	1724.4	1627.1	1526.1	1480.2
48°	1686.9	1718.2	1695.6	1594.8	1492.1	1444.5
49°	1659.8	1691.6	1669.5	1564.9	1457.6	1407.6
50°	1632.6	1665.5	1639.4	1533.3	1424.9	1372.7
51°	1603.4	1640.0	1611.3	1503.8	1389.8	1334.6
52°	1573.1	1613.1	1579.8	1473.8	1354.8	1298.1
53°	1544.9	1585.0	1550.9	1440.1	1320.1	1263.6
54°	1515.6	1558.6	1521.7	1407.6	1285.0	1228.4
55°	1487.8	1531.8	1494.0	1374.2	1250.7	1191.4
56°	1458.3	1504.9	1467.4	1342.1	1215.5	1152.2
57°	1429.2	1476.0	1437.1	1312.1	1180.8	1116.6
58°	1397.7	1446.3	1405.3	1279.7	1144.5	1078.8
59°	1369.6	1418.8	1374.6	1247.3	1108.3	1040.5
60°	1339.2	1389.4	1343.7	1214.8	1073.5	1004.3
61°	1307.3	1357.5	1311.3	1182.4	1035.5	964.3
62°	1276.5	1330.4	1279.5	1148.9	1000.6	928.2
63°	1245.1	1299.7	1250.9	1118.7	964.8	889.2
64°	1216.2	1269.0	1219.2	1085.7	928.0	850.7
65°	1182.9	1239.2	1186.9	1052.3	893.2	813.5
66°	1155.0	1207.3	1156.1	1020.6	857.5	774.8
67°	1120.8	1176.1	1124.9	986.9	820.3	735.1
68°	1088.7	1145.6	1092.4	951.6	784.4	695.7
69°	1058.2	1115.7	1061.6	921.6	750.6	656.8
70°	1024.7	1083.2	1029.4	886.8	716.8	617.7
71°	994.4	1051.6	998.9	853.6	681.0	579.5
72°	962.1	1019.8	966.2	820.5	646.6	541.7
73°	929.8	986.5	932.8	787.9	611.0	502.2
74°	898.4	955.8	901.1	755.6	576.6	464.3
75°	867.1	920.2	870.5	720.8	542.9	427.5
76°	834.6	888.2	838.9	689.9	509.4	389.8
77°	805.1	853.2	805.7	658.1	476.4	353.2
78°	771.8	819.1	776.2	626.0	442.7	316.5
79°	743.4	785.8	744.0	595.8	411.7	282.1
80°	711.6	752.3	712.6	565.2	380.4	248.3
81°	681.9	720.5	681.0	537.4	349.7	215.6
82°	651.5	688.9	651.1	508.3	320.7	184.2
83°	623.2	659.5	621.9	480.0	293.7	154.2
84°	594.6	630.6	593.0	453.2	266.6	126.7
85°	567.8	603.3	566.9	427.6	242.2	101.7
86°	544.9	578.2	541.9	403.2	218.9	79.0
87°	521.9	554.3	517.1	379.7	196.0	59.2



TEST NUMBER: P861211

CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	466.9	494.1	457.4	324.7	150.2	30.1
91°	450.7	479.3	443.1	313.2	141.6	29.1
92°	438.2	465.0	429.5	301.8	133.4	28.4
93°	424.3	452.8	416.6	290.9	125.6	27.8
94°	411.4	439.8	404.1	280.4	117.7	26.9
95°	397.5	427.3	391.8	268.9	111.1	26.6
96°	385.2	414.7	377.9	258.7	104.3	25.7
97°	371.2	402.6	366.1	249.0	97.7	25.2
98°	359.1	390.8	354.6	240.0	91.5	24.8
99°	347.2	379.2	343.0	230.1	85.7	24.3
100°	335.1	367.6	332.1	220.4	80.2	23.9
101°	323.3	356.6	320.3	211.4	76.1	23.4
102°	312.0	345.8	309.3	202.3	71.2	23.4
103°	301.1	334.7	297.9	193.7	66.8	22.9
104°	289.1	323.4	287.2	185.2	62.2	22.5
105°	278.5	314.7	275.8	177.1	58.2	21.8
106°	267.1	304.1	265.8	168.5	53.8	21.6
107°	256.8	293.4	256.2	160.5	49.9	21.3
108°	245.5	281.6	247.1	152.7	46.7	20.9
109°	236.9	271.8	237.5	145.4	43.2	20.4
110°	226.0	261.1	227.5	137.9	40.0	20.0
111°	217.5	250.4	218.0	130.7	36.9	19.5
112°	207.5	239.9	208.4	124.4	34.1	19.0
113°	199.0	229.8	199.0	117.7	31.3	18.8
114°	190.0	220.2	189.8	111.1	28.6	18.6
115°	181.3	210.8	181.2	104.3	26.3	18.4
116°	172.1	201.1	172.8	98.7	23.8	17.7
117°	163.9	192.2	164.6	92.6	22.0	17.4
118°	155.3	183.7	156.6	87.1	20.8	16.8
119°	147.6	174.6	148.7	81.7	20.1	16.3
120°	140.0	166.1	140.7	76.7	19.5	16.1
121°	131.8	157.8	133.1	71.4	19.2	15.6
122°	124.8	149.3	126.2	66.4	19.0	15.2
123°	117.1	141.3	118.2	61.4	18.5	15.1
124°	109.8	133.8	111.4	56.7	18.3	14.4
125°	103.2	126.2	104.3	51.9	18.1	13.8
126°	95.9	118.4	97.4	47.2	17.4	13.3
127°	89.8	111.1	91.0	43.0	17.2	12.8
128°	83.5	104.2	84.4	38.7	16.7	12.6
129°	76.9	97.2	78.5	34.4	16.2	12.6
130°	71.5	90.3	72.5	30.8	16.0	11.9
131°	65.6	83.9	66.7	27.1	15.6	11.7
132°	59.7	77.7	60.9	23.9	14.9	11.2



TEST NUMBER: P861211

CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	43.3	59.5	44.5	15.5	13.7	10.3
136°	37.8	53.8	39.8	14.4	13.5	10.3
137°	32.9	48.4	35.1	14.1	13.0	9.9
138°	28.4	42.9	30.3	13.9	12.8	9.9
139°	23.9	37.8	25.9	13.4	12.1	9.4
140°	20.1	33.2	22.1	13.2	11.9	9.2
141°	15.5	28.4	18.5	12.5	11.7	9.2
142°	12.0	23.9	15.2	12.3	11.2	8.7
143°	10.6	19.9	13.3	11.8	10.7	8.7
144°	9.0	16.2	12.6	11.4	10.3	8.3
145°	8.3	13.6	12.3	11.1	10.1	8.0
146°	8.1	12.6	12.0	10.7	10.1	7.8
147°	7.6	11.7	11.7	10.4	9.6	7.6
148°	7.6	11.4	11.5	10.2	9.2	7.3
149°	7.5	11.0	11.2	9.7	9.2	7.3
150°	7.4	10.7	10.7	9.5	8.7	7.1
151°	7.3	10.5	10.5	9.3	8.9	7.1
152°	7.2	10.3	10.3	8.8	8.7	6.7
153°	7.1	10.2	10.2	8.8	8.6	6.9
154°	7.0	9.8	10.1	8.8	8.6	6.8
155°	6.9	9.3	9.9	8.8	8.5	6.8
156°	6.0	9.2	9.7	8.7	8.5	6.8
157°	6.3	9.2	9.5	8.7	8.4	6.8
158°	6.0	9.1	9.3	8.7	8.4	6.7
159°	6.0	9.0	9.1	8.7	8.3	6.7
160°	6.2	8.9	9.0	8.7	8.3	6.8
161°	6.5	8.8	8.9	8.6	8.2	6.8
162°	6.7	8.4	8.8	8.6	8.2	6.8
163°	6.9	8.6	8.6	8.6	8.1	6.9
164°	7.2	8.4	8.5	8.6	8.1	6.9
165°	7.4	8.3	8.4	8.6	8.0	6.9
166°	7.6	8.2	8.3	8.6	8.5	7.1
167°	7.9	8.1	8.2	8.5	8.9	7.1
168°	7.9	8.0	8.2	8.5	9.4	7.8
169°	7.9	7.9	8.1	8.5	9.6	7.8
170°	7.9	7.5	8.1	8.5	10.8	8.0
171°	8.0	7.7	8.0	8.5	10.5	7.8
172°	8.0	7.5	8.0	8.4	10.8	8.0
173°	8.0	7.5	7.9	8.4	10.8	8.1
174°	8.0	7.2	7.7	8.4	10.8	8.3
175°	8.1	7.0	7.7	8.4	10.8	8.4
176°	8.1	7.0	7.7	8.4	10.8	8.6
177°	8.1	7.2	7.7	8.3	10.8	8.7



TEST NUMBER: P861211
CATALOG NUMBER: 8APVTLD-SL3C3 LO POWER 5000K 120V

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	8.7	8.7	8.7	8.7	8.7	8.7



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°







43°	1617.9	1645.9	1708.9	1780.9	1802.2	1774.6	1700.4	1631.0	1606.2	1654.9	1733.1
44°	1584.5	1613.5	1677.4	1753.5	1776.4	1748.1	1672.6	1597.1	1571.5	1624.2	1705.4



88°	44.6	167.7	321.8	440.7	493.7	443.7	313.3	152.3	37.7	183.0	362.8
89°	34.6	153.3	307.7	424.7	474.3	425.5	297.3	138.4	27.6	167.0	344.6



133°	11.0	13.6	18.0	48.0	59.8	45.2	13.7	10.3	8.3	10.6	17.8
134°	10.8	12.9	15.5	43.0	54.6	40.1	11.4	10.3	7.8	10.4	14.3



178°	8.7	9.9	8.1	7.2	7.2	7.5	7.6	8.5	11.0	8.7	10.2
179°	8.7	9.9	8.1	7.2	7.2	7.7	7.6	8.5	11.0	8.7	10.2





43°	1819.0	1846.9	1830.8	1749.7	1657.2	1617.9
44°	1791.8	1822.9	1804.1	1719.3	1625.2	1584.5



88°	502.5	531.2	494.4	358.6	177.9	44.6
89°	482.1	511.0	474.6	340.3	162.7	34.6



133°	54.7	71.6	55.3	20.4	14.6	11.0
134°	48.2	65.5	50.0	17.6	14.4	10.8



178°	8.1	7.2	7.7	8.3	10.8	8.7
179°	8.1	7.2	7.7	8.3	10.8	8.7



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

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

METALUX

Report Number: SP1-2210-820-18

Test Date: 11/11/2022

Luminaire Tested: 4APVTLD-SL3C3

Data in this report applies to families of products including 4APVTLD-SL3C3.

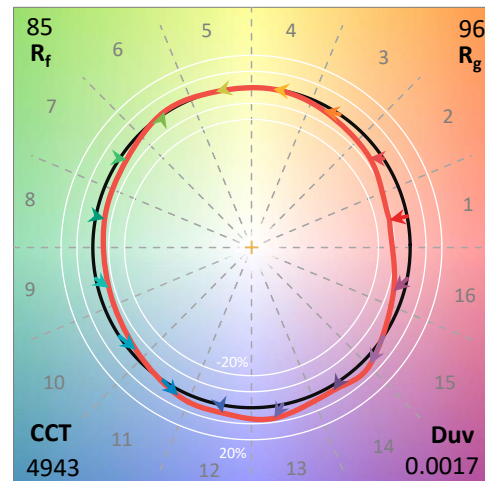
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2210-820-18
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/11/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: METALUX
 Catalog Number: **4APVTLD-SL3C3**
 Description: METALUX

0.1699(@277V) [AT MAX POWER AND 5000K]

Spectral Parameters

CCT (K):	4943	CRI (Ra):	85.1		
CIE u':	0.2108	R1:	83.6	R9:	16.8
CIE v':	0.4873	R2:	91.2	R10:	78.4
Duv:	0.0017	R3:	95.3	R11:	82.6
CIE x:	0.3470	R4:	83.2	R12:	60.5
CIE y:	0.3564	R5:	83.4	R13:	86.0
CIE z:	0.2966	R6:	86.5	R14:	97.8
Peak Wavelength (nm):	452	R7:	88.0		
Dominant Wavelength (nm):	571	R8:	69.5		
Purity:	11.1				
Rf:	85.4				
Rg:	95.7				



Test Conditions

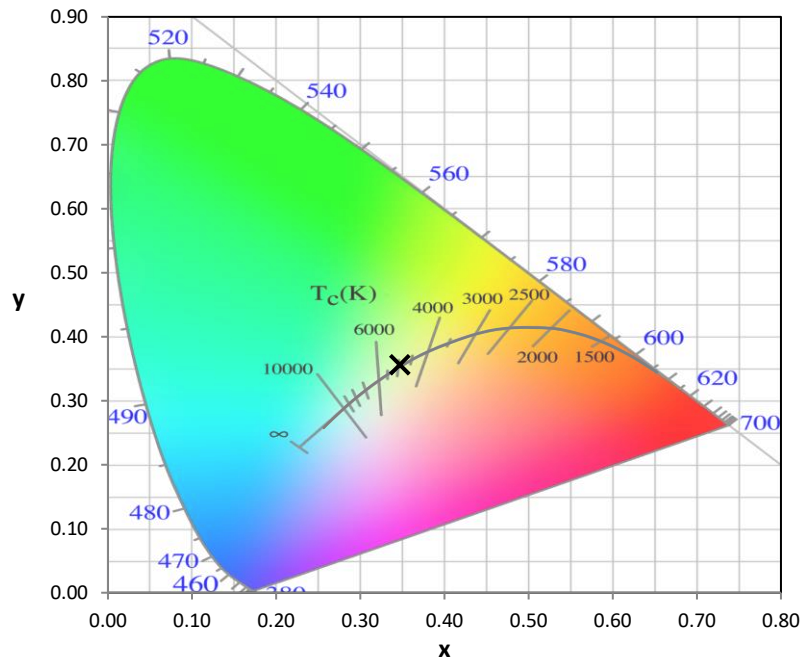
Stabilization Time: 70M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.0/52%
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2210-820-18

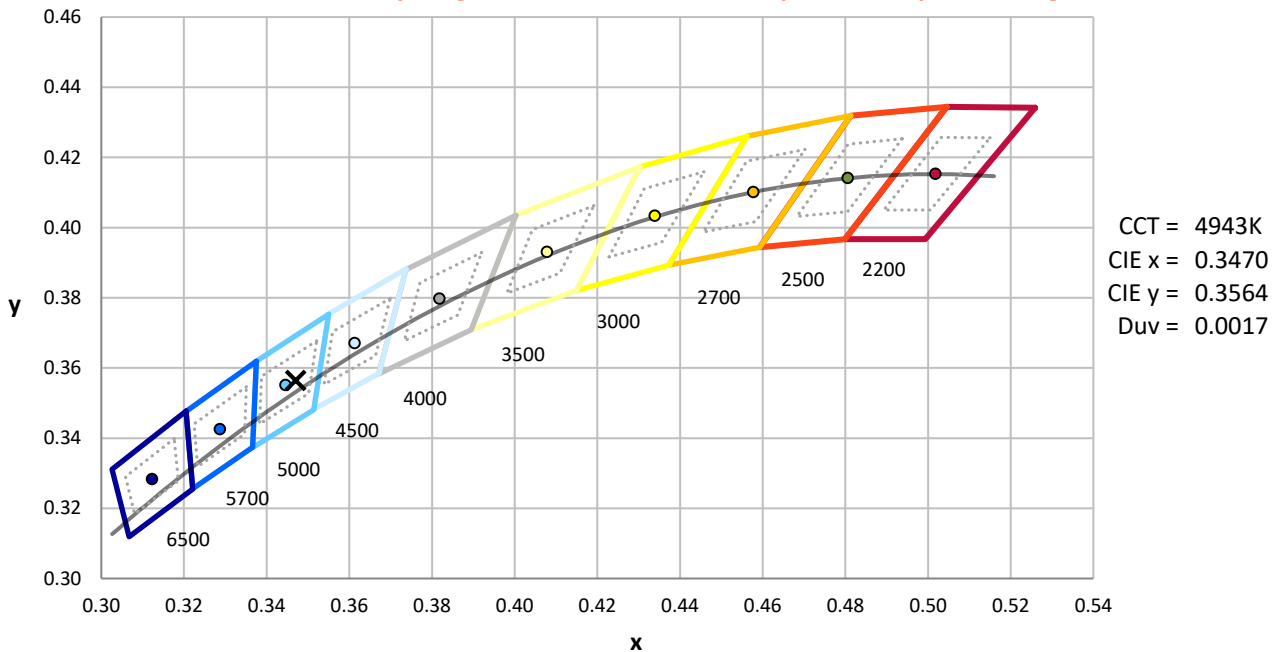
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	8/8/2022	2/8/2023
Power Meter	XITRON 2801 IN0071	11/29/2021	11/29/2022
AC Power Source	CHROMA 61603 IN0063	11/29/2021	11/29/2022
DC Power Source	AGILENT E3634A IN0208	11/29/2021	11/29/2022
Sphere Thermometer	ONSET IN0085	11/29/2021	11/29/2022
Room Thermometer	ONSET IN0046	11/29/2021	11/29/2022

REPORT NUMBER: SP1-2210-820-18

CIE 1931 Chromaticity Diagram



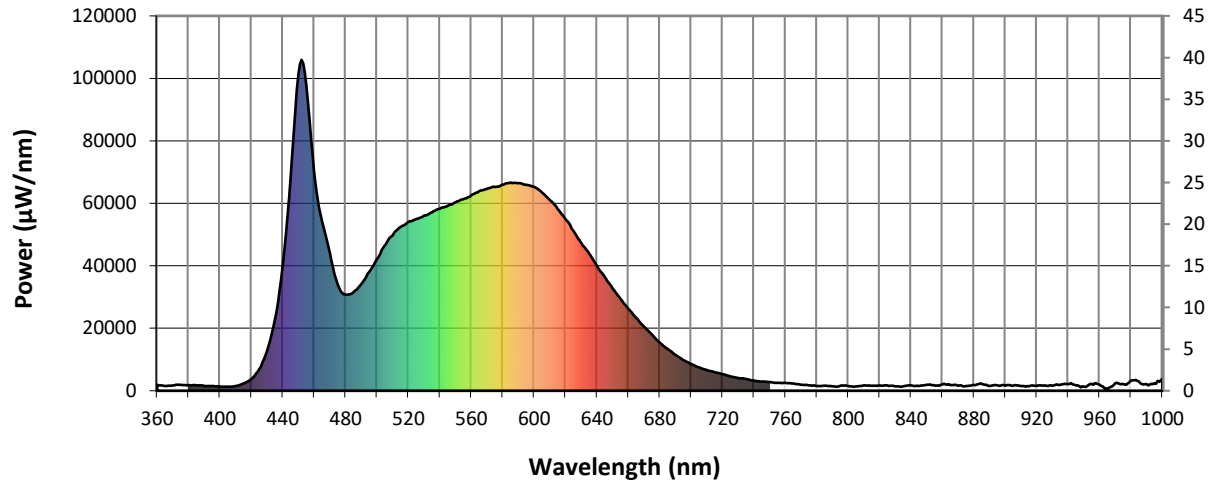
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2210-820-18

Photopic Flux vs. Wavelength

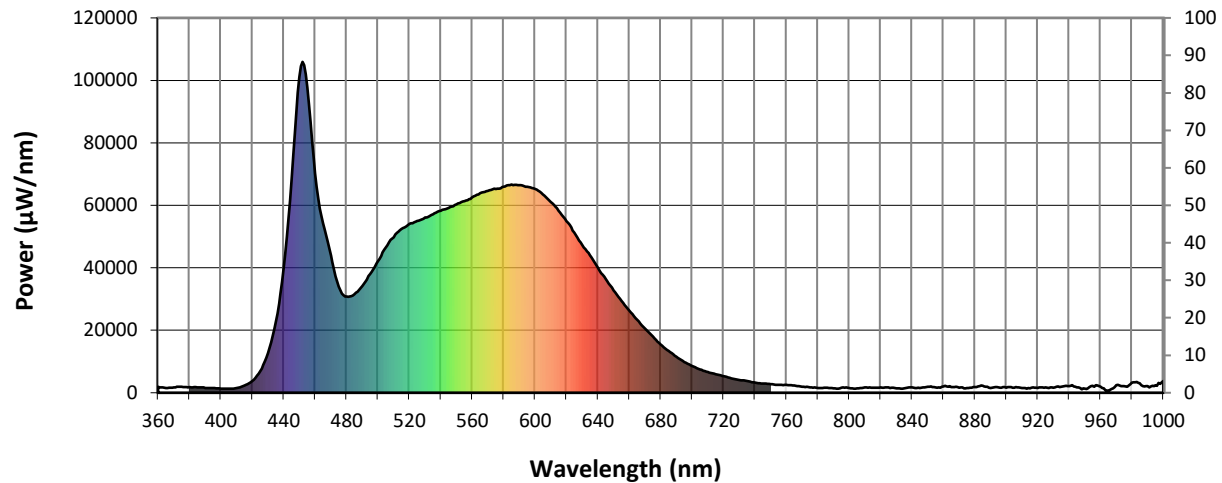


#####

λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	1893	NR	490	34177	NR	620	54916	NR	750	2782	NR	880	1820	NR
365	1545	NR	495	38010	NR	625	51257	NR	755	2500	NR	885	2271	NR
370	1699	NR	500	42146	NR	630	47308	NR	760	2486	NR	890	1534	NR
375	1869	NR	505	46431	NR	635	44039	NR	765	2313	NR	895	1734	NR
380	1777	NR	510	49788	NR	640	39981	NR	770	1952	NR	900	1568	NR
385	1753	NR	515	52380	NR	645	36389	NR	775	1752	NR	905	1643	NR
390	1511	NR	520	54014	NR	650	32774	NR	780	1548	NR	910	1551	NR
395	1483	NR	525	54953	NR	655	29367	NR	785	1620	NR	915	1428	NR
400	1318	NR	530	56065	NR	660	26307	NR	790	1393	NR	920	1468	NR
405	1342	NR	535	57107	NR	665	23364	NR	795	1627	NR	925	1750	NR
410	1469	NR	540	58306	NR	670	20576	NR	800	1553	NR	930	1641	NR
415	2297	NR	545	59230	NR	675	17969	NR	805	1356	NR	935	1881	NR
420	3731	NR	550	60272	NR	680	15411	NR	810	1669	NR	940	2088	NR
425	6912	NR	555	61298	NR	685	13354	NR	815	1647	NR	945	1721	NR
430	12723	NR	560	62528	NR	690	11535	NR	820	1702	NR	950	1281	NR
435	22892	NR	565	63874	NR	695	9837	NR	825	1689	NR	955	2199	NR
440	39880	NR	570	64630	NR	700	8571	NR	830	1456	NR	960	1889	NR
445	68496	NR	575	65183	NR	705	7495	NR	835	1385	NR	965	707	NR
450	101099	NR	580	65979	NR	710	6588	NR	840	1748	NR	970	2458	NR
455	97717	NR	585	66701	NR	715	5938	NR	845	1548	NR	975	2097	NR
460	70276	NR	590	66508	NR	720	5289	NR	850	1920	NR	980	3285	NR
465	54311	NR	595	65934	NR	725	4630	NR	855	1663	NR	985	3054	NR
470	43940	NR	600	65218	NR	730	4073	NR	860	2052	NR	990	2145	NR
475	34008	NR	605	63482	NR	735	3717	NR	865	1849	NR	995	2463	NR
480	30758	NR	610	61041	NR	740	3235	NR	870	1628	NR	1000	3802	NR
485	31504	NR	615	58238	NR	745	2924	NR	875	1526	NR			

REPORT NUMBER: SP1-2210-820-18

Scotopic Flux vs. Wavelength



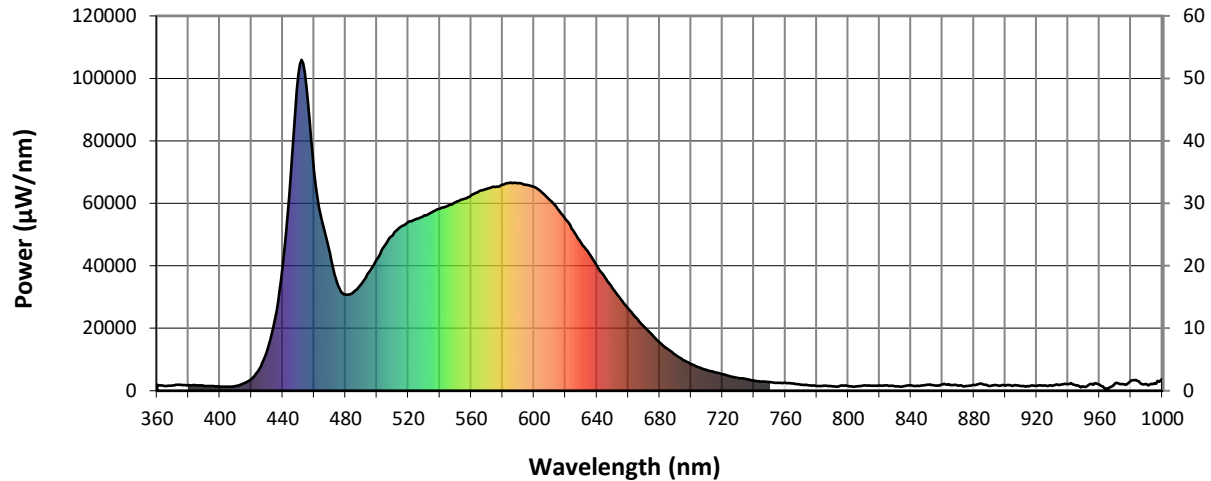
Scotopic Lumens: 8348.9

S/P: 1.99

λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	1893	NR	490	34177	NR	620	54916	NR	750	2782	NR	880	1820	NR
365	1545	NR	495	38010	NR	625	51257	NR	755	2500	NR	885	2271	NR
370	1699	NR	500	42146	NR	630	47308	NR	760	2486	NR	890	1534	NR
375	1869	NR	505	46431	NR	635	44039	NR	765	2313	NR	895	1734	NR
380	1777	NR	510	49788	NR	640	39981	NR	770	1952	NR	900	1568	NR
385	1753	NR	515	52380	NR	645	36389	NR	775	1752	NR	905	1643	NR
390	1511	NR	520	54014	NR	650	32774	NR	780	1548	NR	910	1551	NR
395	1483	NR	525	54953	NR	655	29367	NR	785	1620	NR	915	1428	NR
400	1318	NR	530	56065	NR	660	26307	NR	790	1393	NR	920	1468	NR
405	1342	NR	535	57107	NR	665	23364	NR	795	1627	NR	925	1750	NR
410	1469	NR	540	58306	NR	670	20576	NR	800	1553	NR	930	1641	NR
415	2297	NR	545	59230	NR	675	17969	NR	805	1356	NR	935	1881	NR
420	3731	NR	550	60272	NR	680	15411	NR	810	1669	NR	940	2088	NR
425	6912	NR	555	61298	NR	685	13354	NR	815	1647	NR	945	1721	NR
430	12723	NR	560	62528	NR	690	11535	NR	820	1702	NR	950	1281	NR
435	22892	NR	565	63874	NR	695	9837	NR	825	1689	NR	955	2199	NR
440	39880	NR	570	64630	NR	700	8571	NR	830	1456	NR	960	1889	NR
445	68496	NR	575	65183	NR	705	7495	NR	835	1385	NR	965	707	NR
450	101099	NR	580	65979	NR	710	6588	NR	840	1748	NR	970	2458	NR
455	97717	NR	585	66701	NR	715	5938	NR	845	1548	NR	975	2097	NR
460	70276	NR	590	66508	NR	720	5289	NR	850	1920	NR	980	3285	NR
465	54311	NR	595	65934	NR	725	4630	NR	855	1663	NR	985	3054	NR
470	43940	NR	600	65218	NR	730	4073	NR	860	2052	NR	990	2145	NR
475	34008	NR	605	63482	NR	735	3717	NR	865	1849	NR	995	2463	NR
480	30758	NR	610	61041	NR	740	3235	NR	870	1628	NR	1000	3802	NR
485	31504	NR	615	58238	NR	745	2924	NR	875	1526	NR			

REPORT NUMBER: SP1-2210-820-18

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3536.5 S/P: 0.84

λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	1893	NR	490	34177	NR	620	54916	NR	750	2782	NR	880	1820	NR
365	1545	NR	495	38010	NR	625	51257	NR	755	2500	NR	885	2271	NR
370	1699	NR	500	42146	NR	630	47308	NR	760	2486	NR	890	1534	NR
375	1869	NR	505	46431	NR	635	44039	NR	765	2313	NR	895	1734	NR
380	1777	NR	510	49788	NR	640	39981	NR	770	1952	NR	900	1568	NR
385	1753	NR	515	52380	NR	645	36389	NR	775	1752	NR	905	1643	NR
390	1511	NR	520	54014	NR	650	32774	NR	780	1548	NR	910	1551	NR
395	1483	NR	525	54953	NR	655	29367	NR	785	1620	NR	915	1428	NR
400	1318	NR	530	56065	NR	660	26307	NR	790	1393	NR	920	1468	NR
405	1342	NR	535	57107	NR	665	23364	NR	795	1627	NR	925	1750	NR
410	1469	NR	540	58306	NR	670	20576	NR	800	1553	NR	930	1641	NR
415	2297	NR	545	59230	NR	675	17969	NR	805	1356	NR	935	1881	NR
420	3731	NR	550	60272	NR	680	15411	NR	810	1669	NR	940	2088	NR
425	6912	NR	555	61298	NR	685	13354	NR	815	1647	NR	945	1721	NR
430	12723	NR	560	62528	NR	690	11535	NR	820	1702	NR	950	1281	NR
435	22892	NR	565	63874	NR	695	9837	NR	825	1689	NR	955	2199	NR
440	39880	NR	570	64630	NR	700	8571	NR	830	1456	NR	960	1889	NR
445	68496	NR	575	65183	NR	705	7495	NR	835	1385	NR	965	707	NR
450	101099	NR	580	65979	NR	710	6588	NR	840	1748	NR	970	2458	NR
455	97717	NR	585	66701	NR	715	5938	NR	845	1548	NR	975	2097	NR
460	70276	NR	590	66508	NR	720	5289	NR	850	1920	NR	980	3285	NR
465	54311	NR	595	65934	NR	725	4630	NR	855	1663	NR	985	3054	NR
470	43940	NR	600	65218	NR	730	4073	NR	860	2052	NR	990	2145	NR
475	34008	NR	605	63482	NR	735	3717	NR	865	1849	NR	995	2463	NR
480	30758	NR	610	61041	NR	740	3235	NR	870	1628	NR	1000	3802	NR
485	31504	NR	615	58238	NR	745	2924	NR	875	1526	NR			

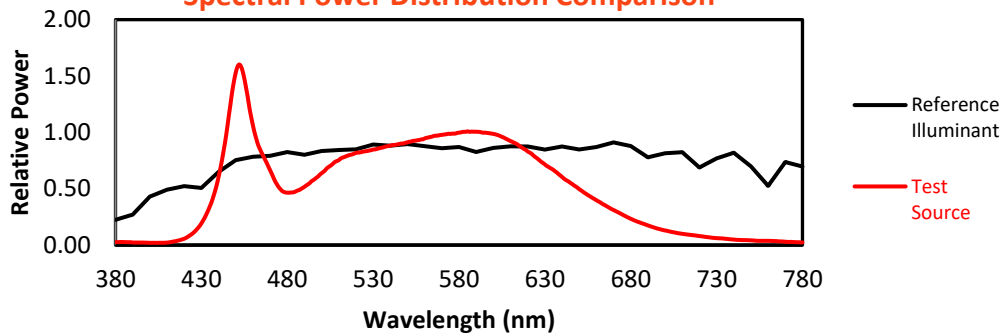
REPORT NUMBER: SP1-2210-820-18

TM-30-18

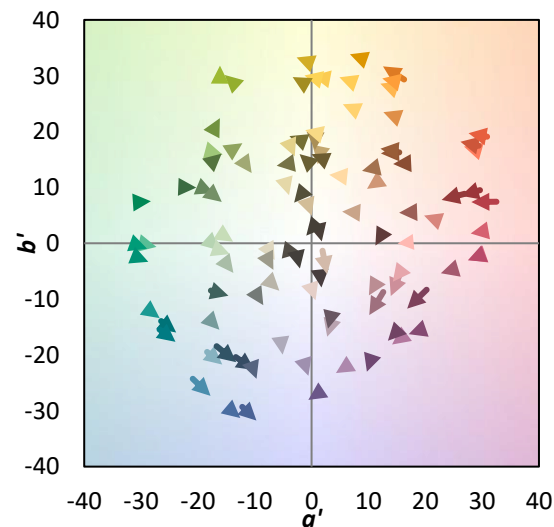
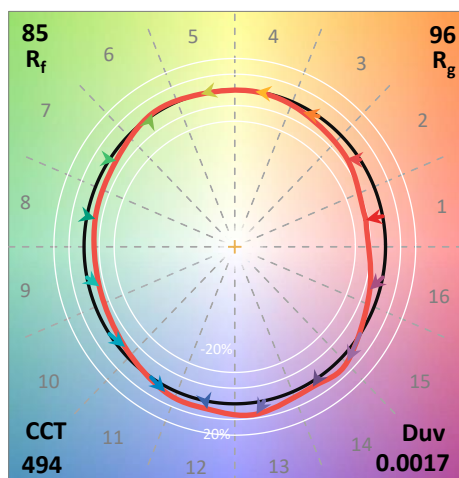
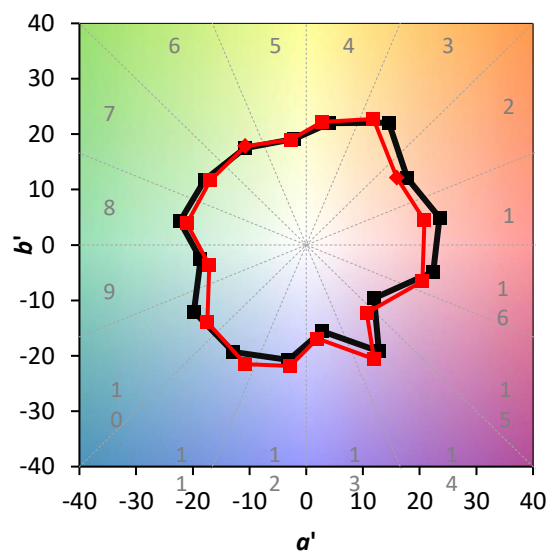
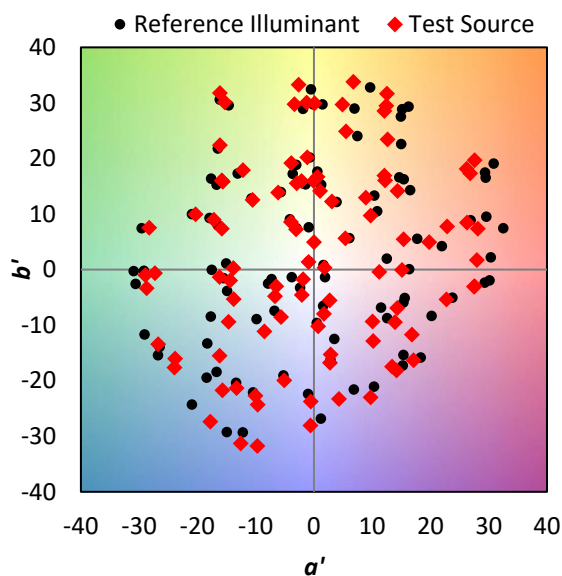
Summary

$R_f = 85.4$
 $R_g = 95.7$
 CIE $R_a = 85.1$
 $R_g = 16.8$

Spectral Power Distribution Comparison



Color Vector Graphics

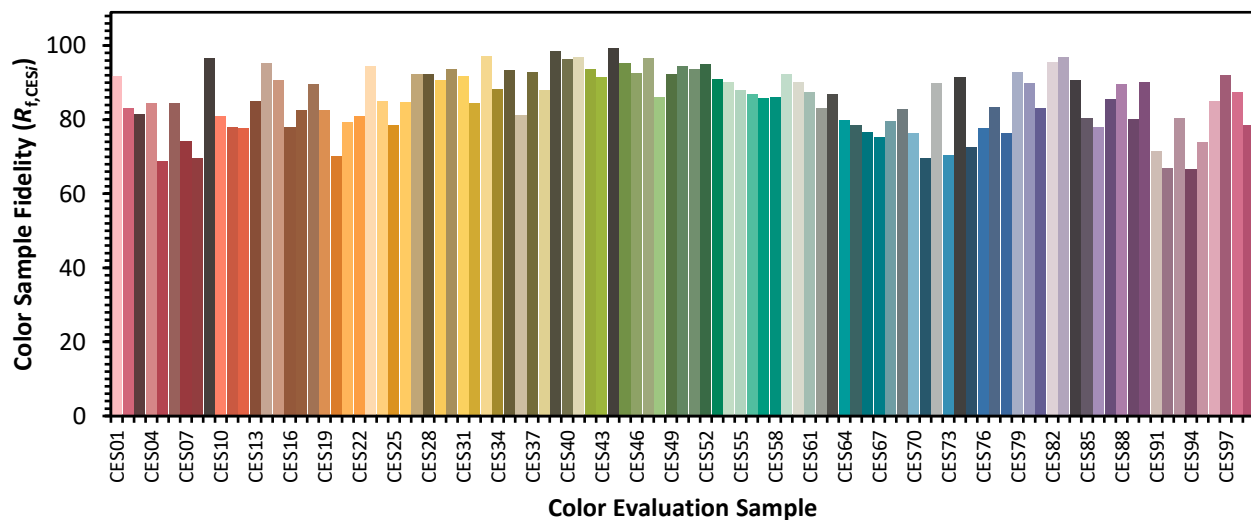


REPORT NUMBER: SP1-2210-820-18

TM-30-18

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

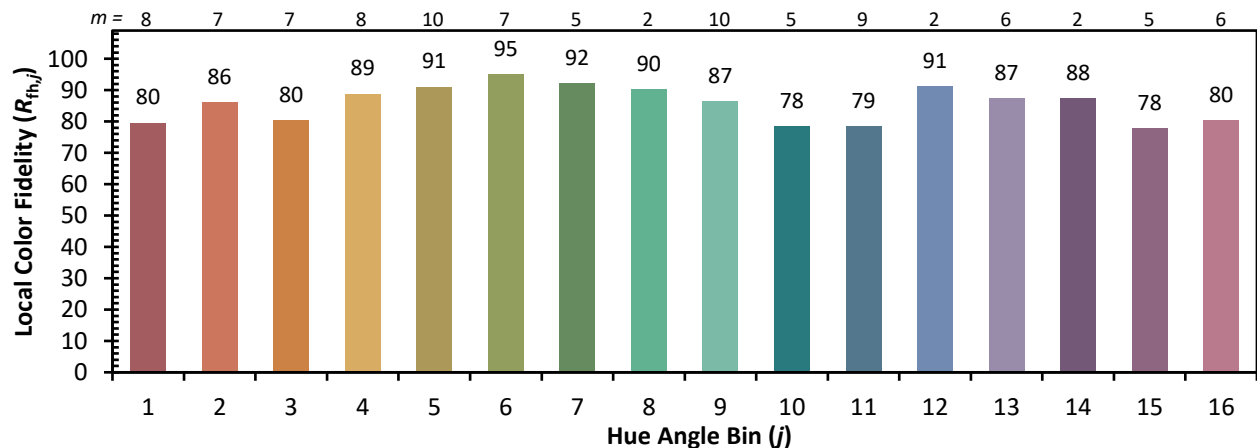
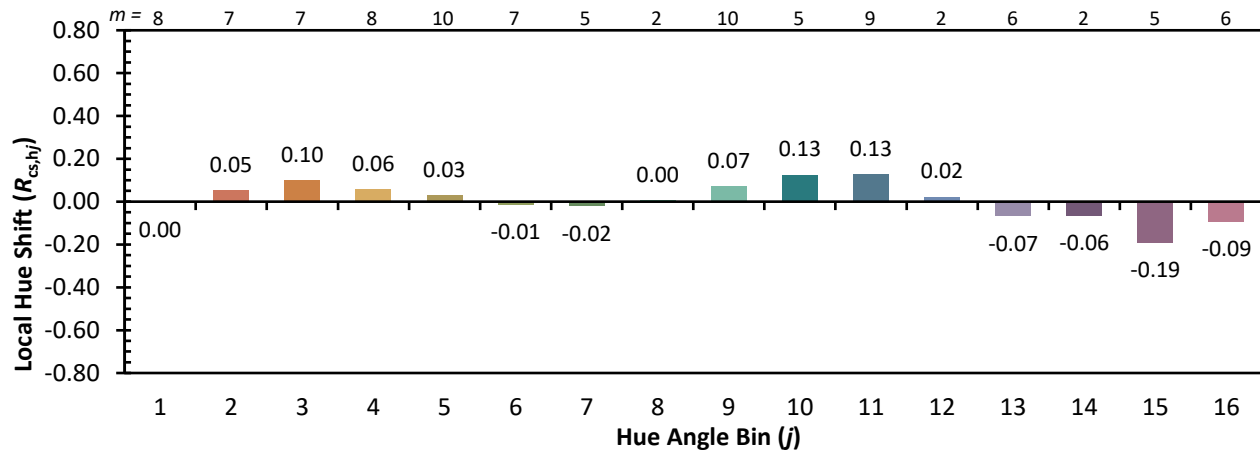
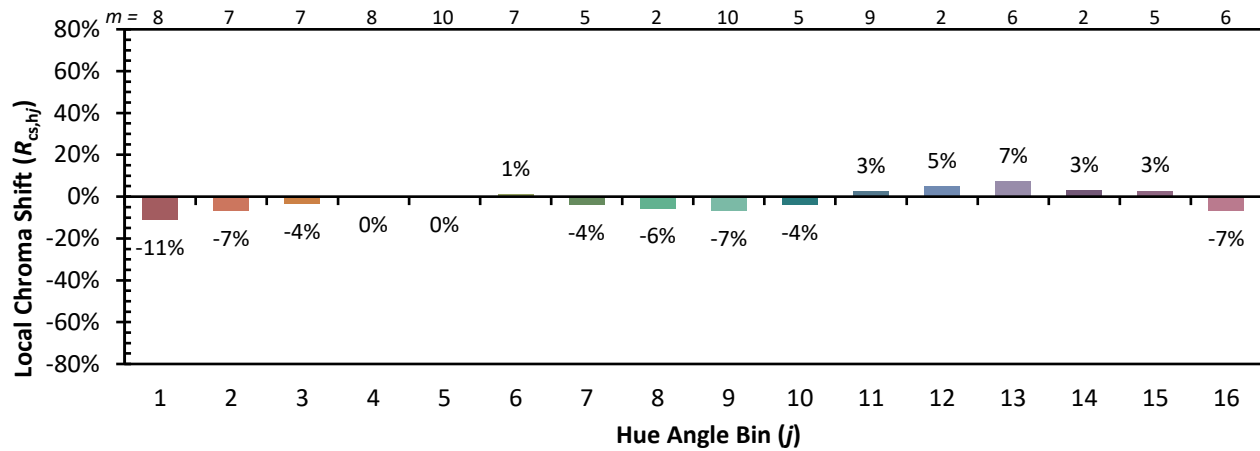
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CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 83
CES03 = 31	CES28 = 92	CES53 = 91	CES78 = 76
CES04 = 69	CES29 = 91	CES54 = 90	CES79 = 93
CES05 = 47	CES30 = 93	CES55 = 88	CES80 = 90
CES06 = 50	CES31 = 92	CES56 = 87	CES81 = 83
CES07 = 40	CES32 = 84	CES57 = 86	CES82 = 96
CES08 = 39	CES33 = 97	CES58 = 86	CES83 = 97
CES09 = 29	CES34 = 88	CES59 = 92	CES84 = 91
CES10 = 73	CES35 = 93	CES60 = 90	CES85 = 80
CES11 = 56	CES36 = 81	CES61 = 87	CES86 = 78
CES12 = 62	CES37 = 93	CES62 = 83	CES87 = 86
CES13 = 42	CES38 = 88	CES63 = 87	CES88 = 90
CES14 = 74	CES39 = 98	CES64 = 80	CES89 = 80
CES15 = 71	CES40 = 96	CES65 = 78	CES90 = 90
CES16 = 46	CES41 = 97	CES66 = 77	CES91 = 71
CES17 = 49	CES42 = 93	CES67 = 75	CES92 = 67
CES18 = 56	CES43 = 92	CES68 = 79	CES93 = 80
CES19 = 70	CES44 = 99	CES69 = 83	CES94 = 66
CES20 = 64	CES45 = 95	CES70 = 76	CES95 = 74
CES21 = 85	CES46 = 93	CES71 = 70	CES96 = 85
CES22 = 77	CES47 = 97	CES72 = 90	CES97 = 92
CES23 = 91	CES48 = 86	CES73 = 70	CES98 = 87
CES24 = 90	CES49 = 92	CES74 = 91	CES99 = 78
CES25 = 71	CES50 = 94	CES75 = 73	



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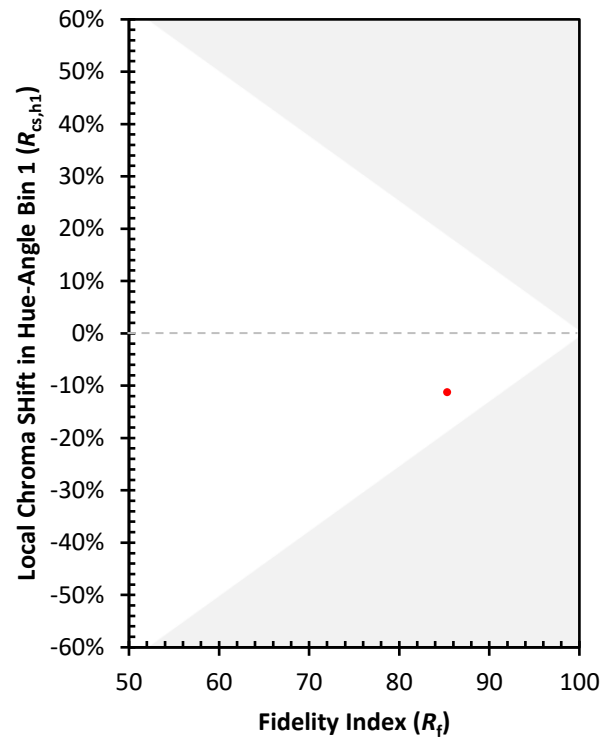
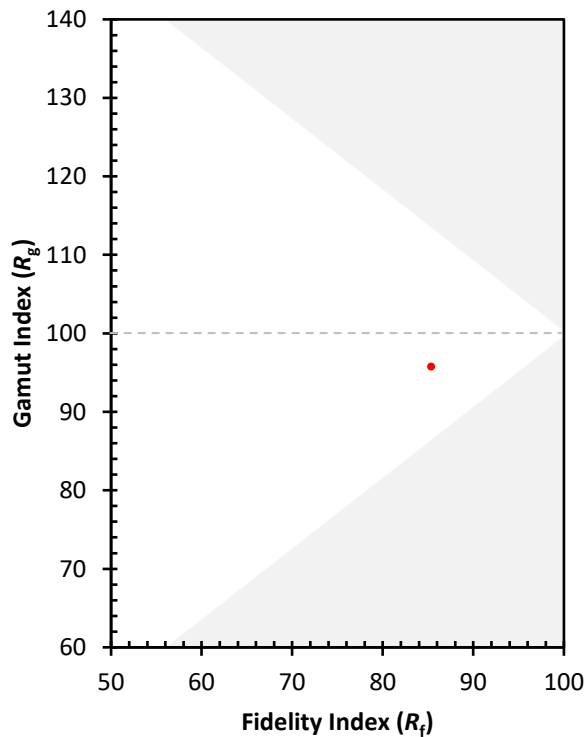
Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2210-820-18

TM-30-18

Measure Comparisons



(END OF REPORT)