

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: P

Luminaire Tested: **4APN-35-37L835-UNV-NP**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-35-37L835-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

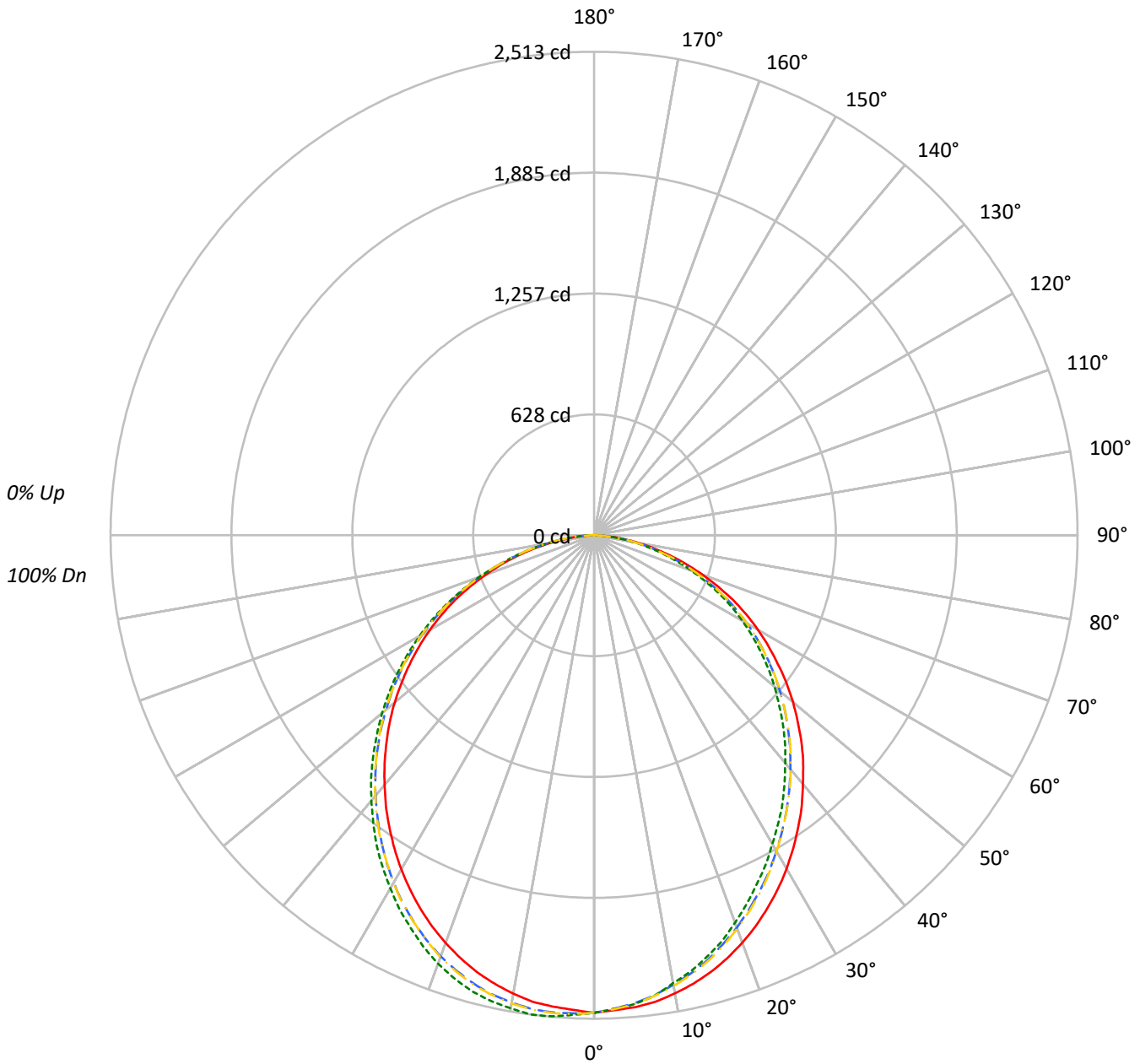
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6561.5 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.32
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 81
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: 25 FT

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Luminous Intensity Polar Plot



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



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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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	72	72	72	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	62	62	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	53	53	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	46	46	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	41	41	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	36	36	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	32	32	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	29	29	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	22902	22902	22902	22902
5°	22800	22653	22774	23246
10°	22654	22149	22668	23392
15°	22443	21663	22457	23432
20°	22126	21037	22139	23269
25°	21738	20373	21783	22941
30°	21321	19737	21352	22563
35°	20833	19224	20882	22196
40°	20329	18609	20399	21680
45°	19893	18105	19912	21186
50°	19373	17574	19416	20629
55°	18757	16999	18828	20047
60°	18155	16408	18181	19312
65°	17406	15688	17406	18456
70°	16161	14510	16121	17143
75°	14651	13147	14551	15432
80°	12624	11306	12390	13240
85°	9718	8638	9411	10649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.4	3.6
10°-20°	663.7	10.1
20°-30°	982.7	15.0
30°-40°	1152.9	17.6
40°-50°	1168.4	17.8
50°-60°	1037.0	15.8
60°-70°	778.5	11.9
70°-80°	432.3	6.6
80°-90°	111.6	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1880.8	28.7
0°-40°	3033.7	46.2
0°-60°	5239.1	79.8
0°-90°	6561.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6561.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2482	2482	2482	2482	2482	
5°	2462	2446	2459	2510	2462	234
15°	2350	2268	2351	2453	2350	662
25°	2135	2001	2140	2254	2135	984
35°	1850	1707	1854	1971	1850	1158
45°	1525	1388	1526	1624	1525	1175
55°	1166	1057	1170	1246	1166	1044
65°	797	719	797	845	797	786
75°	411	369	408	433	411	437
85°	92	82	89	101	92	111
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3
2.5°	2470.6	2476.5	2483.8	2476.5	2464.8	2459.0	2459.0	2457.5	2461.8	2463.3	2461.8
5°	2461.8	2464.8	2466.3	2457.5	2444.4	2437.1	2434.2	2432.7	2438.6	2445.9	2438.6
7.5°	2445.9	2444.4	2442.9	2431.2	2416.7	2406.5	2402.1	2400.6	2406.5	2413.8	2408.0
10°	2418.1	2416.7	2412.3	2397.8	2378.8	2365.7	2361.3	2356.9	2361.3	2364.2	2361.3
12.5°	2387.5	2381.7	2375.9	2359.9	2339.5	2324.8	2317.5	2311.7	2317.5	2322.0	2319.0
15°	2349.6	2340.9	2330.7	2313.2	2292.8	2276.8	2268.0	2262.2	2266.6	2268.0	2268.0
17.5°	2304.4	2294.2	2284.1	2262.2	2237.4	2219.9	2209.8	2202.4	2208.3	2211.1	2211.1
20°	2253.5	2241.8	2228.7	2205.3	2179.1	2160.2	2148.5	2139.8	2141.2	2142.6	2142.6
22.5°	2198.0	2183.5	2167.4	2142.6	2115.0	2094.6	2082.9	2072.7	2072.7	2074.1	2074.1
25°	2135.4	2119.3	2103.3	2078.6	2049.4	2027.5	2012.9	2002.8	2002.8	2001.3	2004.2
27.5°	2071.3	2053.8	2037.7	2011.4	1980.8	1959.0	1944.4	1934.3	1932.8	1931.3	1934.3
30°	2001.3	1980.8	1963.4	1935.6	1906.5	1884.7	1870.1	1858.5	1855.5	1852.6	1855.5
32.5°	1927.0	1908.0	1889.1	1859.9	1830.7	1808.9	1794.3	1782.6	1781.2	1779.7	1782.6
35°	1849.7	1829.2	1811.8	1784.1	1754.9	1733.1	1717.0	1706.8	1706.8	1706.8	1706.8
37.5°	1773.9	1753.5	1734.6	1706.8	1677.7	1655.8	1639.8	1629.6	1626.7	1625.2	1626.7
40°	1687.9	1670.4	1652.9	1626.7	1597.5	1575.7	1562.5	1550.9	1547.9	1545.1	1549.4
42.5°	1609.2	1591.6	1572.7	1547.9	1518.8	1497.0	1482.4	1472.2	1470.7	1469.3	1470.7
45°	1524.6	1504.2	1485.2	1461.9	1435.7	1415.4	1400.7	1390.6	1389.1	1387.6	1389.1
47.5°	1435.7	1419.7	1403.7	1380.3	1354.1	1333.7	1320.6	1309.0	1306.0	1303.1	1306.0
50°	1349.7	1332.2	1316.2	1294.3	1269.6	1250.6	1239.0	1228.7	1225.8	1224.4	1225.8
52.5°	1259.4	1243.3	1228.7	1206.9	1186.5	1167.5	1154.4	1145.7	1144.2	1142.7	1144.2
55°	1166.1	1151.5	1138.4	1120.9	1100.5	1083.0	1071.4	1061.1	1059.7	1056.8	1059.7
57.5°	1075.7	1064.1	1050.9	1032.0	1013.0	997.0	986.8	978.1	976.6	975.1	976.6
60°	983.9	972.2	960.5	944.5	925.6	909.6	900.8	893.5	890.6	889.2	890.6
62.5°	892.0	880.4	871.7	855.6	838.1	825.0	816.2	809.0	806.0	804.6	806.0
65°	797.3	787.1	776.9	762.3	749.2	739.0	730.2	722.9	720.1	718.6	718.6
67.5°	696.8	688.0	680.7	667.6	653.0	642.8	634.1	628.3	625.3	623.8	625.3
70°	599.1	591.7	584.5	574.3	562.6	553.8	548.0	542.2	539.3	537.9	537.9
72.5°	505.8	500.0	492.6	484.0	475.2	466.4	460.6	456.2	453.3	451.9	451.9
75°	411.0	405.2	402.3	395.0	386.2	380.4	374.6	371.7	368.8	368.8	368.8
77.5°	322.1	319.2	316.3	309.1	303.2	297.3	293.0	291.5	288.6	288.6	288.6
80°	237.6	236.1	234.6	230.3	224.5	218.6	215.7	214.3	212.8	212.8	212.8
82.5°	160.3	160.3	158.9	154.5	150.1	148.7	145.8	144.3	144.3	144.3	144.3
85°	91.8	91.8	91.8	90.4	87.5	87.5	84.5	83.1	81.6	81.6	81.6
87.5°	36.4	37.9	39.4	37.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
90°	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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3
2.5°	2457.5	2460.4	2461.8	2469.2	2477.9	2483.8	2476.5	2469.2	2480.8	2493.9	2493.9
5°	2432.7	2435.6	2440.0	2448.7	2460.4	2467.7	2464.8	2459.0	2476.5	2491.1	2492.4
7.5°	2402.1	2405.0	2410.8	2419.6	2434.2	2444.4	2444.4	2445.9	2461.8	2479.4	2483.8
10°	2356.9	2364.2	2373.0	2386.0	2400.6	2413.8	2418.1	2419.6	2440.0	2459.0	2464.8
12.5°	2314.7	2322.0	2330.7	2345.3	2362.7	2377.4	2381.7	2387.5	2409.4	2431.2	2440.0
15°	2266.6	2273.8	2284.1	2298.6	2317.5	2333.6	2342.3	2351.1	2373.0	2396.3	2406.5
17.5°	2209.8	2217.0	2227.2	2244.7	2266.6	2285.5	2295.7	2305.9	2330.7	2355.4	2365.7
20°	2142.6	2152.9	2167.4	2185.0	2209.8	2231.6	2243.2	2254.9	2281.1	2305.9	2317.5
22.5°	2074.1	2085.8	2101.9	2122.3	2148.5	2171.8	2186.4	2201.0	2227.2	2252.0	2265.1
25°	2005.6	2018.8	2034.8	2056.7	2081.4	2104.7	2122.3	2139.8	2166.0	2192.2	2205.3
27.5°	1935.6	1947.4	1963.4	1985.3	2012.9	2037.7	2055.2	2074.1	2100.4	2128.1	2141.2
30°	1858.5	1871.6	1886.1	1908.0	1938.6	1966.3	1983.8	2004.2	2030.4	2058.1	2071.3
32.5°	1784.1	1795.8	1810.3	1832.2	1862.8	1891.9	1910.9	1931.3	1957.6	1985.3	1996.9
35°	1706.8	1718.5	1734.6	1756.4	1787.0	1814.7	1833.7	1854.0	1878.9	1905.0	1918.2
37.5°	1631.0	1642.7	1658.8	1680.6	1709.8	1737.4	1756.4	1776.8	1801.6	1826.4	1838.0
40°	1552.4	1564.0	1577.1	1599.0	1628.2	1655.8	1673.3	1693.7	1718.5	1744.7	1756.4
42.5°	1472.2	1483.9	1499.9	1521.8	1549.4	1574.2	1593.1	1612.1	1635.4	1658.8	1670.4
45°	1392.0	1402.2	1418.2	1438.7	1464.9	1488.2	1507.2	1526.1	1547.9	1569.8	1581.5
47.5°	1309.0	1320.6	1333.7	1354.1	1380.3	1405.1	1424.0	1441.5	1461.9	1483.9	1494.0
50°	1228.7	1239.0	1252.1	1271.0	1295.8	1319.1	1335.1	1352.7	1371.6	1392.0	1400.7
52.5°	1145.7	1155.9	1169.0	1187.9	1208.4	1230.2	1244.8	1260.8	1279.7	1298.7	1307.5
55°	1061.1	1068.4	1080.0	1097.5	1119.4	1139.9	1154.4	1170.5	1186.5	1202.5	1212.7
57.5°	978.1	986.8	998.4	1014.5	1033.5	1052.4	1065.5	1078.6	1094.7	1110.6	1118.0
60°	893.5	900.8	909.6	924.1	943.0	959.1	972.2	985.3	998.4	1013.0	1020.3
62.5°	807.5	814.8	823.5	838.1	854.1	868.7	880.4	892.0	903.7	916.8	924.1
65°	721.5	728.8	737.5	747.7	760.8	774.0	785.6	797.3	806.0	814.8	822.1
67.5°	628.3	635.5	644.3	653.0	664.7	677.8	686.5	696.8	705.5	715.7	720.1
70°	540.8	546.6	555.3	562.6	572.8	581.6	588.9	597.6	603.4	612.2	619.5
72.5°	454.7	460.6	467.9	475.2	481.0	488.3	497.1	504.3	511.6	520.4	523.2
75°	371.7	374.6	380.4	386.2	392.1	397.9	402.3	408.2	414.0	419.8	424.1
77.5°	290.1	293.0	298.8	303.2	307.6	311.9	314.9	317.7	323.6	328.0	332.3
80°	212.8	215.7	220.1	224.5	228.8	233.2	233.2	233.2	240.5	246.4	247.8
82.5°	144.3	145.8	148.7	151.6	154.5	157.4	157.4	156.0	160.3	164.7	167.6
85°	83.1	84.5	87.5	87.5	88.9	88.9	88.9	88.9	91.8	96.2	99.1
87.5°	33.6	33.6	34.9	34.9	36.4	36.4	34.9	33.6	36.4	40.8	42.2
90°	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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3	2482.3
2.5°	2488.1	2486.6	2491.1	2492.4	2495.4	2495.4	2496.9	2496.9	2493.9	2489.6	2491.1
5°	2489.6	2489.6	2493.9	2498.3	2504.2	2510.0	2505.6	2501.2	2498.3	2493.9	2492.4
7.5°	2482.3	2485.2	2489.6	2496.9	2504.2	2512.9	2507.1	2501.2	2493.9	2488.1	2485.2
10°	2464.8	2467.7	2475.0	2482.3	2489.6	2496.9	2491.1	2485.2	2479.4	2472.1	2469.2
12.5°	2442.9	2447.3	2456.0	2463.3	2470.6	2479.4	2472.1	2464.8	2457.5	2450.2	2445.9
15°	2410.8	2416.7	2426.9	2435.6	2445.9	2453.2	2447.3	2441.5	2432.7	2422.6	2415.3
17.5°	2370.0	2378.8	2389.0	2399.2	2408.0	2415.3	2410.8	2405.0	2394.8	2383.2	2374.4
20°	2324.8	2333.6	2342.3	2352.6	2362.7	2370.0	2364.2	2356.9	2346.8	2338.0	2329.2
22.5°	2272.4	2281.1	2291.4	2300.1	2308.9	2316.2	2308.9	2300.1	2291.4	2282.6	2273.8
25°	2212.6	2221.4	2233.0	2241.8	2247.7	2253.5	2247.7	2240.3	2231.6	2222.8	2214.1
27.5°	2149.9	2158.7	2170.4	2179.1	2185.0	2190.8	2185.0	2177.7	2168.9	2160.2	2151.4
30°	2080.0	2088.7	2100.4	2109.2	2113.5	2117.9	2112.0	2106.2	2098.9	2090.2	2081.4
32.5°	2005.6	2014.4	2023.1	2031.9	2039.2	2045.0	2039.2	2033.4	2024.6	2012.9	2004.2
35°	1927.0	1935.6	1945.9	1954.6	1963.4	1970.7	1961.9	1951.7	1944.4	1937.1	1929.8
37.5°	1843.8	1854.0	1865.8	1875.9	1878.9	1884.7	1878.9	1873.0	1865.8	1858.5	1849.7
40°	1762.2	1771.0	1781.2	1791.4	1795.8	1800.1	1794.3	1788.5	1779.7	1772.5	1763.7
42.5°	1677.7	1686.4	1695.2	1703.9	1709.8	1715.6	1709.8	1701.0	1695.2	1689.4	1682.1
45°	1590.3	1599.0	1606.3	1615.0	1619.4	1623.7	1617.9	1610.6	1604.8	1600.4	1593.1
47.5°	1501.3	1508.6	1515.9	1523.1	1526.1	1530.4	1524.6	1520.3	1515.9	1511.5	1505.7
50°	1408.1	1415.4	1424.0	1431.3	1432.8	1437.2	1431.3	1427.0	1422.6	1418.2	1413.9
52.5°	1316.2	1322.1	1329.3	1336.6	1339.6	1342.4	1336.6	1330.8	1326.4	1323.5	1319.1
55°	1220.0	1225.8	1233.1	1239.0	1243.3	1246.3	1240.4	1234.6	1230.2	1228.7	1224.4
57.5°	1123.8	1129.6	1136.9	1142.7	1145.7	1148.6	1142.7	1136.9	1134.0	1131.1	1128.2
60°	1026.2	1032.0	1037.8	1042.1	1045.1	1046.6	1040.8	1036.3	1034.9	1033.5	1030.5
62.5°	929.9	932.9	938.7	941.6	944.5	946.0	941.6	938.7	937.2	935.7	934.4
65°	829.3	836.6	841.0	843.9	843.9	845.4	841.0	839.6	838.1	836.6	833.8
67.5°	725.9	731.7	734.6	737.5	737.5	737.5	737.5	737.5	736.1	733.2	730.2
70°	626.8	631.1	634.1	635.5	635.5	635.5	632.6	631.1	632.6	632.6	631.1
72.5°	526.2	529.1	530.5	532.0	530.5	530.5	530.5	533.5	533.5	532.0	529.1
75°	428.5	431.4	432.9	434.4	432.9	432.9	432.9	435.8	434.4	434.4	432.9
77.5°	336.7	338.2	338.2	339.7	338.2	338.2	339.7	342.5	341.0	341.0	341.0
80°	249.2	249.2	249.2	250.7	249.2	249.2	250.7	253.6	252.2	252.2	252.2
82.5°	169.1	170.6	170.6	170.6	172.0	173.4	173.4	173.4	173.4	173.4	172.0
85°	100.6	102.1	100.6	100.6	100.6	100.6	102.1	103.4	103.4	103.4	103.4
87.5°	43.7	45.2	43.7	42.2	40.8	40.8	43.7	46.7	46.7	45.2	45.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P
 CATALOG NUMBER: 4APN-35-37L835-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2482.3	2482.3	2482.3	2482.3
2.5°	2496.9	2496.9	2483.8	2470.6
5°	2495.4	2492.4	2477.9	2461.8
7.5°	2486.6	2482.3	2463.3	2445.9
10°	2466.3	2460.4	2440.0	2418.1
12.5°	2441.5	2432.7	2409.4	2387.5
15°	2409.4	2399.2	2374.4	2349.6
17.5°	2367.1	2355.4	2330.7	2304.4
20°	2322.0	2308.9	2281.1	2253.5
22.5°	2266.6	2254.9	2225.7	2198.0
25°	2206.8	2193.7	2164.5	2135.4
27.5°	2142.6	2128.1	2098.9	2071.3
30°	2072.7	2058.1	2029.0	2001.3
32.5°	1998.3	1986.7	1957.6	1927.0
35°	1922.6	1908.0	1878.9	1849.7
37.5°	1842.4	1829.2	1801.6	1773.9
40°	1757.9	1744.7	1715.6	1687.9
42.5°	1674.8	1663.1	1635.4	1609.2
45°	1585.8	1574.2	1547.9	1524.6
47.5°	1497.0	1485.2	1460.5	1435.7
50°	1406.6	1394.9	1371.6	1349.7
52.5°	1311.8	1303.1	1281.2	1259.4
55°	1217.1	1206.9	1185.0	1166.1
57.5°	1122.4	1115.1	1094.7	1075.7
60°	1024.7	1016.0	999.9	983.9
62.5°	929.9	922.6	906.6	892.0
65°	829.3	823.5	810.4	797.3
67.5°	725.9	721.5	708.4	696.8
70°	626.8	619.5	609.3	599.1
72.5°	526.2	523.2	514.6	505.8
75°	430.0	427.1	418.3	411.0
77.5°	339.7	336.7	329.4	322.1
80°	250.7	249.2	243.4	237.6
82.5°	172.0	170.6	166.1	160.3
85°	103.4	100.6	96.2	91.8
87.5°	45.2	43.7	39.4	36.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)