

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-35-37L850-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-35-37L850-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

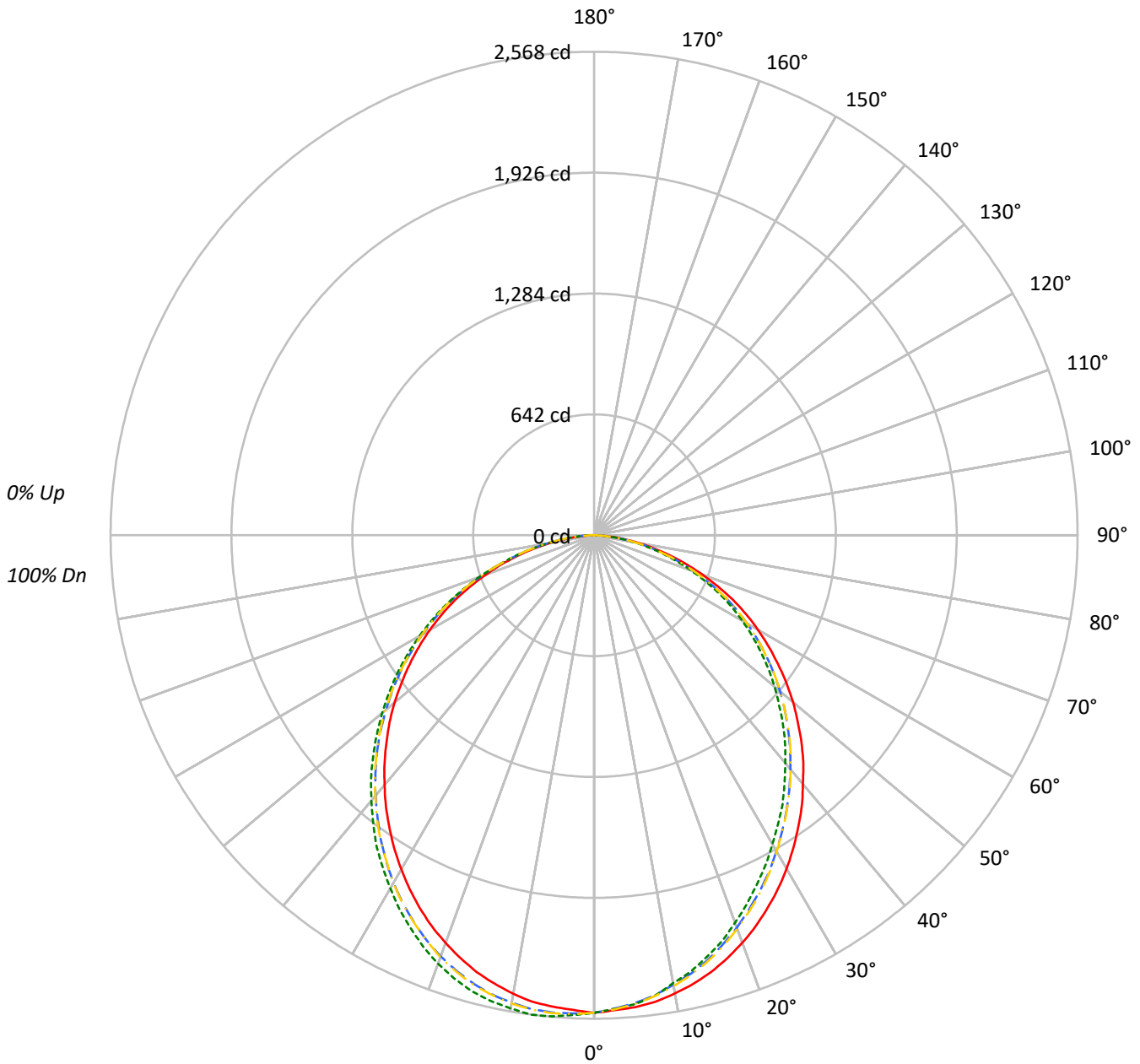
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6706.5 lumens
Efficiency: N/A
Efficacy: 82.8 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°	23408	23408	23408	23408
5°	23304	23152	23277	23759
10°	23154	22639	23169	23908
15°	22938	22142	22953	23949
20°	22614	21502	22628	23784
25°	22219	20823	22264	23447
30°	21792	20172	21824	23062
35°	21294	19649	21344	22686
40°	20778	19020	20849	22160
45°	20332	18506	20352	21654
50°	19801	17962	19844	21084
55°	19172	17374	19243	20488
60°	18556	16770	18583	19739
65°	17792	16035	17792	18864
70°	16517	14828	16477	17521
75°	14979	13435	14868	15774
80°	12906	11556	12661	13533
85°	9940	8829	9623	10882



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.6	3.6
10°-20°	678.4	10.1
20°-30°	1004.4	15.0
30°-40°	1178.4	17.6
40°-50°	1194.2	17.8
50°-60°	1059.9	15.8
60°-70°	795.7	11.9
70°-80°	441.8	6.6
80°-90°	114.1	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°	1922.3	28.7
0°-40°	3100.7	46.2
0°-60°	5354.8	79.8
0°-90°	6706.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6706.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2537	2537	2537	2537	2537	
5°	2516	2500	2513	2565	2516	239
15°	2402	2318	2403	2507	2402	677
25°	2183	2046	2187	2303	2183	1006
35°	1891	1744	1895	2014	1891	1183
45°	1558	1418	1560	1660	1558	1201
55°	1192	1080	1196	1274	1192	1067
65°	815	734	815	864	815	803
75°	420	377	417	442	420	447
85°	94	83	91	103	94	113
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°	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1
2.5°	2525.2	2531.2	2538.6	2531.2	2519.3	2513.3	2513.3	2511.8	2516.2	2517.7	2516.2
5°	2516.2	2519.3	2520.7	2511.8	2498.3	2491.0	2487.9	2486.4	2492.4	2499.8	2492.4
7.5°	2499.8	2498.3	2496.9	2485.0	2470.0	2459.6	2455.2	2453.7	2459.6	2467.1	2461.1
10°	2471.5	2470.0	2465.6	2450.7	2431.3	2417.9	2413.4	2409.0	2413.4	2416.5	2413.4
12.5°	2440.3	2434.4	2428.4	2412.0	2391.1	2376.2	2368.8	2362.8	2368.8	2373.2	2370.3
15°	2401.5	2392.6	2382.2	2364.3	2343.4	2327.0	2318.1	2312.2	2316.6	2318.1	2318.1
17.5°	2355.3	2344.9	2334.5	2312.2	2286.8	2268.9	2258.5	2251.1	2257.1	2260.0	2260.0
20°	2303.2	2291.3	2277.9	2254.0	2227.3	2207.8	2195.9	2187.0	2188.5	2190.0	2190.0
22.5°	2246.6	2231.7	2215.3	2190.0	2161.7	2140.8	2128.9	2118.5	2118.5	2120.0	2120.0
25°	2182.6	2166.1	2149.7	2124.5	2094.6	2072.3	2057.4	2046.9	2046.9	2045.5	2048.5
27.5°	2117.0	2099.1	2082.7	2055.9	2024.6	2002.3	1987.4	1977.0	1975.5	1974.0	1977.0
30°	2045.5	2024.6	2006.7	1978.4	1948.6	1926.3	1911.4	1899.5	1896.5	1893.5	1896.5
32.5°	1969.5	1950.1	1930.8	1901.0	1871.2	1848.8	1834.0	1822.0	1820.5	1819.0	1822.0
35°	1890.6	1869.7	1851.8	1823.5	1793.7	1771.3	1754.9	1744.5	1744.5	1744.5	1744.5
37.5°	1813.1	1792.2	1772.8	1744.5	1714.7	1692.4	1676.0	1665.6	1662.6	1661.1	1662.6
40°	1725.2	1707.3	1689.4	1662.6	1632.8	1610.5	1597.1	1585.1	1582.2	1579.2	1583.6
42.5°	1644.8	1626.9	1607.5	1582.2	1552.4	1530.0	1515.1	1504.7	1503.2	1501.7	1503.2
45°	1558.3	1537.4	1518.1	1494.3	1467.5	1446.6	1431.7	1421.3	1419.8	1418.3	1419.8
47.5°	1467.5	1451.0	1434.6	1410.8	1384.0	1363.2	1349.7	1337.8	1334.9	1331.8	1334.9
50°	1379.5	1361.7	1345.3	1322.9	1297.6	1278.3	1266.3	1255.9	1252.9	1251.4	1252.9
52.5°	1287.2	1270.8	1255.9	1233.5	1212.7	1193.3	1179.9	1170.9	1169.5	1168.0	1169.5
55°	1191.9	1176.9	1163.6	1145.7	1124.7	1107.0	1095.0	1084.5	1083.1	1080.1	1083.1
57.5°	1099.5	1087.5	1074.1	1054.8	1035.4	1019.0	1008.6	999.6	998.2	996.7	998.2
60°	1005.6	993.7	981.7	965.4	946.0	929.7	920.7	913.2	910.3	908.8	910.3
62.5°	911.8	899.9	890.9	874.5	856.6	843.3	834.3	826.8	823.8	822.3	823.8
65°	815.0	804.4	794.0	779.2	765.7	755.3	746.4	738.9	735.9	734.5	734.5
67.5°	712.2	703.2	695.7	682.3	667.4	657.0	648.1	642.1	639.1	637.7	639.1
70°	612.3	604.8	597.4	586.9	575.1	566.1	560.1	554.2	551.3	549.7	549.7
72.5°	517.0	511.0	503.5	494.7	485.7	476.8	470.8	466.3	463.3	461.8	461.8
75°	420.2	414.2	411.2	403.7	394.8	388.8	382.9	379.9	376.9	376.9	376.9
77.5°	329.2	326.3	323.3	315.9	309.9	303.9	299.5	298.0	294.9	294.9	294.9
80°	242.9	241.4	239.8	235.4	229.4	223.5	220.5	219.0	217.5	217.5	217.5
82.5°	163.8	163.8	162.4	157.9	153.4	151.9	149.0	147.5	147.5	147.5	147.5
85°	93.9	93.9	93.9	92.4	89.3	89.3	86.4	84.9	83.4	83.4	83.4
87.5°	37.2	38.7	40.2	38.7	35.8	35.8	35.8	35.8	35.8	35.8	35.8
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°	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1
2.5°	2511.8	2514.8	2516.2	2523.7	2532.6	2538.6	2531.2	2523.7	2535.6	2549.1	2549.1
5°	2486.4	2489.4	2493.9	2502.9	2514.8	2522.2	2519.3	2513.3	2531.2	2546.0	2547.6
7.5°	2455.2	2458.1	2464.1	2473.1	2487.9	2498.3	2498.3	2499.8	2516.2	2534.1	2538.6
10°	2409.0	2416.5	2425.4	2438.8	2453.7	2467.1	2471.5	2473.1	2493.9	2513.3	2519.3
12.5°	2365.8	2373.2	2382.2	2397.1	2414.9	2429.8	2434.4	2440.3	2462.7	2485.0	2493.9
15°	2316.6	2324.1	2334.5	2349.3	2368.8	2385.1	2394.1	2403.0	2425.4	2449.2	2459.6
17.5°	2258.5	2266.0	2276.4	2294.3	2316.6	2336.0	2346.4	2356.8	2382.2	2407.5	2417.9
20°	2190.0	2200.4	2215.3	2233.2	2258.5	2280.8	2292.7	2304.7	2331.6	2356.8	2368.8
22.5°	2120.0	2131.8	2148.3	2169.1	2195.9	2219.8	2234.7	2249.6	2276.4	2301.7	2315.1
25°	2050.0	2063.3	2079.8	2102.1	2127.4	2151.2	2169.1	2187.0	2213.8	2240.6	2254.0
27.5°	1978.4	1990.3	2006.7	2029.0	2057.4	2082.7	2100.6	2120.0	2146.8	2175.1	2188.5
30°	1899.5	1912.9	1927.8	1950.1	1981.4	2009.7	2027.6	2048.5	2075.2	2103.5	2117.0
32.5°	1823.5	1835.4	1850.3	1872.7	1903.9	1933.7	1953.1	1974.0	2000.7	2029.0	2041.0
35°	1744.5	1756.5	1772.8	1795.2	1826.5	1854.8	1874.1	1895.0	1920.3	1947.2	1960.5
37.5°	1667.1	1679.0	1695.4	1717.7	1747.6	1775.9	1795.2	1816.1	1841.4	1866.7	1878.6
40°	1586.6	1598.6	1611.9	1634.3	1664.1	1692.4	1710.3	1731.1	1756.5	1783.2	1795.2
42.5°	1504.7	1516.6	1533.0	1555.3	1583.6	1609.0	1628.3	1647.7	1671.6	1695.4	1707.3
45°	1422.7	1433.2	1449.6	1470.4	1497.2	1521.1	1540.5	1559.8	1582.2	1604.5	1616.5
47.5°	1337.8	1349.7	1363.2	1384.0	1410.8	1436.2	1455.6	1473.4	1494.3	1516.6	1527.0
50°	1255.9	1266.3	1279.7	1299.1	1324.5	1348.2	1364.7	1382.5	1401.9	1422.7	1431.7
52.5°	1170.9	1181.4	1194.8	1214.2	1235.0	1257.4	1272.3	1288.7	1308.0	1327.4	1336.3
55°	1084.5	1092.0	1103.9	1121.8	1144.2	1165.0	1179.9	1196.3	1212.7	1229.1	1239.5
57.5°	999.6	1008.6	1020.5	1036.9	1056.2	1075.6	1089.1	1102.4	1118.8	1135.3	1142.6
60°	913.2	920.7	929.7	944.5	963.9	980.3	993.7	1007.1	1020.5	1035.4	1042.9
62.5°	825.4	832.8	841.7	856.6	873.0	887.9	899.9	911.8	923.7	937.1	944.5
65°	737.4	744.9	753.8	764.2	777.7	791.1	803.0	815.0	823.8	832.8	840.2
67.5°	642.1	649.5	658.5	667.4	679.3	692.8	701.7	712.2	721.1	731.5	735.9
70°	552.7	558.6	567.6	575.1	585.5	594.4	601.9	610.8	616.7	625.7	633.1
72.5°	464.8	470.8	478.2	485.7	491.6	499.1	508.0	515.5	523.0	531.8	534.9
75°	379.9	382.9	388.8	394.8	400.8	406.7	411.2	417.1	423.1	429.1	433.5
77.5°	296.4	299.5	305.4	309.9	314.3	318.8	321.8	324.7	330.7	335.2	339.7
80°	217.5	220.5	225.0	229.4	233.9	238.3	238.3	238.3	245.8	251.8	253.3
82.5°	147.5	149.0	151.9	154.9	157.9	160.9	160.9	159.4	163.8	168.4	171.3
85°	84.9	86.4	89.3	89.3	90.9	90.9	90.9	90.9	93.9	98.3	101.3
87.5°	34.3	34.3	35.8	35.8	37.2	37.2	35.8	34.3	37.2	41.7	43.2
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°	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1	2537.1
2.5°	2543.1	2541.6	2546.0	2547.6	2550.5	2550.5	2552.0	2552.0	2549.1	2544.5	2546.0
5°	2544.5	2544.5	2549.1	2553.5	2559.5	2565.4	2560.9	2556.4	2553.5	2549.1	2547.6
7.5°	2537.1	2540.1	2544.5	2552.0	2559.5	2568.4	2562.4	2556.4	2549.1	2543.1	2540.1
10°	2519.3	2522.2	2529.7	2537.1	2544.5	2552.0	2546.0	2540.1	2534.1	2526.6	2523.7
12.5°	2496.9	2501.4	2510.3	2517.7	2525.2	2534.1	2526.6	2519.3	2511.8	2504.3	2499.8
15°	2464.1	2470.0	2480.5	2489.4	2499.8	2507.3	2501.4	2495.4	2486.4	2476.0	2468.6
17.5°	2422.4	2431.3	2441.7	2452.2	2461.1	2468.6	2464.1	2458.1	2447.7	2435.8	2426.9
20°	2376.2	2385.1	2394.1	2404.5	2414.9	2422.4	2416.5	2409.0	2398.6	2389.6	2380.7
22.5°	2322.6	2331.6	2342.0	2350.9	2359.9	2367.2	2359.9	2350.9	2342.0	2333.0	2324.1
25°	2261.5	2270.4	2282.3	2291.3	2297.3	2303.2	2297.3	2289.8	2280.8	2271.9	2263.0
27.5°	2197.4	2206.3	2218.3	2227.3	2233.2	2239.2	2233.2	2225.7	2216.8	2207.8	2199.0
30°	2125.9	2134.9	2146.8	2155.7	2160.2	2164.7	2158.7	2152.8	2145.3	2136.4	2127.4
32.5°	2050.0	2058.9	2067.9	2076.8	2084.2	2090.2	2084.2	2078.3	2069.3	2057.4	2048.5
35°	1969.5	1978.4	1988.8	1997.8	2006.7	2014.2	2005.3	1994.8	1987.4	1979.9	1972.4
37.5°	1884.6	1895.0	1907.0	1917.4	1920.3	1926.3	1920.3	1914.3	1907.0	1899.5	1890.6
40°	1801.1	1810.1	1820.5	1830.9	1835.4	1839.9	1834.0	1828.0	1819.0	1811.5	1802.6
42.5°	1714.7	1723.7	1732.6	1741.6	1747.6	1753.5	1747.6	1738.6	1732.6	1726.6	1719.3
45°	1625.4	1634.3	1641.7	1650.7	1655.2	1659.6	1653.7	1646.2	1640.2	1635.8	1628.3
47.5°	1534.5	1542.0	1549.4	1556.8	1559.8	1564.3	1558.3	1553.8	1549.4	1544.9	1538.9
50°	1439.1	1446.6	1455.6	1462.9	1464.5	1468.9	1462.9	1458.5	1454.0	1449.6	1445.1
52.5°	1345.3	1351.2	1358.7	1366.1	1369.1	1372.1	1366.1	1360.1	1355.7	1352.8	1348.2
55°	1246.9	1252.9	1260.4	1266.3	1270.8	1273.7	1267.8	1261.8	1257.4	1255.9	1251.4
57.5°	1148.6	1154.6	1162.0	1168.0	1170.9	1174.0	1168.0	1162.0	1159.0	1156.1	1153.1
60°	1048.8	1054.8	1060.8	1065.2	1068.1	1069.7	1063.7	1059.2	1057.7	1056.2	1053.3
62.5°	950.5	953.4	959.4	962.4	965.4	966.9	962.4	959.4	958.0	956.5	954.9
65°	847.7	855.2	859.6	862.6	862.6	864.1	859.6	858.1	856.6	855.2	852.1
67.5°	741.9	747.8	750.9	753.8	753.8	753.8	753.8	753.8	752.4	749.4	746.4
70°	640.6	645.1	648.1	649.5	649.5	649.5	646.6	645.1	646.6	646.6	645.1
72.5°	537.8	540.8	542.3	543.8	542.3	542.3	542.3	545.3	545.3	543.8	540.8
75°	438.0	441.0	442.5	443.9	442.5	442.5	442.5	445.4	443.9	443.9	442.5
77.5°	344.2	345.7	345.7	347.1	345.7	345.7	347.1	350.1	348.6	348.6	348.6
80°	254.7	254.7	254.7	256.2	254.7	254.7	256.2	259.3	257.7	257.7	257.7
82.5°	172.8	174.4	174.4	174.4	175.8	177.3	177.3	177.3	177.3	177.3	175.8
85°	102.8	104.3	102.8	102.8	102.8	102.8	104.3	105.8	105.8	105.8	105.8
87.5°	44.7	46.2	44.7	43.2	41.7	41.7	44.7	47.7	47.7	46.2	46.2
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-35-37L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2537.1	2537.1	2537.1	2537.1
2.5°	2552.0	2552.0	2538.6	2525.2
5°	2550.5	2547.6	2532.6	2516.2
7.5°	2541.6	2537.1	2517.7	2499.8
10°	2520.7	2514.8	2493.9	2471.5
12.5°	2495.4	2486.4	2462.7	2440.3
15°	2462.7	2452.2	2426.9	2401.5
17.5°	2419.4	2407.5	2382.2	2355.3
20°	2373.2	2359.9	2331.6	2303.2
22.5°	2316.6	2304.7	2274.9	2246.6
25°	2255.6	2242.1	2212.3	2182.6
27.5°	2190.0	2175.1	2145.3	2117.0
30°	2118.5	2103.5	2073.8	2045.5
32.5°	2042.5	2030.6	2000.7	1969.5
35°	1965.1	1950.1	1920.3	1890.6
37.5°	1883.1	1869.7	1841.4	1813.1
40°	1796.7	1783.2	1753.5	1725.2
42.5°	1711.8	1699.9	1671.6	1644.8
45°	1620.9	1609.0	1582.2	1558.3
47.5°	1530.0	1518.1	1492.8	1467.5
50°	1437.7	1425.7	1401.9	1379.5
52.5°	1340.8	1331.8	1309.5	1287.2
55°	1244.0	1233.5	1211.2	1191.9
57.5°	1147.2	1139.7	1118.8	1099.5
60°	1047.3	1038.4	1022.0	1005.6
62.5°	950.5	943.0	926.6	911.8
65°	847.7	841.7	828.3	815.0
67.5°	741.9	737.4	724.0	712.2
70°	640.6	633.1	622.7	612.3
72.5°	537.8	534.9	525.9	517.0
75°	439.5	436.5	427.5	420.2
77.5°	347.1	344.2	336.7	329.2
80°	256.2	254.7	248.8	242.9
82.5°	175.8	174.4	169.8	163.8
85°	105.8	102.8	98.3	93.9
87.5°	46.2	44.7	40.2	37.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)