

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: P709187

Luminaire Tested: **4APN-35-37L935-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709187
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-35-37L935-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

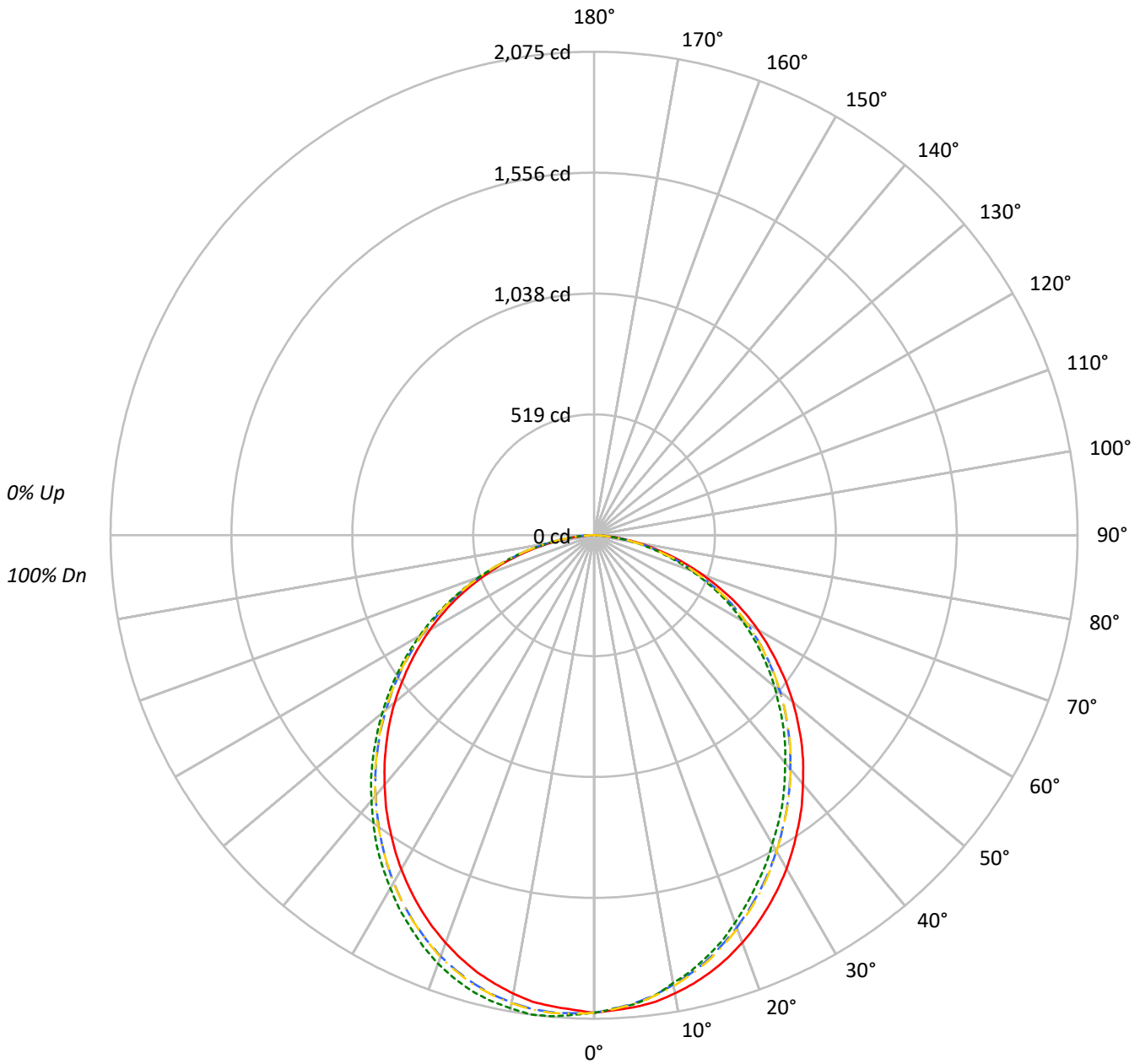
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5417.4 lumens
Efficiency: N/A
Efficacy: 66.9 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 (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

TEST NUMBER: P709187
CATALOG NUMBER: 4APN-35-37L935-UNV

Luminous Intensity Polar Plot



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



TEST NUMBER: P709187
 CATALOG NUMBER: 4APN-35-37L935-UNV

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°	18908	18908	18908	18908
5°	18825	18702	18803	19192
10°	18704	18286	18716	19313
15°	18529	17885	18541	19346
20°	18267	17369	18279	19212
25°	17947	16820	17984	18940
30°	17603	16295	17628	18629
35°	17200	15872	17240	18325
40°	16784	15363	16842	17900
45°	16425	14949	16440	17492
50°	15995	14510	16030	17032
55°	15485	14035	15543	16550
60°	14989	13546	15011	15945
65°	14371	12952	14371	15238
70°	13342	11980	13310	14154
75°	12099	10855	12013	12740
80°	10424	9335	10228	10934
85°	8024	7135	7770	8786



TEST NUMBER: P709187
 CATALOG NUMBER: 4APN-35-37L935-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.5	3.6
10°-20°	548.0	10.1
20°-30°	811.3	15.0
30°-40°	951.9	17.6
40°-50°	964.7	17.8
50°-60°	856.2	15.8
60°-70°	642.8	11.9
70°-80°	356.9	6.6
80°-90°	92.2	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°	1552.8	28.7
0°-40°	2504.7	46.2
0°-60°	4325.5	79.8
0°-90°	5417.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5417.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2049	2049	2049	2049	2049	
5°	2033	2019	2030	2072	2033	193
15°	1940	1872	1941	2025	1940	547
25°	1763	1652	1767	1860	1763	812
35°	1527	1409	1531	1627	1527	956
45°	1259	1146	1260	1341	1259	970
55°	963	872	966	1029	963	862
65°	658	593	658	698	658	649
75°	339	304	337	357	339	361
85°	76	67	73	83	76	91
90°	0	0	0	0	0	



TEST NUMBER: P709187

CATALOG NUMBER: 4APN-35-37L935-UNV

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4
2.5°	2039.8	2044.6	2050.6	2044.6	2035.0	2030.2	2030.2	2029.0	2032.6	2033.8	2032.6
5°	2032.6	2035.0	2036.2	2029.0	2018.1	2012.1	2009.7	2008.5	2013.3	2019.3	2013.3
7.5°	2019.3	2018.1	2016.9	2007.3	1995.3	1986.8	1983.2	1982.0	1986.8	1992.9	1988.0
10°	1996.5	1995.3	1991.7	1979.6	1964.0	1953.1	1949.5	1945.9	1949.5	1951.9	1949.5
12.5°	1971.2	1966.4	1961.6	1948.3	1931.5	1919.5	1913.4	1908.6	1913.4	1917.0	1914.6
15°	1939.9	1932.7	1924.3	1909.8	1893.0	1879.7	1872.5	1867.7	1871.3	1872.5	1872.5
17.5°	1902.6	1894.2	1885.8	1867.7	1847.2	1832.8	1824.4	1818.4	1823.2	1825.6	1825.6
20°	1860.5	1850.9	1840.0	1820.8	1799.1	1783.5	1773.8	1766.6	1767.8	1769.0	1769.0
22.5°	1814.8	1802.7	1789.5	1769.0	1746.2	1729.3	1719.7	1711.3	1711.3	1712.5	1712.5
25°	1763.0	1749.8	1736.5	1716.1	1692.0	1674.0	1661.9	1653.5	1653.5	1652.3	1654.7
27.5°	1710.1	1695.6	1682.4	1660.7	1635.4	1617.4	1605.4	1596.9	1595.7	1594.5	1596.9
30°	1652.3	1635.4	1621.0	1598.1	1574.1	1556.0	1544.0	1534.4	1532.0	1529.5	1532.0
32.5°	1590.9	1575.3	1559.6	1535.6	1511.5	1493.4	1481.4	1471.8	1470.6	1469.4	1471.8
35°	1527.1	1510.3	1495.8	1473.0	1448.9	1430.9	1417.6	1409.2	1409.2	1409.2	1409.2
37.5°	1464.6	1447.7	1432.1	1409.2	1385.1	1367.1	1353.8	1345.4	1343.0	1341.8	1343.0
40°	1393.6	1379.1	1364.7	1343.0	1318.9	1300.9	1290.1	1280.4	1278.0	1275.6	1279.2
42.5°	1328.6	1314.1	1298.5	1278.0	1254.0	1235.9	1223.9	1215.5	1214.2	1213.0	1214.2
45°	1258.8	1241.9	1226.3	1207.0	1185.4	1168.5	1156.5	1148.1	1146.9	1145.7	1146.9
47.5°	1185.4	1172.1	1158.9	1139.6	1118.0	1101.1	1090.3	1080.7	1078.3	1075.9	1078.3
50°	1114.4	1099.9	1086.7	1068.6	1048.2	1032.5	1022.9	1014.5	1012.1	1010.9	1012.1
52.5°	1039.8	1026.5	1014.5	996.4	979.6	963.9	953.1	945.9	944.7	943.5	944.7
55°	962.7	950.7	939.9	925.4	908.6	894.1	884.5	876.1	874.9	872.5	874.9
57.5°	888.1	878.5	867.7	852.0	836.4	823.1	814.7	807.5	806.3	805.1	806.3
60°	812.3	802.7	793.1	779.8	764.2	750.9	743.7	737.7	735.3	734.1	735.3
62.5°	736.5	726.9	719.6	706.4	692.0	681.1	673.9	667.9	665.5	664.3	665.5
65°	658.3	649.8	641.4	629.4	618.6	610.1	602.9	596.9	594.5	593.3	593.3
67.5°	575.2	568.0	562.0	551.2	539.1	530.7	523.5	518.7	516.3	515.1	516.3
70°	494.6	488.6	482.6	474.1	464.5	457.3	452.5	447.7	445.3	444.1	444.1
72.5°	417.6	412.8	406.8	399.5	392.3	385.1	380.3	376.7	374.3	373.1	373.1
75°	339.4	334.6	332.1	326.1	318.9	314.1	309.3	306.9	304.5	304.5	304.5
77.5°	266.0	263.5	261.1	255.1	250.3	245.5	241.9	240.7	238.3	238.3	238.3
80°	196.2	195.0	193.8	190.1	185.3	180.5	178.1	176.9	175.7	175.7	175.7
82.5°	132.4	132.4	131.2	127.6	124.0	122.7	120.3	119.1	119.1	119.1	119.1
85°	75.8	75.8	75.8	74.6	72.2	72.2	69.8	68.6	67.4	67.4	67.4
87.5°	30.1	31.3	32.5	31.3	28.9	28.9	28.9	28.9	28.9	28.9	28.9
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: P709187

CATALOG NUMBER: 4APN-35-37L935-UNV

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4
2.5°	2029.0	2031.4	2032.6	2038.6	2045.8	2050.6	2044.6	2038.6	2048.2	2059.0	2059.0
5°	2008.5	2010.9	2014.5	2021.7	2031.4	2037.4	2035.0	2030.2	2044.6	2056.6	2057.8
7.5°	1983.2	1985.6	1990.5	1997.7	2009.7	2018.1	2018.1	2019.3	2032.6	2047.0	2050.6
10°	1945.9	1951.9	1959.2	1970.0	1982.0	1992.9	1996.5	1997.7	2014.5	2030.2	2035.0
12.5°	1911.0	1917.0	1924.3	1936.3	1950.7	1962.8	1966.4	1971.2	1989.2	2007.3	2014.5
15°	1871.3	1877.3	1885.8	1897.8	1913.4	1926.7	1933.9	1941.1	1959.2	1978.4	1986.8
17.5°	1824.4	1830.4	1838.8	1853.3	1871.3	1887.0	1895.4	1903.8	1924.3	1944.7	1953.1
20°	1769.0	1777.4	1789.5	1803.9	1824.4	1842.4	1852.1	1861.7	1883.3	1903.8	1913.4
22.5°	1712.5	1722.1	1735.3	1752.2	1773.8	1793.1	1805.1	1817.2	1838.8	1859.3	1870.1
25°	1655.9	1666.7	1680.0	1698.0	1718.5	1737.7	1752.2	1766.6	1788.3	1809.9	1820.8
27.5°	1598.1	1607.8	1621.0	1639.1	1661.9	1682.4	1696.8	1712.5	1734.1	1757.0	1767.8
30°	1534.4	1545.2	1557.2	1575.3	1600.5	1623.4	1637.9	1654.7	1676.4	1699.2	1710.1
32.5°	1473.0	1482.6	1494.6	1512.7	1538.0	1562.0	1577.7	1594.5	1616.2	1639.1	1648.7
35°	1409.2	1418.8	1432.1	1450.1	1475.4	1498.3	1513.9	1530.7	1551.2	1572.9	1583.7
37.5°	1346.6	1356.3	1369.5	1387.5	1411.6	1434.5	1450.1	1467.0	1487.4	1507.9	1517.5
40°	1281.6	1291.3	1302.1	1320.1	1344.2	1367.1	1381.5	1398.4	1418.8	1440.5	1450.1
42.5°	1215.5	1225.1	1238.3	1256.4	1279.2	1299.7	1315.3	1331.0	1350.2	1369.5	1379.1
45°	1149.3	1157.7	1170.9	1187.8	1209.4	1228.7	1244.3	1260.0	1278.0	1296.1	1305.7
47.5°	1080.7	1090.3	1101.1	1118.0	1139.6	1160.1	1175.7	1190.2	1207.0	1225.1	1233.5
50°	1014.5	1022.9	1033.7	1049.4	1069.8	1089.1	1102.3	1116.8	1132.4	1149.3	1156.5
52.5°	945.9	954.3	965.1	980.8	997.6	1015.7	1027.7	1041.0	1056.6	1072.2	1079.5
55°	876.1	882.1	891.7	906.2	924.2	941.1	953.1	966.3	979.6	992.8	1001.2
57.5°	807.5	814.7	824.3	837.6	853.2	868.9	879.7	890.5	903.8	917.0	923.0
60°	737.7	743.7	750.9	763.0	778.6	791.8	802.7	813.5	824.3	836.4	842.4
62.5°	666.7	672.7	679.9	692.0	705.2	717.2	726.9	736.5	746.1	756.9	763.0
65°	595.7	601.7	608.9	617.4	628.2	639.0	648.6	658.3	665.5	672.7	678.7
67.5°	518.7	524.7	531.9	539.1	548.8	559.6	566.8	575.2	582.5	590.9	594.5
70°	446.5	451.3	458.5	464.5	472.9	480.2	486.2	493.4	498.2	505.4	511.5
72.5°	375.5	380.3	386.3	392.3	397.1	403.1	410.4	416.4	422.4	429.6	432.0
75°	306.9	309.3	314.1	318.9	323.7	328.5	332.1	337.0	341.8	346.6	350.2
77.5°	239.5	241.9	246.7	250.3	253.9	257.5	259.9	262.3	267.2	270.8	274.4
80°	175.7	178.1	181.7	185.3	188.9	192.5	192.5	192.5	198.6	203.4	204.6
82.5°	119.1	120.3	122.7	125.2	127.6	130.0	130.0	128.8	132.4	136.0	138.4
85°	68.6	69.8	72.2	72.2	73.4	73.4	73.4	73.4	75.8	79.4	81.8
87.5°	27.7	27.7	28.9	28.9	30.1	30.1	28.9	27.7	30.1	33.7	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



TEST NUMBER: P709187

CATALOG NUMBER: 4APN-35-37L935-UNV

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4	2049.4
2.5°	2054.2	2053.0	2056.6	2057.8	2060.3	2060.3	2061.5	2061.5	2059.0	2055.4	2056.6
5°	2055.4	2055.4	2059.0	2062.7	2067.5	2072.3	2068.7	2065.1	2062.7	2059.0	2057.8
7.5°	2049.4	2051.8	2055.4	2061.5	2067.5	2074.7	2069.9	2065.1	2059.0	2054.2	2051.8
10°	2035.0	2037.4	2043.4	2049.4	2055.4	2061.5	2056.6	2051.8	2047.0	2041.0	2038.6
12.5°	2016.9	2020.5	2027.8	2033.8	2039.8	2047.0	2041.0	2035.0	2029.0	2022.9	2019.3
15°	1990.5	1995.3	2003.7	2010.9	2019.3	2025.4	2020.5	2015.7	2008.5	2000.1	1994.1
17.5°	1956.8	1964.0	1972.4	1980.8	1988.0	1994.1	1990.5	1985.6	1977.2	1967.6	1960.4
20°	1919.5	1926.7	1933.9	1942.3	1950.7	1956.8	1951.9	1945.9	1937.5	1930.3	1923.1
22.5°	1876.1	1883.3	1891.8	1899.0	1906.2	1912.2	1906.2	1899.0	1891.8	1884.6	1877.3
25°	1826.8	1834.0	1843.6	1850.9	1855.7	1860.5	1855.7	1849.7	1842.4	1835.2	1828.0
27.5°	1775.0	1782.3	1791.9	1799.1	1803.9	1808.7	1803.9	1797.9	1790.7	1783.5	1776.2
30°	1717.3	1724.5	1734.1	1741.3	1745.0	1748.6	1743.8	1738.9	1732.9	1725.7	1718.5
32.5°	1655.9	1663.1	1670.3	1677.6	1683.6	1688.4	1683.6	1678.8	1671.5	1661.9	1654.7
35°	1590.9	1598.1	1606.6	1613.8	1621.0	1627.0	1619.8	1611.4	1605.4	1599.3	1593.3
37.5°	1522.3	1530.7	1540.4	1548.8	1551.2	1556.0	1551.2	1546.4	1540.4	1534.4	1527.1
40°	1454.9	1462.2	1470.6	1479.0	1482.6	1486.2	1481.4	1476.6	1469.4	1463.4	1456.1
42.5°	1385.1	1392.4	1399.6	1406.8	1411.6	1416.4	1411.6	1404.4	1399.6	1394.8	1388.7
45°	1312.9	1320.1	1326.2	1333.4	1337.0	1340.6	1335.8	1329.8	1325.0	1321.4	1315.3
47.5°	1239.5	1245.5	1251.6	1257.6	1260.0	1263.6	1258.8	1255.2	1251.6	1247.9	1243.1
50°	1162.5	1168.5	1175.7	1181.8	1183.0	1186.6	1181.8	1178.1	1174.5	1170.9	1167.3
52.5°	1086.7	1091.5	1097.5	1103.5	1105.9	1108.3	1103.5	1098.7	1095.1	1092.7	1089.1
55°	1007.3	1012.1	1018.1	1022.9	1026.5	1028.9	1024.1	1019.3	1015.7	1014.5	1010.9
57.5°	927.8	932.6	938.7	943.5	945.9	948.3	943.5	938.7	936.3	933.9	931.4
60°	847.2	852.0	856.8	860.4	862.9	864.1	859.2	855.6	854.4	853.2	850.8
62.5°	767.8	770.2	775.0	777.4	779.8	781.0	777.4	775.0	773.8	772.6	771.4
65°	684.7	690.8	694.4	696.8	696.8	698.0	694.4	693.2	692.0	690.8	688.4
67.5°	599.3	604.1	606.5	608.9	608.9	608.9	608.9	608.9	607.7	605.3	602.9
70°	517.5	521.1	523.5	524.7	524.7	524.7	522.3	521.1	522.3	522.3	521.1
72.5°	434.4	436.8	438.0	439.2	438.0	438.0	438.0	440.5	440.5	439.2	436.8
75°	353.8	356.2	357.4	358.6	357.4	357.4	357.4	359.8	358.6	358.6	357.4
77.5°	278.0	279.2	279.2	280.4	279.2	279.2	280.4	282.8	281.6	281.6	281.6
80°	205.8	205.8	205.8	207.0	205.8	205.8	207.0	209.4	208.2	208.2	208.2
82.5°	139.6	140.8	140.8	140.8	142.0	143.2	143.2	143.2	143.2	143.2	142.0
85°	83.0	84.2	83.0	83.0	83.0	83.0	84.2	85.4	85.4	85.4	85.4
87.5°	36.1	37.3	36.1	34.9	33.7	33.7	36.1	38.5	38.5	37.3	37.3
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: P709187

CATALOG NUMBER: 4APN-35-37L935-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2049.4	2049.4	2049.4	2049.4
2.5°	2061.5	2061.5	2050.6	2039.8
5°	2060.3	2057.8	2045.8	2032.6
7.5°	2053.0	2049.4	2033.8	2019.3
10°	2036.2	2031.4	2014.5	1996.5
12.5°	2015.7	2008.5	1989.2	1971.2
15°	1989.2	1980.8	1960.4	1939.9
17.5°	1954.4	1944.7	1924.3	1902.6
20°	1917.0	1906.2	1883.3	1860.5
22.5°	1871.3	1861.7	1837.6	1814.8
25°	1822.0	1811.1	1787.1	1763.0
27.5°	1769.0	1757.0	1732.9	1710.1
30°	1711.3	1699.2	1675.2	1652.3
32.5°	1649.9	1640.3	1616.2	1590.9
35°	1587.3	1575.3	1551.2	1527.1
37.5°	1521.1	1510.3	1487.4	1464.6
40°	1451.3	1440.5	1416.4	1393.6
42.5°	1382.7	1373.1	1350.2	1328.6
45°	1309.3	1299.7	1278.0	1258.8
47.5°	1235.9	1226.3	1205.8	1185.4
50°	1161.3	1151.7	1132.4	1114.4
52.5°	1083.1	1075.9	1057.8	1039.8
55°	1004.9	996.4	978.4	962.7
57.5°	926.6	920.6	903.8	888.1
60°	846.0	838.8	825.5	812.3
62.5°	767.8	761.8	748.5	736.5
65°	684.7	679.9	669.1	658.3
67.5°	599.3	595.7	584.9	575.2
70°	517.5	511.5	503.0	494.6
72.5°	434.4	432.0	424.8	417.6
75°	355.0	352.6	345.4	339.4
77.5°	280.4	278.0	272.0	266.0
80°	207.0	205.8	201.0	196.2
82.5°	142.0	140.8	137.2	132.4
85°	85.4	83.0	79.4	75.8
87.5°	37.3	36.1	32.5	30.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)