

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-35-37L940-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-35-37L940-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

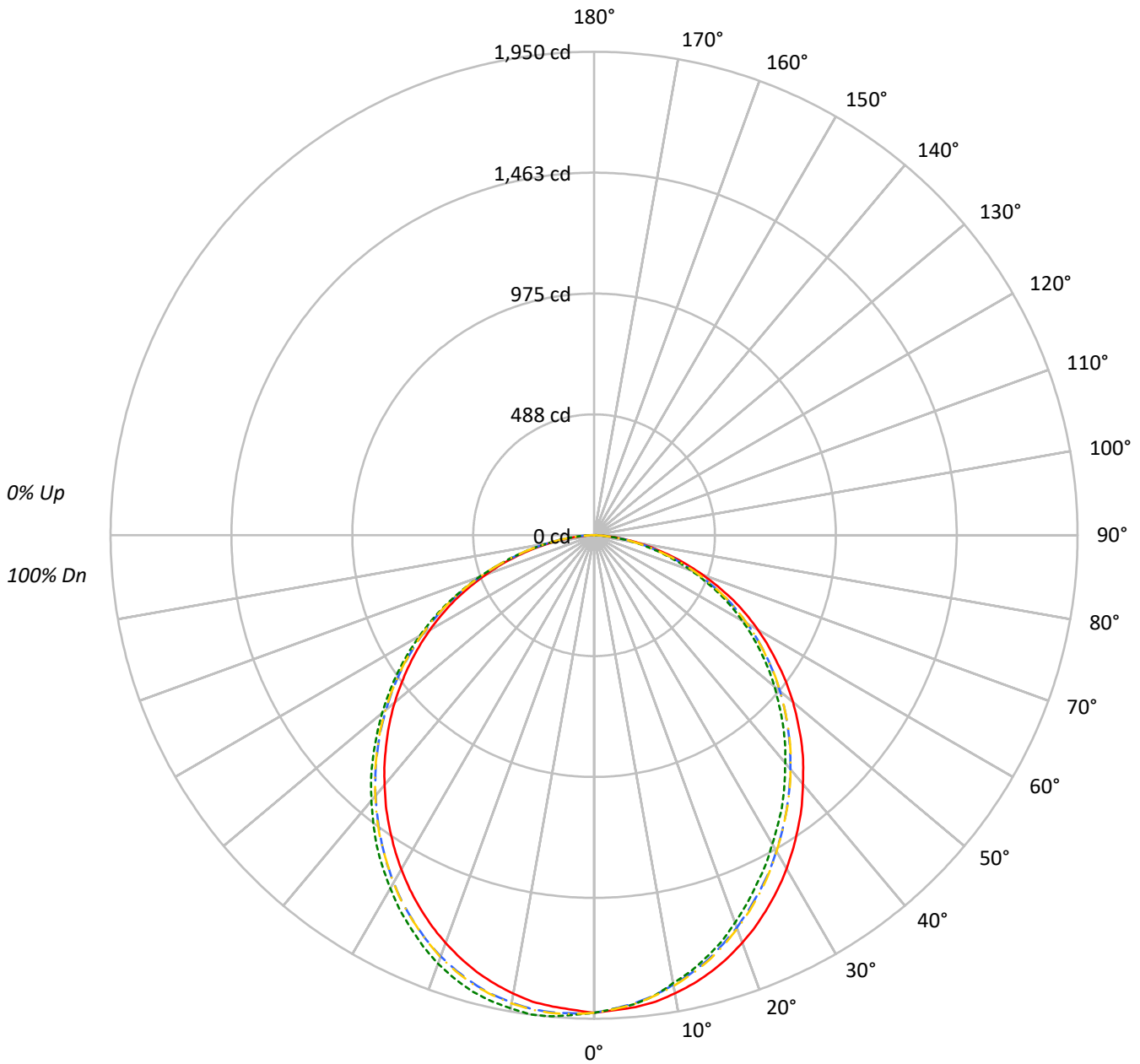
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5091.6 lumens
Efficiency: N/A
Efficacy: 62.9 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 (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				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°	17772	17772	17772	17772
5°	17693	17577	17672	18039
10°	17580	17188	17590	18152
15°	17416	16810	17426	18183
20°	17169	16324	17180	18057
25°	16868	15809	16903	17802
30°	16544	15315	16568	17509
35°	16166	14918	16204	17224
40°	15775	14441	15829	16823
45°	15437	14050	15451	16440
50°	15034	13637	15065	16008
55°	14556	13190	14610	15556
60°	14088	12730	14109	14985
65°	13507	12173	13507	14321
70°	12541	11260	12511	13304
75°	11368	10202	11290	11974
80°	9797	8772	9617	10276
85°	7548	6701	7304	8257



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	3.6
10°-20°	515.0	10.1
20°-30°	762.5	15.0
30°-40°	894.6	17.6
40°-50°	906.7	17.8
50°-60°	804.7	15.8
60°-70°	604.1	11.9
70°-80°	335.5	6.6
80°-90°	86.6	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°	1459.4	28.7
0°-40°	2354.1	46.2
0°-60°	4065.4	79.8
0°-90°	5091.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5091.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1926	1926	1926	1926	1926	
5°	1910	1898	1908	1948	1910	181
15°	1823	1760	1824	1904	1823	514
25°	1657	1553	1660	1749	1657	763
35°	1435	1324	1439	1529	1435	898
45°	1183	1077	1184	1260	1183	912
55°	905	820	908	967	905	810
65°	619	558	619	656	619	610
75°	319	286	317	336	319	339
85°	71	63	69	78	71	86
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°	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2
2.5°	1917.1	1921.6	1927.3	1921.6	1912.6	1908.1	1908.1	1907.0	1910.4	1911.5	1910.4
5°	1910.4	1912.6	1913.8	1907.0	1896.8	1891.1	1888.9	1887.7	1892.3	1897.9	1892.3
7.5°	1897.9	1896.8	1895.6	1886.6	1875.3	1867.4	1864.0	1862.9	1867.4	1873.0	1868.5
10°	1876.5	1875.3	1871.9	1860.6	1845.9	1835.7	1832.3	1829.0	1832.3	1834.6	1832.3
12.5°	1852.7	1848.1	1843.6	1831.2	1815.3	1804.1	1798.4	1793.8	1798.4	1801.8	1799.6
15°	1823.3	1816.5	1808.6	1795.0	1779.2	1766.7	1759.9	1755.4	1758.8	1759.9	1759.9
17.5°	1788.2	1780.3	1772.4	1755.4	1736.2	1722.6	1714.7	1709.0	1713.5	1715.8	1715.8
20°	1748.7	1739.5	1729.4	1711.3	1690.9	1676.2	1667.2	1660.4	1661.5	1662.6	1662.6
22.5°	1705.6	1694.4	1681.9	1662.6	1641.2	1625.3	1616.3	1608.3	1608.3	1609.5	1609.5
25°	1657.0	1644.6	1632.1	1612.9	1590.3	1573.3	1562.0	1554.1	1554.1	1552.9	1555.2
27.5°	1607.2	1593.7	1581.2	1560.9	1537.2	1520.2	1508.9	1500.9	1499.8	1498.6	1500.9
30°	1552.9	1537.2	1523.5	1502.0	1479.4	1462.5	1451.1	1442.1	1439.9	1437.6	1439.9
32.5°	1495.3	1480.5	1465.9	1443.2	1420.6	1403.7	1392.3	1383.3	1382.2	1381.1	1383.3
35°	1435.3	1419.5	1405.9	1384.4	1361.8	1344.8	1332.4	1324.5	1324.5	1324.5	1324.5
37.5°	1376.5	1360.7	1345.9	1324.5	1301.9	1284.9	1272.5	1264.5	1262.3	1261.1	1262.3
40°	1309.8	1296.2	1282.6	1262.3	1239.6	1222.7	1212.5	1203.5	1201.2	1199.0	1202.3
42.5°	1248.7	1235.1	1220.5	1201.2	1178.6	1161.6	1150.3	1142.4	1141.3	1140.1	1141.3
45°	1183.1	1167.3	1152.6	1134.4	1114.1	1098.3	1086.9	1079.0	1077.9	1076.8	1077.9
47.5°	1114.1	1101.7	1089.3	1071.1	1050.8	1034.9	1024.7	1015.7	1013.5	1011.2	1013.5
50°	1047.4	1033.7	1021.4	1004.4	985.2	970.5	961.4	953.4	951.2	950.1	951.2
52.5°	977.2	964.8	953.4	936.5	920.7	906.0	895.8	889.0	887.9	886.8	887.9
55°	904.9	893.5	883.4	869.8	854.0	840.4	831.4	823.4	822.2	820.0	822.2
57.5°	834.7	825.7	815.5	800.8	786.1	773.7	765.7	758.9	757.8	756.7	757.8
60°	763.5	754.4	745.3	732.9	718.2	705.8	699.0	693.3	691.0	689.9	691.0
62.5°	692.2	683.2	676.4	663.9	650.4	640.1	633.4	627.7	625.5	624.4	625.5
65°	618.7	610.7	602.9	591.6	581.3	573.5	566.7	561.0	558.7	557.6	557.6
67.5°	540.7	533.8	528.2	518.1	506.7	498.8	492.0	487.5	485.2	484.0	485.2
70°	464.9	459.2	453.5	445.6	436.6	429.8	425.3	420.8	418.5	417.4	417.4
72.5°	392.5	388.0	382.3	375.5	368.7	362.0	357.5	354.0	351.7	350.6	350.6
75°	318.9	314.4	312.2	306.5	299.7	295.2	290.7	288.4	286.2	286.2	286.2
77.5°	250.0	247.7	245.4	239.8	235.3	230.8	227.4	226.2	224.0	224.0	224.0
80°	184.4	183.2	182.1	178.7	174.2	169.6	167.4	166.2	165.1	165.1	165.1
82.5°	124.4	124.4	123.3	119.9	116.5	115.3	113.1	111.9	111.9	111.9	111.9
85°	71.3	71.3	71.3	70.2	67.9	67.9	65.6	64.4	63.3	63.3	63.3
87.5°	28.3	29.4	30.5	29.4	27.1	27.1	27.1	27.1	27.1	27.1	27.1
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°	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2
2.5°	1907.0	1909.3	1910.4	1916.0	1922.8	1927.3	1921.6	1916.0	1925.0	1935.3	1935.3
5°	1887.7	1890.0	1893.4	1900.1	1909.3	1914.9	1912.6	1908.1	1921.6	1933.0	1934.1
7.5°	1864.0	1866.2	1870.7	1877.6	1888.9	1896.8	1896.8	1897.9	1910.4	1923.9	1927.3
10°	1829.0	1834.6	1841.3	1851.6	1862.9	1873.0	1876.5	1877.6	1893.4	1908.1	1912.6
12.5°	1796.1	1801.8	1808.6	1819.8	1833.5	1844.7	1848.1	1852.7	1869.6	1886.6	1893.4
15°	1758.8	1764.4	1772.4	1783.7	1798.4	1810.8	1817.6	1824.4	1841.3	1859.5	1867.4
17.5°	1714.7	1720.4	1728.3	1741.8	1758.8	1773.5	1781.4	1789.3	1808.6	1827.8	1835.7
20°	1662.6	1670.6	1681.9	1695.5	1714.7	1731.7	1740.7	1749.8	1770.1	1789.3	1798.4
22.5°	1609.5	1618.6	1631.0	1646.8	1667.2	1685.3	1696.6	1707.9	1728.3	1747.5	1757.7
25°	1556.3	1566.5	1578.9	1595.9	1615.2	1633.2	1646.8	1660.4	1680.7	1701.1	1711.3
27.5°	1502.0	1511.1	1523.5	1540.5	1562.0	1581.2	1594.8	1609.5	1629.8	1651.4	1661.5
30°	1442.1	1452.2	1463.6	1480.5	1504.3	1525.8	1539.4	1555.2	1575.6	1597.1	1607.2
32.5°	1384.4	1393.5	1404.8	1421.7	1445.5	1468.1	1482.9	1498.6	1519.0	1540.5	1549.5
35°	1324.5	1333.5	1345.9	1362.9	1386.7	1408.2	1422.9	1438.7	1458.0	1478.3	1488.5
37.5°	1265.6	1274.7	1287.1	1304.1	1326.8	1348.2	1362.9	1378.8	1398.0	1417.2	1426.2
40°	1204.6	1213.6	1223.8	1240.7	1263.4	1284.9	1298.5	1314.3	1333.5	1353.9	1362.9
42.5°	1142.4	1151.4	1163.8	1180.8	1202.3	1221.6	1236.2	1251.0	1269.0	1287.1	1296.2
45°	1080.1	1088.1	1100.5	1116.4	1136.7	1154.8	1169.6	1184.2	1201.2	1218.1	1227.2
47.5°	1015.7	1024.7	1034.9	1050.8	1071.1	1090.4	1105.0	1118.7	1134.4	1151.4	1159.3
50°	953.4	961.4	971.6	986.3	1005.5	1023.6	1036.1	1049.6	1064.4	1080.1	1086.9
52.5°	889.0	896.9	907.2	921.8	937.7	954.6	965.9	978.3	993.1	1007.7	1014.6
55°	823.4	829.1	838.1	851.7	868.6	884.5	895.8	908.3	920.7	933.2	941.1
57.5°	758.9	765.7	774.8	787.2	802.0	816.6	826.8	837.0	849.4	861.9	867.5
60°	693.3	699.0	705.8	717.1	731.8	744.2	754.4	764.6	774.8	786.1	791.7
62.5°	626.6	632.3	639.0	650.4	662.8	674.1	683.2	692.2	701.3	711.4	717.1
65°	559.8	565.6	572.3	580.2	590.4	600.6	609.6	618.7	625.5	632.3	637.9
67.5°	487.5	493.2	499.9	506.7	515.8	525.9	532.7	540.7	547.4	555.3	558.7
70°	419.6	424.1	430.9	436.6	444.5	451.3	456.9	463.8	468.3	475.0	480.7
72.5°	352.8	357.5	363.1	368.7	373.2	378.9	385.7	391.4	397.0	403.7	406.0
75°	288.4	290.7	295.2	299.7	304.3	308.8	312.2	316.7	321.2	325.7	329.2
77.5°	225.1	227.4	231.9	235.3	238.6	242.0	244.3	246.5	251.1	254.5	257.9
80°	165.1	167.4	170.8	174.2	177.6	181.0	181.0	181.0	186.6	191.1	192.2
82.5°	111.9	113.1	115.3	117.6	119.9	122.2	122.2	121.1	124.4	127.8	130.1
85°	64.4	65.6	67.9	67.9	69.0	69.0	69.0	69.0	71.3	74.7	76.9
87.5°	26.0	26.0	27.1	27.1	28.3	28.3	27.1	26.0	28.3	31.6	32.8
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2	1926.2
2.5°	1930.8	1929.6	1933.0	1934.1	1936.4	1936.4	1937.5	1937.5	1935.3	1931.9	1933.0
5°	1931.9	1931.9	1935.3	1938.6	1943.2	1947.7	1944.3	1940.9	1938.6	1935.3	1934.1
7.5°	1926.2	1928.5	1931.9	1937.5	1943.2	1949.9	1945.4	1940.9	1935.3	1930.8	1928.5
10°	1912.6	1914.9	1920.5	1926.2	1931.9	1937.5	1933.0	1928.5	1923.9	1918.3	1916.0
12.5°	1895.6	1899.0	1905.9	1911.5	1917.1	1923.9	1918.3	1912.6	1907.0	1901.3	1897.9
15°	1870.7	1875.3	1883.2	1890.0	1897.9	1903.6	1899.0	1894.5	1887.7	1879.9	1874.1
17.5°	1839.1	1845.9	1853.8	1861.7	1868.5	1874.1	1870.7	1866.2	1858.3	1849.3	1842.5
20°	1804.1	1810.8	1817.6	1825.6	1833.5	1839.1	1834.6	1829.0	1821.0	1814.2	1807.4
22.5°	1763.3	1770.1	1778.0	1784.8	1791.6	1797.3	1791.6	1784.8	1778.0	1771.3	1764.4
25°	1716.9	1723.8	1732.8	1739.5	1744.1	1748.7	1744.1	1738.4	1731.7	1724.9	1718.1
27.5°	1668.4	1675.1	1684.1	1690.9	1695.5	1700.0	1695.5	1689.8	1683.0	1676.2	1669.5
30°	1614.1	1620.8	1629.8	1636.6	1640.1	1643.5	1638.9	1634.4	1628.7	1622.0	1615.2
32.5°	1556.3	1563.2	1569.9	1576.7	1582.3	1586.9	1582.3	1577.8	1571.1	1562.0	1555.2
35°	1495.3	1502.0	1510.0	1516.8	1523.5	1529.2	1522.4	1514.5	1508.9	1503.1	1497.5
37.5°	1430.8	1438.7	1447.7	1455.7	1458.0	1462.5	1458.0	1453.4	1447.7	1442.1	1435.3
40°	1367.4	1374.2	1382.2	1390.1	1393.5	1396.8	1392.3	1387.8	1381.1	1375.3	1368.6
42.5°	1301.9	1308.6	1315.4	1322.2	1326.8	1331.3	1326.8	1319.9	1315.4	1310.9	1305.3
45°	1234.0	1240.7	1246.5	1253.2	1256.6	1260.0	1255.5	1249.9	1245.3	1241.9	1236.2
47.5°	1165.0	1170.7	1176.3	1182.0	1184.2	1187.6	1183.1	1179.7	1176.3	1172.9	1168.4
50°	1092.6	1098.3	1105.0	1110.7	1111.8	1115.3	1110.7	1107.3	1103.9	1100.5	1097.1
52.5°	1021.4	1025.9	1031.5	1037.2	1039.5	1041.7	1037.2	1032.6	1029.2	1027.0	1023.6
55°	946.7	951.2	956.9	961.4	964.8	967.1	962.6	958.1	954.6	953.4	950.1
57.5°	872.0	876.5	882.3	886.8	889.0	891.3	886.8	882.3	880.0	877.7	875.4
60°	796.2	800.8	805.3	808.7	811.0	812.1	807.6	804.2	803.1	802.0	799.7
62.5°	721.6	723.9	728.4	730.7	732.9	734.1	730.7	728.4	727.3	726.2	725.0
65°	643.6	649.3	652.6	654.9	654.9	656.0	652.6	651.5	650.4	649.3	647.0
67.5°	563.2	567.8	570.1	572.3	572.3	572.3	572.3	572.3	571.2	569.0	566.7
70°	486.4	489.8	492.0	493.2	493.2	493.2	490.9	489.8	490.9	490.9	489.8
72.5°	408.4	410.6	411.7	412.9	411.7	411.7	411.7	414.0	414.0	412.9	410.6
75°	332.6	334.8	335.9	337.1	335.9	335.9	335.9	338.2	337.1	337.1	335.9
77.5°	261.3	262.4	262.4	263.5	262.4	262.4	263.5	265.8	264.7	264.7	264.7
80°	193.4	193.4	193.4	194.5	193.4	193.4	194.5	196.8	195.6	195.6	195.6
82.5°	131.2	132.3	132.3	132.3	133.5	134.6	134.6	134.6	134.6	134.6	133.5
85°	78.0	79.2	78.0	78.0	78.0	78.0	79.2	80.3	80.3	80.3	80.3
87.5°	33.9	35.0	33.9	32.8	31.6	31.6	33.9	36.2	36.2	35.0	35.0
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-35-37L940-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1926.2	1926.2	1926.2	1926.2
2.5°	1937.5	1937.5	1927.3	1917.1
5°	1936.4	1934.1	1922.8	1910.4
7.5°	1929.6	1926.2	1911.5	1897.9
10°	1913.8	1909.3	1893.4	1876.5
12.5°	1894.5	1887.7	1869.6	1852.7
15°	1869.6	1861.7	1842.5	1823.3
17.5°	1836.8	1827.8	1808.6	1788.2
20°	1801.8	1791.6	1770.1	1748.7
22.5°	1758.8	1749.8	1727.1	1705.6
25°	1712.4	1702.3	1679.6	1657.0
27.5°	1662.6	1651.4	1628.7	1607.2
30°	1608.3	1597.1	1574.4	1552.9
32.5°	1550.7	1541.7	1519.0	1495.3
35°	1491.9	1480.5	1458.0	1435.3
37.5°	1429.7	1419.5	1398.0	1376.5
40°	1364.1	1353.9	1331.3	1309.8
42.5°	1299.6	1290.5	1269.0	1248.7
45°	1230.6	1221.6	1201.2	1183.1
47.5°	1161.6	1152.6	1133.3	1114.1
50°	1091.5	1082.4	1064.4	1047.4
52.5°	1018.0	1011.2	994.2	977.2
55°	944.4	936.5	919.5	904.9
57.5°	870.9	865.3	849.4	834.7
60°	795.1	788.3	776.0	763.5
62.5°	721.6	715.9	703.5	692.2
65°	643.6	639.0	628.9	618.7
67.5°	563.2	559.8	549.7	540.7
70°	486.4	480.7	472.8	464.9
72.5°	408.4	406.0	399.2	392.5
75°	333.7	331.4	324.6	318.9
77.5°	263.5	261.3	255.6	250.0
80°	194.5	193.4	188.9	184.4
82.5°	133.5	132.3	128.9	124.4
85°	80.3	78.0	74.7	71.3
87.5°	35.0	33.9	30.5	28.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)