

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-39-42L940-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-39-42L940-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

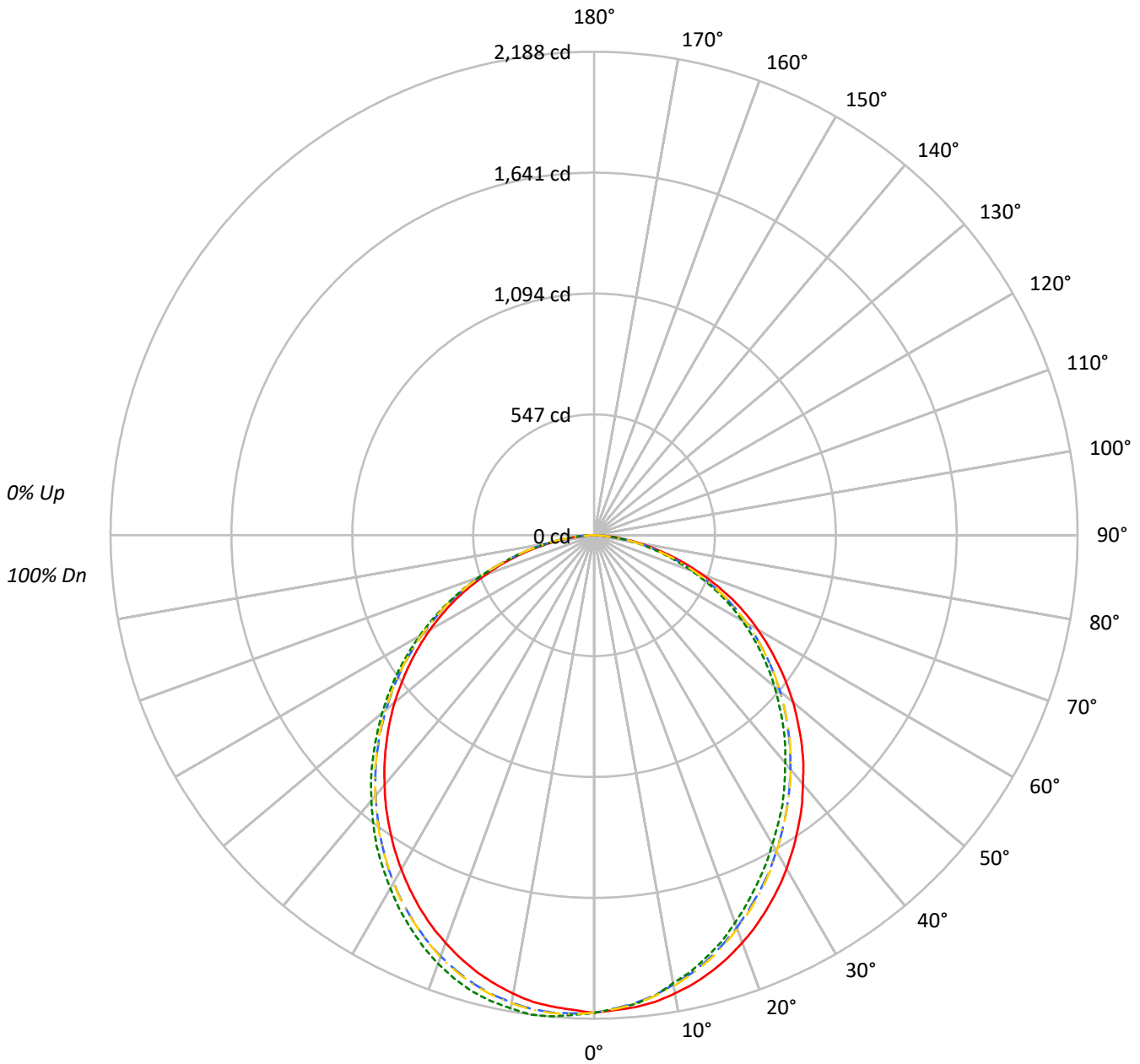
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5713.7 lumens
Efficiency: N/A
Efficacy: 62.1 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): 92
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°	19942	19942	19942	19942
5°	19854	19725	19832	20242
10°	19727	19287	19739	20370
15°	19543	18864	19555	20404
20°	19266	18319	19278	20263
25°	18930	17741	18968	19976
30°	18566	17186	18594	19647
35°	18140	16740	18184	19328
40°	17702	16204	17762	18879
45°	17322	15766	17339	18450
50°	16871	15304	16907	17962
55°	16333	14802	16394	17456
60°	15808	14286	15832	16816
65°	15157	13662	15157	16070
70°	14073	12635	14038	14928
75°	12758	11446	12669	13439
80°	10993	9845	10791	11530
85°	8458	7527	8193	9273



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.1	3.6
10°-20°	577.9	10.1
20°-30°	855.7	15.0
30°-40°	1003.9	17.6
40°-50°	1017.4	17.8
50°-60°	903.0	15.8
60°-70°	677.9	11.9
70°-80°	376.4	6.6
80°-90°	97.2	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°	1637.7	28.7
0°-40°	2641.7	46.2
0°-60°	4562.1	79.8
0°-90°	5713.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5713.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2162	2162	2162	2162	2162	
5°	2144	2130	2141	2186	2144	203
15°	2046	1975	2047	2136	2046	577
25°	1860	1743	1863	1962	1860	857
35°	1611	1486	1614	1716	1611	1008
45°	1328	1208	1329	1414	1328	1023
55°	1015	920	1019	1085	1015	909
65°	694	626	694	736	694	685
75°	358	321	355	377	358	380
85°	80	71	77	88	80	96
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°	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5
2.5°	2151.4	2156.5	2162.8	2156.5	2146.3	2141.3	2141.3	2140.0	2143.7	2145.0	2143.7
5°	2143.7	2146.3	2147.5	2140.0	2128.5	2122.2	2119.7	2118.4	2123.5	2129.8	2123.5
7.5°	2129.8	2128.5	2127.2	2117.1	2104.4	2095.5	2091.7	2090.5	2095.5	2101.9	2096.8
10°	2105.7	2104.4	2100.6	2087.9	2071.4	2060.0	2056.2	2052.4	2056.2	2058.7	2056.2
12.5°	2079.0	2073.9	2068.9	2055.0	2037.2	2024.4	2018.1	2013.0	2018.1	2021.9	2019.4
15°	2046.0	2038.4	2029.5	2014.3	1996.5	1982.6	1974.9	1969.9	1973.6	1974.9	1974.9
17.5°	2006.6	1997.8	1988.9	1969.9	1948.3	1933.1	1924.2	1917.9	1922.9	1925.4	1925.4
20°	1962.3	1952.1	1940.7	1920.3	1897.5	1881.1	1870.8	1863.3	1864.6	1865.8	1865.8
22.5°	1914.0	1901.3	1887.3	1865.8	1841.7	1823.9	1813.8	1804.9	1804.9	1806.1	1806.1
25°	1859.5	1845.5	1831.6	1810.0	1784.5	1765.5	1752.8	1744.0	1744.0	1742.7	1745.3
27.5°	1803.6	1788.4	1774.4	1751.5	1724.9	1705.9	1693.2	1684.3	1683.0	1681.7	1684.3
30°	1742.7	1724.9	1709.7	1685.6	1660.2	1641.2	1628.4	1618.3	1615.7	1613.2	1615.7
32.5°	1677.9	1661.4	1644.9	1619.6	1594.1	1575.1	1562.4	1552.3	1551.0	1549.8	1552.3
35°	1610.6	1592.9	1577.6	1553.6	1528.2	1509.1	1495.2	1486.3	1486.3	1486.3	1486.3
37.5°	1544.6	1526.9	1510.4	1486.3	1460.9	1441.8	1427.9	1419.1	1416.5	1415.2	1416.5
40°	1469.8	1454.5	1439.3	1416.5	1391.1	1372.0	1360.6	1350.5	1348.0	1345.4	1349.2
42.5°	1401.3	1386.0	1369.5	1348.0	1322.5	1303.5	1290.8	1281.9	1280.7	1279.4	1280.7
45°	1327.6	1309.9	1293.4	1273.1	1250.2	1232.4	1219.7	1210.9	1209.6	1208.3	1209.6
47.5°	1250.2	1236.2	1222.3	1202.0	1179.1	1161.4	1149.9	1139.8	1137.3	1134.7	1137.3
50°	1175.4	1160.1	1146.1	1127.1	1105.5	1089.0	1078.8	1070.0	1067.4	1066.2	1067.4
52.5°	1096.6	1082.7	1070.0	1050.9	1033.2	1016.7	1005.3	997.6	996.3	995.1	996.3
55°	1015.4	1002.7	991.2	976.0	958.2	943.0	932.9	924.0	922.7	920.2	922.7
57.5°	936.7	926.5	915.1	898.6	882.2	868.2	859.3	851.7	850.4	849.2	850.4
60°	856.7	846.6	836.4	822.5	806.0	792.0	784.4	778.1	775.5	774.2	775.5
62.5°	776.8	766.6	759.0	745.1	729.9	718.4	710.8	704.4	701.9	700.6	701.9
65°	694.3	685.4	676.5	663.8	652.4	643.5	635.9	629.5	627.1	625.8	625.8
67.5°	606.7	599.1	592.8	581.3	568.6	559.7	552.1	547.0	544.5	543.2	544.5
70°	521.7	515.3	508.9	500.1	490.0	482.3	477.2	472.2	469.6	468.4	468.4
72.5°	440.4	435.4	429.0	421.4	413.8	406.1	401.1	397.3	394.7	393.5	393.5
75°	357.9	352.8	350.3	344.0	336.3	331.3	326.2	323.6	321.1	321.1	321.1
77.5°	280.5	278.0	275.4	269.0	264.0	258.9	255.1	253.8	251.3	251.3	251.3
80°	206.9	205.6	204.3	200.5	195.5	190.4	187.8	186.6	185.3	185.3	185.3
82.5°	139.6	139.6	138.4	134.5	130.7	129.4	127.0	125.7	125.7	125.7	125.7
85°	79.9	79.9	79.9	78.7	76.2	76.2	73.6	72.4	71.1	71.1	71.1
87.5°	31.7	33.0	34.3	33.0	30.4	30.4	30.4	30.4	30.4	30.4	30.4
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°	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5
2.5°	2140.0	2142.5	2143.7	2150.1	2157.8	2162.8	2156.5	2150.1	2160.2	2171.7	2171.7
5°	2118.4	2120.9	2124.7	2132.3	2142.5	2148.8	2146.3	2141.3	2156.5	2169.1	2170.4
7.5°	2091.7	2094.2	2099.3	2107.0	2119.7	2128.5	2128.5	2129.8	2143.7	2159.0	2162.8
10°	2052.4	2058.7	2066.3	2077.7	2090.5	2101.9	2105.7	2107.0	2124.7	2141.3	2146.3
12.5°	2015.6	2021.9	2029.5	2042.2	2057.4	2070.2	2073.9	2079.0	2098.1	2117.1	2124.7
15°	1973.6	1980.0	1988.9	2001.6	2018.1	2032.1	2039.6	2047.3	2066.3	2086.7	2095.5
17.5°	1924.2	1930.5	1939.4	1954.6	1973.6	1990.1	1999.1	2007.9	2029.5	2051.1	2060.0
20°	1865.8	1874.7	1887.3	1902.6	1924.2	1943.2	1953.3	1963.5	1986.4	2007.9	2018.1
22.5°	1806.1	1816.2	1830.3	1848.1	1870.8	1891.2	1903.8	1916.6	1939.4	1961.0	1972.4
25°	1746.5	1757.9	1771.9	1790.9	1812.5	1832.8	1848.1	1863.3	1886.1	1908.9	1920.3
27.5°	1685.6	1695.7	1709.7	1728.8	1752.8	1774.4	1789.6	1806.1	1829.0	1853.1	1864.6
30°	1618.3	1629.7	1642.4	1661.4	1688.1	1712.2	1727.5	1745.3	1768.0	1792.2	1803.6
32.5°	1553.6	1563.7	1576.4	1595.4	1622.1	1647.5	1664.0	1681.7	1704.6	1728.8	1738.9
35°	1486.3	1496.4	1510.4	1529.4	1556.1	1580.2	1596.7	1614.5	1636.1	1658.9	1670.3
37.5°	1420.2	1430.5	1444.4	1463.4	1488.8	1512.9	1529.4	1547.2	1568.8	1590.4	1600.5
40°	1351.7	1361.9	1373.3	1392.4	1417.8	1441.8	1457.1	1474.8	1496.4	1519.3	1529.4
42.5°	1281.9	1292.1	1306.0	1325.1	1349.2	1370.8	1387.2	1403.7	1424.1	1444.4	1454.5
45°	1212.2	1221.0	1235.0	1252.7	1275.6	1295.9	1312.4	1328.9	1348.0	1367.0	1377.1
47.5°	1139.8	1149.9	1161.4	1179.1	1202.0	1223.6	1240.1	1255.3	1273.1	1292.1	1300.9
50°	1070.0	1078.8	1090.3	1106.8	1128.3	1148.6	1162.6	1177.9	1194.4	1212.2	1219.7
52.5°	997.6	1006.5	1018.0	1034.4	1052.2	1071.3	1083.9	1097.9	1114.4	1130.9	1138.5
55°	924.0	930.4	940.5	955.7	974.7	992.5	1005.3	1019.2	1033.2	1047.1	1056.0
57.5°	851.7	859.3	869.4	883.4	899.9	916.4	927.8	939.2	953.2	967.2	973.5
60°	778.1	784.4	792.0	804.7	821.2	835.1	846.6	858.0	869.4	882.2	888.4
62.5°	703.1	709.5	717.1	729.9	743.8	756.5	766.6	776.8	786.9	798.4	804.7
65°	628.3	634.6	642.3	651.1	662.5	674.0	684.1	694.3	701.9	709.5	715.8
67.5°	547.0	553.4	561.0	568.6	578.7	590.2	597.8	606.7	614.3	623.2	627.1
70°	470.9	475.9	483.6	490.0	498.8	506.5	512.8	520.4	525.4	533.1	539.5
72.5°	396.0	401.1	407.4	413.8	418.9	425.2	432.8	439.1	445.5	453.2	455.7
75°	323.6	326.2	331.3	336.3	341.4	346.5	350.3	355.4	360.5	365.6	369.4
77.5°	252.5	255.1	260.2	264.0	267.8	271.6	274.2	276.7	281.8	285.5	289.4
80°	185.3	187.8	191.7	195.5	199.2	203.1	203.1	203.1	209.4	214.5	215.7
82.5°	125.7	127.0	129.4	132.0	134.5	137.1	137.1	135.8	139.6	143.5	146.0
85°	72.4	73.6	76.2	76.2	77.4	77.4	77.4	77.4	79.9	83.8	86.3
87.5°	29.2	29.2	30.4	30.4	31.7	31.7	30.4	29.2	31.7	35.5	36.8
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°	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5	2161.5
2.5°	2166.6	2165.3	2169.1	2170.4	2173.0	2173.0	2174.3	2174.3	2171.7	2167.9	2169.1
5°	2167.9	2167.9	2171.7	2175.5	2180.5	2185.6	2181.8	2178.0	2175.5	2171.7	2170.4
7.5°	2161.5	2164.0	2167.9	2174.3	2180.5	2188.2	2183.1	2178.0	2171.7	2166.6	2164.0
10°	2146.3	2148.8	2155.2	2161.5	2167.9	2174.3	2169.1	2164.0	2159.0	2152.6	2150.1
12.5°	2127.2	2131.0	2138.7	2145.0	2151.4	2159.0	2152.6	2146.3	2140.0	2133.6	2129.8
15°	2099.3	2104.4	2113.3	2120.9	2129.8	2136.2	2131.0	2125.9	2118.4	2109.4	2103.2
17.5°	2063.8	2071.4	2080.3	2089.2	2096.8	2103.2	2099.3	2094.2	2085.4	2075.2	2067.6
20°	2024.4	2032.1	2039.6	2048.6	2057.4	2063.8	2058.7	2052.4	2043.5	2035.9	2028.2
22.5°	1978.8	1986.4	1995.2	2002.9	2010.5	2016.9	2010.5	2002.9	1995.2	1987.6	1980.0
25°	1926.7	1934.4	1944.5	1952.1	1957.2	1962.3	1957.2	1950.9	1943.2	1935.6	1928.0
27.5°	1872.1	1879.8	1889.9	1897.5	1902.6	1907.7	1902.6	1896.3	1888.6	1881.1	1873.4
30°	1811.2	1818.8	1829.0	1836.6	1840.4	1844.2	1839.1	1834.0	1827.7	1820.1	1812.5
32.5°	1746.5	1754.1	1761.8	1769.3	1775.7	1780.8	1775.7	1770.6	1763.0	1752.8	1745.3
35°	1677.9	1685.6	1694.5	1702.0	1709.7	1716.0	1708.4	1699.5	1693.2	1686.8	1680.4
37.5°	1605.6	1614.5	1624.7	1633.5	1636.1	1641.2	1636.1	1631.0	1624.7	1618.3	1610.6
40°	1534.5	1542.1	1551.0	1559.9	1563.7	1567.5	1562.4	1557.4	1549.8	1543.4	1535.8
42.5°	1460.9	1468.6	1476.1	1483.8	1488.8	1493.9	1488.8	1481.2	1476.1	1471.1	1464.7
45°	1384.8	1392.4	1398.7	1406.3	1410.1	1414.0	1408.8	1402.5	1397.5	1393.6	1387.2
47.5°	1307.3	1313.7	1320.0	1326.4	1328.9	1332.8	1327.6	1323.8	1320.0	1316.2	1311.1
50°	1226.1	1232.4	1240.1	1246.4	1247.7	1251.4	1246.4	1242.6	1238.8	1235.0	1231.1
52.5°	1146.1	1151.2	1157.6	1163.9	1166.4	1169.0	1163.9	1158.9	1155.0	1152.5	1148.6
55°	1062.3	1067.4	1073.8	1078.8	1082.7	1085.2	1080.1	1075.1	1071.3	1070.0	1066.2
57.5°	978.6	983.7	990.0	995.1	997.6	1000.2	995.1	990.0	987.5	985.0	982.4
60°	893.5	898.6	903.7	907.5	910.0	911.3	906.2	902.5	901.2	899.9	897.4
62.5°	809.8	812.3	817.4	819.9	822.5	823.7	819.9	817.4	816.2	814.9	813.6
65°	722.2	728.6	732.3	734.9	734.9	736.1	732.3	731.1	729.9	728.6	726.0
67.5°	632.1	637.2	639.7	642.3	642.3	642.3	642.3	642.3	641.0	638.4	635.9
70°	545.7	549.6	552.1	553.4	553.4	553.4	550.9	549.6	550.9	550.9	549.6
72.5°	458.2	460.7	462.0	463.3	462.0	462.0	462.0	464.5	464.5	463.3	460.7
75°	373.1	375.7	377.0	378.2	377.0	377.0	377.0	379.5	378.2	378.2	377.0
77.5°	293.2	294.5	294.5	295.8	294.5	294.5	295.8	298.3	297.0	297.0	297.0
80°	217.0	217.0	217.0	218.3	217.0	217.0	218.3	220.8	219.6	219.6	219.6
82.5°	147.2	148.5	148.5	148.5	149.7	151.0	151.0	151.0	151.0	151.0	149.7
85°	87.6	88.9	87.6	87.6	87.6	87.6	88.9	90.1	90.1	90.1	90.1
87.5°	38.1	39.4	38.1	36.8	35.5	35.5	38.1	40.7	40.7	39.4	39.4
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-39-42L940-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2161.5	2161.5	2161.5	2161.5
2.5°	2174.3	2174.3	2162.8	2151.4
5°	2173.0	2170.4	2157.8	2143.7
7.5°	2165.3	2161.5	2145.0	2129.8
10°	2147.5	2142.5	2124.7	2105.7
12.5°	2125.9	2118.4	2098.1	2079.0
15°	2098.1	2089.2	2067.6	2046.0
17.5°	2061.2	2051.1	2029.5	2006.6
20°	2021.9	2010.5	1986.4	1962.3
22.5°	1973.6	1963.5	1938.1	1914.0
25°	1921.6	1910.2	1884.8	1859.5
27.5°	1865.8	1853.1	1827.7	1803.6
30°	1804.9	1792.2	1766.8	1742.7
32.5°	1740.1	1729.9	1704.6	1677.9
35°	1674.2	1661.4	1636.1	1610.6
37.5°	1604.3	1592.9	1568.8	1544.6
40°	1530.7	1519.3	1493.9	1469.8
42.5°	1458.3	1448.2	1424.1	1401.3
45°	1381.0	1370.8	1348.0	1327.6
47.5°	1303.5	1293.4	1271.8	1250.2
50°	1224.8	1214.6	1194.4	1175.4
52.5°	1142.4	1134.7	1115.7	1096.6
55°	1059.8	1050.9	1031.9	1015.4
57.5°	977.3	971.0	953.2	936.7
60°	892.3	884.7	870.7	856.7
62.5°	809.8	803.4	789.5	776.8
65°	722.2	717.1	705.7	694.3
67.5°	632.1	628.3	616.8	606.7
70°	545.7	539.5	530.5	521.7
72.5°	458.2	455.7	448.0	440.4
75°	374.4	371.9	364.3	357.9
77.5°	295.8	293.2	286.8	280.5
80°	218.3	217.0	212.0	206.9
82.5°	149.7	148.5	144.7	139.6
85°	90.1	87.6	83.8	79.9
87.5°	39.4	38.1	34.3	31.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)