

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-39-42L930-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-39-42L930-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

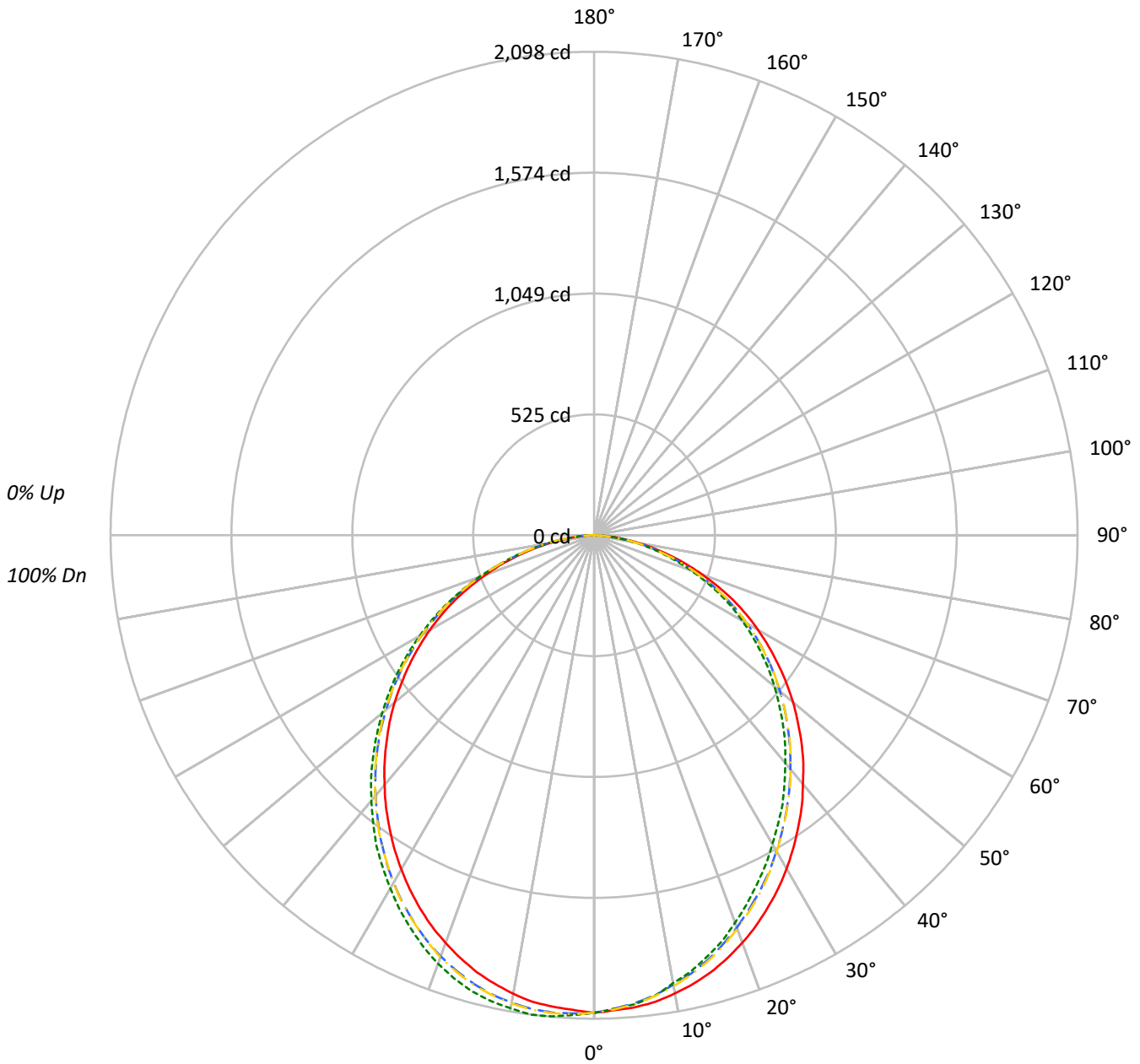
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5479.1 lumens
Efficiency: N/A
Efficacy: 59.6 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				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°	19123	19123	19123	19123
5°	19040	18915	19017	19411
10°	18918	18495	18929	19532
15°	18740	18090	18752	19566
20°	18475	17567	18487	19431
25°	18152	17012	18189	19156
30°	17803	16481	17829	18841
35°	17396	16052	17438	18535
40°	16976	15539	17034	18103
45°	16611	15119	16627	17692
50°	16178	14675	16212	17226
55°	15662	14194	15720	16740
60°	15160	13701	15183	16126
65°	14535	13099	14535	15413
70°	13496	12115	13461	14316
75°	12238	10976	12149	12887
80°	10541	9441	10345	11057
85°	8119	7209	7855	8892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.8	3.6
10°-20°	554.2	10.1
20°-30°	820.5	15.0
30°-40°	962.7	17.6
40°-50°	975.7	17.8
50°-60°	865.9	15.8
60°-70°	650.1	11.9
70°-80°	361.0	6.6
80°-90°	93.2	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°	1570.5	28.7
0°-40°	2533.2	46.2
0°-60°	4374.8	79.8
0°-90°	5479.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5479.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2073	2073	2073	2073	2073	
5°	2056	2042	2053	2096	2056	195
15°	1962	1894	1963	2048	1962	553
25°	1783	1671	1787	1882	1783	822
35°	1544	1425	1548	1646	1544	967
45°	1273	1159	1274	1356	1273	981
55°	974	882	977	1041	974	872
65°	666	600	666	706	666	656
75°	343	308	341	362	343	365
85°	77	68	74	84	77	93
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°	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7
2.5°	2063.1	2068.0	2074.0	2068.0	2058.2	2053.3	2053.3	2052.1	2055.8	2057.0	2055.8
5°	2055.8	2058.2	2059.4	2052.1	2041.1	2035.0	2032.6	2031.4	2036.2	2042.3	2036.2
7.5°	2042.3	2041.1	2039.9	2030.2	2018.0	2009.5	2005.8	2004.6	2009.5	2015.6	2010.7
10°	2019.3	2018.0	2014.4	2002.2	1986.4	1975.4	1971.8	1968.1	1971.8	1974.2	1971.8
12.5°	1993.6	1988.8	1984.0	1970.5	1953.5	1941.4	1935.3	1930.4	1935.3	1938.9	1936.5
15°	1962.0	1954.7	1946.2	1931.6	1914.5	1901.2	1893.9	1889.0	1892.7	1893.9	1893.9
17.5°	1924.3	1915.7	1907.2	1889.0	1868.3	1853.7	1845.2	1839.1	1844.0	1846.4	1846.4
20°	1881.7	1871.9	1861.0	1841.5	1819.7	1803.8	1794.0	1786.7	1787.9	1789.2	1789.2
22.5°	1835.4	1823.3	1809.9	1789.2	1766.1	1749.0	1739.3	1730.8	1730.8	1732.0	1732.0
25°	1783.1	1769.7	1756.3	1735.7	1711.3	1693.1	1680.9	1672.3	1672.3	1671.1	1673.5
27.5°	1729.6	1714.9	1701.6	1679.6	1654.1	1635.8	1623.6	1615.2	1614.0	1612.7	1615.2
30°	1671.1	1654.1	1639.5	1616.4	1592.0	1573.8	1561.6	1551.8	1549.4	1547.0	1549.4
32.5°	1609.1	1593.2	1577.4	1553.1	1528.8	1510.5	1498.2	1488.6	1487.4	1486.1	1488.6
35°	1544.5	1527.5	1512.9	1489.8	1465.4	1447.2	1433.8	1425.2	1425.2	1425.2	1425.2
37.5°	1481.3	1464.2	1448.4	1425.2	1400.9	1382.6	1369.3	1360.8	1358.3	1357.1	1358.3
40°	1409.5	1394.8	1380.2	1358.3	1333.9	1315.7	1304.8	1295.0	1292.6	1290.2	1293.8
42.5°	1343.7	1329.2	1313.3	1292.6	1268.2	1250.0	1237.8	1229.3	1228.1	1226.9	1228.1
45°	1273.1	1256.0	1240.3	1220.8	1198.9	1181.8	1169.6	1161.2	1160.0	1158.7	1160.0
47.5°	1198.9	1185.5	1172.1	1152.6	1130.7	1113.7	1102.7	1093.0	1090.5	1088.1	1090.5
50°	1127.1	1112.5	1099.1	1080.9	1060.1	1044.3	1034.6	1026.0	1023.6	1022.4	1023.6
52.5°	1051.6	1038.2	1026.0	1007.7	990.8	974.9	964.0	956.7	955.5	954.3	955.5
55°	973.7	961.6	950.6	936.0	919.0	904.3	894.6	886.0	884.8	882.4	884.8
57.5°	898.2	888.5	877.6	861.7	845.9	832.6	824.0	816.7	815.5	814.3	815.5
60°	821.6	811.8	802.0	788.7	772.9	759.5	752.2	746.1	743.7	742.5	743.7
62.5°	744.9	735.1	727.8	714.5	699.9	688.9	681.6	675.5	673.1	671.9	673.1
65°	665.8	657.3	648.7	636.5	625.6	617.1	609.8	603.7	601.2	600.0	600.0
67.5°	581.8	574.5	568.4	557.4	545.3	536.8	529.4	524.6	522.1	520.9	522.1
70°	500.3	494.2	488.1	479.5	469.9	462.5	457.7	452.8	450.3	449.1	449.1
72.5°	422.4	417.5	411.4	404.1	396.8	389.5	384.7	381.0	378.6	377.3	377.3
75°	343.3	338.4	335.9	329.8	322.5	317.6	312.8	310.3	307.9	307.9	307.9
77.5°	268.9	266.6	264.2	258.1	253.2	248.3	244.6	243.4	241.0	241.0	241.0
80°	198.4	197.2	195.9	192.3	187.4	182.6	180.2	179.0	177.7	177.7	177.7
82.5°	133.9	133.9	132.7	129.0	125.4	124.2	121.7	120.5	120.5	120.5	120.5
85°	76.7	76.7	76.7	75.4	73.0	73.0	70.6	69.3	68.1	68.1	68.1
87.5°	30.4	31.6	32.8	31.6	29.2	29.2	29.2	29.2	29.2	29.2	29.2
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7
2.5°	2052.1	2054.5	2055.8	2061.9	2069.2	2074.0	2068.0	2061.9	2071.5	2082.5	2082.5
5°	2031.4	2033.8	2037.5	2044.8	2054.5	2060.6	2058.2	2053.3	2068.0	2080.1	2081.3
7.5°	2005.8	2008.3	2013.2	2020.5	2032.6	2041.1	2041.1	2042.3	2055.8	2070.4	2074.0
10°	1968.1	1974.2	1981.5	1992.4	2004.6	2015.6	2019.3	2020.5	2037.5	2053.3	2058.2
12.5°	1932.8	1938.9	1946.2	1958.3	1973.0	1985.2	1988.8	1993.6	2011.9	2030.2	2037.5
15°	1892.7	1898.8	1907.2	1919.4	1935.3	1948.6	1955.9	1963.2	1981.5	2001.0	2009.5
17.5°	1845.2	1851.3	1859.8	1874.4	1892.7	1908.4	1917.0	1925.5	1946.2	1966.9	1975.4
20°	1789.2	1797.7	1809.9	1824.5	1845.2	1863.5	1873.1	1882.9	1904.9	1925.5	1935.3
22.5°	1732.0	1741.8	1755.1	1772.2	1794.0	1813.6	1825.7	1837.9	1859.8	1880.5	1891.4
25°	1674.8	1685.7	1699.2	1717.4	1738.1	1757.5	1772.2	1786.7	1808.7	1830.5	1841.5
27.5°	1616.4	1626.1	1639.5	1657.8	1680.9	1701.6	1716.1	1732.0	1753.9	1777.1	1787.9
30°	1551.8	1562.8	1575.0	1593.2	1618.8	1641.9	1656.6	1673.5	1695.5	1718.6	1729.6
32.5°	1489.8	1499.5	1511.7	1530.0	1555.5	1579.8	1595.7	1612.7	1634.6	1657.8	1667.4
35°	1425.2	1435.0	1448.4	1466.6	1492.2	1515.3	1531.2	1548.2	1568.9	1590.8	1601.8
37.5°	1362.0	1371.8	1385.1	1403.4	1427.7	1450.9	1466.6	1483.7	1504.3	1525.1	1534.9
40°	1296.2	1306.0	1317.0	1335.2	1359.6	1382.6	1397.3	1414.3	1435.0	1456.9	1466.6
42.5°	1229.3	1239.1	1252.4	1270.7	1293.8	1314.5	1330.4	1346.1	1365.7	1385.1	1394.8
45°	1162.4	1170.8	1184.3	1201.3	1223.2	1242.7	1258.5	1274.3	1292.6	1310.9	1320.6
47.5°	1093.0	1102.7	1113.7	1130.7	1152.6	1173.3	1189.1	1203.8	1220.8	1239.1	1247.6
50°	1026.0	1034.6	1045.5	1061.3	1082.1	1101.5	1114.9	1129.5	1145.3	1162.4	1169.6
52.5°	956.7	965.1	976.1	992.0	1009.0	1027.3	1039.5	1052.8	1068.7	1084.5	1091.7
55°	886.0	892.1	901.9	916.5	934.7	951.8	964.0	977.3	990.8	1004.2	1012.6
57.5°	816.7	824.0	833.8	847.1	863.0	878.8	889.7	900.7	914.1	927.4	933.5
60°	746.1	752.2	759.5	771.6	787.5	800.8	811.8	822.8	833.8	845.9	852.0
62.5°	674.3	680.3	687.7	699.9	713.3	725.4	735.1	744.9	754.7	765.5	771.6
65°	602.5	608.6	615.9	624.4	635.4	646.3	656.0	665.8	673.1	680.3	686.4
67.5°	524.6	530.7	538.0	545.3	555.0	565.9	573.3	581.8	589.1	597.6	601.2
70°	451.6	456.4	463.8	469.9	478.3	485.6	491.7	499.0	503.9	511.2	517.2
72.5°	379.8	384.7	390.7	396.8	401.6	407.7	415.1	421.2	427.3	434.5	436.9
75°	310.3	312.8	317.6	322.5	327.4	332.3	335.9	340.8	345.7	350.5	354.2
77.5°	242.2	244.6	249.5	253.2	256.8	260.5	262.9	265.4	270.2	273.8	277.5
80°	177.7	180.2	183.8	187.4	191.1	194.7	194.7	194.7	200.8	205.7	206.9
82.5°	120.5	121.7	124.2	126.6	129.0	131.5	131.5	130.3	133.9	137.6	140.0
85°	69.3	70.6	73.0	73.0	74.2	74.2	74.2	74.2	76.7	80.3	82.8
87.5°	28.0	28.0	29.2	29.2	30.4	30.4	29.2	28.0	30.4	34.1	35.3
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°	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7	2072.7
2.5°	2077.6	2076.4	2080.1	2081.3	2083.7	2083.7	2084.9	2084.9	2082.5	2078.8	2080.1
5°	2078.8	2078.8	2082.5	2086.2	2091.0	2095.9	2092.3	2088.6	2086.2	2082.5	2081.3
7.5°	2072.7	2075.2	2078.8	2084.9	2091.0	2098.4	2093.5	2088.6	2082.5	2077.6	2075.2
10°	2058.2	2060.6	2066.7	2072.7	2078.8	2084.9	2080.1	2075.2	2070.4	2064.3	2061.9
12.5°	2039.9	2043.6	2050.9	2057.0	2063.1	2070.4	2064.3	2058.2	2052.1	2046.0	2042.3
15°	2013.2	2018.0	2026.6	2033.8	2042.3	2048.4	2043.6	2038.7	2031.4	2022.9	2016.8
17.5°	1979.1	1986.4	1994.9	2003.4	2010.7	2016.8	2013.2	2008.3	1999.7	1990.0	1982.8
20°	1941.4	1948.6	1955.9	1964.4	1973.0	1979.1	1974.2	1968.1	1959.6	1952.2	1945.0
22.5°	1897.5	1904.9	1913.3	1920.6	1927.9	1934.0	1927.9	1920.6	1913.3	1906.1	1898.8
25°	1847.6	1854.9	1864.7	1871.9	1876.8	1881.7	1876.8	1870.7	1863.5	1856.2	1848.8
27.5°	1795.3	1802.6	1812.3	1819.7	1824.5	1829.3	1824.5	1818.4	1811.1	1803.8	1796.5
30°	1736.9	1744.1	1753.9	1761.2	1764.9	1768.5	1763.6	1758.8	1752.7	1745.3	1738.1
32.5°	1674.8	1682.1	1689.4	1696.7	1702.7	1707.6	1702.7	1697.9	1690.6	1680.9	1673.5
35°	1609.1	1616.4	1624.8	1632.2	1639.5	1645.6	1638.3	1629.7	1623.6	1617.6	1611.5
37.5°	1539.6	1548.2	1557.9	1566.5	1568.9	1573.8	1568.9	1564.0	1557.9	1551.8	1544.5
40°	1471.5	1478.8	1487.4	1495.9	1499.5	1503.1	1498.2	1493.5	1486.1	1480.0	1472.7
42.5°	1400.9	1408.3	1415.5	1422.8	1427.7	1432.6	1427.7	1420.4	1415.5	1410.7	1404.6
45°	1327.9	1335.2	1341.3	1348.6	1352.2	1355.9	1351.0	1344.9	1340.0	1336.4	1330.4
47.5°	1253.6	1259.7	1265.8	1271.9	1274.3	1278.0	1273.1	1269.5	1265.8	1262.1	1257.3
50°	1175.7	1181.8	1189.1	1195.2	1196.5	1200.1	1195.2	1191.6	1187.9	1184.3	1180.6
52.5°	1099.1	1103.9	1110.0	1116.1	1118.6	1121.0	1116.1	1111.3	1107.6	1105.2	1101.5
55°	1018.7	1023.6	1029.7	1034.6	1038.2	1040.7	1035.8	1030.9	1027.3	1026.0	1022.4
57.5°	938.4	943.3	949.4	954.3	956.7	959.1	954.3	949.4	946.9	944.5	942.1
60°	856.9	861.7	866.6	870.3	872.7	873.9	869.1	865.4	864.2	863.0	860.5
62.5°	776.5	779.0	783.8	786.3	788.7	789.9	786.3	783.8	782.6	781.4	780.2
65°	692.5	698.6	702.3	704.7	704.7	706.0	702.3	701.1	699.9	698.6	696.2
67.5°	606.1	611.0	613.4	615.9	615.9	615.9	615.9	615.9	614.7	612.2	609.8
70°	523.3	527.0	529.4	530.7	530.7	530.7	528.2	527.0	528.2	528.2	527.0
72.5°	439.4	441.8	443.0	444.2	443.0	443.0	443.0	445.5	445.5	444.2	441.8
75°	357.8	360.3	361.5	362.7	361.5	361.5	361.5	363.9	362.7	362.7	361.5
77.5°	281.1	282.4	282.4	283.6	282.4	282.4	283.6	286.0	284.8	284.8	284.8
80°	208.1	208.1	208.1	209.4	208.1	208.1	209.4	211.8	210.6	210.6	210.6
82.5°	141.2	142.4	142.4	142.4	143.6	144.8	144.8	144.8	144.8	144.8	143.6
85°	84.0	85.2	84.0	84.0	84.0	84.0	85.2	86.4	86.4	86.4	86.4
87.5°	36.5	37.7	36.5	35.3	34.1	34.1	36.5	38.9	38.9	37.7	37.7
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-39-42L930-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	2072.7	2072.7	2072.7	2072.7
2.5°	2084.9	2084.9	2074.0	2063.1
5°	2083.7	2081.3	2069.2	2055.8
7.5°	2076.4	2072.7	2057.0	2042.3
10°	2059.4	2054.5	2037.5	2019.3
12.5°	2038.7	2031.4	2011.9	1993.6
15°	2011.9	2003.4	1982.8	1962.0
17.5°	1976.7	1966.9	1946.2	1924.3
20°	1938.9	1927.9	1904.9	1881.7
22.5°	1892.7	1882.9	1858.6	1835.4
25°	1842.7	1831.8	1807.5	1783.1
27.5°	1789.2	1777.1	1752.7	1729.6
30°	1730.8	1718.6	1694.3	1671.1
32.5°	1668.7	1659.0	1634.6	1609.1
35°	1605.4	1593.2	1568.9	1544.5
37.5°	1538.4	1527.5	1504.3	1481.3
40°	1467.8	1456.9	1432.6	1409.5
42.5°	1398.5	1388.7	1365.7	1343.7
45°	1324.3	1314.5	1292.6	1273.1
47.5°	1250.0	1240.3	1219.5	1198.9
50°	1174.5	1164.8	1145.3	1127.1
52.5°	1095.4	1088.1	1069.9	1051.6
55°	1016.3	1007.7	989.5	973.7
57.5°	937.2	931.1	914.1	898.2
60°	855.6	848.3	835.0	821.6
62.5°	776.5	770.4	757.1	744.9
65°	692.5	687.7	676.7	665.8
67.5°	606.1	602.5	591.6	581.8
70°	523.3	517.2	508.8	500.3
72.5°	439.4	436.9	429.7	422.4
75°	359.0	356.6	349.3	343.3
77.5°	283.6	281.1	275.0	268.9
80°	209.4	208.1	203.3	198.4
82.5°	143.6	142.4	138.8	133.9
85°	86.4	84.0	80.3	76.7
87.5°	37.7	36.5	32.8	30.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)