

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-32-34L935-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-32-34L935-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ Nature Pattern Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

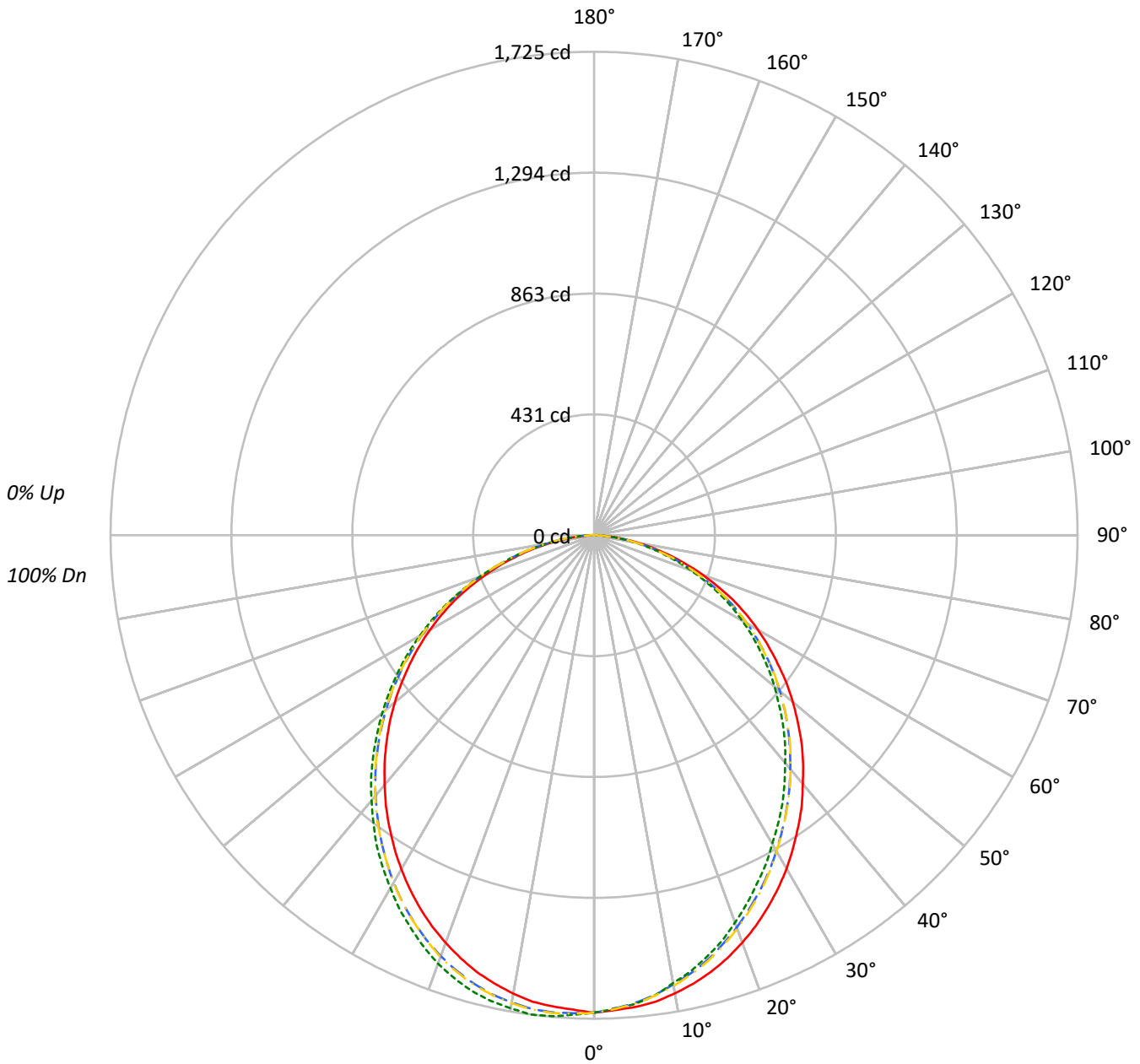
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4503.2 lumens
Efficiency: N/A
Efficacy: 61.7 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): 73
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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70	70	70	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59	59	59	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51	51	51	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44	44	44	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39	39	39	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34	34	34	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31	31	31	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28	28	28	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25	25	25	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15718	15718	15718	15718
5°	15648	15546	15629	15954
10°	15548	15200	15557	16054
15°	15403	14867	15413	16081
20°	15185	14438	15194	15970
25°	14919	13982	14949	15744
30°	14633	13545	14653	15485
35°	14297	13194	14332	15233
40°	13952	12771	14000	14879
45°	13653	12425	13666	14540
50°	13296	12061	13326	14158
55°	12873	11665	12920	13756
60°	12461	11260	12478	13253
65°	11946	10767	11946	12666
70°	11090	9959	11063	11764
75°	10056	9022	9985	10591
80°	8666	7757	8506	9086
85°	6680	5939	6457	7315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.9	3.6
10°-20°	455.5	10.1
20°-30°	674.4	15.0
30°-40°	791.2	17.6
40°-50°	801.9	17.8
50°-60°	711.7	15.8
60°-70°	534.3	11.9
70°-80°	296.7	6.6
80°-90°	76.6	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°	1290.8	28.7
0°-40°	2082.0	46.2
0°-60°	3595.6	79.8
0°-90°	4503.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4503.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1704	1704	1704	1704	1704	
5°	1690	1679	1688	1723	1690	160
15°	1613	1556	1614	1684	1613	454
25°	1466	1374	1468	1547	1466	675
35°	1269	1171	1272	1352	1269	794
45°	1046	952	1047	1114	1046	807
55°	800	725	803	855	800	716
65°	547	493	547	580	547	539
75°	282	253	280	297	282	300
85°	63	56	61	69	63	76
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°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6
2.5°	1695.6	1699.6	1704.6	1699.6	1691.6	1687.5	1687.5	1686.6	1689.6	1690.6	1689.6
5°	1689.6	1691.6	1692.6	1686.6	1677.6	1672.6	1670.6	1669.6	1673.6	1678.6	1673.6
7.5°	1678.6	1677.6	1676.6	1668.5	1658.6	1651.6	1648.5	1647.5	1651.6	1656.6	1652.6
10°	1659.6	1658.6	1655.5	1645.6	1632.6	1623.5	1620.6	1617.6	1620.6	1622.5	1620.6
12.5°	1638.6	1634.5	1630.6	1619.6	1605.6	1595.5	1590.5	1586.6	1590.5	1593.6	1591.6
15°	1612.6	1606.6	1599.6	1587.5	1573.6	1562.5	1556.5	1552.6	1555.5	1556.5	1556.5
17.5°	1581.5	1574.5	1567.5	1552.6	1535.5	1523.5	1516.5	1511.5	1515.5	1517.5	1517.5
20°	1546.6	1538.5	1529.5	1513.6	1495.5	1482.5	1474.5	1468.5	1469.5	1470.5	1470.5
22.5°	1508.5	1498.5	1487.6	1470.5	1451.5	1437.5	1429.5	1422.5	1422.5	1423.5	1423.5
25°	1465.5	1454.5	1443.5	1426.5	1406.5	1391.5	1381.4	1374.4	1374.4	1373.5	1375.4
27.5°	1421.4	1409.5	1398.5	1380.5	1359.5	1344.5	1334.4	1327.5	1326.5	1325.5	1327.5
30°	1373.5	1359.5	1347.5	1328.4	1308.4	1293.5	1283.4	1275.4	1273.5	1271.4	1273.5
32.5°	1322.4	1309.4	1296.4	1276.4	1256.4	1241.4	1231.4	1223.4	1222.4	1221.4	1223.4
35°	1269.4	1255.4	1243.4	1224.4	1204.4	1189.4	1178.4	1171.4	1171.4	1171.4	1171.4
37.5°	1217.4	1203.4	1190.4	1171.4	1151.4	1136.4	1125.4	1118.4	1116.4	1115.3	1116.4
40°	1158.4	1146.4	1134.4	1116.4	1096.4	1081.4	1072.4	1064.4	1062.3	1060.4	1063.3
42.5°	1104.4	1092.4	1079.4	1062.3	1042.3	1027.4	1017.3	1010.3	1009.3	1008.3	1009.3
45°	1046.4	1032.4	1019.4	1003.3	985.3	971.3	961.4	954.4	953.3	952.3	953.3
47.5°	985.3	974.4	963.3	947.4	929.3	915.3	906.3	898.3	896.3	894.3	896.3
50°	926.3	914.3	903.3	888.3	871.3	858.3	850.3	843.3	841.3	840.3	841.3
52.5°	864.3	853.3	843.3	828.3	814.3	801.3	792.3	786.3	785.3	784.3	785.3
55°	800.3	790.2	781.3	769.2	755.3	743.2	735.3	728.3	727.3	725.2	727.3
57.5°	738.2	730.2	721.3	708.3	695.3	684.2	677.2	671.2	670.2	669.2	670.2
60°	675.3	667.3	659.2	648.3	635.3	624.2	618.2	613.2	611.2	610.2	611.2
62.5°	612.2	604.2	598.2	587.2	575.2	566.2	560.2	555.2	553.2	552.2	553.2
65°	547.2	540.2	533.2	523.1	514.2	507.2	501.2	496.1	494.2	493.2	493.2
67.5°	478.1	472.2	467.2	458.1	448.2	441.2	435.2	431.1	429.2	428.2	429.2
70°	411.1	406.1	401.2	394.2	386.1	380.1	376.1	372.1	370.1	369.2	369.2
72.5°	347.1	343.1	338.1	332.1	326.1	320.1	316.2	313.1	311.1	310.1	310.1
75°	282.1	278.1	276.1	271.1	265.1	261.1	257.1	255.1	253.1	253.1	253.1
77.5°	221.1	219.1	217.0	212.1	208.1	204.0	201.1	200.1	198.0	198.0	198.0
80°	163.1	162.1	161.1	158.0	154.1	150.0	148.1	147.1	146.0	146.0	146.0
82.5°	110.0	110.0	109.1	106.0	103.1	102.1	100.0	99.0	99.0	99.0	99.0
85°	63.1	63.1	63.1	62.1	60.0	60.0	58.0	57.0	56.1	56.1	56.1
87.5°	25.0	26.0	27.0	26.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
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°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6
2.5°	1686.6	1688.6	1689.6	1694.5	1700.5	1704.6	1699.6	1694.5	1702.6	1711.6	1711.6
5°	1669.6	1671.6	1674.5	1680.5	1688.6	1693.6	1691.6	1687.5	1699.6	1709.6	1710.6
7.5°	1648.5	1650.6	1654.5	1660.6	1670.6	1677.6	1677.6	1678.6	1689.6	1701.6	1704.6
10°	1617.6	1622.5	1628.5	1637.6	1647.5	1656.6	1659.6	1660.6	1674.5	1687.5	1691.6
12.5°	1588.5	1593.6	1599.6	1609.5	1621.5	1631.6	1634.5	1638.6	1653.6	1668.5	1674.5
15°	1555.5	1560.6	1567.5	1577.5	1590.5	1601.5	1607.5	1613.6	1628.5	1644.6	1651.6
17.5°	1516.5	1521.5	1528.5	1540.6	1555.5	1568.5	1575.5	1582.5	1599.6	1616.5	1623.5
20°	1470.5	1477.5	1487.6	1499.5	1516.5	1531.5	1539.6	1547.5	1565.6	1582.5	1590.5
22.5°	1423.5	1431.5	1442.5	1456.5	1474.5	1490.5	1500.6	1510.5	1528.5	1545.5	1554.5
25°	1376.5	1385.5	1396.5	1411.5	1428.5	1444.5	1456.5	1468.5	1486.5	1504.5	1513.6
27.5°	1328.4	1336.4	1347.5	1362.4	1381.4	1398.5	1410.5	1423.5	1441.5	1460.5	1469.5
30°	1275.4	1284.4	1294.5	1309.4	1330.4	1349.4	1361.4	1375.4	1393.5	1412.5	1421.4
32.5°	1224.4	1232.4	1242.4	1257.4	1278.4	1298.5	1311.5	1325.5	1343.4	1362.4	1370.5
35°	1171.4	1179.4	1190.4	1205.4	1226.4	1245.4	1258.4	1272.5	1289.4	1307.5	1316.4
37.5°	1119.4	1127.4	1138.4	1153.4	1173.4	1192.4	1205.4	1219.4	1236.4	1253.5	1261.4
40°	1065.4	1073.4	1082.3	1097.4	1117.4	1136.4	1148.4	1162.4	1179.4	1197.4	1205.4
42.5°	1010.3	1018.3	1029.3	1044.3	1063.3	1080.4	1093.4	1106.4	1122.4	1138.4	1146.4
45°	955.3	962.3	973.4	987.4	1005.3	1021.4	1034.4	1047.4	1062.3	1077.4	1085.4
47.5°	898.3	906.3	915.3	929.3	947.4	964.3	977.3	989.3	1003.3	1018.3	1025.4
50°	843.3	850.3	859.3	872.3	889.3	905.3	916.3	928.4	941.4	955.3	961.4
52.5°	786.3	793.3	802.2	815.3	829.2	844.3	854.3	865.3	878.3	891.3	897.3
55°	728.3	733.3	741.3	753.3	768.3	782.2	792.3	803.2	814.3	825.3	832.3
57.5°	671.2	677.2	685.2	696.2	709.2	722.2	731.2	740.3	751.2	762.2	767.3
60°	613.2	618.2	624.2	634.2	647.2	658.2	667.3	676.2	685.2	695.3	700.3
62.5°	554.2	559.2	565.2	575.2	586.2	596.2	604.2	612.2	620.2	629.2	634.2
65°	495.2	500.2	506.2	513.2	522.2	531.2	539.2	547.2	553.2	559.2	564.2
67.5°	431.1	436.1	442.2	448.2	456.1	465.1	471.1	478.1	484.1	491.1	494.2
70°	371.1	375.2	381.2	386.1	393.1	399.1	404.1	410.1	414.2	420.2	425.1
72.5°	312.1	316.2	321.1	326.1	330.1	335.1	341.1	346.1	351.1	357.1	359.1
75°	255.1	257.1	261.1	265.1	269.1	273.1	276.1	280.1	284.1	288.1	291.1
77.5°	199.1	201.1	205.1	208.1	211.0	214.1	216.1	218.1	222.1	225.1	228.1
80°	146.0	148.1	151.0	154.1	157.0	160.1	160.1	160.1	165.0	169.1	170.0
82.5°	99.0	100.0	102.1	104.0	106.0	108.1	108.1	107.0	110.0	113.0	115.1
85°	57.0	58.0	60.0	60.0	61.0	61.0	61.0	61.0	63.1	66.0	68.0
87.5°	23.1	23.1	24.0	24.0	25.0	25.0	24.0	23.1	25.0	28.0	29.0
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°	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6	1703.6
2.5°	1707.5	1706.6	1709.6	1710.6	1712.6	1712.6	1713.6	1713.6	1711.6	1708.6	1709.6
5°	1708.6	1708.6	1711.6	1714.6	1718.6	1722.6	1719.6	1716.6	1714.6	1711.6	1710.6
7.5°	1703.6	1705.6	1708.6	1713.6	1718.6	1724.6	1720.5	1716.6	1711.6	1707.5	1705.6
10°	1691.6	1693.6	1698.6	1703.6	1708.6	1713.6	1709.6	1705.6	1701.6	1696.6	1694.5
12.5°	1676.6	1679.6	1685.6	1690.6	1695.6	1701.6	1696.6	1691.6	1686.6	1681.5	1678.6
15°	1654.5	1658.6	1665.6	1671.6	1678.6	1683.6	1679.6	1675.6	1669.6	1662.6	1657.6
17.5°	1626.6	1632.6	1639.6	1646.6	1652.6	1657.6	1654.5	1650.6	1643.6	1635.5	1629.5
20°	1595.5	1601.5	1607.5	1614.5	1621.5	1626.6	1622.5	1617.6	1610.5	1604.6	1598.6
22.5°	1559.6	1565.6	1572.6	1578.6	1584.5	1589.5	1584.5	1578.6	1572.6	1566.6	1560.6
25°	1518.5	1524.5	1532.5	1538.5	1542.5	1546.6	1542.5	1537.5	1531.5	1525.5	1519.5
27.5°	1475.5	1481.5	1489.5	1495.5	1499.5	1503.5	1499.5	1494.5	1488.5	1482.5	1476.5
30°	1427.5	1433.5	1441.5	1447.5	1450.5	1453.5	1449.5	1445.5	1440.5	1434.4	1428.5
32.5°	1376.5	1382.4	1388.4	1394.4	1399.5	1403.5	1399.5	1395.4	1389.5	1381.4	1375.4
35°	1322.4	1328.4	1335.4	1341.4	1347.5	1352.5	1346.5	1339.5	1334.4	1329.4	1324.5
37.5°	1265.4	1272.5	1280.5	1287.5	1289.4	1293.5	1289.4	1285.5	1280.5	1275.4	1269.4
40°	1209.4	1215.4	1222.4	1229.4	1232.4	1235.4	1231.4	1227.5	1221.4	1216.4	1210.4
42.5°	1151.4	1157.4	1163.4	1169.4	1173.4	1177.4	1173.4	1167.4	1163.4	1159.4	1154.4
45°	1091.4	1097.4	1102.3	1108.3	1111.4	1114.4	1110.4	1105.4	1101.4	1098.4	1093.4
47.5°	1030.3	1035.3	1040.4	1045.4	1047.4	1050.3	1046.4	1043.3	1040.4	1037.3	1033.4
50°	966.3	971.3	977.3	982.3	983.3	986.4	982.3	979.3	976.3	973.4	970.3
52.5°	903.3	907.3	912.3	917.3	919.3	921.4	917.3	913.3	910.3	908.4	905.3
55°	837.3	841.3	846.3	850.3	853.3	855.2	851.3	847.3	844.3	843.3	840.3
57.5°	771.3	775.3	780.3	784.3	786.3	788.3	784.3	780.3	778.3	776.2	774.3
60°	704.2	708.3	712.2	715.3	717.2	718.2	714.3	711.2	710.2	709.2	707.3
62.5°	638.2	640.2	644.2	646.2	648.3	649.2	646.2	644.2	643.2	642.3	641.3
65°	569.2	574.2	577.2	579.2	579.2	580.2	577.2	576.2	575.2	574.2	572.2
67.5°	498.2	502.2	504.1	506.2	506.2	506.2	506.2	506.2	505.2	503.1	501.2
70°	430.1	433.2	435.2	436.1	436.1	436.1	434.2	433.2	434.2	434.2	433.2
72.5°	361.1	363.1	364.1	365.1	364.1	364.1	364.1	366.1	366.1	365.1	363.1
75°	294.1	296.1	297.1	298.1	297.1	297.1	297.1	299.1	298.1	298.1	297.1
77.5°	231.1	232.1	232.1	233.1	232.1	232.1	233.1	235.1	234.1	234.1	234.1
80°	171.0	171.0	171.0	172.0	171.0	171.0	172.0	174.1	173.1	173.1	173.1
82.5°	116.1	117.0	117.0	117.0	118.0	119.0	119.0	119.0	119.0	119.0	118.0
85°	69.1	70.0	69.1	69.1	69.1	69.1	70.0	71.0	71.0	71.0	71.0
87.5°	30.0	31.0	30.0	29.0	28.0	28.0	30.0	32.0	32.0	31.0	31.0
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-32-34L935-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1703.6	1703.6	1703.6	1703.6
2.5°	1713.6	1713.6	1704.6	1695.6
5°	1712.6	1710.6	1700.5	1689.6
7.5°	1706.6	1703.6	1690.6	1678.6
10°	1692.6	1688.6	1674.5	1659.6
12.5°	1675.6	1669.6	1653.6	1638.6
15°	1653.6	1646.6	1629.5	1612.6
17.5°	1624.6	1616.5	1599.6	1581.5
20°	1593.6	1584.5	1565.6	1546.6
22.5°	1555.5	1547.5	1527.5	1508.5
25°	1514.5	1505.5	1485.5	1465.5
27.5°	1470.5	1460.5	1440.5	1421.4
30°	1422.5	1412.5	1392.5	1373.5
32.5°	1371.5	1363.5	1343.4	1322.4
35°	1319.5	1309.4	1289.4	1269.4
37.5°	1264.4	1255.4	1236.4	1217.4
40°	1206.4	1197.4	1177.4	1158.4
42.5°	1149.4	1141.4	1122.4	1104.4
45°	1088.3	1080.4	1062.3	1046.4
47.5°	1027.4	1019.4	1002.3	985.3
50°	965.3	957.3	941.4	926.3
52.5°	900.3	894.3	879.3	864.3
55°	835.2	828.3	813.3	800.3
57.5°	770.2	765.3	751.2	738.2
60°	703.2	697.2	686.2	675.3
62.5°	638.2	633.2	622.3	612.2
65°	569.2	565.2	556.2	547.2
67.5°	498.2	495.2	486.2	478.1
70°	430.1	425.1	418.1	411.1
72.5°	361.1	359.1	353.1	347.1
75°	295.1	293.1	287.1	282.1
77.5°	233.1	231.1	226.1	221.1
80°	172.0	171.0	167.1	163.1
82.5°	118.0	117.0	114.1	110.0
85°	71.0	69.1	66.0	63.1
87.5°	31.0	30.0	27.0	25.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)