

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: NEO-RAY

Report Number: P334214

Luminaire Tested: **SA4XXRDP-C1195D927-4F0-1E-UDD-A**

Issue Date: 10/11/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P334214  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-31)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 10/11/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDP-C1195D927-4F0-1E-UDD-A  
Description: DEFINE 4 REGRESSED DIRECT LED LUMINAIRE, ASYMMETRIC DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 1195 LUMENS PER FOOT  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

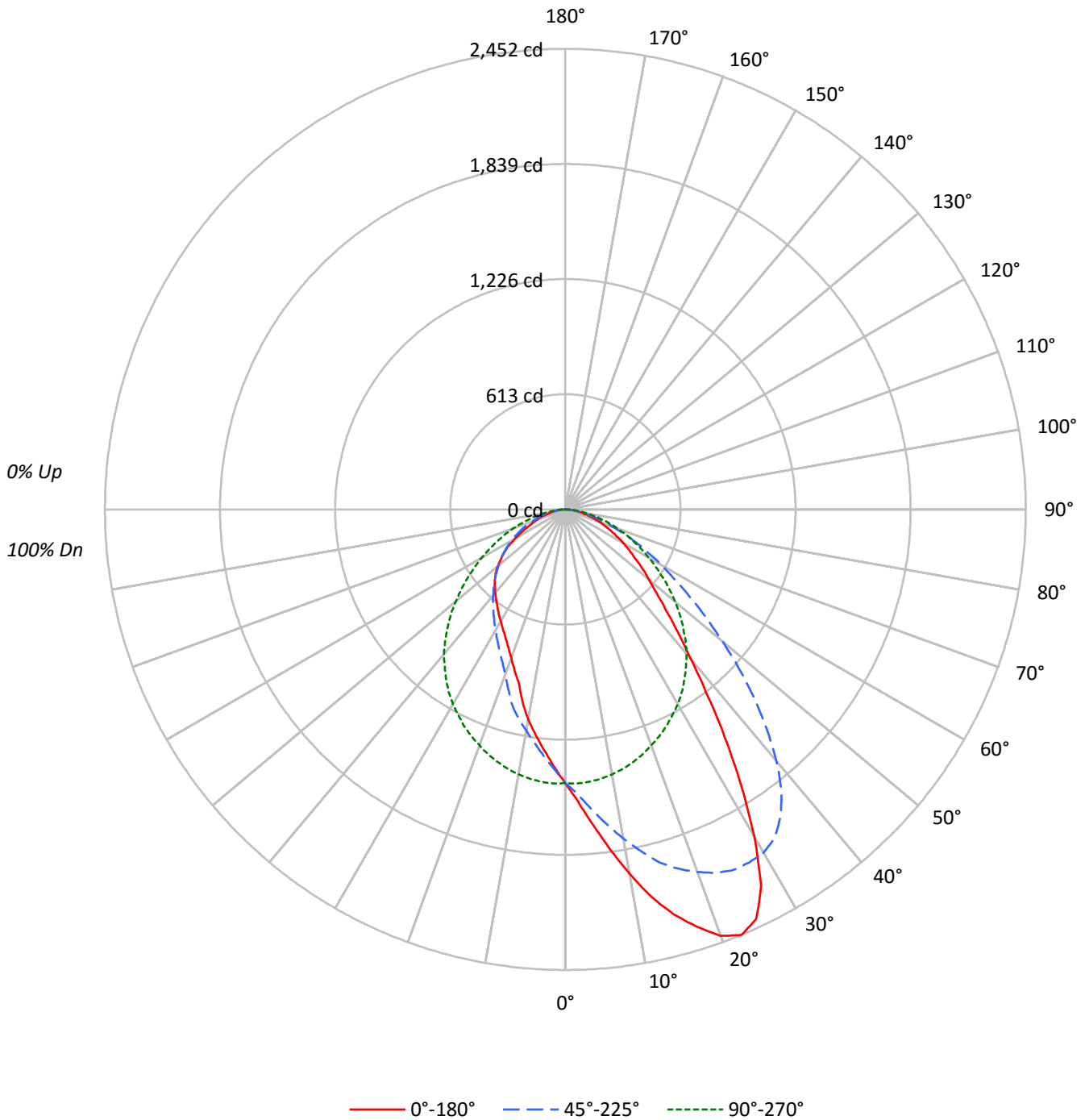
Lumens per Lamp: N/A  
Luminaire Lumens: 3683.2 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.22 / 1.39  
Luminous Opening: Rectangular (W 4' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.1  
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



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### Luminous Intensity Polar Plot





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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	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	100	100	100	100	100	100	100	100	100																
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86	86	86	86	86	86	86	86	86	86	86	86															
2	101	93	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74	74	74	74	74	74	74	74	74	74	74	74	74	74															
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63	63	63	63	63	63	63	63	63	63	63	63	63	63															
4	85	74	66	60	83	73	65	59	71	64	59	68	63	58	66	61	57	55	55	55	55	55	55	55	55	55	55	55	55	55	55															
5	79	67	58	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48	48	48	48	48	48	48	48	48	48	48	48	48	48															
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43	43	43	43	43	43	43	43	43	43	43	43	43	43															
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38	38	38	38	38	38	38	38	38	38	38	38	38	38															
8	64	51	42	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34	34	34	34	34	34	34	34	34	34	34	34	34	34															
9	59	47	39	33	58	46	38	33	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31	31	31	31	31	31	31	31	31															
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	28	28	28	28	28	28	28	28	28	28	28	28	28	28															

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	11762	11762	11762
5°	13644	11798	10428
10°	16140	11747	9307
15°	18644	11638	7998
20°	20759	11489	7232
25°	21429	11342	6714
30°	18759	11164	6402
35°	14603	10900	6214
40°	10951	10597	6112
45°	8646	10113	6059
50°	7299	9555	5884
55°	6362	8940	5569
60°	5725	8302	4929
65°	5047	7614	4239
70°	4544	6899	3824
75°	3808	6117	3260
80°	3222	5212	3054
85°	2723	4076	2723



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.1	3.8
10°-20°	426.0	11.6
20°-30°	667.4	18.1
30°-40°	741.1	20.1
40°-50°	656.7	17.8
50°-60°	511.8	13.9
60°-70°	334.8	9.1
70°-80°	164.3	4.5
80°-90°	40.0	1.1
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°	1234.5	33.5
0°-40°	1975.6	53.6
0°-60°	3144.2	85.4
0°-90°	3683.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3683.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1457	1457	1457	1457	1457	
5°	1684	1603	1456	1317	1287	170
15°	2231	1948	1392	1085	957	635
25°	2406	2118	1273	830	754	1074
35°	1482	1998	1106	667	630	927
45°	757	1424	886	530	531	597
55°	452	805	635	400	396	411
65°	264	414	399	259	222	265
75°	122	157	196	126	104	134
85°	29	32	44	31	29	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1556.8	1556.8	1556.8	1556.2	1550.4	1548.6	1546.3	1538.6	1524.5	1516.3	1518.1
5°	1683.6	1683.6	1690.1	1688.9	1676.0	1663.1	1654.9	1636.1	1616.1	1602.6	1591.5
7.5°	1824.5	1824.5	1827.5	1821.0	1798.7	1791.6	1772.3	1750.0	1716.5	1691.3	1668.4
10°	1968.9	1968.9	1973.6	1958.4	1943.1	1912.0	1894.4	1859.7	1814.5	1778.7	1745.3
12.5°	2111.0	2111.0	2093.4	2098.1	2065.8	2042.9	2012.4	1966.6	1912.6	1863.9	1819.8
15°	2230.8	2230.8	2221.4	2209.6	2177.3	2143.3	2114.5	2068.7	2003.0	1947.8	1889.7
17.5°	2329.4	2329.4	2328.8	2298.8	2275.4	2240.7	2189.1	2136.8	2079.9	2005.9	1948.4
20°	2416.3	2416.3	2411.0	2392.2	2359.3	2321.7	2264.8	2206.7	2129.2	2054.6	1987.7
22.5°	2451.5	2453.8	2447.4	2432.7	2403.9	2367.5	2321.2	2261.9	2181.4	2095.1	2008.3
25°	2405.7	2416.8	2418.0	2413.9	2405.1	2382.8	2341.1	2280.6	2209.0	2118.0	2028.8
27.5°	2257.8	2272.4	2278.3	2291.2	2315.3	2324.1	2318.8	2278.3	2209.0	2119.2	2030.6
30°	2012.4	2024.1	2062.3	2112.2	2150.9	2186.1	2216.7	2224.9	2189.7	2111.0	2016.5
32.5°	1740.0	1757.0	1795.2	1849.8	1920.8	1986.5	2064.6	2106.3	2113.9	2074.6	1988.9
35°	1481.7	1493.4	1528.7	1585.0	1662.5	1751.1	1859.7	1944.3	2001.8	1997.7	1944.3
37.5°	1234.0	1250.4	1286.2	1332.6	1408.9	1522.2	1624.9	1738.2	1841.5	1892.0	1865.0
40°	1039.1	1039.6	1074.3	1122.4	1192.9	1288.6	1403.0	1532.2	1650.8	1747.6	1766.4
42.5°	885.3	885.3	905.2	958.0	1003.8	1092.5	1200.5	1328.5	1472.3	1587.9	1645.5
45°	757.3	762.6	781.3	812.5	852.4	928.7	1016.2	1135.3	1290.9	1423.6	1506.3
47.5°	656.3	665.7	676.9	705.0	737.9	791.3	865.9	977.4	1106.6	1253.9	1368.4
50°	581.2	582.3	597.6	611.7	639.3	679.8	743.2	832.4	948.7	1089.0	1219.9
52.5°	516.6	516.0	523.6	542.4	563.6	592.9	641.0	720.3	820.1	942.2	1078.4
55°	452.0	455.0	462.0	476.1	493.1	515.4	555.9	617.0	698.0	805.4	928.1
57.5°	402.7	404.5	410.9	416.2	432.6	449.1	482.0	526.0	597.0	686.8	807.2
60°	354.6	355.2	356.9	365.7	378.1	393.3	413.9	449.7	507.2	587.6	678.0
62.5°	307.6	308.8	311.7	317.6	326.4	335.8	357.5	384.5	429.7	495.5	574.7
65°	264.2	264.8	268.9	271.2	278.8	288.2	304.1	323.5	356.3	413.9	475.5
67.5°	227.8	227.8	227.8	231.3	237.2	243.6	254.2	270.6	297.0	334.0	391.6
70°	192.5	192.5	193.7	195.5	198.4	203.7	209.0	220.7	238.9	267.7	309.4
72.5°	159.7	160.3	161.4	161.4	162.6	166.7	170.2	176.7	189.0	209.0	240.7
75°	122.1	123.9	126.8	129.1	132.1	131.5	135.6	140.3	144.4	157.3	176.7
77.5°	96.3	95.1	95.1	97.4	98.0	98.6	101.6	105.7	109.2	116.2	123.3
80°	69.3	69.3	71.0	71.6	71.0	71.6	74.6	76.3	77.5	79.8	86.3
82.5°	48.1	49.3	48.1	48.7	49.3	49.9	52.2	52.2	53.4	54.0	55.8
85°	29.4	29.9	30.5	29.4	29.4	29.4	30.5	31.1	32.3	31.7	32.9
87.5°	12.9	12.3	12.9	12.9	13.5	12.9	13.5	14.7	13.5	14.1	14.1
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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1512.2	1504.0	1499.9	1490.5	1479.3	1473.5	1468.2	1460.6	1450.6	1440.0	1432.4
5°	1577.4	1563.3	1545.7	1524.5	1505.8	1487.6	1471.7	1455.9	1437.7	1418.9	1400.1
7.5°	1642.0	1616.7	1589.7	1557.4	1526.3	1497.5	1471.7	1446.5	1417.7	1391.9	1367.8
10°	1710.0	1672.5	1630.8	1586.8	1542.7	1504.6	1467.0	1433.0	1395.4	1361.9	1333.8
12.5°	1765.2	1719.4	1667.2	1609.7	1554.5	1506.3	1461.7	1414.8	1370.7	1333.8	1293.8
15°	1827.5	1767.0	1699.5	1633.7	1565.0	1502.2	1444.1	1392.5	1343.7	1292.7	1256.9
17.5°	1870.3	1800.5	1720.6	1644.3	1565.6	1492.8	1427.1	1367.2	1311.4	1260.4	1218.1
20°	1907.9	1828.6	1737.6	1647.8	1556.8	1477.6	1405.4	1337.3	1279.2	1222.8	1178.8
22.5°	1929.0	1839.2	1737.6	1642.5	1547.4	1460.0	1379.0	1307.3	1242.8	1186.4	1136.5
25°	1930.2	1836.3	1734.7	1626.7	1523.4	1432.4	1350.2	1273.3	1202.8	1146.5	1094.8
27.5°	1925.5	1816.9	1714.7	1605.0	1498.7	1401.9	1316.7	1235.1	1165.3	1105.4	1052.6
30°	1911.4	1792.8	1681.3	1566.2	1458.2	1366.0	1275.1	1197.6	1124.2	1061.4	1007.9
32.5°	1880.9	1763.5	1641.4	1522.8	1413.0	1317.3	1232.2	1154.1	1082.5	1017.9	960.4
35°	1838.6	1719.4	1589.1	1468.2	1360.8	1262.1	1181.1	1106.0	1037.3	968.6	908.7
37.5°	1789.9	1665.4	1536.9	1404.2	1297.4	1203.4	1127.7	1055.5	988.6	925.8	859.4
40°	1714.7	1603.8	1469.9	1338.5	1228.1	1138.3	1069.6	1005.6	938.1	875.9	809.5
42.5°	1623.8	1533.3	1397.7	1265.7	1157.1	1071.3	1008.5	946.3	886.4	826.6	756.7
45°	1520.4	1448.8	1322.0	1195.2	1085.4	999.7	941.0	885.8	831.8	774.3	709.1
47.5°	1405.4	1352.5	1242.2	1109.5	1006.8	928.1	871.8	826.0	778.4	720.3	661.6
50°	1284.4	1253.3	1147.7	1029.1	932.2	861.2	803.1	760.8	722.6	667.5	616.4
52.5°	1155.3	1142.4	1057.3	945.1	852.4	783.1	735.6	698.6	659.8	616.4	569.4
55°	1023.8	1032.6	956.9	858.8	770.8	712.1	666.9	635.2	602.3	563.6	526.6
57.5°	887.0	920.5	864.1	775.5	690.4	635.2	600.5	572.4	544.8	511.9	478.4
60°	766.7	793.7	764.9	689.2	617.0	566.5	534.8	514.2	486.7	457.3	433.2
62.5°	649.3	678.6	664.5	607.0	541.3	499.6	472.6	453.8	435.0	410.3	385.1
65°	554.8	573.5	565.3	523.1	475.5	438.5	412.7	398.6	379.8	361.0	338.7
67.5°	443.8	480.8	474.9	451.4	405.6	376.3	358.1	345.2	327.6	313.5	297.6
70°	349.3	382.7	382.2	364.0	341.7	314.7	302.9	292.3	277.1	263.6	251.3
72.5°	270.0	300.0	305.8	292.9	279.4	260.6	249.5	243.0	228.4	220.1	210.7
75°	200.2	222.5	228.4	228.4	221.3	210.7	200.8	196.1	185.5	177.3	171.4
77.5°	140.9	156.2	165.0	166.7	167.3	163.2	153.8	150.3	142.1	139.1	132.7
80°	92.8	102.1	112.7	116.2	119.2	118.0	114.5	112.1	104.5	101.6	99.2
82.5°	56.9	61.1	69.3	78.1	76.3	80.4	77.5	75.7	70.4	69.9	67.5
85°	33.5	34.0	35.2	40.5	43.4	44.6	45.2	44.0	42.3	42.3	38.2
87.5°	14.1	13.5	14.7	14.7	15.3	17.6	19.4	20.0	18.2	16.4	14.7
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°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1424.2	1418.3	1410.7	1401.9	1391.3	1381.9	1377.8	1381.3	1383.1	1378.4	1377.8
5°	1387.2	1372.5	1360.8	1343.1	1329.1	1317.3	1309.1	1305.6	1306.8	1297.4	1295.0
7.5°	1346.1	1330.2	1310.9	1290.9	1272.1	1255.7	1246.9	1242.8	1232.8	1228.7	1222.2
10°	1306.8	1283.3	1264.5	1239.8	1217.5	1197.0	1187.0	1178.8	1168.8	1164.1	1154.1
12.5°	1266.2	1238.1	1216.9	1191.1	1168.2	1142.4	1133.0	1116.0	1098.9	1087.8	1074.3
15°	1228.7	1195.8	1170.6	1140.0	1113.0	1084.8	1059.6	1031.4	1020.9	998.6	985.6
17.5°	1184.1	1150.0	1121.8	1082.5	1042.0	1007.9	979.8	950.4	934.6	919.3	912.8
20°	1140.0	1109.5	1066.1	1018.5	972.1	933.4	911.7	894.1	876.5	866.5	859.4
22.5°	1098.4	1057.3	1005.0	952.8	906.4	878.2	860.6	842.4	828.9	819.5	809.5
25°	1050.8	999.7	946.3	887.6	855.9	829.5	809.5	794.9	786.0	773.7	769.0
27.5°	1004.4	942.8	882.3	842.4	809.5	784.3	766.1	755.5	743.8	735.6	729.1
30°	949.2	886.4	833.6	796.0	762.6	742.6	728.5	715.6	706.8	700.3	695.6
32.5°	894.6	831.8	789.6	748.5	723.8	704.4	689.2	680.4	673.9	665.1	662.8
35°	842.4	786.6	747.9	711.5	684.5	666.9	655.1	645.2	639.3	636.9	635.2
37.5°	791.3	745.0	702.1	672.7	647.5	634.0	618.7	614.0	609.9	604.7	607.0
40°	743.2	700.3	663.4	631.7	612.3	597.0	588.8	582.9	579.4	579.4	579.4
42.5°	701.5	659.8	624.0	596.4	577.1	564.7	555.3	550.6	550.1	549.5	553.0
45°	658.1	619.3	582.9	559.4	543.0	530.1	524.8	520.7	520.7	523.1	523.6
47.5°	614.6	578.2	548.9	521.9	506.6	498.4	493.7	491.4	491.4	494.3	496.6
50°	575.3	539.5	510.7	487.2	473.2	465.5	461.4	460.2	461.4	461.4	465.5
52.5°	532.4	501.3	473.2	454.4	437.9	430.9	429.1	427.4	428.0	430.3	431.5
55°	490.8	462.0	435.0	416.2	404.5	399.8	394.5	395.1	393.9	395.1	395.1
57.5°	448.5	423.3	396.8	381.6	371.6	364.6	358.7	360.4	358.7	358.7	358.1
60°	408.0	379.8	359.9	346.4	334.6	328.7	323.5	324.6	322.9	321.7	319.3
62.5°	364.0	341.7	322.9	310.0	301.2	294.1	288.8	287.1	282.4	277.7	271.8
65°	321.7	302.3	285.3	273.0	264.2	258.9	254.8	251.3	242.4	233.1	228.4
67.5°	280.0	265.9	249.5	238.9	231.9	224.8	217.2	210.7	201.9	196.1	193.1
70°	240.1	226.6	213.1	203.1	195.5	189.0	180.2	176.1	170.2	167.9	165.0
72.5°	201.9	189.6	177.3	168.5	160.3	155.6	149.1	145.0	143.2	142.7	139.7
75°	163.2	153.2	143.8	135.6	129.1	125.6	122.7	119.8	118.6	113.3	110.4
77.5°	125.6	118.6	112.7	106.3	102.1	99.8	93.3	89.2	86.9	83.9	83.4
80°	92.8	88.1	82.2	78.7	72.2	69.9	67.5	66.9	66.3	65.7	65.2
82.5°	64.0	59.3	53.4	51.7	51.1	49.9	48.7	48.1	47.6	48.1	48.1
85°	35.2	32.9	32.9	32.3	31.7	31.1	30.5	30.5	29.9	30.5	29.9
87.5°	14.7	14.1	14.1	12.9	13.5	13.5	12.9	12.9	13.5	12.3	12.3
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: P334214

CATALOG NUMBER: SA4XXRDP-C1195D927-4F0-1E-UDD-A

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1457.0	1457.0	1457.0	1457.0
2.5°	1374.3	1375.4	1371.3	1370.2
5°	1290.3	1289.1	1286.2	1286.8
7.5°	1217.5	1213.4	1216.3	1211.6
10°	1151.8	1145.3	1140.0	1135.3
12.5°	1062.0	1056.7	1049.0	1052.0
15°	978.0	969.2	955.1	956.9
17.5°	902.9	904.0	895.8	898.2
20°	847.1	843.0	843.6	841.8
22.5°	808.4	803.1	797.8	793.7
25°	763.7	760.2	754.9	753.8
27.5°	724.4	723.8	721.5	718.5
30°	690.9	689.8	688.6	686.8
32.5°	661.0	660.4	659.2	659.8
35°	632.8	632.2	631.1	630.5
37.5°	606.4	608.2	607.0	607.0
40°	578.8	579.4	580.6	580.0
42.5°	555.9	555.9	557.7	555.3
45°	527.7	531.3	530.7	530.7
47.5°	497.8	501.9	502.5	502.5
50°	468.5	467.3	469.0	468.5
52.5°	432.6	433.2	432.6	432.1
55°	395.7	396.3	395.1	395.7
57.5°	356.3	354.0	355.7	354.6
60°	313.5	308.8	307.6	305.3
62.5°	265.3	262.4	257.7	260.6
65°	223.7	221.3	219.6	221.9
67.5°	190.2	189.0	189.0	187.9
70°	165.0	163.2	163.2	162.0
72.5°	139.1	137.4	138.0	137.4
75°	106.8	103.9	103.9	104.5
77.5°	83.4	82.8	83.9	82.2
80°	65.2	64.6	64.0	65.7
82.5°	47.0	47.0	47.0	49.3
85°	30.5	29.4	30.5	29.4
87.5°	13.5	12.9	12.3	12.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)