

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: P331863-940

Luminaire Tested: **S122RDIW-S1005D1440U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331863-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S1005D1440U940-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1440 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8246.4 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

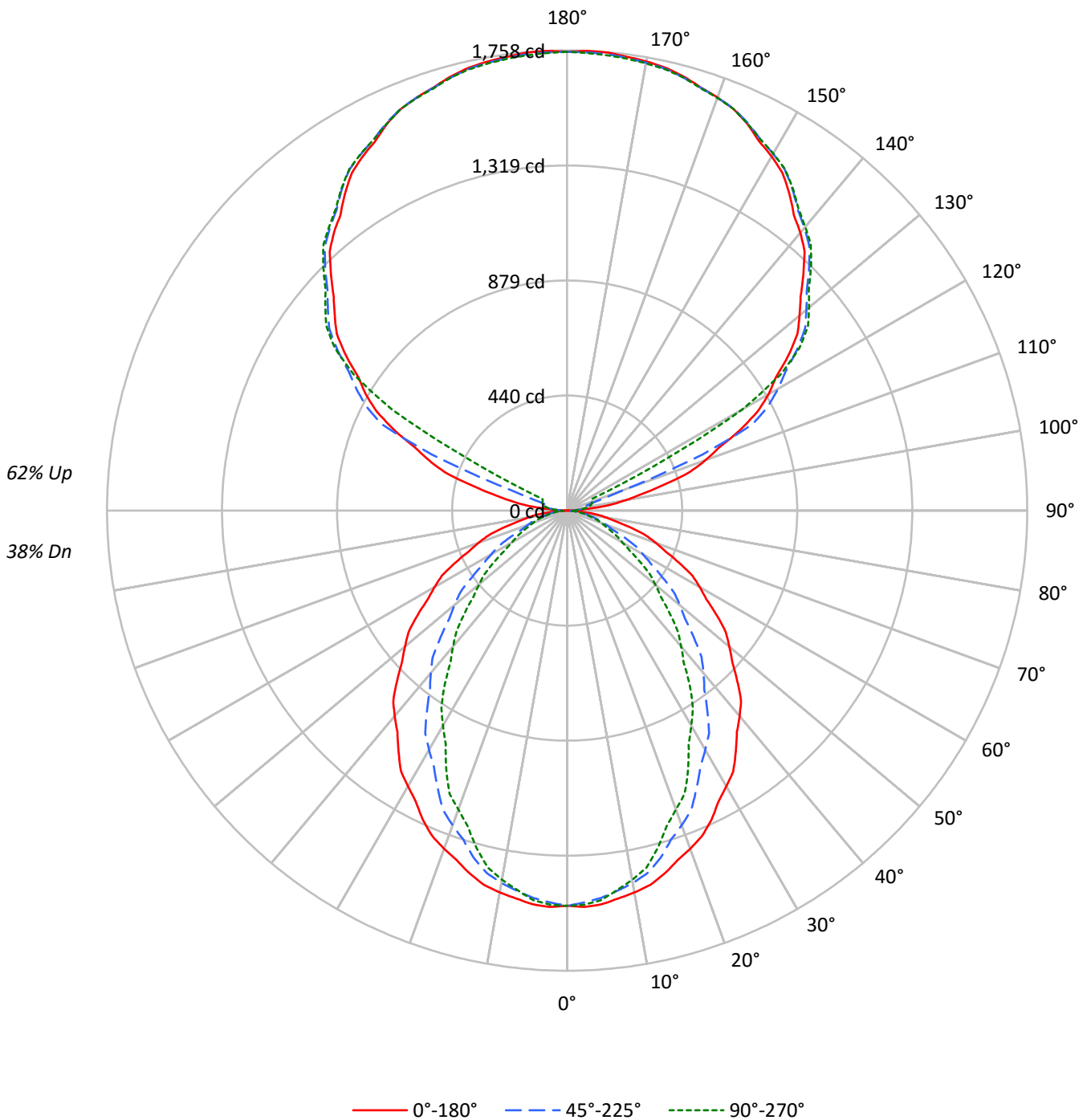
Input Watts (W): 82.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
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	0
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	39	32
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	34	33	28
3	80	71	64	58	72	64	59	54	53	49	45	42	39	37	32	30	28	24
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18
6	62	50	43	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16	13
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11

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

	0°	45°	90°
0°	24380	24380	24380
5°	24473	24076	24209
10°	24287	23682	23481
15°	24008	22980	22318
20°	23622	21978	20874
25°	23225	20838	19475
30°	22676	19669	17682
35°	22141	18398	16109
40°	21602	17081	14286
45°	20970	15602	12638
50°	20321	14109	11017
55°	19657	12504	9464
60°	18887	10811	7857
65°	18010	9085	7156
70°	16966	7482	6581
75°	15689	6818	6138
80°	13845	6100	5588
85°	10893	4798	4798



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	1.7
10°-20°	388.1	4.7
20°-30°	545.0	6.6
30°-40°	594.3	7.2
40°-50°	546.4	6.6
50°-60°	429.2	5.2
60°-70°	279.8	3.4
70°-80°	144.3	1.7
80°-90°	41.7	0.5
90°-100°	58.5	0.7
100°-110°	214.4	2.6
110°-120°	573.1	6.9
120°-130°	946.0	11.5
130°-140°	1006.1	12.2
140°-150°	935.1	11.3
150°-160°	751.8	9.1
160°-170°	484.5	5.9
170°-180°	166.8	2.0
0°-30°	1074.4	13.0
0°-40°	1668.7	20.2
0°-60°	2644.3	32.1
0°-90°	3110.1	37.7
90°-120°	846.0	10.3
90°-150°	3733.2	45.3
90°-180°	5136.0	62.3
0°-180°	8246.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1510	1503	1486	1497	1494	143
15°	1436	1419	1375	1350	1335	404
25°	1304	1257	1170	1116	1093	599
35°	1123	1051	933	850	817	703
45°	918	824	683	590	554	709
55°	698	589	444	365	336	624
65°	471	360	238	194	187	467
75°	252	158	109	100	98	266
85°	59	31	26	26	26	69
90°	1	15	25	32	34	6
95°	82	43	50	55	55	101
105°	386	402	77	91	96	412
115°	729	751	782	223	104	718
125°	1031	1048	1072	1080	1084	919
135°	1276	1296	1308	1319	1318	985
145°	1480	1480	1500	1508	1503	925
155°	1630	1620	1633	1640	1631	751
165°	1717	1710	1713	1721	1713	485
175°	1756	1748	1750	1758	1746	167
180°	1753	1753	1753	1753	1753	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1515.6	1514.3	1513.1	1511.9	1510.6	1508.7	1506.0	1503.4	1500.7	1498.1	1500.5
5°	1510.0	1508.5	1507.0	1505.5	1504.0	1501.3	1497.3	1493.3	1489.4	1485.5	1488.2
7.5°	1494.5	1492.6	1490.8	1488.8	1486.9	1483.7	1479.1	1474.4	1469.9	1465.3	1466.1
10°	1481.4	1479.3	1477.1	1475.0	1472.8	1468.7	1462.7	1456.6	1450.5	1444.5	1443.6
12.5°	1465.0	1462.3	1459.7	1457.1	1454.6	1449.3	1441.5	1433.8	1426.0	1418.3	1416.6
15°	1436.3	1432.9	1429.6	1426.2	1422.9	1416.0	1405.8	1395.4	1385.1	1374.8	1369.0
17.5°	1401.0	1395.9	1390.8	1385.7	1380.6	1371.5	1358.2	1345.0	1331.7	1318.5	1311.6
20°	1374.8	1368.7	1362.6	1356.6	1350.5	1339.9	1324.6	1309.5	1294.3	1279.1	1271.5
22.5°	1346.3	1339.5	1332.8	1326.0	1319.1	1307.2	1290.0	1272.9	1255.8	1238.7	1228.9
25°	1303.7	1294.0	1284.2	1274.5	1264.8	1250.0	1229.9	1209.9	1189.8	1169.7	1157.4
27.5°	1252.3	1241.8	1231.2	1220.7	1210.1	1193.5	1170.9	1148.3	1125.7	1103.1	1088.6
30°	1216.3	1204.7	1193.2	1181.6	1170.1	1152.2	1127.8	1103.6	1079.3	1055.0	1039.5
32.5°	1181.2	1167.8	1154.3	1140.9	1127.3	1108.2	1083.4	1058.6	1033.8	1009.1	991.4
35°	1123.3	1107.9	1092.3	1076.8	1061.4	1040.3	1013.5	986.9	960.1	933.4	914.3
37.5°	1065.4	1048.4	1031.4	1014.3	997.4	974.6	946.1	917.7	889.1	860.7	839.6
40°	1024.9	1006.7	988.5	970.3	952.1	928.2	898.8	869.3	839.8	810.4	788.8
42.5°	983.4	964.2	945.0	925.8	906.6	881.8	851.4	820.9	790.5	760.1	737.8
45°	918.4	898.0	877.6	857.3	837.0	810.8	778.9	747.1	715.2	683.3	661.7
47.5°	854.9	833.4	811.8	790.2	768.7	741.5	708.6	675.6	642.7	609.8	588.4
50°	809.0	787.5	765.9	744.3	722.7	695.3	661.9	628.5	595.0	561.7	540.7
52.5°	764.2	741.6	719.2	696.6	674.0	646.5	613.8	581.1	548.4	515.8	495.5
55°	698.3	674.7	650.9	627.2	603.6	575.3	542.5	509.7	477.0	444.2	425.9
57.5°	630.8	606.5	582.2	557.9	533.6	505.7	474.2	442.6	411.2	379.6	362.9
60°	584.9	560.6	536.3	512.0	487.7	459.9	428.6	397.3	366.0	334.8	319.3
62.5°	540.1	515.8	491.5	467.2	442.9	415.8	386.0	356.1	326.4	296.6	281.8
65°	471.4	446.8	422.3	397.7	373.1	347.1	319.8	292.5	265.1	237.8	227.5
67.5°	405.3	380.9	356.5	332.1	307.6	283.1	258.6	234.0	209.4	184.8	180.0
70°	359.4	335.7	312.0	288.4	264.7	242.4	221.4	200.5	179.5	158.5	155.5
72.5°	315.7	292.9	270.3	247.5	224.8	205.0	188.2	171.4	154.5	137.8	135.2
75°	251.5	230.2	208.9	187.7	166.4	150.6	140.3	130.0	119.7	109.3	107.2
77.5°	188.3	169.7	151.1	132.4	113.7	101.9	96.9	91.9	86.9	82.0	80.8
80°	148.9	133.5	118.0	102.5	87.0	77.8	74.7	71.7	68.7	65.6	64.4
82.5°	112.9	100.8	88.7	76.6	64.6	57.4	55.4	53.3	51.3	49.2	48.5
85°	58.8	52.3	46.0	39.6	33.3	29.6	28.7	27.8	26.8	25.9	25.9
87.5°	17.7	16.4	15.1	13.7	12.5	12.0	12.5	12.9	13.4	13.8	13.8
90°	1.2	4.4	7.5	10.6	13.6	16.3	18.6	20.9	23.1	25.3	26.8
92.5°	25.6	25.3	25.1	24.8	24.5	24.9	26.0	27.2	28.3	29.4	30.1
95°	82.4	73.1	63.8	54.6	45.2	41.6	43.5	45.5	47.5	49.5	50.8
97.5°	163.6	137.4	111.2	85.0	58.8	48.0	52.5	57.1	61.6	66.2	67.3
100°	224.4	185.8	147.2	108.6	70.0	53.1	57.9	62.7	67.5	72.3	74.5
102.5°	291.4	283.3	275.1	266.9	258.8	234.6	194.6	154.4	114.4	74.3	77.2
105°	385.6	394.0	402.4	410.9	419.4	385.1	308.2	231.2	154.3	77.4	80.4
107.5°	492.8	499.6	506.5	513.3	520.1	477.4	385.1	292.8	200.5	108.3	105.1
110°	561.9	567.8	573.6	579.6	585.5	547.7	466.3	384.9	303.4	221.9	193.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	626.8	632.0	637.2	642.5	647.7	640.2	620.2	600.0	579.9	559.8	457.0
115°	729.2	734.1	738.8	743.6	748.4	754.3	761.3	768.4	775.4	782.5	652.0
117.5°	820.8	826.2	831.5	836.9	842.2	847.3	852.1	857.0	861.8	866.7	835.2
120°	887.8	892.0	896.2	900.4	904.6	909.3	914.4	919.4	924.5	929.6	933.0
122.5°	944.6	949.0	953.5	958.0	962.4	967.4	972.9	978.4	983.9	989.4	991.5
125°	1031.1	1034.7	1038.4	1042.1	1045.7	1050.3	1055.6	1061.0	1066.3	1071.7	1073.6
127.5°	1109.5	1113.5	1117.6	1121.6	1125.7	1129.7	1133.7	1137.7	1141.7	1145.8	1148.6
130°	1159.1	1163.7	1168.1	1172.7	1177.2	1181.0	1184.1	1187.2	1190.3	1193.4	1196.5
132.5°	1209.9	1213.7	1217.5	1221.4	1225.2	1228.7	1231.8	1234.8	1238.0	1241.1	1243.8
135°	1275.9	1280.3	1284.9	1289.3	1293.9	1297.4	1299.9	1302.4	1305.0	1307.5	1310.4
137.5°	1342.6	1345.7	1348.9	1352.0	1355.1	1358.2	1361.0	1364.0	1366.8	1369.7	1372.4
140°	1386.2	1388.4	1390.7	1392.9	1395.2	1397.8	1401.0	1404.1	1407.2	1410.2	1412.8
142.5°	1422.7	1424.7	1426.7	1428.8	1430.8	1433.6	1437.2	1440.7	1444.2	1447.8	1450.1
145°	1480.1	1479.7	1479.4	1479.2	1478.9	1481.1	1485.9	1490.8	1495.5	1500.3	1502.3
147.5°	1530.0	1528.9	1527.9	1526.8	1525.7	1527.5	1532.2	1537.0	1541.8	1546.5	1547.9
150°	1562.5	1560.5	1558.5	1556.6	1554.5	1555.9	1560.3	1564.9	1569.3	1573.9	1575.6
152.5°	1589.8	1587.7	1585.5	1583.2	1581.1	1582.1	1586.4	1590.6	1594.9	1599.2	1600.9
155°	1629.7	1627.1	1624.6	1622.0	1619.5	1620.0	1623.4	1626.7	1630.1	1633.4	1635.1
157.5°	1660.9	1658.8	1656.6	1654.5	1652.3	1652.4	1654.7	1657.2	1659.5	1661.9	1663.8
160°	1679.1	1677.4	1675.8	1674.1	1672.4	1672.4	1674.1	1675.8	1677.4	1679.1	1680.8
162.5°	1695.3	1693.7	1692.0	1690.3	1688.6	1688.5	1690.0	1691.4	1692.9	1694.3	1696.3
165°	1717.2	1715.5	1713.8	1712.1	1710.4	1710.0	1710.8	1711.6	1712.5	1713.3	1715.4
167.5°	1733.4	1731.7	1730.0	1728.3	1726.6	1726.2	1727.0	1727.8	1728.6	1729.4	1731.3
170°	1742.6	1740.9	1739.2	1737.5	1735.8	1735.2	1735.8	1736.3	1736.9	1737.5	1739.5
172.5°	1748.6	1747.0	1745.3	1743.6	1741.9	1741.3	1741.9	1742.4	1743.0	1743.6	1745.5
175°	1756.5	1754.5	1752.6	1750.6	1748.6	1747.9	1748.5	1749.0	1749.6	1750.2	1752.1
177.5°	1757.7	1756.2	1754.6	1753.0	1751.4	1750.8	1751.0	1751.2	1751.4	1751.7	1753.3
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1502.9	1505.3	1507.8	1508.7	1508.2	1507.8	1507.3	1506.8
5°	1490.9	1493.7	1496.4	1497.3	1496.4	1495.5	1494.6	1493.7
7.5°	1466.8	1467.6	1468.4	1468.0	1466.4	1464.8	1463.3	1461.7
10°	1442.6	1441.7	1440.8	1439.5	1437.6	1435.8	1434.0	1432.2
12.5°	1415.0	1413.3	1411.7	1409.3	1406.3	1403.3	1400.3	1397.2
15°	1363.2	1357.5	1351.7	1347.3	1344.3	1341.2	1338.2	1335.2
17.5°	1304.8	1297.9	1291.0	1285.0	1279.8	1274.5	1269.3	1264.1
20°	1263.9	1256.3	1248.8	1241.6	1234.9	1228.2	1221.6	1214.9
22.5°	1219.1	1209.3	1199.5	1192.1	1187.2	1182.2	1177.2	1172.2
25°	1144.9	1132.5	1120.0	1111.5	1106.9	1102.3	1097.8	1093.2
27.5°	1074.1	1059.5	1045.0	1034.1	1026.9	1019.7	1012.4	1005.2
30°	1024.0	1008.5	993.0	981.2	973.0	964.8	956.6	948.4
32.5°	973.7	956.1	938.3	925.7	918.0	910.3	902.5	894.8
35°	895.1	876.0	856.8	843.9	837.2	830.5	823.9	817.3
37.5°	818.5	797.5	776.3	762.0	754.4	746.7	739.0	731.4
40°	767.2	745.6	724.2	709.4	701.5	693.6	685.7	677.8
42.5°	715.5	693.2	670.9	655.9	648.3	640.6	633.0	625.4
45°	640.2	618.6	597.0	582.6	575.3	568.0	560.7	553.5
47.5°	566.9	545.5	524.0	510.0	503.4	496.8	490.1	483.5
50°	519.8	498.8	477.9	464.1	457.8	451.4	445.1	438.6
52.5°	475.3	455.0	434.9	421.8	415.9	410.0	404.1	398.2
55°	407.7	389.5	371.2	359.3	353.5	347.7	342.0	336.2
57.5°	346.3	329.5	312.8	302.0	297.2	292.3	287.5	282.6
60°	303.8	288.4	272.9	262.7	257.8	253.0	248.1	243.3
62.5°	267.1	252.3	237.6	228.6	225.8	222.8	219.9	217.0
65°	217.1	206.8	196.4	190.8	189.9	189.0	188.2	187.3
67.5°	175.3	170.6	165.8	162.9	162.0	161.0	160.1	159.1
70°	152.5	149.5	146.4	144.3	143.0	141.8	140.6	139.4
72.5°	132.7	130.1	127.5	125.9	125.2	124.5	123.7	123.0
75°	105.0	103.0	100.9	99.6	99.3	99.0	98.7	98.4
77.5°	79.5	78.4	77.1	76.2	75.8	75.3	74.8	74.4
80°	63.1	62.0	60.7	60.1	60.1	60.1	60.1	60.1
82.5°	47.7	47.0	46.3	45.9	45.9	45.9	45.9	45.9
85°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
87.5°	13.9	13.9	14.0	14.1	14.2	14.3	14.4	14.5
90°	28.2	29.6	31.0	32.0	32.5	33.1	33.7	34.2
92.5°	30.9	31.7	32.4	32.9	33.3	33.5	33.9	34.2
95°	52.3	53.7	55.1	55.6	55.4	55.1	54.8	54.6
97.5°	68.5	69.6	70.7	71.4	71.8	72.1	72.5	72.8
100°	76.8	79.1	81.3	82.8	83.3	83.8	84.4	85.0
102.5°	80.2	83.1	86.1	87.9	88.7	89.4	90.2	91.0
105°	83.6	86.7	89.8	91.8	93.0	94.2	95.2	96.4
107.5°	102.0	98.8	95.7	94.7	95.8	96.9	98.1	99.2
110°	165.6	137.4	109.2	95.7	96.8	97.9	99.1	100.2





TEST NUMBER: P331863-940

CATALOG NUMBER: S122RDIW-S1005D1440U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	354.2	251.4	148.6	97.6	98.5	99.4	100.3	101.2
115°	521.6	391.0	260.6	185.1	164.9	144.5	124.3	104.0
117.5°	803.6	772.0	740.5	691.3	624.6	557.9	491.2	424.6
120°	936.4	939.8	943.2	925.8	887.8	849.7	811.6	773.6
122.5°	993.5	995.6	997.6	994.9	987.5	980.2	972.8	965.4
125°	1075.6	1077.5	1079.5	1080.9	1081.8	1082.6	1083.5	1084.3
127.5°	1151.5	1154.3	1157.2	1158.8	1158.9	1159.0	1159.2	1159.4
130°	1199.6	1202.7	1205.8	1207.2	1206.9	1206.7	1206.4	1206.0
132.5°	1246.3	1249.0	1251.7	1252.9	1252.6	1252.3	1252.1	1251.7
135°	1313.1	1316.0	1318.8	1319.9	1319.4	1318.8	1318.2	1317.7
137.5°	1375.2	1378.0	1380.7	1381.6	1380.6	1379.7	1378.8	1377.8
140°	1415.3	1417.9	1420.4	1420.9	1419.6	1418.2	1416.8	1415.3
142.5°	1452.4	1454.7	1457.1	1457.5	1456.1	1454.6	1453.3	1451.9
145°	1504.2	1506.2	1508.2	1508.5	1507.1	1505.7	1504.2	1502.9
147.5°	1549.4	1550.9	1552.4	1552.5	1551.3	1550.2	1548.9	1547.7
150°	1577.3	1579.0	1580.6	1580.7	1579.4	1578.0	1576.5	1575.1
152.5°	1602.6	1604.3	1606.0	1605.9	1604.0	1602.2	1600.4	1598.5
155°	1636.8	1638.5	1640.2	1639.9	1637.7	1635.5	1633.2	1630.9
157.5°	1665.7	1667.6	1669.6	1669.4	1667.2	1665.0	1662.8	1660.6
160°	1682.5	1684.2	1685.9	1685.8	1683.8	1681.8	1679.8	1677.8
162.5°	1698.2	1700.1	1702.0	1701.7	1699.3	1696.9	1694.5	1692.1
165°	1717.3	1719.3	1721.3	1721.3	1719.3	1717.3	1715.4	1713.3
167.5°	1733.3	1735.3	1737.2	1737.0	1734.5	1731.9	1729.4	1726.8
170°	1741.4	1743.4	1745.3	1745.1	1742.6	1740.0	1737.5	1734.9
172.5°	1747.5	1749.4	1751.4	1751.1	1748.6	1746.1	1743.6	1741.0
175°	1754.1	1756.0	1758.0	1757.7	1754.8	1751.9	1749.2	1746.3
177.5°	1754.8	1756.4	1758.0	1757.7	1755.7	1753.7	1751.7	1749.6
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7

(END OF REPORT)