

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: P331859-940

Luminaire Tested: **S122RDIW-S1005D1240U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331859-940  
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-S1005D1240U940-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1240 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7527.2 lumens  
Efficiency: N/A  
Efficacy: 98.8 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: General Diffuse

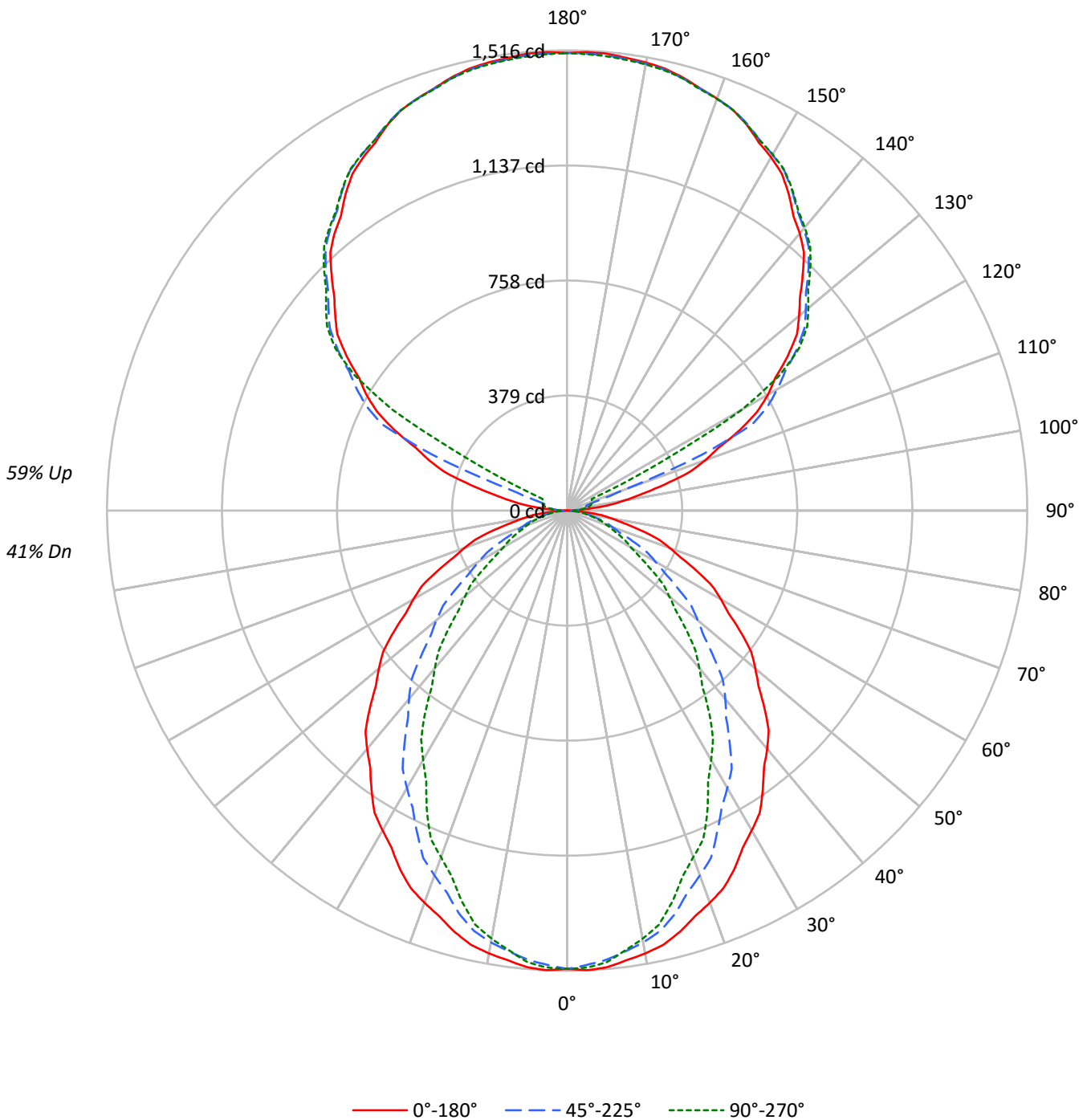
Input Watts (W): 76.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20	
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	88	81	75	70	80	74	69	65	61	58	55	49	47	45	38	37	35	30
3	80	71	64	59	73	65	59	55	54	50	46	44	41	38	34	32	31	26
4	74	63	56	50	67	58	52	47	48	44	40	39	36	33	31	29	27	23
5	68	57	49	43	62	52	45	40	44	38	35	36	32	29	28	26	24	20
6	63	51	43	37	57	47	40	35	39	34	30	32	28	26	26	23	21	18
7	58	46	38	33	53	42	36	31	36	31	27	29	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	14
9	50	38	31	26	46	35	29	25	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	33	26	22	28	23	19	23	19	17	19	16	14	12

**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	1.9
10°-20°	388.1	5.2
20°-30°	545.0	7.2
30°-40°	594.3	7.9
40°-50°	546.4	7.3
50°-60°	429.2	5.7
60°-70°	279.8	3.7
70°-80°	144.3	1.9
80°-90°	41.1	0.5
90°-100°	50.3	0.7
100°-110°	184.4	2.4
110°-120°	492.9	6.5
120°-130°	813.7	10.8
130°-140°	865.3	11.5
140°-150°	804.3	10.7
150°-160°	646.7	8.6
160°-170°	416.7	5.5
170°-180°	143.4	1.9
0°-30°	1074.4	14.3
0°-40°	1668.7	22.2
0°-60°	2644.3	35.1
0°-90°	3109.5	41.3
90°-120°	727.6	9.7
90°-150°	3210.9	42.7
90°-180°	4418.0	58.7
0°-180°	7527.2	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	13	22	27	29	6
95°	71	37	42	48	47	87
105°	332	346	66	78	83	354
115°	627	646	673	192	89	617
125°	887	901	922	929	933	790
135°	1097	1114	1125	1135	1133	847
145°	1273	1273	1290	1297	1293	796
155°	1402	1393	1405	1411	1403	646
165°	1477	1471	1474	1480	1474	417
175°	1511	1504	1505	1512	1502	144
180°	1507	1507	1507	1507	1507	



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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	16.3	14.9	13.5	12.0	11.6	11.9	12.3	12.8	13.1	13.1
90°	1.1	3.7	6.4	9.1	11.8	14.1	16.0	17.9	19.9	21.8	23.0
92.5°	22.0	21.8	21.6	21.3	21.0	21.4	22.4	23.4	24.3	25.3	25.9
95°	70.9	62.9	54.9	46.9	38.9	35.8	37.5	39.1	40.8	42.5	43.8
97.5°	140.7	118.2	95.6	73.1	50.6	41.2	45.1	49.0	53.1	57.0	57.9
100°	193.1	159.9	126.6	93.5	60.3	45.7	49.8	53.9	58.1	62.2	64.1
102.5°	250.7	243.6	236.6	229.6	222.6	201.8	167.3	132.9	98.4	63.9	66.4
105°	331.6	338.9	346.2	353.4	360.7	331.3	265.1	198.9	132.7	66.5	69.2
107.5°	423.9	429.7	435.6	441.5	447.4	410.6	331.3	251.9	172.5	93.2	90.4
110°	483.2	488.3	493.4	498.5	503.5	471.1	401.1	331.0	260.9	190.9	166.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.0	543.6	548.0	552.6	557.1	550.7	533.4	516.1	498.8	481.4	393.1
115°	627.2	631.3	635.4	639.5	643.7	648.8	654.9	660.9	667.0	673.1	560.8
117.5°	706.0	710.6	715.2	719.8	724.4	728.8	732.9	737.1	741.3	745.5	718.3
120°	763.6	767.2	770.8	774.5	778.1	782.1	786.5	790.9	795.2	799.5	802.5
122.5°	812.4	816.3	820.1	823.9	827.8	832.1	836.8	841.5	846.3	851.0	852.7
125°	886.8	889.9	893.1	896.3	899.4	903.3	907.9	912.5	917.1	921.8	923.5
127.5°	954.2	957.7	961.2	964.7	968.2	971.7	975.1	978.6	982.0	985.4	987.9
130°	997.0	1000.9	1004.8	1008.6	1012.5	1015.7	1018.4	1021.1	1023.8	1026.4	1029.1
132.5°	1040.6	1043.9	1047.2	1050.5	1053.8	1056.8	1059.4	1062.1	1064.8	1067.5	1069.7
135°	1097.3	1101.2	1105.1	1108.9	1112.9	1115.9	1118.0	1120.3	1122.4	1124.6	1127.0
137.5°	1154.7	1157.4	1160.1	1162.9	1165.6	1168.1	1170.6	1173.1	1175.5	1178.0	1180.4
140°	1192.2	1194.2	1196.1	1198.0	1200.0	1202.3	1205.0	1207.6	1210.3	1213.0	1215.1
142.5°	1223.7	1225.4	1227.2	1228.9	1230.7	1233.1	1236.1	1239.1	1242.2	1245.3	1247.2
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1292.1
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.4
150°	1343.9	1342.2	1340.5	1338.7	1337.0	1338.2	1342.0	1345.9	1349.8	1353.7	1355.1
152.5°	1367.4	1365.6	1363.6	1361.7	1359.9	1360.8	1364.4	1368.2	1371.8	1375.5	1377.0
155°	1401.7	1399.5	1397.3	1395.1	1392.9	1393.3	1396.2	1399.1	1402.0	1405.0	1406.4
157.5°	1428.5	1426.6	1424.8	1423.0	1421.1	1421.2	1423.3	1425.3	1427.4	1429.4	1431.0
160°	1444.2	1442.8	1441.3	1439.8	1438.4	1438.4	1439.8	1441.3	1442.8	1444.2	1445.6
162.5°	1458.2	1456.7	1455.3	1453.8	1452.3	1452.2	1453.5	1454.7	1456.1	1457.3	1458.9
165°	1476.9	1475.5	1474.0	1472.6	1471.1	1470.8	1471.5	1472.2	1472.9	1473.6	1475.3
167.5°	1490.9	1489.4	1488.0	1486.6	1485.1	1484.7	1485.4	1486.0	1486.7	1487.4	1489.1
170°	1498.8	1497.3	1495.8	1494.4	1492.9	1492.5	1492.9	1493.4	1493.9	1494.4	1496.1
172.5°	1504.0	1502.5	1501.1	1499.6	1498.2	1497.7	1498.2	1498.6	1499.1	1499.6	1501.3
175°	1510.7	1509.0	1507.3	1505.7	1504.0	1503.3	1503.9	1504.3	1504.9	1505.3	1507.0
177.5°	1511.8	1510.5	1509.1	1507.8	1506.4	1505.8	1506.0	1506.2	1506.4	1506.6	1508.0
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4



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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°	13.1	13.1	13.1	13.2	13.3	13.4	13.5	13.6
90°	24.3	25.4	26.7	27.6	28.0	28.4	29.0	29.4
92.5°	26.6	27.2	27.8	28.3	28.5	28.9	29.2	29.4
95°	44.9	46.2	47.3	47.9	47.6	47.3	47.2	46.9
97.5°	58.9	59.8	60.8	61.4	61.7	62.1	62.3	62.6
100°	66.1	67.9	69.9	71.2	71.6	72.1	72.6	73.1
102.5°	68.9	71.5	74.0	75.6	76.2	77.0	77.7	78.3
105°	71.9	74.5	77.2	79.0	80.0	81.0	81.9	82.9
107.5°	87.7	85.0	82.3	81.4	82.4	83.4	84.4	85.3
110°	142.4	118.2	93.9	82.3	83.3	84.3	85.2	86.1





TEST NUMBER: P331859-940

CATALOG NUMBER: S122RDIW-S1005D1240U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.6	216.2	127.8	83.9	84.7	85.5	86.2	87.0
115°	448.5	336.4	224.1	159.3	141.8	124.4	106.9	89.4
117.5°	691.2	664.0	636.9	594.6	537.3	479.9	422.6	365.2
120°	805.4	808.2	811.2	796.3	763.6	730.8	698.1	665.4
122.5°	854.5	856.3	858.0	855.7	849.4	843.0	836.7	830.3
125°	925.1	926.8	928.5	929.7	930.4	931.2	931.9	932.6
127.5°	990.3	992.8	995.3	996.7	996.8	996.9	997.0	997.2
130°	1031.8	1034.5	1037.1	1038.3	1038.0	1037.9	1037.6	1037.3
132.5°	1072.0	1074.2	1076.6	1077.5	1077.4	1077.1	1076.8	1076.7
135°	1129.4	1131.8	1134.3	1135.2	1134.8	1134.3	1133.8	1133.4
137.5°	1182.8	1185.2	1187.6	1188.3	1187.5	1186.7	1185.9	1185.0
140°	1217.4	1219.5	1221.7	1222.2	1220.9	1219.8	1218.5	1217.4
142.5°	1249.2	1251.2	1253.2	1253.6	1252.4	1251.2	1249.9	1248.8
145°	1293.8	1295.5	1297.2	1297.4	1296.2	1295.0	1293.8	1292.6
147.5°	1332.7	1333.9	1335.2	1335.2	1334.3	1333.2	1332.2	1331.2
150°	1356.6	1358.1	1359.5	1359.6	1358.4	1357.2	1355.9	1354.8
152.5°	1378.4	1379.8	1381.3	1381.3	1379.7	1378.0	1376.4	1374.8
155°	1407.8	1409.3	1410.8	1410.5	1408.5	1406.7	1404.7	1402.8
157.5°	1432.7	1434.3	1436.0	1435.8	1434.0	1432.1	1430.2	1428.3
160°	1447.2	1448.6	1450.0	1449.9	1448.2	1446.5	1444.8	1443.1
162.5°	1460.6	1462.2	1463.9	1463.7	1461.6	1459.5	1457.4	1455.4
165°	1477.0	1478.7	1480.4	1480.4	1478.7	1477.0	1475.3	1473.6
167.5°	1490.8	1492.5	1494.2	1494.0	1491.7	1489.6	1487.4	1485.2
170°	1497.8	1499.5	1501.2	1500.9	1498.8	1496.6	1494.4	1492.2
172.5°	1503.0	1504.7	1506.4	1506.2	1504.0	1501.8	1499.6	1497.4
175°	1508.7	1510.4	1512.1	1511.7	1509.3	1506.9	1504.4	1502.0
177.5°	1509.3	1510.6	1512.1	1511.8	1510.1	1508.3	1506.6	1504.9
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4

(END OF REPORT)