

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: P331860-940

Luminaire Tested: **S122RDIW-S1005D1240U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331860-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
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-F1  
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, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6942.4 lumens  
Efficiency: N/A  
Efficacy: 91.1 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

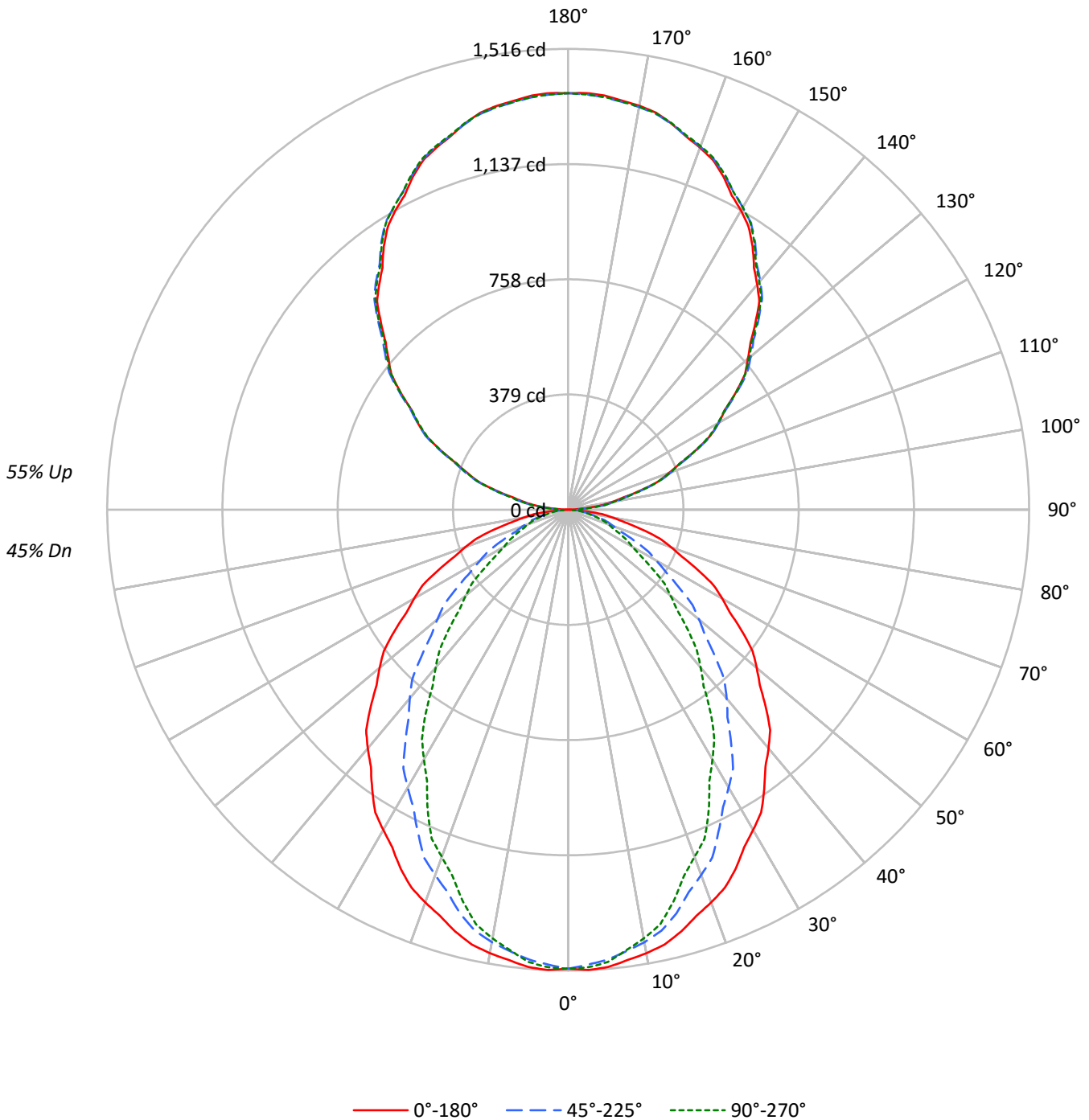
Input Watts (W): 76.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39				
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33				
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	28				
4	74	64	56	51	68	59	52	47	50	45	41	41	38	35	33	31	29	25				
5	68	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22				
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	25	22	19				
7	58	47	39	33	54	43	36	32	37	31	28	31	27	24	25	22	20	17				
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16				
9	51	39	31	27	46	36	30	25	31	26	22	26	22	19	21	19	16	14				
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13				

**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	2.0
10°-20°	388.1	5.6
20°-30°	545.0	7.9
30°-40°	594.3	8.6
40°-50°	546.4	7.9
50°-60°	429.2	6.2
60°-70°	279.8	4.0
70°-80°	144.3	2.1
80°-90°	42.9	0.6
90°-100°	86.8	1.3
100°-110°	269.6	3.9
110°-120°	460.9	6.6
120°-130°	606.1	8.7
130°-140°	680.3	9.8
140°-150°	667.1	9.6
150°-160°	559.5	8.1
160°-170°	371.1	5.3
170°-180°	129.7	1.9
0°-30°	1074.4	15.5
0°-40°	1668.7	24.0
0°-60°	2644.3	38.1
0°-90°	3111.3	44.8
90°-120°	817.4	11.8
90°-150°	2770.9	39.9
90°-180°	3831.0	55.2
0°-180°	6942.4	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	16	40	38	39	6
95°	60	71	74	74	72	69
105°	249	252	254	257	257	263
115°	462	469	467	466	462	457
125°	673	683	680	677	675	601
135°	871	883	886	884	881	672
145°	1057	1065	1072	1073	1068	660
155°	1208	1212	1215	1220	1218	556
165°	1315	1314	1314	1321	1316	371
175°	1368	1364	1362	1369	1363	130
180°	1370	1370	1370	1370	1370	



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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	12.4	12.3	13.5	14.5	15.7	16.9	16.5
90°	1.2	4.3	7.3	10.4	13.5	17.8	23.5	29.2	34.8	40.5	39.9
92.5°	20.6	22.8	25.1	27.4	29.6	31.4	32.7	34.1	35.4	36.7	36.8
95°	60.1	62.7	65.3	67.9	70.4	72.0	72.5	72.9	73.5	74.0	74.0
97.5°	109.9	112.1	114.4	116.6	118.9	120.5	121.5	122.4	123.4	124.4	124.4
100°	146.9	148.9	151.0	153.0	155.1	156.5	157.2	158.0	158.8	159.5	159.5
102.5°	185.7	187.3	189.0	190.6	192.3	193.6	194.6	195.6	196.5	197.5	197.7
105°	248.6	249.3	250.1	250.9	251.6	252.4	252.8	253.3	253.9	254.4	254.9
107.5°	311.9	313.1	314.2	315.3	316.5	317.0	317.0	317.0	317.0	317.0	317.3
110°	352.7	354.2	355.7	357.3	358.8	359.6	359.6	359.6	359.6	359.6	359.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	397.1	398.6	400.1	401.7	403.2	403.9	403.7	403.5	403.2	403.1	402.4
115°	462.5	464.0	465.6	467.1	468.7	469.1	468.7	468.1	467.6	467.1	466.9
117.5°	527.7	529.8	531.8	533.9	535.9	536.3	534.8	533.3	531.9	530.5	529.9
120°	571.1	573.2	575.3	577.4	579.4	579.4	577.4	575.3	573.2	571.1	571.1
122.5°	610.9	613.4	615.9	618.3	620.8	621.3	619.9	618.5	617.0	615.5	614.9
125°	672.9	675.2	677.5	679.8	682.2	683.0	682.2	681.4	680.6	679.8	679.1
127.5°	733.3	736.2	739.1	742.1	745.0	746.0	745.1	744.1	743.2	742.3	741.4
130°	771.2	774.5	777.9	781.2	784.5	786.0	785.5	785.0	784.4	783.9	783.4
132.5°	813.8	816.5	819.2	821.9	824.7	826.1	826.2	826.3	826.3	826.4	825.4
135°	870.7	873.4	876.3	879.1	882.0	883.6	884.1	884.7	885.2	885.6	885.4
137.5°	930.5	932.8	935.1	937.5	939.8	941.3	941.9	942.6	943.3	944.0	943.8
140°	966.6	968.9	971.3	973.6	975.9	977.7	978.9	980.3	981.5	982.8	982.8
142.5°	1003.6	1005.9	1008.3	1010.6	1012.9	1014.4	1015.3	1016.2	1017.1	1018.0	1018.2
145°	1056.8	1058.6	1060.4	1062.2	1064.0	1065.7	1067.2	1068.7	1070.3	1071.8	1072.1
147.5°	1104.2	1106.3	1108.5	1110.7	1112.9	1114.5	1115.4	1116.5	1117.5	1118.6	1119.1
150°	1136.6	1138.1	1139.7	1141.2	1142.7	1144.1	1145.0	1146.1	1147.1	1148.2	1148.9
152.5°	1165.3	1166.8	1168.3	1169.8	1171.4	1172.8	1174.0	1175.3	1176.5	1177.8	1178.8
155°	1208.3	1209.1	1209.8	1210.6	1211.4	1212.1	1212.9	1213.6	1214.4	1215.2	1216.5
157.5°	1245.0	1245.5	1246.1	1246.6	1247.1	1247.6	1248.0	1248.5	1248.9	1249.5	1251.2
160°	1267.2	1267.7	1268.3	1268.8	1269.3	1269.7	1269.9	1270.2	1270.4	1270.7	1272.2
162.5°	1287.5	1287.7	1287.8	1287.9	1288.0	1288.2	1288.4	1288.7	1289.0	1289.2	1290.9
165°	1314.6	1314.4	1314.1	1313.8	1313.6	1313.5	1313.5	1313.5	1313.5	1313.5	1315.3
167.5°	1337.3	1336.5	1335.8	1335.0	1334.2	1333.8	1333.7	1333.7	1333.6	1333.6	1335.4
170°	1349.3	1348.5	1347.8	1347.0	1346.2	1345.8	1345.5	1345.2	1345.0	1344.7	1346.5
172.5°	1357.6	1356.9	1356.1	1355.3	1354.6	1354.1	1353.8	1353.5	1353.3	1353.0	1354.9
175°	1367.8	1367.1	1366.3	1365.5	1364.8	1364.1	1363.6	1363.1	1362.5	1362.0	1363.9
177.5°	1372.0	1371.4	1370.7	1370.1	1369.5	1369.0	1368.6	1368.2	1367.8	1367.3	1368.6
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1



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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°	16.1	15.8	15.4	15.3	15.3	15.4	15.4	15.5
90°	39.4	39.0	38.4	38.3	38.5	38.8	39.1	39.3
92.5°	37.0	37.1	37.2	37.3	37.3	37.4	37.5	37.5
95°	74.0	74.0	74.0	73.7	73.2	72.7	72.2	71.7
97.5°	124.4	124.4	124.4	124.4	124.3	124.3	124.2	124.2
100°	159.5	159.5	159.5	159.4	159.2	158.9	158.6	158.4
102.5°	197.9	198.1	198.3	198.3	198.0	197.8	197.5	197.2
105°	255.4	255.9	256.5	256.7	256.7	256.7	256.7	256.7
107.5°	317.4	317.6	317.9	317.4	316.2	315.0	313.8	312.6
110°	359.6	359.6	359.6	359.2	358.5	357.7	356.9	356.1





TEST NUMBER: P331860-940

CATALOG NUMBER: S122RDIW-S1005D1240U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	401.8	401.2	400.6	400.0	399.4	398.9	398.3	397.7
115°	466.6	466.4	466.1	465.6	464.8	464.0	463.2	462.5
117.5°	529.2	528.6	528.0	527.4	526.6	525.8	525.0	524.2
120°	571.1	571.1	571.1	570.8	570.0	569.3	568.5	567.8
122.5°	614.4	613.8	613.1	612.5	612.0	611.4	610.8	610.3
125°	678.3	677.5	676.8	676.3	676.0	675.7	675.5	675.2
127.5°	740.5	739.5	738.6	737.7	736.9	736.1	735.3	734.4
130°	782.9	782.4	781.9	781.1	780.1	779.1	778.0	776.9
132.5°	824.2	823.0	822.0	821.0	820.2	819.3	818.5	817.7
135°	885.2	884.9	884.7	884.1	883.3	882.6	881.8	881.0
137.5°	943.5	943.3	943.2	942.5	941.5	940.5	939.4	938.4
140°	982.8	982.8	982.8	982.3	981.2	980.3	979.2	978.2
142.5°	1018.3	1018.6	1018.8	1018.3	1017.4	1016.3	1015.3	1014.2
145°	1072.4	1072.6	1072.8	1072.5	1071.5	1070.4	1069.4	1068.4
147.5°	1119.6	1120.3	1120.8	1120.6	1119.6	1118.7	1117.7	1116.7
150°	1149.7	1150.5	1151.2	1151.2	1150.5	1149.7	1148.9	1148.2
152.5°	1179.7	1180.6	1181.6	1181.6	1180.6	1179.7	1178.8	1177.8
155°	1217.8	1219.1	1220.3	1220.6	1219.9	1219.1	1218.3	1217.5
157.5°	1252.9	1254.6	1256.4	1256.7	1255.4	1254.2	1252.9	1251.7
160°	1273.8	1275.3	1276.8	1277.1	1276.1	1275.1	1274.1	1273.0
162.5°	1292.7	1294.4	1296.2	1296.5	1295.2	1294.0	1292.7	1291.6
165°	1317.1	1318.8	1320.7	1320.9	1319.6	1318.4	1317.1	1315.8
167.5°	1337.2	1339.0	1340.8	1341.0	1339.7	1338.4	1337.0	1335.7
170°	1348.3	1350.1	1351.9	1352.0	1350.5	1349.0	1347.4	1345.9
172.5°	1356.6	1358.4	1360.2	1360.3	1358.8	1357.3	1355.8	1354.2
175°	1365.7	1367.4	1369.2	1369.4	1367.8	1366.3	1364.8	1363.2
177.5°	1369.8	1371.1	1372.3	1372.3	1371.1	1369.8	1368.6	1367.3
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1

(END OF REPORT)