

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: P331855-935

Luminaire Tested: **S122RDIW-S1005D970U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331855-935
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-S1005D970U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 970 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6333.6 lumens
Efficiency: N/A
Efficacy: 94.0 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

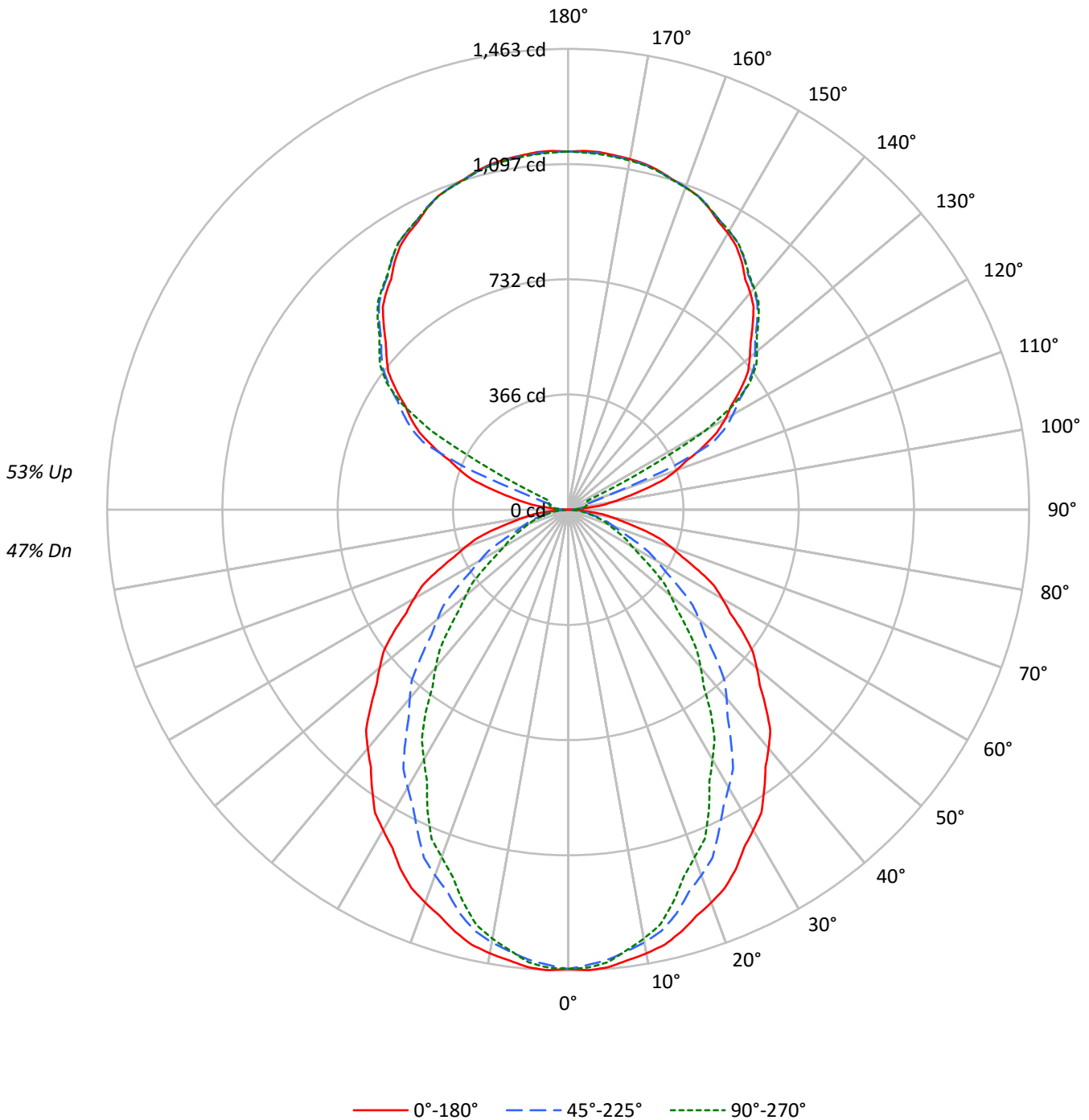
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	98	94	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	38	36	34	30
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	35	32	30	26
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	31	29	26	23
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23	21
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21	18
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	17
9	51	39	32	27	47	37	30	25	32	26	23	27	23	20	22	19	17	15
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23541	23541	23541
5°	23631	23246	23376
10°	23451	22866	22673
15°	23181	22188	21549
20°	22807	21220	20155
25°	22425	20122	18805
30°	21895	18990	17074
35°	21378	17763	15554
40°	20858	16493	13793
45°	20247	15066	12202
50°	19623	13622	10638
55°	18978	12073	9137
60°	18235	10440	7585
65°	17391	8772	6907
70°	16386	7227	6354
75°	15147	6588	5926
80°	13371	5895	5393
85°	10504	4650	4650



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.5	2.2
10°-20°	374.7	5.9
20°-30°	526.2	8.3
30°-40°	573.8	9.1
40°-50°	527.6	8.3
50°-60°	414.4	6.5
60°-70°	270.2	4.3
70°-80°	139.3	2.2
80°-90°	38.9	0.6
90°-100°	37.9	0.6
100°-110°	139.1	2.2
110°-120°	371.8	5.9
120°-130°	613.7	9.7
130°-140°	652.7	10.3
140°-150°	606.6	9.6
150°-160°	487.7	7.7
160°-170°	314.3	5.0
170°-180°	108.2	1.7
0°-30°	1037.4	16.4
0°-40°	1611.3	25.4
0°-60°	2553.2	40.3
0°-90°	3001.6	47.4
90°-120°	548.8	8.7
90°-150°	2421.8	38.2
90°-180°	3332.0	52.6
0°-180°	6333.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1458	1451	1434	1445	1442	138
15°	1387	1371	1327	1303	1289	390
25°	1259	1214	1130	1077	1056	579
35°	1085	1015	901	821	789	678
45°	887	796	660	570	534	684
55°	674	569	429	353	325	602
65°	455	348	230	187	181	451
75°	243	153	106	97	95	257
85°	57	30	25	25	25	67
90°	1	10	16	20	22	5
95°	54	28	32	36	35	65
105°	250	261	50	59	62	267
115°	473	487	508	145	68	466
125°	669	680	695	701	703	596
135°	828	840	848	856	855	639
145°	960	960	973	978	975	600
155°	1057	1051	1060	1064	1058	487
165°	1114	1109	1112	1117	1112	315
175°	1139	1134	1135	1140	1133	108
180°	1137	1137	1137	1137	1137	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1463.4	1462.2	1460.9	1459.8	1458.6	1456.7	1454.1	1451.6	1449.1	1446.5	1448.8
5°	1458.0	1456.6	1455.1	1453.6	1452.2	1449.6	1445.7	1441.9	1438.1	1434.3	1436.9
7.5°	1443.0	1441.2	1439.4	1437.5	1435.7	1432.6	1428.1	1423.7	1419.3	1414.8	1415.6
10°	1430.4	1428.3	1426.2	1424.2	1422.1	1418.2	1412.3	1406.4	1400.6	1394.7	1393.9
12.5°	1414.5	1412.0	1409.5	1407.0	1404.5	1399.4	1391.9	1384.4	1376.9	1369.4	1367.8
15°	1386.8	1383.5	1380.4	1377.1	1373.9	1367.3	1357.4	1347.4	1337.4	1327.4	1321.9
17.5°	1352.7	1347.8	1342.9	1338.0	1333.1	1324.2	1311.4	1298.6	1285.8	1273.1	1266.4
20°	1327.4	1321.5	1315.7	1309.8	1304.0	1293.7	1279.0	1264.4	1249.7	1235.0	1227.7
22.5°	1299.9	1293.4	1286.9	1280.3	1273.7	1262.1	1245.6	1229.1	1212.5	1196.0	1186.5
25°	1258.8	1249.4	1240.0	1230.6	1221.2	1206.9	1187.6	1168.2	1148.8	1129.5	1117.5
27.5°	1209.2	1199.0	1188.8	1178.6	1168.4	1152.4	1130.6	1108.7	1086.9	1065.1	1051.1
30°	1174.4	1163.2	1152.1	1140.9	1129.8	1112.5	1089.0	1065.6	1042.2	1018.6	1003.7
32.5°	1140.6	1127.6	1114.6	1101.6	1088.5	1070.1	1046.1	1022.2	998.2	974.3	957.3
35°	1084.6	1069.7	1054.7	1039.7	1024.8	1004.4	978.6	952.9	927.0	901.2	882.8
37.5°	1028.7	1012.3	995.8	979.4	963.0	941.1	913.5	886.1	858.5	831.0	810.7
40°	989.6	972.1	954.4	936.9	919.3	896.2	867.8	839.4	810.9	782.5	761.6
42.5°	949.5	931.0	912.5	893.9	875.4	851.4	822.1	792.6	763.3	733.9	712.4
45°	886.7	867.0	847.4	827.8	808.1	782.9	752.1	721.3	690.5	659.8	638.9
47.5°	825.4	804.7	783.9	763.0	742.2	715.9	684.2	652.3	620.5	588.8	568.1
50°	781.2	760.3	739.5	718.7	697.8	671.3	639.1	606.8	574.5	542.3	522.1
52.5°	737.9	716.1	694.4	672.6	650.8	624.2	592.6	561.1	529.5	498.0	478.5
55°	674.2	651.4	628.5	605.6	582.8	555.5	523.8	492.1	460.5	428.9	411.2
57.5°	609.1	585.7	562.1	538.7	515.2	488.3	457.9	427.4	397.0	366.5	350.4
60°	564.7	541.3	517.8	494.4	470.9	444.1	413.9	383.7	353.4	323.3	308.3
62.5°	521.5	498.0	474.6	451.1	427.7	401.5	372.7	343.9	315.1	286.4	272.1
65°	455.2	431.4	407.8	384.0	360.2	335.2	308.8	282.4	256.0	229.6	219.6
67.5°	391.3	367.8	344.2	320.6	297.0	273.4	249.7	225.9	202.2	178.4	173.8
70°	347.1	324.2	301.3	278.4	255.5	234.0	213.8	193.6	173.3	153.1	150.2
72.5°	304.8	282.8	261.0	239.0	217.1	197.9	181.8	165.5	149.2	133.0	130.5
75°	242.8	222.2	201.7	181.2	160.7	145.4	135.4	125.5	115.5	105.6	103.5
77.5°	181.8	163.8	145.9	127.9	109.8	98.4	93.6	88.8	83.9	79.2	78.0
80°	143.8	128.9	113.9	98.9	84.0	75.1	72.2	69.2	66.3	63.4	62.2
82.5°	109.0	97.3	85.7	74.0	62.3	55.4	53.5	51.5	49.5	47.5	46.8
85°	56.7	50.5	44.4	38.2	32.1	28.6	27.7	26.9	25.9	25.1	25.1
87.5°	17.0	15.6	14.1	12.7	11.2	10.6	10.8	11.2	11.5	11.7	11.7
90°	0.9	2.8	4.8	6.9	8.9	10.6	12.1	13.5	15.0	16.4	17.4
92.5°	16.6	16.4	16.3	16.1	15.9	16.2	16.9	17.7	18.3	19.1	19.5
95°	53.5	47.4	41.4	35.4	29.4	26.9	28.2	29.5	30.8	32.1	33.0
97.5°	106.2	89.1	72.2	55.1	38.1	31.1	34.1	37.0	40.0	43.0	43.7
100°	145.6	120.5	95.5	70.5	45.5	34.4	37.5	40.6	43.8	46.9	48.4
102.5°	189.1	183.7	178.5	173.1	167.8	152.2	126.2	100.2	74.2	48.2	50.1
105°	250.1	255.6	261.1	266.6	272.1	249.9	199.9	150.0	100.1	50.2	52.2
107.5°	319.7	324.2	328.6	332.9	337.4	309.7	249.9	189.9	130.1	70.3	68.2
110°	364.5	368.3	372.1	376.0	379.8	355.3	302.5	249.7	196.8	144.0	125.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	406.6	410.0	413.4	416.8	420.2	415.3	402.3	389.3	376.2	363.2	296.4
115°	473.0	476.1	479.3	482.4	485.5	489.3	493.9	498.4	503.1	507.6	422.9
117.5°	532.4	536.0	539.4	542.9	546.4	549.7	552.8	555.9	559.1	562.2	541.7
120°	575.9	578.7	581.3	584.1	586.9	589.9	593.1	596.5	599.8	603.0	605.3
122.5°	612.8	615.6	618.5	621.4	624.3	627.6	631.1	634.7	638.3	641.9	643.2
125°	668.8	671.2	673.6	676.0	678.4	681.3	684.8	688.3	691.7	695.2	696.5
127.5°	719.7	722.4	725.0	727.6	730.2	732.9	735.5	738.0	740.6	743.2	745.1
130°	752.0	754.9	757.9	760.7	763.6	766.1	768.1	770.2	772.1	774.2	776.2
132.5°	784.9	787.4	789.9	792.3	794.8	797.0	799.1	801.1	803.1	805.1	806.8
135°	827.7	830.6	833.5	836.5	839.4	841.6	843.3	844.9	846.5	848.3	850.1
137.5°	870.9	873.0	875.0	877.1	879.1	881.1	883.0	884.8	886.7	888.6	890.4
140°	899.2	900.7	902.2	903.6	905.1	906.8	908.8	910.9	912.8	914.9	916.5
142.5°	922.9	924.2	925.6	926.9	928.2	930.0	932.3	934.6	936.9	939.2	940.7
145°	960.1	959.9	959.8	959.6	959.4	960.9	964.0	967.1	970.2	973.3	974.6
147.5°	992.6	991.8	991.1	990.4	989.7	990.9	994.0	997.0	1000.1	1003.2	1004.2
150°	1013.6	1012.3	1011.0	1009.8	1008.5	1009.3	1012.2	1015.1	1018.0	1021.0	1022.1
152.5°	1031.4	1029.9	1028.5	1027.1	1025.6	1026.3	1029.1	1031.9	1034.7	1037.4	1038.5
155°	1057.2	1055.5	1053.9	1052.2	1050.6	1050.9	1053.1	1055.2	1057.5	1059.6	1060.8
157.5°	1077.5	1076.1	1074.6	1073.2	1071.9	1071.9	1073.5	1075.0	1076.5	1078.1	1079.3
160°	1089.3	1088.2	1087.1	1086.0	1084.9	1084.9	1086.0	1087.1	1088.2	1089.3	1090.4
162.5°	1099.8	1098.7	1097.6	1096.5	1095.5	1095.4	1096.3	1097.3	1098.2	1099.2	1100.4
165°	1114.0	1112.8	1111.7	1110.7	1109.6	1109.3	1109.8	1110.3	1110.9	1111.5	1112.8
167.5°	1124.5	1123.3	1122.3	1121.2	1120.1	1119.8	1120.3	1120.8	1121.4	1121.9	1123.1
170°	1130.4	1129.3	1128.3	1127.1	1126.0	1125.7	1126.0	1126.4	1126.8	1127.1	1128.4
172.5°	1134.4	1133.2	1132.1	1131.1	1130.0	1129.6	1130.0	1130.3	1130.7	1131.1	1132.4
175°	1139.4	1138.2	1136.9	1135.7	1134.4	1133.9	1134.3	1134.6	1135.0	1135.3	1136.6
177.5°	1140.3	1139.3	1138.2	1137.2	1136.2	1135.7	1135.9	1136.0	1136.2	1136.3	1137.4
180°	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0	1458.0
2.5°	1451.1	1453.5	1455.9	1456.7	1456.3	1455.9	1455.3	1454.9
5°	1439.6	1442.3	1444.8	1445.7	1444.8	1444.0	1443.1	1442.3
7.5°	1416.3	1417.0	1417.8	1417.5	1415.9	1414.4	1412.9	1411.4
10°	1392.9	1392.1	1391.2	1389.9	1388.1	1386.4	1384.6	1382.9
12.5°	1366.2	1364.6	1363.0	1360.8	1357.9	1355.0	1352.0	1349.1
15°	1316.3	1310.7	1305.1	1300.9	1298.0	1295.0	1292.1	1289.2
17.5°	1259.8	1253.2	1246.6	1240.7	1235.7	1230.6	1225.5	1220.6
20°	1220.4	1213.1	1205.7	1198.9	1192.4	1185.9	1179.5	1173.0
22.5°	1177.2	1167.7	1158.2	1151.1	1146.3	1141.5	1136.7	1131.9
25°	1105.4	1093.5	1081.4	1073.2	1068.8	1064.4	1060.0	1055.6
27.5°	1037.1	1023.0	1009.0	998.5	991.5	984.6	977.6	970.6
30°	988.8	973.8	958.8	947.4	939.5	931.6	923.7	915.8
32.5°	940.2	923.2	906.0	893.8	886.4	878.9	871.4	864.0
35°	864.3	845.8	827.3	814.9	808.4	801.9	795.5	789.1
37.5°	790.3	770.0	749.6	735.7	728.4	721.0	713.6	706.2
40°	740.8	720.0	699.2	685.0	677.3	669.7	662.1	654.4
42.5°	690.9	669.3	647.8	633.4	625.9	618.5	611.2	603.8
45°	618.1	597.3	576.4	562.6	555.5	548.5	541.4	534.4
47.5°	547.3	526.7	505.9	492.4	486.0	479.7	473.2	466.8
50°	501.9	481.6	461.4	448.2	442.0	435.8	429.7	423.5
52.5°	458.9	439.4	419.9	407.3	401.6	395.9	390.2	384.5
55°	393.6	376.1	358.4	346.9	341.3	335.7	330.2	324.6
57.5°	334.3	318.1	302.0	291.6	287.0	282.2	277.6	272.9
60°	293.3	278.4	263.5	253.7	248.9	244.3	239.5	234.9
62.5°	257.9	243.6	229.4	220.8	218.0	215.2	212.3	209.6
65°	209.7	199.7	189.7	184.3	183.4	182.5	181.7	180.8
67.5°	169.3	164.7	160.1	157.3	156.4	155.5	154.5	153.6
70°	147.2	144.3	141.4	139.3	138.1	136.9	135.8	134.6
72.5°	128.1	125.6	123.1	121.6	120.9	120.2	119.4	118.7
75°	101.4	99.4	97.4	96.2	95.9	95.6	95.3	95.0
77.5°	76.8	75.7	74.5	73.6	73.2	72.8	72.2	71.8
80°	61.0	59.8	58.6	58.0	58.0	58.0	58.0	58.0
82.5°	46.1	45.4	44.7	44.3	44.3	44.3	44.3	44.3
85°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
87.5°	11.6	11.5	11.5	11.5	11.6	11.7	11.8	11.8
90°	18.3	19.2	20.1	20.8	21.1	21.4	21.9	22.2
92.5°	20.1	20.5	21.0	21.4	21.5	21.8	22.0	22.2
95°	33.9	34.9	35.7	36.1	35.9	35.7	35.6	35.4
97.5°	44.4	45.1	45.9	46.3	46.6	46.8	47.0	47.2
100°	49.9	51.3	52.8	53.6	54.0	54.4	54.8	55.1
102.5°	52.0	53.9	55.8	57.0	57.5	58.0	58.5	59.1
105°	54.2	56.2	58.2	59.6	60.4	61.0	61.8	62.5
107.5°	66.1	64.1	62.1	61.4	62.2	62.9	63.6	64.3
110°	107.4	89.1	70.9	62.1	62.8	63.5	64.2	65.0



TEST NUMBER: P331855-935

CATALOG NUMBER: S122RDIW-S1005D970U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	229.7	163.1	96.3	63.3	63.9	64.5	65.1	65.7
115°	338.3	253.7	169.0	120.1	106.9	93.8	80.6	67.5
117.5°	521.2	500.8	480.4	448.5	405.2	362.0	318.7	275.4
120°	607.4	609.6	611.8	600.5	575.9	551.2	526.5	501.9
122.5°	644.5	645.8	647.1	645.4	640.6	635.8	631.0	626.3
125°	697.8	699.0	700.3	701.2	701.8	702.3	702.8	703.4
127.5°	747.0	748.8	750.7	751.7	751.8	751.9	752.0	752.1
130°	778.2	780.2	782.2	783.2	782.9	782.7	782.6	782.4
132.5°	808.6	810.3	812.0	812.8	812.5	812.4	812.2	812.0
135°	851.9	853.7	855.5	856.3	855.9	855.5	855.1	854.8
137.5°	892.1	893.9	895.7	896.3	895.7	895.0	894.4	893.8
140°	918.2	919.8	921.4	921.8	920.9	920.0	919.0	918.2
142.5°	942.2	943.7	945.2	945.5	944.6	943.7	942.8	941.8
145°	975.9	977.1	978.4	978.6	977.7	976.7	975.9	974.9
147.5°	1005.1	1006.1	1007.0	1007.1	1006.3	1005.6	1004.8	1004.0
150°	1023.2	1024.2	1025.4	1025.5	1024.6	1023.6	1022.7	1021.8
152.5°	1039.7	1040.7	1041.8	1041.8	1040.6	1039.4	1038.2	1037.0
155°	1061.9	1062.9	1064.0	1063.9	1062.4	1060.9	1059.5	1058.0
157.5°	1080.6	1081.8	1083.1	1083.0	1081.5	1080.1	1078.7	1077.3
160°	1091.5	1092.5	1093.6	1093.6	1092.3	1091.0	1089.8	1088.5
162.5°	1101.6	1102.9	1104.1	1104.0	1102.3	1100.8	1099.2	1097.7
165°	1114.0	1115.3	1116.6	1116.6	1115.3	1114.0	1112.8	1111.5
167.5°	1124.4	1125.7	1127.0	1126.8	1125.2	1123.5	1121.9	1120.2
170°	1129.7	1130.9	1132.2	1132.0	1130.4	1128.8	1127.1	1125.5
172.5°	1133.6	1134.9	1136.2	1136.0	1134.4	1132.7	1131.1	1129.5
175°	1137.9	1139.2	1140.5	1140.2	1138.3	1136.5	1134.7	1132.9
177.5°	1138.4	1139.4	1140.4	1140.3	1138.9	1137.6	1136.3	1135.1
180°	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0	1137.0

(END OF REPORT)