

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: P331859-927

Luminaire Tested: **S122RDIW-S1005D1240U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331859-927
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-S1005D1240U927-4F0-1E-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: 6687.1 lumens
Efficiency: N/A
Efficacy: 87.8 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

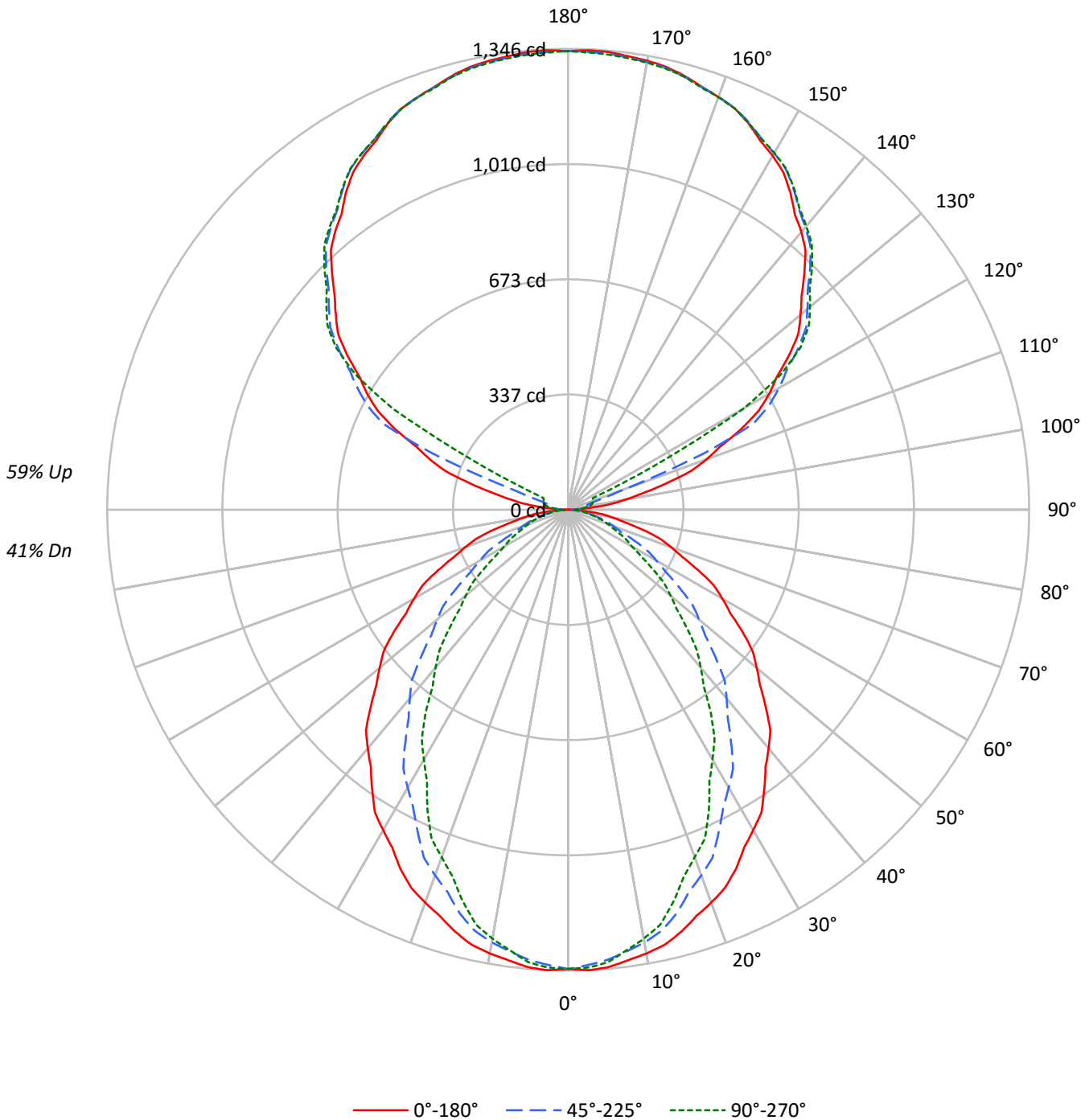
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20						20							20
RC	80					70						30							10
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50
RCR																			
0	105	105	105	105		96	96	96	96		79	79	79		63	63	63		48
1	96	92	88	85		88	84	81	78		69	67	65		56	54	53		43
2	88	81	75	70		80	74	69	65		61	58	55		49	47	45		38
3	80	71	64	59		73	65	59	55		54	50	46		44	41	38		34
4	74	63	56	50		67	58	52	47		48	44	40		39	36	33		31
5	68	57	49	43		62	52	45	40		44	38	35		36	32	29		28
6	63	51	43	37		57	47	40	35		39	34	30		32	28	26		26
7	58	46	38	33		53	42	36	31		36	31	27		29	26	23		24
8	54	42	34	29		49	39	32	27		33	28	24		27	23	20		22
9	50	38	31	26		46	35	29	25		30	25	21		25	21	18		20
10	47	35	28	23		43	33	26	22		28	23	19		23	19	17		19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21660	21660	21660
5°	21742	21389	21507
10°	21577	21040	20859
15°	21329	20415	19826
20°	20984	19524	18545
25°	20633	18513	17302
30°	20144	17473	15709
35°	19669	16344	14310
40°	19191	15173	12690
45°	18630	13860	11227
50°	18053	12534	9789
55°	17464	11108	8408
60°	16779	9607	6978
65°	16000	8073	6357
70°	15073	6652	5844
75°	13936	6057	5452
80°	12301	5421	4965
85°	9670	4279	4279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	1.9
10°-20°	344.8	5.2
20°-30°	484.2	7.2
30°-40°	528.0	7.9
40°-50°	485.4	7.3
50°-60°	381.3	5.7
60°-70°	248.6	3.7
70°-80°	128.2	1.9
80°-90°	36.5	0.5
90°-100°	44.7	0.7
100°-110°	163.8	2.4
110°-120°	437.9	6.5
120°-130°	722.9	10.8
130°-140°	768.8	11.5
140°-150°	714.5	10.7
150°-160°	574.5	8.6
160°-170°	370.2	5.5
170°-180°	127.4	1.9
0°-30°	954.5	14.3
0°-40°	1482.5	22.2
0°-60°	2349.2	35.1
0°-90°	2762.5	41.3
90°-120°	646.4	9.7
90°-150°	2852.5	42.7
90°-180°	3925.0	58.7
0°-180°	6687.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1335	1320	1330	1327	127
15°	1276	1261	1221	1199	1186	359
25°	1158	1117	1039	991	971	532
35°	998	934	829	755	726	624
45°	816	732	607	524	492	630
55°	620	524	395	324	299	554
65°	419	320	211	172	166	415
75°	223	141	97	89	87	236
85°	52	28	23	23	23	62
90°	1	12	19	24	26	5
95°	63	33	38	42	42	77
105°	295	307	59	69	74	315
115°	557	574	598	170	80	548
125°	788	801	819	825	828	702
135°	975	990	999	1008	1007	753
145°	1131	1131	1146	1152	1148	707
155°	1245	1238	1248	1253	1246	574
165°	1312	1307	1309	1315	1309	371
175°	1342	1336	1337	1343	1334	128
180°	1339	1339	1339	1339	1339	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1346.4	1345.3	1344.2	1343.1	1342.0	1340.3	1337.9	1335.6	1333.2	1330.9	1333.0
5°	1341.5	1340.1	1338.8	1337.4	1336.1	1333.7	1330.2	1326.7	1323.2	1319.7	1322.1
7.5°	1327.7	1326.0	1324.4	1322.6	1321.0	1318.1	1314.0	1309.9	1305.8	1301.7	1302.4
10°	1316.1	1314.2	1312.2	1310.3	1308.4	1304.8	1299.4	1294.0	1288.6	1283.3	1282.5
12.5°	1301.5	1299.1	1296.8	1294.5	1292.2	1287.5	1280.6	1273.7	1266.9	1260.0	1258.5
15°	1276.0	1273.0	1270.0	1267.0	1264.1	1258.0	1248.9	1239.7	1230.5	1221.3	1216.2
17.5°	1244.6	1240.1	1235.6	1231.1	1226.5	1218.4	1206.6	1194.8	1183.0	1171.3	1165.2
20°	1221.3	1215.9	1210.5	1205.1	1199.8	1190.3	1176.8	1163.3	1149.9	1136.3	1129.6
22.5°	1196.0	1190.0	1184.0	1178.0	1171.9	1161.3	1146.1	1130.8	1115.6	1100.4	1091.7
25°	1158.2	1149.5	1140.9	1132.3	1123.6	1110.5	1092.7	1074.8	1057.0	1039.2	1028.2
27.5°	1112.5	1103.2	1093.8	1084.4	1075.0	1060.3	1040.2	1020.1	1000.1	980.0	967.1
30°	1080.5	1070.2	1060.0	1049.7	1039.5	1023.6	1002.0	980.4	958.9	937.2	923.4
32.5°	1049.4	1037.4	1025.5	1013.5	1001.5	984.5	962.5	940.5	918.5	896.4	880.7
35°	997.9	984.2	970.4	956.6	942.9	924.2	900.4	876.7	852.9	829.2	812.2
37.5°	946.5	931.4	916.2	901.1	886.1	865.9	840.5	815.2	789.9	764.6	745.9
40°	910.5	894.4	878.1	862.0	845.8	824.6	798.4	772.3	746.1	719.9	700.8
42.5°	873.6	856.6	839.6	822.4	805.4	783.4	756.4	729.3	702.3	675.3	655.5
45°	815.9	797.7	779.7	761.6	743.5	720.3	692.0	663.7	635.3	607.0	587.9
47.5°	759.5	740.4	721.2	702.0	682.9	658.7	629.5	600.2	570.9	541.7	522.7
50°	718.7	699.6	680.4	661.2	642.1	617.7	588.0	558.3	528.6	499.0	480.4
52.5°	678.9	658.9	638.9	618.9	598.8	574.3	545.3	516.3	487.2	458.2	440.2
55°	620.4	599.4	578.3	557.2	536.2	511.1	482.0	452.8	423.7	394.6	378.3
57.5°	560.4	538.8	517.2	495.7	474.0	449.2	421.3	393.2	365.3	337.2	322.4
60°	519.6	498.0	476.4	454.9	433.2	408.6	380.8	353.0	325.2	297.5	283.7
62.5°	479.8	458.2	436.7	415.0	393.5	369.4	342.9	316.4	289.9	263.5	250.3
65°	418.8	397.0	375.2	353.3	331.4	308.4	284.1	259.8	235.5	211.3	202.1
67.5°	360.0	338.4	316.7	295.0	273.3	251.5	229.7	207.9	186.0	164.1	159.9
70°	319.3	298.3	277.2	256.2	235.1	215.3	196.7	178.1	159.5	140.9	138.2
72.5°	280.4	260.2	240.1	219.9	199.7	182.1	167.2	152.3	137.3	122.4	120.1
75°	223.4	204.5	185.6	166.8	147.8	133.8	124.6	115.5	106.3	97.1	95.2
77.5°	167.3	150.8	134.2	117.6	101.0	90.5	86.1	81.7	77.2	72.9	71.8
80°	132.3	118.6	104.8	91.0	77.3	69.1	66.4	63.7	61.0	58.3	57.2
82.5°	100.3	89.5	78.8	68.0	57.4	51.0	49.2	47.4	45.6	43.7	43.1
85°	52.2	46.5	40.9	35.2	29.5	26.3	25.5	24.7	23.8	23.1	23.1
87.5°	15.8	14.5	13.2	12.0	10.7	10.3	10.6	10.9	11.3	11.6	11.6
90°	1.0	3.3	5.7	8.1	10.5	12.5	14.2	15.9	17.7	19.4	20.4
92.5°	19.6	19.3	19.2	18.9	18.7	19.0	19.9	20.8	21.6	22.5	23.1
95°	63.0	55.8	48.8	41.7	34.5	31.8	33.3	34.8	36.3	37.8	38.9
97.5°	125.0	105.0	84.9	65.0	44.9	36.6	40.1	43.6	47.1	50.6	51.4
100°	171.5	142.0	112.5	83.0	53.6	40.6	44.3	47.9	51.6	55.2	57.0
102.5°	222.7	216.4	210.2	204.0	197.7	179.3	148.6	118.0	87.4	56.8	59.0
105°	294.6	301.0	307.5	313.9	320.4	294.3	235.5	176.7	117.9	59.1	61.5
107.5°	376.6	381.8	387.0	392.2	397.4	364.8	294.3	223.8	153.3	82.8	80.3
110°	429.3	433.8	438.3	442.8	447.3	418.5	356.3	294.1	231.8	169.6	148.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	478.9	482.9	486.9	490.9	495.0	489.3	473.9	458.5	443.1	427.7	349.2
115°	557.2	560.9	564.5	568.2	571.9	576.4	581.8	587.2	592.6	597.9	498.2
117.5°	627.2	631.3	635.3	639.4	643.6	647.5	651.1	654.8	658.5	662.3	638.1
120°	678.3	681.6	684.8	688.0	691.3	694.8	698.7	702.6	706.5	710.3	712.9
122.5°	721.8	725.2	728.6	732.0	735.4	739.2	743.4	747.6	751.9	756.1	757.6
125°	787.8	790.6	793.4	796.2	799.0	802.5	806.6	810.6	814.8	818.9	820.4
127.5°	847.7	850.8	853.9	857.1	860.2	863.2	866.3	869.3	872.4	875.4	877.7
130°	885.7	889.1	892.6	896.0	899.5	902.4	904.8	907.1	909.5	911.9	914.3
132.5°	924.5	927.4	930.3	933.3	936.2	938.8	941.2	943.6	945.9	948.3	950.3
135°	974.9	978.3	981.8	985.2	988.6	991.3	993.2	995.2	997.1	999.1	1001.2
137.5°	1025.8	1028.3	1030.6	1033.1	1035.5	1037.8	1040.0	1042.2	1044.3	1046.6	1048.7
140°	1059.1	1060.9	1062.6	1064.3	1066.0	1068.1	1070.5	1072.9	1075.2	1077.6	1079.5
142.5°	1087.1	1088.6	1090.2	1091.7	1093.3	1095.4	1098.1	1100.8	1103.5	1106.3	1108.0
145°	1130.8	1130.7	1130.4	1130.2	1130.0	1131.7	1135.4	1139.1	1142.7	1146.4	1147.9
147.5°	1169.0	1168.2	1167.4	1166.6	1165.8	1167.2	1170.8	1174.4	1178.1	1181.6	1182.8
150°	1193.9	1192.4	1190.9	1189.3	1187.8	1188.8	1192.2	1195.7	1199.1	1202.6	1203.9
152.5°	1214.8	1213.1	1211.4	1209.7	1208.1	1208.9	1212.1	1215.4	1218.7	1221.9	1223.3
155°	1245.2	1243.3	1241.3	1239.4	1237.5	1237.8	1240.4	1242.9	1245.5	1248.2	1249.4
157.5°	1269.1	1267.4	1265.7	1264.2	1262.5	1262.6	1264.4	1266.2	1268.0	1269.9	1271.3
160°	1283.0	1281.8	1280.4	1279.1	1277.9	1277.9	1279.1	1280.4	1281.8	1283.0	1284.3
162.5°	1295.5	1294.1	1292.8	1291.6	1290.2	1290.1	1291.3	1292.4	1293.6	1294.7	1296.1
165°	1312.1	1310.8	1309.5	1308.2	1306.9	1306.6	1307.3	1307.9	1308.5	1309.2	1310.7
167.5°	1324.5	1323.2	1321.9	1320.6	1319.3	1319.0	1319.6	1320.2	1320.8	1321.4	1322.9
170°	1331.5	1330.2	1328.9	1327.6	1326.3	1325.9	1326.3	1326.7	1327.1	1327.6	1329.1
172.5°	1336.1	1334.8	1333.6	1332.2	1330.9	1330.5	1330.9	1331.3	1331.8	1332.2	1333.7
175°	1342.1	1340.6	1339.1	1337.6	1336.1	1335.5	1336.0	1336.4	1336.9	1337.3	1338.8
177.5°	1343.1	1341.9	1340.7	1339.5	1338.2	1337.8	1337.9	1338.1	1338.2	1338.5	1339.7
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1335.1	1337.3	1339.5	1340.3	1339.9	1339.5	1339.0	1338.6
5°	1324.5	1327.0	1329.4	1330.2	1329.4	1328.6	1327.8	1327.0
7.5°	1303.1	1303.8	1304.5	1304.2	1302.7	1301.3	1300.0	1298.5
10°	1281.6	1280.8	1280.0	1278.8	1277.2	1275.6	1273.9	1272.3
12.5°	1257.0	1255.5	1254.1	1252.0	1249.4	1246.7	1244.0	1241.3
15°	1211.1	1205.9	1200.8	1196.9	1194.2	1191.5	1188.8	1186.1
17.5°	1159.1	1153.0	1146.9	1141.5	1136.9	1132.3	1127.6	1123.0
20°	1122.8	1116.1	1109.4	1103.0	1097.1	1091.2	1085.2	1079.3
22.5°	1083.1	1074.4	1065.6	1059.1	1054.7	1050.3	1045.8	1041.4
25°	1017.1	1006.1	995.0	987.5	983.3	979.3	975.3	971.2
27.5°	954.2	941.3	928.4	918.7	912.3	905.9	899.4	893.0
30°	909.7	896.0	882.2	871.7	864.4	857.1	849.9	842.6
32.5°	865.1	849.4	833.6	822.4	815.6	808.7	801.8	795.0
35°	795.2	778.2	761.2	749.7	743.8	737.8	731.9	726.0
37.5°	727.1	708.4	689.7	676.9	670.2	663.4	656.6	649.7
40°	681.6	662.4	643.3	630.3	623.2	616.2	609.2	602.1
42.5°	635.6	615.8	596.0	582.7	575.9	569.1	562.4	555.6
45°	568.7	549.5	530.4	517.6	511.1	504.6	498.1	491.7
47.5°	503.6	484.6	465.5	453.0	447.2	441.3	435.4	429.5
50°	461.8	443.1	424.5	412.3	406.7	401.0	395.4	389.7
52.5°	422.2	404.3	386.3	374.7	369.5	364.2	359.0	353.8
55°	362.2	346.0	329.8	319.2	314.0	308.9	303.8	298.7
57.5°	307.6	292.7	277.9	268.3	264.0	259.7	255.4	251.0
60°	269.9	256.2	242.4	233.4	229.0	224.7	220.4	216.1
62.5°	237.3	224.1	211.0	203.1	200.6	198.0	195.4	192.8
65°	192.9	183.7	174.5	169.5	168.7	167.9	167.2	166.4
67.5°	155.7	151.5	147.3	144.7	143.9	143.1	142.2	141.3
70°	135.5	132.8	130.1	128.2	127.1	126.0	124.9	123.8
72.5°	117.9	115.6	113.3	111.9	111.2	110.6	109.9	109.2
75°	93.3	91.5	89.6	88.5	88.2	87.9	87.7	87.4
77.5°	70.7	69.6	68.5	67.7	67.3	66.9	66.5	66.1
80°	56.1	55.1	53.9	53.4	53.4	53.4	53.4	53.4
82.5°	42.4	41.7	41.1	40.8	40.8	40.8	40.8	40.8
85°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
87.5°	11.6	11.6	11.6	11.7	11.8	11.9	12.0	12.0
90°	21.5	22.6	23.7	24.5	24.9	25.3	25.7	26.1
92.5°	23.6	24.2	24.7	25.1	25.3	25.7	25.9	26.1
95°	39.9	41.0	42.1	42.5	42.3	42.1	41.9	41.7
97.5°	52.3	53.2	54.0	54.6	54.8	55.1	55.4	55.6
100°	58.7	60.4	62.1	63.2	63.6	64.1	64.5	65.0
102.5°	61.2	63.5	65.8	67.2	67.7	68.4	69.0	69.6
105°	63.8	66.2	68.6	70.2	71.1	71.9	72.8	73.7
107.5°	78.0	75.5	73.1	72.3	73.2	74.1	74.9	75.8
110°	126.5	105.0	83.4	73.1	74.0	74.9	75.7	76.5



TEST NUMBER: P331859-927

CATALOG NUMBER: S122RDIW-S1005D1240U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	270.6	192.1	113.5	74.5	75.3	76.0	76.6	77.3
115°	398.5	298.8	199.1	141.5	126.0	110.5	95.0	79.5
117.5°	614.0	589.9	565.8	528.2	477.3	426.4	375.4	324.4
120°	715.5	718.0	720.6	707.4	678.3	649.3	620.2	591.1
122.5°	759.1	760.7	762.2	760.2	754.6	748.9	743.3	737.6
125°	821.9	823.4	824.9	825.9	826.6	827.3	827.9	828.5
127.5°	879.8	882.0	884.2	885.4	885.5	885.7	885.7	885.9
130°	916.6	919.0	921.3	922.4	922.2	922.0	921.8	921.5
132.5°	952.4	954.3	956.4	957.3	957.1	956.9	956.6	956.5
135°	1003.4	1005.5	1007.7	1008.5	1008.1	1007.7	1007.3	1006.9
137.5°	1050.8	1052.9	1055.0	1055.7	1054.9	1054.2	1053.5	1052.7
140°	1081.5	1083.4	1085.4	1085.8	1084.7	1083.6	1082.5	1081.5
142.5°	1109.8	1111.6	1113.3	1113.6	1112.6	1111.5	1110.4	1109.4
145°	1149.4	1150.9	1152.4	1152.6	1151.5	1150.5	1149.4	1148.3
147.5°	1183.9	1185.0	1186.1	1186.2	1185.3	1184.4	1183.5	1182.6
150°	1205.1	1206.5	1207.8	1207.8	1206.8	1205.7	1204.6	1203.6
152.5°	1224.6	1225.8	1227.2	1227.1	1225.7	1224.2	1222.8	1221.4
155°	1250.7	1252.0	1253.3	1253.1	1251.3	1249.7	1247.9	1246.2
157.5°	1272.8	1274.2	1275.7	1275.6	1273.9	1272.2	1270.6	1268.8
160°	1285.6	1286.9	1288.2	1288.1	1286.6	1285.1	1283.6	1282.1
162.5°	1297.6	1299.0	1300.5	1300.3	1298.5	1296.6	1294.7	1292.9
165°	1312.2	1313.7	1315.2	1315.2	1313.7	1312.2	1310.7	1309.2
167.5°	1324.4	1325.9	1327.4	1327.2	1325.2	1323.3	1321.4	1319.5
170°	1330.6	1332.1	1333.6	1333.4	1331.5	1329.5	1327.6	1325.6
172.5°	1335.2	1336.7	1338.2	1338.1	1336.1	1334.2	1332.2	1330.3
175°	1340.3	1341.8	1343.3	1343.0	1340.8	1338.7	1336.5	1334.4
177.5°	1340.8	1342.0	1343.3	1343.1	1341.6	1340.0	1338.5	1336.9
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2

(END OF REPORT)