

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: P331839-930

Luminaire Tested: **S122RDIW-S865D1240U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331839-930
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-S865D1240U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 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: 6501.3 lumens
Efficiency: N/A
Efficacy: 93.1 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: Semi-Indirect

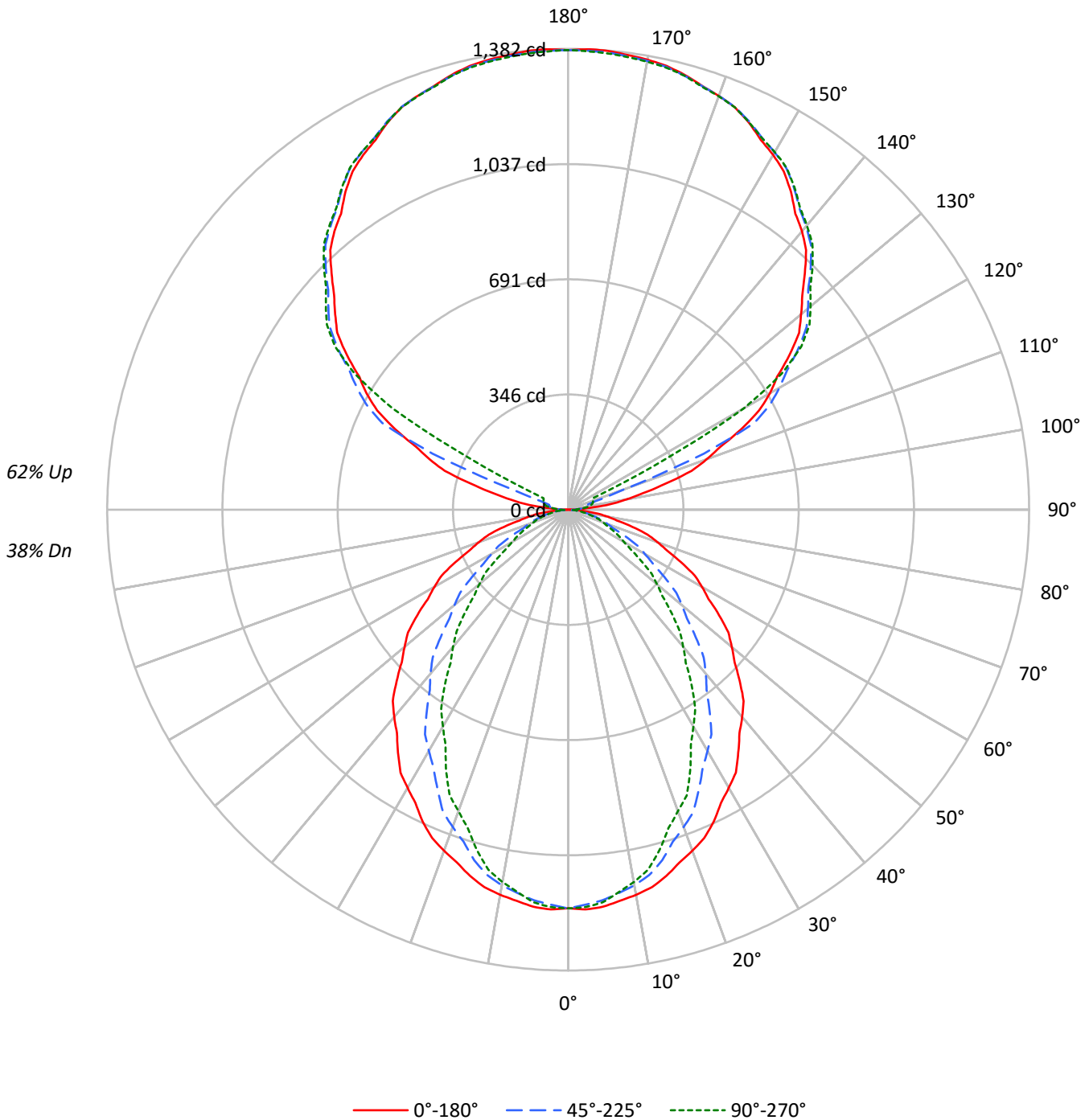
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	65	63	53	52	51	40	39	39	33
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	65	59	54	53	49	45	42	39	37	32	30	29	24
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21
5	67	56	48	43	61	51	45	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	22	27	22	19	22	18	16	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19302	19302	19302
5°	19376	19060	19164
10°	19226	18748	18589
15°	19005	18191	17668
20°	18699	17399	16526
25°	18387	16498	15419
30°	17952	15571	13998
35°	17527	14564	12751
40°	17102	13523	11310
45°	16600	12353	10003
50°	16088	11170	8721
55°	15564	9897	7491
60°	14951	8561	6219
65°	14258	7194	5662
70°	13430	5925	5207
75°	12420	5402	4860
80°	10962	4826	4426
85°	8633	3798	3798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	1.7
10°-20°	307.2	4.7
20°-30°	431.5	6.6
30°-40°	470.5	7.2
40°-50°	432.6	6.7
50°-60°	339.7	5.2
60°-70°	221.5	3.4
70°-80°	114.2	1.8
80°-90°	33.0	0.5
90°-100°	46.0	0.7
100°-110°	168.6	2.6
110°-120°	450.7	6.9
120°-130°	744.0	11.4
130°-140°	791.2	12.2
140°-150°	735.4	11.3
150°-160°	591.2	9.1
160°-170°	381.0	5.9
170°-180°	131.1	2.0
0°-30°	850.6	13.1
0°-40°	1321.1	20.3
0°-60°	2093.4	32.2
0°-90°	2462.1	37.9
90°-120°	665.3	10.2
90°-150°	2935.8	45.2
90°-180°	4039.0	62.1
0°-180°	6501.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1196	1190	1176	1185	1182	113
15°	1137	1124	1088	1068	1057	320
25°	1032	995	926	883	866	474
35°	889	832	739	673	647	556
45°	727	652	541	467	438	561
55°	553	467	352	289	266	494
65°	373	285	188	153	148	370
75°	199	126	87	79	78	211
85°	47	25	20	20	20	55
90°	1	12	20	25	27	5
95°	65	34	39	44	43	79
105°	303	316	61	71	76	324
115°	574	591	615	175	82	564
125°	811	824	843	850	853	723
135°	1003	1019	1028	1038	1036	775
145°	1164	1164	1180	1186	1182	728
155°	1282	1274	1285	1290	1282	590
165°	1350	1345	1347	1354	1347	381
175°	1381	1375	1376	1382	1373	131
180°	1378	1378	1378	1378	1378	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1199.8	1198.8	1197.8	1196.9	1196.0	1194.4	1192.3	1190.2	1188.1	1185.9	1187.9
5°	1195.5	1194.3	1193.0	1191.8	1190.7	1188.5	1185.4	1182.3	1179.1	1176.0	1178.1
7.5°	1183.1	1181.6	1180.1	1178.7	1177.1	1174.6	1170.9	1167.3	1163.6	1159.9	1160.6
10°	1172.7	1171.0	1169.4	1167.7	1166.0	1162.8	1158.0	1153.2	1148.3	1143.5	1142.8
12.5°	1159.8	1157.6	1155.6	1153.6	1151.4	1147.4	1141.2	1135.1	1128.9	1122.7	1121.4
15°	1137.0	1134.4	1131.7	1129.1	1126.4	1121.0	1112.9	1104.7	1096.5	1088.3	1083.8
17.5°	1109.1	1105.1	1101.1	1097.0	1093.0	1085.7	1075.2	1064.7	1054.3	1043.7	1038.4
20°	1088.3	1083.5	1078.7	1073.9	1069.1	1060.7	1048.6	1036.7	1024.7	1012.6	1006.6
22.5°	1065.8	1060.5	1055.1	1049.7	1044.3	1034.9	1021.2	1007.7	994.2	980.6	972.8
25°	1032.1	1024.4	1016.7	1009.0	1001.4	989.5	973.6	957.8	941.9	926.1	916.2
27.5°	991.4	983.0	974.7	966.3	958.0	944.9	926.9	909.1	891.1	873.3	861.8
30°	962.9	953.7	944.6	935.5	926.3	912.2	892.9	873.7	854.4	835.2	823.0
32.5°	935.1	924.5	913.8	903.1	892.4	877.3	857.7	838.0	818.5	798.8	784.9
35°	889.2	877.0	864.8	852.5	840.2	823.5	802.3	781.2	760.1	738.9	723.7
37.5°	843.4	830.0	816.5	803.0	789.5	771.5	749.0	726.4	703.9	681.3	664.6
40°	811.4	797.0	782.5	768.1	753.7	734.8	711.5	688.2	664.9	641.6	624.4
42.5°	778.5	763.3	748.1	733.0	717.7	698.1	674.0	649.9	625.8	601.7	584.1
45°	727.0	710.9	694.8	678.7	662.6	641.9	616.7	591.4	566.1	541.0	523.8
47.5°	676.8	659.7	642.7	625.6	608.5	586.9	560.9	534.8	508.7	482.7	465.8
50°	640.5	623.4	606.3	589.2	572.2	550.4	524.0	497.5	471.1	444.7	428.0
52.5°	605.0	587.1	569.3	551.5	533.6	511.8	485.9	460.0	434.1	408.3	392.2
55°	552.9	534.1	515.4	496.6	477.8	455.4	429.5	403.5	377.6	351.6	337.2
57.5°	499.4	480.1	460.9	441.6	422.5	400.4	375.4	350.4	325.5	300.5	287.3
60°	463.0	443.8	424.6	405.4	386.1	364.1	339.3	314.5	289.8	265.1	252.8
62.5°	427.5	408.3	389.1	369.8	350.6	329.2	305.6	282.0	258.4	234.7	223.1
65°	373.2	353.8	334.3	314.8	295.4	274.8	253.2	231.5	209.9	188.3	180.1
67.5°	320.9	301.6	282.3	262.9	243.5	224.1	204.7	185.2	165.8	146.3	142.5
70°	284.5	265.8	247.0	228.3	209.5	191.8	175.3	158.7	142.1	125.5	123.1
72.5°	249.9	232.0	213.9	196.0	178.0	162.3	149.0	135.7	122.4	109.1	107.0
75°	199.1	182.2	165.4	148.5	131.8	119.3	111.0	102.9	94.7	86.6	84.9
77.5°	149.1	134.3	119.5	104.8	90.0	80.7	76.7	72.8	68.9	64.9	63.9
80°	117.9	105.7	93.4	81.1	68.9	61.6	59.1	56.7	54.3	51.9	51.0
82.5°	89.4	79.8	70.2	60.7	51.1	45.5	43.9	42.2	40.6	39.0	38.4
85°	46.6	41.5	36.4	31.4	26.3	23.5	22.7	22.0	21.3	20.5	20.5
87.5°	14.0	13.0	12.0	10.9	9.9	9.5	9.9	10.2	10.6	10.9	10.9
90°	1.0	3.4	5.9	8.3	10.8	12.9	14.6	16.4	18.2	20.0	21.0
92.5°	20.1	19.9	19.7	19.5	19.2	19.6	20.5	21.4	22.3	23.2	23.7
95°	64.8	57.5	50.2	42.9	35.5	32.7	34.2	35.8	37.3	38.9	40.0
97.5°	128.7	108.0	87.4	66.9	46.2	37.7	41.3	44.8	48.5	52.1	52.9
100°	176.5	146.2	115.8	85.4	55.1	41.7	45.6	49.3	53.1	56.8	58.6
102.5°	229.2	222.7	216.3	209.9	203.5	184.5	153.0	121.5	89.9	58.5	60.7
105°	303.2	309.8	316.5	323.1	329.8	302.9	242.4	181.8	121.3	60.8	63.3
107.5°	387.6	392.9	398.3	403.7	409.0	375.4	302.9	230.3	157.8	85.2	82.7
110°	441.8	446.5	451.1	455.8	460.4	430.7	366.7	302.6	238.6	174.6	152.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	492.8	497.0	501.1	505.2	509.4	503.5	487.7	471.9	456.1	440.2	359.4
115°	573.5	577.2	581.0	584.7	588.6	593.2	598.8	604.3	609.8	615.4	512.7
117.5°	645.5	649.7	653.9	658.1	662.3	666.3	670.1	673.9	677.8	681.6	656.7
120°	698.1	701.5	704.7	708.1	711.4	715.1	719.1	723.1	727.1	731.0	733.7
122.5°	742.8	746.3	749.8	753.3	756.8	760.8	765.1	769.4	773.8	778.1	779.7
125°	810.8	813.7	816.6	819.5	822.3	825.9	830.1	834.3	838.5	842.8	844.3
127.5°	872.5	875.6	878.8	882.1	885.3	888.4	891.5	894.7	897.8	901.0	903.3
130°	911.6	915.1	918.7	922.2	925.8	928.7	931.2	933.6	936.0	938.5	940.9
132.5°	951.5	954.5	957.5	960.5	963.5	966.2	968.7	971.1	973.5	976.0	978.0
135°	1003.3	1006.8	1010.4	1013.9	1017.5	1020.3	1022.2	1024.3	1026.2	1028.3	1030.5
137.5°	1055.7	1058.3	1060.7	1063.2	1065.7	1068.0	1070.3	1072.6	1074.8	1077.1	1079.3
140°	1090.1	1091.8	1093.6	1095.4	1097.1	1099.3	1101.7	1104.2	1106.6	1109.1	1111.0
142.5°	1118.8	1120.4	1122.0	1123.6	1125.2	1127.4	1130.2	1132.9	1135.7	1138.6	1140.4
145°	1163.8	1163.7	1163.4	1163.2	1163.0	1164.7	1168.6	1172.3	1176.1	1179.8	1181.4
147.5°	1203.1	1202.3	1201.5	1200.6	1199.8	1201.3	1204.9	1208.7	1212.4	1216.1	1217.3
150°	1228.7	1227.2	1225.6	1224.0	1222.5	1223.5	1227.0	1230.6	1234.1	1237.7	1239.0
152.5°	1250.3	1248.5	1246.8	1245.0	1243.3	1244.1	1247.5	1250.9	1254.3	1257.6	1259.0
155°	1281.6	1279.5	1277.6	1275.5	1273.6	1273.9	1276.6	1279.2	1281.9	1284.6	1285.9
157.5°	1306.1	1304.4	1302.7	1301.1	1299.3	1299.4	1301.3	1303.2	1305.0	1306.9	1308.4
160°	1320.5	1319.2	1317.8	1316.5	1315.2	1315.2	1316.5	1317.8	1319.2	1320.5	1321.8
162.5°	1333.3	1331.9	1330.6	1329.3	1327.9	1327.8	1328.9	1330.1	1331.3	1332.4	1333.9
165°	1350.4	1349.1	1347.7	1346.4	1345.1	1344.8	1345.4	1346.1	1346.7	1347.4	1348.9
167.5°	1363.2	1361.8	1360.5	1359.2	1357.8	1357.5	1358.1	1358.7	1359.3	1359.9	1361.5
170°	1370.4	1369.0	1367.7	1366.4	1365.0	1364.6	1365.0	1365.5	1365.9	1366.4	1367.9
172.5°	1375.1	1373.8	1372.5	1371.1	1369.8	1369.4	1369.8	1370.2	1370.7	1371.1	1372.6
175°	1381.3	1379.7	1378.2	1376.6	1375.1	1374.5	1375.0	1375.4	1375.9	1376.3	1377.9
177.5°	1382.3	1381.0	1379.8	1378.6	1377.3	1376.8	1377.0	1377.1	1377.3	1377.5	1378.8
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1189.8	1191.7	1193.6	1194.4	1194.0	1193.6	1193.3	1192.9
5°	1180.3	1182.4	1184.6	1185.4	1184.6	1183.9	1183.2	1182.4
7.5°	1161.2	1161.8	1162.5	1162.1	1160.9	1159.7	1158.4	1157.2
10°	1142.1	1141.3	1140.6	1139.5	1138.1	1136.7	1135.2	1133.8
12.5°	1120.1	1118.8	1117.5	1115.7	1113.3	1110.9	1108.5	1106.1
15°	1079.2	1074.6	1070.1	1066.6	1064.2	1061.8	1059.4	1057.0
17.5°	1032.9	1027.4	1022.1	1017.2	1013.1	1009.0	1004.9	1000.7
20°	1000.6	994.6	988.6	982.9	977.6	972.3	967.0	961.8
22.5°	965.2	957.4	949.7	943.8	939.9	935.9	932.0	928.1
25°	906.4	896.5	886.6	879.9	876.3	872.7	869.1	865.5
27.5°	850.3	838.8	827.3	818.7	813.0	807.2	801.5	795.8
30°	810.7	798.4	786.1	776.7	770.3	763.8	757.3	750.8
32.5°	770.9	756.8	742.9	732.8	726.8	720.6	714.5	708.4
35°	708.6	693.5	678.3	668.1	662.8	657.5	652.2	646.9
37.5°	648.0	631.3	614.7	603.2	597.2	591.1	585.1	579.0
40°	607.4	590.4	573.2	561.6	555.4	549.1	542.8	536.6
42.5°	566.5	548.8	531.2	519.3	513.2	507.2	501.1	495.0
45°	506.8	489.8	472.6	461.2	455.4	449.7	443.9	438.1
47.5°	448.7	431.8	414.8	403.7	398.5	393.2	388.0	382.8
50°	411.5	394.8	378.3	367.5	362.4	357.3	352.3	347.2
52.5°	376.3	360.3	344.2	333.9	329.2	324.6	319.9	315.3
55°	322.8	308.3	293.9	284.4	279.8	275.2	270.7	266.1
57.5°	274.1	260.9	247.7	239.1	235.3	231.4	227.6	223.7
60°	240.5	228.3	216.0	208.0	204.1	200.2	196.4	192.6
62.5°	211.4	199.7	188.0	181.0	178.7	176.4	174.1	171.8
65°	171.9	163.7	155.6	151.1	150.3	149.7	149.0	148.2
67.5°	138.8	135.0	131.3	129.0	128.2	127.4	126.7	126.0
70°	120.7	118.3	115.9	114.2	113.2	112.3	111.3	110.3
72.5°	105.0	103.0	100.9	99.7	99.1	98.5	97.9	97.3
75°	83.2	81.5	79.8	78.8	78.6	78.4	78.1	77.9
77.5°	63.0	62.0	61.1	60.4	60.0	59.6	59.3	58.9
80°	50.0	49.1	48.1	47.6	47.6	47.6	47.6	47.6
82.5°	37.8	37.2	36.6	36.4	36.4	36.4	36.4	36.4
85°	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
87.5°	11.0	11.0	11.0	11.1	11.2	11.3	11.3	11.4
90°	22.2	23.2	24.4	25.2	25.6	26.0	26.5	26.9
92.5°	24.3	24.9	25.4	25.8	26.1	26.4	26.7	26.9
95°	41.1	42.2	43.3	43.8	43.5	43.3	43.1	42.9
97.5°	53.8	54.7	55.6	56.2	56.4	56.7	57.0	57.2
100°	60.4	62.1	63.9	65.1	65.5	66.0	66.4	66.9
102.5°	63.0	65.4	67.7	69.1	69.7	70.4	71.0	71.6
105°	65.7	68.2	70.6	72.2	73.1	74.0	74.9	75.8
107.5°	80.2	77.7	75.3	74.4	75.3	76.2	77.1	78.0
110°	130.2	108.0	85.9	75.3	76.1	77.0	77.9	78.8



TEST NUMBER: P331839-930

CATALOG NUMBER: S122RDIW-S865D1240U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.5	197.7	116.8	76.7	77.5	78.2	78.8	79.6
115°	410.1	307.5	204.9	145.6	129.6	113.7	97.8	81.8
117.5°	631.9	607.1	582.3	543.6	491.2	438.8	386.4	333.9
120°	736.4	739.0	741.7	728.1	698.1	668.2	638.3	608.4
122.5°	781.3	782.9	784.5	782.4	776.6	770.8	765.0	759.1
125°	845.9	847.4	849.0	850.0	850.7	851.4	852.1	852.7
127.5°	905.5	907.8	910.0	911.3	911.3	911.5	911.6	911.7
130°	943.4	945.8	948.2	949.3	949.1	948.9	948.7	948.4
132.5°	980.2	982.2	984.3	985.2	985.0	984.8	984.6	984.4
135°	1032.7	1034.9	1037.1	1038.0	1037.5	1037.1	1036.7	1036.2
137.5°	1081.4	1083.6	1085.8	1086.5	1085.7	1085.0	1084.3	1083.5
140°	1113.0	1115.0	1117.0	1117.4	1116.3	1115.2	1114.1	1113.0
142.5°	1142.2	1144.0	1145.8	1146.1	1145.1	1143.9	1142.8	1141.7
145°	1182.9	1184.5	1186.0	1186.3	1185.1	1184.1	1182.9	1181.9
147.5°	1218.5	1219.6	1220.7	1220.8	1219.9	1219.0	1218.1	1217.2
150°	1240.3	1241.7	1243.0	1243.1	1242.0	1240.9	1239.7	1238.7
152.5°	1260.3	1261.6	1263.0	1262.9	1261.4	1260.0	1258.5	1257.0
155°	1287.2	1288.6	1289.9	1289.6	1287.8	1286.1	1284.3	1282.5
157.5°	1309.9	1311.4	1313.0	1312.8	1311.1	1309.4	1307.7	1305.9
160°	1323.1	1324.5	1325.8	1325.7	1324.1	1322.6	1321.0	1319.5
162.5°	1335.5	1336.9	1338.5	1338.2	1336.4	1334.4	1332.5	1330.6
165°	1350.5	1352.0	1353.6	1353.6	1352.0	1350.5	1348.9	1347.4
167.5°	1363.0	1364.6	1366.1	1366.0	1363.9	1362.0	1359.9	1358.0
170°	1369.5	1371.0	1372.6	1372.3	1370.4	1368.3	1366.4	1364.3
172.5°	1374.2	1375.7	1377.3	1377.1	1375.1	1373.1	1371.1	1369.1
175°	1379.4	1381.0	1382.5	1382.2	1380.0	1377.8	1375.5	1373.3
177.5°	1380.0	1381.2	1382.5	1382.3	1380.7	1379.1	1377.5	1375.9
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3

(END OF REPORT)