

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: P331839-935

Luminaire Tested: **S122RDIW-S865D1240U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331839-935
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-S865D1240U935-4F0-1E-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: 6865.7 lumens
Efficiency: N/A
Efficacy: 98.4 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

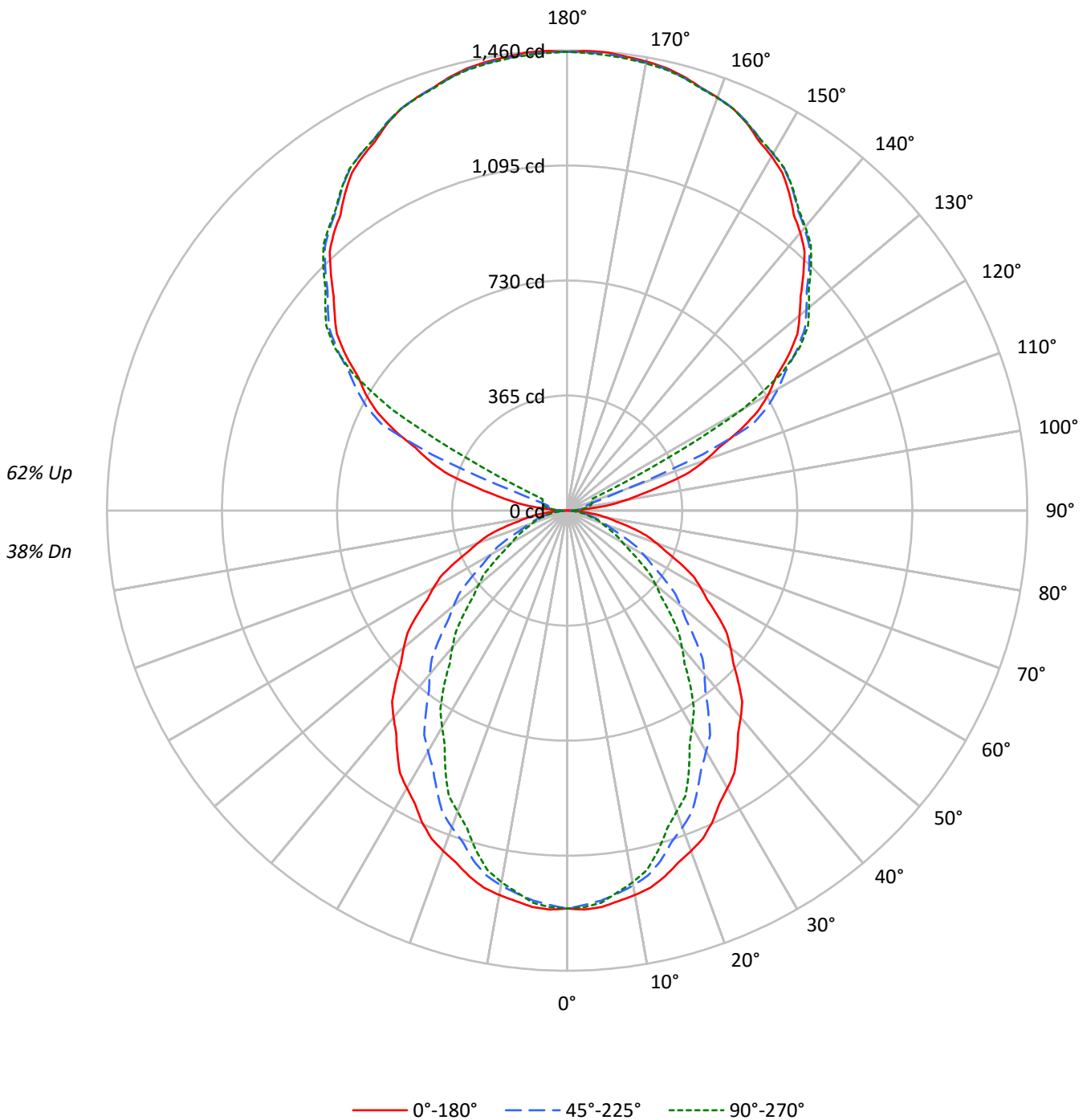
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

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	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°	20384	20384	20384
5°	20462	20128	20238
10°	20305	19799	19630
15°	20072	19211	18658
20°	19747	18374	17452
25°	19417	17423	16283
30°	18957	16444	14783
35°	18510	15380	13466
40°	18061	14280	11944
45°	17532	13045	10565
50°	16990	11796	9211
55°	16434	10452	7910
60°	15791	9038	6568
65°	15060	7595	5979
70°	14186	6255	5500
75°	13119	5702	5128
80°	11576	5095	4677
85°	9114	4020	4020



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	1.7
10°-20°	324.5	4.7
20°-30°	455.6	6.6
30°-40°	496.8	7.2
40°-50°	456.8	6.7
50°-60°	358.8	5.2
60°-70°	233.9	3.4
70°-80°	120.6	1.8
80°-90°	34.9	0.5
90°-100°	48.6	0.7
100°-110°	178.1	2.6
110°-120°	476.0	6.9
120°-130°	785.7	11.4
130°-140°	835.5	12.2
140°-150°	776.6	11.3
150°-160°	624.4	9.1
160°-170°	402.3	5.9
170°-180°	138.5	2.0
0°-30°	898.3	13.1
0°-40°	1395.1	20.3
0°-60°	2210.7	32.2
0°-90°	2600.2	37.9
90°-120°	702.6	10.2
90°-150°	3100.4	45.2
90°-180°	4266.0	62.1
0°-180°	6865.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1262	1256	1242	1251	1249	120
15°	1201	1187	1149	1128	1116	338
25°	1090	1051	978	933	914	501
35°	939	878	780	711	683	587
45°	768	689	571	493	463	593
55°	584	493	371	305	281	521
65°	394	301	199	162	156	391
75°	210	133	91	84	82	223
85°	49	26	22	22	22	58
90°	1	12	21	26	28	5
95°	68	36	41	46	45	84
105°	320	334	64	75	80	342
115°	606	624	650	185	86	596
125°	856	870	890	897	900	763
135°	1060	1076	1086	1096	1094	818
145°	1229	1229	1246	1253	1248	768
155°	1353	1345	1357	1362	1354	623
165°	1426	1420	1423	1429	1423	403
175°	1459	1452	1454	1460	1450	139
180°	1456	1456	1456	1456	1456	



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5
2.5°	1267.0	1266.0	1265.0	1263.9	1263.0	1261.4	1259.1	1256.9	1254.6	1252.4	1254.5
5°	1262.5	1261.2	1259.9	1258.6	1257.4	1255.1	1251.8	1248.5	1245.2	1241.9	1244.1
7.5°	1249.4	1247.8	1246.3	1244.7	1243.1	1240.4	1236.6	1232.7	1228.8	1224.9	1225.6
10°	1238.5	1236.7	1234.9	1233.1	1231.3	1228.0	1222.9	1217.8	1212.7	1207.6	1206.9
12.5°	1224.8	1222.5	1220.4	1218.2	1216.0	1211.7	1205.1	1198.7	1192.1	1185.7	1184.3
15°	1200.8	1198.0	1195.2	1192.4	1189.6	1183.9	1175.3	1166.7	1158.0	1149.3	1144.5
17.5°	1171.3	1167.0	1162.8	1158.5	1154.3	1146.6	1135.5	1124.4	1113.4	1102.3	1096.6
20°	1149.3	1144.3	1139.2	1134.1	1129.0	1120.2	1107.4	1094.8	1082.1	1069.4	1063.0
22.5°	1125.6	1119.9	1114.2	1108.5	1102.9	1092.9	1078.5	1064.2	1049.9	1035.5	1027.3
25°	1089.9	1081.8	1073.7	1065.6	1057.5	1045.0	1028.2	1011.5	994.7	978.0	967.6
27.5°	1047.0	1038.1	1029.3	1020.5	1011.7	997.8	978.9	960.0	941.1	922.2	910.1
30°	1016.8	1007.2	997.6	987.9	978.3	963.3	943.0	922.6	902.3	882.0	869.1
32.5°	987.6	976.3	965.0	953.7	942.5	926.5	905.8	885.0	864.4	843.6	828.9
35°	939.1	926.2	913.3	900.3	887.3	869.7	847.3	825.0	802.7	780.3	764.3
37.5°	890.7	876.5	862.3	848.0	833.8	814.8	791.0	767.2	743.4	719.5	701.9
40°	856.9	841.6	826.4	811.1	795.9	776.0	751.4	726.8	702.1	677.5	659.4
42.5°	822.2	806.1	790.1	774.0	757.9	737.2	711.8	686.3	660.9	635.4	616.8
45°	767.8	750.7	733.7	716.7	699.7	677.9	651.3	624.6	597.9	571.3	553.2
47.5°	714.7	696.7	678.7	660.6	642.7	619.8	592.4	564.8	537.3	509.8	491.9
50°	676.4	658.3	640.3	622.2	604.2	581.3	553.4	525.4	497.5	469.6	452.0
52.5°	638.9	620.0	601.2	582.4	563.5	540.4	513.2	485.8	458.5	431.2	414.2
55°	583.8	564.0	544.2	524.4	504.6	481.0	453.6	426.1	398.7	371.3	356.1
57.5°	527.4	507.0	486.7	466.4	446.2	422.8	396.4	370.1	343.7	317.4	303.4
60°	489.0	468.6	448.4	428.1	407.8	384.5	358.3	332.2	306.1	279.9	267.0
62.5°	451.5	431.2	410.9	390.5	370.2	347.7	322.7	297.8	272.9	247.9	235.6
65°	394.2	373.6	353.0	332.4	311.9	290.2	267.3	244.5	221.6	198.8	190.2
67.5°	338.9	318.5	298.1	277.6	257.2	236.7	216.2	195.6	175.0	154.5	150.5
70°	300.5	280.7	260.9	241.1	221.3	202.6	185.1	167.6	150.1	132.5	130.0
72.5°	263.9	245.0	225.9	207.0	188.0	171.4	157.4	143.3	129.2	115.2	113.0
75°	210.3	192.4	174.7	156.9	139.1	126.0	117.3	108.7	100.0	91.4	89.6
77.5°	157.5	141.8	126.2	110.6	95.1	85.2	81.0	76.9	72.8	68.5	67.5
80°	124.5	111.6	98.7	85.7	72.8	65.0	62.4	59.9	57.3	54.8	53.8
82.5°	94.4	84.3	74.1	64.1	54.0	48.0	46.3	44.6	42.9	41.2	40.6
85°	49.2	43.8	38.5	33.1	27.8	24.8	24.0	23.2	22.5	21.7	21.7
87.5°	14.8	13.7	12.7	11.5	10.4	10.0	10.4	10.8	11.2	11.5	11.5
90°	1.0	3.6	6.2	8.8	11.4	13.6	15.4	17.3	19.2	21.1	22.2
92.5°	21.3	21.0	20.8	20.6	20.3	20.7	21.6	22.6	23.5	24.5	25.1
95°	68.4	60.7	53.0	45.3	37.5	34.5	36.2	37.8	39.4	41.1	42.3
97.5°	135.9	114.1	92.3	70.6	48.8	39.8	43.6	47.4	51.2	55.0	55.9
100°	186.4	154.4	122.3	90.2	58.2	44.1	48.1	52.1	56.1	60.0	61.9
102.5°	242.0	235.2	228.4	221.7	214.9	194.8	161.5	128.3	95.0	61.7	64.1
105°	320.2	327.2	334.2	341.2	348.3	319.9	256.0	192.0	128.1	64.2	66.8
107.5°	409.3	414.9	420.6	426.3	432.0	396.5	319.9	243.2	166.6	90.0	87.3
110°	466.6	471.5	476.4	481.3	486.2	454.9	387.3	319.6	251.9	184.3	160.9



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	520.5	524.9	529.2	533.6	538.0	531.8	515.1	498.3	481.6	464.9	379.5
115°	605.6	609.6	613.5	617.5	621.6	626.5	632.3	638.2	644.0	649.9	541.5
117.5°	681.7	686.1	690.5	695.0	699.5	703.7	707.7	711.7	715.7	719.8	693.5
120°	737.3	740.8	744.2	747.8	751.3	755.2	759.4	763.6	767.8	772.0	774.8
122.5°	784.5	788.2	791.9	795.6	799.3	803.4	808.0	812.5	817.2	821.7	823.4
125°	856.3	859.3	862.4	865.4	868.4	872.2	876.7	881.1	885.5	890.0	891.7
127.5°	921.4	924.7	928.1	931.5	934.9	938.2	941.5	944.9	948.1	951.5	953.9
130°	962.7	966.4	970.2	973.9	977.7	980.8	983.3	985.9	988.5	991.1	993.7
132.5°	1004.8	1008.0	1011.2	1014.3	1017.5	1020.4	1023.0	1025.5	1028.1	1030.7	1032.9
135°	1059.5	1063.2	1067.0	1070.7	1074.5	1077.5	1079.5	1081.7	1083.7	1085.9	1088.2
137.5°	1114.9	1117.6	1120.2	1122.8	1125.4	1127.9	1130.3	1132.7	1135.1	1137.5	1139.8
140°	1151.2	1153.1	1154.9	1156.8	1158.6	1160.9	1163.5	1166.1	1168.6	1171.2	1173.3
142.5°	1181.6	1183.2	1184.9	1186.5	1188.3	1190.6	1193.5	1196.4	1199.4	1202.4	1204.3
145°	1229.1	1228.9	1228.6	1228.4	1228.2	1230.0	1234.1	1238.0	1242.0	1246.0	1247.6
147.5°	1270.6	1269.7	1268.9	1267.9	1267.0	1268.6	1272.5	1276.4	1280.4	1284.3	1285.6
150°	1297.6	1296.0	1294.3	1292.6	1291.0	1292.1	1295.8	1299.6	1303.3	1307.1	1308.5
152.5°	1320.3	1318.5	1316.6	1314.8	1313.0	1313.9	1317.4	1321.0	1324.6	1328.1	1329.6
155°	1353.4	1351.3	1349.2	1347.0	1345.0	1345.3	1348.2	1350.9	1353.8	1356.6	1358.0
157.5°	1379.3	1377.5	1375.7	1374.0	1372.2	1372.3	1374.2	1376.2	1378.2	1380.2	1381.7
160°	1394.5	1393.1	1391.6	1390.3	1388.9	1388.9	1390.3	1391.6	1393.1	1394.5	1395.9
162.5°	1408.0	1406.5	1405.2	1403.8	1402.3	1402.2	1403.4	1404.6	1405.9	1407.1	1408.7
165°	1426.1	1424.7	1423.2	1421.9	1420.5	1420.1	1420.8	1421.5	1422.2	1422.9	1424.5
167.5°	1439.6	1438.1	1436.8	1435.4	1433.9	1433.6	1434.3	1434.9	1435.5	1436.1	1437.8
170°	1447.2	1445.7	1444.3	1442.9	1441.5	1441.1	1441.5	1442.0	1442.4	1442.9	1444.6
172.5°	1452.2	1450.8	1449.4	1447.9	1446.6	1446.1	1446.6	1447.0	1447.5	1447.9	1449.6
175°	1458.7	1457.1	1455.4	1453.8	1452.2	1451.6	1452.1	1452.5	1453.0	1453.5	1455.1
177.5°	1459.7	1458.4	1457.2	1455.9	1454.5	1454.0	1454.1	1454.3	1454.5	1454.7	1456.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5
2.5°	1256.5	1258.5	1260.5	1261.4	1260.9	1260.5	1260.2	1259.7
5°	1246.5	1248.7	1251.0	1251.8	1251.0	1250.3	1249.5	1248.7
7.5°	1226.3	1226.9	1227.6	1227.3	1226.0	1224.7	1223.3	1222.0
10°	1206.1	1205.3	1204.5	1203.4	1201.9	1200.4	1198.9	1197.3
12.5°	1182.9	1181.6	1180.2	1178.3	1175.7	1173.2	1170.6	1168.1
15°	1139.7	1134.9	1130.1	1126.4	1123.9	1121.3	1118.8	1116.2
17.5°	1090.8	1085.0	1079.3	1074.3	1069.9	1065.6	1061.2	1056.8
20°	1056.7	1050.3	1044.0	1038.0	1032.4	1026.8	1021.2	1015.7
22.5°	1019.3	1011.1	1002.9	996.7	992.6	988.3	984.2	980.1
25°	957.2	946.8	936.3	929.2	925.4	921.6	917.8	914.0
27.5°	897.9	885.8	873.7	864.6	858.6	852.5	846.4	840.4
30°	856.1	843.2	830.2	820.3	813.5	806.6	799.8	792.9
32.5°	814.1	799.3	784.5	773.9	767.5	761.0	754.6	748.1
35°	748.3	732.4	716.4	705.6	700.0	694.4	688.8	683.2
37.5°	684.3	666.7	649.1	637.1	630.7	624.2	617.9	611.5
40°	641.4	623.5	605.4	593.1	586.5	579.9	573.3	566.7
42.5°	598.2	579.5	560.9	548.4	542.0	535.6	529.2	522.8
45°	535.2	517.2	499.1	487.1	481.0	474.9	468.8	462.7
47.5°	473.9	456.0	438.1	426.4	420.9	415.3	409.7	404.2
50°	434.5	417.0	399.5	388.1	382.7	377.4	372.0	366.7
52.5°	397.4	380.5	363.5	352.7	347.7	342.8	337.9	332.9
55°	340.9	325.6	310.4	300.3	295.5	290.7	285.9	281.0
57.5°	289.5	275.5	261.6	252.5	248.5	244.4	240.3	236.3
60°	254.0	241.1	228.1	219.6	215.5	211.5	207.4	203.4
62.5°	223.3	210.9	198.5	191.1	188.7	186.3	183.8	181.4
65°	181.5	172.9	164.3	159.5	158.8	158.1	157.3	156.5
67.5°	146.5	142.6	138.6	136.2	135.4	134.6	133.8	133.0
70°	127.4	124.9	122.3	120.6	119.6	118.6	117.5	116.5
72.5°	110.9	108.7	106.6	105.3	104.6	104.0	103.4	102.8
75°	87.8	86.1	84.3	83.3	83.0	82.7	82.5	82.2
77.5°	66.6	65.5	64.5	63.8	63.4	62.9	62.6	62.2
80°	52.8	51.8	50.8	50.3	50.3	50.3	50.3	50.3
82.5°	40.0	39.3	38.7	38.4	38.4	38.4	38.4	38.4
85°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
87.5°	11.6	11.6	11.6	11.7	11.8	11.9	12.0	12.1
90°	23.4	24.5	25.7	26.6	27.0	27.5	28.0	28.4
92.5°	25.7	26.3	26.9	27.3	27.6	27.9	28.2	28.4
95°	43.4	44.6	45.7	46.2	46.0	45.7	45.5	45.3
97.5°	56.8	57.8	58.7	59.3	59.6	59.9	60.2	60.4
100°	63.8	65.6	67.5	68.7	69.1	69.7	70.1	70.6
102.5°	66.6	69.1	71.5	73.0	73.6	74.3	75.0	75.6
105°	69.4	72.0	74.6	76.3	77.2	78.2	79.1	80.1
107.5°	84.7	82.1	79.5	78.6	79.6	80.5	81.5	82.4
110°	137.5	114.1	90.7	79.5	80.4	81.4	82.3	83.2



TEST NUMBER: P331839-935

CATALOG NUMBER: S122RDIW-S865D1240U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.1	208.8	123.4	81.0	81.8	82.6	83.3	84.0
115°	433.1	324.8	216.4	153.8	136.9	120.1	103.2	86.4
117.5°	667.4	641.1	614.9	574.1	518.8	463.4	408.0	352.6
120°	777.7	780.4	783.3	768.9	737.3	705.7	674.1	642.5
122.5°	825.1	826.8	828.5	826.2	820.1	814.0	807.9	801.7
125°	893.3	894.9	896.6	897.7	898.4	899.1	899.8	900.5
127.5°	956.2	958.6	961.0	962.3	962.4	962.6	962.7	962.9
130°	996.3	998.8	1001.3	1002.5	1002.3	1002.1	1001.9	1001.6
132.5°	1035.1	1037.2	1039.5	1040.4	1040.3	1040.0	1039.7	1039.6
135°	1090.5	1092.9	1095.3	1096.1	1095.7	1095.3	1094.8	1094.3
137.5°	1142.0	1144.4	1146.7	1147.4	1146.6	1145.8	1145.0	1144.2
140°	1175.4	1177.5	1179.7	1180.1	1178.9	1177.8	1176.6	1175.4
142.5°	1206.2	1208.2	1210.0	1210.4	1209.3	1208.1	1206.9	1205.7
145°	1249.2	1250.9	1252.5	1252.8	1251.5	1250.4	1249.2	1248.1
147.5°	1286.8	1288.0	1289.2	1289.3	1288.3	1287.3	1286.3	1285.4
150°	1309.8	1311.3	1312.7	1312.8	1311.6	1310.4	1309.2	1308.1
152.5°	1330.9	1332.3	1333.8	1333.7	1332.1	1330.6	1329.0	1327.5
155°	1359.3	1360.8	1362.2	1361.9	1360.0	1358.2	1356.3	1354.4
157.5°	1383.4	1384.9	1386.6	1386.4	1384.6	1382.8	1381.0	1379.1
160°	1397.3	1398.7	1400.1	1400.0	1398.4	1396.7	1395.1	1393.4
162.5°	1410.3	1411.9	1413.5	1413.2	1411.3	1409.2	1407.2	1405.2
165°	1426.2	1427.8	1429.4	1429.4	1427.8	1426.2	1424.5	1422.9
167.5°	1439.4	1441.1	1442.7	1442.5	1440.4	1438.3	1436.1	1434.1
170°	1446.2	1447.9	1449.5	1449.2	1447.2	1445.0	1442.9	1440.8
172.5°	1451.2	1452.9	1454.5	1454.3	1452.2	1450.1	1447.9	1445.9
175°	1456.7	1458.4	1460.0	1459.7	1457.3	1455.0	1452.6	1450.3
177.5°	1457.3	1458.6	1460.0	1459.7	1458.1	1456.4	1454.7	1453.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5

(END OF REPORT)