

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: P331843-927

Luminaire Tested: **S122RDIW-S865D1440U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331843-927
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-S865D1440U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6955.9 lumens
Efficiency: N/A
Efficacy: 90.8 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: Semi-Indirect

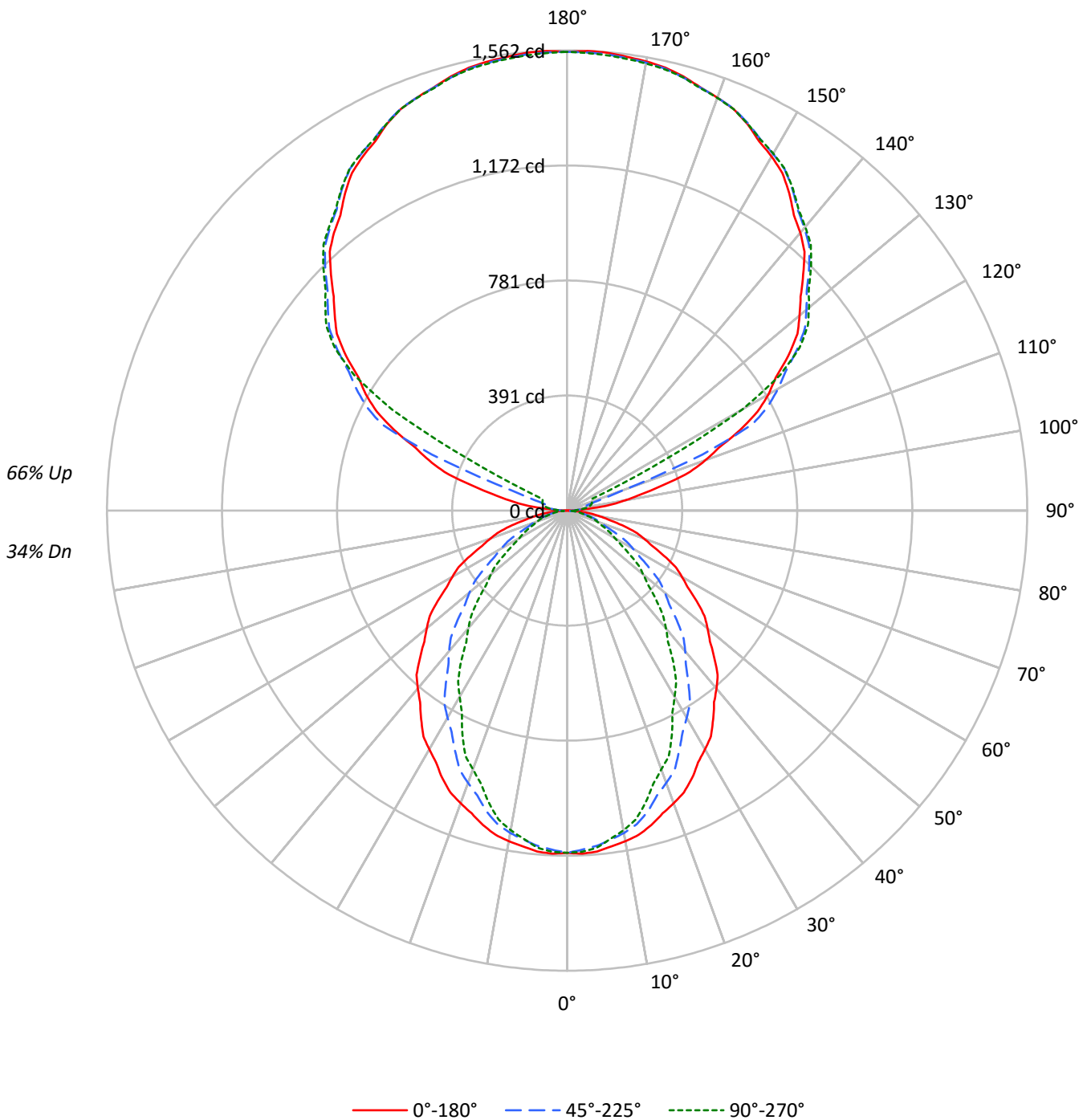
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34
1	95	91	87	84	85	82	79	76	66	64	62	51	50	48	37	37	36	30
2	86	79	74	69	78	72	67	63	58	55	52	45	43	41	33	32	31	25
3	79	70	63	58	71	64	58	53	51	47	44	40	37	35	30	28	26	22
4	72	62	55	49	65	56	50	45	46	41	38	36	33	30	27	25	23	19
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20	17
6	61	50	42	36	55	45	39	34	37	32	28	29	26	23	22	20	18	15
7	57	45	37	32	51	41	34	30	34	29	25	27	23	21	20	18	16	13
8	53	41	33	28	47	37	31	26	31	26	22	25	21	18	19	16	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	17	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18755	18755	18755
5°	18827	18519	18621
10°	18682	18216	18061
15°	18467	17677	17167
20°	18170	16905	16057
25°	17865	16030	14982
30°	17443	15129	13601
35°	17030	14152	12390
40°	16617	13139	10989
45°	16130	12001	9720
50°	15631	10854	8475
55°	15122	9619	7279
60°	14528	8315	6042
65°	13857	6988	5501
70°	13053	5755	5061
75°	12071	5246	4722
80°	10646	4695	4305
85°	8373	3705	3705



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.7	1.6
10°-20°	298.5	4.3
20°-30°	419.2	6.0
30°-40°	457.1	6.6
40°-50°	420.3	6.0
50°-60°	330.1	4.7
60°-70°	215.2	3.1
70°-80°	111.0	1.6
80°-90°	32.6	0.5
90°-100°	51.9	0.7
100°-110°	190.5	2.7
110°-120°	509.1	7.3
120°-130°	840.4	12.1
130°-140°	893.8	12.8
140°-150°	830.7	11.9
150°-160°	667.9	9.6
160°-170°	430.4	6.2
170°-180°	148.2	2.1
0°-30°	826.5	11.9
0°-40°	1283.6	18.5
0°-60°	2034.0	29.2
0°-90°	2392.9	34.4
90°-120°	751.5	10.8
90°-150°	3316.5	47.7
90°-180°	4563.0	65.6
0°-180°	6955.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1162	1162	1162	1162	1162	
5°	1162	1156	1143	1151	1149	110
15°	1105	1092	1058	1038	1027	311
25°	1003	967	900	858	841	461
35°	864	808	718	654	629	541
45°	706	634	526	454	426	545
55°	537	453	342	281	259	480
65°	363	277	183	149	144	359
75°	194	122	84	77	76	205
85°	45	24	20	20	20	53
90°	1	13	22	28	30	5
95°	73	39	44	49	48	90
105°	342	357	69	81	86	366
115°	648	668	695	198	92	638
125°	916	931	952	960	963	816
135°	1134	1151	1162	1172	1171	875
145°	1315	1315	1333	1340	1335	822
155°	1448	1439	1451	1457	1449	667
165°	1526	1519	1522	1529	1522	431
175°	1560	1553	1555	1562	1551	148
180°	1557	1557	1557	1557	1557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6
2.5°	1165.8	1164.8	1163.9	1162.9	1162.1	1160.5	1158.5	1156.4	1154.4	1152.3	1154.2
5°	1161.6	1160.4	1159.2	1158.0	1156.9	1154.8	1151.8	1148.7	1145.7	1142.6	1144.7
7.5°	1149.5	1148.1	1146.7	1145.3	1143.8	1141.3	1137.7	1134.2	1130.6	1127.0	1127.7
10°	1139.5	1137.8	1136.2	1134.6	1132.9	1129.8	1125.1	1120.5	1115.8	1111.1	1110.4
12.5°	1126.9	1124.8	1122.8	1120.9	1118.8	1114.8	1108.8	1102.9	1096.9	1090.9	1089.6
15°	1104.8	1102.2	1099.6	1097.1	1094.5	1089.3	1081.3	1073.4	1065.4	1057.5	1053.0
17.5°	1077.7	1073.7	1069.8	1065.9	1062.0	1054.9	1044.7	1034.5	1024.4	1014.2	1008.9
20°	1057.5	1052.8	1048.1	1043.5	1038.8	1030.6	1018.9	1007.3	995.6	983.9	978.0
22.5°	1035.6	1030.4	1025.2	1019.9	1014.7	1005.5	992.3	979.1	966.0	952.8	945.2
25°	1002.8	995.4	987.9	980.4	973.0	961.5	946.0	930.7	915.2	899.8	890.3
27.5°	963.3	955.1	947.1	938.9	930.8	918.1	900.6	883.3	865.9	848.5	837.3
30°	935.6	926.7	917.8	908.9	900.1	886.3	867.6	848.9	830.2	811.5	799.6
32.5°	908.6	898.3	887.9	877.5	867.1	852.5	833.4	814.3	795.3	776.2	762.6
35°	864.0	852.2	840.3	828.3	816.4	800.2	779.6	759.1	738.6	718.0	703.2
37.5°	819.5	806.4	793.4	780.2	767.1	749.6	727.8	705.8	684.0	662.0	645.8
40°	788.4	774.4	760.3	746.3	732.3	714.0	691.3	668.7	646.0	623.4	606.7
42.5°	756.5	741.6	726.9	712.2	697.4	678.3	654.9	631.4	608.1	584.6	567.5
45°	706.4	690.7	675.1	659.4	643.8	623.7	599.2	574.6	550.1	525.6	509.0
47.5°	657.6	641.0	624.5	607.8	591.3	570.3	545.0	519.7	494.3	469.1	452.6
50°	622.3	605.7	589.1	572.5	556.0	534.8	509.1	483.4	457.7	432.1	415.9
52.5°	587.8	570.5	553.2	535.8	518.5	497.3	472.1	446.9	421.8	396.7	381.1
55°	537.2	519.0	500.7	482.5	464.3	442.5	417.3	392.1	366.9	341.7	327.6
57.5°	485.2	466.5	447.8	429.1	410.5	389.0	364.7	340.5	316.2	292.0	279.2
60°	449.9	431.2	412.6	393.9	375.2	353.8	329.7	305.6	281.6	257.5	245.7
62.5°	415.4	396.7	378.0	359.3	340.6	319.9	296.9	274.0	251.0	228.1	216.7
65°	362.7	343.7	324.8	305.9	287.0	267.0	246.0	225.0	203.9	182.9	175.0
67.5°	311.8	293.0	274.3	255.4	236.6	217.8	198.9	180.0	161.1	142.1	138.5
70°	276.5	258.3	240.0	221.8	203.6	186.4	170.3	154.2	138.1	121.9	119.6
72.5°	242.8	225.4	207.9	190.4	172.9	157.7	144.8	131.8	118.9	106.0	104.0
75°	193.5	177.1	160.7	144.3	128.0	115.9	107.9	100.0	92.1	84.1	82.5
77.5°	144.9	130.5	116.1	101.8	87.5	78.4	74.5	70.7	66.9	63.1	62.1
80°	114.5	102.7	90.8	78.8	66.9	59.8	57.4	55.1	52.8	50.5	49.5
82.5°	86.8	77.6	68.2	58.9	49.7	44.2	42.6	41.0	39.5	37.9	37.3
85°	45.2	40.3	35.4	30.5	25.6	22.8	22.1	21.4	20.7	20.0	20.0
87.5°	13.7	12.8	11.8	10.9	9.9	9.7	10.1	10.5	10.9	11.2	11.3
90°	1.1	3.9	6.7	9.4	12.1	14.5	16.6	18.5	20.5	22.5	23.8
92.5°	22.7	22.5	22.3	22.0	21.8	22.1	23.1	24.2	25.1	26.1	26.8
95°	73.2	65.0	56.7	48.5	40.2	36.9	38.7	40.4	42.2	44.0	45.2
97.5°	145.4	122.1	98.8	75.5	52.2	42.6	46.7	50.7	54.7	58.8	59.8
100°	199.4	165.1	130.8	96.5	62.2	47.2	51.4	55.7	60.0	64.2	66.2
102.5°	258.9	251.7	244.4	237.1	229.9	208.4	172.9	137.2	101.6	66.0	68.6
105°	342.5	350.0	357.5	365.0	372.6	342.1	273.8	205.4	137.0	68.8	71.5
107.5°	437.8	443.9	450.0	456.0	462.1	424.1	342.1	260.2	178.2	96.3	93.4
110°	499.2	504.4	509.6	514.9	520.1	486.6	414.2	341.9	269.5	197.2	172.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	556.8	561.4	566.1	570.8	575.4	568.8	551.0	533.1	515.2	497.3	406.0
115°	647.8	652.1	656.3	660.6	664.9	670.1	676.4	682.6	688.9	695.1	579.2
117.5°	729.2	734.0	738.7	743.5	748.2	752.7	757.0	761.4	765.6	770.0	742.0
120°	788.7	792.4	796.1	799.9	803.7	807.8	812.3	816.8	821.3	825.9	828.9
122.5°	839.2	843.1	847.1	851.0	855.0	859.4	864.3	869.2	874.1	879.0	880.8
125°	916.0	919.2	922.5	925.7	929.0	933.0	937.8	942.5	947.3	952.0	953.8
127.5°	985.6	989.2	992.8	996.4	1000.1	1003.6	1007.2	1010.7	1014.3	1017.9	1020.4
130°	1029.8	1033.8	1037.8	1041.8	1045.8	1049.2	1051.9	1054.7	1057.4	1060.2	1063.0
132.5°	1074.8	1078.2	1081.6	1085.1	1088.5	1091.5	1094.3	1097.0	1099.8	1102.6	1104.9
135°	1133.5	1137.4	1141.5	1145.4	1149.5	1152.5	1154.8	1157.1	1159.4	1161.6	1164.1
137.5°	1192.7	1195.5	1198.3	1201.1	1203.9	1206.6	1209.1	1211.7	1214.3	1216.8	1219.2
140°	1231.4	1233.4	1235.5	1237.5	1239.4	1241.8	1244.6	1247.4	1250.1	1252.8	1255.1
142.5°	1263.9	1265.7	1267.5	1269.3	1271.1	1273.6	1276.8	1279.9	1283.0	1286.2	1288.2
145°	1314.9	1314.5	1314.3	1314.1	1313.8	1315.8	1320.1	1324.4	1328.6	1332.8	1334.6
147.5°	1359.2	1358.3	1357.3	1356.4	1355.4	1357.0	1361.2	1365.5	1369.7	1373.9	1375.1
150°	1388.1	1386.3	1384.6	1382.8	1381.0	1382.2	1386.2	1390.2	1394.2	1398.2	1399.7
152.5°	1412.4	1410.5	1408.5	1406.5	1404.6	1405.5	1409.3	1413.1	1416.9	1420.7	1422.2
155°	1447.8	1445.5	1443.3	1441.0	1438.8	1439.2	1442.2	1445.2	1448.2	1451.1	1452.6
157.5°	1475.5	1473.6	1471.7	1469.8	1467.9	1468.0	1470.1	1472.2	1474.3	1476.4	1478.1
160°	1491.7	1490.2	1488.7	1487.2	1485.7	1485.7	1487.2	1488.7	1490.2	1491.7	1493.2
162.5°	1506.1	1504.7	1503.2	1501.7	1500.2	1500.0	1501.3	1502.6	1504.0	1505.2	1507.0
165°	1525.5	1524.0	1522.5	1521.0	1519.5	1519.2	1519.9	1520.6	1521.4	1522.1	1523.9
167.5°	1539.9	1538.4	1536.9	1535.4	1533.9	1533.5	1534.2	1534.9	1535.6	1536.4	1538.1
170°	1548.1	1546.6	1545.1	1543.6	1542.1	1541.5	1542.1	1542.5	1543.0	1543.6	1545.3
172.5°	1553.5	1552.0	1550.5	1549.0	1547.4	1547.0	1547.4	1547.9	1548.5	1549.0	1550.7
175°	1560.4	1558.7	1557.0	1555.2	1553.5	1552.8	1553.3	1553.8	1554.3	1554.8	1556.6
177.5°	1561.5	1560.2	1558.8	1557.4	1555.9	1555.4	1555.5	1555.8	1555.9	1556.2	1557.6
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6	1161.6
2.5°	1156.0	1157.9	1159.8	1160.5	1160.2	1159.8	1159.4	1159.0
5°	1146.8	1148.9	1151.0	1151.8	1151.0	1150.3	1149.6	1148.9
7.5°	1128.3	1128.9	1129.5	1129.2	1128.0	1126.8	1125.5	1124.3
10°	1109.7	1109.0	1108.3	1107.2	1105.8	1104.5	1103.0	1101.6
12.5°	1088.4	1087.1	1085.8	1084.1	1081.7	1079.4	1077.1	1074.8
15°	1048.6	1044.2	1039.7	1036.3	1034.0	1031.7	1029.4	1027.0
17.5°	1003.6	998.3	993.1	988.4	984.4	980.4	976.4	972.3
20°	972.2	966.4	960.5	955.1	949.9	944.8	939.6	934.5
22.5°	937.8	930.3	922.7	917.0	913.2	909.3	905.5	901.7
25°	880.7	871.1	861.5	854.9	851.4	848.0	844.5	841.0
27.5°	826.2	815.0	803.8	795.5	790.0	784.3	778.8	773.2
30°	787.7	775.8	763.8	754.7	748.5	742.1	735.9	729.5
32.5°	749.0	735.4	721.8	712.0	706.2	700.2	694.3	688.3
35°	688.5	673.8	659.1	649.2	644.0	638.9	633.7	628.6
37.5°	629.6	613.4	597.2	586.1	580.3	574.3	568.5	562.6
40°	590.2	573.6	557.0	545.7	539.6	533.5	527.4	521.4
42.5°	550.4	533.2	516.1	504.5	498.7	492.8	486.9	481.0
45°	492.4	475.9	459.2	448.1	442.5	437.0	431.3	425.7
47.5°	436.0	419.5	403.1	392.3	387.2	382.1	377.0	371.9
50°	399.8	383.7	367.6	357.0	352.1	347.2	342.3	337.4
52.5°	365.6	350.1	334.5	324.5	319.9	315.4	310.9	306.3
55°	313.6	299.6	285.6	276.3	271.9	267.4	263.0	258.6
57.5°	266.3	253.5	240.7	232.3	228.6	224.8	221.1	217.4
60°	233.7	221.8	209.8	202.1	198.3	194.6	190.8	187.1
62.5°	205.4	194.1	182.7	175.9	173.6	171.4	169.1	166.9
65°	167.0	159.1	151.1	146.8	146.1	145.4	144.7	144.0
67.5°	134.8	131.2	127.5	125.3	124.6	123.8	123.1	122.4
70°	117.2	114.9	112.6	111.0	110.0	109.1	108.1	107.2
72.5°	102.0	100.1	98.1	96.9	96.3	95.7	95.1	94.6
75°	80.8	79.2	77.6	76.6	76.4	76.1	75.9	75.7
77.5°	61.2	60.3	59.3	58.7	58.3	57.9	57.6	57.2
80°	48.6	47.7	46.7	46.3	46.3	46.3	46.3	46.3
82.5°	36.8	36.1	35.6	35.3	35.3	35.3	35.3	35.3
85°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
87.5°	11.3	11.4	11.5	11.6	11.6	11.8	11.9	12.0
90°	25.0	26.3	27.6	28.4	28.9	29.4	29.9	30.4
92.5°	27.4	28.1	28.8	29.2	29.5	29.8	30.1	30.4
95°	46.4	47.7	49.0	49.4	49.2	49.0	48.7	48.5
97.5°	60.8	61.8	62.8	63.5	63.8	64.1	64.4	64.6
100°	68.2	70.3	72.2	73.5	74.0	74.5	75.0	75.5
102.5°	71.2	73.8	76.4	78.1	78.8	79.5	80.2	80.9
105°	74.2	77.0	79.8	81.6	82.6	83.7	84.6	85.6
107.5°	90.6	87.8	85.0	84.1	85.1	86.1	87.1	88.1
110°	147.1	122.1	97.0	85.0	86.0	87.0	88.0	89.0



TEST NUMBER: P331843-927

CATALOG NUMBER: S122RDIW-S865D1440U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	314.7	223.3	132.0	86.7	87.5	88.3	89.1	89.9
115°	463.3	347.4	231.5	164.5	146.5	128.4	110.4	92.4
117.5°	713.9	685.9	657.8	614.2	554.9	495.7	436.4	377.2
120°	831.9	834.9	837.9	822.4	788.7	754.9	721.0	687.3
122.5°	882.6	884.5	886.2	883.8	877.3	870.8	864.2	857.6
125°	955.5	957.3	959.0	960.3	961.1	961.8	962.6	963.3
127.5°	1022.9	1025.5	1028.0	1029.4	1029.5	1029.7	1029.8	1030.0
130°	1065.7	1068.5	1071.2	1072.5	1072.2	1072.0	1071.7	1071.4
132.5°	1107.2	1109.6	1112.0	1113.0	1112.8	1112.5	1112.3	1112.0
135°	1166.6	1169.1	1171.6	1172.6	1172.1	1171.6	1171.1	1170.6
137.5°	1221.7	1224.2	1226.6	1227.4	1226.5	1225.7	1224.9	1224.0
140°	1257.4	1259.6	1261.9	1262.3	1261.2	1259.9	1258.6	1257.4
142.5°	1290.3	1292.4	1294.4	1294.8	1293.6	1292.3	1291.1	1289.8
145°	1336.3	1338.1	1339.9	1340.1	1338.9	1337.6	1336.3	1335.1
147.5°	1376.5	1377.8	1379.1	1379.2	1378.2	1377.1	1376.0	1375.0
150°	1401.2	1402.7	1404.2	1404.3	1403.1	1401.8	1400.6	1399.3
152.5°	1423.7	1425.2	1426.7	1426.6	1425.0	1423.4	1421.7	1420.1
155°	1454.1	1455.6	1457.1	1456.9	1454.9	1452.9	1450.9	1448.9
157.5°	1479.8	1481.5	1483.2	1483.0	1481.1	1479.2	1477.2	1475.3
160°	1494.7	1496.2	1497.7	1497.6	1495.9	1494.1	1492.3	1490.6
162.5°	1508.6	1510.4	1512.0	1511.8	1509.7	1507.5	1505.4	1503.2
165°	1525.7	1527.4	1529.1	1529.1	1527.4	1525.7	1523.9	1522.1
167.5°	1539.8	1541.6	1543.3	1543.1	1540.9	1538.6	1536.4	1534.1
170°	1547.1	1548.8	1550.5	1550.3	1548.1	1545.8	1543.6	1541.3
172.5°	1552.4	1554.2	1555.9	1555.7	1553.5	1551.2	1549.0	1546.7
175°	1558.3	1560.0	1561.8	1561.5	1558.9	1556.4	1553.9	1551.4
177.5°	1558.9	1560.4	1561.8	1561.5	1559.7	1558.0	1556.2	1554.3
180°	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0	1557.0

(END OF REPORT)