

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: P331819

Luminaire Tested: **S122RDIW-S675D1240U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331819  
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-S675D1240U835-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 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: 7278.5 lumens  
Efficiency: N/A  
Efficacy: 118.5 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

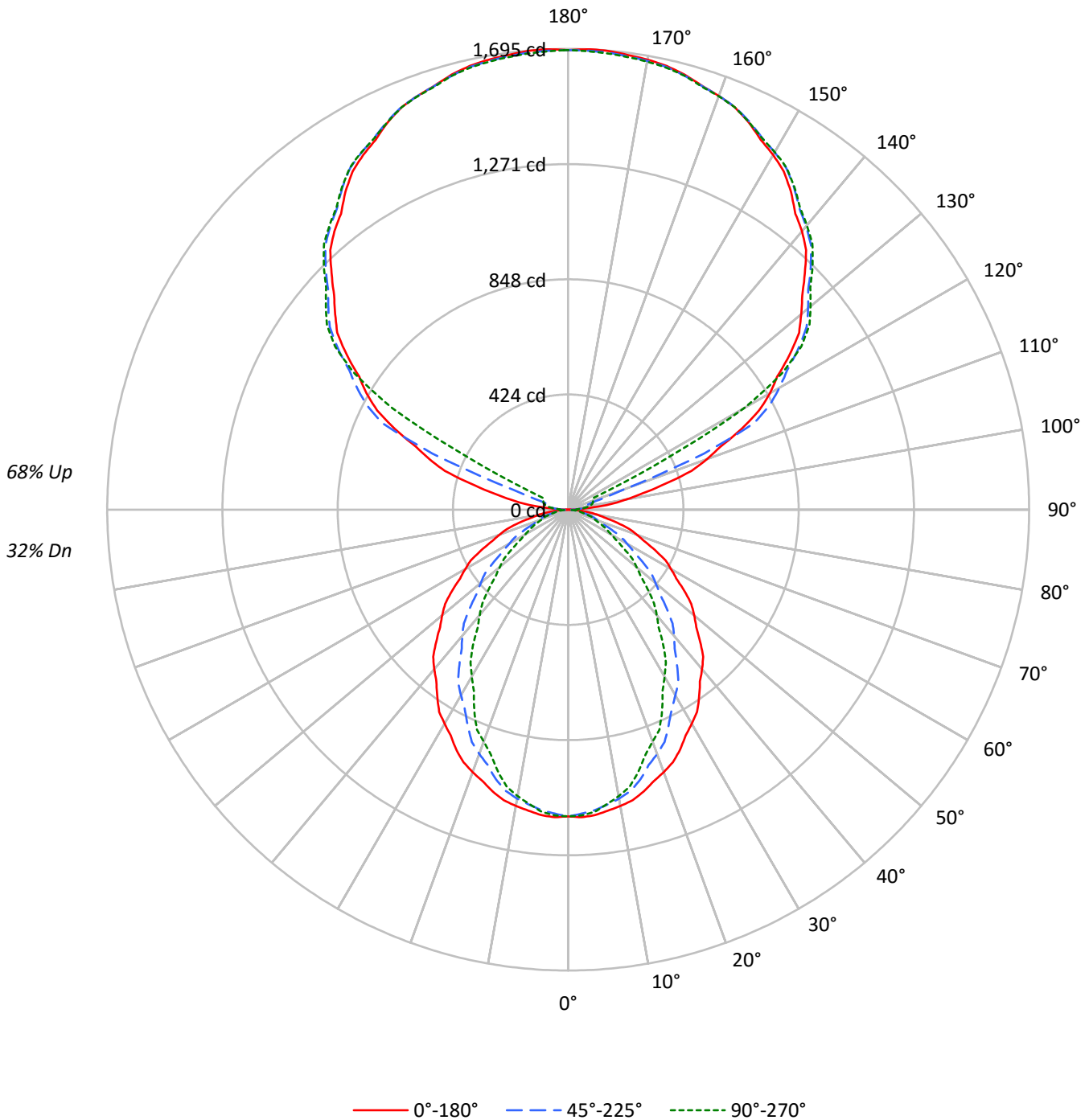
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	84	81	78	75	65	62	61	49	48	47	35	35	34	27
2	86	79	73	68	77	71	66	62	57	54	51	44	41	40	31	30	29	24
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	18213	18213	18213
5°	18282	17985	18084
10°	18143	17690	17539
15°	17934	17167	16672
20°	17646	16417	15593
25°	17350	15567	14549
30°	16940	14693	13209
35°	16539	13742	12033
40°	16136	12760	10671
45°	15664	11654	9439
50°	15179	10540	8231
55°	14686	9340	7068
60°	14108	8076	5867
65°	13456	6785	5345
70°	12675	5589	4914
75°	11715	5097	4585
80°	10349	4556	4175
85°	8133	3594	3594



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	1.5
10°-20°	289.9	4.0
20°-30°	407.1	5.6
30°-40°	443.9	6.1
40°-50°	408.2	5.6
50°-60°	320.6	4.4
60°-70°	209.0	2.9
70°-80°	107.8	1.5
80°-90°	32.1	0.4
90°-100°	56.4	0.8
100°-110°	206.8	2.8
110°-120°	552.8	7.6
120°-130°	912.5	12.5
130°-140°	970.4	13.3
140°-150°	902.0	12.4
150°-160°	725.2	10.0
160°-170°	467.3	6.4
170°-180°	160.9	2.2
0°-30°	802.6	11.0
0°-40°	1246.6	17.1
0°-60°	1975.3	27.1
0°-90°	2324.2	31.9
90°-120°	816.0	11.2
90°-150°	3600.9	49.5
90°-180°	4954.0	68.1
0°-180°	7278.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1128	1122	1110	1118	1116	107
15°	1073	1060	1027	1008	997	302
25°	974	939	874	833	817	448
35°	839	785	697	635	610	525
45°	686	615	510	441	413	529
55°	522	440	332	273	251	466
65°	352	269	178	145	140	349
75°	188	118	82	75	74	199
85°	44	23	19	19	19	52
90°	1	14	24	30	33	6
95°	80	42	48	53	53	97
105°	372	388	75	88	93	397
115°	703	725	755	215	100	692
125°	994	1011	1034	1042	1046	886
135°	1231	1250	1261	1273	1271	950
145°	1428	1428	1447	1455	1450	893
155°	1572	1562	1576	1582	1573	724
165°	1656	1650	1653	1660	1653	468
175°	1694	1686	1688	1696	1684	161
180°	1690	1690	1690	1690	1690	



TEST NUMBER: P331819

CATALOG NUMBER: S122RDIW-S675D1240U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1132.1	1131.2	1130.3	1129.4	1128.5	1127.0	1125.0	1123.0	1121.1	1119.1	1120.9
5°	1128.0	1126.9	1125.8	1124.6	1123.5	1121.5	1118.5	1115.6	1112.6	1109.7	1111.7
7.5°	1116.4	1115.0	1113.6	1112.2	1110.8	1108.3	1104.9	1101.5	1098.0	1094.6	1095.1
10°	1106.6	1105.0	1103.4	1101.8	1100.2	1097.2	1092.6	1088.1	1083.6	1079.0	1078.4
12.5°	1094.3	1092.4	1090.4	1088.5	1086.5	1082.7	1076.9	1071.1	1065.2	1059.4	1058.2
15°	1072.9	1070.4	1067.9	1065.4	1062.9	1057.8	1050.1	1042.4	1034.7	1027.0	1022.7
17.5°	1046.6	1042.8	1039.0	1035.1	1031.3	1024.5	1014.6	1004.7	994.8	984.9	979.8
20°	1027.0	1022.4	1017.9	1013.4	1008.8	1000.9	989.5	978.2	966.9	955.5	949.8
22.5°	1005.7	1000.7	995.6	990.5	985.4	976.5	963.7	950.9	938.1	925.3	918.0
25°	973.9	966.6	959.4	952.1	944.9	933.7	918.8	903.8	888.8	873.8	864.5
27.5°	935.5	927.6	919.7	911.8	903.9	891.5	874.7	857.8	840.9	824.0	813.2
30°	908.6	899.9	891.3	882.7	874.1	860.7	842.5	824.4	806.2	788.1	776.5
32.5°	882.4	872.3	862.3	852.2	842.1	827.8	809.3	790.8	772.3	753.8	740.6
35°	839.1	827.6	816.0	804.4	792.9	777.1	757.1	737.2	717.2	697.2	682.9
37.5°	795.9	783.1	770.4	757.7	745.0	728.0	706.8	685.5	664.2	642.9	627.2
40°	765.6	752.0	738.4	724.8	711.2	693.4	671.4	649.4	627.4	605.4	589.3
42.5°	734.6	720.3	705.9	691.6	677.3	658.7	636.0	613.3	590.5	567.8	551.1
45°	686.0	670.8	655.6	640.4	625.2	605.7	581.9	558.1	534.2	510.4	494.3
47.5°	638.6	622.5	606.4	590.3	574.2	553.9	529.3	504.7	480.1	455.5	439.5
50°	604.3	588.2	572.1	556.0	539.9	519.4	494.4	469.5	444.5	419.6	403.9
52.5°	570.9	554.0	537.2	520.4	503.5	482.9	458.5	434.1	409.7	385.3	370.2
55°	521.7	504.0	486.3	468.6	450.9	429.8	405.3	380.8	356.3	331.8	318.2
57.5°	471.2	453.1	434.9	416.8	398.6	377.8	354.2	330.7	307.1	283.6	271.1
60°	436.9	418.8	400.6	382.5	364.3	343.6	320.2	296.8	273.5	250.1	238.5
62.5°	403.4	385.3	367.1	349.0	330.8	310.6	288.4	266.1	243.8	221.5	210.5
65°	352.2	333.8	315.4	297.1	278.7	259.3	238.9	218.5	198.0	177.6	169.9
67.5°	302.8	284.5	266.3	248.1	229.8	211.5	193.1	174.8	156.4	138.0	134.5
70°	268.5	250.8	233.1	215.4	197.7	181.0	165.4	149.7	134.1	118.4	116.1
72.5°	235.8	218.8	201.9	184.9	167.9	153.2	140.6	128.0	115.5	102.9	101.0
75°	187.8	172.0	156.1	140.2	124.3	112.5	104.8	97.1	89.4	81.7	80.1
77.5°	140.7	126.7	112.8	98.9	85.0	76.1	72.4	68.7	65.0	61.3	60.3
80°	111.3	99.7	88.1	76.6	65.0	58.1	55.8	53.5	51.3	49.0	48.1
82.5°	84.3	75.3	66.3	57.2	48.2	42.9	41.4	39.8	38.3	36.8	36.2
85°	43.9	39.1	34.4	29.6	24.8	22.1	21.4	20.8	20.1	19.4	19.4
87.5°	13.3	12.5	11.6	10.8	9.9	9.7	10.1	10.6	11.0	11.4	11.5
90°	1.2	4.2	7.2	10.2	13.2	15.8	17.9	20.1	22.3	24.5	25.8
92.5°	24.7	24.4	24.2	23.9	23.6	24.0	25.1	26.2	27.3	28.4	29.1
95°	79.5	70.5	61.6	52.6	43.6	40.1	42.0	43.9	45.8	47.7	49.1
97.5°	157.8	132.5	107.2	82.0	56.7	46.2	50.6	55.0	59.5	63.9	64.9
100°	216.5	179.3	142.0	104.8	67.6	51.2	55.9	60.5	65.1	69.7	71.9
102.5°	281.1	273.2	265.3	257.5	249.6	226.3	187.6	149.0	110.3	71.7	74.5
105°	371.9	380.0	388.2	396.3	404.5	371.5	297.3	223.0	148.8	74.6	77.6
107.5°	475.4	481.9	488.5	495.1	501.7	460.5	371.5	282.5	193.5	104.5	101.4
110°	541.9	547.6	553.3	559.0	564.7	528.3	449.8	371.2	292.6	214.1	186.9



TEST NUMBER: P331819

CATALOG NUMBER: S122RDIW-S675D1240U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	604.5	609.6	614.6	619.7	624.8	617.6	598.2	578.8	559.4	539.9	440.8
115°	703.4	708.0	712.6	717.2	721.9	727.6	734.4	741.2	748.0	754.8	628.9
117.5°	791.7	796.9	802.0	807.2	812.4	817.3	821.9	826.6	831.3	836.0	805.5
120°	856.3	860.4	864.4	868.5	872.6	877.1	882.0	886.9	891.8	896.6	899.9
122.5°	911.1	915.4	919.7	924.0	928.3	933.1	938.4	943.7	949.1	954.4	956.3
125°	994.5	998.0	1001.6	1005.1	1008.6	1013.0	1018.2	1023.3	1028.5	1033.7	1035.6
127.5°	1070.1	1074.0	1077.9	1081.9	1085.8	1089.7	1093.5	1097.4	1101.2	1105.1	1107.9
130°	1118.1	1122.4	1126.8	1131.1	1135.5	1139.1	1142.1	1145.1	1148.1	1151.1	1154.1
132.5°	1167.0	1170.7	1174.4	1178.1	1181.8	1185.1	1188.1	1191.1	1194.1	1197.1	1199.6
135°	1230.6	1234.9	1239.3	1243.6	1248.0	1251.4	1253.8	1256.3	1258.7	1261.2	1263.9
137.5°	1294.9	1298.0	1301.0	1304.1	1307.1	1310.0	1312.8	1315.6	1318.3	1321.1	1323.8
140°	1337.0	1339.2	1341.4	1343.5	1345.7	1348.3	1351.3	1354.3	1357.3	1360.3	1362.7
142.5°	1372.3	1374.2	1376.2	1378.1	1380.1	1382.8	1386.2	1389.6	1393.0	1396.5	1398.7
145°	1427.5	1427.3	1427.0	1426.7	1426.5	1428.6	1433.3	1437.9	1442.5	1447.1	1449.0
147.5°	1475.7	1474.7	1473.7	1472.6	1471.6	1473.4	1477.9	1482.5	1487.1	1491.6	1493.1
150°	1507.1	1505.2	1503.3	1501.3	1499.4	1500.7	1505.0	1509.4	1513.7	1518.1	1519.7
152.5°	1533.5	1531.4	1529.2	1527.1	1525.0	1526.0	1530.1	1534.3	1538.4	1542.5	1544.2
155°	1571.9	1569.4	1567.0	1564.5	1562.1	1562.5	1565.8	1569.0	1572.3	1575.6	1577.2
157.5°	1602.0	1599.9	1597.8	1595.8	1593.7	1593.8	1596.1	1598.4	1600.7	1603.0	1604.8
160°	1619.6	1618.0	1616.3	1614.7	1613.1	1613.1	1614.7	1616.3	1618.0	1619.6	1621.2
162.5°	1635.3	1633.6	1632.0	1630.4	1628.7	1628.6	1630.0	1631.4	1632.9	1634.3	1636.1
165°	1656.3	1654.7	1653.0	1651.4	1649.8	1649.4	1650.2	1651.0	1651.8	1652.6	1654.5
167.5°	1672.0	1670.3	1668.7	1667.1	1665.4	1665.0	1665.8	1666.5	1667.3	1668.0	1669.9
170°	1680.8	1679.1	1677.5	1675.9	1674.2	1673.7	1674.2	1674.8	1675.3	1675.9	1677.8
172.5°	1686.6	1685.0	1683.4	1681.7	1680.1	1679.6	1680.1	1680.6	1681.2	1681.7	1683.6
175°	1694.2	1692.3	1690.4	1688.5	1686.6	1685.9	1686.5	1687.0	1687.6	1688.1	1690.0
177.5°	1695.4	1693.9	1692.4	1690.9	1689.3	1688.7	1688.9	1689.1	1689.3	1689.6	1691.1
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5



TEST NUMBER: P331819

CATALOG NUMBER: S122RDIW-S675D1240U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1122.7	1124.5	1126.3	1127.0	1126.7	1126.3	1126.0	1125.6
5°	1113.7	1115.8	1117.8	1118.5	1117.8	1117.1	1116.5	1115.8
7.5°	1095.7	1096.3	1096.9	1096.6	1095.4	1094.3	1093.1	1091.9
10°	1077.7	1077.0	1076.3	1075.3	1073.9	1072.6	1071.2	1069.8
12.5°	1057.0	1055.8	1054.5	1052.8	1050.5	1048.3	1046.0	1043.7
15°	1018.4	1014.0	1009.7	1006.4	1004.2	1001.9	999.6	997.4
17.5°	974.7	969.5	964.4	959.9	956.0	952.1	948.2	944.3
20°	944.2	938.5	932.8	927.5	922.5	917.5	912.5	907.5
22.5°	910.7	903.4	896.1	890.6	886.8	883.1	879.4	875.7
25°	855.2	845.9	836.6	830.3	826.9	823.5	820.1	816.7
27.5°	802.3	791.5	780.7	772.5	767.1	761.7	756.3	750.9
30°	765.0	753.4	741.8	733.0	726.8	720.7	714.6	708.5
32.5°	727.4	714.2	701.0	691.5	685.7	680.0	674.2	668.5
35°	668.7	654.4	640.1	630.4	625.4	620.4	615.5	610.5
37.5°	611.4	595.7	580.0	569.2	563.5	557.8	552.1	546.4
40°	573.1	557.0	540.9	529.9	524.0	518.1	512.2	506.3
42.5°	534.5	517.8	501.2	490.0	484.3	478.6	472.9	467.1
45°	478.2	462.1	446.0	435.2	429.8	424.3	418.9	413.4
47.5°	423.5	407.5	391.4	381.0	376.0	371.1	366.1	361.2
50°	388.3	372.6	357.0	346.7	342.0	337.2	332.5	327.7
52.5°	355.1	339.9	324.8	315.1	310.7	306.3	301.9	297.5
55°	304.6	290.9	277.3	268.4	264.1	259.7	255.4	251.1
57.5°	258.6	246.2	233.7	225.6	222.0	218.4	214.7	211.1
60°	227.0	215.4	203.8	196.2	192.6	189.0	185.3	181.7
62.5°	199.5	188.4	177.4	170.8	168.6	166.5	164.3	162.1
65°	162.2	154.5	146.8	142.6	141.9	141.2	140.5	139.9
67.5°	130.9	127.4	123.9	121.7	121.0	120.3	119.6	118.8
70°	113.9	111.6	109.3	107.8	106.8	105.9	105.0	104.1
72.5°	99.1	97.2	95.3	94.1	93.5	93.0	92.4	91.9
75°	78.5	76.9	75.3	74.4	74.2	74.0	73.7	73.5
77.5°	59.4	58.5	57.6	57.0	56.6	56.3	55.9	55.5
80°	47.2	46.3	45.4	44.9	44.9	44.9	44.9	44.9
82.5°	35.7	35.1	34.6	34.3	34.3	34.3	34.3	34.3
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.3
90°	27.2	28.5	29.9	30.9	31.4	31.9	32.5	33.0
92.5°	29.8	30.5	31.2	31.7	32.0	32.4	32.7	33.0
95°	50.4	51.8	53.1	53.7	53.4	53.1	52.9	52.6
97.5°	66.0	67.1	68.2	68.9	69.2	69.6	69.9	70.2
100°	74.1	76.2	78.4	79.8	80.3	80.9	81.4	82.0
102.5°	77.3	80.2	83.0	84.8	85.5	86.3	87.1	87.8
105°	80.6	83.6	86.6	88.6	89.7	90.8	91.9	93.0
107.5°	98.4	95.3	92.3	91.3	92.4	93.5	94.6	95.7
110°	159.7	132.5	105.3	92.3	93.4	94.5	95.6	96.6





TEST NUMBER: P331819

CATALOG NUMBER: S122RDIW-S675D1240U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.6	242.5	143.3	94.1	95.0	95.9	96.7	97.6
115°	503.0	377.2	251.3	178.6	159.0	139.5	119.9	100.3
117.5°	775.1	744.6	714.2	666.8	602.5	538.2	473.9	409.5
120°	903.2	906.4	909.7	893.0	856.3	819.6	782.9	746.2
122.5°	958.3	960.3	962.2	959.6	952.5	945.4	938.3	931.1
125°	1037.5	1039.4	1041.3	1042.6	1043.4	1044.3	1045.1	1045.9
127.5°	1110.6	1113.4	1116.2	1117.7	1117.8	1118.0	1118.1	1118.3
130°	1157.1	1160.1	1163.0	1164.4	1164.1	1163.9	1163.6	1163.3
132.5°	1202.2	1204.7	1207.3	1208.4	1208.2	1207.9	1207.6	1207.4
135°	1266.6	1269.3	1272.1	1273.1	1272.6	1272.1	1271.5	1271.0
137.5°	1326.4	1329.1	1331.8	1332.6	1331.7	1330.8	1329.9	1328.9
140°	1365.2	1367.6	1370.1	1370.6	1369.2	1367.9	1366.5	1365.2
142.5°	1400.9	1403.2	1405.4	1405.8	1404.5	1403.1	1401.7	1400.4
145°	1450.9	1452.8	1454.7	1455.0	1453.6	1452.3	1450.9	1449.6
147.5°	1494.5	1495.9	1497.3	1497.4	1496.3	1495.1	1494.0	1492.9
150°	1521.3	1523.0	1524.6	1524.7	1523.4	1522.0	1520.6	1519.3
152.5°	1545.8	1547.4	1549.1	1549.0	1547.2	1545.4	1543.6	1541.8
155°	1578.8	1580.5	1582.1	1581.8	1579.6	1577.5	1575.3	1573.1
157.5°	1606.7	1608.5	1610.4	1610.2	1608.1	1606.0	1603.9	1601.7
160°	1622.9	1624.5	1626.1	1626.0	1624.1	1622.2	1620.3	1618.4
162.5°	1638.0	1639.8	1641.7	1641.4	1639.1	1636.7	1634.4	1632.1
165°	1656.4	1658.3	1660.2	1660.2	1658.3	1656.4	1654.5	1652.6
167.5°	1671.8	1673.7	1675.6	1675.4	1672.9	1670.5	1668.0	1665.6
170°	1679.7	1681.6	1683.5	1683.2	1680.8	1678.3	1675.9	1673.4
172.5°	1685.5	1687.4	1689.3	1689.1	1686.6	1684.2	1681.7	1679.3
175°	1691.9	1693.8	1695.7	1695.3	1692.6	1689.9	1687.1	1684.4
177.5°	1692.6	1694.1	1695.7	1695.4	1693.5	1691.5	1689.6	1687.6
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5

(END OF REPORT)