

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: P331824-935

Luminaire Tested: **S122RDIW-S675D1440U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331824-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S675D1440U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6304.7 lumens  
Efficiency: N/A  
Efficacy: 92.6 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

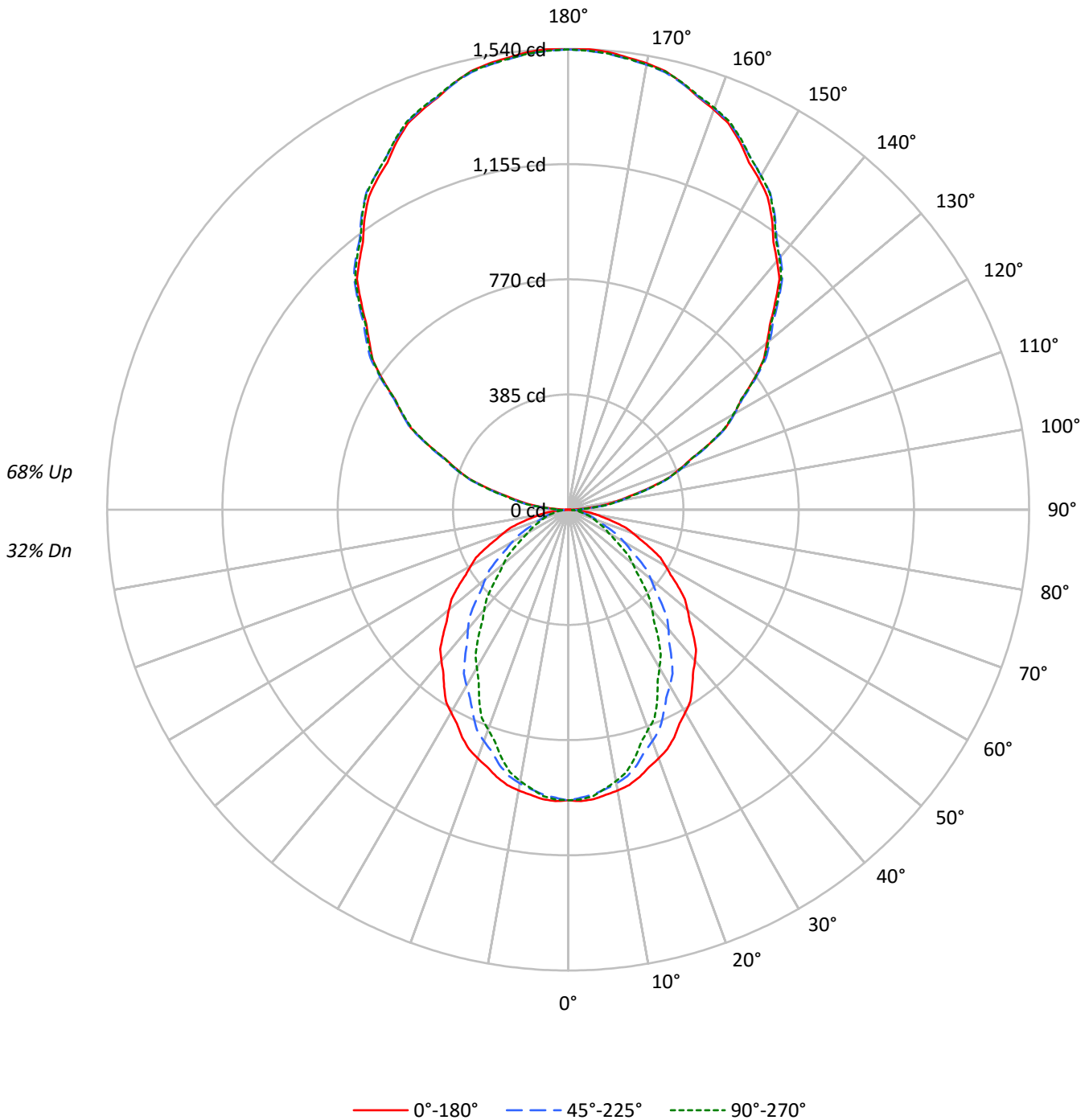
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	92	92	92	73	73	73	56	56	56	39	39	39	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	27
2	86	79	73	68	77	71	66	62	57	53	51	44	41	39	31	30	29	23
3	78	69	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	15
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°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	1.4
10°-20°	249.6	4.0
20°-30°	350.5	5.6
30°-40°	382.2	6.1
40°-50°	351.5	5.6
50°-60°	276.0	4.4
60°-70°	180.0	2.9
70°-80°	92.8	1.5
80°-90°	30.2	0.5
90°-100°	97.5	1.5
100°-110°	302.7	4.8
110°-120°	517.4	8.2
120°-130°	680.4	10.8
130°-140°	763.7	12.1
140°-150°	748.8	11.9
150°-160°	628.1	10.0
160°-170°	416.6	6.6
170°-180°	145.6	2.3
0°-30°	691.1	11.0
0°-40°	1073.3	17.0
0°-60°	1700.8	27.0
0°-90°	2003.7	31.8
90°-120°	917.6	14.6
90°-150°	3110.6	49.3
90°-180°	4301.0	68.2
0°-180°	6304.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	18	46	43	44	5
95°	68	80	83	83	80	77
105°	279	283	286	288	288	295
115°	519	526	524	523	519	513
125°	755	766	763	759	758	675
135°	977	991	994	993	989	755
145°	1186	1195	1203	1204	1199	741
155°	1356	1360	1364	1370	1367	624
165°	1476	1475	1474	1483	1477	416
175°	1536	1532	1529	1537	1530	146
180°	1538	1538	1538	1538	1538	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.5	10.9	10.4	9.8	9.3	9.6	10.9	12.1	13.4	14.7	14.5
90°	1.3	4.7	8.2	11.7	15.2	20.1	26.4	32.7	39.1	45.5	44.9
92.5°	23.1	25.7	28.2	30.7	33.2	35.3	36.8	38.3	39.8	41.2	41.4
95°	67.5	70.3	73.3	76.1	79.0	80.8	81.4	81.9	82.5	83.1	83.1
97.5°	123.3	125.9	128.4	131.0	133.5	135.3	136.4	137.5	138.5	139.7	139.7
100°	164.9	167.1	169.4	171.8	174.1	175.6	176.5	177.4	178.2	179.1	179.1
102.5°	208.4	210.3	212.2	214.0	215.9	217.3	218.4	219.5	220.6	221.7	222.0
105°	279.1	279.9	280.8	281.6	282.5	283.3	283.9	284.4	285.0	285.6	286.1
107.5°	350.2	351.5	352.8	354.0	355.2	355.9	355.9	355.9	355.9	355.9	356.1
110°	395.9	397.6	399.3	401.1	402.8	403.7	403.7	403.7	403.7	403.7	403.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	445.7	447.5	449.2	450.9	452.6	453.4	453.1	453.0	452.7	452.5	451.8
115°	519.2	520.9	522.6	524.4	526.2	526.7	526.2	525.6	525.0	524.4	524.1
117.5°	592.5	594.7	597.0	599.3	601.7	602.0	600.4	598.7	597.1	595.6	594.9
120°	641.2	643.5	645.8	648.2	650.5	650.5	648.2	645.8	643.5	641.2	641.2
122.5°	685.9	688.6	691.4	694.1	697.0	697.5	695.9	694.3	692.7	691.0	690.3
125°	755.4	758.0	760.6	763.2	765.9	766.7	765.9	765.0	764.1	763.2	762.3
127.5°	823.2	826.5	829.7	833.1	836.4	837.5	836.5	835.4	834.4	833.4	832.2
130°	865.7	869.5	873.3	877.0	880.8	882.4	881.8	881.2	880.6	880.0	879.5
132.5°	913.5	916.6	919.6	922.7	925.7	927.4	927.5	927.6	927.7	927.8	926.5
135°	977.4	980.6	983.8	986.9	990.1	992.0	992.6	993.2	993.7	994.3	994.0
137.5°	1044.7	1047.2	1049.8	1052.4	1055.0	1056.7	1057.5	1058.2	1058.9	1059.7	1059.5
140°	1085.1	1087.7	1090.4	1093.0	1095.5	1097.5	1099.0	1100.4	1101.9	1103.3	1103.3
142.5°	1126.7	1129.3	1131.9	1134.5	1137.0	1138.8	1139.8	1140.8	1141.8	1142.8	1143.0
145°	1186.4	1188.4	1190.4	1192.4	1194.5	1196.4	1198.1	1199.8	1201.5	1203.2	1203.5
147.5°	1239.6	1242.0	1244.4	1246.9	1249.3	1251.1	1252.2	1253.4	1254.6	1255.7	1256.4
150°	1275.9	1277.6	1279.4	1281.2	1282.9	1284.3	1285.5	1286.6	1287.8	1288.9	1289.8
152.5°	1308.1	1309.8	1311.6	1313.3	1315.1	1316.6	1318.0	1319.4	1320.8	1322.2	1323.3
155°	1356.4	1357.3	1358.1	1359.0	1359.9	1360.7	1361.6	1362.4	1363.3	1364.2	1365.6
157.5°	1397.7	1398.3	1398.9	1399.5	1400.0	1400.6	1401.1	1401.6	1402.1	1402.7	1404.5
160°	1422.6	1423.2	1423.7	1424.4	1425.0	1425.4	1425.6	1425.9	1426.2	1426.5	1428.2
162.5°	1445.4	1445.6	1445.7	1445.8	1446.0	1446.1	1446.4	1446.7	1447.0	1447.3	1449.2
165°	1475.8	1475.6	1475.2	1475.0	1474.7	1474.5	1474.5	1474.5	1474.5	1474.5	1476.5
167.5°	1501.2	1500.4	1499.5	1498.7	1497.8	1497.4	1497.3	1497.3	1497.2	1497.1	1499.2
170°	1514.8	1513.9	1513.0	1512.2	1511.3	1510.7	1510.5	1510.2	1509.8	1509.6	1511.6
172.5°	1524.1	1523.3	1522.4	1521.6	1520.7	1520.1	1519.8	1519.5	1519.2	1518.9	1521.0
175°	1535.5	1534.6	1533.8	1532.9	1532.1	1531.4	1530.8	1530.2	1529.7	1529.0	1531.1
177.5°	1540.2	1539.6	1538.9	1538.2	1537.5	1536.9	1536.4	1535.9	1535.5	1535.0	1536.4
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	14.2	13.9	13.6	13.5	13.6	13.6	13.7	13.8
90°	44.3	43.7	43.1	43.0	43.3	43.6	43.8	44.2
92.5°	41.5	41.6	41.8	41.8	41.8	41.9	42.0	42.0
95°	83.1	83.1	83.1	82.7	82.2	81.6	81.0	80.5
97.5°	139.7	139.7	139.7	139.7	139.6	139.5	139.5	139.4
100°	179.1	179.1	179.1	179.0	178.7	178.4	178.1	177.8
102.5°	222.1	222.4	222.7	222.6	222.3	222.1	221.7	221.4
105°	286.7	287.3	287.8	288.2	288.2	288.2	288.2	288.2
107.5°	356.4	356.6	356.8	356.3	355.0	353.6	352.3	350.9
110°	403.7	403.7	403.7	403.2	402.3	401.5	400.6	399.8





TEST NUMBER: P331824-935

CATALOG NUMBER: S122RDIW-S675D1440U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	451.1	450.4	449.7	449.0	448.4	447.8	447.1	446.5
115°	523.8	523.5	523.2	522.6	521.8	520.9	520.0	519.2
117.5°	594.2	593.5	592.8	591.9	591.1	590.2	589.4	588.5
120°	641.2	641.2	641.2	640.8	639.9	639.0	638.2	637.3
122.5°	689.7	689.0	688.3	687.6	687.0	686.4	685.7	685.1
125°	761.5	760.6	759.7	759.2	758.9	758.6	758.4	758.0
127.5°	831.2	830.2	829.1	828.2	827.2	826.3	825.4	824.5
130°	878.9	878.3	877.7	876.8	875.7	874.6	873.4	872.3
132.5°	925.3	924.0	922.7	921.6	920.8	919.8	918.9	917.9
135°	993.7	993.4	993.2	992.6	991.7	990.8	990.0	989.1
137.5°	1059.2	1059.0	1058.8	1058.1	1057.0	1055.8	1054.6	1053.4
140°	1103.3	1103.3	1103.3	1102.8	1101.6	1100.4	1099.2	1098.1
142.5°	1143.2	1143.5	1143.7	1143.2	1142.1	1140.9	1139.8	1138.6
145°	1203.9	1204.1	1204.4	1203.9	1202.8	1201.7	1200.5	1199.4
147.5°	1257.0	1257.6	1258.3	1258.0	1256.9	1255.8	1254.7	1253.6
150°	1290.6	1291.5	1292.4	1292.4	1291.5	1290.6	1289.8	1288.9
152.5°	1324.3	1325.4	1326.5	1326.5	1325.4	1324.3	1323.3	1322.2
155°	1367.1	1368.6	1369.9	1370.3	1369.4	1368.6	1367.7	1366.8
157.5°	1406.5	1408.5	1410.5	1410.7	1409.4	1408.0	1406.6	1405.2
160°	1429.9	1431.7	1433.4	1433.7	1432.5	1431.4	1430.3	1429.1
162.5°	1451.2	1453.2	1455.1	1455.4	1454.1	1452.7	1451.3	1449.8
165°	1478.6	1480.6	1482.6	1482.9	1481.4	1480.1	1478.6	1477.1
167.5°	1501.2	1503.2	1505.2	1505.5	1504.0	1502.4	1501.0	1499.4
170°	1513.6	1515.6	1517.7	1517.8	1516.0	1514.3	1512.6	1510.9
172.5°	1522.9	1525.0	1527.0	1527.2	1525.4	1523.7	1522.0	1520.3
175°	1533.1	1535.1	1537.1	1537.3	1535.5	1533.8	1532.1	1530.3
177.5°	1537.8	1539.2	1540.6	1540.6	1539.2	1537.8	1536.4	1535.0
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2

(END OF REPORT)