

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: P333069-940

Luminaire Tested: **S124RDIW-S795D1340U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333069-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S795D1340U940-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7649.8 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

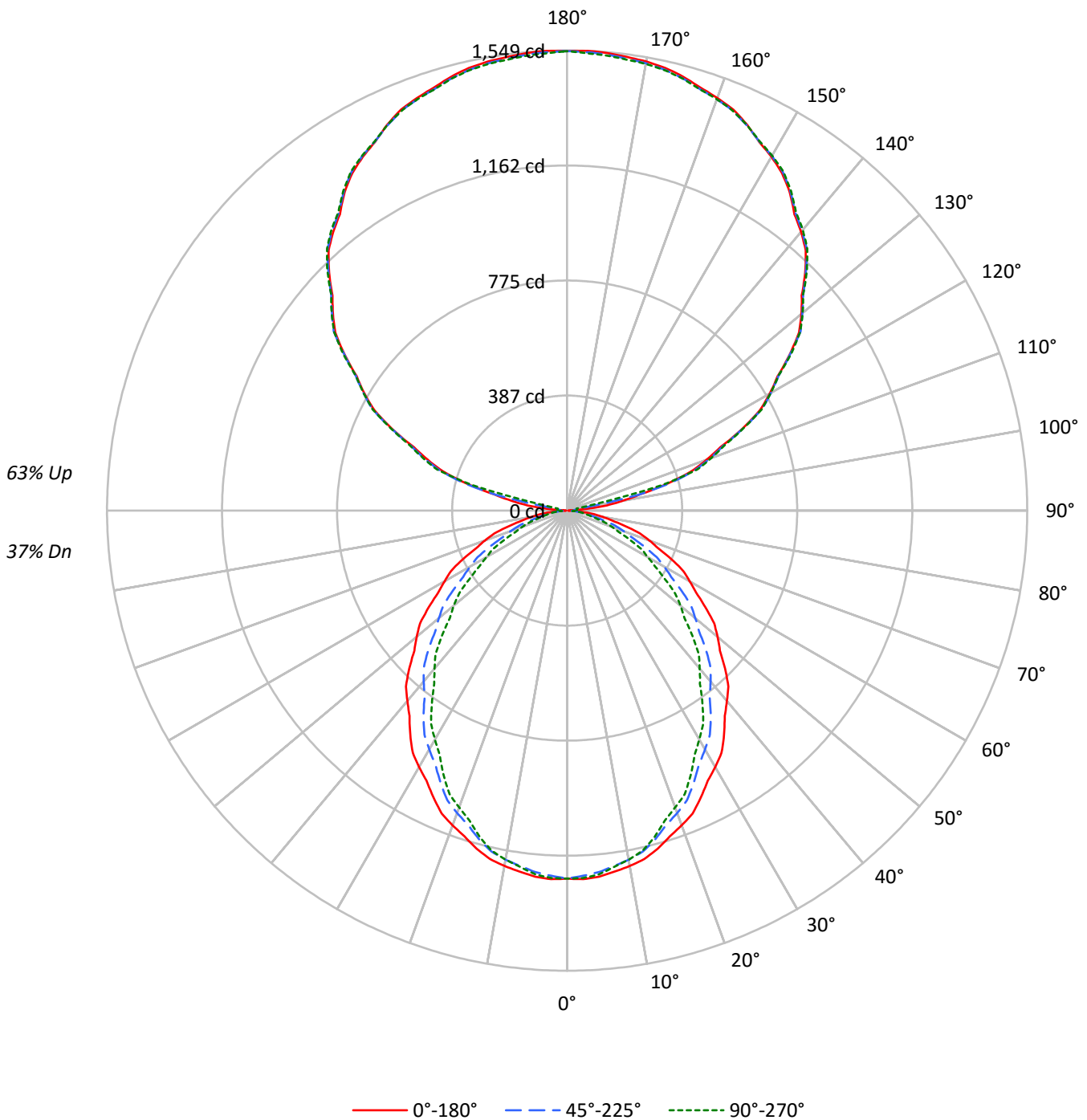
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32
2	87	80	74	69	79	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	73	62	54	49	66	57	50	45	46	42	38	37	34	31	28	26	24	20
5	67	55	47	42	60	51	44	39	42	37	33	33	30	27	25	23	21	17
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	18	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

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

	0°	45°	90°
0°	10001	10001	10001
5°	10023	9900	9961
10°	9960	9781	9781
15°	9845	9576	9504
20°	9688	9306	9135
25°	9487	8989	8761
30°	9292	8655	8294
35°	9077	8310	7824
40°	8816	7917	7317
45°	8576	7526	6801
50°	8303	7076	6253
55°	8010	6608	5661
60°	7689	6095	5054
65°	7393	5454	4458
70°	6963	4747	3784
75°	6419	3936	3075
80°	5602	2999	2822
85°	4742	2723	2547



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.4	1.5
10°-20°	324.5	4.2
20°-30°	468.6	6.1
30°-40°	531.1	6.9
40°-50°	512.9	6.7
50°-60°	426.5	5.6
60°-70°	294.5	3.8
70°-80°	149.3	2.0
80°-90°	42.8	0.6
90°-100°	52.9	0.7
100°-110°	337.2	4.4
110°-120°	645.1	8.4
120°-130°	818.9	10.7
130°-140°	876.2	11.5
140°-150°	819.3	10.7
150°-160°	660.7	8.6
160°-170°	426.2	5.6
170°-180°	146.9	1.9
0°-30°	909.4	11.9
0°-40°	1440.5	18.8
0°-60°	2379.9	31.1
0°-90°	2866.4	37.5
90°-120°	1035.2	13.5
90°-150°	3549.6	46.4
90°-180°	4783.0	62.5
0°-180°	7649.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1233	1222	1230	1229	117
15°	1178	1169	1146	1144	1137	332
25°	1065	1047	1009	993	984	491
35°	921	890	843	812	794	575
45°	751	715	659	614	596	579
55°	569	530	470	422	402	509
65°	387	345	286	246	233	382
75°	206	170	126	105	99	217
85°	51	33	29	28	28	58
90°	4	16	25	32	35	5
95°	64	26	25	32	34	82
105°	348	355	361	368	330	364
115°	650	653	652	654	655	639
125°	914	918	916	919	921	815
135°	1134	1133	1137	1139	1142	873
145°	1307	1310	1310	1312	1314	816
155°	1433	1434	1431	1435	1432	660
165°	1512	1506	1506	1514	1505	427
175°	1546	1540	1541	1550	1537	147
180°	1546	1546	1546	1546	1546	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1241.8	1241.1	1240.4	1239.7	1239.0	1237.8	1235.9	1234.1	1232.3	1230.4	1232.3
5°	1236.8	1236.0	1235.1	1234.3	1233.4	1231.8	1229.2	1226.7	1224.1	1221.6	1223.8
7.5°	1225.7	1224.8	1223.9	1223.0	1222.1	1220.0	1216.7	1213.4	1210.1	1206.8	1208.2
10°	1215.0	1214.0	1212.9	1211.8	1210.8	1208.4	1204.6	1200.8	1197.0	1193.2	1194.0
12.5°	1201.3	1200.2	1198.9	1197.7	1196.5	1193.6	1189.2	1184.6	1180.2	1175.7	1176.3
15°	1178.0	1176.2	1174.2	1172.3	1170.5	1166.9	1161.5	1156.3	1151.0	1145.8	1145.3
17.5°	1149.8	1147.0	1144.2	1141.6	1138.8	1134.3	1127.9	1121.6	1115.3	1108.9	1107.8
20°	1127.7	1125.0	1122.3	1119.5	1116.8	1111.9	1104.7	1097.5	1090.3	1083.2	1081.5
22.5°	1103.5	1100.4	1097.3	1094.2	1091.2	1085.7	1078.1	1070.4	1062.7	1055.1	1052.6
25°	1065.1	1061.3	1057.6	1053.7	1050.0	1043.7	1035.1	1026.4	1017.8	1009.1	1005.6
27.5°	1024.9	1020.2	1015.4	1010.7	1005.8	998.9	989.6	980.4	971.2	962.0	957.5
30°	996.8	991.6	986.3	981.1	975.8	968.2	958.3	948.4	938.4	928.5	923.3
32.5°	967.2	961.4	955.4	949.4	943.5	935.4	925.1	914.9	904.6	894.4	888.3
35°	921.0	914.3	907.5	900.7	894.0	885.4	874.9	864.2	853.7	843.2	836.1
37.5°	871.5	864.5	857.6	850.6	843.6	834.4	822.7	811.0	799.3	787.6	779.6
40°	836.6	829.6	822.7	815.7	808.8	799.2	787.2	775.3	763.2	751.2	742.3
42.5°	803.2	795.9	788.6	781.3	774.0	764.1	751.6	739.0	726.6	714.0	705.0
45°	751.2	743.4	735.6	727.8	720.0	709.8	697.1	684.5	671.8	659.2	648.9
47.5°	697.5	689.5	681.4	673.3	665.3	654.7	641.6	628.4	615.3	602.1	591.4
50°	661.1	652.9	644.6	636.4	628.2	617.3	603.9	590.4	576.8	563.4	552.9
52.5°	623.9	615.9	607.8	599.8	591.7	580.8	566.9	553.1	539.3	525.5	514.8
55°	569.1	560.6	552.2	543.8	535.4	524.3	510.6	496.9	483.2	469.5	458.5
57.5°	514.9	506.0	497.3	488.6	479.7	468.6	455.1	441.7	428.2	414.6	403.6
60°	476.2	467.7	459.3	450.8	442.4	431.5	417.9	404.5	391.0	377.5	366.5
62.5°	441.2	432.5	423.7	414.9	406.2	394.8	381.0	367.2	353.4	339.6	329.4
65°	387.0	377.9	368.8	359.8	350.7	339.5	325.9	312.5	299.0	285.5	276.4
67.5°	330.6	322.0	313.3	304.6	295.9	285.3	272.8	260.3	247.7	235.2	227.4
70°	295.0	286.1	277.2	268.4	259.6	249.1	237.1	225.1	213.1	201.1	194.1
72.5°	257.1	249.1	241.0	233.0	225.0	215.3	204.0	192.6	181.3	170.0	164.0
75°	205.8	198.0	190.2	182.4	174.6	165.8	155.9	146.0	136.1	126.2	121.3
77.5°	153.8	147.2	140.6	134.0	127.3	120.0	112.1	104.1	96.0	88.0	85.2
80°	120.5	114.3	108.3	102.1	96.0	89.8	83.5	77.1	70.8	64.5	63.8
82.5°	91.7	86.1	80.4	74.8	69.2	64.6	61.0	57.3	53.7	50.1	49.6
85°	51.2	47.0	42.8	38.6	34.3	31.9	31.3	30.7	30.1	29.4	29.0
87.5°	18.1	17.4	16.6	15.8	15.0	14.7	15.0	15.2	15.4	15.7	15.9
90°	3.5	6.3	9.1	11.9	14.8	17.2	19.3	21.3	23.4	25.4	27.0
92.5°	14.5	14.7	14.9	15.1	15.2	16.3	18.4	20.4	22.5	24.5	26.0
95°	63.6	54.8	46.1	37.4	28.6	24.4	24.7	25.0	25.1	25.4	27.0
97.5°	135.1	140.5	146.0	151.4	156.9	145.3	116.5	87.9	59.2	30.5	30.7
100°	189.7	194.3	198.9	203.6	208.2	192.8	157.3	121.8	86.3	50.9	46.5
102.5°	250.7	254.1	257.5	260.9	264.3	263.7	259.0	254.5	249.9	245.2	198.0
105°	348.1	349.6	351.2	352.8	354.3	355.7	357.0	358.3	359.5	360.9	363.2
107.5°	438.5	439.3	440.1	440.9	441.7	442.9	444.7	446.4	448.2	450.0	451.0
110°	499.6	500.4	501.2	501.9	502.7	503.9	505.4	506.9	508.5	510.1	510.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	558.8	560.3	561.7	563.0	564.5	565.4	566.2	566.9	567.7	568.4	568.3
115°	650.0	650.8	651.6	652.3	653.1	653.4	653.1	652.8	652.6	652.3	652.8
117.5°	732.1	733.2	734.1	735.2	736.2	737.0	737.6	738.2	738.7	739.3	739.2
120°	787.6	788.6	789.7	790.8	791.8	792.1	791.9	791.7	791.4	791.1	791.7
122.5°	839.5	840.1	840.7	841.3	842.0	842.4	842.8	843.1	843.5	843.8	844.2
125°	913.7	914.7	915.8	916.8	917.8	918.1	917.6	917.0	916.5	916.1	916.8
127.5°	984.0	984.3	984.5	984.8	985.1	985.8	986.9	988.1	989.4	990.5	990.3
130°	1029.4	1029.7	1029.9	1030.1	1030.4	1030.9	1031.7	1032.4	1033.2	1034.0	1034.3
132.5°	1071.0	1071.5	1071.9	1072.4	1072.8	1073.6	1074.6	1075.5	1076.5	1077.5	1077.7
135°	1133.5	1133.2	1132.9	1132.7	1132.5	1132.8	1133.8	1134.9	1136.0	1136.9	1137.5
137.5°	1188.7	1188.8	1188.9	1189.1	1189.2	1189.8	1190.9	1192.0	1193.2	1194.3	1194.9
140°	1224.9	1225.4	1225.8	1226.4	1226.9	1227.4	1227.9	1228.4	1229.0	1229.5	1230.2
142.5°	1257.2	1258.1	1259.1	1260.0	1261.0	1261.5	1261.9	1262.1	1262.5	1262.8	1263.4
145°	1307.0	1307.7	1308.5	1309.3	1310.0	1310.5	1310.5	1310.5	1310.5	1310.5	1310.7
147.5°	1346.5	1347.9	1349.4	1350.9	1352.3	1352.9	1352.6	1352.4	1352.1	1351.8	1352.0
150°	1375.2	1376.3	1377.2	1378.3	1379.3	1379.7	1379.5	1379.2	1378.9	1378.7	1378.7
152.5°	1399.3	1400.1	1400.9	1401.7	1402.6	1402.8	1402.3	1401.8	1401.3	1400.9	1401.3
155°	1433.1	1433.2	1433.5	1433.8	1434.0	1433.8	1433.1	1432.3	1431.5	1430.7	1431.7
157.5°	1461.5	1461.3	1461.2	1461.0	1460.9	1460.4	1459.5	1458.6	1457.8	1456.9	1458.2
160°	1478.1	1477.4	1476.6	1475.8	1475.1	1474.5	1474.3	1474.0	1473.7	1473.6	1475.1
162.5°	1492.9	1491.9	1491.0	1490.0	1489.1	1488.4	1488.2	1487.9	1487.6	1487.4	1488.9
165°	1511.7	1510.4	1509.1	1507.8	1506.5	1505.9	1505.9	1505.9	1505.9	1505.9	1508.0
167.5°	1526.5	1525.2	1523.8	1522.5	1521.2	1520.4	1520.3	1520.1	1519.9	1519.7	1522.1
170°	1534.8	1533.3	1531.7	1530.2	1528.7	1528.0	1528.2	1528.5	1528.7	1529.0	1531.1
172.5°	1540.3	1538.8	1537.3	1535.7	1534.2	1533.6	1533.8	1534.1	1534.3	1534.5	1536.6
175°	1546.4	1544.8	1543.3	1541.8	1540.2	1539.5	1539.8	1540.1	1540.3	1540.6	1542.9
177.5°	1549.2	1547.7	1546.2	1544.8	1543.4	1542.8	1543.3	1543.7	1544.1	1544.5	1546.1
180°	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1234.1	1235.9	1237.8	1238.7	1238.5	1238.3	1238.1	1238.0
5°	1225.8	1228.0	1230.1	1230.9	1230.5	1230.1	1229.7	1229.2
7.5°	1209.5	1210.9	1212.3	1212.5	1211.9	1211.2	1210.6	1209.9
10°	1194.9	1195.7	1196.6	1196.6	1195.7	1194.9	1194.0	1193.2
12.5°	1176.8	1177.2	1177.8	1177.4	1176.3	1175.1	1173.8	1172.7
15°	1145.0	1144.5	1144.1	1143.2	1141.7	1140.1	1138.7	1137.2
17.5°	1106.6	1105.5	1104.2	1102.5	1100.3	1098.1	1095.8	1093.6
20°	1079.8	1078.1	1076.4	1074.2	1071.5	1068.7	1066.0	1063.3
22.5°	1050.1	1047.5	1045.0	1042.6	1040.4	1038.1	1035.9	1033.7
25°	1002.0	998.4	994.9	992.0	989.9	987.8	985.7	983.6
27.5°	953.1	948.7	944.2	940.5	937.5	934.4	931.4	928.4
30°	918.0	912.8	907.5	903.1	899.8	896.4	893.0	889.7
32.5°	882.2	876.1	870.0	865.3	862.1	858.9	855.7	852.5
35°	828.8	821.7	814.6	809.0	805.3	801.5	797.6	793.9
37.5°	771.6	763.6	755.5	749.7	745.9	742.1	738.3	734.5
40°	733.5	724.6	715.8	709.4	705.7	701.9	698.1	694.3
42.5°	696.0	687.0	678.0	671.5	667.4	663.5	659.6	655.6
45°	638.6	628.2	617.9	610.8	607.0	603.2	599.4	595.7
47.5°	580.7	570.0	559.3	551.8	547.7	543.5	539.3	535.1
50°	542.3	531.8	521.2	514.0	510.0	506.0	501.9	497.9
52.5°	504.1	493.4	482.6	475.2	471.0	466.8	462.7	458.5
55°	447.5	436.6	425.7	418.2	414.2	410.2	406.2	402.2
57.5°	392.4	381.3	370.1	363.1	360.1	357.0	354.0	351.0
60°	355.6	344.6	333.7	326.5	323.2	319.8	316.4	313.0
62.5°	319.3	309.2	299.1	292.7	290.0	287.3	284.5	281.9
65°	267.3	258.3	249.2	243.4	240.9	238.4	235.9	233.4
67.5°	219.6	211.9	204.0	198.8	196.0	193.1	190.4	187.6
70°	187.2	180.2	173.3	168.7	166.7	164.5	162.4	160.3
72.5°	158.1	152.1	146.2	142.2	140.4	138.4	136.4	134.5
75°	116.5	111.6	106.7	103.7	102.5	101.2	99.9	98.6
77.5°	82.4	79.5	76.7	75.1	74.7	74.4	74.0	73.6
80°	63.2	62.6	62.0	61.5	61.3	61.1	60.9	60.7
82.5°	49.1	48.7	48.2	47.9	47.7	47.4	47.3	47.1
85°	28.5	28.2	27.7	27.5	27.5	27.5	27.5	27.5
87.5°	16.0	16.1	16.2	16.5	16.8	17.0	17.3	17.6
90°	28.5	30.1	31.7	32.6	33.2	33.7	34.2	34.7
92.5°	27.6	29.2	30.7	31.5	31.7	31.7	31.8	31.9
95°	28.5	30.1	31.7	32.5	32.7	33.0	33.3	33.5
97.5°	30.9	31.0	31.1	31.4	31.7	31.8	32.1	32.4
100°	42.2	37.8	33.4	31.4	31.7	31.8	32.1	32.4
102.5°	151.0	103.8	56.6	33.1	33.2	33.2	33.3	33.3
105°	365.5	367.8	370.1	366.7	357.4	348.1	338.9	329.7
107.5°	452.2	453.3	454.4	455.5	456.5	457.4	458.4	459.4
110°	511.1	511.6	512.1	512.7	513.5	514.3	515.1	515.9





TEST NUMBER: P333069-940

CATALOG NUMBER: S124RDIW-S795D1340U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	568.1	568.0	567.9	568.4	569.4	570.3	571.3	572.3
115°	653.4	653.9	654.3	654.6	654.6	654.6	654.6	654.6
117.5°	739.0	739.0	738.9	738.8	738.7	738.6	738.5	738.3
120°	792.1	792.6	793.2	793.2	792.6	792.1	791.7	791.1
122.5°	844.5	844.8	845.1	845.0	844.5	843.9	843.5	842.9
125°	917.6	918.4	919.1	919.6	919.9	920.2	920.4	920.7
127.5°	990.2	990.1	989.9	989.7	989.5	989.3	989.1	988.9
130°	1034.5	1034.7	1035.0	1035.2	1035.2	1035.2	1035.2	1035.2
132.5°	1078.0	1078.3	1078.5	1078.5	1078.3	1078.2	1077.9	1077.7
135°	1138.0	1138.4	1139.0	1139.5	1140.1	1140.5	1141.0	1141.6
137.5°	1195.4	1196.0	1196.6	1196.8	1196.6	1196.5	1196.3	1196.1
140°	1231.0	1231.8	1232.5	1233.1	1233.3	1233.6	1233.9	1234.1
142.5°	1263.9	1264.4	1265.1	1265.3	1265.4	1265.4	1265.5	1265.5
145°	1310.9	1311.2	1311.4	1311.9	1312.3	1312.9	1313.4	1313.9
147.5°	1352.3	1352.5	1352.6	1352.9	1353.2	1353.4	1353.6	1353.9
150°	1378.7	1378.7	1378.7	1378.8	1379.0	1379.3	1379.6	1379.8
152.5°	1401.7	1402.1	1402.5	1402.7	1402.5	1402.3	1402.2	1402.0
155°	1432.8	1433.8	1434.9	1434.9	1434.2	1433.4	1432.6	1431.9
157.5°	1459.6	1460.9	1462.2	1462.2	1460.9	1459.6	1458.2	1456.9
160°	1476.6	1478.1	1479.7	1479.7	1478.1	1476.6	1475.1	1473.6
162.5°	1490.5	1492.0	1493.5	1493.4	1491.7	1490.0	1488.2	1486.5
165°	1510.0	1512.1	1514.1	1513.9	1511.7	1509.4	1507.1	1504.8
167.5°	1524.3	1526.5	1528.8	1528.7	1526.1	1523.5	1521.0	1518.4
170°	1533.1	1535.2	1537.2	1537.0	1534.5	1531.9	1529.3	1526.7
172.5°	1538.6	1540.8	1542.8	1542.5	1539.6	1536.9	1534.1	1531.3
175°	1545.2	1547.6	1549.9	1549.4	1546.4	1543.3	1540.2	1537.1
177.5°	1547.8	1549.4	1551.1	1550.7	1548.2	1545.8	1543.3	1540.8
180°	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4	1546.4

(END OF REPORT)