

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: P332322-840

Luminaire Tested: **S123RDIP-S775D1025U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332322-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S775D1025U840-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6504.6 lumens  
Efficiency: N/A  
Efficacy: 125.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

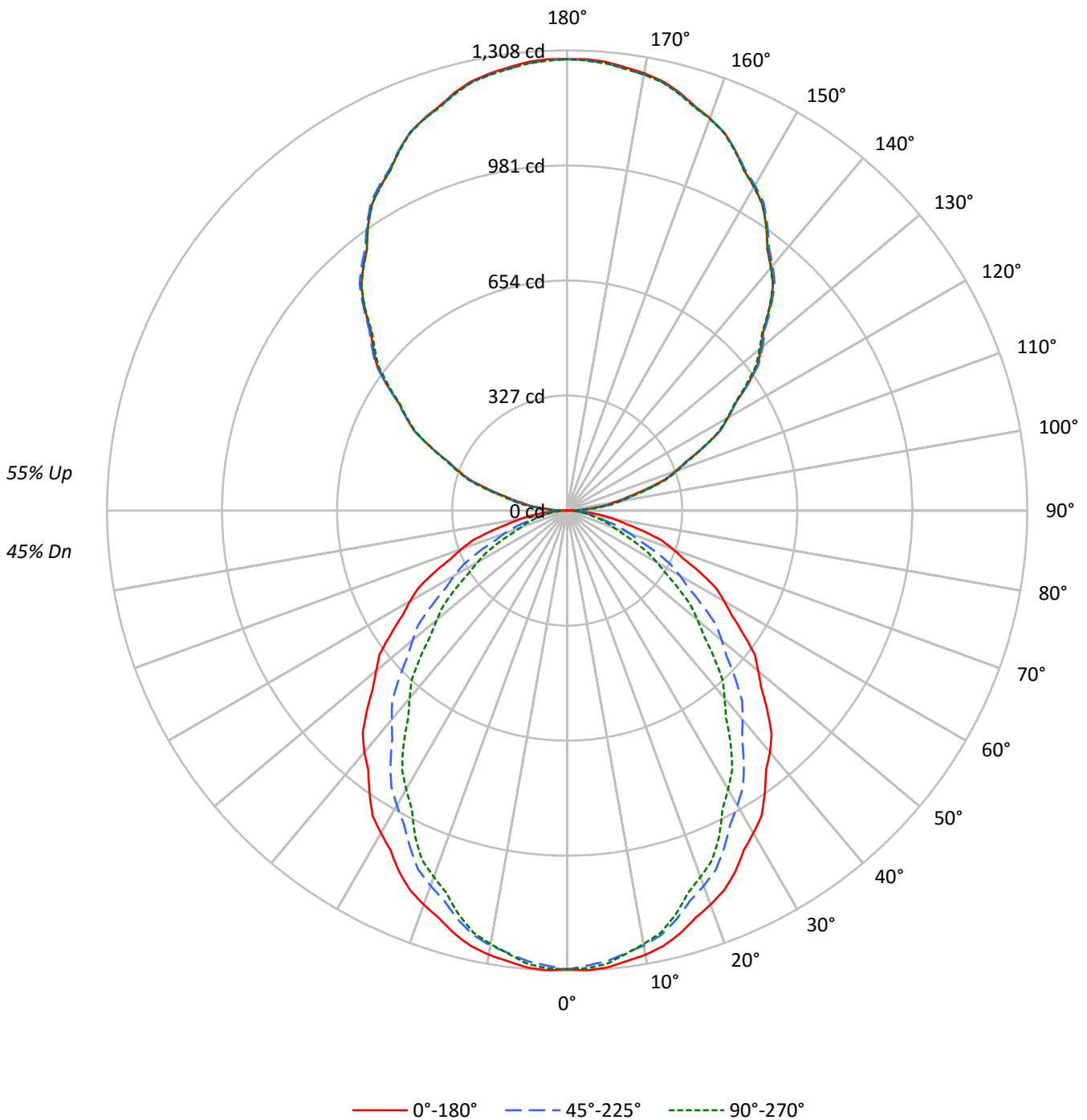
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	81	75	70	81	75	70	65	63	59	56	51	49	47	41	39	38	33
3	81	72	65	59	74	66	60	55	56	51	47	46	42	40	37	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	53	46	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	20	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	14	13

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

	0°	45°	90°
0°	14034	14034	14034
5°	14088	13894	13973
10°	14008	13719	13672
15°	13857	13397	13256
20°	13651	12997	12693
25°	13438	12545	12144
30°	13155	12026	11368
35°	12867	11506	10657
40°	12600	10891	9777
45°	12250	10286	8983
50°	11863	9597	8092
55°	11470	8811	7263
60°	11108	7967	6351
65°	10639	7055	5440
70°	10049	5923	4393
75°	9191	4662	4134
80°	8195	4135	3800
85°	6916	3656	3396



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.4	1.9
10°-20°	340.6	5.2
20°-30°	490.5	7.5
30°-40°	552.5	8.5
40°-50°	528.6	8.1
50°-60°	432.9	6.7
60°-70°	292.0	4.5
70°-80°	146.9	2.3
80°-90°	42.7	0.7
90°-100°	83.6	1.3
100°-110°	250.2	3.8
110°-120°	425.6	6.5
120°-130°	559.8	8.6
130°-140°	629.2	9.7
140°-150°	618.5	9.5
150°-160°	520.7	8.0
160°-170°	346.6	5.3
170°-180°	121.4	1.9
0°-30°	953.6	14.7
0°-40°	1506.1	23.2
0°-60°	2467.5	37.9
0°-90°	2949.2	45.3
90°-120°	759.4	11.7
90°-150°	2566.9	39.5
90°-180°	3555.0	54.7
0°-180°	6504.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1304	1298	1286	1295	1293	124
15°	1244	1231	1202	1197	1190	350
25°	1132	1104	1056	1035	1022	520
35°	979	940	876	832	811	613
45°	805	755	676	617	590	621
55°	611	557	470	410	387	548
65°	418	358	277	227	214	413
75°	221	170	112	102	99	236
85°	56	34	30	28	28	63
90°	1	11	24	28	30	6
95°	60	67	75	78	79	67
105°	227	229	238	238	240	243
115°	428	431	429	430	429	424
125°	627	630	628	624	620	559
135°	814	819	818	815	812	627
145°	987	989	992	991	987	616
155°	1130	1130	1131	1134	1128	520
165°	1231	1228	1228	1233	1227	347
175°	1280	1276	1276	1282	1275	122
180°	1283	1283	1283	1283	1283	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1308.0	1307.3	1306.5	1305.8	1305.0	1303.5	1301.2	1299.0	1296.8	1294.4	1296.6
5°	1303.8	1302.6	1301.4	1300.3	1299.1	1297.1	1294.2	1291.4	1288.6	1285.9	1287.9
7.5°	1291.7	1290.5	1289.2	1287.9	1286.7	1284.1	1280.5	1276.9	1273.2	1269.5	1270.7
10°	1281.6	1279.9	1278.3	1276.7	1275.0	1272.0	1267.8	1263.6	1259.4	1255.2	1255.4
12.5°	1267.2	1265.4	1263.5	1261.7	1259.9	1256.4	1251.2	1246.1	1240.8	1235.7	1235.6
15°	1243.5	1240.9	1238.3	1235.8	1233.1	1228.6	1222.0	1215.5	1208.8	1202.2	1201.1
17.5°	1213.7	1210.7	1207.7	1204.7	1201.6	1196.0	1187.6	1179.2	1170.8	1162.6	1160.0
20°	1191.7	1187.9	1184.2	1180.4	1176.7	1170.3	1161.3	1152.5	1143.6	1134.6	1131.6
22.5°	1167.2	1162.9	1158.5	1154.2	1149.8	1143.0	1133.5	1124.0	1114.5	1105.0	1101.2
25°	1131.5	1125.6	1119.6	1113.8	1107.9	1099.5	1088.7	1077.9	1067.1	1056.3	1051.4
27.5°	1088.0	1081.6	1075.1	1068.6	1062.2	1052.9	1040.9	1028.9	1016.7	1004.7	997.8
30°	1058.4	1051.4	1044.4	1037.3	1030.3	1020.2	1007.0	993.8	980.7	967.6	959.6
32.5°	1028.9	1020.9	1012.9	1004.9	996.9	985.9	972.0	958.2	944.2	930.3	921.6
35°	979.2	970.7	962.2	953.8	945.3	933.8	919.3	904.6	890.1	875.6	865.5
37.5°	928.9	919.4	910.0	900.6	891.2	878.8	863.2	847.7	832.1	816.6	805.1
40°	896.7	886.4	876.0	865.7	855.4	841.8	825.2	808.5	791.7	775.1	762.9
42.5°	860.3	850.0	839.6	829.3	819.0	805.2	787.9	770.6	753.5	736.2	722.9
45°	804.7	794.2	783.6	773.0	762.3	748.1	729.9	711.9	693.8	675.7	662.3
47.5°	749.1	737.5	725.9	714.3	702.7	687.8	669.7	651.6	633.5	615.4	600.9
50°	708.4	697.4	686.4	675.3	664.3	649.2	630.3	611.2	592.2	573.1	558.6
52.5°	672.1	660.1	648.1	636.1	624.2	608.7	589.9	571.1	552.2	533.3	518.3
55°	611.2	599.7	588.1	576.6	565.1	549.4	529.4	509.5	489.5	469.5	455.9
57.5°	554.9	542.4	529.9	517.3	504.7	488.5	468.4	448.3	428.2	408.2	395.3
60°	516.0	503.1	490.2	477.3	464.3	448.1	428.6	409.1	389.6	370.1	357.4
62.5°	477.1	464.1	451.2	438.3	425.5	409.2	389.7	370.2	350.7	331.1	319.2
65°	417.7	404.8	391.8	378.9	366.0	350.3	332.0	313.7	295.4	277.0	265.5
67.5°	358.3	345.2	332.1	319.0	306.0	290.6	273.1	255.5	237.9	220.4	211.8
70°	319.3	306.7	294.0	281.2	268.6	254.0	237.5	221.2	204.7	188.2	180.0
72.5°	280.4	267.9	255.4	242.9	230.5	216.7	201.8	186.8	171.9	156.9	150.2
75°	221.0	209.7	198.4	187.1	175.9	163.8	150.9	137.9	125.0	112.1	109.8
77.5°	166.8	156.6	146.4	136.2	126.0	116.8	108.5	100.2	91.9	83.5	82.3
80°	132.2	122.5	112.9	103.3	93.6	86.3	81.4	76.4	71.6	66.7	65.9
82.5°	99.2	90.9	82.5	74.2	65.9	60.6	58.3	55.9	53.7	51.4	50.7
85°	56.0	50.9	45.7	40.5	35.3	32.4	31.7	31.0	30.3	29.6	29.2
87.5°	20.5	18.9	17.3	15.7	14.0	13.5	14.1	14.6	15.2	15.9	15.9
90°	1.0	3.2	5.5	7.8	10.0	12.5	15.5	18.4	21.3	24.2	25.0
92.5°	24.4	26.0	27.5	29.0	30.5	32.1	33.7	35.3	37.1	38.7	39.4
95°	59.5	61.0	62.6	64.2	65.7	67.5	69.2	71.0	72.8	74.6	75.5
97.5°	105.6	106.8	108.0	109.2	110.3	111.5	112.8	114.1	115.4	116.7	117.8
100°	137.1	138.5	139.8	141.1	142.5	143.7	144.8	145.9	147.0	148.1	148.9
102.5°	173.4	174.2	175.0	175.8	176.6	177.7	179.3	180.7	182.2	183.7	184.3
105°	226.8	227.2	227.7	228.1	228.6	229.8	231.9	233.9	235.9	237.9	237.9
107.5°	288.9	289.2	289.4	289.7	290.0	290.5	291.3	292.2	293.0	293.8	294.5
110°	327.6	328.1	328.5	328.9	329.4	329.8	330.3	330.7	331.2	331.6	332.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	367.9	368.2	368.5	368.7	369.0	369.2	369.3	369.4	369.5	369.5	370.6
115°	428.4	429.1	429.8	430.4	431.1	431.2	430.8	430.3	429.9	429.4	429.7
117.5°	489.3	489.8	490.2	490.7	491.1	491.0	490.5	489.9	489.3	488.7	488.7
120°	527.3	528.6	529.9	531.3	532.6	532.7	531.6	530.5	529.4	528.3	528.0
122.5°	566.7	567.7	568.7	569.7	570.7	570.9	570.3	569.7	569.2	568.6	567.9
125°	627.0	627.7	628.3	629.0	629.7	629.9	629.3	628.9	628.4	628.0	627.1
127.5°	682.7	684.1	685.5	686.9	688.4	688.8	688.3	687.9	687.4	686.9	685.6
130°	719.7	721.5	723.4	725.1	726.9	727.5	726.8	726.1	725.5	724.8	723.9
132.5°	756.9	758.6	760.4	762.2	764.1	764.7	764.2	763.7	763.2	762.7	761.6
135°	813.5	814.9	816.2	817.5	818.9	819.4	819.2	819.0	818.8	818.5	817.7
137.5°	866.0	867.1	868.2	869.3	870.4	871.2	871.8	872.4	873.0	873.5	872.6
140°	902.2	903.3	904.4	905.5	906.7	907.4	907.6	907.8	908.1	908.3	908.1
142.5°	935.2	936.3	937.6	938.7	939.8	940.5	940.9	941.3	941.7	942.1	941.9
145°	986.8	987.3	987.7	988.3	988.7	989.3	989.9	990.6	991.3	991.9	991.7
147.5°	1032.1	1032.9	1033.7	1034.5	1035.3	1036.0	1036.6	1037.2	1037.8	1038.5	1038.5
150°	1063.5	1064.0	1064.4	1064.8	1065.3	1065.7	1066.2	1066.6	1067.1	1067.5	1067.5
152.5°	1089.3	1089.9	1090.6	1091.2	1091.8	1092.3	1092.6	1092.8	1093.1	1093.4	1093.7
155°	1130.0	1130.0	1130.0	1130.0	1130.0	1130.1	1130.3	1130.5	1130.8	1131.0	1132.0
157.5°	1164.7	1164.5	1164.2	1163.9	1163.7	1163.6	1163.8	1164.0	1164.2	1164.3	1165.3
160°	1186.5	1186.0	1185.6	1185.2	1184.7	1184.5	1184.5	1184.5	1184.5	1184.5	1185.6
162.5°	1205.9	1205.2	1204.6	1204.0	1203.4	1203.2	1203.3	1203.5	1203.7	1203.9	1205.0
165°	1230.8	1230.1	1229.5	1228.8	1228.2	1227.8	1227.8	1227.8	1227.8	1227.8	1229.1
167.5°	1250.8	1249.9	1249.0	1248.1	1247.2	1246.9	1247.1	1247.2	1247.4	1247.6	1249.0
170°	1262.1	1261.2	1260.3	1259.4	1258.5	1258.1	1258.1	1258.1	1258.1	1258.1	1259.6
172.5°	1270.9	1270.1	1269.2	1268.3	1267.4	1266.9	1266.9	1266.9	1266.9	1266.9	1268.3
175°	1280.2	1279.3	1278.4	1277.6	1276.7	1276.2	1276.2	1276.2	1276.2	1276.2	1277.6
177.5°	1284.0	1283.3	1282.6	1281.9	1281.2	1280.8	1280.8	1280.8	1280.8	1280.8	1281.9
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1298.6	1300.7	1302.7	1303.6	1303.2	1302.8	1302.4	1302.1
5°	1290.0	1292.1	1294.2	1295.1	1294.6	1294.1	1293.6	1293.2
7.5°	1271.9	1273.0	1274.2	1274.4	1273.6	1272.8	1272.0	1271.2
10°	1255.7	1255.9	1256.1	1255.7	1254.5	1253.2	1252.1	1250.9
12.5°	1235.4	1235.3	1235.2	1234.4	1233.0	1231.6	1230.3	1228.9
15°	1199.9	1198.7	1197.6	1196.2	1194.6	1192.9	1191.2	1189.6
17.5°	1157.5	1155.1	1152.6	1150.1	1147.6	1145.2	1142.8	1140.3
20°	1128.5	1125.4	1122.4	1119.4	1116.6	1113.8	1111.0	1108.1
22.5°	1097.4	1093.6	1089.7	1086.5	1083.9	1081.3	1078.6	1076.0
25°	1046.5	1041.6	1036.6	1032.9	1030.3	1027.6	1025.1	1022.5
27.5°	991.0	984.2	977.3	971.9	968.0	964.0	960.1	956.1
30°	951.6	943.5	935.5	929.7	925.9	922.2	918.4	914.6
32.5°	912.8	904.1	895.3	889.0	885.0	881.1	877.2	873.2
35°	855.4	845.3	835.2	828.0	823.7	819.5	815.3	811.0
37.5°	793.6	782.1	770.6	762.3	757.1	751.8	746.7	741.4
40°	750.6	738.4	726.2	717.4	712.0	706.6	701.1	695.8
42.5°	709.4	696.1	682.8	673.7	668.8	664.0	659.1	654.3
45°	648.9	635.5	622.1	612.6	606.9	601.3	595.7	590.1
47.5°	586.2	571.7	557.1	547.3	542.3	537.2	532.3	527.3
50°	544.0	529.4	514.8	504.8	499.5	494.0	488.7	483.2
52.5°	503.1	488.0	472.8	462.8	458.0	453.1	448.3	443.4
55°	442.2	428.6	415.0	405.8	401.1	396.4	391.7	387.0
57.5°	382.4	369.5	356.7	348.2	344.3	340.2	336.2	332.2
60°	344.7	332.0	319.3	311.0	307.0	303.0	299.0	295.0
62.5°	307.3	295.4	283.5	275.4	271.1	267.0	262.9	258.6
65°	254.0	242.5	231.0	223.9	221.4	218.7	216.2	213.6
67.5°	203.2	194.6	185.9	180.3	177.5	174.7	172.0	169.2
70°	171.8	163.5	155.3	150.0	147.3	144.7	142.2	139.6
72.5°	143.5	136.7	130.1	126.1	125.0	124.0	122.9	121.8
75°	107.3	105.0	102.7	101.3	100.8	100.4	99.9	99.4
77.5°	81.0	79.7	78.5	77.6	77.2	76.6	76.1	75.7
80°	65.2	64.5	63.8	63.2	62.7	62.3	61.8	61.3
82.5°	50.0	49.3	48.6	48.2	48.1	48.0	47.9	47.8
85°	28.7	28.2	27.8	27.5	27.5	27.5	27.5	27.5
87.5°	15.9	15.9	15.8	15.8	15.7	15.6	15.5	15.3
90°	26.0	26.9	27.8	28.5	28.9	29.4	29.8	30.2
92.5°	40.2	40.9	41.6	41.8	41.5	41.3	41.0	40.7
95°	76.3	77.3	78.2	78.7	78.7	78.7	78.7	78.7
97.5°	118.8	119.9	120.9	121.3	121.3	121.2	121.1	121.0
100°	149.6	150.2	150.9	151.5	151.9	152.3	152.8	153.2
102.5°	185.0	185.7	186.3	186.6	186.5	186.4	186.4	186.3
105°	237.9	237.9	237.9	238.1	238.5	239.0	239.4	239.9
107.5°	295.2	295.9	296.6	296.8	296.6	296.3	296.0	295.8
110°	333.5	334.4	335.3	335.5	335.0	334.6	334.2	333.7





TEST NUMBER: P332322-840

CATALOG NUMBER: S123RDIP-S775D1025U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	371.7	372.7	373.9	374.4	374.3	374.2	374.1	374.0
115°	429.9	430.1	430.3	430.3	430.1	429.9	429.7	429.4
117.5°	488.6	488.6	488.6	488.2	487.6	487.0	486.4	485.6
120°	527.8	527.6	527.4	526.9	526.5	526.1	525.6	525.2
122.5°	567.3	566.8	566.2	565.6	565.0	564.3	563.7	563.1
125°	626.2	625.3	624.4	623.5	622.7	621.8	620.9	620.0
127.5°	684.4	683.2	681.9	680.8	679.7	678.6	677.6	676.6
130°	723.0	722.1	721.2	719.9	718.4	716.8	715.3	713.7
132.5°	760.5	759.5	758.4	757.3	756.1	754.9	753.7	752.5
135°	816.8	815.9	815.0	814.3	813.9	813.3	812.9	812.5
137.5°	871.7	870.8	869.8	868.9	868.1	867.2	866.4	865.6
140°	907.8	907.6	907.4	906.5	904.9	903.3	901.8	900.2
142.5°	941.7	941.5	941.2	940.5	939.3	938.1	936.9	935.6
145°	991.5	991.3	991.0	990.5	989.6	988.7	987.7	986.8
147.5°	1038.5	1038.5	1038.5	1037.8	1036.5	1035.1	1033.8	1032.5
150°	1067.5	1067.5	1067.5	1066.8	1065.5	1064.2	1062.8	1061.5
152.5°	1094.1	1094.4	1094.8	1094.4	1093.2	1092.1	1090.9	1089.7
155°	1132.9	1133.8	1134.6	1134.3	1132.8	1131.1	1129.5	1128.0
157.5°	1166.2	1167.1	1168.1	1167.9	1166.7	1165.4	1164.2	1162.9
160°	1186.7	1187.8	1188.9	1189.0	1188.2	1187.3	1186.4	1185.5
162.5°	1206.1	1207.2	1208.3	1208.1	1206.7	1205.3	1203.9	1202.4
165°	1230.5	1231.8	1233.1	1233.0	1231.5	1229.9	1228.4	1226.8
167.5°	1250.3	1251.7	1253.1	1253.1	1251.7	1250.3	1249.0	1247.6
170°	1261.2	1262.7	1264.4	1264.4	1262.7	1261.2	1259.6	1258.1
172.5°	1269.7	1271.1	1272.4	1272.4	1270.8	1269.3	1267.7	1266.1
175°	1278.9	1280.2	1281.6	1281.4	1279.9	1278.3	1276.8	1275.2
177.5°	1283.0	1284.0	1285.2	1285.1	1283.8	1282.5	1281.3	1280.0
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2

(END OF REPORT)