

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: P333229-840

Luminaire Tested: **S125DIP-S850D810U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333229-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S850D810U840-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

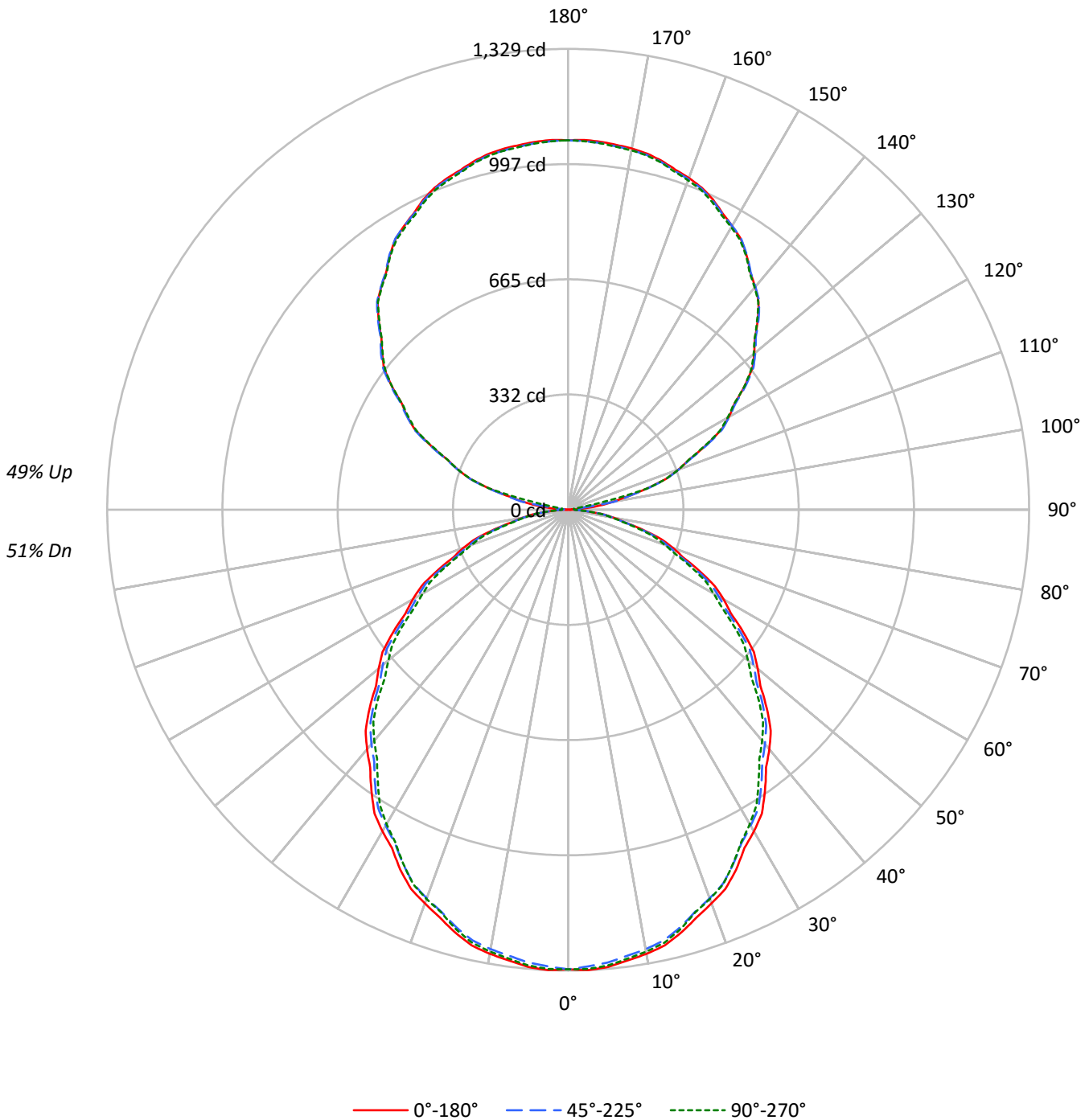
Lumens per Lamp: N/A  
Luminaire Lumens: 6723.6 lumens  
Efficiency: N/A  
Efficacy: 146.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (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



TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43
2	89	82	76	70	82	76	70	66	64	60	57	54	51	49	44	42	41	36
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	39	37	35	30
4	74	64	56	50	68	59	52	47	50	45	41	43	38	35	35	32	30	26
5	68	57	48	42	63	53	45	40	45	40	35	38	34	30	32	28	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13

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

	0°	45°	90°
0°	8561	8561	8561
5°	8581	8499	8554
10°	8529	8439	8487
15°	8436	8338	8372
20°	8304	8195	8210
25°	8161	8027	8020
30°	7986	7845	7806
35°	7798	7649	7541
40°	7605	7436	7331
45°	7395	7242	7099
50°	7166	7007	6797
55°	6944	6742	6554
60°	6679	6475	6245
65°	6363	6154	5946
70°	6060	5784	5586
75°	5522	5340	5155
80°	4917	4839	4720
85°	4276	4357	4113



TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.0	1.9
10°-20°	353.1	5.3
20°-30°	521.3	7.8
30°-40°	608.3	9.0
40°-50°	611.0	9.1
50°-60°	536.3	8.0
60°-70°	399.6	5.9
70°-80°	228.5	3.4
80°-90°	68.7	1.0
90°-100°	38.7	0.6
100°-110°	238.6	3.5
110°-120°	432.8	6.4
120°-130°	555.4	8.3
130°-140°	597.4	8.9
140°-150°	560.7	8.3
150°-160°	453.6	6.7
160°-170°	293.3	4.4
170°-180°	101.2	1.5
0°-30°	999.4	14.9
0°-40°	1607.8	23.9
0°-60°	2755.1	41.0
0°-90°	3451.9	51.3
90°-120°	710.1	10.6
90°-150°	2423.5	36.0
90°-180°	3272.0	48.7
0°-180°	6723.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1324	1321	1311	1320	1319	125
15°	1262	1258	1247	1252	1252	355
25°	1145	1140	1126	1128	1125	527
35°	989	984	970	965	956	618
45°	810	805	793	781	777	624
55°	617	613	599	590	582	550
65°	416	414	403	394	389	413
75°	221	219	214	211	207	236
85°	58	59	59	58	56	64
90°	1	7	13	17	19	5
95°	45	41	13	16	17	57
105°	232	235	235	235	235	246
115°	436	440	441	437	433	432
125°	620	625	626	622	620	554
135°	773	778	776	775	770	596
145°	896	898	898	898	894	560
155°	987	983	984	986	980	455
165°	1042	1037	1038	1042	1036	294
175°	1065	1061	1062	1067	1061	101
180°	1065	1065	1065	1065	1065	



TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1329.1	1328.5	1328.0	1327.4	1326.8	1325.5	1323.7	1321.9	1320.0	1318.2	1320.0
5°	1323.6	1323.1	1322.6	1322.2	1321.7	1320.3	1318.0	1315.7	1313.3	1311.0	1313.1
7.5°	1311.4	1311.0	1310.5	1310.0	1309.6	1308.1	1305.5	1302.9	1300.4	1297.8	1299.8
10°	1300.5	1300.1	1299.6	1299.1	1298.7	1297.2	1294.5	1292.0	1289.5	1286.9	1288.8
12.5°	1287.1	1286.3	1285.5	1284.5	1283.7	1282.1	1279.8	1277.4	1275.0	1272.6	1274.1
15°	1261.7	1261.0	1260.3	1259.6	1258.9	1257.3	1254.8	1252.1	1249.6	1247.0	1248.2
17.5°	1232.5	1231.5	1230.5	1229.5	1228.5	1226.6	1224.0	1221.3	1218.6	1216.0	1217.4
20°	1208.2	1207.8	1207.3	1206.8	1206.4	1204.6	1201.5	1198.5	1195.5	1192.4	1194.2
22.5°	1183.9	1183.1	1182.2	1181.3	1180.5	1178.7	1175.9	1173.0	1170.1	1167.3	1168.4
25°	1145.3	1144.2	1143.0	1141.8	1140.6	1138.5	1135.5	1132.5	1129.4	1126.4	1126.9
27.5°	1100.1	1099.5	1098.8	1098.1	1097.4	1095.5	1092.4	1089.2	1086.1	1083.0	1083.1
30°	1070.9	1070.2	1069.4	1068.7	1068.0	1065.9	1062.5	1058.9	1055.4	1052.0	1051.5
32.5°	1038.9	1037.8	1036.8	1035.7	1034.7	1032.6	1029.5	1026.3	1023.2	1020.1	1019.3
35°	989.1	988.1	987.1	986.2	985.3	983.2	980.0	976.6	973.4	970.2	969.0
37.5°	937.3	936.0	934.8	933.7	932.5	930.4	927.4	924.2	921.2	918.2	916.4
40°	902.0	900.8	899.7	898.5	897.3	895.1	891.8	888.6	885.3	882.0	880.0
42.5°	864.2	863.2	862.2	861.3	860.3	858.2	855.0	851.6	848.4	845.2	843.2
45°	809.7	808.7	807.8	806.9	806.0	804.1	801.3	798.5	795.7	792.9	790.1
47.5°	750.9	751.0	751.0	751.0	751.1	749.5	746.1	742.8	739.4	736.1	733.2
50°	713.2	712.5	711.8	711.0	710.4	708.6	705.9	703.1	700.2	697.4	694.4
52.5°	674.6	674.1	673.6	673.1	672.6	670.8	667.8	664.8	661.9	658.8	656.2
55°	616.7	616.0	615.3	614.6	613.9	611.9	608.6	605.4	602.1	598.8	596.7
57.5°	555.6	555.3	554.9	554.5	554.2	552.6	549.9	547.1	544.3	541.6	538.9
60°	517.1	516.1	515.2	514.2	513.3	511.6	509.0	506.4	503.9	501.3	499.0
62.5°	476.8	476.1	475.3	474.5	473.8	472.3	470.2	468.0	465.7	463.5	461.1
65°	416.4	415.9	415.5	415.0	414.5	413.0	410.4	407.9	405.3	402.7	400.6
67.5°	357.9	356.9	355.9	354.9	354.0	352.4	350.6	348.7	346.8	344.9	343.1
70°	320.9	319.7	318.6	317.4	316.3	314.7	312.6	310.4	308.3	306.3	304.9
72.5°	280.6	279.8	279.0	278.3	277.5	276.4	275.1	273.7	272.4	271.0	269.4
75°	221.3	220.9	220.4	219.9	219.4	218.6	217.4	216.3	215.1	214.0	213.3
77.5°	166.5	166.3	166.2	166.0	165.8	165.4	164.7	164.1	163.4	162.8	162.4
80°	132.2	132.2	132.2	132.2	132.2	131.9	131.5	131.0	130.5	130.1	129.9
82.5°	101.9	101.6	101.2	100.8	100.5	100.2	100.1	100.1	100.0	99.9	99.5
85°	57.7	58.0	58.2	58.4	58.6	58.8	58.8	58.8	58.8	58.8	58.5
87.5°	22.8	23.1	23.3	23.6	23.9	24.1	24.1	24.2	24.2	24.3	24.5
90°	0.8	2.2	3.6	5.0	6.4	7.7	9.0	10.2	11.4	12.6	13.5
92.5°	12.1	11.2	10.2	9.2	8.3	8.3	9.4	10.5	11.5	12.6	13.5
95°	45.0	44.5	43.9	43.4	42.9	39.3	32.6	26.0	19.3	12.6	13.5
97.5°	94.0	94.9	95.8	96.8	97.8	91.7	78.5	65.2	52.0	38.9	33.9
100°	131.9	132.4	132.9	133.5	134.0	134.6	135.3	136.0	136.7	137.4	111.3
102.5°	170.5	171.1	171.8	172.4	173.1	173.6	174.1	174.5	174.9	175.3	170.4
105°	232.2	232.9	233.6	234.3	235.0	235.3	235.3	235.3	235.3	235.3	235.3
107.5°	296.3	296.3	296.3	296.3	296.3	296.5	296.8	297.2	297.5	297.9	297.9
110°	338.0	338.0	338.0	338.0	338.0	338.2	338.5	338.9	339.2	339.6	339.1



TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	377.2	377.6	378.0	378.5	378.9	379.2	379.4	379.6	379.8	380.0	379.4
115°	436.0	436.9	437.7	438.6	439.5	440.0	440.2	440.3	440.5	440.7	440.0
117.5°	496.8	496.8	496.7	496.7	496.7	497.0	497.6	498.3	499.0	499.6	498.7
120°	534.6	534.5	534.3	534.1	533.9	534.1	534.6	535.2	535.7	536.2	535.9
122.5°	568.2	568.9	569.5	570.2	570.8	571.3	571.5	571.8	572.0	572.3	571.9
125°	620.0	621.2	622.4	623.7	624.9	625.5	625.5	625.5	625.5	625.5	624.8
127.5°	669.4	670.2	671.2	672.1	672.9	673.3	673.2	673.1	673.0	672.9	672.5
130°	699.7	700.6	701.5	702.4	703.3	703.8	704.0	704.1	704.3	704.5	704.0
132.5°	730.0	731.0	732.1	733.1	734.2	734.5	734.1	733.7	733.3	732.9	732.8
135°	773.2	774.3	775.3	776.4	777.4	777.7	777.4	777.0	776.7	776.4	776.0
137.5°	812.8	813.7	814.7	815.6	816.5	816.8	816.5	816.2	815.9	815.5	815.6
140°	838.7	839.1	839.4	839.8	840.1	840.2	840.0	839.9	839.7	839.5	839.9
142.5°	862.1	862.3	862.5	862.7	862.9	863.1	863.4	863.6	863.9	864.1	864.2
145°	896.4	896.8	897.1	897.5	897.8	898.0	898.0	898.0	898.0	898.0	898.2
147.5°	926.3	926.3	926.2	926.1	926.1	926.1	926.3	926.6	926.9	927.1	927.3
150°	945.3	945.0	944.6	944.3	943.9	943.9	944.3	944.6	945.0	945.3	945.7
152.5°	963.7	962.9	962.1	961.4	960.6	960.4	960.7	961.1	961.4	961.8	962.1
155°	987.2	986.1	985.1	984.0	983.0	982.6	983.0	983.3	983.7	984.0	984.5
157.5°	1005.3	1004.7	1004.1	1003.5	1002.8	1002.5	1002.6	1002.6	1002.6	1002.7	1003.2
160°	1018.0	1016.9	1015.9	1014.8	1013.8	1013.4	1013.5	1013.7	1013.9	1014.0	1014.7
162.5°	1028.1	1027.0	1026.0	1024.9	1023.9	1023.5	1023.6	1023.8	1024.0	1024.2	1025.1
165°	1041.7	1040.7	1039.6	1038.5	1037.4	1037.0	1037.2	1037.4	1037.5	1037.7	1038.8
167.5°	1051.8	1050.8	1049.7	1048.5	1047.4	1047.0	1047.1	1047.3	1047.5	1047.7	1048.9
170°	1057.5	1056.2	1055.0	1053.8	1052.6	1052.1	1052.2	1052.4	1052.6	1052.8	1054.2
172.5°	1061.3	1060.1	1058.8	1057.6	1056.3	1055.9	1056.2	1056.5	1056.8	1057.1	1058.4
175°	1065.4	1064.3	1063.3	1062.3	1061.2	1060.8	1060.9	1061.1	1061.3	1061.5	1062.9
177.5°	1067.3	1066.4	1065.6	1064.8	1063.9	1063.6	1063.7	1063.8	1064.0	1064.1	1065.1
180°	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4



TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1321.9	1323.7	1325.5	1326.5	1326.3	1326.1	1325.9	1325.6
5°	1315.2	1317.3	1319.4	1320.3	1320.1	1319.9	1319.6	1319.4
7.5°	1301.9	1303.9	1306.0	1306.9	1306.7	1306.5	1306.2	1306.0
10°	1290.6	1292.5	1294.3	1295.2	1294.9	1294.6	1294.4	1294.2
12.5°	1275.6	1277.1	1278.6	1279.3	1279.3	1279.2	1279.2	1279.1
15°	1249.4	1250.5	1251.7	1252.2	1252.2	1252.2	1252.2	1252.2
17.5°	1218.9	1220.3	1221.7	1221.9	1220.7	1219.6	1218.4	1217.3
20°	1195.8	1197.4	1199.0	1199.2	1198.1	1196.9	1195.8	1194.6
22.5°	1169.4	1170.5	1171.6	1171.7	1170.9	1170.1	1169.3	1168.6
25°	1127.3	1127.8	1128.3	1128.1	1127.5	1126.8	1126.1	1125.4
27.5°	1083.2	1083.3	1083.4	1083.1	1082.4	1081.7	1081.0	1080.3
30°	1051.1	1050.6	1050.1	1049.6	1048.8	1048.1	1047.4	1046.7
32.5°	1018.3	1017.5	1016.7	1015.6	1014.4	1013.1	1011.9	1010.7
35°	967.9	966.6	965.5	964.0	962.1	960.3	958.4	956.5
37.5°	914.6	912.9	911.2	909.8	908.8	907.7	906.7	905.5
40°	877.9	875.8	873.6	872.2	871.5	870.9	870.2	869.5
42.5°	841.3	839.4	837.5	836.0	835.0	833.8	832.7	831.7
45°	787.3	784.5	781.7	779.9	779.3	778.6	777.9	777.2
47.5°	730.3	727.5	724.7	722.5	720.8	719.2	717.5	715.9
50°	691.4	688.3	685.3	683.0	681.4	679.7	678.1	676.5
52.5°	653.6	650.9	648.2	646.0	644.2	642.4	640.6	638.7
55°	594.7	592.6	590.5	588.7	586.9	585.3	583.7	582.1
57.5°	536.2	533.5	530.8	529.0	528.1	527.3	526.3	525.4
60°	496.7	494.3	492.0	490.0	488.4	486.8	485.1	483.5
62.5°	458.6	456.1	453.5	451.6	450.4	449.1	447.9	446.6
65°	398.6	396.5	394.4	392.8	391.9	391.0	390.0	389.1
67.5°	341.3	339.5	337.8	336.6	336.1	335.5	334.9	334.4
70°	303.5	302.1	300.6	299.5	298.5	297.6	296.7	295.8
72.5°	267.8	266.3	264.7	263.4	262.5	261.6	260.6	259.6
75°	212.6	211.9	211.2	210.4	209.4	208.4	207.5	206.6
77.5°	162.0	161.5	161.1	160.6	159.9	159.3	158.6	157.9
80°	129.6	129.4	129.2	128.8	128.4	127.8	127.3	126.9
82.5°	99.0	98.6	98.2	98.0	97.9	97.8	97.7	97.6
85°	58.3	58.1	57.8	57.5	57.0	56.6	56.0	55.5
87.5°	24.7	24.8	25.0	25.0	24.7	24.4	24.2	23.9
90°	14.4	15.2	16.2	16.9	17.4	17.9	18.4	19.0
92.5°	14.4	15.2	16.2	16.7	17.0	17.2	17.5	17.7
95°	14.4	15.2	16.2	16.6	16.6	16.6	16.6	16.6
97.5°	29.0	24.0	19.1	16.6	16.6	16.6	16.6	16.6
100°	85.1	59.0	32.8	19.4	18.7	18.0	17.3	16.6
102.5°	165.4	160.5	155.5	147.1	135.1	123.2	111.3	99.4
105°	235.3	235.3	235.3	235.3	235.1	234.9	234.7	234.6
107.5°	298.0	298.0	298.0	297.8	297.3	296.7	296.2	295.7
110°	338.5	338.0	337.5	337.3	337.5	337.7	337.8	338.0





TEST NUMBER: P333229-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.7	378.0	377.4	376.9	376.7	376.4	376.2	376.0
115°	439.3	438.6	437.9	437.0	436.0	434.8	433.8	432.8
117.5°	497.8	496.9	495.9	495.2	494.8	494.3	493.9	493.4
120°	535.5	535.2	534.8	534.2	533.3	532.5	531.6	530.7
122.5°	571.6	571.2	570.9	570.2	569.2	568.2	567.1	566.1
125°	624.1	623.4	622.7	622.1	621.6	621.0	620.5	620.0
127.5°	672.1	671.8	671.4	670.4	669.2	667.9	666.6	665.3
130°	703.4	702.9	702.4	701.7	700.7	699.9	699.0	698.1
132.5°	732.7	732.6	732.5	732.0	731.1	730.2	729.3	728.5
135°	775.7	775.3	775.0	774.3	773.2	772.1	771.0	770.0
137.5°	815.7	815.7	815.8	815.4	814.5	813.5	812.6	811.7
140°	840.2	840.6	840.9	840.6	839.5	838.5	837.4	836.4
142.5°	864.3	864.3	864.4	863.9	862.9	861.8	860.8	859.7
145°	898.3	898.5	898.7	898.2	897.2	896.2	895.0	894.0
147.5°	927.5	927.7	927.9	927.4	926.0	924.8	923.5	922.3
150°	946.0	946.4	946.7	946.2	944.8	943.4	942.0	940.6
152.5°	962.5	962.8	963.2	962.7	961.5	960.2	959.0	957.7
155°	985.1	985.6	986.1	985.7	984.3	982.9	981.5	980.1
157.5°	1003.8	1004.4	1004.9	1004.5	1003.1	1001.7	1000.3	998.9
160°	1015.4	1016.1	1016.8	1016.5	1015.1	1013.7	1012.3	1010.9
162.5°	1026.1	1027.1	1028.0	1027.8	1026.2	1024.7	1023.2	1021.7
165°	1039.9	1040.9	1042.0	1041.8	1040.4	1038.9	1037.5	1036.1
167.5°	1050.3	1051.5	1052.8	1052.6	1051.0	1049.5	1047.8	1046.3
170°	1055.5	1056.9	1058.3	1058.2	1056.7	1055.1	1053.5	1052.0
172.5°	1059.7	1061.0	1062.3	1062.1	1060.5	1058.9	1057.3	1055.7
175°	1064.2	1065.6	1067.0	1066.9	1065.4	1063.8	1062.3	1060.7
177.5°	1066.1	1067.0	1068.0	1068.0	1066.8	1065.7	1064.6	1063.5
180°	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4	1065.4

(END OF REPORT)