

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: P332079-935

Luminaire Tested: **S123DIP-S1165D1025U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332079-935  
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: S123DIP-S1165D1025U935-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

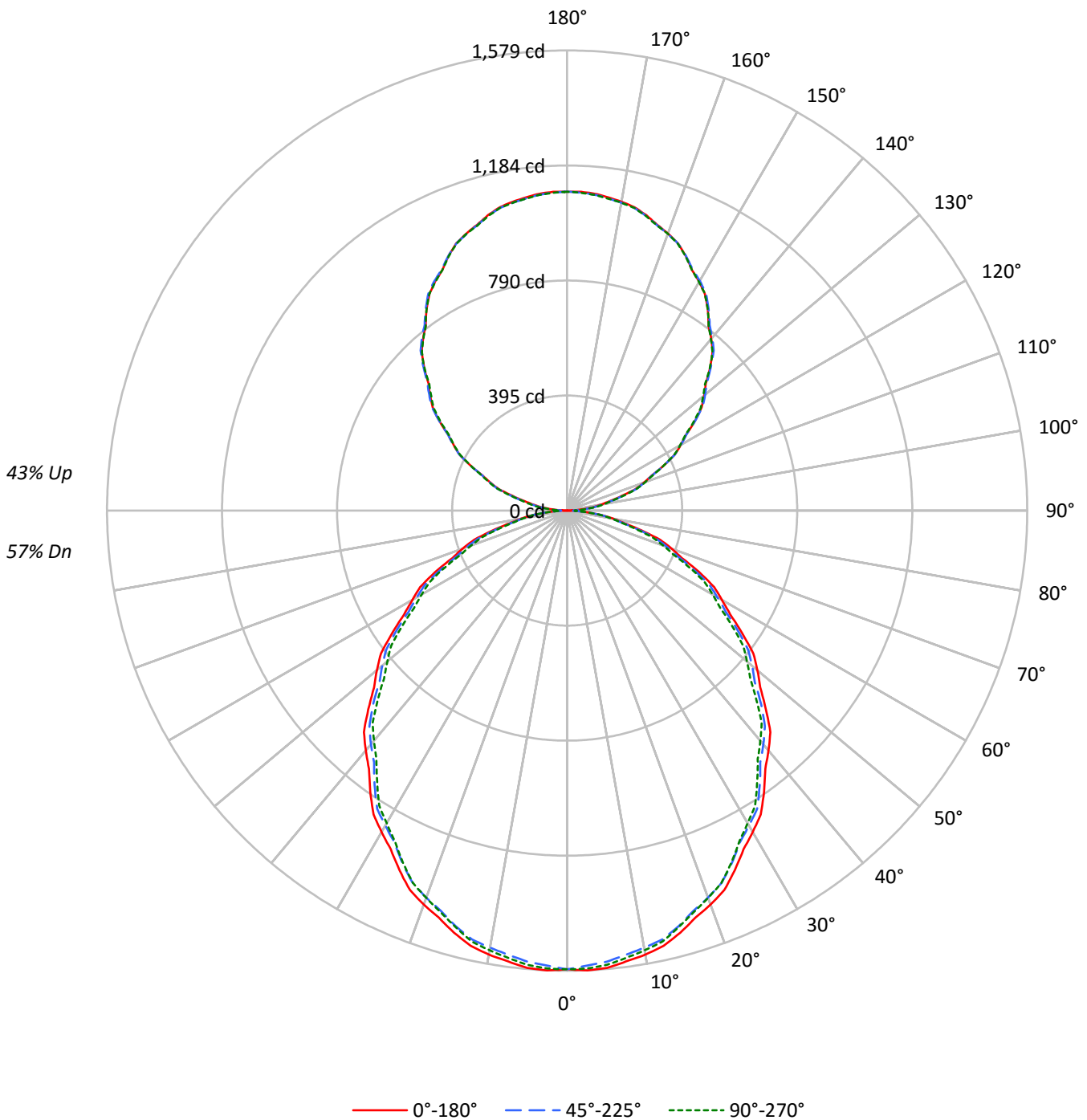
Lumens per Lamp: N/A  
Luminaire Lumens: 7130.3 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (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



TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**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	109	109	109	109	101	101	101	101	87	87	87	75	75	75	63	63	63	57
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	90	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	40
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	40	38	34
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	35	33	29
5	69	57	49	43	64	54	46	41	47	41	37	41	36	33	35	31	28	25
6	64	52	43	37	59	48	41	36	42	36	32	37	32	29	32	28	25	22
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14

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

	0°	45°	90°
0°	16942	16942	16942
5°	17022	16788	16904
10°	16909	16642	16746
15°	16711	16454	16485
20°	16479	16186	16200
25°	16170	15865	15833
30°	15830	15509	15392
35°	15473	15135	14939
40°	15100	14720	14491
45°	14690	14338	13988
50°	14277	13870	13485
55°	13741	13386	12979
60°	13199	12820	12411
65°	12720	12202	11826
70°	12013	11500	10990
75°	10975	10580	10131
80°	9899	9478	9397
85°	8682	8361	8028



TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.3	2.1
10°-20°	418.7	5.9
20°-30°	618.4	8.7
30°-40°	722.4	10.1
40°-50°	726.3	10.2
50°-60°	638.0	8.9
60°-70°	475.3	6.7
70°-80°	270.8	3.8
80°-90°	81.0	1.1
90°-100°	71.3	1.0
100°-110°	213.3	3.0
110°-120°	362.8	5.1
120°-130°	477.3	6.7
130°-140°	536.4	7.5
140°-150°	527.3	7.4
150°-160°	443.9	6.2
160°-170°	295.5	4.1
170°-180°	103.5	1.5
0°-30°	1185.3	16.6
0°-40°	1907.7	26.8
0°-60°	3272.0	45.9
0°-90°	4099.0	57.5
90°-120°	647.5	9.1
90°-150°	2188.5	30.7
90°-180°	3031.0	42.5
0°-180°	7130.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1575	1568	1554	1566	1564	149
15°	1500	1494	1476	1486	1479	423
25°	1362	1353	1336	1337	1333	627
35°	1178	1169	1152	1144	1137	736
45°	965	959	942	926	919	745
55°	732	730	713	699	692	656
65°	499	492	479	469	464	493
75°	264	259	254	248	244	282
85°	70	68	68	65	65	77
90°	1	10	21	24	26	7
95°	51	57	64	67	67	57
105°	193	195	203	203	205	207
115°	365	368	366	367	366	361
125°	535	537	536	532	529	477
135°	694	698	698	694	693	534
145°	841	843	846	845	841	525
155°	964	964	964	967	962	443
165°	1049	1047	1047	1051	1046	296
175°	1092	1088	1088	1093	1087	104
180°	1094	1094	1094	1094	1094	



TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0
2.5°	1579.4	1578.5	1577.5	1576.6	1575.5	1573.7	1571.2	1568.5	1565.8	1563.1	1565.6
5°	1575.4	1573.9	1572.4	1570.9	1569.3	1566.9	1563.7	1560.3	1557.0	1553.7	1556.7
7.5°	1560.0	1558.4	1556.9	1555.4	1553.9	1551.4	1548.0	1544.6	1541.2	1537.7	1540.4
10°	1547.0	1545.4	1543.9	1542.4	1540.9	1538.3	1534.3	1530.4	1526.5	1522.6	1525.3
12.5°	1529.7	1528.4	1527.1	1525.9	1524.6	1522.1	1518.5	1514.8	1511.1	1507.4	1509.4
15°	1499.6	1498.4	1497.2	1496.0	1494.8	1492.2	1488.3	1484.4	1480.5	1476.5	1478.9
17.5°	1464.6	1463.1	1461.5	1460.0	1458.4	1455.7	1451.7	1447.9	1443.9	1440.0	1441.7
20°	1438.6	1436.8	1435.0	1433.2	1431.5	1428.6	1424.7	1420.8	1416.9	1413.0	1414.2
22.5°	1409.5	1407.6	1405.8	1404.0	1402.2	1399.4	1395.4	1391.5	1387.7	1383.7	1384.7
25°	1361.5	1359.7	1357.9	1356.1	1354.4	1351.4	1347.6	1343.7	1339.7	1335.8	1336.1
27.5°	1310.4	1308.6	1306.9	1305.1	1303.4	1300.5	1296.2	1292.0	1287.8	1283.6	1283.8
30°	1273.6	1272.0	1270.6	1269.0	1267.6	1264.7	1260.5	1256.3	1252.1	1247.8	1247.8
32.5°	1236.7	1234.8	1232.8	1230.8	1228.8	1226.2	1223.0	1219.7	1216.4	1213.2	1211.5
35°	1177.5	1175.7	1173.9	1172.1	1170.3	1167.4	1163.5	1159.6	1155.6	1151.8	1150.0
37.5°	1116.8	1114.6	1112.2	1110.0	1107.7	1104.6	1100.6	1096.7	1092.7	1088.6	1086.5
40°	1074.6	1072.8	1071.0	1069.2	1067.4	1064.4	1060.1	1055.9	1051.7	1047.6	1045.2
42.5°	1032.3	1030.4	1028.3	1026.2	1024.2	1021.1	1016.8	1012.6	1008.4	1004.3	1001.9
45°	965.0	963.8	962.6	961.4	960.2	957.6	953.7	949.8	945.9	941.9	938.4
47.5°	898.1	896.4	894.7	892.9	891.1	888.5	884.8	881.1	877.4	873.7	870.2
50°	852.6	851.2	849.6	848.2	846.6	844.0	840.0	836.1	832.2	828.3	825.0
52.5°	805.0	804.0	803.0	801.9	800.9	798.3	794.2	790.1	785.9	781.7	778.9
55°	732.2	731.9	731.6	731.3	731.0	728.9	725.0	721.1	717.1	713.3	710.0
57.5°	662.9	661.9	660.8	659.9	658.8	656.8	653.6	650.5	647.4	644.2	641.3
60°	613.1	612.8	612.5	612.2	611.9	609.9	606.3	602.7	599.1	595.5	592.8
62.5°	568.7	567.9	567.1	566.4	565.6	563.4	559.7	556.1	552.6	549.0	546.2
65°	499.4	497.9	496.4	494.9	493.4	491.1	488.1	485.1	482.1	479.1	476.7
67.5°	426.0	424.7	423.4	422.1	420.8	419.0	416.6	414.4	412.1	409.8	407.7
70°	381.7	379.9	378.1	376.3	374.4	372.6	370.8	369.0	367.2	365.4	363.3
72.5°	335.1	333.8	332.4	331.1	329.8	328.1	326.1	324.0	322.0	319.9	318.1
75°	263.9	262.7	261.5	260.3	259.1	258.0	257.2	256.2	255.4	254.4	253.0
77.5°	200.9	200.2	199.5	198.9	198.2	197.3	196.2	195.2	194.1	193.0	192.0
80°	159.7	158.8	157.9	157.0	156.1	155.3	154.7	154.1	153.5	152.9	152.7
82.5°	119.7	119.4	119.2	119.1	118.9	118.7	118.6	118.6	118.4	118.3	117.8
85°	70.3	69.7	69.1	68.5	67.9	67.7	67.7	67.7	67.7	67.7	67.1
87.5°	28.3	28.0	27.6	27.3	26.9	26.9	27.2	27.5	27.7	28.0	27.9
90°	0.9	2.8	4.6	6.6	8.5	10.7	13.2	15.7	18.2	20.7	21.4
92.5°	20.8	22.1	23.4	24.7	26.0	27.4	28.8	30.1	31.6	33.0	33.6
95°	50.7	52.0	53.4	54.8	56.1	57.5	59.0	60.5	62.1	63.6	64.4
97.5°	90.1	91.1	92.0	93.1	94.0	95.1	96.2	97.3	98.4	99.5	100.4
100°	116.9	118.0	119.2	120.3	121.5	122.5	123.5	124.4	125.4	126.3	126.9
102.5°	147.8	148.5	149.2	149.9	150.6	151.5	152.8	154.0	155.3	156.6	157.1
105°	193.4	193.7	194.2	194.5	194.9	196.0	197.7	199.4	201.1	202.9	202.9
107.5°	246.3	246.6	246.8	247.0	247.3	247.7	248.4	249.1	249.8	250.5	251.1
110°	279.3	279.7	280.1	280.4	280.9	281.2	281.6	282.0	282.4	282.8	283.5



TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.7	313.9	314.2	314.4	314.6	314.8	314.9	315.0	315.0	315.0	316.0
115°	365.2	365.8	366.4	367.0	367.6	367.6	367.3	366.9	366.5	366.1	366.4
117.5°	417.2	417.6	417.9	418.4	418.7	418.6	418.2	417.7	417.2	416.6	416.6
120°	449.5	450.6	451.8	453.0	454.1	454.2	453.2	452.3	451.3	450.4	450.1
122.5°	483.2	484.1	484.8	485.7	486.6	486.7	486.2	485.7	485.3	484.7	484.2
125°	534.6	535.2	535.7	536.3	536.8	537.0	536.6	536.2	535.8	535.5	534.7
127.5°	582.0	583.2	584.4	585.7	586.9	587.3	586.9	586.5	586.1	585.7	584.5
130°	613.6	615.2	616.7	618.2	619.7	620.3	619.7	619.1	618.5	617.9	617.2
132.5°	645.3	646.8	648.3	649.9	651.4	651.9	651.5	651.1	650.7	650.2	649.4
135°	693.6	694.7	695.9	697.0	698.2	698.6	698.4	698.3	698.1	697.8	697.2
137.5°	738.3	739.3	740.2	741.1	742.1	742.8	743.3	743.8	744.3	744.8	744.0
140°	769.2	770.2	771.1	772.1	773.0	773.6	773.8	774.0	774.2	774.4	774.2
142.5°	797.4	798.3	799.4	800.3	801.2	801.8	802.2	802.5	802.9	803.2	803.1
145°	841.4	841.8	842.1	842.6	842.9	843.4	844.0	844.6	845.2	845.7	845.5
147.5°	879.9	880.6	881.3	882.0	882.7	883.3	883.8	884.3	884.8	885.5	885.5
150°	906.7	907.1	907.5	907.8	908.3	908.6	909.0	909.4	909.8	910.2	910.2
152.5°	928.8	929.3	929.8	930.3	930.8	931.3	931.5	931.7	931.9	932.2	932.5
155°	963.5	963.5	963.5	963.5	963.5	963.5	963.7	963.9	964.1	964.3	965.1
157.5°	993.0	992.8	992.6	992.3	992.1	992.0	992.2	992.4	992.6	992.6	993.5
160°	1011.6	1011.2	1010.8	1010.5	1010.0	1009.9	1009.9	1009.9	1009.9	1009.9	1010.8
162.5°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.8	1025.9	1026.1	1026.2	1026.4	1027.3
165°	1049.4	1048.8	1048.3	1047.7	1047.1	1046.8	1046.8	1046.8	1046.8	1046.8	1047.9
167.5°	1066.4	1065.7	1064.9	1064.1	1063.3	1063.1	1063.2	1063.3	1063.5	1063.7	1064.9
170°	1076.1	1075.3	1074.5	1073.8	1073.0	1072.6	1072.6	1072.6	1072.6	1072.6	1073.9
172.5°	1083.6	1082.9	1082.1	1081.3	1080.6	1080.1	1080.1	1080.1	1080.1	1080.1	1081.3
175°	1091.5	1090.7	1089.9	1089.3	1088.5	1088.0	1088.0	1088.0	1088.0	1088.0	1089.3
177.5°	1094.8	1094.2	1093.6	1093.0	1092.4	1092.0	1092.0	1092.0	1092.0	1092.0	1093.0
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1



TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0
2.5°	1568.0	1570.4	1572.8	1573.9	1573.6	1573.4	1573.1	1573.0
5°	1559.7	1562.7	1565.7	1566.9	1566.3	1565.7	1565.1	1564.5
7.5°	1543.2	1545.8	1548.6	1549.7	1549.4	1549.0	1548.7	1548.3
10°	1528.0	1530.7	1533.4	1534.5	1533.9	1533.3	1532.7	1532.1
12.5°	1511.4	1513.4	1515.4	1516.2	1515.8	1515.4	1515.1	1514.8
15°	1481.4	1483.8	1486.2	1486.5	1484.7	1482.9	1481.1	1479.3
17.5°	1443.4	1445.1	1446.7	1447.3	1446.7	1446.0	1445.3	1444.7
20°	1415.4	1416.6	1417.8	1417.9	1417.0	1416.1	1415.2	1414.3
22.5°	1385.7	1386.6	1387.6	1387.5	1386.4	1385.2	1384.1	1382.9
25°	1336.4	1336.7	1337.0	1336.7	1335.8	1334.9	1334.0	1333.1
27.5°	1284.1	1284.3	1284.5	1284.1	1283.0	1281.8	1280.7	1279.5
30°	1247.8	1247.8	1247.8	1246.8	1244.7	1242.6	1240.4	1238.4
32.5°	1209.8	1208.2	1206.4	1205.1	1203.9	1202.7	1201.6	1200.5
35°	1148.1	1146.3	1144.5	1142.9	1141.3	1139.9	1138.3	1136.9
37.5°	1084.3	1082.2	1080.0	1078.5	1077.5	1076.5	1075.6	1074.6
40°	1042.8	1040.3	1037.9	1036.1	1034.9	1033.7	1032.5	1031.3
42.5°	999.4	997.0	994.6	992.8	991.6	990.4	989.2	988.0
45°	934.8	931.2	927.6	925.0	923.5	922.0	920.5	918.9
47.5°	866.7	863.2	859.5	857.1	855.8	854.5	853.2	851.9
50°	821.7	818.4	815.0	812.5	810.7	808.9	807.1	805.3
52.5°	776.1	773.3	770.4	768.1	766.3	764.5	762.7	760.9
55°	706.6	703.4	700.0	697.6	696.1	694.6	693.1	691.6
57.5°	638.3	635.4	632.4	630.1	628.4	626.6	624.8	623.1
60°	590.1	587.4	584.7	582.6	581.1	579.5	578.1	576.5
62.5°	543.5	540.8	538.1	536.2	535.2	534.2	533.2	532.2
65°	474.3	471.9	469.5	467.9	466.9	466.1	465.1	464.3
67.5°	405.6	403.5	401.4	399.7	398.5	397.2	395.9	394.7
70°	361.2	359.1	357.0	355.2	353.7	352.1	350.7	349.2
72.5°	316.2	314.4	312.5	311.2	310.4	309.6	308.8	308.1
75°	251.4	249.9	248.4	247.2	246.3	245.4	244.5	243.6
77.5°	191.0	189.9	188.9	188.4	188.4	188.4	188.4	188.4
80°	152.3	152.1	151.7	151.6	151.6	151.6	151.6	151.6
82.5°	117.2	116.7	116.1	115.7	115.5	115.3	115.0	114.8
85°	66.5	65.9	65.3	65.0	65.0	65.0	65.0	65.0
87.5°	27.8	27.7	27.6	27.6	27.6	27.7	27.8	27.9
90°	22.1	22.9	23.7	24.3	24.6	25.1	25.4	25.7
92.5°	34.3	34.9	35.5	35.6	35.4	35.2	35.0	34.7
95°	65.1	65.9	66.6	67.1	67.1	67.1	67.1	67.1
97.5°	101.3	102.2	103.1	103.4	103.4	103.3	103.2	103.1
100°	127.5	128.0	128.6	129.2	129.5	129.8	130.3	130.6
102.5°	157.7	158.3	158.9	159.1	159.0	158.9	158.9	158.9
105°	202.9	202.9	202.9	203.0	203.4	203.8	204.1	204.6
107.5°	251.7	252.3	252.9	253.0	252.9	252.6	252.4	252.2
110°	284.3	285.1	285.9	286.0	285.6	285.2	284.9	284.5





TEST NUMBER: P332079-935

CATALOG NUMBER: S123DIP-S1165D1025U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.9	317.8	318.7	319.2	319.1	319.0	318.9	318.8
115°	366.5	366.7	366.9	366.9	366.7	366.5	366.4	366.1
117.5°	416.6	416.6	416.6	416.2	415.7	415.2	414.7	414.1
120°	450.0	449.8	449.6	449.3	448.9	448.6	448.2	447.8
122.5°	483.7	483.3	482.8	482.2	481.7	481.1	480.6	480.1
125°	533.9	533.1	532.4	531.6	530.9	530.1	529.3	528.6
127.5°	583.5	582.5	581.3	580.4	579.5	578.6	577.7	576.9
130°	616.4	615.6	614.9	613.8	612.5	611.1	609.8	608.5
132.5°	648.4	647.6	646.6	645.7	644.6	643.6	642.6	641.5
135°	696.4	695.6	694.8	694.2	693.9	693.4	693.1	692.8
137.5°	743.2	742.4	741.6	740.8	740.1	739.3	738.7	738.0
140°	774.0	773.8	773.6	772.8	771.5	770.2	768.9	767.5
142.5°	802.9	802.7	802.5	801.8	800.8	799.8	798.7	797.7
145°	845.3	845.2	844.9	844.5	843.7	842.9	842.1	841.4
147.5°	885.5	885.5	885.5	884.8	883.7	882.5	881.4	880.3
150°	910.2	910.2	910.2	909.6	908.4	907.3	906.1	905.0
152.5°	932.8	933.1	933.4	933.1	932.0	931.1	930.1	929.1
155°	965.9	966.6	967.3	967.1	965.8	964.4	963.0	961.7
157.5°	994.3	995.1	995.9	995.7	994.7	993.6	992.6	991.4
160°	1011.8	1012.7	1013.7	1013.7	1013.1	1012.3	1011.5	1010.7
162.5°	1028.3	1029.2	1030.2	1030.0	1028.8	1027.6	1026.4	1025.2
165°	1049.1	1050.2	1051.4	1051.3	1050.0	1048.6	1047.3	1045.9
167.5°	1066.0	1067.2	1068.4	1068.4	1067.2	1066.0	1064.9	1063.7
170°	1075.3	1076.6	1078.0	1078.0	1076.6	1075.3	1073.9	1072.6
172.5°	1082.5	1083.7	1084.9	1084.9	1083.5	1082.2	1080.8	1079.4
175°	1090.4	1091.5	1092.7	1092.5	1091.2	1089.9	1088.6	1087.2
177.5°	1093.9	1094.8	1095.7	1095.6	1094.6	1093.5	1092.4	1091.3
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1

(END OF REPORT)