

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: P333456-935

Luminaire Tested: **S125DIW-S1090D1560U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333456-935  
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: S125DIW-S1090D1560U935-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9044.9 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

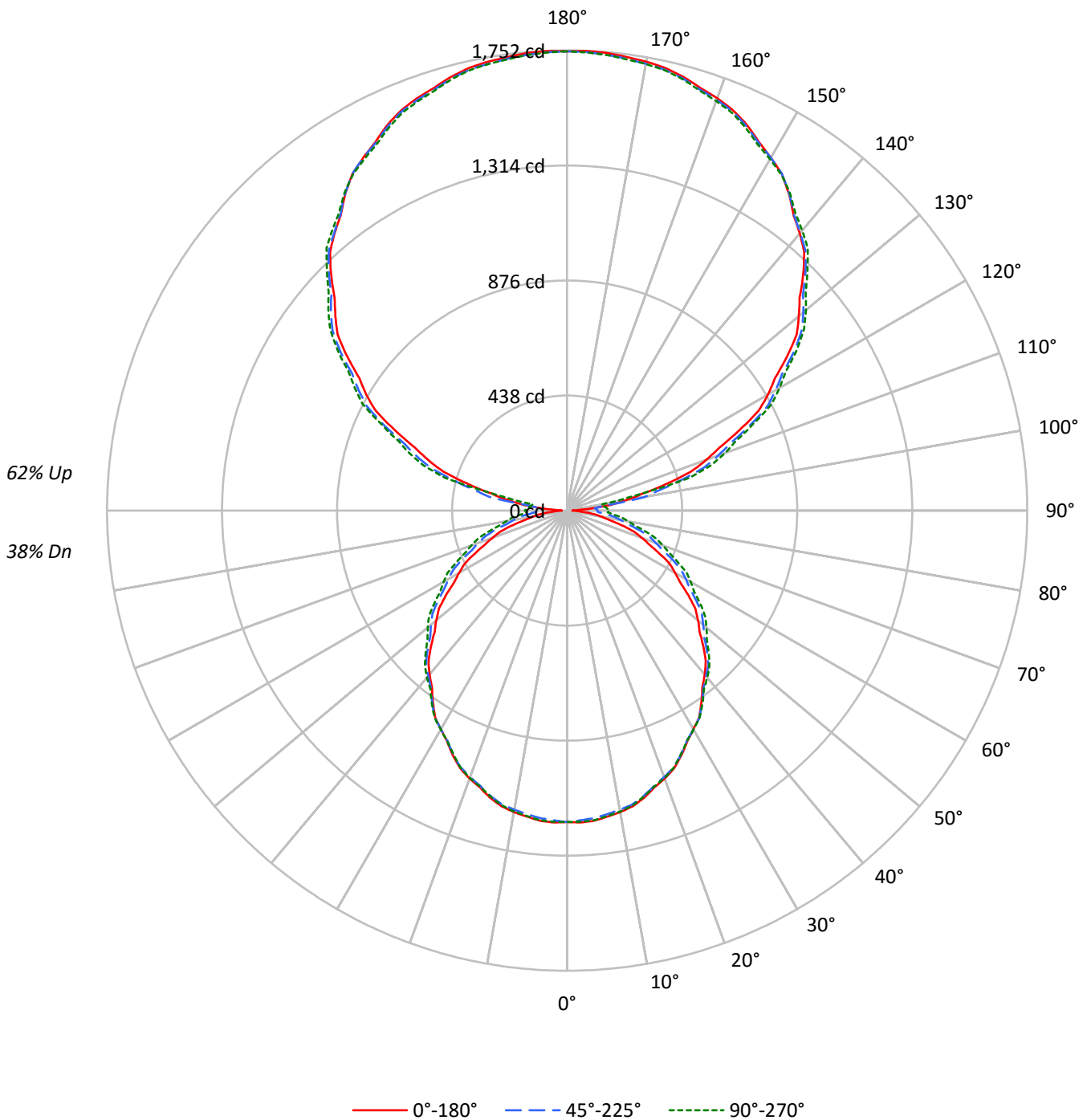
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**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	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	67	78	71	66	61	58	54	51	45	43	40	34	32	31	25
3	78	69	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	21
4	71	61	53	47	64	55	48	43	45	40	36	35	32	29	27	24	22	18
5	65	54	46	40	59	49	42	37	40	35	31	32	28	25	24	21	19	16
6	60	48	40	34	54	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	43	35	30	50	40	33	28	33	27	23	26	22	19	20	17	15	12
8	51	39	32	26	47	36	29	24	30	24	21	24	20	17	18	15	13	11
9	48	36	28	23	43	33	26	22	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	40	30	24	19	25	20	16	20	16	14	15	13	11	9

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

	0°	45°	90°
0°	7657	7657	7657
5°	7672	7516	7539
10°	7617	7381	7370
15°	7527	7221	7155
20°	7405	7022	6940
25°	7259	6810	6675
30°	7083	6575	6434
35°	6919	6361	6214
40°	6751	6134	5991
45°	6562	5941	5794
50°	6381	5731	5621
55°	6164	5532	5416
60°	5927	5306	5207
65°	5679	5069	4972
70°	5397	4745	4731
75°	4952	4435	4434
80°	4367	4057	4111
85°	3824	3802	4009



TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.1	1.2
10°-20°	318.2	3.5
20°-30°	473.3	5.2
30°-40°	560.6	6.2
40°-50°	579.6	6.4
50°-60°	533.9	5.9
60°-70°	431.6	4.8
70°-80°	289.0	3.2
80°-90°	153.5	1.7
90°-100°	147.7	1.6
100°-110°	453.6	5.0
110°-120°	751.8	8.3
120°-130°	935.1	10.3
130°-140°	990.7	11.0
140°-150°	922.3	10.2
150°-160°	744.4	8.2
160°-170°	481.4	5.3
170°-180°	166.0	1.8
0°-30°	903.6	10.0
0°-40°	1464.2	16.2
0°-60°	2577.8	28.5
0°-90°	3452.0	38.2
90°-120°	1353.0	15.0
90°-150°	4201.1	46.4
90°-180°	5593.0	61.8
0°-180°	9044.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1186	1183	1175	1184	1183	112
15°	1132	1133	1125	1132	1128	319
25°	1029	1032	1025	1029	1024	473
35°	890	898	895	898	898	557
45°	733	746	752	760	761	566
55°	564	582	601	613	618	504
65°	388	415	443	460	465	385
75°	214	244	281	304	310	227
85°	64	102	143	168	178	68
90°	20	68	116	148	161	15
95°	89	113	106	136	146	106
105°	392	416	450	472	480	415
115°	722	738	768	783	784	716
125°	1022	1031	1053	1066	1069	912
135°	1271	1278	1283	1295	1294	980
145°	1472	1474	1474	1480	1478	920
155°	1620	1613	1615	1618	1608	746
165°	1710	1702	1703	1710	1700	483
175°	1748	1741	1742	1751	1741	166
180°	1748	1748	1748	1748	1748	



TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6
2.5°	1188.4	1187.9	1187.5	1187.1	1186.7	1185.8	1184.3	1182.8	1181.5	1180.0	1181.5
5°	1185.6	1185.1	1184.6	1184.0	1183.5	1182.3	1180.5	1178.7	1176.9	1175.1	1177.2
7.5°	1175.1	1174.9	1174.7	1174.5	1174.3	1173.3	1171.4	1169.5	1167.7	1165.8	1167.6
10°	1165.8	1165.8	1165.8	1165.8	1165.8	1164.8	1162.7	1160.6	1158.6	1156.5	1158.3
12.5°	1152.8	1153.0	1153.2	1153.4	1153.7	1152.9	1151.2	1149.6	1148.0	1146.2	1147.7
15°	1132.1	1132.4	1132.6	1132.9	1133.2	1132.4	1130.6	1128.8	1127.0	1125.2	1126.7
17.5°	1105.1	1105.6	1106.1	1106.6	1107.2	1106.6	1104.7	1102.9	1101.1	1099.3	1100.5
20°	1085.6	1086.2	1086.7	1087.2	1087.7	1087.0	1085.2	1083.4	1081.6	1079.8	1080.6
22.5°	1063.2	1064.2	1065.1	1066.1	1067.0	1066.4	1064.5	1062.5	1060.4	1058.4	1059.4
25°	1028.6	1029.4	1030.2	1031.0	1031.7	1031.4	1029.8	1028.3	1026.7	1025.2	1026.2
27.5°	990.1	991.2	992.3	993.5	994.6	994.3	992.6	990.8	989.0	987.3	988.0
30°	961.2	962.8	964.3	965.9	967.4	967.4	965.9	964.3	962.8	961.2	961.7
32.5°	935.2	936.5	937.9	939.3	940.6	940.6	939.5	938.4	937.3	936.2	936.7
35°	890.4	892.2	894.0	895.8	897.6	898.1	897.3	896.6	895.8	895.0	895.8
37.5°	845.5	847.1	848.8	850.4	852.0	852.8	852.6	852.3	852.0	851.8	852.8
40°	814.8	816.8	818.9	821.0	823.0	824.0	823.7	823.5	823.2	822.9	824.0
42.5°	781.3	784.0	786.7	789.4	792.0	793.7	794.3	794.8	795.4	796.0	797.2
45°	733.4	736.2	739.1	741.9	744.8	746.8	748.1	749.4	750.7	752.0	753.8
47.5°	684.4	687.0	689.7	692.2	694.9	697.3	699.6	701.8	704.0	706.2	708.9
50°	650.9	653.8	656.6	659.4	662.3	665.1	668.0	670.8	673.6	676.5	679.3
52.5°	615.5	619.1	622.5	625.9	629.4	632.8	636.4	639.8	643.3	646.7	649.8
55°	563.7	567.8	572.0	576.1	580.2	584.4	588.5	592.6	596.8	600.9	603.7
57.5°	510.7	515.7	520.6	525.6	530.5	535.5	540.2	544.9	549.7	554.4	557.7
60°	475.4	480.5	485.7	490.9	496.0	501.2	506.4	511.5	516.7	521.9	525.7
62.5°	441.0	446.2	451.3	456.5	461.7	467.0	472.6	478.2	483.8	489.3	493.6
65°	388.2	394.2	400.1	406.0	412.0	418.0	424.2	430.4	436.6	442.8	446.7
67.5°	338.5	344.2	349.9	355.7	361.4	367.4	373.8	380.0	386.3	392.6	397.4
70°	302.2	308.2	314.1	320.0	326.0	332.3	339.0	345.7	352.4	359.1	364.0
72.5°	266.9	273.0	279.1	285.3	291.4	298.2	305.6	312.9	320.2	327.5	332.9
75°	213.9	220.6	227.3	234.0	240.7	248.2	256.5	264.8	273.0	281.3	286.5
77.5°	163.0	170.7	178.5	186.2	194.0	201.8	209.7	217.7	225.7	233.6	239.3
80°	131.3	139.1	146.8	154.5	162.3	170.6	179.3	188.1	196.9	205.7	211.4
82.5°	102.5	110.6	118.8	127.0	135.2	143.7	152.7	161.7	170.7	179.7	185.2
85°	63.9	72.4	80.9	89.5	98.0	106.8	115.8	124.8	133.9	142.9	148.6
87.5°	36.5	45.3	54.0	62.7	71.5	80.4	89.5	98.8	108.0	117.1	123.4
90°	19.9	30.5	41.1	51.6	62.2	72.8	83.7	94.5	105.2	116.1	123.5
92.5°	36.7	42.7	48.7	54.8	60.8	69.2	80.0	90.7	101.5	112.4	119.5
95°	89.0	94.9	100.7	106.5	112.4	114.3	112.1	109.9	107.7	105.6	112.7
97.5°	168.0	175.6	183.1	190.7	198.4	195.5	182.4	169.2	156.0	142.8	140.1
100°	229.2	235.5	241.9	248.1	254.4	262.3	271.6	281.1	290.5	299.9	262.4
102.5°	291.5	297.6	303.8	309.9	316.0	323.4	332.2	340.9	349.7	358.4	355.5
105°	391.5	396.8	402.1	407.3	412.7	419.1	426.9	434.6	442.4	450.1	455.3
107.5°	495.3	498.9	502.4	505.9	509.5	515.2	523.2	531.2	539.2	547.3	552.4
110°	562.8	565.9	569.0	572.1	575.2	580.7	588.5	596.3	604.2	612.0	616.0



TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	627.2	630.3	633.5	636.7	639.8	645.1	652.5	659.9	667.2	674.6	678.2
115°	722.5	725.7	728.9	732.2	735.4	740.5	747.5	754.6	761.6	768.5	772.1
117.5°	821.0	822.2	823.3	824.5	825.6	829.9	837.3	844.8	852.2	859.7	862.5
120°	883.3	883.7	884.2	884.8	885.2	888.9	895.7	902.5	909.3	916.1	919.9
122.5°	937.3	938.7	940.2	941.7	943.1	946.9	953.0	959.2	965.4	971.5	975.1
125°	1022.1	1023.8	1025.6	1027.3	1029.2	1032.6	1037.8	1042.9	1048.1	1053.3	1056.3
127.5°	1102.1	1103.3	1104.4	1105.6	1106.8	1109.4	1113.4	1117.6	1121.6	1125.7	1128.9
130°	1151.8	1153.1	1154.2	1155.4	1156.6	1159.1	1163.0	1166.9	1170.8	1174.7	1177.5
132.5°	1200.7	1202.3	1203.9	1205.6	1207.1	1209.0	1211.2	1213.3	1215.5	1217.6	1221.1
135°	1271.2	1272.6	1274.2	1275.7	1277.1	1278.4	1279.7	1280.9	1282.1	1283.4	1286.2
137.5°	1336.0	1337.3	1338.6	1339.9	1341.2	1342.0	1342.4	1342.7	1343.1	1343.5	1346.6
140°	1377.6	1378.2	1378.8	1379.3	1379.9	1380.2	1380.2	1380.2	1380.1	1380.1	1383.5
142.5°	1416.0	1416.2	1416.3	1416.4	1416.5	1416.9	1417.3	1417.7	1418.2	1418.7	1421.3
145°	1472.2	1472.6	1472.9	1473.2	1473.5	1473.7	1473.7	1473.7	1473.7	1473.7	1475.2
147.5°	1520.4	1520.2	1520.1	1520.0	1519.8	1520.0	1520.4	1520.7	1521.0	1521.4	1522.2
150°	1551.4	1550.8	1550.3	1549.7	1549.1	1549.1	1549.7	1550.3	1550.8	1551.4	1552.0
152.5°	1581.5	1580.3	1579.0	1577.7	1576.4	1576.1	1576.7	1577.3	1577.9	1578.4	1579.0
155°	1620.1	1618.4	1616.7	1615.0	1613.3	1612.7	1613.3	1613.8	1614.4	1615.0	1615.8
157.5°	1649.9	1648.9	1647.9	1646.8	1645.8	1645.3	1645.4	1645.5	1645.5	1645.5	1646.5
160°	1670.7	1669.0	1667.2	1665.5	1663.8	1663.0	1663.4	1663.6	1663.9	1664.2	1665.3
162.5°	1687.3	1685.6	1683.9	1682.0	1680.3	1679.6	1679.9	1680.2	1680.5	1680.8	1682.4
165°	1709.6	1707.9	1706.1	1704.3	1702.6	1701.9	1702.2	1702.5	1702.8	1703.1	1704.8
167.5°	1726.1	1724.4	1722.6	1720.8	1719.0	1718.3	1718.6	1718.8	1719.2	1719.4	1721.5
170°	1735.5	1733.5	1731.5	1729.4	1727.4	1726.6	1726.8	1727.2	1727.4	1727.7	1730.0
172.5°	1741.7	1739.7	1737.7	1735.7	1733.6	1732.9	1733.5	1734.0	1734.5	1735.0	1737.1
175°	1748.4	1746.7	1745.0	1743.3	1741.5	1740.9	1741.1	1741.4	1741.7	1742.0	1744.3
177.5°	1751.5	1750.2	1748.8	1747.4	1746.0	1745.4	1745.7	1745.9	1746.1	1746.4	1748.0
180°	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4



TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6
2.5°	1182.8	1184.3	1185.8	1186.4	1186.2	1185.9	1185.8	1185.6
5°	1179.2	1181.3	1183.4	1184.3	1184.0	1183.8	1183.5	1183.3
7.5°	1169.4	1171.2	1173.0	1173.8	1173.5	1173.3	1173.0	1172.8
10°	1160.1	1161.9	1163.7	1164.5	1164.2	1164.0	1163.7	1163.5
12.5°	1149.1	1150.5	1151.8	1152.2	1151.6	1150.9	1150.2	1149.5
15°	1128.3	1129.8	1131.4	1131.6	1130.6	1129.5	1128.5	1127.5
17.5°	1101.7	1102.9	1104.1	1104.3	1103.7	1103.1	1102.5	1101.9
20°	1081.3	1082.1	1082.9	1083.3	1083.3	1083.3	1083.3	1083.3
22.5°	1060.4	1061.4	1062.3	1062.5	1061.9	1061.3	1060.7	1060.1
25°	1027.3	1028.3	1029.3	1029.2	1027.9	1026.6	1025.3	1024.0
27.5°	988.7	989.5	990.2	990.3	989.8	989.4	988.9	988.4
30°	962.3	962.8	963.3	963.5	963.2	962.9	962.7	962.4
32.5°	937.2	937.7	938.2	938.3	938.1	937.8	937.5	937.3
35°	896.6	897.3	898.1	898.5	898.5	898.5	898.5	898.5
37.5°	853.9	854.9	855.9	856.4	856.3	856.2	856.0	855.9
40°	825.0	826.0	827.1	827.9	828.4	828.9	829.4	829.9
42.5°	798.4	799.7	800.9	801.6	801.7	801.8	801.9	802.0
45°	755.6	757.4	759.2	760.3	760.5	760.8	761.0	761.3
47.5°	711.5	714.1	716.8	718.3	718.9	719.5	720.1	720.7
50°	682.2	685.0	687.9	689.7	690.4	691.2	692.0	692.8
52.5°	652.8	655.8	658.9	660.7	661.2	661.9	662.5	663.0
55°	606.6	609.4	612.3	614.2	615.3	616.3	617.3	618.4
57.5°	560.9	564.2	567.5	569.5	570.2	571.0	571.8	572.6
60°	529.6	533.5	537.4	539.7	540.4	541.2	542.0	542.8
62.5°	497.9	502.2	506.5	509.1	510.1	511.1	512.0	513.1
65°	450.6	454.4	458.3	460.8	461.8	462.9	463.9	464.9
67.5°	402.0	406.7	411.5	414.5	415.8	417.2	418.4	419.8
70°	368.9	373.8	378.8	382.0	383.6	385.1	386.7	388.2
72.5°	338.2	343.5	348.8	352.1	353.2	354.3	355.4	356.6
75°	291.6	296.8	302.0	305.1	306.4	307.7	309.0	310.3
77.5°	245.0	250.6	256.3	259.7	260.7	261.7	262.8	263.8
80°	217.1	222.7	228.4	231.8	232.8	233.8	234.9	235.9
82.5°	190.6	196.1	201.6	205.3	207.2	209.0	210.9	212.7
85°	154.3	160.0	165.7	169.5	171.6	173.7	175.7	177.8
87.5°	129.6	135.8	142.1	146.1	148.1	150.1	152.1	154.0
90°	130.8	138.2	145.6	150.6	153.3	155.9	158.6	161.3
92.5°	126.7	133.9	141.0	145.7	147.9	150.2	152.3	154.5
95°	119.9	127.0	134.1	138.5	140.3	142.2	144.0	145.8
97.5°	137.4	134.7	132.0	131.6	133.3	135.1	136.8	138.5
100°	224.9	187.4	150.0	131.4	131.8	132.2	132.6	133.0
102.5°	352.6	349.7	346.8	336.3	318.3	300.2	282.2	264.2
105°	460.5	465.6	470.8	474.2	475.7	477.3	478.7	480.3
107.5°	557.6	562.7	567.9	570.8	571.6	572.4	573.1	573.9
110°	620.0	624.1	628.1	631.2	633.3	635.4	637.5	639.6





TEST NUMBER: P333456-935

CATALOG NUMBER: S125DIW-S1090D1560U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	681.8	685.4	689.1	691.6	692.9	694.3	695.8	697.2
115°	775.6	779.0	782.6	784.2	784.0	783.9	783.7	783.5
117.5°	865.5	868.3	871.2	873.2	874.2	875.2	876.2	877.2
120°	923.7	927.6	931.3	933.3	933.4	933.5	933.7	933.8
122.5°	978.7	982.3	985.9	987.7	987.6	987.4	987.3	987.1
125°	1059.2	1062.2	1065.1	1066.9	1067.3	1067.7	1068.2	1068.6
127.5°	1132.0	1135.2	1138.4	1139.7	1139.1	1138.4	1137.8	1137.2
130°	1180.3	1183.0	1185.8	1187.1	1186.9	1186.7	1186.6	1186.5
132.5°	1224.5	1228.0	1231.4	1233.0	1232.6	1232.3	1231.9	1231.6
135°	1288.9	1291.8	1294.5	1295.6	1295.2	1294.8	1294.3	1293.9
137.5°	1349.8	1353.0	1356.2	1357.5	1357.0	1356.6	1356.1	1355.6
140°	1386.9	1390.3	1393.8	1395.1	1394.4	1393.7	1393.0	1392.3
142.5°	1423.7	1426.3	1428.8	1429.8	1429.1	1428.4	1427.7	1427.0
145°	1476.9	1478.4	1480.0	1480.4	1479.7	1479.0	1478.3	1477.6
147.5°	1522.9	1523.6	1524.4	1524.0	1522.3	1520.8	1519.1	1517.5
150°	1552.6	1553.2	1553.8	1553.0	1551.0	1548.9	1546.9	1544.8
152.5°	1579.6	1580.1	1580.7	1580.0	1578.0	1576.0	1573.9	1571.9
155°	1616.7	1617.6	1618.4	1617.6	1615.4	1613.1	1610.8	1608.4
157.5°	1647.4	1648.3	1649.2	1648.6	1646.2	1643.9	1641.6	1639.3
160°	1666.5	1667.7	1668.8	1668.3	1665.9	1663.6	1661.3	1659.1
162.5°	1684.0	1685.7	1687.2	1686.8	1684.3	1681.7	1679.2	1676.6
165°	1706.5	1708.3	1710.0	1709.7	1707.4	1705.1	1702.8	1700.5
167.5°	1723.5	1725.6	1727.7	1727.4	1724.8	1722.3	1719.7	1717.1
170°	1732.3	1734.7	1736.9	1736.8	1734.2	1731.6	1729.0	1726.4
172.5°	1739.1	1741.2	1743.3	1743.0	1740.4	1737.8	1735.3	1732.7
175°	1746.5	1748.9	1751.2	1751.0	1748.4	1745.8	1743.3	1740.7
177.5°	1749.6	1751.2	1752.8	1752.7	1750.8	1749.0	1747.1	1745.3
180°	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4	1748.4

(END OF REPORT)