

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: P333429-940

Luminaire Tested: **S125DIW-S850D1560U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333429-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S850D1560U940-4F0-1E-UDD-F1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7872.1 lumens  
Efficiency: N/A  
Efficacy: 115.6 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: Semi-Indirect

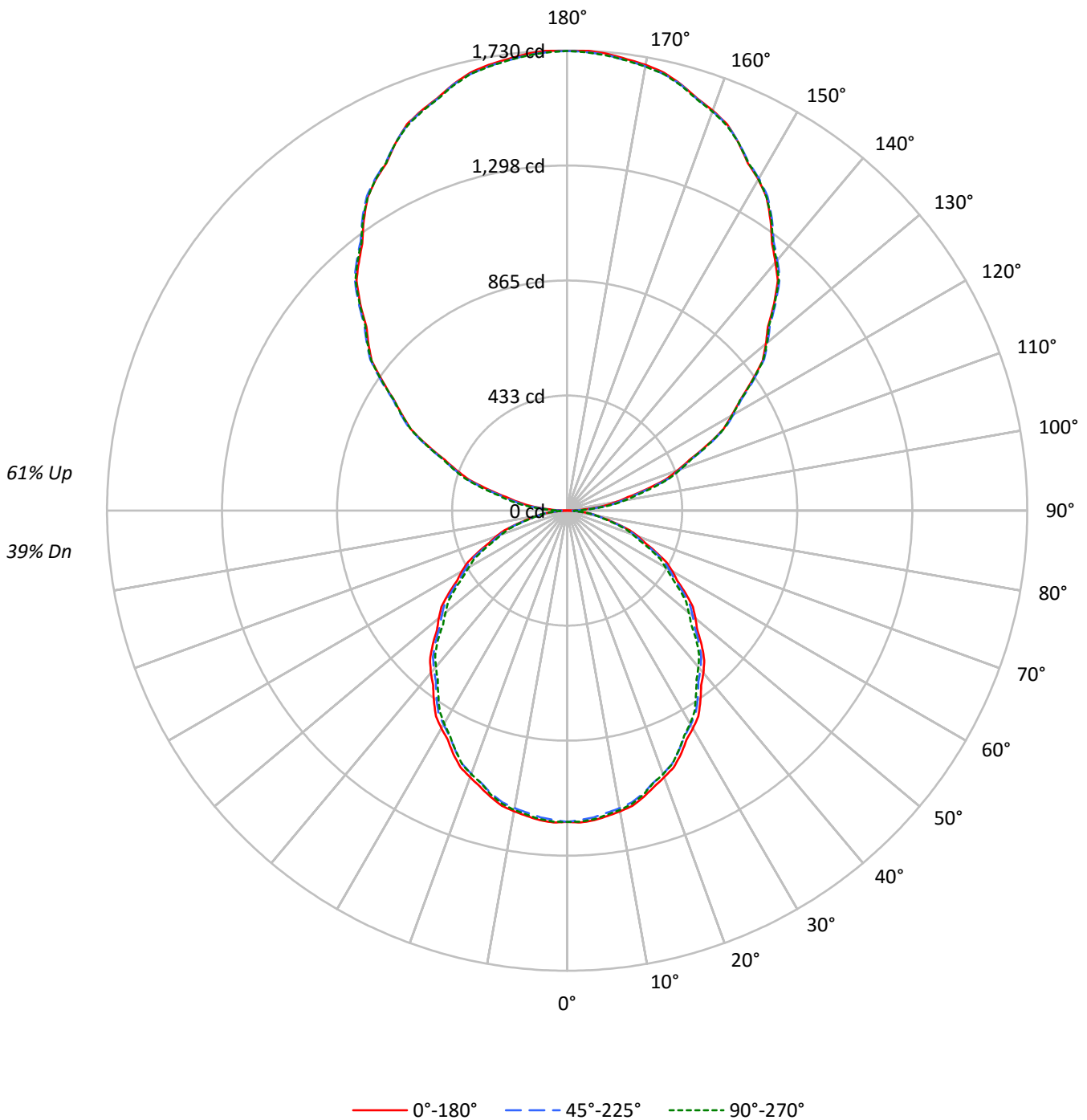
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46
1	95	91	87	84	86	83	79	77	67	65	63	53	52	50	40	39	39
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32
3	79	70	62	57	71	64	57	52	52	47	44	41	38	36	31	29	28
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18
7	56	44	36	31	51	41	34	29	34	28	24	27	23	20	21	18	16
8	52	40	32	27	47	37	30	25	31	25	22	25	21	18	19	16	14
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13
10	45	33	26	22	41	31	24	20	26	21	17	21	17	15	16	14	12

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

	0°	45°	90°
0°	7559	7559	7559
5°	7577	7505	7553
10°	7531	7452	7494
15°	7449	7362	7393
20°	7332	7236	7249
25°	7207	7088	7081
30°	7052	6927	6893
35°	6885	6754	6659
40°	6715	6566	6473
45°	6530	6395	6268
50°	6327	6187	6002
55°	6132	5954	5788
60°	5898	5717	5515
65°	5619	5434	5251
70°	5351	5108	4932
75°	4876	4716	4551
80°	4340	4273	4169
85°	3772	3846	3631



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.4	1.4
10°-20°	311.8	4.0
20°-30°	460.3	5.8
30°-40°	537.2	6.8
40°-50°	539.5	6.9
50°-60°	473.6	6.0
60°-70°	352.9	4.5
70°-80°	201.8	2.6
80°-90°	62.5	0.8
90°-100°	115.7	1.5
100°-110°	341.8	4.3
110°-120°	578.9	7.4
120°-130°	761.9	9.7
130°-140°	853.7	10.8
140°-150°	836.7	10.6
150°-160°	702.8	8.9
160°-170°	467.2	5.9
170°-180°	163.5	2.1
0°-30°	882.5	11.2
0°-40°	1419.6	18.0
0°-60°	2432.7	30.9
0°-90°	3049.9	38.7
90°-120°	1036.5	13.2
90°-150°	3488.8	44.3
90°-180°	4822.0	61.3
0°-180°	7872.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1169	1166	1158	1165	1165	111
15°	1114	1111	1101	1106	1106	314
25°	1011	1006	995	996	994	465
35°	873	869	857	852	845	546
45°	715	711	700	690	686	551
55°	545	541	529	521	514	486
65°	368	365	356	348	344	365
75°	195	193	189	186	182	208
85°	51	52	52	51	49	57
90°	1	12	22	28	32	8
95°	87	91	104	113	116	93
105°	307	313	322	329	334	327
115°	580	585	588	586	585	573
125°	846	854	855	853	851	757
135°	1100	1108	1110	1109	1104	848
145°	1333	1338	1342	1342	1338	833
155°	1525	1525	1526	1531	1525	702
165°	1658	1656	1657	1661	1654	468
175°	1724	1719	1719	1726	1717	164
180°	1728	1728	1728	1728	1728	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5
2.5°	1173.6	1173.0	1172.6	1172.1	1171.5	1170.5	1168.9	1167.2	1165.6	1164.0	1165.6
5°	1168.8	1168.3	1167.9	1167.5	1167.1	1165.8	1163.8	1161.7	1159.7	1157.6	1159.5
7.5°	1158.0	1157.6	1157.2	1156.7	1156.4	1155.0	1152.7	1150.5	1148.3	1145.9	1147.7
10°	1148.3	1148.0	1147.5	1147.1	1146.7	1145.4	1143.1	1140.9	1138.6	1136.3	1138.0
12.5°	1136.5	1135.8	1135.1	1134.3	1133.5	1132.1	1130.1	1127.9	1125.8	1123.7	1125.1
15°	1114.1	1113.5	1112.9	1112.2	1111.6	1110.2	1108.0	1105.6	1103.4	1101.1	1102.2
17.5°	1088.3	1087.4	1086.5	1085.7	1084.8	1083.1	1080.8	1078.4	1076.0	1073.7	1075.0
20°	1066.8	1066.5	1066.0	1065.6	1065.2	1063.6	1061.0	1058.3	1055.6	1052.9	1054.4
22.5°	1045.4	1044.6	1043.9	1043.1	1042.4	1040.8	1038.3	1035.7	1033.2	1030.7	1031.7
25°	1011.3	1010.3	1009.2	1008.2	1007.2	1005.3	1002.6	1000.0	997.3	994.6	995.1
27.5°	971.4	970.9	970.3	969.6	969.0	967.3	964.6	961.8	959.0	956.3	956.4
30°	945.6	944.9	944.3	943.7	943.1	941.2	938.2	935.0	931.9	928.9	928.4
32.5°	917.4	916.4	915.5	914.5	913.6	911.8	909.0	906.2	903.5	900.7	900.0
35°	873.3	872.4	871.6	870.8	870.0	868.2	865.3	862.4	859.5	856.7	855.6
37.5°	827.6	826.5	825.5	824.5	823.4	821.5	818.9	816.1	813.4	810.7	809.1
40°	796.5	795.4	794.4	793.4	792.3	790.4	787.5	784.6	781.8	778.8	777.0
42.5°	763.1	762.2	761.3	760.5	759.6	757.8	754.9	752.0	749.1	746.3	744.6
45°	715.0	714.1	713.3	712.5	711.7	710.0	707.6	705.1	702.6	700.2	697.7
47.5°	663.1	663.2	663.2	663.2	663.3	661.8	658.8	655.9	652.9	650.0	647.4
50°	629.7	629.1	628.5	627.9	627.3	625.7	623.3	620.8	618.3	615.8	613.1
52.5°	595.7	595.2	594.8	594.3	593.9	592.3	589.7	587.0	584.4	581.8	579.4
55°	544.6	543.9	543.3	542.7	542.1	540.3	537.4	534.6	531.6	528.8	526.9
57.5°	490.6	490.4	490.0	489.6	489.4	487.9	485.5	483.1	480.6	478.2	475.8
60°	456.6	455.8	455.0	454.1	453.3	451.7	449.4	447.2	445.0	442.6	440.6
62.5°	421.0	420.4	419.7	419.0	418.4	417.1	415.2	413.2	411.3	409.3	407.2
65°	367.7	367.2	366.8	366.4	366.0	364.7	362.4	360.2	357.8	355.6	353.7
67.5°	316.0	315.1	314.2	313.3	312.5	311.2	309.6	307.9	306.2	304.5	302.9
70°	283.4	282.3	281.3	280.3	279.3	277.9	276.0	274.1	272.2	270.5	269.2
72.5°	247.8	247.1	246.4	245.8	245.0	244.1	242.9	241.7	240.5	239.3	237.9
75°	195.4	195.0	194.6	194.2	193.8	193.1	192.0	191.0	189.9	189.0	188.3
77.5°	147.0	146.9	146.8	146.6	146.4	146.1	145.4	144.9	144.3	143.7	143.4
80°	116.7	116.7	116.7	116.7	116.7	116.5	116.1	115.7	115.2	114.9	114.7
82.5°	90.0	89.7	89.3	89.0	88.7	88.5	88.4	88.4	88.3	88.2	87.8
85°	50.9	51.2	51.4	51.5	51.7	51.9	51.9	51.9	51.9	51.9	51.6
87.5°	20.2	20.8	21.2	21.7	22.2	22.6	22.8	23.1	23.3	23.5	23.9
90°	1.3	3.7	6.2	8.6	10.9	13.1	15.2	17.3	19.4	21.5	23.0
92.5°	32.5	34.2	35.9	37.5	39.2	41.4	44.0	46.5	49.0	51.6	53.6
95°	87.4	88.0	88.6	89.2	89.8	91.6	94.6	97.6	100.6	103.5	105.7
97.5°	145.3	145.4	145.7	146.0	146.2	148.4	152.5	156.7	160.8	164.9	166.8
100°	188.2	188.2	188.2	188.2	188.2	190.2	194.1	198.0	201.9	205.7	208.5
102.5°	234.5	235.8	236.9	238.1	239.3	240.9	242.9	244.9	246.8	248.8	251.7
105°	306.7	308.1	309.6	311.1	312.6	314.2	316.0	317.8	319.6	321.5	323.2
107.5°	386.2	387.7	389.2	390.7	392.2	393.7	395.0	396.4	397.8	399.1	400.0
110°	441.1	442.6	444.1	445.6	447.1	448.3	449.2	450.0	450.9	451.8	452.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	497.0	497.8	498.6	499.4	500.2	501.1	502.2	503.4	504.5	505.7	506.0
115°	579.6	580.9	582.0	583.2	584.4	585.3	585.9	586.5	587.1	587.7	587.4
117.5°	662.5	663.0	663.5	664.1	664.6	665.1	665.7	666.2	666.7	667.4	667.5
120°	714.1	715.6	717.1	718.6	720.1	720.9	721.3	721.6	721.8	722.2	722.2
122.5°	770.1	770.6	771.2	771.7	772.2	772.8	773.6	774.5	775.2	776.0	775.7
125°	845.9	847.7	849.5	851.3	853.1	854.2	854.4	854.7	855.1	855.3	854.7
127.5°	926.6	927.6	928.6	929.6	930.7	931.4	931.7	932.1	932.5	932.8	932.5
130°	975.0	976.5	978.0	979.5	981.0	982.0	982.7	983.2	983.8	984.4	984.1
132.5°	1023.4	1025.9	1028.3	1030.8	1033.2	1034.4	1034.3	1034.1	1034.0	1033.9	1033.6
135°	1100.1	1101.9	1103.7	1105.5	1107.2	1108.3	1108.6	1108.9	1109.2	1109.5	1109.5
137.5°	1172.2	1173.9	1175.6	1177.3	1179.1	1180.3	1181.0	1181.6	1182.2	1182.9	1183.3
140°	1218.4	1219.9	1221.4	1222.9	1224.4	1225.6	1226.5	1227.4	1228.3	1229.2	1229.8
142.5°	1264.7	1266.0	1267.2	1268.5	1269.7	1270.9	1272.0	1273.2	1274.3	1275.4	1275.8
145°	1332.8	1333.9	1335.2	1336.3	1337.6	1338.5	1339.4	1340.3	1341.2	1342.1	1342.1
147.5°	1395.7	1396.3	1397.0	1397.7	1398.3	1399.0	1399.7	1400.4	1401.1	1401.9	1402.6
150°	1437.6	1437.3	1437.1	1436.7	1436.5	1436.9	1438.1	1439.3	1440.5	1441.7	1441.7
152.5°	1472.0	1472.5	1472.9	1473.3	1473.7	1474.2	1474.7	1475.2	1475.6	1476.1	1476.9
155°	1525.1	1525.1	1525.1	1525.1	1525.1	1525.2	1525.5	1525.8	1526.1	1526.4	1527.6
157.5°	1572.4	1571.7	1571.1	1570.4	1569.8	1569.6	1569.9	1570.2	1570.5	1570.7	1572.0
160°	1600.4	1599.5	1598.6	1597.7	1596.8	1596.5	1596.8	1597.1	1597.4	1597.7	1598.8
162.5°	1625.1	1624.4	1623.8	1623.2	1622.5	1622.2	1622.2	1622.3	1622.4	1622.4	1623.9
165°	1658.2	1657.6	1657.0	1656.4	1655.8	1655.6	1656.0	1656.3	1656.5	1656.9	1658.0
167.5°	1686.1	1685.0	1683.8	1682.6	1681.4	1680.8	1680.8	1680.8	1680.8	1680.8	1682.6
170°	1701.2	1700.0	1698.8	1697.6	1696.5	1695.9	1695.9	1695.9	1695.9	1695.9	1697.6
172.5°	1712.0	1710.8	1709.6	1708.4	1707.2	1706.6	1706.6	1706.6	1706.6	1706.6	1708.4
175°	1724.1	1722.9	1721.7	1720.5	1719.3	1718.7	1718.7	1718.7	1718.7	1718.7	1720.5
177.5°	1730.3	1729.3	1728.4	1727.4	1726.4	1725.8	1725.6	1725.4	1725.1	1724.9	1726.4
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5	1170.5
2.5°	1167.2	1168.9	1170.5	1171.3	1171.1	1170.9	1170.7	1170.5
5°	1161.4	1163.1	1165.0	1165.8	1165.6	1165.5	1165.2	1165.0
7.5°	1149.6	1151.4	1153.2	1154.0	1153.8	1153.6	1153.3	1153.2
10°	1139.6	1141.3	1142.9	1143.6	1143.4	1143.2	1143.0	1142.8
12.5°	1126.3	1127.7	1129.0	1129.6	1129.6	1129.5	1129.5	1129.4
15°	1103.2	1104.2	1105.3	1105.7	1105.7	1105.7	1105.7	1105.7
17.5°	1076.3	1077.5	1078.8	1079.0	1077.9	1076.9	1075.8	1074.9
20°	1055.9	1057.3	1058.7	1058.9	1057.9	1056.9	1055.9	1054.8
22.5°	1032.6	1033.6	1034.6	1034.7	1033.9	1033.2	1032.5	1031.9
25°	995.4	995.9	996.3	996.1	995.6	995.0	994.3	993.7
27.5°	956.4	956.5	956.6	956.4	955.7	955.1	954.5	953.9
30°	928.1	927.6	927.2	926.8	926.1	925.5	924.9	924.3
32.5°	899.2	898.5	897.8	896.8	895.7	894.6	893.5	892.4
35°	854.6	853.5	852.6	851.2	849.5	847.9	846.2	844.6
37.5°	807.6	806.1	804.6	803.3	802.5	801.5	800.6	799.6
40°	775.2	773.3	771.4	770.2	769.5	769.0	768.4	767.8
42.5°	742.9	741.2	739.5	738.2	737.3	736.3	735.3	734.4
45°	695.2	692.7	690.3	688.7	688.1	687.5	686.9	686.3
47.5°	644.9	642.4	639.9	637.9	636.5	635.1	633.6	632.1
50°	610.5	607.8	605.1	603.1	601.6	600.2	598.8	597.4
52.5°	577.1	574.7	572.4	570.4	568.8	567.2	565.6	564.0
55°	525.1	523.3	521.4	519.8	518.3	516.8	515.4	514.0
57.5°	473.5	471.1	468.7	467.1	466.3	465.6	464.8	464.0
60°	438.5	436.5	434.4	432.7	431.2	429.8	428.4	427.0
62.5°	404.9	402.7	400.5	398.8	397.7	396.5	395.5	394.3
65°	352.0	350.1	348.2	346.9	346.1	345.3	344.4	343.6
67.5°	301.4	299.8	298.3	297.2	296.8	296.2	295.7	295.2
70°	268.0	266.7	265.5	264.5	263.6	262.8	262.0	261.2
72.5°	236.5	235.1	233.7	232.6	231.8	231.0	230.2	229.3
75°	187.7	187.1	186.5	185.7	184.9	184.0	183.2	182.4
77.5°	143.0	142.6	142.2	141.8	141.2	140.6	140.1	139.5
80°	114.4	114.2	114.0	113.7	113.3	112.9	112.4	112.1
82.5°	87.4	87.0	86.7	86.5	86.4	86.3	86.2	86.1
85°	51.5	51.3	51.0	50.7	50.3	49.9	49.5	49.0
87.5°	24.2	24.4	24.8	24.9	24.7	24.5	24.3	24.3
90°	24.5	26.0	27.5	28.7	29.6	30.5	31.4	32.3
92.5°	55.6	57.5	59.6	60.8	61.5	62.2	62.8	63.5
95°	107.7	109.9	111.9	113.2	113.9	114.5	115.0	115.7
97.5°	168.8	170.8	172.7	174.0	174.3	174.7	175.0	175.4
100°	211.2	213.8	216.5	218.2	218.7	219.4	220.0	220.5
102.5°	254.7	257.6	260.5	262.4	263.2	264.0	264.9	265.7
105°	325.0	326.8	328.6	329.9	330.8	331.7	332.6	333.5
107.5°	400.9	401.8	402.7	403.1	403.1	403.1	403.0	402.9
110°	453.7	454.6	455.5	455.8	455.5	455.1	454.9	454.6





TEST NUMBER: P333429-940

CATALOG NUMBER: S125DIW-S850D1560U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	506.5	506.9	507.3	507.3	506.8	506.2	505.7	505.2
115°	587.1	586.8	586.5	586.2	585.9	585.6	585.3	585.1
117.5°	667.8	668.1	668.2	667.8	666.6	665.4	664.2	663.0
120°	722.2	722.2	722.2	721.6	720.4	719.2	718.0	716.8
122.5°	775.5	775.3	775.0	774.5	773.5	772.5	771.5	770.6
125°	854.2	853.5	852.9	852.5	852.2	851.9	851.6	851.3
127.5°	932.2	931.9	931.6	931.1	930.5	930.0	929.3	928.7
130°	983.8	983.6	983.2	982.8	982.2	981.6	981.0	980.4
132.5°	1033.3	1033.0	1032.7	1032.2	1031.4	1030.5	1029.7	1028.8
135°	1109.5	1109.5	1109.5	1108.9	1107.7	1106.5	1105.3	1104.1
137.5°	1183.7	1184.0	1184.4	1183.8	1182.3	1180.8	1179.3	1177.8
140°	1230.4	1231.0	1231.5	1231.1	1229.7	1228.2	1226.6	1225.1
142.5°	1276.1	1276.5	1276.9	1276.3	1274.8	1273.4	1271.8	1270.3
145°	1342.1	1342.1	1342.1	1341.7	1340.8	1339.9	1339.0	1338.1
147.5°	1403.3	1404.0	1404.7	1404.1	1402.0	1400.0	1398.0	1396.0
150°	1441.7	1441.7	1441.7	1441.4	1440.7	1440.2	1439.6	1439.0
152.5°	1477.6	1478.3	1479.0	1478.8	1477.7	1476.7	1475.6	1474.5
155°	1528.7	1530.0	1531.2	1531.1	1529.6	1528.0	1526.5	1525.1
157.5°	1573.2	1574.4	1575.6	1575.2	1573.2	1571.2	1569.2	1567.3
160°	1600.1	1601.2	1602.5	1602.3	1600.8	1599.3	1597.9	1596.3
162.5°	1625.3	1626.7	1628.2	1628.0	1626.3	1624.5	1622.8	1621.0
165°	1659.2	1660.5	1661.6	1661.3	1659.6	1657.8	1656.0	1654.1
167.5°	1684.4	1686.1	1687.9	1687.9	1686.0	1684.3	1682.4	1680.5
170°	1699.4	1701.2	1703.0	1702.9	1700.8	1698.7	1696.6	1694.5
172.5°	1710.2	1712.0	1713.8	1713.8	1711.9	1710.0	1708.2	1706.4
175°	1722.3	1724.1	1725.9	1725.7	1723.7	1721.5	1719.5	1717.3
177.5°	1727.8	1729.2	1730.6	1730.5	1728.8	1727.2	1725.5	1723.9
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1

(END OF REPORT)