

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: P333428-940

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333428-940
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-S850D1560U940-4F0-1E-UDD-F
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8610.6 lumens
Efficiency: N/A
Efficacy: 126.4 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

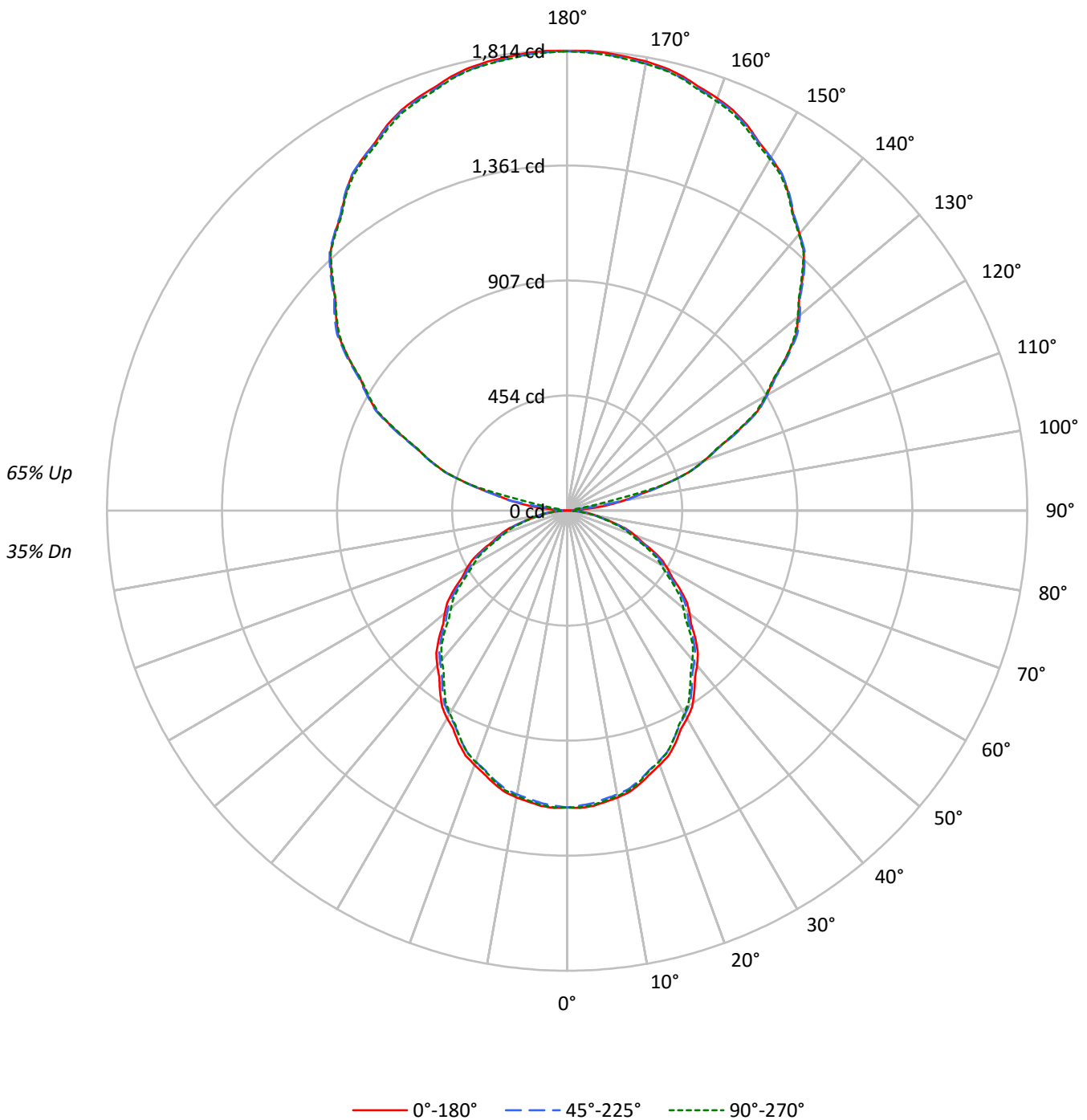
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	94	90	86	83	85	82	78	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	77	71	66	62	58	54	51	45	42	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	47	64	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	49	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

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	1.3
10°-20°	311.8	3.6
20°-30°	460.3	5.3
30°-40°	537.2	6.2
40°-50°	539.5	6.3
50°-60°	473.6	5.5
60°-70°	352.9	4.1
70°-80°	201.8	2.3
80°-90°	62.5	0.7
90°-100°	65.8	0.8
100°-110°	405.6	4.7
110°-120°	735.5	8.5
120°-130°	944.0	11.0
130°-140°	1015.3	11.8
140°-150°	953.0	11.1
150°-160°	770.9	9.0
160°-170°	498.6	5.8
170°-180°	172.0	2.0
0°-30°	882.5	10.2
0°-40°	1419.6	16.5
0°-60°	2432.7	28.3
0°-90°	3049.9	35.4
90°-120°	1206.9	14.0
90°-150°	4119.2	47.8
90°-180°	5561.0	64.6
0°-180°	8610.6	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	6
95°	76	70	22	28	28	97
105°	395	400	400	400	399	418
115°	741	747	749	744	736	734
125°	1054	1063	1063	1058	1054	941
135°	1314	1322	1320	1316	1309	1013
145°	1524	1526	1526	1527	1520	952
155°	1678	1670	1673	1676	1666	773
165°	1771	1763	1764	1771	1761	500
175°	1811	1803	1804	1814	1803	172
180°	1811	1811	1811	1811	1811	



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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	8.5	10.9	13.1	15.2	17.3	19.4	21.5	23.0
92.5°	20.7	19.0	17.3	15.7	14.0	14.1	16.0	17.7	19.6	21.5	23.0
95°	76.5	75.6	74.7	73.8	72.9	66.8	55.5	44.1	32.8	21.5	23.0
97.5°	159.7	161.3	162.9	164.6	166.2	155.8	133.3	110.9	88.5	66.1	57.6
100°	224.2	225.1	226.0	226.9	227.7	228.8	230.0	231.2	232.4	233.5	189.1
102.5°	289.7	290.8	291.9	293.1	294.2	295.2	295.9	296.6	297.3	298.0	289.6
105°	394.7	395.8	397.1	398.2	399.4	400.0	400.0	400.0	400.0	400.0	400.0
107.5°	503.6	503.6	503.6	503.6	503.6	503.9	504.5	505.2	505.8	506.3	506.4
110°	574.5	574.5	574.5	574.5	574.5	574.8	575.4	576.0	576.6	577.2	576.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	641.1	641.9	642.6	643.3	644.0	644.5	644.9	645.2	645.6	646.0	644.8
115°	741.0	742.4	744.0	745.5	746.9	747.8	748.1	748.4	748.8	749.0	747.8
117.5°	844.4	844.3	844.2	844.2	844.1	844.6	845.8	846.9	848.0	849.2	847.6
120°	908.7	908.5	908.2	907.9	907.6	907.9	908.7	909.6	910.5	911.4	910.9
122.5°	965.7	966.8	968.0	969.1	970.2	971.0	971.4	971.8	972.2	972.7	972.1
125°	1053.7	1055.8	1057.9	1060.0	1062.1	1063.1	1063.1	1063.1	1063.1	1063.1	1061.9
127.5°	1137.7	1139.2	1140.8	1142.3	1143.7	1144.4	1144.2	1144.1	1143.9	1143.7	1143.0
130°	1189.3	1190.8	1192.3	1193.8	1195.2	1196.1	1196.5	1196.8	1197.0	1197.4	1196.5
132.5°	1240.8	1242.6	1244.3	1246.1	1247.8	1248.3	1247.7	1247.0	1246.3	1245.7	1245.5
135°	1314.1	1315.9	1317.8	1319.6	1321.3	1321.9	1321.3	1320.7	1320.1	1319.6	1318.9
137.5°	1381.5	1383.0	1384.6	1386.2	1387.8	1388.2	1387.7	1387.1	1386.6	1386.1	1386.3
140°	1425.6	1426.2	1426.7	1427.4	1428.0	1428.1	1427.8	1427.5	1427.2	1426.9	1427.5
142.5°	1465.3	1465.6	1466.0	1466.3	1466.7	1467.1	1467.6	1467.9	1468.4	1468.8	1468.9
145°	1523.6	1524.1	1524.7	1525.4	1526.0	1526.3	1526.3	1526.3	1526.3	1526.3	1526.5
147.5°	1574.6	1574.4	1574.3	1574.2	1574.0	1574.2	1574.6	1574.9	1575.3	1575.7	1576.0
150°	1606.8	1606.1	1605.6	1605.0	1604.4	1604.4	1605.0	1605.6	1606.1	1606.8	1607.4
152.5°	1637.9	1636.6	1635.3	1634.0	1632.6	1632.3	1632.9	1633.5	1634.1	1634.7	1635.3
155°	1677.9	1676.1	1674.4	1672.6	1670.8	1670.2	1670.8	1671.3	1672.0	1672.6	1673.5
157.5°	1708.8	1707.7	1706.6	1705.6	1704.5	1704.0	1704.1	1704.1	1704.1	1704.2	1705.2
160°	1730.3	1728.5	1726.7	1724.9	1723.1	1722.3	1722.7	1723.0	1723.2	1723.6	1724.7
162.5°	1747.5	1745.7	1743.9	1742.0	1740.3	1739.5	1739.8	1740.2	1740.4	1740.7	1742.4
165°	1770.6	1768.8	1766.9	1765.1	1763.4	1762.6	1762.9	1763.3	1763.5	1763.8	1765.6
167.5°	1787.7	1785.9	1784.0	1782.2	1780.3	1779.6	1779.9	1780.1	1780.5	1780.7	1782.9
170°	1797.4	1795.3	1793.2	1791.1	1789.0	1788.1	1788.4	1788.8	1789.0	1789.3	1791.7
172.5°	1803.8	1801.8	1799.7	1797.6	1795.5	1794.7	1795.3	1795.8	1796.4	1796.9	1799.0
175°	1810.8	1809.0	1807.2	1805.4	1803.7	1803.0	1803.2	1803.5	1803.8	1804.1	1806.5
177.5°	1814.0	1812.6	1811.2	1809.7	1808.3	1807.7	1807.9	1808.2	1808.4	1808.7	1810.4
180°	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8



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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	24.8	24.7	24.5	24.3	24.3
90°	24.4	25.9	27.5	28.6	29.5	30.4	31.3	32.2
92.5°	24.4	25.9	27.5	28.4	28.8	29.2	29.7	30.1
95°	24.4	25.9	27.5	28.2	28.2	28.2	28.2	28.2
97.5°	49.2	40.8	32.4	28.2	28.2	28.2	28.2	28.2
100°	144.6	100.2	55.8	33.0	31.7	30.6	29.4	28.2
102.5°	281.2	272.8	264.4	250.0	229.7	209.5	189.1	168.9
105°	400.0	400.0	400.0	399.8	399.6	399.3	399.0	398.7
107.5°	506.5	506.5	506.6	506.1	505.2	504.4	503.5	502.6
110°	575.4	574.5	573.6	573.4	573.6	573.9	574.3	574.5



TEST NUMBER: P333428-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	643.6	642.6	641.4	640.6	640.2	639.8	639.4	638.9
115°	746.6	745.5	744.2	742.8	741.0	739.1	737.4	735.6
117.5°	846.1	844.5	842.9	841.8	841.1	840.3	839.5	838.7
120°	910.3	909.6	909.1	908.0	906.5	905.0	903.6	902.1
122.5°	971.4	970.9	970.3	969.1	967.4	965.6	963.9	962.2
125°	1060.8	1059.5	1058.4	1057.3	1056.4	1055.5	1054.6	1053.7
127.5°	1142.4	1141.7	1141.0	1139.6	1137.4	1135.2	1133.0	1130.8
130°	1195.6	1194.7	1193.8	1192.6	1191.1	1189.6	1188.1	1186.6
132.5°	1245.4	1245.2	1245.0	1244.1	1242.7	1241.2	1239.7	1238.1
135°	1318.3	1317.8	1317.1	1315.9	1314.1	1312.3	1310.5	1308.8
137.5°	1386.3	1386.4	1386.6	1385.9	1384.3	1382.8	1381.2	1379.7
140°	1428.1	1428.7	1429.3	1428.7	1426.9	1425.1	1423.3	1421.6
142.5°	1469.0	1469.2	1469.3	1468.5	1466.6	1464.8	1463.0	1461.2
145°	1526.9	1527.1	1527.4	1526.7	1524.9	1523.1	1521.3	1519.6
147.5°	1576.4	1576.7	1577.1	1576.2	1574.0	1571.9	1569.8	1567.6
150°	1607.9	1608.6	1609.2	1608.3	1605.9	1603.5	1601.2	1598.7
152.5°	1635.9	1636.5	1637.1	1636.3	1634.1	1632.0	1629.9	1627.7
155°	1674.4	1675.3	1676.1	1675.3	1673.0	1670.6	1668.2	1665.8
157.5°	1706.1	1707.1	1708.1	1707.4	1705.0	1702.5	1700.1	1697.8
160°	1725.9	1727.2	1728.3	1727.8	1725.4	1723.0	1720.6	1718.2
162.5°	1744.1	1745.8	1747.4	1747.0	1744.4	1741.7	1739.1	1736.4
165°	1767.4	1769.2	1771.0	1770.7	1768.4	1765.9	1763.5	1761.1
167.5°	1785.0	1787.2	1789.3	1789.0	1786.4	1783.7	1781.0	1778.3
170°	1794.1	1796.5	1798.8	1798.8	1796.1	1793.4	1790.6	1788.0
172.5°	1801.2	1803.3	1805.4	1805.2	1802.5	1799.8	1797.2	1794.5
175°	1808.8	1811.2	1813.7	1813.5	1810.8	1808.1	1805.4	1802.8
177.5°	1812.0	1813.7	1815.3	1815.3	1813.3	1811.4	1809.5	1807.6
180°	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8	1810.8

(END OF REPORT)