

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: P333458-940

Luminaire Tested: **S125DIW-S1090D1560U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333458-940  
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-S1090D1560U940-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

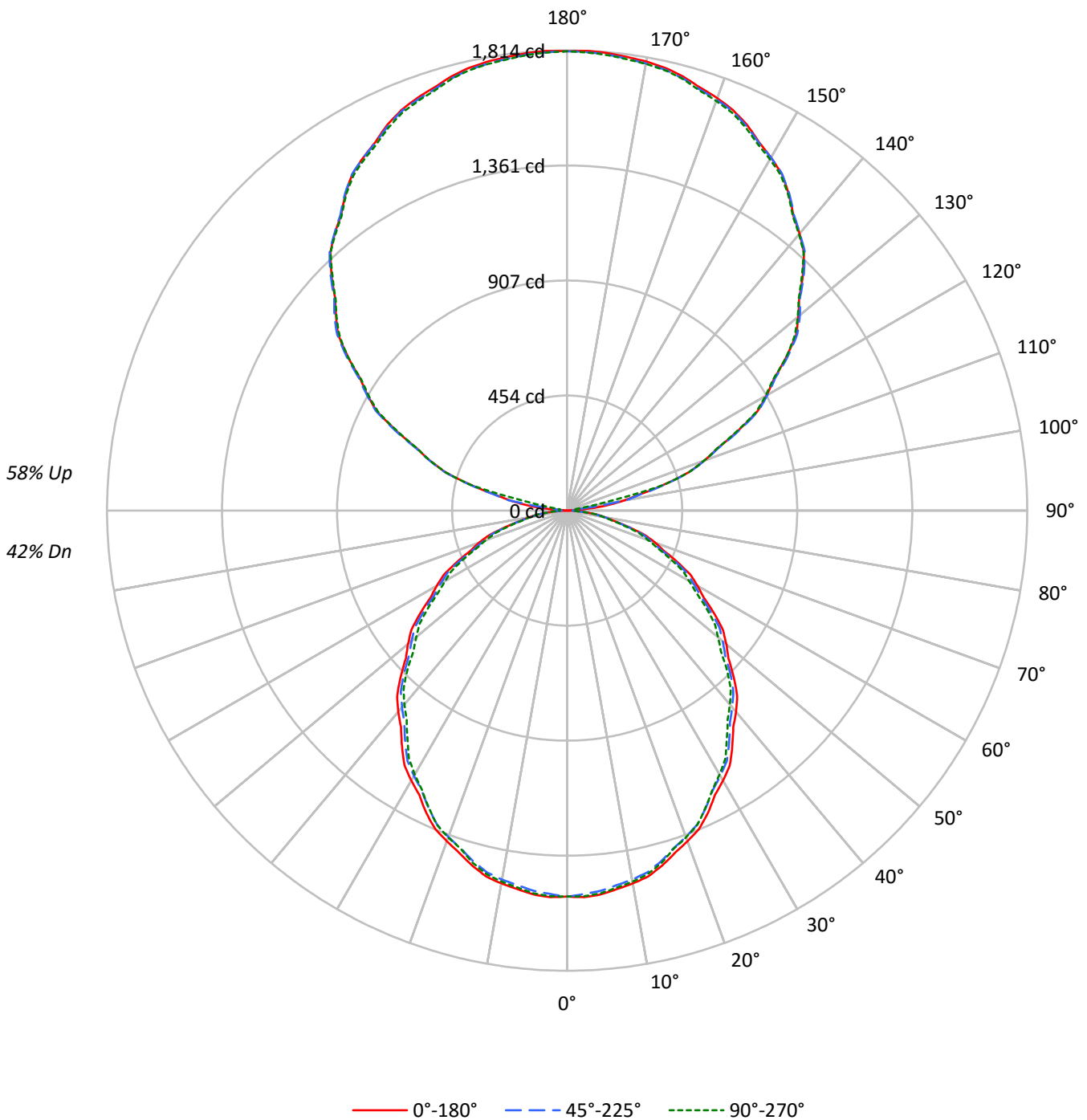
Lumens per Lamp: N/A  
Luminaire Lumens: 9523.9 lumens  
Efficiency: N/A  
Efficacy: 124.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	96	92	88	84	87	84	80	77	69	67	64	55	54	52	43	42	41	35
2	87	80	74	69	79	73	68	63	60	56	53	48	46	44	38	36	34	29
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	49	41	36	56	45	38	33	38	33	28	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	30	26	31	26	22	26	22	19	20	17	15	13
9	49	37	29	24	45	34	27	23	29	23	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	12	10

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

	0°	45°	90°
0°	9827	9827	9827
5°	9849	9756	9818
10°	9789	9686	9742
15°	9682	9570	9610
20°	9531	9407	9423
25°	9368	9213	9204
30°	9165	9004	8959
35°	8949	8779	8656
40°	8728	8535	8413
45°	8488	8312	8147
50°	8225	8043	7801
55°	7970	7739	7523
60°	7665	7432	7167
65°	7303	7065	6825
70°	6956	6637	6411
75°	6338	6128	5916
80°	5642	5553	5415
85°	4905	4994	4728



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.5	1.5
10°-20°	405.3	4.3
20°-30°	598.4	6.3
30°-40°	698.2	7.3
40°-50°	701.3	7.4
50°-60°	615.6	6.5
60°-70°	458.7	4.8
70°-80°	262.3	2.8
80°-90°	80.1	0.8
90°-100°	65.8	0.7
100°-110°	405.6	4.3
110°-120°	735.5	7.7
120°-130°	944.0	9.9
130°-140°	1015.3	10.7
140°-150°	953.0	10.0
150°-160°	770.9	8.1
160°-170°	498.6	5.2
170°-180°	172.0	1.8
0°-30°	1147.1	12.0
0°-40°	1845.3	19.4
0°-60°	3162.2	33.2
0°-90°	3963.2	41.6
90°-120°	1206.9	12.7
90°-150°	4119.2	43.3
90°-180°	5561.0	58.4
0°-180°	9523.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1522	1522	1522	1522	1522	
5°	1519	1516	1505	1515	1514	144
15°	1448	1444	1431	1437	1437	408
25°	1315	1308	1293	1295	1292	605
35°	1135	1130	1114	1107	1098	710
45°	929	924	910	896	892	716
55°	708	703	687	677	668	632
65°	478	475	462	452	447	474
75°	254	251	246	242	237	271
85°	66	67	67	66	64	74
90°	1	12	22	28	32	7
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°	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6
2.5°	1525.4	1524.8	1524.1	1523.5	1522.9	1521.4	1519.3	1517.2	1515.0	1512.9	1515.0
5°	1519.2	1518.7	1518.1	1517.6	1517.1	1515.5	1512.8	1510.1	1507.4	1504.8	1507.2
7.5°	1505.2	1504.7	1504.1	1503.6	1503.1	1501.3	1498.3	1495.4	1492.5	1489.5	1491.9
10°	1492.7	1492.2	1491.7	1491.1	1490.6	1488.8	1485.9	1482.9	1480.0	1477.0	1479.2
12.5°	1477.3	1476.3	1475.3	1474.4	1473.5	1471.6	1468.8	1466.2	1463.4	1460.6	1462.4
15°	1448.1	1447.3	1446.5	1445.7	1444.9	1443.1	1440.1	1437.2	1434.2	1431.3	1432.6
17.5°	1414.7	1413.5	1412.3	1411.1	1410.0	1407.8	1404.8	1401.8	1398.7	1395.6	1397.3
20°	1386.8	1386.3	1385.7	1385.2	1384.6	1382.6	1379.1	1375.6	1372.2	1368.7	1370.6
22.5°	1358.8	1357.9	1356.9	1355.9	1355.0	1352.8	1349.6	1346.3	1343.1	1339.8	1341.0
25°	1314.6	1313.2	1311.9	1310.5	1309.2	1306.8	1303.3	1299.8	1296.4	1292.9	1293.4
27.5°	1262.8	1261.9	1261.1	1260.3	1259.5	1257.4	1253.7	1250.2	1246.6	1243.0	1243.1
30°	1229.0	1228.2	1227.4	1226.6	1225.8	1223.4	1219.4	1215.4	1211.4	1207.4	1206.8
32.5°	1192.5	1191.2	1190.0	1188.7	1187.6	1185.2	1181.5	1177.9	1174.4	1170.8	1169.8
35°	1135.1	1134.1	1133.0	1131.9	1130.9	1128.5	1124.7	1121.0	1117.2	1113.5	1112.1
37.5°	1075.7	1074.3	1073.0	1071.7	1070.3	1067.9	1064.3	1060.9	1057.3	1053.8	1051.8
40°	1035.3	1033.9	1032.6	1031.3	1029.9	1027.3	1023.6	1019.8	1016.1	1012.4	1010.0
42.5°	991.9	990.8	989.7	988.6	987.4	985.0	981.2	977.5	973.7	970.0	967.8
45°	929.3	928.3	927.2	926.1	925.1	922.9	919.7	916.5	913.3	910.1	906.9
47.5°	861.9	861.9	862.0	862.1	862.1	860.2	856.4	852.5	848.6	844.8	841.5
50°	818.6	817.8	817.0	816.2	815.4	813.3	810.1	806.9	803.7	800.5	797.0
52.5°	774.3	773.6	773.1	772.5	772.0	769.9	766.5	763.0	759.6	756.2	753.1
55°	707.8	707.0	706.2	705.4	704.6	702.3	698.6	694.8	691.1	687.3	684.9
57.5°	637.8	637.3	636.9	636.5	636.1	634.3	631.1	627.9	624.8	621.6	618.5
60°	593.4	592.4	591.3	590.2	589.2	587.2	584.2	581.3	578.4	575.4	572.7
62.5°	547.2	546.4	545.5	544.7	543.9	542.2	539.6	537.1	534.6	532.1	529.1
65°	477.9	477.3	476.8	476.3	475.7	474.0	471.1	468.1	465.2	462.3	459.9
67.5°	410.7	409.6	408.5	407.3	406.3	404.6	402.3	400.2	398.0	395.8	393.8
70°	368.4	367.0	365.7	364.4	363.0	361.1	358.7	356.3	353.9	351.5	349.9
72.5°	322.2	321.2	320.3	319.4	318.5	317.3	315.8	314.1	312.6	311.0	309.2
75°	254.0	253.4	252.9	252.4	251.8	250.9	249.6	248.3	246.9	245.6	244.8
77.5°	191.2	190.9	190.7	190.6	190.3	189.8	189.0	188.3	187.6	186.8	186.4
80°	151.7	151.7	151.7	151.7	151.7	151.4	150.9	150.3	149.8	149.3	149.0
82.5°	117.0	116.5	116.2	115.7	115.3	115.0	114.9	114.9	114.7	114.6	114.1
85°	66.2	66.4	66.7	67.0	67.2	67.4	67.4	67.4	67.4	67.4	67.1
87.5°	26.3	26.8	27.2	27.7	28.2	28.5	28.7	28.9	29.2	29.3	29.6
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°	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6	1521.6
2.5°	1517.2	1519.3	1521.4	1522.4	1522.2	1522.0	1521.8	1521.6
5°	1509.6	1512.0	1514.4	1515.5	1515.2	1514.9	1514.7	1514.4
7.5°	1494.2	1496.6	1499.0	1500.0	1499.8	1499.5	1499.2	1499.0
10°	1481.3	1483.5	1485.6	1486.6	1486.3	1486.0	1485.8	1485.5
12.5°	1464.1	1465.8	1467.5	1468.4	1468.3	1468.2	1468.2	1468.1
15°	1434.0	1435.3	1436.6	1437.3	1437.3	1437.3	1437.3	1437.3
17.5°	1399.0	1400.6	1402.3	1402.5	1401.1	1399.8	1398.5	1397.1
20°	1372.4	1374.3	1376.2	1376.4	1375.1	1373.8	1372.4	1371.1
22.5°	1342.3	1343.5	1344.7	1344.9	1344.0	1343.1	1342.2	1341.2
25°	1294.0	1294.5	1295.0	1294.9	1294.1	1293.2	1292.4	1291.6
27.5°	1243.2	1243.3	1243.5	1243.1	1242.3	1241.5	1240.7	1239.9
30°	1206.3	1205.8	1205.2	1204.6	1203.8	1203.0	1202.2	1201.4
32.5°	1168.9	1167.9	1167.0	1165.7	1164.3	1162.9	1161.4	1159.9
35°	1110.8	1109.5	1108.1	1106.4	1104.3	1102.2	1100.0	1097.9
37.5°	1049.8	1047.8	1045.9	1044.3	1043.0	1041.8	1040.5	1039.4
40°	1007.5	1005.1	1002.7	1001.1	1000.3	999.5	998.7	997.9
42.5°	965.6	963.4	961.3	959.5	958.3	957.1	955.8	954.6
45°	903.7	900.4	897.2	895.2	894.4	893.6	892.8	892.0
47.5°	838.3	835.0	831.8	829.2	827.3	825.5	823.6	821.7
50°	793.5	790.1	786.6	783.9	782.0	780.2	778.3	776.4
52.5°	750.1	747.1	744.0	741.5	739.3	737.3	735.2	733.1
55°	682.5	680.1	677.7	675.6	673.7	671.8	669.9	668.1
57.5°	615.5	612.3	609.2	607.2	606.2	605.1	604.1	603.1
60°	570.1	567.4	564.7	562.4	560.5	558.7	556.8	554.9
62.5°	526.3	523.4	520.5	518.4	516.9	515.5	514.0	512.6
65°	457.4	455.0	452.6	450.8	449.8	448.7	447.6	446.6
67.5°	391.7	389.7	387.6	386.3	385.7	385.0	384.4	383.8
70°	348.3	346.7	345.1	343.8	342.7	341.6	340.5	339.5
72.5°	307.5	305.6	303.8	302.4	301.3	300.2	299.2	298.1
75°	244.0	243.2	242.4	241.4	240.3	239.2	238.2	237.1
77.5°	185.8	185.4	184.9	184.3	183.5	182.8	182.0	181.3
80°	148.7	148.5	148.2	147.8	147.2	146.7	146.2	145.6
82.5°	113.6	113.2	112.7	112.4	112.3	112.2	112.1	111.9
85°	66.9	66.6	66.3	65.9	65.4	64.8	64.3	63.8
87.5°	30.0	30.2	30.5	30.6	30.3	30.1	29.8	29.5
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: P333458-940

CATALOG NUMBER: S125DIW-S1090D1560U940-4F0-1E-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)