

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: P333458-840

Luminaire Tested: **S125DIW-S1090D1560U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333458-840  
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-S1090D1560U840-4F0-1E-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**

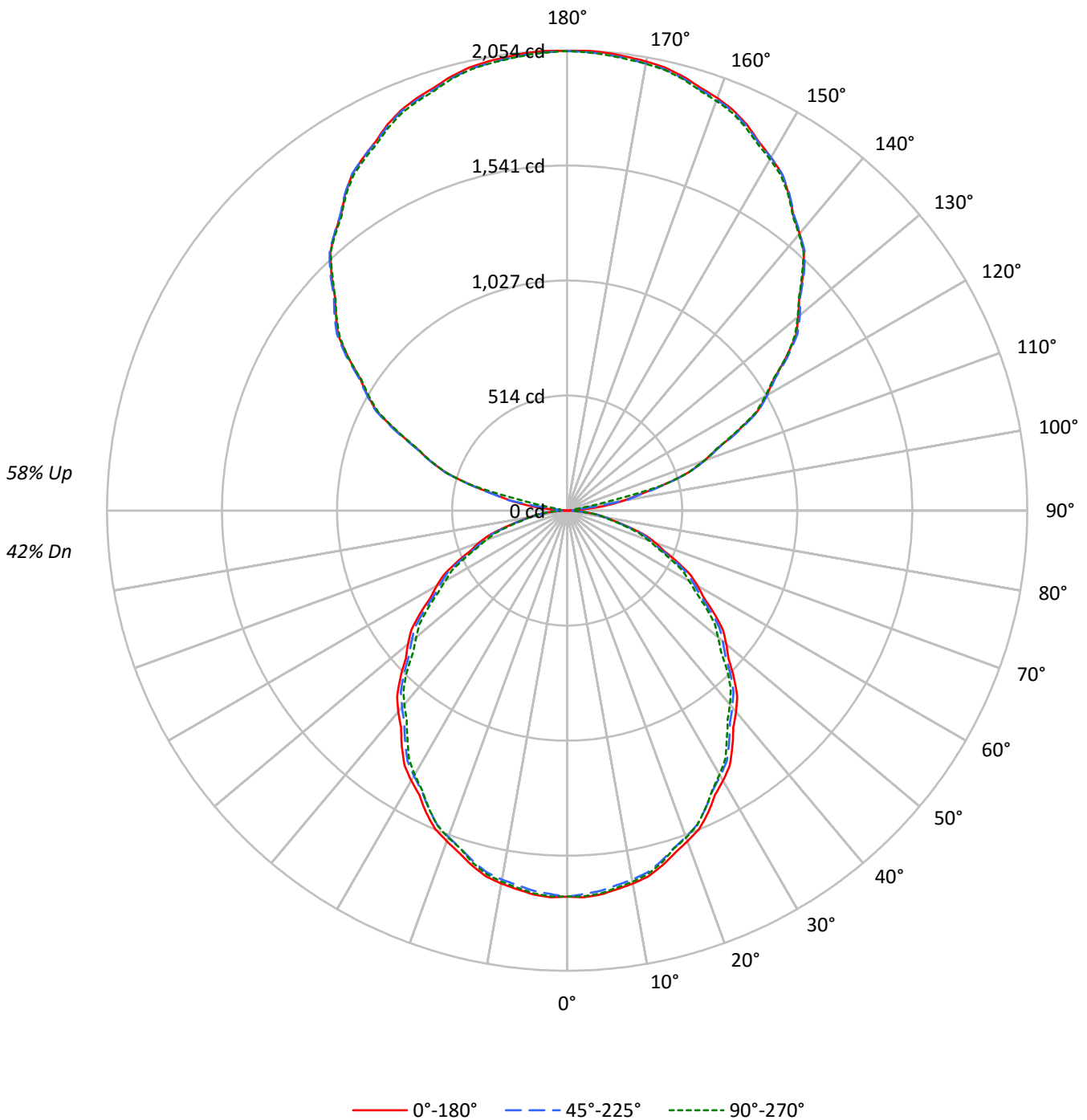
Lumens per Lamp: N/A  
Luminaire Lumens: 10785.8 lumens  
Efficiency: N/A  
Efficacy: 140.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 76.6  
Input Voltage (V): 120  
Input Current (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°	11129	11129	11129
5°	11154	11048	11119
10°	11086	10970	11032
15°	10965	10838	10884
20°	10794	10653	10672
25°	10608	10434	10424
30°	10380	10197	10147
35°	10136	9942	9802
40°	9885	9666	9528
45°	9613	9414	9227
50°	9315	9109	8835
55°	9026	8765	8519
60°	8681	8418	8117
65°	8270	8000	7728
70°	7878	7517	7260
75°	7177	6939	6700
80°	6390	6289	6133
85°	5550	5654	5350



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.5	1.5
10°-20°	459.0	4.3
20°-30°	677.7	6.3
30°-40°	790.7	7.3
40°-50°	794.2	7.4
50°-60°	697.1	6.5
60°-70°	519.5	4.8
70°-80°	297.0	2.8
80°-90°	90.7	0.8
90°-100°	74.5	0.7
100°-110°	459.3	4.3
110°-120°	833.0	7.7
120°-130°	1069.1	9.9
130°-140°	1149.9	10.7
140°-150°	1079.3	10.0
150°-160°	873.1	8.1
160°-170°	564.7	5.2
170°-180°	194.8	1.8
0°-30°	1299.1	12.0
0°-40°	2089.8	19.4
0°-60°	3581.2	33.2
0°-90°	4488.3	41.6
90°-120°	1366.8	12.7
90°-150°	4665.0	43.3
90°-180°	6298.0	58.4
0°-180°	10785.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1720	1717	1704	1716	1715	163
15°	1640	1635	1621	1627	1628	462
25°	1489	1481	1464	1466	1463	685
35°	1286	1279	1261	1254	1243	804
45°	1052	1046	1031	1015	1010	811
55°	802	797	778	766	757	715
65°	541	538	524	512	506	537
75°	288	285	278	274	268	307
85°	75	76	76	75	72	84
90°	2	14	24	32	36	8
95°	87	79	24	32	32	110
105°	447	453	453	453	452	474
115°	839	846	848	842	833	832
125°	1193	1203	1204	1198	1193	1065
135°	1488	1497	1494	1491	1482	1147
145°	1726	1728	1728	1729	1721	1079
155°	1900	1892	1894	1898	1886	875
165°	2005	1997	1998	2006	1994	566
175°	2051	2042	2043	2054	2042	195
180°	2051	2051	2051	2051	2051	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1727.6	1726.9	1726.1	1725.4	1724.6	1723.0	1720.6	1718.2	1715.8	1713.3	1715.8
5°	1720.5	1719.9	1719.3	1718.7	1718.1	1716.3	1713.2	1710.2	1707.2	1704.1	1706.9
7.5°	1704.7	1704.0	1703.4	1702.8	1702.2	1700.2	1696.9	1693.5	1690.2	1686.9	1689.6
10°	1690.5	1689.9	1689.3	1688.7	1688.1	1686.1	1682.7	1679.4	1676.1	1672.7	1675.2
12.5°	1673.0	1671.9	1670.8	1669.7	1668.7	1666.6	1663.4	1660.4	1657.3	1654.2	1656.2
15°	1640.0	1639.1	1638.2	1637.3	1636.4	1634.3	1630.9	1627.6	1624.3	1620.9	1622.4
17.5°	1602.2	1600.8	1599.4	1598.1	1596.8	1594.4	1590.9	1587.5	1584.1	1580.5	1582.5
20°	1570.5	1569.9	1569.3	1568.7	1568.1	1565.8	1561.9	1557.9	1554.0	1550.0	1552.2
22.5°	1538.8	1537.8	1536.7	1535.6	1534.5	1532.1	1528.4	1524.7	1521.1	1517.3	1518.7
25°	1488.7	1487.2	1485.7	1484.2	1482.7	1480.0	1476.0	1472.1	1468.1	1464.2	1464.8
27.5°	1430.1	1429.2	1428.3	1427.3	1426.4	1424.0	1419.9	1415.8	1411.8	1407.8	1407.9
30°	1391.9	1391.0	1390.1	1389.2	1388.3	1385.5	1381.0	1376.4	1371.9	1367.4	1366.8
32.5°	1350.5	1349.1	1347.7	1346.3	1344.9	1342.2	1338.1	1334.0	1330.0	1326.0	1324.8
35°	1285.6	1284.3	1283.1	1281.9	1280.7	1278.0	1273.7	1269.5	1265.3	1261.0	1259.5
37.5°	1218.2	1216.7	1215.2	1213.7	1212.1	1209.4	1205.4	1201.4	1197.4	1193.5	1191.1
40°	1172.5	1170.9	1169.4	1167.9	1166.4	1163.5	1159.2	1155.0	1150.7	1146.5	1143.8
42.5°	1123.4	1122.1	1120.8	1119.5	1118.2	1115.5	1111.3	1107.0	1102.8	1098.5	1096.0
45°	1052.5	1051.3	1050.1	1048.8	1047.6	1045.2	1041.6	1037.9	1034.3	1030.7	1027.0
47.5°	976.1	976.1	976.2	976.3	976.3	974.2	969.9	965.4	961.1	956.7	953.0
50°	927.1	926.1	925.2	924.3	923.4	921.1	917.5	913.8	910.2	906.6	902.6
52.5°	876.9	876.2	875.6	874.8	874.2	871.9	868.1	864.1	860.3	856.4	852.9
55°	801.6	800.7	799.8	798.9	798.0	795.4	791.1	786.9	782.6	778.4	775.7
57.5°	722.3	721.8	721.3	720.8	720.3	718.3	714.7	711.1	707.6	704.0	700.4
60°	672.1	670.9	669.6	668.4	667.2	665.0	661.7	658.3	655.0	651.7	648.6
62.5°	619.8	618.7	617.8	616.8	615.9	614.0	611.1	608.2	605.4	602.6	599.3
65°	541.2	540.6	540.0	539.4	538.8	536.8	533.5	530.2	526.8	523.5	520.8
67.5°	465.1	463.8	462.6	461.3	460.1	458.2	455.7	453.2	450.7	448.3	446.0
70°	417.2	415.7	414.1	412.6	411.1	409.0	406.3	403.5	400.8	398.1	396.3
72.5°	364.9	363.8	362.7	361.7	360.7	359.3	357.6	355.8	354.1	352.2	350.2
75°	287.6	287.0	286.4	285.8	285.2	284.2	282.7	281.1	279.6	278.1	277.2
77.5°	216.5	216.2	216.0	215.8	215.5	215.0	214.1	213.3	212.5	211.6	211.1
80°	171.8	171.8	171.8	171.8	171.8	171.5	170.9	170.3	169.7	169.1	168.7
82.5°	132.5	132.0	131.6	131.1	130.6	130.3	130.2	130.1	129.9	129.8	129.3
85°	74.9	75.2	75.5	75.8	76.1	76.3	76.3	76.3	76.3	76.3	76.0
87.5°	29.8	30.3	30.8	31.4	31.9	32.3	32.5	32.7	33.0	33.2	33.5
90°	1.5	4.2	7.0	9.6	12.3	14.8	17.3	19.6	21.9	24.3	26.1
92.5°	23.4	21.5	19.6	17.8	15.9	16.0	18.1	20.1	22.2	24.3	26.1
95°	86.6	85.6	84.6	83.6	82.6	75.6	62.8	50.0	37.2	24.3	26.1
97.5°	180.9	182.7	184.5	186.4	188.2	176.4	151.0	125.6	100.2	74.8	65.2
100°	253.9	254.9	255.9	256.9	257.9	259.1	260.4	261.9	263.2	264.5	214.2
102.5°	328.1	329.3	330.6	331.9	333.2	334.3	335.1	335.9	336.7	337.5	328.0
105°	447.0	448.3	449.7	451.0	452.3	453.0	453.0	453.0	453.0	453.0	453.0
107.5°	570.4	570.4	570.4	570.4	570.4	570.7	571.4	572.1	572.8	573.4	573.5
110°	650.7	650.7	650.7	650.7	650.7	651.0	651.7	652.4	653.0	653.7	652.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	726.1	726.9	727.7	728.5	729.3	729.9	730.3	730.7	731.1	731.5	730.2
115°	839.2	840.8	842.5	844.2	845.9	846.9	847.3	847.6	848.0	848.3	846.9
117.5°	956.2	956.1	956.0	956.0	955.9	956.5	957.9	959.1	960.4	961.7	959.9
120°	1029.2	1028.9	1028.5	1028.1	1027.8	1028.1	1029.2	1030.2	1031.2	1032.2	1031.6
122.5°	1093.7	1094.9	1096.2	1097.5	1098.7	1099.6	1100.1	1100.6	1101.1	1101.6	1100.9
125°	1193.4	1195.7	1198.1	1200.4	1202.9	1204.0	1204.0	1204.0	1204.0	1204.0	1202.6
127.5°	1288.5	1290.2	1291.9	1293.6	1295.3	1296.1	1295.9	1295.7	1295.5	1295.3	1294.4
130°	1346.9	1348.6	1350.3	1352.0	1353.6	1354.6	1355.0	1355.3	1355.6	1356.0	1355.0
132.5°	1405.2	1407.2	1409.2	1411.2	1413.1	1413.7	1413.0	1412.2	1411.5	1410.8	1410.6
135°	1488.2	1490.3	1492.4	1494.4	1496.4	1497.0	1496.4	1495.7	1495.0	1494.4	1493.7
137.5°	1564.6	1566.3	1568.1	1569.8	1571.7	1572.2	1571.6	1570.9	1570.3	1569.7	1569.9
140°	1614.5	1615.2	1615.8	1616.5	1617.2	1617.3	1617.0	1616.7	1616.3	1616.0	1616.7
142.5°	1659.4	1659.8	1660.2	1660.6	1661.0	1661.5	1662.0	1662.4	1662.9	1663.4	1663.6
145°	1725.5	1726.1	1726.8	1727.5	1728.2	1728.5	1728.5	1728.5	1728.5	1728.5	1728.8
147.5°	1783.2	1783.0	1782.9	1782.8	1782.6	1782.8	1783.2	1783.6	1784.0	1784.4	1784.8
150°	1819.7	1819.0	1818.4	1817.7	1816.9	1816.9	1817.7	1818.4	1819.0	1819.7	1820.4
152.5°	1854.9	1853.5	1852.0	1850.5	1849.0	1848.6	1849.3	1850.0	1850.7	1851.3	1852.0
155°	1900.3	1898.2	1896.2	1894.2	1892.2	1891.5	1892.2	1892.8	1893.5	1894.2	1895.2
157.5°	1935.2	1934.0	1932.8	1931.6	1930.4	1929.8	1929.9	1930.0	1930.0	1930.1	1931.2
160°	1959.5	1957.5	1955.5	1953.5	1951.5	1950.6	1951.0	1951.3	1951.6	1952.0	1953.3
162.5°	1979.0	1977.0	1975.0	1972.9	1970.9	1970.0	1970.3	1970.8	1971.1	1971.4	1973.3
165°	2005.2	2003.2	2001.0	1999.0	1997.0	1996.2	1996.5	1996.9	1997.2	1997.5	1999.5
167.5°	2024.6	2022.6	2020.4	2018.3	2016.2	2015.4	2015.7	2016.0	2016.4	2016.7	2019.1
170°	2035.6	2033.2	2030.8	2028.4	2026.1	2025.1	2025.4	2025.8	2026.1	2026.4	2029.1
172.5°	2042.9	2040.5	2038.1	2035.8	2033.4	2032.6	2033.2	2033.8	2034.4	2035.0	2037.4
175°	2050.7	2048.7	2046.7	2044.7	2042.7	2041.8	2042.1	2042.5	2042.9	2043.2	2045.9
177.5°	2054.4	2052.8	2051.1	2049.5	2047.9	2047.2	2047.5	2047.8	2048.0	2048.3	2050.2
180°	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1718.2	1720.6	1723.0	1724.1	1723.9	1723.6	1723.4	1723.2
5°	1709.6	1712.3	1715.1	1716.3	1716.0	1715.7	1715.4	1715.1
7.5°	1692.2	1695.0	1697.6	1698.8	1698.5	1698.2	1697.9	1697.6
10°	1677.6	1680.0	1682.4	1683.5	1683.2	1682.9	1682.6	1682.3
12.5°	1658.1	1660.0	1661.9	1662.9	1662.8	1662.7	1662.7	1662.6
15°	1624.0	1625.5	1627.0	1627.8	1627.8	1627.8	1627.8	1627.8
17.5°	1584.4	1586.2	1588.1	1588.3	1586.8	1585.3	1583.8	1582.3
20°	1554.3	1556.4	1558.5	1558.8	1557.3	1555.8	1554.3	1552.8
22.5°	1520.1	1521.6	1522.9	1523.1	1522.1	1521.1	1520.0	1518.9
25°	1465.4	1466.0	1466.6	1466.4	1465.5	1464.6	1463.7	1462.8
27.5°	1408.0	1408.1	1408.3	1407.9	1406.9	1406.0	1405.1	1404.2
30°	1366.1	1365.5	1364.9	1364.2	1363.3	1362.4	1361.5	1360.6
32.5°	1323.7	1322.6	1321.6	1320.2	1318.6	1317.0	1315.2	1313.6
35°	1258.0	1256.5	1255.0	1253.0	1250.6	1248.2	1245.8	1243.3
37.5°	1188.9	1186.7	1184.5	1182.7	1181.2	1179.8	1178.4	1177.1
40°	1141.0	1138.3	1135.6	1133.8	1132.9	1132.0	1131.0	1130.1
42.5°	1093.6	1091.1	1088.6	1086.6	1085.3	1083.9	1082.5	1081.1
45°	1023.4	1019.8	1016.1	1013.8	1012.9	1012.0	1011.1	1010.2
47.5°	949.4	945.6	942.0	939.1	937.0	934.8	932.7	930.6
50°	898.7	894.7	890.8	887.8	885.7	883.5	881.4	879.3
52.5°	849.5	846.1	842.6	839.7	837.3	835.0	832.6	830.2
55°	773.0	770.2	767.5	765.1	763.0	760.8	758.7	756.6
57.5°	697.0	693.5	689.9	687.6	686.5	685.3	684.2	683.0
60°	645.6	642.6	639.5	636.9	634.8	632.7	630.6	628.4
62.5°	596.0	592.8	589.5	587.0	585.4	583.8	582.1	580.5
65°	518.1	515.3	512.6	510.6	509.4	508.2	507.0	505.7
67.5°	443.6	441.3	439.0	437.5	436.8	436.1	435.4	434.6
70°	394.5	392.6	390.8	389.3	388.1	386.9	385.7	384.5
72.5°	348.2	346.1	344.1	342.4	341.2	340.0	338.8	337.6
75°	276.3	275.4	274.5	273.4	272.2	270.9	269.7	268.5
77.5°	210.5	210.0	209.4	208.7	207.8	207.0	206.1	205.3
80°	168.4	168.1	167.8	167.3	166.7	166.1	165.5	164.9
82.5°	128.7	128.2	127.6	127.2	127.1	127.0	126.9	126.7
85°	75.7	75.4	75.1	74.6	74.0	73.4	72.8	72.2
87.5°	33.9	34.2	34.5	34.6	34.3	34.0	33.7	33.4
90°	27.7	29.4	31.1	32.4	33.4	34.4	35.4	36.5
92.5°	27.7	29.4	31.1	32.1	32.6	33.1	33.6	34.0
95°	27.7	29.4	31.1	31.9	31.9	31.9	31.9	31.9
97.5°	55.7	46.3	36.7	31.9	31.9	31.9	31.9	31.9
100°	163.8	113.5	63.2	37.4	36.0	34.6	33.3	31.9
102.5°	318.4	308.9	299.4	283.2	260.1	237.2	214.2	191.3
105°	453.0	453.0	453.0	452.8	452.5	452.2	451.8	451.5
107.5°	573.6	573.6	573.7	573.2	572.2	571.2	570.2	569.2
110°	651.7	650.7	649.6	649.3	649.6	649.9	650.4	650.7





TEST NUMBER: P333458-840

CATALOG NUMBER: S125DIW-S1090D1560U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	728.9	727.7	726.4	725.5	725.1	724.6	724.1	723.6
115°	845.6	844.2	842.8	841.2	839.2	837.1	835.1	833.0
117.5°	958.2	956.4	954.6	953.3	952.5	951.6	950.7	949.8
120°	1030.9	1030.2	1029.6	1028.3	1026.6	1024.9	1023.3	1021.6
122.5°	1100.1	1099.5	1098.8	1097.5	1095.6	1093.6	1091.7	1089.6
125°	1201.3	1199.9	1198.6	1197.4	1196.4	1195.4	1194.4	1193.4
127.5°	1293.7	1293.0	1292.2	1290.6	1288.1	1285.7	1283.1	1280.6
130°	1354.0	1353.0	1352.0	1350.6	1349.0	1347.3	1345.5	1343.8
132.5°	1410.4	1410.2	1410.0	1409.0	1407.3	1405.6	1403.9	1402.2
135°	1493.0	1492.4	1491.7	1490.3	1488.2	1486.2	1484.2	1482.2
137.5°	1570.0	1570.1	1570.3	1569.5	1567.7	1566.0	1564.2	1562.5
140°	1617.3	1618.0	1618.7	1618.0	1616.0	1614.0	1611.9	1609.9
142.5°	1663.7	1663.9	1664.0	1663.0	1660.9	1658.9	1656.9	1654.9
145°	1729.2	1729.5	1729.8	1729.0	1727.0	1725.0	1722.9	1720.9
147.5°	1785.2	1785.6	1786.0	1785.0	1782.6	1780.2	1777.8	1775.3
150°	1821.0	1821.7	1822.4	1821.4	1818.7	1815.9	1813.3	1810.6
152.5°	1852.7	1853.3	1854.0	1853.1	1850.7	1848.3	1845.8	1843.4
155°	1896.2	1897.2	1898.2	1897.3	1894.7	1892.0	1889.3	1886.5
157.5°	1932.2	1933.3	1934.4	1933.6	1930.9	1928.1	1925.4	1922.8
160°	1954.6	1956.0	1957.3	1956.7	1954.0	1951.3	1948.5	1945.9
162.5°	1975.2	1977.1	1978.9	1978.4	1975.5	1972.5	1969.5	1966.5
165°	2001.6	2003.7	2005.7	2005.3	2002.7	1999.9	1997.2	1994.5
167.5°	2021.5	2024.0	2026.4	2026.1	2023.1	2020.0	2017.0	2014.0
170°	2031.8	2034.6	2037.2	2037.1	2034.1	2031.0	2027.9	2024.9
172.5°	2039.8	2042.3	2044.7	2044.4	2041.3	2038.3	2035.3	2032.3
175°	2048.5	2051.2	2054.0	2053.8	2050.7	2047.7	2044.7	2041.6
177.5°	2052.1	2054.0	2055.9	2055.8	2053.6	2051.4	2049.2	2047.1
180°	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7	2050.7

(END OF REPORT)