

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: P333428-840

Luminaire Tested: **S125DIW-S850D1560U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333428-840
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-S850D1560U840-4F0-1E-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: 9751.5 lumens
Efficiency: N/A
Efficacy: 143.2 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

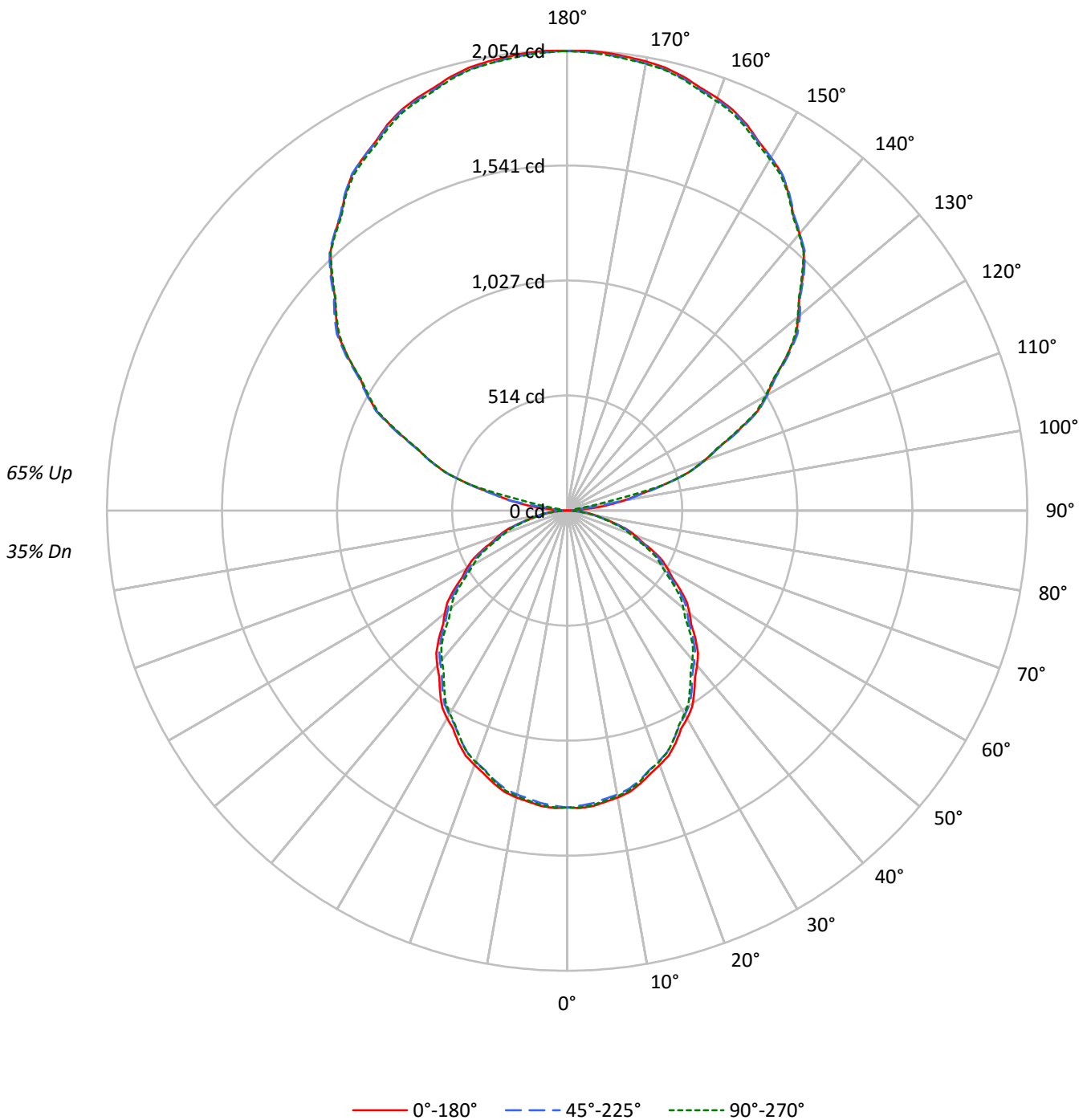
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8561	8561	8561
5°	8581	8499	8554
10°	8529	8439	8487
15°	8436	8338	8372
20°	8304	8195	8210
25°	8161	8027	8020
30°	7986	7845	7806
35°	7798	7649	7541
40°	7605	7436	7331
45°	7395	7242	7099
50°	7166	7007	6797
55°	6944	6742	6554
60°	6679	6475	6245
65°	6363	6154	5946
70°	6060	5784	5586
75°	5522	5340	5155
80°	4917	4839	4720
85°	4276	4357	4113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	1.3
10°-20°	353.1	3.6
20°-30°	521.3	5.3
30°-40°	608.3	6.2
40°-50°	611.0	6.3
50°-60°	536.3	5.5
60°-70°	399.6	4.1
70°-80°	228.5	2.3
80°-90°	70.8	0.7
90°-100°	74.5	0.8
100°-110°	459.3	4.7
110°-120°	833.0	8.5
120°-130°	1069.1	11.0
130°-140°	1149.9	11.8
140°-150°	1079.3	11.1
150°-160°	873.1	9.0
160°-170°	564.7	5.8
170°-180°	194.8	2.0
0°-30°	999.4	10.2
0°-40°	1607.8	16.5
0°-60°	2755.1	28.3
0°-90°	3454.0	35.4
90°-120°	1366.8	14.0
90°-150°	4665.0	47.8
90°-180°	6298.0	64.6
0°-180°	9751.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1324	1321	1311	1320	1319	125
15°	1262	1258	1247	1252	1252	355
25°	1145	1140	1126	1128	1125	527
35°	989	984	970	965	956	618
45°	810	805	793	781	777	624
55°	617	613	599	590	582	550
65°	416	414	403	394	389	413
75°	221	219	214	211	207	236
85°	58	59	59	58	56	64
90°	2	14	24	32	36	7
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°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1329.1	1328.5	1328.0	1327.4	1326.8	1325.5	1323.7	1321.9	1320.0	1318.2	1320.0
5°	1323.6	1323.1	1322.6	1322.2	1321.7	1320.3	1318.0	1315.7	1313.3	1311.0	1313.1
7.5°	1311.4	1311.0	1310.5	1310.0	1309.6	1308.1	1305.5	1302.9	1300.4	1297.8	1299.8
10°	1300.5	1300.1	1299.6	1299.1	1298.7	1297.2	1294.5	1292.0	1289.5	1286.9	1288.8
12.5°	1287.1	1286.3	1285.5	1284.5	1283.7	1282.1	1279.8	1277.4	1275.0	1272.6	1274.1
15°	1261.7	1261.0	1260.3	1259.6	1258.9	1257.3	1254.8	1252.1	1249.6	1247.0	1248.2
17.5°	1232.5	1231.5	1230.5	1229.5	1228.5	1226.6	1224.0	1221.3	1218.6	1216.0	1217.4
20°	1208.2	1207.8	1207.3	1206.8	1206.4	1204.6	1201.5	1198.5	1195.5	1192.4	1194.2
22.5°	1183.9	1183.1	1182.2	1181.3	1180.5	1178.7	1175.9	1173.0	1170.1	1167.3	1168.4
25°	1145.3	1144.2	1143.0	1141.8	1140.6	1138.5	1135.5	1132.5	1129.4	1126.4	1126.9
27.5°	1100.1	1099.5	1098.8	1098.1	1097.4	1095.5	1092.4	1089.2	1086.1	1083.0	1083.1
30°	1070.9	1070.2	1069.4	1068.7	1068.0	1065.9	1062.5	1058.9	1055.4	1052.0	1051.5
32.5°	1038.9	1037.8	1036.8	1035.7	1034.7	1032.6	1029.5	1026.3	1023.2	1020.1	1019.3
35°	989.1	988.1	987.1	986.2	985.3	983.2	980.0	976.6	973.4	970.2	969.0
37.5°	937.3	936.0	934.8	933.7	932.5	930.4	927.4	924.2	921.2	918.2	916.4
40°	902.0	900.8	899.7	898.5	897.3	895.1	891.8	888.6	885.3	882.0	880.0
42.5°	864.2	863.2	862.2	861.3	860.3	858.2	855.0	851.6	848.4	845.2	843.2
45°	809.7	808.7	807.8	806.9	806.0	804.1	801.3	798.5	795.7	792.9	790.1
47.5°	750.9	751.0	751.0	751.0	751.1	749.5	746.1	742.8	739.4	736.1	733.2
50°	713.2	712.5	711.8	711.0	710.4	708.6	705.9	703.1	700.2	697.4	694.4
52.5°	674.6	674.1	673.6	673.1	672.6	670.8	667.8	664.8	661.9	658.8	656.2
55°	616.7	616.0	615.3	614.6	613.9	611.9	608.6	605.4	602.1	598.8	596.7
57.5°	555.6	555.3	554.9	554.5	554.2	552.6	549.9	547.1	544.3	541.6	538.9
60°	517.1	516.1	515.2	514.2	513.3	511.6	509.0	506.4	503.9	501.3	499.0
62.5°	476.8	476.1	475.3	474.5	473.8	472.3	470.2	468.0	465.7	463.5	461.1
65°	416.4	415.9	415.5	415.0	414.5	413.0	410.4	407.9	405.3	402.7	400.6
67.5°	357.9	356.9	355.9	354.9	354.0	352.4	350.6	348.7	346.8	344.9	343.1
70°	320.9	319.7	318.6	317.4	316.3	314.7	312.6	310.4	308.3	306.3	304.9
72.5°	280.6	279.8	279.0	278.3	277.5	276.4	275.1	273.7	272.4	271.0	269.4
75°	221.3	220.9	220.4	219.9	219.4	218.6	217.4	216.3	215.1	214.0	213.3
77.5°	166.5	166.3	166.2	166.0	165.8	165.4	164.7	164.1	163.4	162.8	162.4
80°	132.2	132.2	132.2	132.2	132.2	131.9	131.5	131.0	130.5	130.1	129.9
82.5°	101.9	101.6	101.2	100.8	100.5	100.2	100.1	100.1	100.0	99.9	99.5
85°	57.7	58.0	58.2	58.4	58.6	58.8	58.8	58.8	58.8	58.8	58.5
87.5°	22.9	23.5	24.0	24.5	25.1	25.5	25.9	26.2	26.4	26.7	27.1
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°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1321.9	1323.7	1325.5	1326.5	1326.3	1326.1	1325.9	1325.6
5°	1315.2	1317.3	1319.4	1320.3	1320.1	1319.9	1319.6	1319.4
7.5°	1301.9	1303.9	1306.0	1306.9	1306.7	1306.5	1306.2	1306.0
10°	1290.6	1292.5	1294.3	1295.2	1294.9	1294.6	1294.4	1294.2
12.5°	1275.6	1277.1	1278.6	1279.3	1279.3	1279.2	1279.2	1279.1
15°	1249.4	1250.5	1251.7	1252.2	1252.2	1252.2	1252.2	1252.2
17.5°	1218.9	1220.3	1221.7	1221.9	1220.7	1219.6	1218.4	1217.3
20°	1195.8	1197.4	1199.0	1199.2	1198.1	1196.9	1195.8	1194.6
22.5°	1169.4	1170.5	1171.6	1171.7	1170.9	1170.1	1169.3	1168.6
25°	1127.3	1127.8	1128.3	1128.1	1127.5	1126.8	1126.1	1125.4
27.5°	1083.2	1083.3	1083.4	1083.1	1082.4	1081.7	1081.0	1080.3
30°	1051.1	1050.6	1050.1	1049.6	1048.8	1048.1	1047.4	1046.7
32.5°	1018.3	1017.5	1016.7	1015.6	1014.4	1013.1	1011.9	1010.7
35°	967.9	966.6	965.5	964.0	962.1	960.3	958.4	956.5
37.5°	914.6	912.9	911.2	909.8	908.8	907.7	906.7	905.5
40°	877.9	875.8	873.6	872.2	871.5	870.9	870.2	869.5
42.5°	841.3	839.4	837.5	836.0	835.0	833.8	832.7	831.7
45°	787.3	784.5	781.7	779.9	779.3	778.6	777.9	777.2
47.5°	730.3	727.5	724.7	722.5	720.8	719.2	717.5	715.9
50°	691.4	688.3	685.3	683.0	681.4	679.7	678.1	676.5
52.5°	653.6	650.9	648.2	646.0	644.2	642.4	640.6	638.7
55°	594.7	592.6	590.5	588.7	586.9	585.3	583.7	582.1
57.5°	536.2	533.5	530.8	529.0	528.1	527.3	526.3	525.4
60°	496.7	494.3	492.0	490.0	488.4	486.8	485.1	483.5
62.5°	458.6	456.1	453.5	451.6	450.4	449.1	447.9	446.6
65°	398.6	396.5	394.4	392.8	391.9	391.0	390.0	389.1
67.5°	341.3	339.5	337.8	336.6	336.1	335.5	334.9	334.4
70°	303.5	302.1	300.6	299.5	298.5	297.6	296.7	295.8
72.5°	267.8	266.3	264.7	263.4	262.5	261.6	260.6	259.6
75°	212.6	211.9	211.2	210.4	209.4	208.4	207.5	206.6
77.5°	162.0	161.5	161.1	160.6	159.9	159.3	158.6	157.9
80°	129.6	129.4	129.2	128.8	128.4	127.8	127.3	126.9
82.5°	99.0	98.6	98.2	98.0	97.9	97.8	97.7	97.6
85°	58.3	58.1	57.8	57.5	57.0	56.6	56.0	55.5
87.5°	27.4	27.7	28.1	28.1	28.0	27.8	27.6	27.5
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: P333428-840

CATALOG NUMBER: S125DIW-S850D1560U840-4F0-1E-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)