

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: P333698-840

Luminaire Tested: **S125RDIW-S850D1560U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333698-840
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: S125RDIW-S850D1560U840-4F0-1E-UDD-F
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9582.4 lumens
Efficiency: N/A
Efficacy: 140.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Indirect

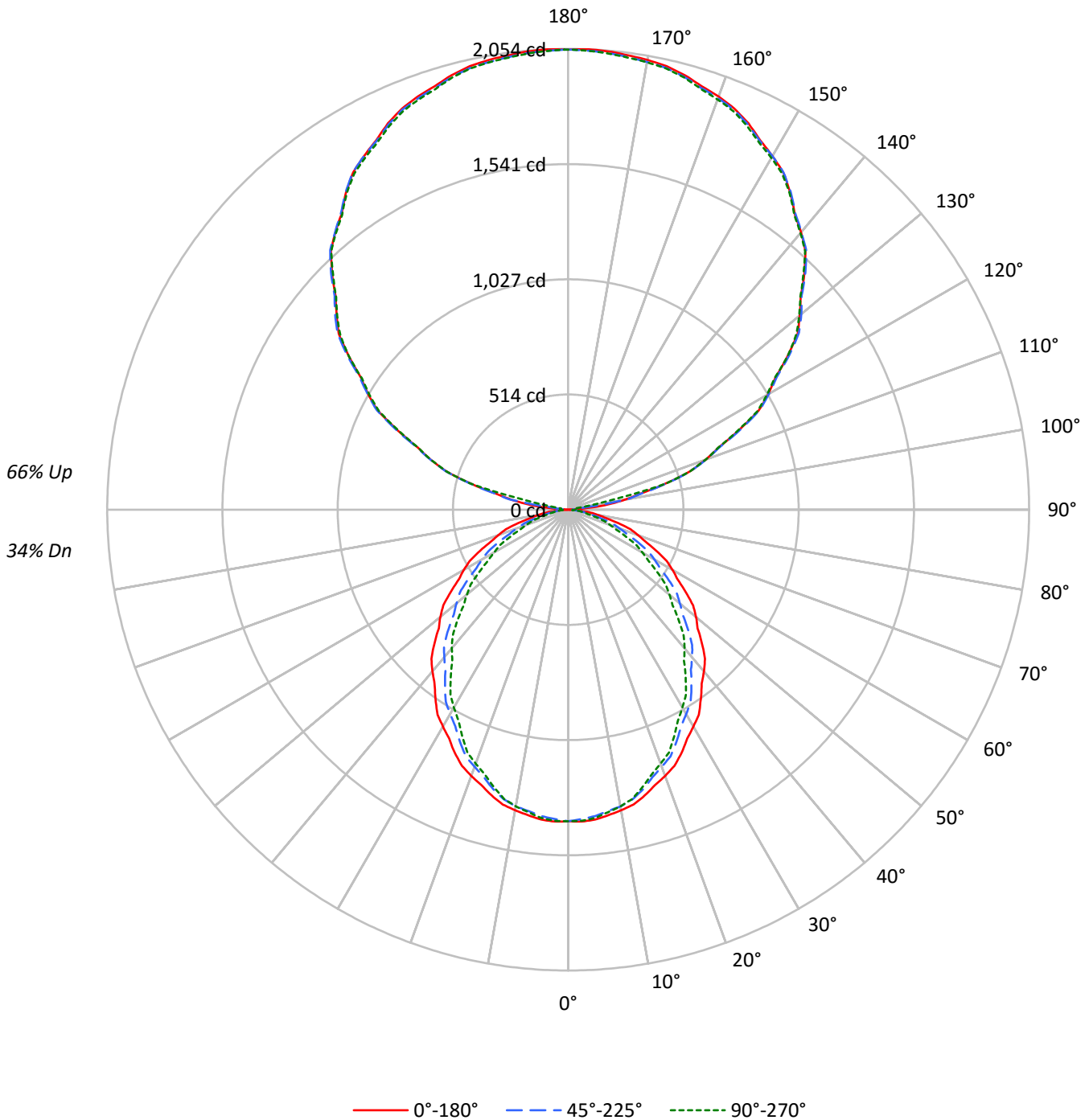
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333698-840

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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	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42	34
1	94	90	87	83	85	82	79	76	66	63	61	51	49	48	37	36	35	29
2	86	79	73	68	77	71	67	62	58	54	51	45	42	40	33	31	30	25
3	79	69	62	57	71	63	57	52	51	47	43	40	37	34	29	27	26	21
4	72	61	54	48	65	56	49	44	45	40	37	35	32	29	26	24	22	18
5	66	55	47	41	59	50	43	38	40	35	32	32	28	25	24	21	19	16
6	61	49	41	36	55	45	38	33	36	31	28	29	25	22	21	19	17	14
7	56	44	36	31	50	40	34	29	33	28	24	26	22	20	20	17	15	12
8	52	40	33	27	47	37	30	25	30	25	21	24	20	18	18	15	14	11
9	48	36	29	24	44	33	27	23	27	23	19	22	18	16	17	14	12	10
10	45	33	26	22	41	31	24	20	25	20	17	20	17	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8969	8969	8969
5°	8989	8887	8941
10°	8921	8804	8804
15°	8815	8625	8555
20°	8678	8376	8276
25°	8521	8131	7952
30°	8322	7845	7594
35°	8121	7550	7194
40°	7932	7242	6800
45°	7701	6898	6370
50°	7471	6523	5923
55°	7203	6164	5444
60°	6935	5730	4930
65°	6619	5225	4343
70°	6258	4594	3743
75°	5759	3873	3114
80°	5069	3042	2615
85°	4276	2482	2334



TEST NUMBER: P333698-840

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	1.4
10°-20°	364.9	3.8
20°-30°	529.2	5.5
30°-40°	603.1	6.3
40°-50°	587.8	6.1
50°-60°	494.8	5.2
60°-70°	346.9	3.6
70°-80°	178.3	1.9
80°-90°	49.3	0.5
90°-100°	74.5	0.8
100°-110°	459.3	4.8
110°-120°	833.0	8.7
120°-130°	1069.1	11.2
130°-140°	1149.9	12.0
140°-150°	1079.3	11.3
150°-160°	873.1	9.1
160°-170°	564.7	5.9
170°-180°	194.8	2.0
0°-30°	1024.6	10.7
0°-40°	1627.7	17.0
0°-60°	2710.4	28.3
0°-90°	3284.8	34.3
90°-120°	1366.8	14.3
90°-150°	4665.0	48.7
90°-180°	6298.0	65.7
0°-180°	9582.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1386	1382	1371	1381	1379	131
15°	1318	1311	1290	1289	1280	371
25°	1196	1179	1141	1128	1116	550
35°	1030	1004	958	928	912	645
45°	843	811	755	715	697	650
55°	640	605	547	502	484	572
65°	433	396	342	301	284	429
75°	231	199	155	133	125	244
85°	58	40	34	32	32	65
90°	2	14	24	32	36	6
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	



TEST NUMBER: P333698-840

CATALOG NUMBER: S125RDIW-S850D1560U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7
2.5°	1391.1	1390.6	1390.0	1389.5	1388.9	1387.7	1385.8	1383.9	1382.1	1380.2	1382.1
5°	1386.5	1385.6	1384.6	1383.7	1382.8	1381.1	1378.5	1375.9	1373.3	1370.8	1373.1
7.5°	1372.9	1372.0	1371.1	1370.2	1369.4	1367.4	1364.3	1361.2	1358.2	1355.0	1356.7
10°	1360.3	1359.6	1358.9	1358.2	1357.5	1355.5	1352.3	1349.0	1345.7	1342.5	1343.1
12.5°	1346.0	1345.1	1344.2	1343.4	1342.5	1339.9	1335.4	1331.1	1326.8	1322.3	1322.8
15°	1318.4	1317.0	1315.6	1314.1	1312.7	1309.6	1304.7	1299.8	1294.9	1290.0	1289.8
17.5°	1287.1	1285.0	1282.8	1280.7	1278.5	1274.3	1268.2	1262.0	1255.9	1249.7	1248.6
20°	1262.7	1260.4	1258.1	1255.8	1253.4	1248.5	1241.1	1233.7	1226.2	1218.7	1217.6
22.5°	1235.9	1233.6	1231.2	1228.9	1226.6	1221.5	1213.7	1205.9	1198.0	1190.2	1187.9
25°	1195.7	1192.1	1188.6	1185.2	1181.6	1175.6	1167.0	1158.3	1149.7	1141.1	1138.1
27.5°	1149.5	1145.3	1141.0	1136.8	1132.6	1125.8	1116.6	1107.3	1098.1	1088.8	1084.6
30°	1115.9	1111.5	1107.1	1102.7	1098.2	1091.1	1081.4	1071.6	1061.8	1052.0	1046.6
32.5°	1083.2	1078.0	1072.9	1067.7	1062.5	1054.9	1045.0	1035.0	1025.0	1015.0	1009.2
35°	1030.0	1024.3	1018.8	1013.1	1007.5	999.5	989.1	978.6	968.1	957.6	950.8
37.5°	977.7	970.9	964.1	957.3	950.5	941.7	930.9	920.0	909.2	898.4	890.3
40°	940.8	933.8	926.8	919.8	912.8	903.7	892.5	881.3	870.2	859.0	850.1
42.5°	902.2	895.0	887.9	880.6	873.4	864.1	852.5	841.0	829.4	817.9	809.4
45°	843.2	836.5	829.7	822.9	816.2	806.4	793.6	780.8	768.0	755.2	745.8
47.5°	782.2	775.1	767.9	760.8	753.7	743.7	730.7	717.8	704.9	692.0	682.4
50°	743.6	735.9	728.2	720.5	712.9	702.4	689.0	675.8	662.5	649.2	639.4
52.5°	701.7	693.8	685.9	678.0	670.1	659.9	647.4	634.9	622.3	609.8	599.3
55°	639.7	632.3	624.9	617.4	610.0	599.7	586.6	573.6	560.6	547.4	536.9
57.5°	577.2	569.3	561.3	553.3	545.4	535.1	522.5	509.9	497.4	484.7	474.5
60°	536.9	528.9	520.7	512.5	504.3	494.0	481.4	468.8	456.3	443.6	433.4
62.5°	494.2	486.5	478.7	470.8	463.0	452.8	440.0	427.3	414.4	401.7	392.2
65°	433.1	425.3	417.3	409.4	401.4	391.3	379.0	366.6	354.3	341.9	332.5
67.5°	372.5	364.6	356.7	348.8	340.8	330.9	319.1	307.3	295.5	283.6	275.1
70°	331.4	323.5	315.6	307.6	299.7	289.9	278.3	266.6	255.0	243.3	236.1
72.5°	291.1	283.4	275.7	267.9	260.2	250.9	239.9	229.0	218.1	207.2	200.6
75°	230.8	223.8	216.7	209.7	202.8	194.4	184.6	174.8	165.0	155.2	150.1
77.5°	170.8	165.1	159.6	154.0	148.3	141.7	133.8	126.0	118.2	110.4	106.7
80°	136.3	130.8	125.1	119.6	114.0	108.0	101.4	94.8	88.4	81.8	79.7
82.5°	102.8	97.8	92.7	87.7	82.6	77.9	73.4	69.0	64.4	60.0	59.0
85°	57.7	53.5	49.3	45.1	40.9	38.2	37.1	35.9	34.7	33.5	33.3
87.5°	19.6	18.9	18.1	17.3	16.6	16.3	16.6	16.9	17.2	17.5	17.8
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



TEST NUMBER: P333698-840

CATALOG NUMBER: S125RDIW-S850D1560U840-4F0-1E-UDD-F

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



TEST NUMBER: P333698-840

CATALOG NUMBER: S125RDIW-S850D1560U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7
2.5°	1383.9	1385.8	1387.7	1388.6	1388.4	1388.2	1388.0	1387.8
5°	1375.4	1377.8	1380.1	1381.1	1380.6	1380.1	1379.7	1379.2
7.5°	1358.4	1360.0	1361.6	1362.1	1361.6	1361.1	1360.6	1360.1
10°	1343.8	1344.5	1345.2	1345.2	1344.5	1343.8	1343.1	1342.5
12.5°	1323.3	1323.8	1324.3	1324.1	1323.0	1321.9	1320.9	1319.8
15°	1289.6	1289.3	1289.1	1288.0	1285.9	1283.7	1281.6	1279.5
17.5°	1247.4	1246.3	1245.1	1243.6	1241.9	1240.2	1238.5	1236.8
20°	1216.4	1215.2	1214.1	1212.4	1210.3	1208.2	1206.1	1204.1
22.5°	1185.6	1183.4	1181.0	1179.0	1177.3	1175.6	1173.9	1172.2
25°	1135.1	1132.1	1129.0	1126.2	1123.6	1121.1	1118.5	1115.9
27.5°	1080.4	1076.1	1071.9	1068.5	1066.1	1063.6	1061.2	1058.6
30°	1041.3	1035.9	1030.5	1026.8	1024.7	1022.6	1020.5	1018.3
32.5°	1003.2	997.2	991.4	987.0	984.4	981.8	979.1	976.4
35°	944.0	937.3	930.5	925.5	922.2	919.0	915.7	912.4
37.5°	882.2	874.0	866.0	860.3	857.2	853.9	850.8	847.7
40°	841.2	832.4	823.5	817.7	815.0	812.1	809.3	806.6
42.5°	800.9	792.4	784.0	777.6	773.6	769.4	765.3	761.2
45°	736.5	727.2	717.8	711.4	707.9	704.5	700.9	697.4
47.5°	672.8	663.2	653.6	646.8	643.0	639.1	635.2	631.4
50°	629.7	619.9	610.1	603.4	600.0	596.4	592.9	589.5
52.5°	588.8	578.1	567.6	560.6	557.1	553.6	550.2	546.6
55°	526.5	516.0	505.5	498.4	494.7	491.0	487.3	483.5
57.5°	464.2	454.0	443.7	437.0	433.6	430.3	427.1	423.7
60°	423.1	412.8	402.6	395.8	392.2	388.8	385.3	381.7
62.5°	382.6	373.1	363.7	357.2	353.7	350.1	346.7	343.2
65°	323.3	314.0	304.6	298.2	294.7	291.2	287.7	284.2
67.5°	266.5	258.0	249.4	243.8	241.1	238.2	235.4	232.7
70°	228.8	221.7	214.4	209.4	206.6	203.8	201.1	198.2
72.5°	193.9	187.2	180.6	176.3	174.4	172.6	170.8	168.8
75°	145.0	139.9	134.7	131.4	129.7	128.1	126.4	124.8
77.5°	103.1	99.6	95.9	93.6	92.4	91.2	90.0	88.8
80°	77.7	75.5	73.4	72.1	71.7	71.2	70.7	70.3
82.5°	58.1	57.1	56.0	55.4	55.1	54.9	54.6	54.3
85°	33.1	32.8	32.6	32.4	32.1	31.9	31.7	31.5
87.5°	18.1	18.5	18.8	19.0	19.0	19.0	19.0	19.1
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: P333698-840

CATALOG NUMBER: S125RDIW-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)