

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: P333690-840

Luminaire Tested: **S125RDIW-S850D1050U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333690-840  
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-S850D1050U840-4F0-1E-UDD-F  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1050 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7514.4 lumens  
Efficiency: N/A  
Efficacy: 142.9 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: General Diffuse

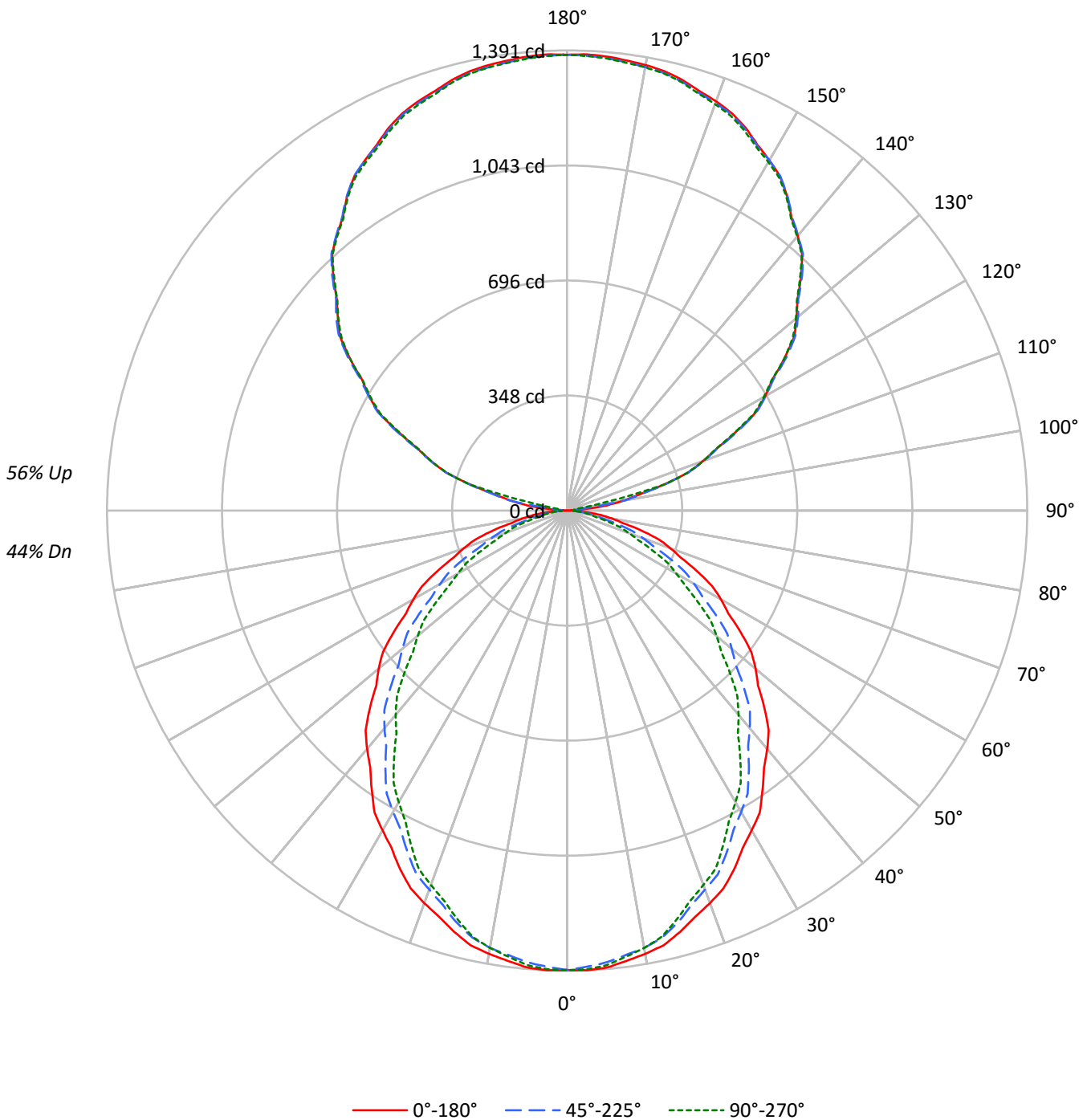
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36	31
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	35	33	31	27
4	74	63	55	49	67	58	51	46	49	44	40	40	36	33	32	29	27	23
5	68	56	48	42	62	52	45	40	44	38	34	36	32	29	29	26	24	20
6	62	50	42	37	57	47	40	34	39	34	30	32	28	25	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	20	17	15	13
10	46	35	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.6	1.7
10°-20°	364.9	4.9
20°-30°	529.2	7.0
30°-40°	603.1	8.0
40°-50°	587.8	7.8
50°-60°	494.8	6.6
60°-70°	346.9	4.6
70°-80°	178.3	2.4
80°-90°	47.9	0.6
90°-100°	50.1	0.7
100°-110°	308.6	4.1
110°-120°	559.7	7.4
120°-130°	718.2	9.6
130°-140°	772.5	10.3
140°-150°	725.1	9.6
150°-160°	586.6	7.8
160°-170°	379.4	5.0
170°-180°	130.8	1.7
0°-30°	1024.6	13.6
0°-40°	1627.7	21.7
0°-60°	2710.4	36.1
0°-90°	3283.4	43.7
90°-120°	918.3	12.2
90°-150°	3134.2	41.7
90°-180°	4231.0	56.3
0°-180°	7514.4	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°	1	9	16	21	24	5
95°	58	53	16	21	21	74
105°	300	304	304	304	303	318
115°	564	569	570	566	560	559
125°	802	808	809	805	802	716
135°	1000	1006	1004	1002	996	770
145°	1159	1161	1161	1162	1156	725
155°	1277	1271	1273	1275	1268	588
165°	1347	1341	1342	1347	1340	380
175°	1378	1372	1373	1380	1372	131
180°	1378	1378	1378	1378	1378	



TEST NUMBER: P333690-840

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**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°	19.5	18.6	17.6	16.7	15.8	15.3	15.5	15.6	15.8	15.9	16.1
90°	1.0	2.8	4.6	6.5	8.3	10.0	11.6	13.1	14.7	16.4	17.5
92.5°	15.8	14.4	13.2	11.9	10.6	10.7	12.1	13.5	14.9	16.4	17.5
95°	58.2	57.6	56.9	56.1	55.5	50.8	42.2	33.6	24.9	16.4	17.5
97.5°	121.6	122.8	124.0	125.2	126.4	118.6	101.5	84.4	67.4	50.3	43.8
100°	170.6	171.3	171.9	172.6	173.3	174.1	175.0	175.9	176.8	177.7	143.9
102.5°	220.5	221.3	222.2	223.0	223.9	224.6	225.1	225.6	226.2	226.7	220.4
105°	300.2	301.1	302.1	303.0	303.9	304.4	304.4	304.4	304.4	304.4	304.4
107.5°	383.2	383.2	383.2	383.2	383.2	383.4	383.8	384.4	384.8	385.3	385.3
110°	437.2	437.2	437.2	437.2	437.2	437.4	437.8	438.3	438.7	439.2	438.5



TEST NUMBER: P333690-840

CATALOG NUMBER: S125RDIW-S850D1050U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	487.8	488.4	488.9	489.4	490.0	490.4	490.7	490.9	491.2	491.5	490.6
115°	563.8	564.9	566.0	567.1	568.4	569.0	569.3	569.5	569.7	569.9	569.0
117.5°	642.5	642.4	642.4	642.3	642.3	642.7	643.5	644.4	645.2	646.1	644.9
120°	691.5	691.3	690.9	690.7	690.5	690.7	691.5	692.2	692.8	693.5	693.1
122.5°	734.8	735.6	736.5	737.3	738.2	738.8	739.1	739.4	739.7	740.0	739.6
125°	801.7	803.3	805.0	806.5	808.1	808.9	808.9	808.9	808.9	808.9	808.0
127.5°	865.7	866.9	868.0	869.1	870.2	870.7	870.6	870.5	870.3	870.2	869.7
130°	904.9	906.1	907.2	908.3	909.5	910.1	910.4	910.6	910.8	911.0	910.4
132.5°	944.1	945.4	946.7	948.1	949.4	949.8	949.3	948.8	948.3	947.9	947.7
135°	999.9	1001.3	1002.6	1004.0	1005.3	1005.8	1005.3	1004.9	1004.4	1004.0	1003.5
137.5°	1051.2	1052.4	1053.5	1054.7	1055.9	1056.3	1055.9	1055.5	1055.0	1054.6	1054.7
140°	1084.7	1085.1	1085.6	1086.0	1086.5	1086.6	1086.4	1086.1	1085.9	1085.7	1086.1
142.5°	1114.9	1115.2	1115.5	1115.7	1116.0	1116.3	1116.6	1116.9	1117.2	1117.5	1117.6
145°	1159.2	1159.7	1160.1	1160.6	1161.0	1161.2	1161.2	1161.2	1161.2	1161.2	1161.5
147.5°	1198.0	1198.0	1197.9	1197.8	1197.7	1197.8	1198.0	1198.3	1198.6	1198.8	1199.1
150°	1222.5	1222.1	1221.6	1221.2	1220.7	1220.7	1221.2	1221.6	1222.1	1222.5	1223.0
152.5°	1246.3	1245.3	1244.3	1243.2	1242.2	1242.0	1242.4	1242.9	1243.3	1243.7	1244.3
155°	1276.7	1275.4	1273.9	1272.6	1271.2	1270.8	1271.2	1271.7	1272.1	1272.6	1273.2
157.5°	1300.2	1299.4	1298.6	1297.8	1296.9	1296.6	1296.6	1296.6	1296.7	1296.7	1297.5
160°	1316.6	1315.1	1313.8	1312.4	1311.1	1310.5	1310.7	1311.0	1311.2	1311.4	1312.3
162.5°	1329.6	1328.3	1326.9	1325.5	1324.1	1323.5	1323.8	1324.0	1324.2	1324.4	1325.8
165°	1347.2	1345.8	1344.4	1343.1	1341.7	1341.1	1341.4	1341.6	1341.8	1342.0	1343.4
167.5°	1360.2	1358.9	1357.5	1356.0	1354.6	1354.0	1354.2	1354.4	1354.7	1354.9	1356.6
170°	1367.6	1366.0	1364.4	1362.8	1361.2	1360.6	1360.8	1361.0	1361.2	1361.5	1363.3
172.5°	1372.5	1370.9	1369.3	1367.8	1366.1	1365.5	1365.9	1366.3	1366.8	1367.2	1368.8
175°	1377.8	1376.4	1375.0	1373.7	1372.3	1371.8	1372.0	1372.2	1372.5	1372.7	1374.5
177.5°	1380.3	1379.2	1378.1	1377.0	1375.9	1375.4	1375.6	1375.8	1375.9	1376.1	1377.5
180°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8



TEST NUMBER: P333690-840

CATALOG NUMBER: S125RDIW-S850D1050U840-4F0-1E-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°	16.3	16.6	16.8	16.9	16.8	16.8	16.7	16.7
90°	18.6	19.8	20.9	21.8	22.5	23.1	23.8	24.5
92.5°	18.6	19.8	20.9	21.6	21.9	22.2	22.5	22.9
95°	18.6	19.8	20.9	21.4	21.4	21.4	21.4	21.4
97.5°	37.5	31.0	24.6	21.4	21.4	21.4	21.4	21.4
100°	110.1	76.2	42.4	25.0	24.1	23.2	22.3	21.4
102.5°	213.9	207.5	201.2	190.3	174.8	159.4	143.9	128.5
105°	304.4	304.4	304.4	304.3	304.1	303.8	303.6	303.4
107.5°	385.4	385.4	385.5	385.2	384.5	383.7	383.0	382.4
110°	437.8	437.2	436.5	436.3	436.5	436.7	436.9	437.2





TEST NUMBER: P333690-840

CATALOG NUMBER: S125RDIW-S850D1050U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	489.8	488.9	488.1	487.5	487.2	486.8	486.5	486.1
115°	568.0	567.1	566.2	565.1	563.8	562.4	561.1	559.7
117.5°	643.8	642.6	641.4	640.5	640.0	639.3	638.7	638.1
120°	692.6	692.2	691.7	690.8	689.7	688.6	687.5	686.3
122.5°	739.1	738.7	738.2	737.4	736.1	734.8	733.5	732.2
125°	807.1	806.2	805.3	804.5	803.9	803.1	802.4	801.7
127.5°	869.2	868.7	868.2	867.1	865.5	863.7	862.0	860.4
130°	909.7	909.0	908.3	907.4	906.3	905.1	904.0	902.9
132.5°	947.6	947.4	947.3	946.6	945.5	944.3	943.2	942.1
135°	1003.1	1002.6	1002.2	1001.3	999.9	998.6	997.1	995.8
137.5°	1054.8	1054.9	1055.0	1054.5	1053.3	1052.1	1051.0	1049.8
140°	1086.6	1087.0	1087.5	1087.0	1085.7	1084.3	1083.0	1081.6
142.5°	1117.7	1117.8	1117.9	1117.3	1115.9	1114.6	1113.2	1111.9
145°	1161.7	1162.0	1162.2	1161.6	1160.2	1158.9	1157.5	1156.2
147.5°	1199.4	1199.7	1199.9	1199.3	1197.6	1196.0	1194.4	1192.8
150°	1223.5	1224.0	1224.4	1223.7	1221.8	1220.0	1218.2	1216.4
152.5°	1244.7	1245.2	1245.6	1245.1	1243.3	1241.7	1240.1	1238.5
155°	1273.9	1274.7	1275.4	1274.8	1272.9	1271.1	1269.3	1267.5
157.5°	1298.2	1298.9	1299.6	1299.1	1297.3	1295.5	1293.6	1291.8
160°	1313.2	1314.1	1315.0	1314.5	1312.8	1311.0	1309.2	1307.4
162.5°	1327.1	1328.3	1329.6	1329.2	1327.2	1325.2	1323.2	1321.2
165°	1344.7	1346.2	1347.5	1347.3	1345.4	1343.6	1341.8	1340.0
167.5°	1358.2	1359.8	1361.5	1361.3	1359.2	1357.2	1355.1	1353.1
170°	1365.1	1367.0	1368.8	1368.6	1366.5	1364.5	1362.5	1360.4
172.5°	1370.5	1372.1	1373.7	1373.5	1371.5	1369.4	1367.4	1365.3
175°	1376.3	1378.2	1380.0	1379.9	1377.8	1375.7	1373.7	1371.7
177.5°	1378.7	1380.0	1381.3	1381.2	1379.7	1378.3	1376.8	1375.3
180°	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8	1377.8

(END OF REPORT)