

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: P333690-830

Luminaire Tested: **S125RDIW-S850D1050U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333690-830
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-S850D1050U830-4F0-1E-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: 7013.5 lumens
Efficiency: N/A
Efficacy: 133.3 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

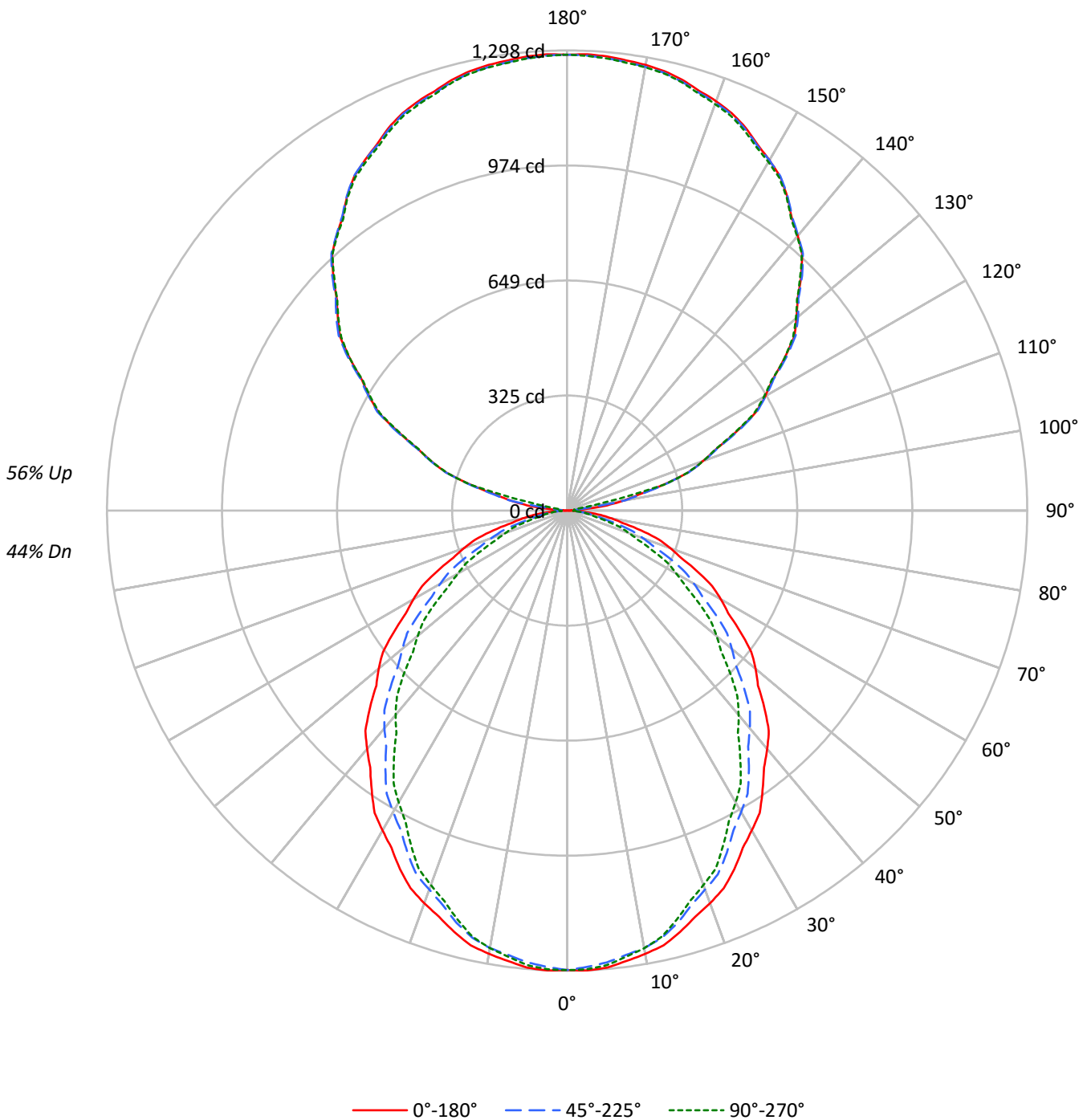
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8371	8371	8371
5°	8390	8294	8345
10°	8326	8217	8217
15°	8227	8050	7985
20°	8100	7818	7724
25°	7953	7590	7422
30°	7767	7322	7088
35°	7579	7046	6714
40°	7403	6759	6347
45°	7188	6437	5945
50°	6973	6089	5528
55°	6723	5754	5082
60°	6473	5349	4602
65°	6178	4876	4053
70°	5840	4288	3493
75°	5375	3616	2907
80°	4731	2838	2440
85°	3987	2319	2179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.9	1.7
10°-20°	340.6	4.9
20°-30°	493.9	7.0
30°-40°	562.9	8.0
40°-50°	548.6	7.8
50°-60°	461.8	6.6
60°-70°	323.7	4.6
70°-80°	166.4	2.4
80°-90°	44.7	0.6
90°-100°	46.7	0.7
100°-110°	288.0	4.1
110°-120°	522.3	7.4
120°-130°	670.4	9.6
130°-140°	721.0	10.3
140°-150°	676.8	9.6
150°-160°	547.5	7.8
160°-170°	354.1	5.0
170°-180°	122.1	1.7
0°-30°	956.3	13.6
0°-40°	1519.2	21.7
0°-60°	2529.7	36.1
0°-90°	3064.5	43.7
90°-120°	857.1	12.2
90°-150°	2925.3	41.7
90°-180°	3949.0	56.3
0°-180°	7013.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1296	1296	1296	1296	1296	
5°	1294	1290	1279	1289	1287	123
15°	1230	1224	1204	1203	1194	347
25°	1116	1100	1065	1052	1042	513
35°	961	937	894	866	852	602
45°	787	757	705	667	651	607
55°	597	564	511	468	451	534
65°	404	370	319	281	265	400
75°	215	185	145	124	116	228
85°	54	37	31	30	29	60
90°	1	8	15	20	23	5
95°	54	50	15	20	20	69
105°	280	284	284	284	283	297
115°	526	531	532	528	522	521
125°	748	755	755	751	748	668
135°	933	939	937	935	929	719
145°	1082	1084	1084	1084	1079	676
155°	1192	1186	1188	1190	1183	549
165°	1257	1252	1252	1258	1251	355
175°	1286	1281	1281	1288	1280	122
180°	1286	1286	1286	1286	1286	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1
2.5°	1298.4	1297.9	1297.3	1296.8	1296.3	1295.1	1293.5	1291.7	1290.0	1288.2	1290.0
5°	1294.1	1293.3	1292.3	1291.5	1290.6	1289.0	1286.6	1284.2	1281.8	1279.4	1281.6
7.5°	1281.4	1280.5	1279.7	1278.8	1278.1	1276.2	1273.4	1270.5	1267.6	1264.7	1266.2
10°	1269.6	1268.9	1268.3	1267.6	1267.0	1265.2	1262.2	1259.0	1256.0	1253.0	1253.6
12.5°	1256.3	1255.5	1254.6	1253.9	1253.0	1250.6	1246.4	1242.4	1238.3	1234.2	1234.6
15°	1230.5	1229.2	1227.9	1226.5	1225.2	1222.3	1217.8	1213.1	1208.6	1204.0	1203.8
17.5°	1201.3	1199.3	1197.3	1195.3	1193.3	1189.4	1183.6	1177.9	1172.1	1166.4	1165.4
20°	1178.6	1176.4	1174.2	1172.1	1169.9	1165.3	1158.4	1151.4	1144.4	1137.5	1136.4
22.5°	1153.5	1151.3	1149.1	1147.0	1144.8	1140.1	1132.7	1125.5	1118.1	1110.9	1108.7
25°	1116.0	1112.7	1109.4	1106.2	1102.9	1097.2	1089.2	1081.1	1073.1	1065.1	1062.2
27.5°	1072.9	1068.9	1065.0	1061.0	1057.1	1050.7	1042.2	1033.5	1024.9	1016.2	1012.3
30°	1041.5	1037.4	1033.3	1029.2	1025.0	1018.3	1009.3	1000.1	991.0	981.8	976.9
32.5°	1011.0	1006.2	1001.4	996.6	991.6	984.6	975.3	966.0	956.7	947.3	941.9
35°	961.3	956.0	950.8	945.6	940.4	932.8	923.1	913.3	903.5	893.7	887.4
37.5°	912.5	906.2	899.8	893.4	887.1	878.9	868.8	858.7	848.6	838.5	830.9
40°	878.1	871.6	865.0	858.5	852.0	843.5	833.0	822.6	812.2	801.7	793.4
42.5°	842.1	835.4	828.7	821.9	815.2	806.5	795.7	784.9	774.1	763.4	755.4
45°	787.0	780.7	774.4	768.1	761.8	752.6	740.6	728.8	716.8	704.8	696.1
47.5°	730.1	723.4	716.7	710.1	703.4	694.1	682.0	670.0	657.9	645.8	636.9
50°	694.0	686.8	679.7	672.5	665.3	655.5	643.1	630.7	618.3	606.0	596.8
52.5°	654.9	647.5	640.2	632.8	625.5	616.0	604.3	592.6	580.8	569.1	559.3
55°	597.1	590.1	583.2	576.3	569.3	559.7	547.5	535.4	523.2	511.0	501.1
57.5°	538.8	531.3	523.9	516.4	509.1	499.5	487.7	475.9	464.2	452.4	442.9
60°	501.1	493.6	486.0	478.3	470.7	461.1	449.3	437.5	425.8	414.1	404.5
62.5°	461.3	454.0	446.8	439.4	432.2	422.6	410.7	398.8	386.8	374.9	366.1
65°	404.3	396.9	389.5	382.1	374.7	365.2	353.7	342.1	330.6	319.1	310.4
67.5°	347.7	340.3	332.9	325.6	318.1	308.9	297.8	286.8	275.8	264.7	256.7
70°	309.3	301.9	294.5	287.1	279.7	270.6	259.8	248.8	238.0	227.1	220.4
72.5°	271.7	264.5	257.3	250.1	242.9	234.1	223.9	213.8	203.6	193.4	187.2
75°	215.4	208.9	202.3	195.8	189.3	181.4	172.3	163.2	154.0	144.9	140.1
77.5°	159.4	154.1	148.9	143.7	138.5	132.2	124.9	117.6	110.3	103.0	99.6
80°	127.2	122.1	116.8	111.6	106.4	100.8	94.6	88.5	82.5	76.3	74.4
82.5°	96.0	91.2	86.5	81.8	77.1	72.7	68.5	64.4	60.1	56.0	55.0
85°	53.8	50.0	46.0	42.1	38.2	35.6	34.6	33.5	32.4	31.3	31.1
87.5°	18.2	17.3	16.4	15.6	14.7	14.3	14.4	14.5	14.7	14.8	15.0
90°	0.9	2.6	4.3	6.0	7.7	9.3	10.8	12.3	13.8	15.3	16.3
92.5°	14.7	13.5	12.3	11.1	9.9	10.0	11.3	12.6	13.9	15.3	16.3
95°	54.3	53.7	53.1	52.4	51.8	47.4	39.4	31.4	23.3	15.3	16.3
97.5°	113.5	114.6	115.7	116.9	118.0	110.7	94.7	78.8	62.9	46.9	40.9
100°	159.2	159.9	160.4	161.1	161.7	162.5	163.3	164.2	165.0	165.9	134.3
102.5°	205.8	206.5	207.4	208.1	209.0	209.6	210.1	210.6	211.1	211.6	205.7
105°	280.2	281.1	281.9	282.8	283.6	284.1	284.1	284.1	284.1	284.1	284.1
107.5°	357.7	357.7	357.7	357.7	357.7	357.9	358.3	358.7	359.1	359.6	359.6
110°	408.0	408.0	408.0	408.0	408.0	408.2	408.6	409.1	409.4	409.9	409.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	455.2	455.8	456.3	456.8	457.3	457.7	458.0	458.2	458.5	458.7	457.9
115°	526.2	527.3	528.3	529.3	530.5	531.0	531.3	531.5	531.7	531.9	531.0
117.5°	599.6	599.6	599.6	599.5	599.5	599.8	600.6	601.4	602.2	603.0	601.9
120°	645.4	645.2	644.9	644.7	644.5	644.7	645.4	646.0	646.6	647.2	646.9
122.5°	685.8	686.5	687.4	688.2	689.0	689.6	689.8	690.1	690.4	690.7	690.3
125°	748.3	749.8	751.3	752.7	754.2	755.0	755.0	755.0	755.0	755.0	754.1
127.5°	807.9	809.1	810.1	811.2	812.2	812.7	812.6	812.5	812.3	812.2	811.7
130°	844.6	845.6	846.7	847.7	848.9	849.4	849.7	849.9	850.1	850.3	849.7
132.5°	881.2	882.4	883.6	884.9	886.1	886.5	886.0	885.5	885.0	884.7	884.5
135°	933.2	934.5	935.8	937.1	938.3	938.8	938.3	937.9	937.5	937.1	936.6
137.5°	981.1	982.2	983.3	984.4	985.5	985.9	985.5	985.1	984.7	984.3	984.4
140°	1012.4	1012.8	1013.2	1013.6	1014.1	1014.2	1014.0	1013.7	1013.5	1013.3	1013.7
142.5°	1040.6	1040.8	1041.1	1041.3	1041.6	1041.9	1042.2	1042.5	1042.7	1043.0	1043.1
145°	1081.9	1082.4	1082.8	1083.3	1083.6	1083.8	1083.8	1083.8	1083.8	1083.8	1084.1
147.5°	1118.1	1118.1	1118.0	1117.9	1117.9	1117.9	1118.1	1118.4	1118.7	1118.9	1119.2
150°	1141.0	1140.7	1140.2	1139.8	1139.3	1139.3	1139.8	1140.2	1140.7	1141.0	1141.5
152.5°	1163.2	1162.2	1161.3	1160.4	1159.4	1159.2	1159.6	1160.1	1160.5	1160.8	1161.3
155°	1191.6	1190.3	1189.0	1187.8	1186.5	1186.1	1186.5	1186.9	1187.3	1187.8	1188.4
157.5°	1213.5	1212.8	1212.0	1211.3	1210.4	1210.1	1210.1	1210.1	1210.2	1210.2	1211.0
160°	1228.8	1227.5	1226.2	1224.9	1223.7	1223.1	1223.3	1223.6	1223.8	1224.0	1224.8
162.5°	1241.0	1239.7	1238.4	1237.2	1235.9	1235.3	1235.6	1235.8	1236.0	1236.1	1237.4
165°	1257.4	1256.1	1254.8	1253.6	1252.3	1251.7	1252.0	1252.2	1252.4	1252.5	1253.9
167.5°	1269.5	1268.3	1267.0	1265.6	1264.3	1263.8	1263.9	1264.1	1264.4	1264.6	1266.1
170°	1276.4	1275.0	1273.5	1272.0	1270.5	1269.9	1270.1	1270.3	1270.5	1270.7	1272.4
172.5°	1281.0	1279.5	1278.0	1276.6	1275.1	1274.5	1274.9	1275.3	1275.6	1276.0	1277.5
175°	1285.9	1284.7	1283.4	1282.1	1280.8	1280.3	1280.5	1280.7	1281.0	1281.2	1282.9
177.5°	1288.3	1287.2	1286.2	1285.2	1284.2	1283.7	1283.9	1284.1	1284.2	1284.4	1285.6
180°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1
2.5°	1291.7	1293.5	1295.1	1296.0	1295.8	1295.6	1295.4	1295.2
5°	1283.7	1285.9	1288.1	1289.0	1288.5	1288.1	1287.7	1287.2
7.5°	1267.8	1269.3	1270.8	1271.3	1270.8	1270.4	1269.9	1269.4
10°	1254.2	1254.9	1255.6	1255.6	1254.9	1254.2	1253.6	1253.0
12.5°	1235.1	1235.6	1236.1	1235.9	1234.8	1233.8	1232.8	1231.8
15°	1203.6	1203.3	1203.2	1202.1	1200.1	1198.2	1196.2	1194.2
17.5°	1164.2	1163.2	1162.1	1160.7	1159.1	1157.5	1155.9	1154.3
20°	1135.3	1134.2	1133.1	1131.6	1129.6	1127.7	1125.7	1123.8
22.5°	1106.5	1104.5	1102.3	1100.4	1098.8	1097.2	1095.6	1094.0
25°	1059.4	1056.6	1053.8	1051.1	1048.7	1046.3	1044.0	1041.5
27.5°	1008.3	1004.4	1000.4	997.3	995.0	992.7	990.4	988.1
30°	971.9	966.9	961.8	958.4	956.4	954.4	952.4	950.5
32.5°	936.3	930.8	925.3	921.2	918.8	916.3	913.8	911.3
35°	881.1	874.8	868.5	863.8	860.7	857.7	854.7	851.6
37.5°	823.4	815.8	808.2	803.0	800.0	797.0	794.1	791.2
40°	785.1	776.9	768.6	763.2	760.6	758.0	755.4	752.8
42.5°	747.5	739.6	731.7	725.8	722.0	718.1	714.3	710.5
45°	687.4	678.7	670.0	664.0	660.7	657.5	654.2	650.9
47.5°	627.9	619.0	610.0	603.7	600.1	596.5	592.9	589.3
50°	587.7	578.5	569.4	563.2	560.0	556.7	553.4	550.2
52.5°	549.5	539.6	529.8	523.2	520.0	516.7	513.5	510.2
55°	491.4	481.6	471.8	465.1	461.8	458.3	454.8	451.3
57.5°	433.3	423.8	414.2	407.8	404.7	401.6	398.6	395.5
60°	394.9	385.3	375.8	369.4	366.1	362.9	359.6	356.3
62.5°	357.1	348.3	339.4	333.4	330.1	326.8	323.6	320.3
65°	301.7	293.0	284.3	278.3	275.0	271.8	268.5	265.2
67.5°	248.7	240.8	232.8	227.5	225.0	222.3	219.7	217.2
70°	213.6	206.9	200.1	195.5	192.8	190.2	187.7	185.0
72.5°	181.0	174.7	168.5	164.6	162.8	161.1	159.4	157.6
75°	135.3	130.5	125.7	122.6	121.0	119.5	118.0	116.5
77.5°	96.2	92.9	89.5	87.4	86.2	85.1	84.0	82.8
80°	72.5	70.5	68.5	67.3	66.9	66.4	66.0	65.6
82.5°	54.2	53.3	52.3	51.7	51.5	51.3	51.0	50.7
85°	30.9	30.6	30.4	30.3	30.0	29.8	29.6	29.4
87.5°	15.2	15.5	15.6	15.7	15.6	15.6	15.6	15.6
90°	17.3	18.5	19.5	20.4	21.0	21.6	22.2	22.9
92.5°	17.3	18.5	19.5	20.2	20.5	20.7	21.0	21.4
95°	17.3	18.5	19.5	20.0	20.0	20.0	20.0	20.0
97.5°	35.0	28.9	23.0	20.0	20.0	20.0	20.0	20.0
100°	102.7	71.2	39.6	23.4	22.5	21.7	20.8	20.0
102.5°	199.6	193.7	187.8	177.6	163.2	148.7	134.3	119.9
105°	284.1	284.1	284.1	284.0	283.8	283.5	283.3	283.1
107.5°	359.7	359.7	359.8	359.5	358.8	358.2	357.5	356.9
110°	408.6	408.0	407.4	407.2	407.4	407.6	407.7	408.0



TEST NUMBER: P333690-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	457.1	456.3	455.5	455.0	454.7	454.3	454.0	453.7
115°	530.2	529.3	528.5	527.4	526.2	524.9	523.7	522.4
117.5°	600.9	599.7	598.6	597.8	597.3	596.7	596.2	595.6
120°	646.4	646.0	645.5	644.8	643.8	642.7	641.7	640.6
122.5°	689.8	689.5	689.0	688.2	687.0	685.8	684.6	683.3
125°	753.3	752.4	751.6	750.8	750.3	749.6	748.9	748.3
127.5°	811.2	810.8	810.3	809.3	807.8	806.2	804.6	803.0
130°	849.0	848.4	847.7	846.9	845.8	844.8	843.8	842.7
132.5°	884.4	884.2	884.1	883.5	882.5	881.4	880.3	879.3
135°	936.2	935.8	935.4	934.5	933.2	932.0	930.7	929.4
137.5°	984.5	984.6	984.7	984.2	983.1	981.9	980.9	979.8
140°	1014.2	1014.6	1015.0	1014.6	1013.3	1012.0	1010.8	1009.5
142.5°	1043.2	1043.3	1043.4	1042.8	1041.5	1040.3	1039.0	1037.7
145°	1084.3	1084.5	1084.7	1084.2	1082.9	1081.7	1080.3	1079.1
147.5°	1119.5	1119.7	1119.9	1119.4	1117.8	1116.3	1114.7	1113.2
150°	1141.9	1142.4	1142.7	1142.1	1140.4	1138.7	1137.0	1135.3
152.5°	1161.7	1162.2	1162.5	1162.1	1160.5	1159.0	1157.4	1155.9
155°	1189.0	1189.7	1190.3	1189.8	1188.1	1186.4	1184.7	1183.0
157.5°	1211.6	1212.3	1213.0	1212.5	1210.8	1209.1	1207.4	1205.7
160°	1225.7	1226.5	1227.4	1226.9	1225.3	1223.6	1221.9	1220.2
162.5°	1238.6	1239.7	1241.0	1240.6	1238.7	1236.9	1235.0	1233.1
165°	1255.1	1256.4	1257.6	1257.4	1255.7	1254.1	1252.4	1250.7
167.5°	1267.6	1269.1	1270.7	1270.5	1268.6	1266.7	1264.8	1262.9
170°	1274.1	1275.8	1277.5	1277.3	1275.4	1273.6	1271.7	1269.7
172.5°	1279.1	1280.6	1282.1	1282.0	1280.1	1278.1	1276.2	1274.3
175°	1284.6	1286.3	1288.0	1287.9	1285.9	1284.0	1282.1	1280.3
177.5°	1286.8	1288.0	1289.2	1289.1	1287.7	1286.4	1285.1	1283.6
180°	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9	1285.9

(END OF REPORT)