

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: P332798-935

Luminaire Tested: **S124DIW-S795D1340U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332798-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1340U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6942.9 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

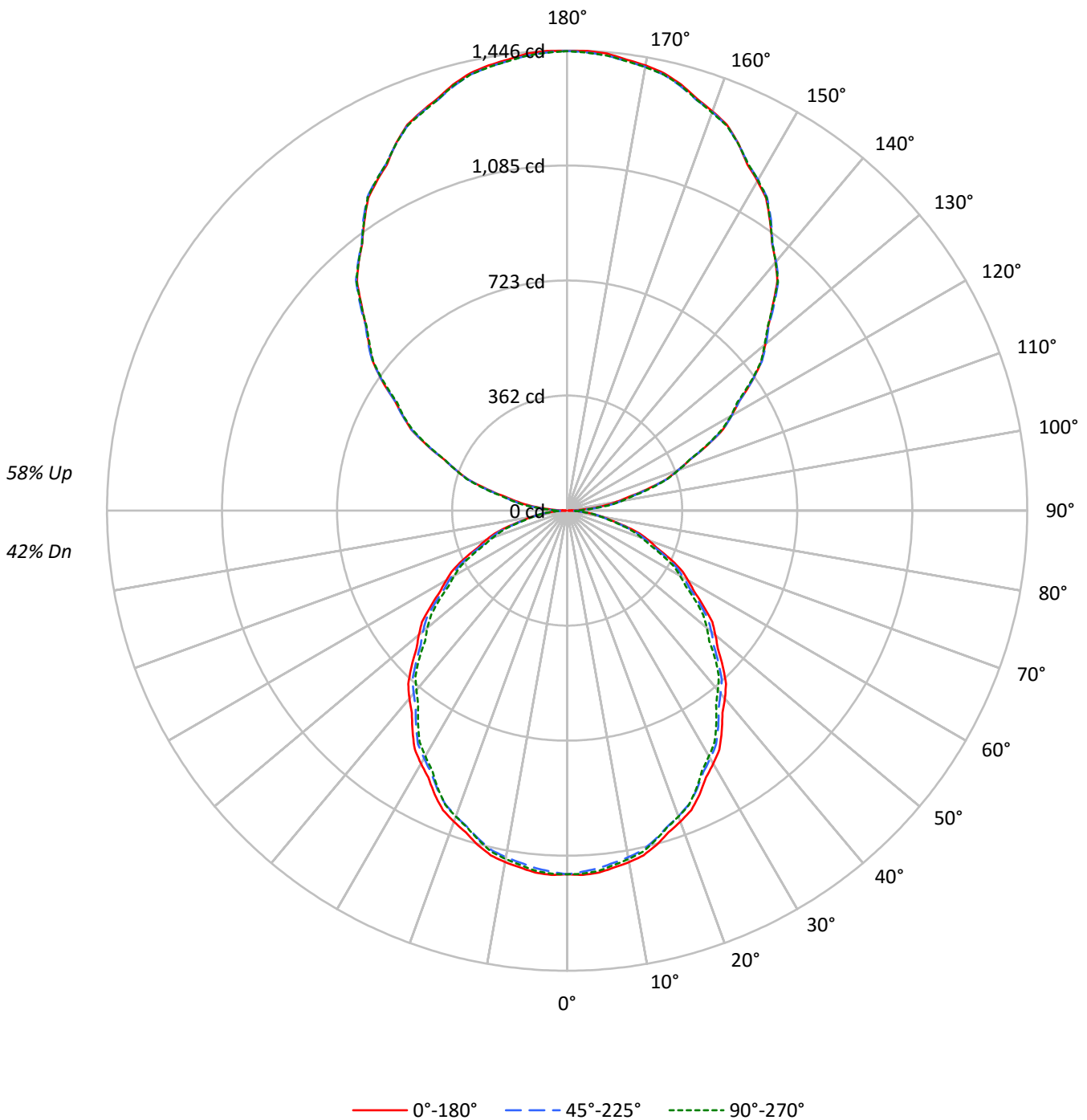
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	50	30	10	0														
RCR																																						
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42																				
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36																				
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30																				
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	34	31	30	25																				
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	28	25	22																				
5	67	55	47	41	61	51	44	39	42	37	33	35	31	28	27	24	22	19																				
6	62	50	42	36	56	46	39	33	38	33	29	31	27	24	25	22	20	16																				
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	20	17	15																				
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	21	18	16	13																				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12																				
10	46	34	27	22	42	31	25	21	27	21	18	22	18	15	18	15	13	11																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9227	9227	9227
5°	9255	9143	9210
10°	9197	9069	9114
15°	9086	8940	8964
20°	8937	8781	8789
25°	8769	8598	8573
30°	8563	8383	8307
35°	8348	8159	8051
40°	8126	7904	7759
45°	7895	7654	7507
50°	7637	7430	7200
55°	7361	7142	6909
60°	7083	6817	6610
65°	6770	6508	6245
70°	6420	6097	5858
75°	5883	5599	5459
80°	5235	5026	4895
85°	4576	4409	4326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	1.6
10°-20°	303.3	4.4
20°-30°	446.4	6.4
30°-40°	518.9	7.5
40°-50°	518.9	7.5
50°-60°	453.9	6.5
60°-70°	337.1	4.9
70°-80°	191.5	2.8
80°-90°	59.6	0.9
90°-100°	95.2	1.4
100°-110°	282.1	4.1
110°-120°	478.8	6.9
120°-130°	631.3	9.1
130°-140°	709.0	10.2
140°-150°	696.7	10.0
150°-160°	586.0	8.4
160°-170°	389.9	5.6
170°-180°	136.5	2.0
0°-30°	857.3	12.3
0°-40°	1376.2	19.8
0°-60°	2349.1	33.8
0°-90°	2937.3	42.3
90°-120°	856.1	12.3
90°-150°	2893.2	41.7
90°-180°	4006.0	57.7
0°-180°	6942.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1142	1138	1128	1138	1136	108
15°	1087	1083	1070	1075	1072	306
25°	984	978	965	966	962	453
35°	847	840	828	822	817	529
45°	692	685	670	661	658	533
55°	523	520	507	497	491	468
65°	354	350	341	332	327	351
75°	189	184	180	176	175	200
85°	49	49	48	48	47	54
90°	3	15	24	31	34	7
95°	67	77	85	88	88	75
105°	260	261	266	269	272	276
115°	487	487	485	484	482	480
125°	709	709	708	706	703	632
135°	914	921	921	919	916	707
145°	1111	1115	1117	1115	1112	695
155°	1273	1273	1272	1276	1272	585
165°	1386	1382	1380	1386	1382	390
175°	1442	1436	1435	1442	1435	137
180°	1444	1444	1444	1444	1444	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1145.9	1145.4	1144.9	1144.4	1143.9	1142.8	1141.0	1139.2	1137.4	1135.7	1137.2
5°	1142.0	1141.3	1140.4	1139.6	1138.8	1137.2	1135.0	1132.7	1130.5	1128.3	1130.5
7.5°	1131.4	1130.6	1129.8	1128.9	1128.2	1126.5	1124.0	1121.5	1119.0	1116.5	1118.4
10°	1121.9	1121.1	1120.2	1119.5	1118.6	1116.9	1114.2	1111.6	1109.0	1106.3	1107.9
12.5°	1109.4	1108.6	1107.8	1107.0	1106.2	1104.3	1101.6	1098.7	1096.0	1093.1	1094.9
15°	1087.1	1086.2	1085.5	1084.6	1083.8	1081.9	1078.8	1075.8	1072.7	1069.7	1070.9
17.5°	1060.1	1059.1	1058.1	1057.1	1056.1	1054.1	1051.3	1048.4	1045.4	1042.6	1043.4
20°	1040.3	1039.3	1038.4	1037.3	1036.3	1034.2	1031.2	1028.1	1025.1	1022.1	1022.7
22.5°	1019.2	1017.8	1016.4	1015.1	1013.7	1011.6	1008.5	1005.5	1002.4	999.4	1000.5
25°	984.5	983.1	981.6	980.2	978.8	976.6	973.8	970.9	968.1	965.3	965.4
27.5°	944.9	943.5	942.0	940.6	939.1	937.0	934.4	931.8	929.1	926.4	925.9
30°	918.6	917.0	915.3	913.7	912.1	909.9	907.2	904.7	902.0	899.3	898.5
32.5°	890.7	889.2	887.8	886.3	884.8	882.7	879.9	877.1	874.3	871.5	870.6
35°	847.1	845.7	844.3	842.8	841.5	839.3	836.5	833.6	830.8	827.9	826.5
37.5°	801.2	799.9	798.6	797.3	795.9	793.8	790.7	787.6	784.6	781.5	780.0
40°	771.1	769.5	767.8	766.2	764.6	762.2	759.2	756.1	753.1	750.0	748.0
42.5°	738.9	737.9	736.9	736.0	734.9	732.8	729.4	726.1	722.6	719.3	717.0
45°	691.5	690.0	688.6	687.2	685.8	683.4	680.2	676.9	673.6	670.4	668.1
47.5°	641.8	640.8	639.9	638.9	637.9	635.9	632.9	629.9	626.9	623.9	621.3
50°	608.1	607.3	606.5	605.6	604.9	603.0	600.2	597.4	594.4	591.6	588.8
52.5°	575.1	574.2	573.2	572.2	571.2	569.2	566.2	563.2	560.2	557.2	554.7
55°	523.0	522.3	521.7	521.1	520.5	518.8	515.9	513.1	510.2	507.4	504.9
57.5°	473.1	472.4	471.7	471.1	470.4	468.6	465.8	463.0	460.2	457.4	455.0
60°	438.7	437.6	436.6	435.7	434.6	432.7	430.2	427.5	424.8	422.2	420.3
62.5°	405.0	404.2	403.3	402.4	401.6	399.8	396.9	394.1	391.3	388.5	386.8
65°	354.4	353.4	352.4	351.4	350.3	348.8	346.8	344.7	342.7	340.7	338.6
67.5°	303.5	302.6	301.6	300.7	299.8	298.3	296.4	294.4	292.5	290.5	288.5
70°	272.0	270.6	269.1	267.7	266.3	264.8	263.1	261.5	259.8	258.3	256.7
72.5°	238.3	236.9	235.5	234.0	232.6	231.3	230.0	228.6	227.3	226.0	224.7
75°	188.6	187.6	186.7	185.6	184.6	183.6	182.5	181.5	180.6	179.5	178.7
77.5°	141.2	140.8	140.3	139.9	139.4	138.8	137.8	137.0	136.0	135.2	134.9
80°	112.6	112.0	111.4	110.8	110.2	109.7	109.3	108.9	108.5	108.1	107.6
82.5°	84.8	84.6	84.2	83.9	83.7	83.5	83.4	83.3	83.3	83.2	82.9
85°	49.4	49.4	49.4	49.4	49.4	49.2	48.8	48.5	48.0	47.6	47.6
87.5°	19.7	20.1	20.5	20.8	21.3	21.5	21.8	22.0	22.3	22.5	22.8
90°	3.4	6.1	8.8	11.5	14.3	16.6	18.6	20.6	22.6	24.5	26.1
92.5°	23.9	27.0	30.1	33.2	36.4	38.7	40.0	41.4	42.8	44.3	45.1
95°	67.0	69.2	71.5	73.7	75.9	77.9	79.6	81.4	83.1	84.9	85.6
97.5°	117.0	118.8	120.6	122.3	124.2	126.1	128.1	130.2	132.2	134.2	135.1
100°	156.4	157.3	158.3	159.3	160.3	161.9	164.1	166.3	168.6	170.8	171.3
102.5°	197.4	197.9	198.2	198.6	199.0	200.2	202.2	204.3	206.3	208.4	209.1
105°	260.2	260.5	260.7	260.9	261.1	261.7	262.8	263.8	264.8	265.8	266.5
107.5°	326.1	326.3	326.7	326.9	327.3	327.4	327.6	327.8	328.0	328.0	328.7
110°	370.7	371.2	371.7	372.2	372.7	372.8	372.6	372.3	372.1	371.9	371.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	417.2	417.2	417.3	417.5	417.6	417.4	417.0	416.5	416.0	415.6	415.5
115°	486.8	486.8	486.8	486.8	486.8	486.6	486.1	485.6	485.1	484.6	484.4
117.5°	552.5	552.7	552.9	553.1	553.3	553.2	552.8	552.5	552.2	551.8	551.0
120°	596.2	597.3	598.2	599.3	600.2	600.4	599.6	598.9	598.1	597.4	596.2
122.5°	641.8	642.2	642.7	643.0	643.4	643.4	643.1	642.7	642.4	642.0	641.2
125°	709.0	709.0	709.0	709.0	709.0	708.9	708.7	708.4	708.2	707.9	707.4
127.5°	770.0	770.8	771.5	772.2	773.0	773.2	772.7	772.4	772.0	771.5	771.1
130°	812.9	813.6	814.4	815.1	815.9	816.2	816.2	816.2	816.2	816.2	815.7
132.5°	856.7	857.2	857.7	858.3	858.8	859.0	858.8	858.6	858.4	858.2	857.7
135°	914.5	916.0	917.5	918.9	920.5	921.2	921.2	921.2	921.2	921.2	920.8
137.5°	977.5	978.2	978.9	979.6	980.2	980.9	981.2	981.6	982.0	982.4	981.7
140°	1019.5	1019.9	1020.5	1021.0	1021.5	1021.7	1021.7	1021.7	1021.7	1021.7	1021.5
142.5°	1057.9	1058.3	1058.9	1059.4	1059.9	1060.0	1059.8	1059.6	1059.5	1059.2	1059.2
145°	1111.0	1112.1	1113.0	1114.0	1115.0	1115.6	1115.9	1116.1	1116.4	1116.6	1116.4
147.5°	1163.7	1164.9	1166.1	1167.3	1168.5	1169.0	1168.8	1168.6	1168.4	1168.2	1168.0
150°	1195.9	1196.9	1197.9	1198.9	1199.9	1200.3	1200.3	1200.3	1200.3	1200.3	1200.3
152.5°	1226.2	1226.8	1227.4	1228.0	1228.6	1229.1	1229.2	1229.4	1229.7	1229.9	1230.5
155°	1272.9	1272.9	1272.9	1272.9	1272.9	1272.8	1272.6	1272.3	1272.0	1271.9	1272.8
157.5°	1312.3	1311.8	1311.4	1310.9	1310.4	1310.2	1310.2	1310.1	1310.1	1310.0	1310.8
160°	1335.5	1335.2	1335.0	1334.7	1334.5	1334.2	1333.9	1333.8	1333.5	1333.3	1333.9
162.5°	1356.9	1356.2	1355.6	1355.0	1354.4	1353.9	1353.7	1353.4	1353.1	1352.9	1354.3
165°	1385.7	1385.0	1384.2	1383.5	1382.8	1382.2	1381.6	1381.1	1380.6	1380.1	1381.6
167.5°	1407.8	1406.8	1405.8	1404.7	1403.7	1403.2	1403.3	1403.3	1403.3	1403.3	1404.9
170°	1420.3	1419.1	1417.9	1416.6	1415.4	1414.9	1415.1	1415.4	1415.7	1415.8	1417.4
172.5°	1429.3	1428.2	1427.2	1426.2	1425.1	1424.6	1424.7	1424.7	1424.8	1424.8	1426.5
175°	1441.6	1440.3	1439.1	1437.9	1436.6	1435.8	1435.6	1435.4	1435.1	1434.9	1436.6
177.5°	1445.5	1444.6	1443.6	1442.6	1441.6	1441.1	1441.1	1441.1	1441.1	1441.1	1442.5
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0	1143.0
2.5°	1138.8	1140.5	1142.1	1142.9	1142.7	1142.5	1142.4	1142.2
5°	1132.7	1135.0	1137.2	1138.2	1137.7	1137.4	1137.0	1136.5
7.5°	1120.2	1122.0	1123.7	1124.5	1124.3	1124.0	1123.8	1123.5
10°	1109.6	1111.2	1112.8	1113.4	1113.0	1112.6	1112.2	1111.8
12.5°	1096.7	1098.5	1100.3	1100.9	1100.4	1099.8	1099.2	1098.6
15°	1072.1	1073.3	1074.5	1074.9	1074.3	1073.7	1073.1	1072.5
17.5°	1044.1	1044.9	1045.7	1045.9	1045.4	1045.0	1044.7	1044.2
20°	1023.3	1023.9	1024.5	1024.6	1024.2	1023.8	1023.4	1023.0
22.5°	1001.5	1002.6	1003.8	1003.9	1003.2	1002.5	1001.7	1001.0
25°	965.7	965.9	966.1	965.8	965.0	964.1	963.4	962.5
27.5°	925.5	925.0	924.5	923.8	922.7	921.7	920.7	919.6
30°	897.7	896.9	896.0	895.2	894.1	893.1	892.1	891.1
32.5°	869.5	868.6	867.6	866.6	865.6	864.5	863.5	862.5
35°	825.1	823.6	822.2	821.0	819.9	819.0	817.9	816.9
37.5°	778.4	776.9	775.4	774.0	772.6	771.3	769.9	768.5
40°	746.0	744.0	741.9	740.4	739.3	738.4	737.4	736.3
42.5°	714.5	712.2	709.8	708.3	707.7	707.0	706.3	705.6
45°	665.9	663.7	661.4	660.0	659.4	658.8	658.1	657.5
47.5°	618.8	616.3	613.7	611.7	610.2	608.6	607.1	605.5
50°	585.9	583.1	580.2	578.2	577.0	575.8	574.5	573.3
52.5°	552.2	549.6	547.1	545.1	543.5	542.0	540.4	538.9
55°	502.5	500.1	497.6	495.8	494.6	493.4	492.1	490.9
57.5°	452.7	450.4	448.1	446.3	445.1	443.9	442.8	441.6
60°	418.5	416.7	414.8	413.5	412.4	411.4	410.4	409.4
62.5°	385.1	383.5	381.9	380.5	379.4	378.4	377.5	376.4
65°	336.7	334.6	332.5	331.1	330.0	329.0	328.0	326.9
67.5°	286.6	284.6	282.7	281.5	281.3	281.0	280.7	280.4
70°	255.0	253.4	251.8	250.6	250.0	249.4	248.8	248.2
72.5°	223.4	222.1	220.8	219.9	219.2	218.6	218.0	217.4
75°	177.9	177.0	176.2	175.7	175.6	175.3	175.1	175.0
77.5°	134.7	134.4	134.2	133.8	133.3	132.8	132.2	131.7
80°	107.3	106.9	106.4	106.2	105.9	105.7	105.6	105.3
82.5°	82.7	82.4	82.1	82.0	81.8	81.5	81.4	81.1
85°	47.6	47.6	47.6	47.5	47.4	47.1	46.9	46.7
87.5°	23.1	23.4	23.7	23.8	24.0	24.1	24.2	24.3
90°	27.6	29.0	30.5	31.5	32.0	32.5	33.0	33.5
92.5°	46.0	46.9	47.8	48.4	48.6	49.0	49.2	49.6
95°	86.4	87.1	87.8	88.3	88.3	88.3	88.3	88.3
97.5°	136.0	136.9	137.8	138.3	138.3	138.3	138.3	138.3
100°	171.9	172.4	172.8	173.1	173.1	173.1	173.1	173.1
102.5°	209.7	210.4	211.1	211.5	211.8	212.0	212.2	212.4
105°	267.3	268.0	268.7	269.5	270.2	271.0	271.7	272.4
107.5°	329.4	330.1	330.9	331.1	331.1	331.1	331.1	331.0
110°	370.8	370.3	369.9	370.0	370.7	371.4	372.2	373.0



TEST NUMBER: P332798-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	415.4	415.3	415.2	415.3	415.3	415.5	415.7	415.9
115°	484.1	483.9	483.6	483.4	483.1	482.8	482.6	482.4
117.5°	550.2	549.3	548.5	547.8	547.3	546.8	546.3	545.8
120°	595.0	593.7	592.5	592.0	592.5	593.1	593.6	594.0
122.5°	640.3	639.6	638.7	637.8	636.9	636.0	635.2	634.2
125°	707.0	706.5	705.9	705.4	705.0	704.5	704.0	703.4
127.5°	770.6	770.1	769.6	769.1	768.8	768.4	767.9	767.6
130°	815.3	814.8	814.2	813.6	812.5	811.5	810.5	809.5
132.5°	857.2	856.8	856.3	855.8	855.4	855.0	854.6	854.2
135°	920.2	919.7	919.2	918.6	917.8	917.1	916.4	915.6
137.5°	981.1	980.5	979.8	979.6	979.7	979.9	980.0	980.2
140°	1021.2	1021.0	1020.7	1020.5	1020.2	1019.9	1019.7	1019.5
142.5°	1059.1	1059.1	1059.0	1058.9	1058.9	1058.9	1058.9	1058.8
145°	1116.1	1115.9	1115.6	1115.2	1114.4	1113.6	1112.9	1112.2
147.5°	1167.8	1167.6	1167.4	1167.2	1166.9	1166.7	1166.5	1166.2
150°	1200.3	1200.3	1200.3	1200.2	1200.0	1199.7	1199.5	1199.3
152.5°	1231.1	1231.7	1232.3	1232.2	1231.6	1230.9	1230.3	1229.6
155°	1273.8	1274.8	1275.8	1275.8	1274.8	1273.8	1272.8	1271.9
157.5°	1311.5	1312.3	1313.0	1312.9	1312.1	1311.2	1310.4	1309.6
160°	1334.7	1335.5	1336.2	1335.9	1334.7	1333.5	1332.2	1331.0
162.5°	1355.6	1356.9	1358.2	1358.3	1357.0	1355.8	1354.6	1353.3
165°	1383.1	1384.6	1386.1	1386.4	1385.3	1384.3	1383.4	1382.3
167.5°	1406.4	1407.8	1409.3	1409.3	1407.7	1406.2	1404.7	1403.2
170°	1418.8	1420.3	1421.9	1421.7	1420.0	1418.2	1416.5	1414.8
172.5°	1428.1	1429.9	1431.6	1431.5	1429.8	1428.1	1426.3	1424.6
175°	1438.3	1440.0	1441.8	1441.8	1440.0	1438.3	1436.6	1434.9
177.5°	1443.9	1445.3	1446.7	1446.6	1445.0	1443.4	1441.8	1440.2
180°	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8	1443.8

(END OF REPORT)