

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: P332352-930

Luminaire Tested: **S123RDIP-S1000D1025U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332352-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D1025U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5964.4 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

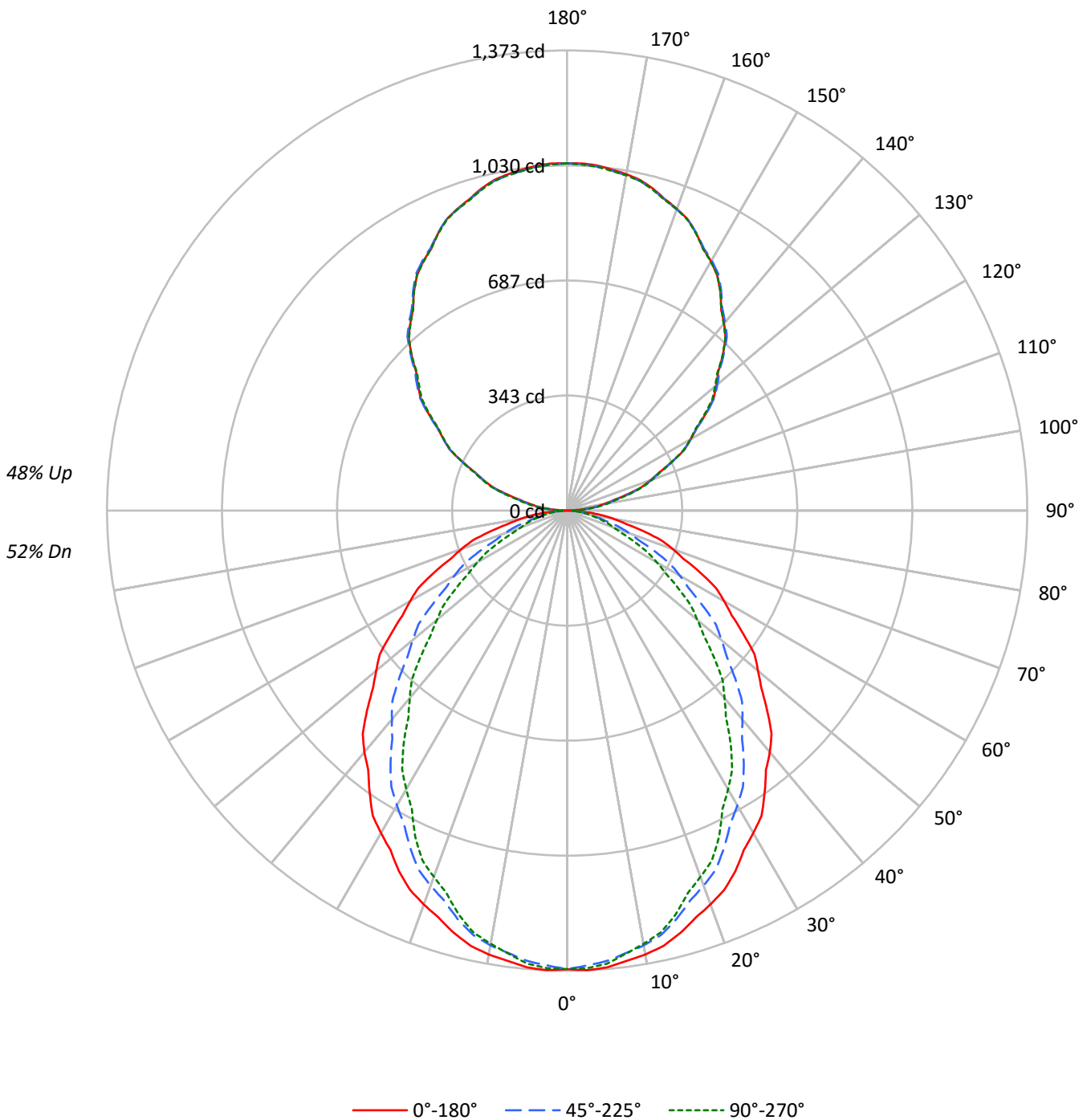
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	99	99	99	99	84	84	84	71	71	71	58	58	58	52
1	99	94	91	87	91	87	84	81	74	72	70	63	61	59	52	51	50	44
2	90	83	77	72	83	77	72	67	66	62	58	55	53	50	46	44	42	38
3	82	73	66	60	76	68	62	57	58	53	50	49	46	43	41	38	36	32
4	75	65	57	51	70	60	54	48	52	47	42	44	40	37	37	34	32	28
5	69	58	50	44	64	54	47	42	47	41	37	40	35	32	33	30	28	24
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	24	22
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	26	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14727	14727	14727
5°	14783	14579	14664
10°	14700	14397	14348
15°	14542	14060	13912
20°	14325	13639	13321
25°	14101	13166	12744
30°	13806	12621	11931
35°	13502	12073	11184
40°	13222	11428	10260
45°	12855	10794	9426
50°	12450	10071	8492
55°	12037	9246	7621
60°	11657	8361	6665
65°	11163	7404	5708
70°	10546	6216	4611
75°	9649	4891	4338
80°	8598	4333	3986
85°	7262	3841	3569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.5	2.2
10°-20°	357.5	6.0
20°-30°	514.7	8.6
30°-40°	579.8	9.7
40°-50°	554.7	9.3
50°-60°	454.2	7.6
60°-70°	306.5	5.1
70°-80°	154.2	2.6
80°-90°	43.9	0.7
90°-100°	67.5	1.1
100°-110°	202.0	3.4
110°-120°	343.6	5.8
120°-130°	451.9	7.6
130°-140°	508.0	8.5
140°-150°	499.3	8.4
150°-160°	420.4	7.0
160°-170°	279.8	4.7
170°-180°	98.0	1.6
0°-30°	1000.7	16.8
0°-40°	1580.5	26.5
0°-60°	2589.5	43.4
0°-90°	3094.0	51.9
90°-120°	613.1	10.3
90°-150°	2072.3	34.7
90°-180°	2870.0	48.1
0°-180°	5964.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1368	1368	1368	1368	1368	
5°	1368	1362	1349	1359	1357	130
15°	1305	1292	1262	1256	1248	367
25°	1187	1158	1109	1086	1073	546
35°	1028	986	919	873	851	643
45°	844	793	709	648	619	651
55°	641	585	493	431	406	575
65°	438	376	291	239	224	434
75°	232	178	118	107	104	247
85°	59	36	31	29	29	66
90°	1	9	20	23	24	6
95°	48	54	60	63	64	54
105°	183	185	192	192	194	196
115°	346	348	347	347	347	342
125°	506	508	507	504	500	451
135°	657	661	661	658	656	506
145°	797	798	801	800	797	497
155°	912	912	913	916	911	420
165°	994	991	991	996	990	280
175°	1034	1030	1030	1035	1030	98
180°	1036	1036	1036	1036	1036	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1372.6	1371.8	1371.1	1370.3	1369.5	1367.9	1365.5	1363.2	1360.8	1358.5	1360.6
5°	1368.2	1366.9	1365.7	1364.5	1363.3	1361.1	1358.2	1355.3	1352.3	1349.3	1351.5
7.5°	1355.5	1354.2	1352.9	1351.5	1350.2	1347.6	1343.8	1339.9	1336.1	1332.3	1333.5
10°	1344.9	1343.2	1341.4	1339.7	1338.0	1334.9	1330.5	1326.0	1321.6	1317.2	1317.4
12.5°	1329.8	1327.9	1326.0	1324.0	1322.1	1318.4	1313.0	1307.6	1302.2	1296.7	1296.6
15°	1305.0	1302.3	1299.5	1296.8	1294.1	1289.3	1282.4	1275.5	1268.6	1261.7	1260.5
17.5°	1273.7	1270.5	1267.4	1264.2	1261.0	1255.1	1246.3	1237.5	1228.7	1219.9	1217.3
20°	1250.6	1246.7	1242.7	1238.8	1234.8	1228.2	1218.8	1209.4	1200.0	1190.7	1187.5
22.5°	1224.8	1220.3	1215.8	1211.2	1206.7	1199.5	1189.4	1179.5	1169.5	1159.6	1155.6
25°	1187.3	1181.2	1175.0	1168.8	1162.7	1153.9	1142.6	1131.2	1119.9	1108.6	1103.3
27.5°	1141.8	1135.1	1128.2	1121.4	1114.6	1104.9	1092.3	1079.6	1067.0	1054.4	1047.2
30°	1110.8	1103.3	1096.0	1088.6	1081.2	1070.6	1056.8	1042.9	1029.2	1015.4	1007.0
32.5°	1079.7	1071.3	1062.9	1054.5	1046.2	1034.7	1020.1	1005.5	990.8	976.2	967.1
35°	1027.5	1018.6	1009.7	1000.9	992.1	979.9	964.7	949.3	934.1	918.8	908.2
37.5°	974.7	964.8	955.0	945.1	935.2	922.2	905.9	889.5	873.2	856.9	844.8
40°	941.0	930.2	919.2	908.4	897.6	883.4	865.9	848.4	830.9	813.3	800.5
42.5°	902.8	891.9	881.1	870.3	859.4	845.0	826.9	808.8	790.7	772.6	758.6
45°	844.5	833.3	822.2	811.1	800.1	785.1	766.1	747.1	728.1	709.1	695.0
47.5°	786.1	773.9	761.7	749.5	737.4	721.8	702.8	683.8	664.8	645.8	630.6
50°	743.5	731.9	720.3	708.7	697.1	681.3	661.4	641.4	621.4	601.4	586.1
52.5°	705.3	692.8	680.1	667.6	655.0	638.8	619.1	599.2	579.5	559.7	543.8
55°	641.4	629.3	617.2	605.1	593.0	576.5	555.5	534.6	513.6	492.7	478.4
57.5°	582.4	569.2	556.0	542.8	529.7	512.6	491.5	470.4	449.4	428.4	414.8
60°	541.5	528.0	514.4	500.8	487.2	470.3	449.8	429.3	408.9	388.4	375.0
62.5°	500.7	487.1	473.5	460.0	446.5	429.4	409.0	388.5	368.0	347.6	335.0
65°	438.3	424.8	411.2	397.6	384.1	367.7	348.5	329.2	310.0	290.7	278.7
67.5°	375.9	362.2	348.5	334.8	321.1	305.0	286.6	268.2	249.7	231.2	222.3
70°	335.1	321.8	308.5	295.1	281.8	266.6	249.3	232.0	214.7	197.5	188.9
72.5°	294.2	281.2	268.1	254.9	241.8	227.4	211.7	196.1	180.3	164.7	157.6
75°	232.0	220.0	208.2	196.4	184.6	171.9	158.3	144.7	131.2	117.6	115.1
77.5°	175.1	164.4	153.7	143.0	132.3	122.5	113.8	105.1	96.4	87.6	86.3
80°	138.7	128.6	118.5	108.4	98.2	90.7	85.4	80.2	75.1	69.9	69.1
82.5°	104.1	95.4	86.7	77.9	69.1	63.6	61.1	58.8	56.3	53.9	53.2
85°	58.8	53.4	47.9	42.6	37.1	34.0	33.3	32.5	31.8	31.1	30.6
87.5°	21.4	19.6	17.9	16.1	14.3	13.5	14.0	14.5	15.0	15.4	15.4
90°	0.8	2.6	4.4	6.3	8.1	10.1	12.5	14.8	17.2	19.6	20.2
92.5°	19.7	21.0	22.2	23.4	24.6	25.9	27.2	28.5	29.9	31.2	31.8
95°	48.0	49.2	50.5	51.9	53.1	54.5	55.8	57.3	58.8	60.3	61.0
97.5°	85.3	86.3	87.2	88.1	89.0	90.0	91.1	92.1	93.2	94.2	95.1
100°	110.7	111.8	112.8	113.9	115.0	116.0	116.9	117.8	118.7	119.6	120.2
102.5°	140.0	140.6	141.3	141.9	142.6	143.5	144.7	145.9	147.1	148.3	148.8
105°	183.1	183.4	183.8	184.2	184.6	185.6	187.2	188.8	190.5	192.1	192.1
107.5°	233.3	233.5	233.7	233.9	234.2	234.6	235.2	235.9	236.5	237.2	237.7
110°	264.5	264.9	265.2	265.5	266.0	266.3	266.7	267.0	267.4	267.7	268.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.0	297.3	297.5	297.7	297.9	298.1	298.2	298.2	298.3	298.3	299.2
115°	345.8	346.4	347.0	347.5	348.1	348.1	347.8	347.4	347.1	346.7	346.9
117.5°	395.0	395.4	395.7	396.2	396.5	396.4	396.0	395.5	395.0	394.5	394.5
120°	425.7	426.7	427.8	428.9	430.0	430.1	429.2	428.3	427.4	426.5	426.2
122.5°	457.5	458.4	459.1	459.9	460.7	460.9	460.4	459.9	459.5	459.0	458.5
125°	506.2	506.8	507.3	507.8	508.3	508.5	508.1	507.8	507.4	507.0	506.3
127.5°	551.1	552.3	553.4	554.6	555.8	556.1	555.7	555.4	555.0	554.6	553.5
130°	581.1	582.5	584.0	585.4	586.9	587.3	586.8	586.2	585.7	585.1	584.4
132.5°	611.1	612.5	613.9	615.4	616.9	617.3	616.9	616.5	616.1	615.7	614.9
135°	656.8	657.9	658.9	660.0	661.1	661.5	661.4	661.2	661.0	660.8	660.1
137.5°	699.1	700.0	700.9	701.8	702.7	703.4	703.8	704.3	704.8	705.2	704.5
140°	728.4	729.3	730.2	731.1	732.0	732.5	732.7	732.9	733.1	733.3	733.1
142.5°	755.0	755.9	756.9	757.8	758.7	759.3	759.6	759.9	760.3	760.6	760.4
145°	796.7	797.1	797.4	797.9	798.2	798.7	799.2	799.7	800.3	800.8	800.6
147.5°	833.2	833.9	834.5	835.2	835.8	836.4	836.9	837.4	837.9	838.5	838.5
150°	858.6	859.0	859.3	859.7	860.1	860.4	860.8	861.1	861.5	861.9	861.9
152.5°	879.5	880.0	880.4	880.9	881.4	881.8	882.1	882.2	882.5	882.7	883.0
155°	912.3	912.3	912.3	912.3	912.3	912.4	912.6	912.7	913.0	913.1	913.9
157.5°	940.3	940.1	939.9	939.6	939.5	939.4	939.6	939.7	939.9	940.0	940.8
160°	957.9	957.5	957.2	956.8	956.4	956.3	956.3	956.3	956.3	956.3	957.2
162.5°	973.5	973.0	972.5	972.0	971.5	971.3	971.4	971.6	971.8	971.9	972.8
165°	993.7	993.1	992.6	992.1	991.6	991.2	991.2	991.2	991.2	991.2	992.3
167.5°	1009.8	1009.1	1008.4	1007.6	1006.9	1006.7	1006.8	1006.9	1007.1	1007.2	1008.4
170°	1019.0	1018.2	1017.5	1016.8	1016.0	1015.7	1015.7	1015.7	1015.7	1015.7	1016.9
172.5°	1026.1	1025.4	1024.7	1023.9	1023.2	1022.8	1022.8	1022.8	1022.8	1022.8	1023.9
175°	1033.6	1032.8	1032.1	1031.4	1030.7	1030.3	1030.3	1030.3	1030.3	1030.3	1031.4
177.5°	1036.7	1036.1	1035.5	1034.9	1034.4	1034.0	1034.0	1034.0	1034.0	1034.0	1034.9
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1362.8	1365.0	1367.1	1368.0	1367.6	1367.3	1366.8	1366.4
5°	1353.8	1356.0	1358.2	1359.1	1358.6	1358.1	1357.6	1357.1
7.5°	1334.7	1335.9	1337.2	1337.4	1336.5	1335.7	1334.9	1334.0
10°	1317.7	1317.9	1318.2	1317.7	1316.4	1315.2	1313.9	1312.7
12.5°	1296.4	1296.3	1296.2	1295.3	1294.0	1292.5	1291.1	1289.6
15°	1259.2	1258.0	1256.8	1255.2	1253.5	1251.8	1250.1	1248.4
17.5°	1214.7	1212.1	1209.5	1206.9	1204.4	1201.8	1199.2	1196.6
20°	1184.2	1181.0	1177.9	1174.8	1171.8	1168.8	1165.9	1162.9
22.5°	1151.6	1147.6	1143.6	1140.2	1137.5	1134.7	1132.0	1129.2
25°	1098.2	1093.0	1087.9	1083.9	1081.2	1078.5	1075.8	1073.0
27.5°	1040.0	1032.8	1025.6	1019.9	1015.8	1011.6	1007.5	1003.4
30°	998.6	990.2	981.8	975.7	971.7	967.8	963.8	959.9
32.5°	957.9	948.8	939.6	932.9	928.8	924.6	920.5	916.3
35°	897.6	887.0	876.4	868.9	864.5	860.0	855.6	851.1
37.5°	832.8	820.8	808.8	800.0	794.5	789.0	783.6	778.1
40°	787.7	774.9	762.1	752.8	747.1	741.5	735.8	730.2
42.5°	744.5	730.5	716.5	706.9	701.9	696.8	691.7	686.6
45°	680.9	666.9	652.8	642.9	636.9	631.0	625.1	619.2
47.5°	615.2	600.0	584.7	574.4	569.1	563.9	558.6	553.3
50°	570.9	555.5	540.3	529.8	524.2	518.4	512.8	507.1
52.5°	528.0	512.1	496.2	485.7	480.6	475.6	470.5	465.4
55°	464.1	449.8	435.5	425.8	420.9	416.0	411.1	406.1
57.5°	401.3	387.8	374.3	365.4	361.3	357.0	352.9	348.6
60°	361.7	348.5	335.1	326.4	322.2	318.0	313.8	309.6
62.5°	322.5	310.0	297.4	288.9	284.6	280.2	275.8	271.4
65°	266.6	254.5	242.4	235.0	232.3	229.6	226.9	224.1
67.5°	213.2	204.2	195.2	189.1	186.3	183.4	180.4	177.6
70°	180.3	171.6	163.0	157.4	154.6	151.9	149.2	146.5
72.5°	150.6	143.5	136.5	132.4	131.3	130.1	129.0	127.8
75°	112.7	110.2	107.8	106.3	105.8	105.3	104.8	104.3
77.5°	85.0	83.6	82.3	81.4	81.0	80.5	80.0	79.5
80°	68.4	67.7	66.9	66.4	65.9	65.4	64.8	64.3
82.5°	52.4	51.7	51.0	50.5	50.5	50.4	50.2	50.1
85°	30.1	29.6	29.1	28.9	28.9	28.9	28.9	28.9
87.5°	15.3	15.3	15.2	15.2	15.0	14.9	14.8	14.7
90°	21.0	21.7	22.4	23.0	23.3	23.7	24.1	24.4
92.5°	32.4	33.0	33.6	33.8	33.5	33.3	33.1	32.9
95°	61.6	62.4	63.1	63.5	63.5	63.5	63.5	63.5
97.5°	95.9	96.8	97.6	97.9	97.9	97.8	97.8	97.7
100°	120.7	121.2	121.8	122.3	122.6	122.9	123.4	123.7
102.5°	149.4	149.9	150.4	150.7	150.6	150.5	150.5	150.4
105°	192.1	192.1	192.1	192.2	192.6	193.0	193.3	193.7
107.5°	238.3	238.9	239.5	239.6	239.5	239.2	239.0	238.8
110°	269.2	269.9	270.7	270.8	270.4	270.1	269.8	269.4



TEST NUMBER: P332352-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.1	300.9	301.8	302.2	302.1	302.1	302.0	301.9
115°	347.1	347.2	347.4	347.4	347.2	347.1	346.9	346.7
117.5°	394.4	394.4	394.4	394.1	393.6	393.1	392.6	392.1
120°	426.1	425.9	425.7	425.4	425.1	424.8	424.4	424.0
122.5°	458.0	457.6	457.1	456.6	456.2	455.6	455.1	454.6
125°	505.6	504.8	504.1	503.4	502.7	502.0	501.2	500.5
127.5°	552.5	551.5	550.5	549.6	548.8	547.9	547.1	546.3
130°	583.7	582.9	582.3	581.2	580.0	578.7	577.5	576.2
132.5°	614.0	613.2	612.3	611.4	610.4	609.4	608.5	607.5
135°	659.4	658.7	657.9	657.4	657.0	656.6	656.3	656.0
137.5°	703.8	703.0	702.2	701.5	700.8	700.1	699.4	698.8
140°	732.9	732.7	732.5	731.8	730.6	729.3	728.1	726.8
142.5°	760.3	760.1	759.9	759.3	758.3	757.3	756.4	755.4
145°	800.5	800.3	800.1	799.6	798.9	798.2	797.4	796.7
147.5°	838.5	838.5	838.5	837.9	836.8	835.7	834.6	833.6
150°	861.9	861.9	861.9	861.3	860.2	859.2	858.0	857.0
152.5°	883.3	883.5	883.9	883.5	882.6	881.7	880.7	879.8
155°	914.6	915.3	916.0	915.7	914.5	913.2	911.9	910.7
157.5°	941.5	942.2	943.1	942.9	941.9	940.9	939.9	938.8
160°	958.1	959.0	959.9	959.9	959.3	958.5	957.8	957.1
162.5°	973.7	974.6	975.5	975.3	974.2	973.1	971.9	970.8
165°	993.4	994.5	995.6	995.5	994.3	993.0	991.7	990.4
167.5°	1009.4	1010.6	1011.7	1011.7	1010.6	1009.4	1008.4	1007.2
170°	1018.2	1019.5	1020.8	1020.8	1019.5	1018.2	1016.9	1015.7
172.5°	1025.1	1026.2	1027.3	1027.3	1026.0	1024.7	1023.4	1022.1
175°	1032.5	1033.6	1034.7	1034.5	1033.3	1032.0	1030.8	1029.5
177.5°	1035.8	1036.7	1037.5	1037.5	1036.5	1035.4	1034.5	1033.4
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0

(END OF REPORT)