

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: P332359-935

Luminaire Tested: **S123RDIP-S1000D1195U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332359-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D1195U935-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6985.9 lumens
Efficiency: N/A
Efficacy: 106.8 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

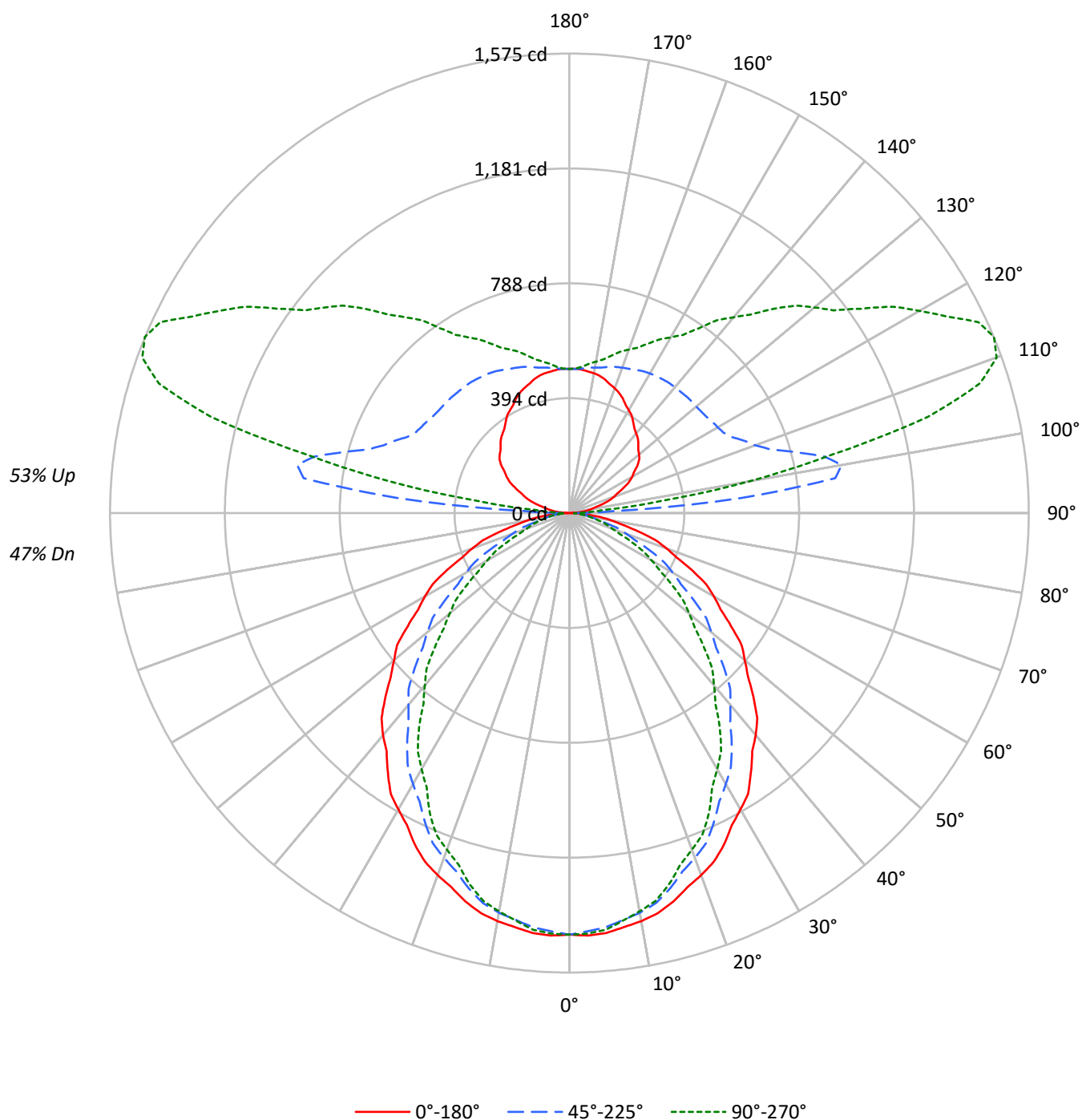
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53
1	97	93	89	86	89	86	83	80	72	70	68	59	58	56	47	46	45
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39
3	81	72	65	59	74	67	60	55	56	52	48	46	43	40	38	35	33
4	74	64	56	50	68	59	52	47	50	45	41	42	38	35	34	31	29
5	68	57	49	43	63	53	46	41	45	40	35	37	33	30	31	28	25
6	63	51	43	38	58	48	41	35	41	35	31	34	30	27	28	25	22
7	58	46	39	33	54	43	36	31	37	31	27	31	27	24	25	22	20
8	54	42	34	29	50	39	32	28	34	28	24	28	24	21	23	20	18
9	50	38	31	26	46	36	29	25	31	26	22	26	22	19	22	19	16
10	47	35	28	23	43	33	27	22	28	23	20	24	20	17	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15553	15553	15553
5°	15612	15397	15486
10°	15524	15204	15152
15°	15357	14848	14692
20°	15128	14403	14068
25°	14892	13904	13459
30°	14579	13328	12599
35°	14259	12750	11811
40°	13964	12069	10835
45°	13575	11399	9954
50°	13147	10637	8967
55°	12710	9764	8049
60°	12312	8831	7037
65°	11790	7819	6029
70°	11138	6565	4869
75°	10189	5165	4579
80°	9081	4575	4209
85°	7669	4051	3767

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	1.9
10°-20°	377.5	5.4
20°-30°	543.6	7.8
30°-40°	612.3	8.8
40°-50°	585.8	8.4
50°-60°	479.7	6.9
60°-70°	323.7	4.6
70°-80°	162.8	2.3
80°-90°	46.9	0.7
90°-100°	275.0	3.9
100°-110°	778.7	11.1
110°-120°	766.1	11.0
120°-130°	611.0	8.7
130°-140°	481.8	6.9
140°-150°	359.6	5.1
150°-160°	250.6	3.6
160°-170°	147.2	2.1
170°-180°	47.9	0.7
0°-30°	1056.8	15.1
0°-40°	1669.1	23.9
0°-60°	2734.6	39.1
0°-90°	3268.0	46.8
90°-120°	1819.8	26.0
90°-150°	3272.2	46.8
90°-180°	3718.0	53.2
0°-180°	6985.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1445	1445	1445	1445	1445	
5°	1445	1439	1425	1435	1433	137
15°	1378	1364	1332	1326	1318	388
25°	1254	1223	1171	1147	1133	576
35°	1085	1041	970	922	899	679
45°	892	837	749	684	654	688
55°	677	618	520	455	429	607
65°	463	397	307	252	237	458
75°	245	188	124	113	110	261
85°	62	38	33	31	30	70
90°	2	12	25	28	29	5
95°	34	110	593	173	116	37
105°	116	172	804	1406	1272	123
115°	205	256	615	1349	1548	203
125°	285	337	574	1040	1220	253
135°	334	399	566	857	989	258
145°	381	437	559	703	773	239
155°	433	467	541	615	641	199
165°	473	487	518	550	559	133
175°	493	494	497	504	503	47
180°	494	494	494	494	494	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9
2.5°	1449.6	1448.7	1447.9	1447.1	1446.2	1444.6	1442.1	1439.6	1437.1	1434.6	1436.8
5°	1444.9	1443.6	1442.3	1441.0	1439.7	1437.4	1434.3	1431.2	1428.1	1425.0	1427.3
7.5°	1431.5	1430.1	1428.7	1427.3	1425.9	1423.1	1419.1	1415.1	1411.0	1407.0	1408.3
10°	1420.3	1418.5	1416.6	1414.8	1413.0	1409.7	1405.1	1400.3	1395.7	1391.0	1391.3
12.5°	1404.4	1402.3	1400.3	1398.3	1396.2	1392.3	1386.6	1380.9	1375.2	1369.4	1369.2
15°	1378.1	1375.3	1372.3	1369.5	1366.7	1361.6	1354.3	1346.9	1339.7	1332.4	1331.1
17.5°	1345.1	1341.7	1338.4	1335.1	1331.7	1325.4	1316.1	1306.9	1297.6	1288.3	1285.6
20°	1320.7	1316.6	1312.3	1308.2	1304.0	1297.0	1287.1	1277.2	1267.3	1257.4	1254.0
22.5°	1293.5	1288.7	1283.9	1279.1	1274.4	1266.7	1256.1	1245.6	1235.1	1224.6	1220.4
25°	1253.9	1247.4	1240.9	1234.3	1227.9	1218.6	1206.6	1194.6	1182.7	1170.7	1165.2
27.5°	1205.8	1198.7	1191.5	1184.3	1177.1	1166.8	1153.5	1140.1	1126.8	1113.5	1105.9
30°	1173.0	1165.2	1157.4	1149.6	1141.8	1130.6	1116.0	1101.4	1086.8	1072.3	1063.4
32.5°	1140.2	1131.4	1122.5	1113.6	1104.8	1092.7	1077.3	1061.9	1046.4	1031.0	1021.3
35°	1085.1	1075.7	1066.3	1057.0	1047.7	1034.8	1018.7	1002.5	986.4	970.3	959.1
37.5°	1029.3	1018.9	1008.5	998.1	987.7	973.9	956.7	939.4	922.1	904.9	892.2
40°	993.8	982.3	970.8	959.3	947.9	932.9	914.5	896.0	877.4	858.9	845.4
42.5°	953.4	941.9	930.5	919.0	907.6	892.3	873.2	854.1	835.0	815.9	801.1
45°	891.8	880.0	868.3	856.6	844.9	829.1	809.0	788.9	768.9	748.8	734.0
47.5°	830.2	817.3	804.4	791.5	778.7	762.2	742.2	722.1	702.1	682.0	665.9
50°	785.1	772.9	760.7	748.5	736.2	719.5	698.4	677.3	656.3	635.2	619.0
52.5°	744.9	731.6	718.2	705.0	691.7	674.6	653.8	632.8	612.0	591.1	574.3
55°	677.3	664.6	651.8	639.0	626.3	608.8	586.7	564.6	542.4	520.3	505.2
57.5°	615.0	601.1	587.2	573.3	559.4	541.3	519.0	496.8	474.6	452.4	438.1
60°	571.9	557.6	543.2	528.9	514.5	496.6	475.0	453.4	431.8	410.2	396.1
62.5°	528.7	514.4	500.1	485.8	471.5	453.5	431.9	410.3	388.7	367.0	353.8
65°	462.9	448.6	434.2	419.9	405.6	388.3	368.0	347.7	327.4	307.0	294.3
67.5°	397.0	382.5	368.1	353.6	339.1	322.1	302.6	283.2	263.7	244.2	234.7
70°	353.9	339.8	325.8	311.7	297.6	281.5	263.3	245.0	226.8	208.6	199.5
72.5°	310.7	297.0	283.1	269.2	255.4	240.1	223.6	207.1	190.5	173.9	166.4
75°	245.0	232.4	219.9	207.4	194.9	181.5	167.2	152.8	138.5	124.2	121.6
77.5°	184.9	173.6	162.3	151.0	139.7	129.4	120.2	111.0	101.8	92.6	91.2
80°	146.5	135.8	125.1	114.4	103.8	95.7	90.2	84.7	79.3	73.8	73.0
82.5°	109.9	100.7	91.5	82.2	73.0	67.2	64.6	62.1	59.5	56.9	56.1
85°	62.1	56.4	50.6	44.9	39.2	35.9	35.1	34.4	33.6	32.8	32.3
87.5°	22.9	21.0	19.1	17.4	15.5	14.8	15.4	16.0	16.6	17.2	16.8
90°	2.0	4.0	6.0	9.0	11.0	13.0	16.0	19.0	22.0	25.0	24.0
92.5°	12.4	18.4	26.8	34.6	43.0	57.9	84.0	127.1	169.3	153.9	116.1
95°	34.0	37.0	48.0	65.0	91.0	130.0	215.1	364.1	528.2	593.2	481.1
97.5°	58.0	59.0	67.6	82.4	108.1	150.2	231.5	399.5	673.0	919.3	983.5
100°	74.0	75.0	82.1	96.0	120.0	159.0	229.1	377.1	640.2	947.4	1144.4
102.5°	90.8	92.6	98.8	112.0	133.6	169.4	232.3	357.9	592.2	895.4	1152.4
105°	116.1	119.1	125.0	137.1	156.0	187.1	241.1	344.1	533.2	804.3	1091.4
107.5°	142.8	145.9	151.6	163.4	181.2	210.1	257.5	343.1	495.6	723.8	984.6
110°	162.0	165.1	170.0	181.1	198.0	226.1	271.1	347.2	481.1	678.2	917.3

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.7	182.7	187.7	198.6	215.7	242.9	284.7	355.2	473.2	647.8	858.9
115°	205.1	209.1	215.1	225.1	242.1	269.1	307.1	368.2	470.2	615.2	788.2
117.5°	230.5	235.1	240.0	249.3	268.3	293.3	330.9	385.3	472.0	596.0	745.6
120°	248.1	251.1	256.1	266.1	285.1	310.1	346.1	398.1	475.2	587.2	723.2
122.5°	263.3	266.3	271.3	282.1	300.3	326.9	362.1	410.2	480.8	581.6	704.8
125°	285.1	287.1	293.1	304.1	323.1	350.1	385.1	429.1	489.1	574.2	681.2
127.5°	301.7	304.7	312.1	323.3	344.3	371.3	405.1	444.8	498.8	570.6	660.5
130°	312.1	315.1	324.1	336.1	357.1	384.1	417.2	455.1	505.1	568.2	649.2
132.5°	320.1	323.9	333.7	348.1	369.1	395.4	427.6	464.8	510.0	567.4	638.9
135°	334.2	338.1	349.1	364.1	385.1	412.2	443.2	477.2	517.2	566.2	625.3
137.5°	347.3	351.5	362.3	378.3	399.2	424.1	453.9	486.4	522.0	564.0	613.4
140°	356.1	361.1	371.1	387.1	407.2	432.1	461.2	491.2	525.2	563.2	606.2
142.5°	365.8	370.0	380.7	395.1	415.2	438.6	466.7	495.9	527.6	561.6	599.8
145°	381.2	384.1	393.1	408.1	425.2	448.2	474.2	501.2	529.2	559.2	591.2
147.5°	396.7	398.6	407.3	420.3	436.8	456.3	480.2	504.4	529.2	555.4	582.8
150°	407.2	408.1	416.1	429.1	443.2	461.2	484.1	505.1	529.2	552.2	577.2
152.5°	417.6	417.8	425.8	437.1	449.5	466.7	486.6	506.8	526.8	548.2	570.8
155°	433.2	433.2	439.2	449.2	460.1	474.2	491.2	507.2	524.2	541.2	561.2
157.5°	445.6	446.3	451.2	459.9	469.3	480.2	493.8	508.2	520.8	535.0	550.4
160°	455.1	455.1	459.2	467.2	474.2	484.1	496.2	508.2	519.2	530.2	543.2
162.5°	462.4	462.4	465.5	472.0	478.2	486.6	497.0	507.4	516.0	525.4	536.0
165°	473.2	472.2	474.2	479.1	483.2	490.2	498.2	505.1	511.2	518.1	526.2
167.5°	481.4	480.2	481.1	485.0	487.8	492.1	498.0	503.6	506.4	511.0	516.8
170°	486.2	484.1	485.2	488.2	490.2	492.1	497.1	501.2	503.2	506.2	511.2
172.5°	489.4	488.2	488.4	490.6	491.8	493.0	497.1	500.4	500.8	502.1	505.6
175°	493.2	492.1	491.2	493.2	493.2	494.2	496.2	498.2	497.1	497.1	499.2
177.5°	495.0	494.2	493.4	494.2	494.2	494.2	495.0	496.5	495.0	494.2	495.0
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9
2.5°	1439.2	1441.5	1443.7	1444.7	1444.2	1443.9	1443.5	1443.0
5°	1429.7	1432.0	1434.3	1435.3	1434.8	1434.3	1433.7	1433.2
7.5°	1409.5	1410.8	1412.1	1412.4	1411.4	1410.6	1409.7	1408.8
10°	1391.5	1391.8	1392.1	1391.5	1390.2	1388.9	1387.6	1386.3
12.5°	1369.1	1369.0	1368.8	1368.0	1366.5	1364.9	1363.5	1361.9
15°	1329.8	1328.5	1327.2	1325.6	1323.8	1322.0	1320.2	1318.4
17.5°	1282.8	1280.0	1277.3	1274.5	1271.9	1269.1	1266.4	1263.7
20°	1250.6	1247.2	1243.9	1240.6	1237.5	1234.3	1231.2	1228.1
22.5°	1216.2	1211.9	1207.7	1204.1	1201.3	1198.3	1195.4	1192.5
25°	1159.8	1154.3	1148.8	1144.6	1141.8	1138.9	1136.1	1133.2
27.5°	1098.3	1090.7	1083.1	1077.1	1072.7	1068.3	1063.9	1059.6
30°	1054.6	1045.7	1036.8	1030.4	1026.1	1022.0	1017.8	1013.7
32.5°	1011.6	1001.9	992.2	985.2	980.9	976.5	972.1	967.7
35°	947.9	936.7	925.5	917.6	912.9	908.2	903.5	898.8
37.5°	879.5	866.8	854.1	844.8	839.0	833.3	827.5	821.7
40°	831.9	818.4	804.8	795.0	789.0	783.1	777.1	771.1
42.5°	786.3	771.5	756.6	746.6	741.2	735.9	730.5	725.1
45°	719.1	704.3	689.4	678.9	672.6	666.4	660.1	653.9
47.5°	649.7	633.6	617.4	606.6	601.0	595.5	589.9	584.3
50°	602.9	586.7	570.6	559.5	553.5	547.5	541.6	535.5
52.5°	557.6	540.8	524.0	512.9	507.6	502.2	496.9	491.5
55°	490.1	475.0	459.9	449.7	444.5	439.3	434.1	428.9
57.5°	423.8	409.5	395.3	385.9	381.5	377.0	372.6	368.2
60°	382.0	368.0	353.9	344.7	340.3	335.8	331.4	326.9
62.5°	340.5	327.4	314.1	305.1	300.6	295.9	291.3	286.6
65°	281.5	268.7	256.0	248.1	245.3	242.5	239.6	236.7
67.5°	225.2	215.6	206.1	199.8	196.7	193.6	190.5	187.5
70°	190.4	181.2	172.1	166.2	163.2	160.4	157.6	154.7
72.5°	159.0	151.5	144.1	139.8	138.6	137.4	136.2	135.0
75°	119.0	116.4	113.8	112.3	111.8	111.2	110.6	110.1
77.5°	89.8	88.3	87.0	86.0	85.5	85.0	84.5	83.9
80°	72.2	71.5	70.7	70.1	69.6	69.1	68.4	67.9
82.5°	55.4	54.6	53.8	53.4	53.3	53.2	53.0	53.0
85°	31.8	31.3	30.7	30.5	30.5	30.5	30.5	30.5
87.5°	16.8	16.8	16.8	17.0	16.5	16.5	16.5	16.1
90°	25.0	26.0	27.0	29.0	28.0	29.0	30.0	29.0
92.5°	84.2	66.8	59.0	53.8	52.0	49.0	50.0	48.2
95°	360.2	244.1	191.1	155.1	136.0	127.1	120.0	116.1
97.5°	897.7	719.0	590.0	470.4	396.6	351.5	324.5	315.9
100°	1179.4	1098.4	981.4	839.3	738.2	665.2	626.2	627.2
102.5°	1273.1	1270.4	1202.2	1112.2	1033.5	975.8	943.1	920.2
105°	1300.5	1400.5	1419.5	1393.5	1347.5	1309.5	1277.5	1272.5
107.5°	1221.6	1384.1	1471.7	1507.4	1508.1	1495.3	1484.5	1475.3
110°	1146.4	1330.5	1456.6	1526.6	1554.5	1562.5	1560.6	1558.6

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1071.9	1260.1	1401.3	1491.3	1542.6	1567.4	1574.9	1575.4
115°	973.4	1147.4	1294.4	1403.5	1478.5	1522.5	1542.6	1547.6
117.5°	901.9	1052.1	1184.2	1294.9	1373.1	1423.5	1452.3	1459.1
120°	864.3	999.4	1119.4	1220.5	1299.4	1355.5	1379.5	1385.5
122.5°	834.7	956.9	1068.2	1162.0	1232.3	1282.6	1309.1	1316.6
125°	795.3	904.3	1000.3	1080.4	1144.4	1188.4	1213.4	1220.5
127.5°	760.9	858.1	944.7	1017.5	1074.6	1112.2	1134.8	1141.2
130°	739.3	829.3	910.3	978.4	1031.4	1067.4	1088.4	1096.4
132.5°	719.3	802.1	877.5	942.4	992.1	1028.1	1046.8	1052.4
135°	692.2	763.3	828.3	885.3	934.4	964.3	982.3	989.4
137.5°	667.6	725.8	781.9	831.3	872.5	902.9	918.1	922.7
140°	653.2	704.2	752.3	795.3	833.3	861.3	877.3	876.3
142.5°	639.6	683.5	725.0	762.5	794.9	819.7	834.1	833.1
145°	623.2	656.3	688.3	717.2	742.3	763.3	771.3	773.3
147.5°	609.8	636.0	661.9	682.4	701.5	715.7	723.2	724.0
150°	600.2	623.2	644.2	663.2	678.2	689.2	695.3	695.3
152.5°	591.4	611.2	629.8	645.7	657.5	667.6	671.2	671.2
155°	578.2	594.2	609.2	621.2	630.3	638.3	640.2	641.2
157.5°	564.2	577.6	589.2	598.6	606.4	612.4	614.0	613.8
160°	556.2	567.2	577.2	584.2	591.2	597.2	597.2	596.2
162.5°	546.6	556.0	565.2	571.4	576.0	581.2	581.2	580.2
165°	534.2	540.2	547.2	552.2	556.2	560.2	559.2	559.2
167.5°	523.4	528.0	532.0	535.6	537.4	540.2	539.2	539.2
170°	516.2	519.2	523.1	525.2	526.2	528.2	527.2	527.2
172.5°	509.8	512.0	515.2	516.3	516.6	518.6	516.8	516.0
175°	501.2	502.1	504.2	504.2	504.2	505.1	504.2	503.2
177.5°	495.8	496.5	497.4	497.4	496.5	497.4	495.8	495.8
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2

(END OF REPORT)