

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: P332465-930

Luminaire Tested: **S123RDIW-S1000D1320U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332465-930
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: S123RDIW-S1000D1320U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1320 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6824.5 lumens
Efficiency: N/A
Efficacy: 97.8 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

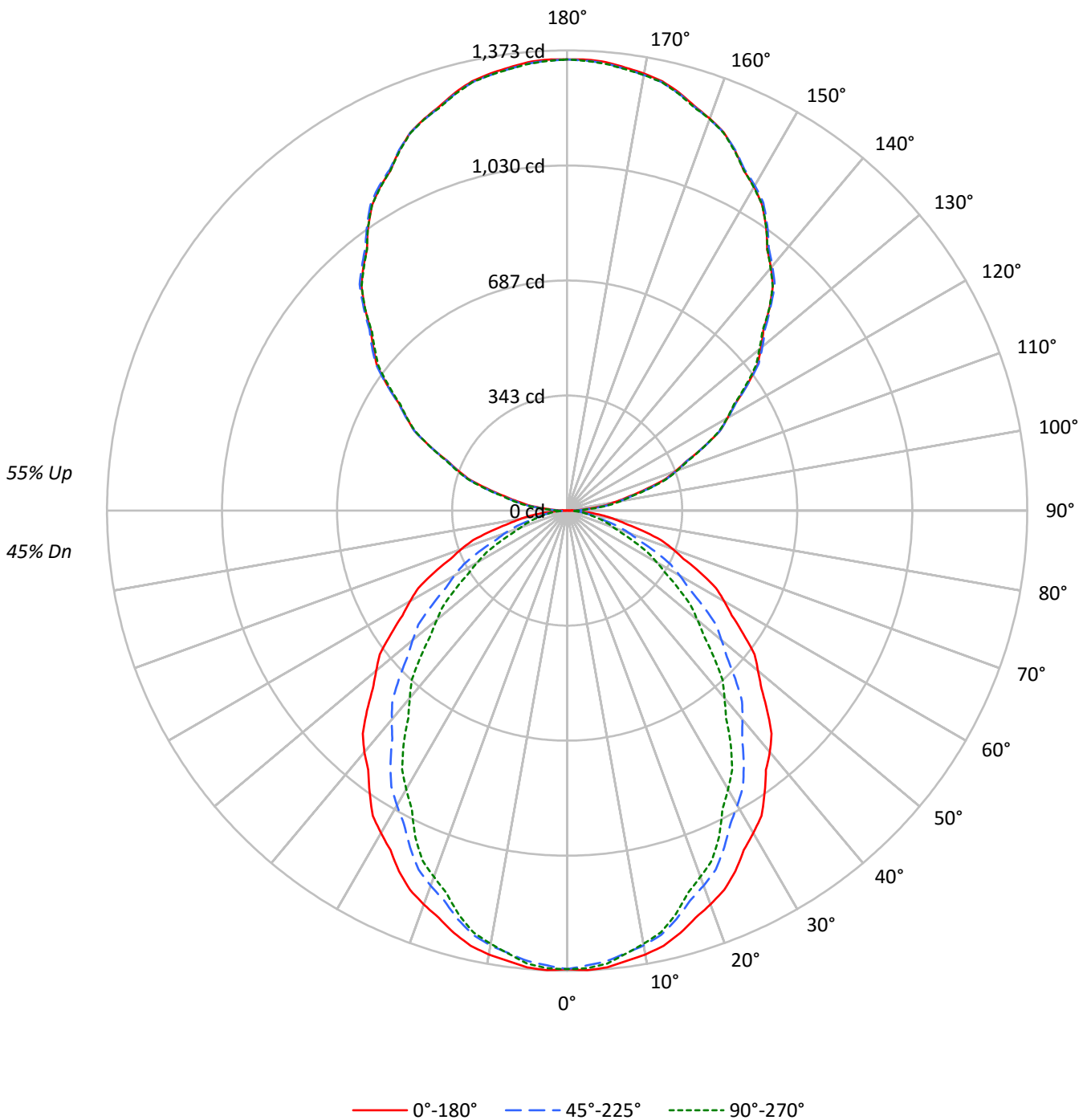
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44
2	89	81	75	70	81	75	70	65	63	59	56	51	49	47	41	39	38
3	81	72	65	59	74	66	60	55	56	51	47	46	42	40	37	34	32
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28
5	68	57	49	43	62	53	46	40	44	39	35	37	33	30	30	27	25
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	20
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	18
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	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	1.9
10°-20°	357.5	5.2
20°-30°	514.7	7.5
30°-40°	579.8	8.5
40°-50°	554.7	8.1
50°-60°	454.2	6.7
60°-70°	306.5	4.5
70°-80°	154.2	2.3
80°-90°	44.8	0.7
90°-100°	87.7	1.3
100°-110°	262.5	3.8
110°-120°	446.4	6.5
120°-130°	587.2	8.6
130°-140°	660.0	9.7
140°-150°	648.8	9.5
150°-160°	546.2	8.0
160°-170°	363.6	5.3
170°-180°	127.3	1.9
0°-30°	1000.7	14.7
0°-40°	1580.5	23.2
0°-60°	2589.5	37.9
0°-90°	3094.9	45.3
90°-120°	796.6	11.7
90°-150°	2692.5	39.5
90°-180°	3730.0	54.7
0°-180°	6824.5	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	12	25	29	32	7
95°	62	70	78	82	82	70
105°	238	240	250	250	252	255
115°	449	452	450	451	450	444
125°	658	661	659	655	650	586
135°	853	859	859	854	852	657
145°	1035	1037	1040	1039	1035	646
155°	1185	1185	1186	1190	1183	545
165°	1291	1288	1288	1294	1287	364
175°	1343	1339	1339	1344	1338	128
180°	1346	1346	1346	1346	1346	



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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°	21.5	19.8	18.1	16.4	14.8	14.2	14.8	15.4	16.0	16.6	16.6
90°	1.1	3.4	5.8	8.1	10.4	13.1	16.2	19.2	22.3	25.4	26.3
92.5°	25.6	27.1	28.8	30.4	32.0	33.7	35.4	37.1	38.9	40.6	41.3
95°	62.4	64.0	65.7	67.3	69.0	70.8	72.6	74.5	76.4	78.3	79.2
97.5°	110.8	112.0	113.2	114.5	115.7	117.0	118.4	119.7	121.1	122.5	123.5
100°	143.8	145.2	146.6	148.1	149.4	150.7	151.9	153.1	154.3	155.5	156.1
102.5°	181.9	182.7	183.6	184.4	185.2	186.5	188.0	189.6	191.1	192.7	193.4
105°	237.9	238.4	238.9	239.3	239.8	241.1	243.2	245.3	247.4	249.6	249.6
107.5°	303.0	303.4	303.6	303.9	304.2	304.8	305.6	306.5	307.3	308.1	308.9
110°	343.6	344.1	344.6	345.0	345.5	346.0	346.5	347.0	347.4	347.9	348.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	386.0	386.2	386.5	386.8	387.1	387.3	387.3	387.4	387.6	387.7	388.8
115°	449.4	450.1	450.8	451.5	452.2	452.3	451.8	451.4	450.9	450.5	450.7
117.5°	513.3	513.7	514.2	514.7	515.2	515.1	514.5	513.9	513.2	512.7	512.6
120°	553.0	554.4	555.9	557.3	558.6	558.8	557.6	556.4	555.3	554.1	553.8
122.5°	594.5	595.5	596.6	597.6	598.6	598.8	598.2	597.6	597.0	596.4	595.7
125°	657.7	658.4	659.1	659.8	660.6	660.6	660.1	659.7	659.3	658.8	657.9
127.5°	716.1	717.6	719.1	720.6	722.1	722.6	722.1	721.5	721.1	720.6	719.2
130°	755.0	756.8	758.8	760.7	762.5	763.1	762.4	761.7	761.0	760.3	759.4
132.5°	793.9	795.8	797.7	799.6	801.4	802.1	801.6	801.1	800.5	800.1	798.9
135°	853.4	854.8	856.1	857.5	859.0	859.6	859.3	859.1	858.8	858.6	857.7
137.5°	908.3	909.5	910.7	911.8	913.1	914.0	914.5	915.2	915.7	916.4	915.3
140°	946.4	947.5	948.8	949.9	951.1	951.8	952.0	952.3	952.5	952.8	952.5
142.5°	981.0	982.3	983.4	984.6	985.8	986.6	987.0	987.4	987.8	988.3	988.1
145°	1035.2	1035.7	1036.2	1036.7	1037.1	1037.7	1038.4	1039.1	1039.8	1040.5	1040.2
147.5°	1082.6	1083.5	1084.3	1085.2	1086.0	1086.7	1087.4	1088.0	1088.7	1089.3	1089.3
150°	1115.6	1116.1	1116.6	1117.0	1117.4	1117.9	1118.4	1118.8	1119.3	1119.8	1119.8
152.5°	1142.6	1143.3	1143.9	1144.6	1145.3	1145.7	1146.1	1146.3	1146.6	1146.9	1147.3
155°	1185.4	1185.4	1185.4	1185.4	1185.4	1185.5	1185.7	1185.9	1186.2	1186.4	1187.4
157.5°	1221.7	1221.5	1221.2	1220.9	1220.6	1220.6	1220.7	1220.9	1221.2	1221.3	1222.3
160°	1244.6	1244.1	1243.7	1243.2	1242.7	1242.4	1242.4	1242.4	1242.4	1242.4	1243.7
162.5°	1264.9	1264.2	1263.6	1262.9	1262.2	1262.0	1262.2	1262.4	1262.6	1262.7	1264.0
165°	1291.1	1290.4	1289.7	1289.0	1288.3	1287.9	1287.9	1287.9	1287.9	1287.9	1289.3
167.5°	1312.1	1311.1	1310.2	1309.2	1308.3	1307.9	1308.1	1308.3	1308.5	1308.6	1310.1
170°	1323.9	1323.0	1322.0	1321.1	1320.1	1319.6	1319.6	1319.6	1319.6	1319.6	1321.3
172.5°	1333.2	1332.3	1331.3	1330.4	1329.4	1328.9	1328.9	1328.9	1328.9	1328.9	1330.4
175°	1343.0	1342.0	1341.1	1340.1	1339.1	1338.7	1338.7	1338.7	1338.7	1338.7	1340.1
177.5°	1347.0	1346.2	1345.4	1344.7	1343.9	1343.5	1343.5	1343.5	1343.5	1343.5	1344.7
180°	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1



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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°	16.6	16.6	16.6	16.6	16.4	16.3	16.2	16.1
90°	27.2	28.2	29.1	29.8	30.3	30.8	31.2	31.7
92.5°	42.1	42.9	43.6	43.9	43.5	43.3	43.0	42.7
95°	80.1	81.0	82.0	82.5	82.5	82.5	82.5	82.5
97.5°	124.6	125.7	126.8	127.3	127.2	127.1	127.0	126.9
100°	156.9	157.5	158.2	158.8	159.3	159.8	160.3	160.7
102.5°	194.0	194.8	195.5	195.8	195.7	195.6	195.5	195.4
105°	249.6	249.6	249.6	249.8	250.3	250.7	251.2	251.7
107.5°	309.7	310.4	311.1	311.4	311.1	310.8	310.5	310.2
110°	349.8	350.7	351.6	351.9	351.4	351.0	350.5	350.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	389.9	391.0	392.2	392.6	392.6	392.5	392.4	392.3
115°	450.9	451.2	451.4	451.4	451.2	450.9	450.7	450.5
117.5°	512.6	512.5	512.4	512.1	511.4	510.8	510.1	509.5
120°	553.6	553.4	553.2	552.8	552.4	551.9	551.4	550.9
122.5°	595.2	594.5	593.9	593.3	592.6	592.0	591.3	590.7
125°	656.9	656.0	655.0	654.1	653.1	652.2	651.3	650.3
127.5°	717.9	716.6	715.3	714.0	713.0	711.9	710.9	709.7
130°	758.4	757.5	756.5	755.2	753.6	752.0	750.3	748.7
132.5°	797.8	796.6	795.6	794.3	793.0	791.8	790.5	789.3
135°	856.7	855.8	854.8	854.2	853.7	853.2	852.7	852.3
137.5°	914.4	913.4	912.4	911.5	910.6	909.7	908.8	907.9
140°	952.3	952.0	951.8	950.9	949.3	947.5	945.9	944.3
142.5°	987.8	987.6	987.3	986.6	985.3	984.1	982.8	981.5
145°	1040.0	1039.8	1039.6	1039.0	1038.0	1037.1	1036.2	1035.2
147.5°	1089.3	1089.3	1089.3	1088.7	1087.3	1085.8	1084.4	1083.0
150°	1119.8	1119.8	1119.8	1119.1	1117.7	1116.3	1114.8	1113.5
152.5°	1147.6	1148.0	1148.3	1147.9	1146.7	1145.5	1144.3	1143.0
155°	1188.3	1189.3	1190.2	1189.8	1188.2	1186.6	1184.9	1183.2
157.5°	1223.3	1224.3	1225.3	1225.1	1223.8	1222.5	1221.2	1219.9
160°	1244.8	1246.0	1247.2	1247.3	1246.3	1245.5	1244.5	1243.5
162.5°	1265.1	1266.3	1267.5	1267.3	1265.8	1264.3	1262.8	1261.3
165°	1290.8	1292.2	1293.6	1293.5	1291.8	1290.2	1288.5	1286.9
167.5°	1311.6	1313.0	1314.5	1314.5	1313.0	1311.6	1310.1	1308.6
170°	1323.0	1324.6	1326.2	1326.2	1324.6	1323.0	1321.3	1319.6
172.5°	1331.9	1333.3	1334.8	1334.7	1333.1	1331.4	1329.8	1328.1
175°	1341.5	1343.0	1344.3	1344.2	1342.6	1340.9	1339.3	1337.7
177.5°	1345.8	1347.0	1348.1	1348.0	1346.6	1345.3	1344.0	1342.7
180°	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1

(END OF REPORT)