

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: P331584-935

Luminaire Tested: **S122DIW-S865D1440U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331584-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D1440U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7330.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

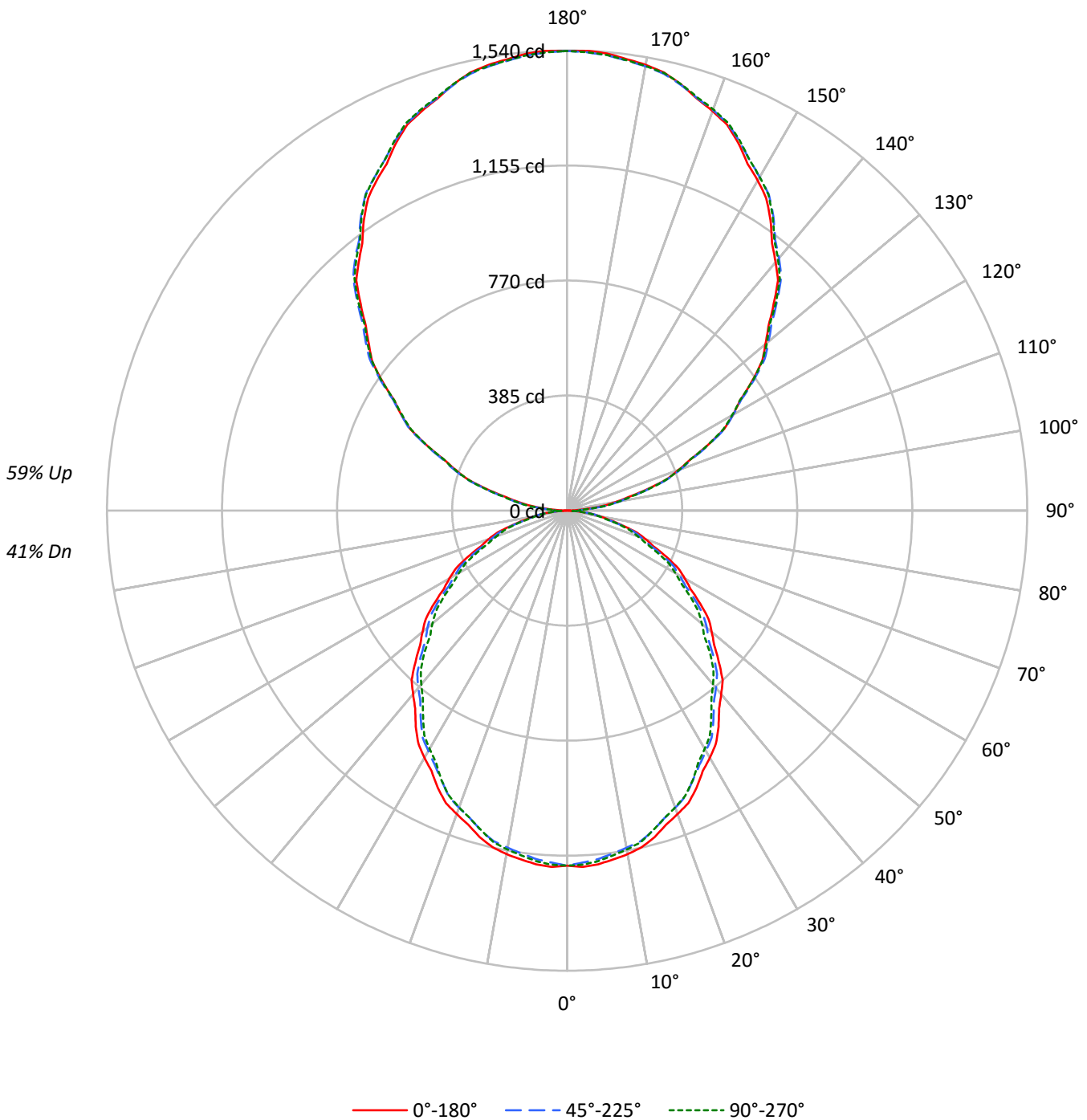
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64	55	54	52	43	42	41	35
2	87	80	74	69	79	73	68	63	60	56	53	48	46	43	37	36	34	29
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	50	42	36	56	46	38	33	38	33	29	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15	13
9	49	37	30	25	45	34	27	23	29	23	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19184	19184	19184
5°	19258	18979	19091
10°	19143	18787	18882
15°	18907	18544	18524
20°	18570	18179	18158
25°	18235	17728	17728
30°	17807	17316	17167
35°	17406	16821	16575
40°	16904	16326	16012
45°	16408	15835	15445
50°	15870	15325	14780
55°	15308	14728	14184
60°	14683	14018	13504
65°	14013	13310	12699
70°	13161	12458	11863
75°	11971	11472	11185
80°	10628	10302	9772
85°	8670	8262	7410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	1.5
10°-20°	314.4	4.3
20°-30°	462.1	6.3
30°-40°	536.8	7.3
40°-50°	536.2	7.3
50°-60°	467.6	6.4
60°-70°	345.7	4.7
70°-80°	195.8	2.7
80°-90°	58.8	0.8
90°-100°	97.5	1.3
100°-110°	302.7	4.1
110°-120°	517.4	7.1
120°-130°	680.4	9.3
130°-140°	763.7	10.4
140°-150°	748.8	10.2
150°-160°	628.1	8.6
160°-170°	416.6	5.7
170°-180°	145.6	2.0
0°-30°	888.2	12.1
0°-40°	1425.0	19.4
0°-60°	2428.7	33.1
0°-90°	3029.1	41.3
90°-120°	917.6	12.5
90°-150°	3110.6	42.4
90°-180°	4301.0	58.7
0°-180°	7330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1183	1171	1180	1178	113
15°	1131	1124	1109	1113	1108	318
25°	1024	1014	995	997	995	471
35°	883	871	853	847	841	551
45°	719	710	694	681	676	554
55°	544	537	523	510	504	486
65°	367	360	348	338	332	363
75°	192	189	184	178	179	205
85°	47	46	45	41	40	54
90°	1	18	46	43	44	6
95°	68	80	83	83	80	77
105°	279	283	286	288	288	295
115°	519	526	524	523	519	513
125°	755	766	763	759	758	675
135°	977	991	994	993	989	755
145°	1186	1195	1203	1204	1199	741
155°	1356	1360	1364	1370	1367	624
165°	1476	1475	1474	1483	1477	416
175°	1536	1532	1529	1537	1530	146
180°	1538	1538	1538	1538	1538	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1193.7	1192.7	1191.6	1190.7	1189.6	1188.0	1185.8	1183.5	1181.3	1179.1	1181.1
5°	1188.2	1187.1	1186.2	1185.2	1184.1	1182.2	1179.5	1176.6	1173.9	1171.0	1173.1
7.5°	1177.7	1176.1	1174.6	1172.9	1171.4	1169.2	1166.3	1163.5	1160.6	1157.8	1159.9
10°	1167.6	1165.9	1164.1	1162.3	1160.5	1158.1	1155.0	1152.0	1149.0	1145.9	1148.0
12.5°	1153.9	1152.4	1150.8	1149.2	1147.6	1145.3	1142.3	1139.2	1136.2	1133.2	1134.5
15°	1131.1	1129.5	1128.0	1126.5	1125.0	1122.6	1119.3	1115.9	1112.7	1109.4	1110.3
17.5°	1101.8	1100.3	1098.8	1097.3	1095.7	1093.3	1089.9	1086.6	1083.2	1079.9	1081.1
20°	1080.8	1079.3	1077.8	1076.2	1074.7	1072.2	1068.6	1065.1	1061.5	1058.0	1058.7
22.5°	1059.8	1057.7	1055.5	1053.3	1051.3	1048.5	1045.2	1041.8	1038.5	1035.1	1035.3
25°	1023.6	1021.7	1019.6	1017.6	1015.5	1012.4	1008.1	1003.8	999.4	995.1	995.7
27.5°	982.6	980.8	978.9	977.1	975.3	972.6	969.2	965.8	962.4	959.0	958.3
30°	955.1	953.1	951.1	949.1	947.0	944.1	940.3	936.5	932.6	928.8	928.1
32.5°	925.9	924.3	922.6	921.0	919.4	916.5	912.6	908.5	904.6	900.5	899.1
35°	883.1	880.6	878.0	875.6	873.0	869.7	865.6	861.6	857.5	853.4	852.0
37.5°	834.9	832.7	830.4	828.2	826.0	822.9	818.8	814.8	810.6	806.6	804.7
40°	802.0	800.0	798.0	795.9	793.9	790.8	786.8	782.7	778.7	774.6	772.3
42.5°	770.1	768.0	765.9	764.0	761.9	758.9	754.8	750.8	746.7	742.6	740.1
45°	718.6	716.9	715.1	713.3	711.5	708.7	704.9	701.1	697.3	693.5	690.7
47.5°	667.4	665.8	664.1	662.5	660.7	657.9	653.9	650.0	646.0	642.0	639.1
50°	631.8	630.5	629.3	628.0	626.7	624.3	620.8	617.2	613.6	610.1	606.6
52.5°	597.1	595.4	593.7	592.0	590.4	587.9	584.5	581.2	577.8	574.5	571.5
55°	543.8	542.3	540.8	539.2	537.7	535.5	532.4	529.3	526.3	523.2	520.2
57.5°	490.3	489.1	487.9	486.7	485.5	483.2	479.8	476.5	473.1	469.8	466.8
60°	454.7	453.7	452.7	451.7	450.6	448.4	444.8	441.3	437.7	434.1	431.4
62.5°	420.0	418.4	416.7	415.1	413.5	411.3	408.5	405.8	403.0	400.4	397.8
65°	366.8	365.2	363.7	362.1	360.7	358.6	356.1	353.5	351.0	348.4	346.2
67.5°	312.6	311.3	310.1	308.9	307.7	306.0	303.7	301.4	299.1	296.8	295.1
70°	278.8	277.8	276.7	275.7	274.7	273.0	270.8	268.5	266.2	263.9	262.2
72.5°	244.0	243.1	242.0	241.0	240.0	238.8	237.3	235.8	234.3	232.8	231.1
75°	191.9	191.4	190.9	190.5	189.9	189.0	187.8	186.5	185.2	183.9	182.4
77.5°	145.3	144.5	143.6	142.8	141.9	141.2	140.7	140.2	139.7	139.1	138.4
80°	114.3	114.0	113.7	113.5	113.2	112.9	112.4	111.8	111.3	110.8	110.0
82.5°	85.0	85.0	84.9	84.8	84.8	84.6	84.3	84.0	83.7	83.4	82.4
85°	46.8	46.6	46.3	46.1	45.8	45.5	45.3	45.0	44.8	44.6	43.8
87.5°	16.7	17.0	17.3	17.6	17.8	18.4	19.3	20.1	21.0	21.9	21.2
90°	1.3	4.7	8.2	11.7	15.2	20.1	26.4	32.7	39.1	45.5	44.9
92.5°	23.1	25.7	28.2	30.7	33.2	35.3	36.8	38.3	39.8	41.2	41.4
95°	67.5	70.3	73.3	76.1	79.0	80.8	81.4	81.9	82.5	83.1	83.1
97.5°	123.3	125.9	128.4	131.0	133.5	135.3	136.4	137.5	138.5	139.7	139.7
100°	164.9	167.1	169.4	171.8	174.1	175.6	176.5	177.4	178.2	179.1	179.1
102.5°	208.4	210.3	212.2	214.0	215.9	217.3	218.4	219.5	220.6	221.7	222.0
105°	279.1	279.9	280.8	281.6	282.5	283.3	283.9	284.4	285.0	285.6	286.1
107.5°	350.2	351.5	352.8	354.0	355.2	355.9	355.9	355.9	355.9	355.9	356.1
110°	395.9	397.6	399.3	401.1	402.8	403.7	403.7	403.7	403.7	403.7	403.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	445.7	447.5	449.2	450.9	452.6	453.4	453.1	453.0	452.7	452.5	451.8
115°	519.2	520.9	522.6	524.4	526.2	526.7	526.2	525.6	525.0	524.4	524.1
117.5°	592.5	594.7	597.0	599.3	601.7	602.0	600.4	598.7	597.1	595.6	594.9
120°	641.2	643.5	645.8	648.2	650.5	650.5	648.2	645.8	643.5	641.2	641.2
122.5°	685.9	688.6	691.4	694.1	697.0	697.5	695.9	694.3	692.7	691.0	690.3
125°	755.4	758.0	760.6	763.2	765.9	766.7	765.9	765.0	764.1	763.2	762.3
127.5°	823.2	826.5	829.7	833.1	836.4	837.5	836.5	835.4	834.4	833.4	832.2
130°	865.7	869.5	873.3	877.0	880.8	882.4	881.8	881.2	880.6	880.0	879.5
132.5°	913.5	916.6	919.6	922.7	925.7	927.4	927.5	927.6	927.7	927.8	926.5
135°	977.4	980.6	983.8	986.9	990.1	992.0	992.6	993.2	993.7	994.3	994.0
137.5°	1044.7	1047.2	1049.8	1052.4	1055.0	1056.7	1057.5	1058.2	1058.9	1059.7	1059.5
140°	1085.1	1087.7	1090.4	1093.0	1095.5	1097.5	1099.0	1100.4	1101.9	1103.3	1103.3
142.5°	1126.7	1129.3	1131.9	1134.5	1137.0	1138.8	1139.8	1140.8	1141.8	1142.8	1143.0
145°	1186.4	1188.4	1190.4	1192.4	1194.5	1196.4	1198.1	1199.8	1201.5	1203.2	1203.5
147.5°	1239.6	1242.0	1244.4	1246.9	1249.3	1251.1	1252.2	1253.4	1254.6	1255.7	1256.4
150°	1275.9	1277.6	1279.4	1281.2	1282.9	1284.3	1285.5	1286.6	1287.8	1288.9	1289.8
152.5°	1308.1	1309.8	1311.6	1313.3	1315.1	1316.6	1318.0	1319.4	1320.8	1322.2	1323.3
155°	1356.4	1357.3	1358.1	1359.0	1359.9	1360.7	1361.6	1362.4	1363.3	1364.2	1365.6
157.5°	1397.7	1398.3	1398.9	1399.5	1400.0	1400.6	1401.1	1401.6	1402.1	1402.7	1404.5
160°	1422.6	1423.2	1423.7	1424.4	1425.0	1425.4	1425.6	1425.9	1426.2	1426.5	1428.2
162.5°	1445.4	1445.6	1445.7	1445.8	1446.0	1446.1	1446.4	1446.7	1447.0	1447.3	1449.2
165°	1475.8	1475.6	1475.2	1475.0	1474.7	1474.5	1474.5	1474.5	1474.5	1474.5	1476.5
167.5°	1501.2	1500.4	1499.5	1498.7	1497.8	1497.4	1497.3	1497.3	1497.2	1497.1	1499.2
170°	1514.8	1513.9	1513.0	1512.2	1511.3	1510.7	1510.5	1510.2	1509.8	1509.6	1511.6
172.5°	1524.1	1523.3	1522.4	1521.6	1520.7	1520.1	1519.8	1519.5	1519.2	1518.9	1521.0
175°	1535.5	1534.6	1533.8	1532.9	1532.1	1531.4	1530.8	1530.2	1529.7	1529.0	1531.1
177.5°	1540.2	1539.6	1538.9	1538.2	1537.5	1536.9	1536.4	1535.9	1535.5	1535.0	1536.4
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1183.1	1185.2	1187.1	1188.0	1187.6	1187.1	1186.8	1186.4
5°	1175.1	1177.2	1179.2	1179.9	1179.5	1179.0	1178.5	1177.9
7.5°	1161.8	1163.9	1166.0	1166.7	1166.1	1165.5	1165.0	1164.4
10°	1150.0	1152.0	1154.1	1154.7	1153.9	1153.1	1152.4	1151.7
12.5°	1136.0	1137.4	1138.8	1139.3	1138.7	1138.2	1137.6	1137.0
15°	1111.4	1112.4	1113.4	1113.3	1112.1	1110.8	1109.5	1108.2
17.5°	1082.2	1083.4	1084.6	1084.5	1083.3	1082.1	1080.9	1079.7
20°	1059.5	1060.2	1061.0	1060.8	1059.9	1058.9	1057.8	1056.8
22.5°	1035.4	1035.5	1035.7	1035.5	1034.8	1034.2	1033.6	1033.0
25°	996.2	996.6	997.1	997.1	996.6	996.2	995.7	995.1
27.5°	957.5	956.7	956.0	955.0	953.7	952.5	951.3	950.1
30°	927.3	926.6	925.8	924.9	923.9	922.9	921.9	920.8
32.5°	897.8	896.4	895.0	893.8	892.9	891.8	890.8	889.8
35°	850.4	848.9	847.4	845.9	844.7	843.4	842.1	840.9
37.5°	802.9	801.0	799.1	797.5	796.3	795.1	793.9	792.6
40°	770.1	767.8	765.5	763.8	762.8	761.8	760.8	759.7
42.5°	737.6	735.1	732.7	730.7	729.3	727.9	726.4	725.0
45°	687.9	685.1	682.3	680.4	679.4	678.4	677.3	676.4
47.5°	636.2	633.3	630.3	628.1	626.6	625.2	623.7	622.2
50°	603.0	599.4	595.9	593.5	592.2	590.9	589.7	588.4
52.5°	568.5	565.6	562.7	560.3	558.7	557.0	555.3	553.6
55°	517.2	514.1	511.1	508.9	507.6	506.4	505.1	503.9
57.5°	463.8	460.8	457.8	455.8	454.9	453.9	453.0	451.9
60°	428.6	425.8	423.0	421.2	420.4	419.7	418.9	418.2
62.5°	395.1	392.5	389.9	388.2	387.2	386.2	385.3	384.4
65°	343.9	341.6	339.3	337.5	336.3	335.0	333.7	332.4
67.5°	293.3	291.4	289.7	288.3	287.3	286.3	285.2	284.2
70°	260.4	258.6	256.8	255.4	254.4	253.4	252.4	251.3
72.5°	229.3	227.5	225.8	224.5	223.6	222.8	222.0	221.2
75°	180.9	179.3	177.9	177.4	177.9	178.4	178.8	179.3
77.5°	137.7	136.9	136.1	135.3	134.7	134.0	133.3	132.5
80°	109.3	108.6	107.8	107.1	106.6	106.2	105.6	105.1
82.5°	81.5	80.5	79.6	79.0	78.9	78.8	78.7	78.6
85°	43.0	42.3	41.5	41.0	40.7	40.5	40.2	40.0
87.5°	20.4	19.7	18.9	18.5	18.4	18.3	18.1	18.0
90°	44.3	43.7	43.1	43.0	43.3	43.6	43.8	44.2
92.5°	41.5	41.6	41.8	41.8	41.8	41.9	42.0	42.0
95°	83.1	83.1	83.1	82.7	82.2	81.6	81.0	80.5
97.5°	139.7	139.7	139.7	139.7	139.6	139.5	139.5	139.4
100°	179.1	179.1	179.1	179.0	178.7	178.4	178.1	177.8
102.5°	222.1	222.4	222.7	222.6	222.3	222.1	221.7	221.4
105°	286.7	287.3	287.8	288.2	288.2	288.2	288.2	288.2
107.5°	356.4	356.6	356.8	356.3	355.0	353.6	352.3	350.9
110°	403.7	403.7	403.7	403.2	402.3	401.5	400.6	399.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	451.1	450.4	449.7	449.0	448.4	447.8	447.1	446.5
115°	523.8	523.5	523.2	522.6	521.8	520.9	520.0	519.2
117.5°	594.2	593.5	592.8	591.9	591.1	590.2	589.4	588.5
120°	641.2	641.2	641.2	640.8	639.9	639.0	638.2	637.3
122.5°	689.7	689.0	688.3	687.6	687.0	686.4	685.7	685.1
125°	761.5	760.6	759.7	759.2	758.9	758.6	758.4	758.0
127.5°	831.2	830.2	829.1	828.2	827.2	826.3	825.4	824.5
130°	878.9	878.3	877.7	876.8	875.7	874.6	873.4	872.3
132.5°	925.3	924.0	922.7	921.6	920.8	919.8	918.9	917.9
135°	993.7	993.4	993.2	992.6	991.7	990.8	990.0	989.1
137.5°	1059.2	1059.0	1058.8	1058.1	1057.0	1055.8	1054.6	1053.4
140°	1103.3	1103.3	1103.3	1102.8	1101.6	1100.4	1099.2	1098.1
142.5°	1143.2	1143.5	1143.7	1143.2	1142.1	1140.9	1139.8	1138.6
145°	1203.9	1204.1	1204.4	1203.9	1202.8	1201.7	1200.5	1199.4
147.5°	1257.0	1257.6	1258.3	1258.0	1256.9	1255.8	1254.7	1253.6
150°	1290.6	1291.5	1292.4	1292.4	1291.5	1290.6	1289.8	1288.9
152.5°	1324.3	1325.4	1326.5	1326.5	1325.4	1324.3	1323.3	1322.2
155°	1367.1	1368.6	1369.9	1370.3	1369.4	1368.6	1367.7	1366.8
157.5°	1406.5	1408.5	1410.5	1410.7	1409.4	1408.0	1406.6	1405.2
160°	1429.9	1431.7	1433.4	1433.7	1432.5	1431.4	1430.3	1429.1
162.5°	1451.2	1453.2	1455.1	1455.4	1454.1	1452.7	1451.3	1449.8
165°	1478.6	1480.6	1482.6	1482.9	1481.4	1480.1	1478.6	1477.1
167.5°	1501.2	1503.2	1505.2	1505.5	1504.0	1502.4	1501.0	1499.4
170°	1513.6	1515.6	1517.7	1517.8	1516.0	1514.3	1512.6	1510.9
172.5°	1522.9	1525.0	1527.0	1527.2	1525.4	1523.7	1522.0	1520.3
175°	1533.1	1535.1	1537.1	1537.3	1535.5	1533.8	1532.1	1530.3
177.5°	1537.8	1539.2	1540.6	1540.6	1539.2	1537.8	1536.4	1535.0
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2

(END OF REPORT)