

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: P331844-935

Luminaire Tested: **S122RDIW-S865D1440U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331844-935
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: S122RDIW-S865D1440U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

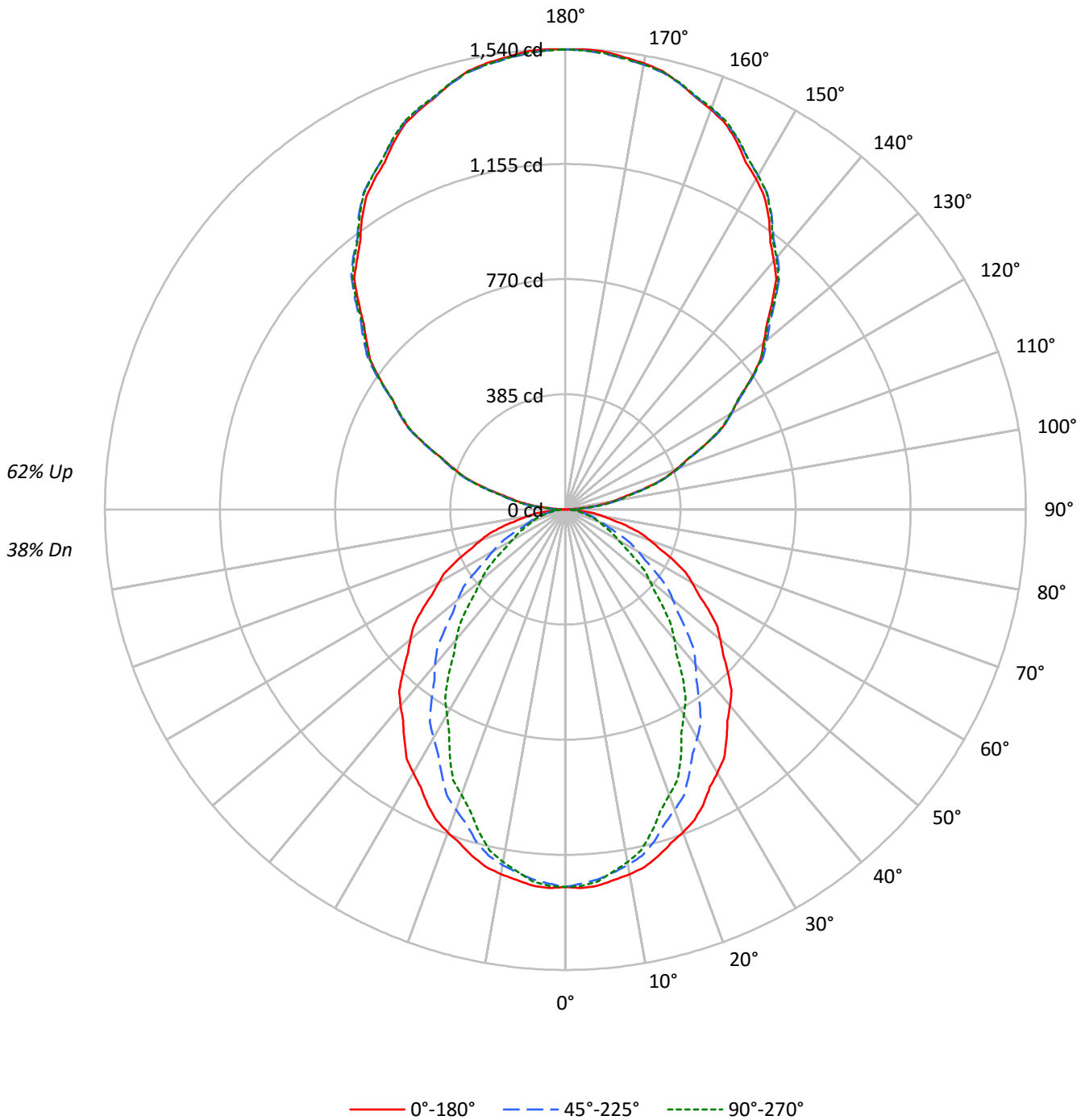
Lumens per Lamp: N/A
Luminaire Lumens: 6903.6 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 76.6
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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	38	32
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	34	33	28
3	80	71	64	58	72	64	58	54	53	48	45	42	39	37	32	30	28	24
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16	13
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20384	20384	20384
5°	20462	20128	20238
10°	20305	19799	19630
15°	20072	19211	18658
20°	19747	18374	17452
25°	19417	17423	16283
30°	18957	16444	14783
35°	18510	15380	13466
40°	18061	14280	11944
45°	17532	13045	10565
50°	16990	11796	9211
55°	16434	10452	7910
60°	15791	9038	6568
65°	15060	7595	5979
70°	14186	6255	5500
75°	13119	5702	5128
80°	11576	5095	4677
85°	9114	4020	4020



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	1.7
10°-20°	324.5	4.7
20°-30°	455.6	6.6
30°-40°	496.8	7.2
40°-50°	456.8	6.6
50°-60°	358.8	5.2
60°-70°	233.9	3.4
70°-80°	120.6	1.7
80°-90°	37.4	0.5
90°-100°	97.5	1.4
100°-110°	302.7	4.4
110°-120°	517.4	7.5
120°-130°	680.4	9.9
130°-140°	763.7	11.1
140°-150°	748.8	10.8
150°-160°	628.1	9.1
160°-170°	416.6	6.0
170°-180°	145.6	2.1
0°-30°	898.3	13.0
0°-40°	1395.1	20.2
0°-60°	2210.7	32.0
0°-90°	2602.7	37.7
90°-120°	917.6	13.3
90°-150°	3110.6	45.1
90°-180°	4301.0	62.3
0°-180°	6903.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1262	1256	1242	1251	1249	120
15°	1201	1187	1149	1128	1116	338
25°	1090	1051	978	933	914	501
35°	939	878	780	711	683	587
45°	768	689	571	493	463	593
55°	584	493	371	305	281	521
65°	394	301	199	162	156	391
75°	210	133	91	84	82	223
85°	49	26	22	22	22	58
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°	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5
2.5°	1267.0	1266.0	1265.0	1263.9	1263.0	1261.4	1259.1	1256.9	1254.6	1252.4	1254.5
5°	1262.5	1261.2	1259.9	1258.6	1257.4	1255.1	1251.8	1248.5	1245.2	1241.9	1244.1
7.5°	1249.4	1247.8	1246.3	1244.7	1243.1	1240.4	1236.6	1232.7	1228.8	1224.9	1225.6
10°	1238.5	1236.7	1234.9	1233.1	1231.3	1228.0	1222.9	1217.8	1212.7	1207.6	1206.9
12.5°	1224.8	1222.5	1220.4	1218.2	1216.0	1211.7	1205.1	1198.7	1192.1	1185.7	1184.3
15°	1200.8	1198.0	1195.2	1192.4	1189.6	1183.9	1175.3	1166.7	1158.0	1149.3	1144.5
17.5°	1171.3	1167.0	1162.8	1158.5	1154.3	1146.6	1135.5	1124.4	1113.4	1102.3	1096.6
20°	1149.3	1144.3	1139.2	1134.1	1129.0	1120.2	1107.4	1094.8	1082.1	1069.4	1063.0
22.5°	1125.6	1119.9	1114.2	1108.5	1102.9	1092.9	1078.5	1064.2	1049.9	1035.5	1027.3
25°	1089.9	1081.8	1073.7	1065.6	1057.5	1045.0	1028.2	1011.5	994.7	978.0	967.6
27.5°	1047.0	1038.1	1029.3	1020.5	1011.7	997.8	978.9	960.0	941.1	922.2	910.1
30°	1016.8	1007.2	997.6	987.9	978.3	963.3	943.0	922.6	902.3	882.0	869.1
32.5°	987.6	976.3	965.0	953.7	942.5	926.5	905.8	885.0	864.4	843.6	828.9
35°	939.1	926.2	913.3	900.3	887.3	869.7	847.3	825.0	802.7	780.3	764.3
37.5°	890.7	876.5	862.3	848.0	833.8	814.8	791.0	767.2	743.4	719.5	701.9
40°	856.9	841.6	826.4	811.1	795.9	776.0	751.4	726.8	702.1	677.5	659.4
42.5°	822.2	806.1	790.1	774.0	757.9	737.2	711.8	686.3	660.9	635.4	616.8
45°	767.8	750.7	733.7	716.7	699.7	677.9	651.3	624.6	597.9	571.3	553.2
47.5°	714.7	696.7	678.7	660.6	642.7	619.8	592.4	564.8	537.3	509.8	491.9
50°	676.4	658.3	640.3	622.2	604.2	581.3	553.4	525.4	497.5	469.6	452.0
52.5°	638.9	620.0	601.2	582.4	563.5	540.4	513.2	485.8	458.5	431.2	414.2
55°	583.8	564.0	544.2	524.4	504.6	481.0	453.6	426.1	398.7	371.3	356.1
57.5°	527.4	507.0	486.7	466.4	446.2	422.8	396.4	370.1	343.7	317.4	303.4
60°	489.0	468.6	448.4	428.1	407.8	384.5	358.3	332.2	306.1	279.9	267.0
62.5°	451.5	431.2	410.9	390.5	370.2	347.7	322.7	297.8	272.9	247.9	235.6
65°	394.2	373.6	353.0	332.4	311.9	290.2	267.3	244.5	221.6	198.8	190.2
67.5°	338.9	318.5	298.1	277.6	257.2	236.7	216.2	195.6	175.0	154.5	150.5
70°	300.5	280.7	260.9	241.1	221.3	202.6	185.1	167.6	150.1	132.5	130.0
72.5°	263.9	245.0	225.9	207.0	188.0	171.4	157.4	143.3	129.2	115.2	113.0
75°	210.3	192.4	174.7	156.9	139.1	126.0	117.3	108.7	100.0	91.4	89.6
77.5°	157.5	141.8	126.2	110.6	95.1	85.2	81.0	76.9	72.8	68.5	67.5
80°	124.5	111.6	98.7	85.7	72.8	65.0	62.4	59.9	57.3	54.8	53.8
82.5°	94.4	84.3	74.1	64.1	54.0	48.0	46.3	44.6	42.9	41.2	40.6
85°	49.2	43.8	38.5	33.1	27.8	24.8	24.0	23.2	22.5	21.7	21.7
87.5°	14.9	13.9	13.0	12.1	11.2	11.3	12.6	13.9	15.2	16.4	16.1
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°	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5	1262.5
2.5°	1256.5	1258.5	1260.5	1261.4	1260.9	1260.5	1260.2	1259.7
5°	1246.5	1248.7	1251.0	1251.8	1251.0	1250.3	1249.5	1248.7
7.5°	1226.3	1226.9	1227.6	1227.3	1226.0	1224.7	1223.3	1222.0
10°	1206.1	1205.3	1204.5	1203.4	1201.9	1200.4	1198.9	1197.3
12.5°	1182.9	1181.6	1180.2	1178.3	1175.7	1173.2	1170.6	1168.1
15°	1139.7	1134.9	1130.1	1126.4	1123.9	1121.3	1118.8	1116.2
17.5°	1090.8	1085.0	1079.3	1074.3	1069.9	1065.6	1061.2	1056.8
20°	1056.7	1050.3	1044.0	1038.0	1032.4	1026.8	1021.2	1015.7
22.5°	1019.3	1011.1	1002.9	996.7	992.6	988.3	984.2	980.1
25°	957.2	946.8	936.3	929.2	925.4	921.6	917.8	914.0
27.5°	897.9	885.8	873.7	864.6	858.6	852.5	846.4	840.4
30°	856.1	843.2	830.2	820.3	813.5	806.6	799.8	792.9
32.5°	814.1	799.3	784.5	773.9	767.5	761.0	754.6	748.1
35°	748.3	732.4	716.4	705.6	700.0	694.4	688.8	683.2
37.5°	684.3	666.7	649.1	637.1	630.7	624.2	617.9	611.5
40°	641.4	623.5	605.4	593.1	586.5	579.9	573.3	566.7
42.5°	598.2	579.5	560.9	548.4	542.0	535.6	529.2	522.8
45°	535.2	517.2	499.1	487.1	481.0	474.9	468.8	462.7
47.5°	473.9	456.0	438.1	426.4	420.9	415.3	409.7	404.2
50°	434.5	417.0	399.5	388.1	382.7	377.4	372.0	366.7
52.5°	397.4	380.5	363.5	352.7	347.7	342.8	337.9	332.9
55°	340.9	325.6	310.4	300.3	295.5	290.7	285.9	281.0
57.5°	289.5	275.5	261.6	252.5	248.5	244.4	240.3	236.3
60°	254.0	241.1	228.1	219.6	215.5	211.5	207.4	203.4
62.5°	223.3	210.9	198.5	191.1	188.7	186.3	183.8	181.4
65°	181.5	172.9	164.3	159.5	158.8	158.1	157.3	156.5
67.5°	146.5	142.6	138.6	136.2	135.4	134.6	133.8	133.0
70°	127.4	124.9	122.3	120.6	119.6	118.6	117.5	116.5
72.5°	110.9	108.7	106.6	105.3	104.6	104.0	103.4	102.8
75°	87.8	86.1	84.3	83.3	83.0	82.7	82.5	82.2
77.5°	66.6	65.5	64.5	63.8	63.4	62.9	62.6	62.2
80°	52.8	51.8	50.8	50.3	50.3	50.3	50.3	50.3
82.5°	40.0	39.3	38.7	38.4	38.4	38.4	38.4	38.4
85°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
87.5°	15.8	15.4	15.2	15.0	15.1	15.1	15.2	15.2
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)