

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: P331763-927

Luminaire Tested: **SA2XXRDIP-C1005D1080U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331763-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C1005D1080U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5812.5 lumens
Efficiency: N/A
Efficacy: 81.1 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: General Diffuse

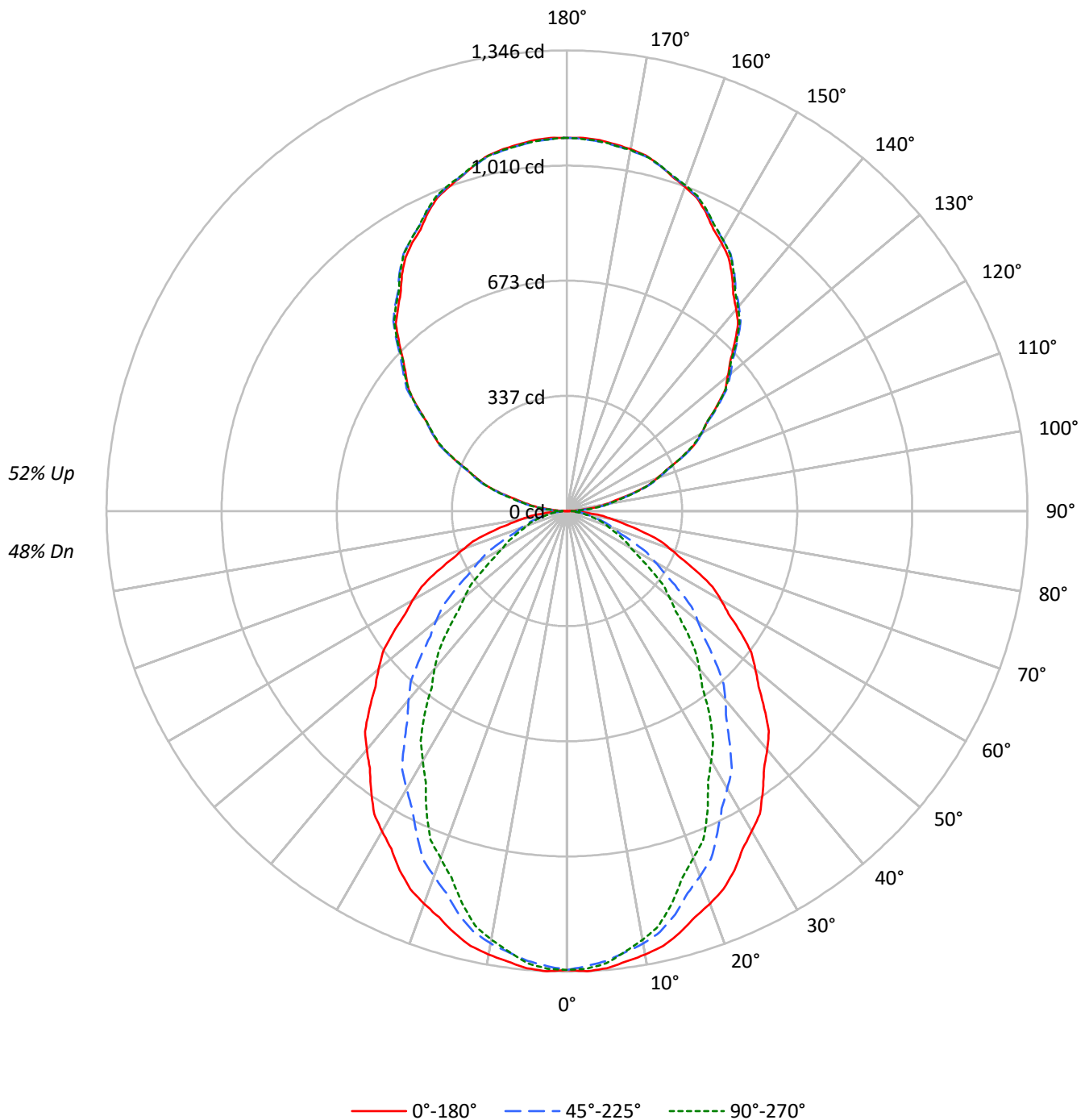
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54
1	98	94	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46
2	89	82	76	71	82	76	71	67	64	60	57	53	51	48	43	41	40
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	39	36	34
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	35	32	30
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	32	29	26
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19
9	51	39	32	27	47	37	30	26	32	26	23	27	23	20	23	19	17
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21660	21660	21660
5°	21742	21389	21507
10°	21577	21040	20859
15°	21329	20415	19826
20°	20984	19524	18545
25°	20633	18513	17302
30°	20144	17473	15709
35°	19669	16344	14310
40°	19191	15173	12690
45°	18630	13860	11227
50°	18053	12534	9789
55°	17464	11108	8408
60°	16779	9607	6978
65°	16000	8073	6357
70°	15073	6652	5844
75°	13936	6057	5452
80°	12301	5421	4965
85°	9670	4279	4279

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	2.2
10°-20°	344.8	5.9
20°-30°	484.2	8.3
30°-40°	528.0	9.1
40°-50°	485.4	8.4
50°-60°	381.3	6.6
60°-70°	248.6	4.3
70°-80°	128.2	2.2
80°-90°	37.6	0.6
90°-100°	69.1	1.2
100°-110°	214.6	3.7
110°-120°	366.8	6.3
120°-130°	482.4	8.3
130°-140°	541.4	9.3
140°-150°	530.9	9.1
150°-160°	445.3	7.7
160°-170°	295.3	5.1
170°-180°	103.2	1.8
0°-30°	954.5	16.4
0°-40°	1482.5	25.5
0°-60°	2349.2	40.4
0°-90°	2763.5	47.5
90°-120°	650.5	11.2
90°-150°	2205.2	37.9
90°-180°	3049.0	52.5
0°-180°	5812.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1335	1320	1330	1327	127
15°	1276	1261	1221	1199	1186	359
25°	1158	1117	1039	991	971	532
35°	998	934	829	755	726	624
45°	816	732	607	524	492	630
55°	620	524	395	324	299	554
65°	419	320	211	172	166	415
75°	223	141	97	89	87	236
85°	52	28	23	23	23	62
90°	1	12	32	31	31	5
95°	48	57	59	59	57	55
105°	198	201	202	204	204	209
115°	368	373	372	371	368	364
125°	536	543	541	538	537	478
135°	693	703	705	704	701	535
145°	841	847	853	854	850	525
155°	962	964	967	971	969	442
165°	1046	1045	1045	1051	1047	295
175°	1089	1086	1084	1090	1085	103
180°	1090	1090	1090	1090	1090	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1346.4	1345.3	1344.2	1343.1	1342.0	1340.3	1337.9	1335.6	1333.2	1330.9	1333.0
5°	1341.5	1340.1	1338.8	1337.4	1336.1	1333.7	1330.2	1326.7	1323.2	1319.7	1322.1
7.5°	1327.7	1326.0	1324.4	1322.6	1321.0	1318.1	1314.0	1309.9	1305.8	1301.7	1302.4
10°	1316.1	1314.2	1312.2	1310.3	1308.4	1304.8	1299.4	1294.0	1288.6	1283.3	1282.5
12.5°	1301.5	1299.1	1296.8	1294.5	1292.2	1287.5	1280.6	1273.7	1266.9	1260.0	1258.5
15°	1276.0	1273.0	1270.0	1267.0	1264.1	1258.0	1248.9	1239.7	1230.5	1221.3	1216.2
17.5°	1244.6	1240.1	1235.6	1231.1	1226.5	1218.4	1206.6	1194.8	1183.0	1171.3	1165.2
20°	1221.3	1215.9	1210.5	1205.1	1199.8	1190.3	1176.8	1163.3	1149.9	1136.3	1129.6
22.5°	1196.0	1190.0	1184.0	1178.0	1171.9	1161.3	1146.1	1130.8	1115.6	1100.4	1091.7
25°	1158.2	1149.5	1140.9	1132.3	1123.6	1110.5	1092.7	1074.8	1057.0	1039.2	1028.2
27.5°	1112.5	1103.2	1093.8	1084.4	1075.0	1060.3	1040.2	1020.1	1000.1	980.0	967.1
30°	1080.5	1070.2	1060.0	1049.7	1039.5	1023.6	1002.0	980.4	958.9	937.2	923.4
32.5°	1049.4	1037.4	1025.5	1013.5	1001.5	984.5	962.5	940.5	918.5	896.4	880.7
35°	997.9	984.2	970.4	956.6	942.9	924.2	900.4	876.7	852.9	829.2	812.2
37.5°	946.5	931.4	916.2	901.1	886.1	865.9	840.5	815.2	789.9	764.6	745.9
40°	910.5	894.4	878.1	862.0	845.8	824.6	798.4	772.3	746.1	719.9	700.8
42.5°	873.6	856.6	839.6	822.4	805.4	783.4	756.4	729.3	702.3	675.3	655.5
45°	815.9	797.7	779.7	761.6	743.5	720.3	692.0	663.7	635.3	607.0	587.9
47.5°	759.5	740.4	721.2	702.0	682.9	658.7	629.5	600.2	570.9	541.7	522.7
50°	718.7	699.6	680.4	661.2	642.1	617.7	588.0	558.3	528.6	499.0	480.4
52.5°	678.9	658.9	638.9	618.9	598.8	574.3	545.3	516.3	487.2	458.2	440.2
55°	620.4	599.4	578.3	557.2	536.2	511.1	482.0	452.8	423.7	394.6	378.3
57.5°	560.4	538.8	517.2	495.7	474.0	449.2	421.3	393.2	365.3	337.2	322.4
60°	519.6	498.0	476.4	454.9	433.2	408.6	380.8	353.0	325.2	297.5	283.7
62.5°	479.8	458.2	436.7	415.0	393.5	369.4	342.9	316.4	289.9	263.5	250.3
65°	418.8	397.0	375.2	353.3	331.4	308.4	284.1	259.8	235.5	211.3	202.1
67.5°	360.0	338.4	316.7	295.0	273.3	251.5	229.7	207.9	186.0	164.1	159.9
70°	319.3	298.3	277.2	256.2	235.1	215.3	196.7	178.1	159.5	140.9	138.2
72.5°	280.4	260.2	240.1	219.9	199.7	182.1	167.2	152.3	137.3	122.4	120.1
75°	223.4	204.5	185.6	166.8	147.8	133.8	124.6	115.5	106.3	97.1	95.2
77.5°	167.3	150.8	134.2	117.6	101.0	90.5	86.1	81.7	77.2	72.9	71.8
80°	132.3	118.6	104.8	91.0	77.3	69.1	66.4	63.7	61.0	58.3	57.2
82.5°	100.3	89.5	78.8	68.0	57.4	51.0	49.2	47.4	45.6	43.7	43.1
85°	52.2	46.5	40.9	35.2	29.5	26.3	25.5	24.7	23.8	23.1	23.1
87.5°	15.7	14.5	13.2	12.0	10.8	10.6	11.5	12.4	13.3	14.2	13.9
90°	1.0	3.4	5.9	8.3	10.8	14.2	18.7	23.2	27.7	32.2	31.8
92.5°	16.4	18.1	20.0	21.8	23.6	25.0	26.1	27.2	28.2	29.2	29.3
95°	47.8	49.9	52.0	53.9	56.0	57.3	57.7	58.1	58.5	58.9	58.9
97.5°	87.5	89.2	91.0	92.8	94.6	95.9	96.6	97.4	98.2	99.0	99.0
100°	116.8	118.5	120.2	121.8	123.4	124.5	125.2	125.7	126.4	127.0	127.0
102.5°	147.8	149.1	150.4	151.7	153.0	154.1	154.9	155.6	156.4	157.2	157.3
105°	197.8	198.4	199.1	199.7	200.3	200.8	201.2	201.6	202.0	202.4	202.9
107.5°	248.3	249.1	250.1	251.0	251.8	252.3	252.3	252.3	252.3	252.3	252.5
110°	280.7	281.9	283.1	284.3	285.6	286.2	286.2	286.2	286.2	286.2	286.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	316.0	317.2	318.5	319.6	320.9	321.5	321.2	321.1	320.9	320.8	320.3
115°	368.0	369.3	370.5	371.8	373.0	373.4	373.0	372.6	372.2	371.8	371.5
117.5°	419.9	421.6	423.3	424.8	426.5	426.7	425.6	424.5	423.3	422.2	421.7
120°	454.6	456.2	457.9	459.5	461.1	461.1	459.5	457.9	456.2	454.6	454.6
122.5°	486.2	488.2	490.1	492.1	494.1	494.5	493.4	492.2	491.1	489.9	489.4
125°	535.5	537.4	539.2	541.1	542.9	543.5	542.9	542.3	541.7	541.1	540.4
127.5°	583.6	585.9	588.3	590.6	592.9	593.7	592.9	592.2	591.5	590.7	590.0
130°	613.8	616.4	619.1	621.7	624.4	625.5	625.1	624.7	624.3	623.9	623.4
132.5°	647.6	649.8	652.0	654.1	656.3	657.4	657.5	657.6	657.7	657.7	656.9
135°	692.9	695.1	697.4	699.7	701.9	703.2	703.6	704.0	704.5	704.9	704.6
137.5°	740.5	742.4	744.3	746.1	747.9	749.1	749.6	750.2	750.7	751.2	751.1
140°	769.3	771.1	772.9	774.8	776.7	778.1	779.1	780.1	781.2	782.1	782.1
142.5°	798.8	800.6	802.4	804.2	806.0	807.3	808.0	808.7	809.5	810.2	810.3
145°	841.1	842.5	843.9	845.3	846.8	848.1	849.3	850.6	851.8	853.0	853.2
147.5°	878.8	880.5	882.2	883.9	885.7	886.9	887.7	888.6	889.4	890.2	890.7
150°	904.5	905.8	907.0	908.2	909.4	910.5	911.3	912.1	912.9	913.8	914.3
152.5°	927.3	928.6	929.8	931.1	932.2	933.3	934.4	935.3	936.4	937.3	938.1
155°	961.6	962.2	962.8	963.5	964.1	964.6	965.3	965.9	966.5	967.1	968.1
157.5°	990.9	991.3	991.7	992.0	992.5	992.8	993.2	993.6	994.0	994.3	995.8
160°	1008.5	1008.9	1009.3	1009.7	1010.2	1010.4	1010.7	1010.9	1011.1	1011.3	1012.5
162.5°	1024.7	1024.8	1024.8	1024.9	1025.1	1025.2	1025.4	1025.6	1025.8	1026.0	1027.4
165°	1046.2	1046.1	1045.8	1045.6	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1046.8
167.5°	1064.3	1063.7	1063.0	1062.5	1061.8	1061.5	1061.4	1061.4	1061.4	1061.4	1062.8
170°	1073.9	1073.2	1072.6	1072.0	1071.4	1071.0	1070.8	1070.6	1070.4	1070.2	1071.6
172.5°	1080.5	1079.9	1079.3	1078.6	1078.0	1077.6	1077.4	1077.2	1077.0	1076.8	1078.2
175°	1088.6	1088.0	1087.3	1086.7	1086.2	1085.6	1085.2	1084.8	1084.4	1083.9	1085.4
177.5°	1091.9	1091.4	1090.9	1090.4	1090.0	1089.5	1089.2	1088.9	1088.5	1088.2	1089.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1335.1	1337.3	1339.5	1340.3	1339.9	1339.5	1339.0	1338.6
5°	1324.5	1327.0	1329.4	1330.2	1329.4	1328.6	1327.8	1327.0
7.5°	1303.1	1303.8	1304.5	1304.2	1302.7	1301.3	1300.0	1298.5
10°	1281.6	1280.8	1280.0	1278.8	1277.2	1275.6	1273.9	1272.3
12.5°	1257.0	1255.5	1254.1	1252.0	1249.4	1246.7	1244.0	1241.3
15°	1211.1	1205.9	1200.8	1196.9	1194.2	1191.5	1188.8	1186.1
17.5°	1159.1	1153.0	1146.9	1141.5	1136.9	1132.3	1127.6	1123.0
20°	1122.8	1116.1	1109.4	1103.0	1097.1	1091.2	1085.2	1079.3
22.5°	1083.1	1074.4	1065.6	1059.1	1054.7	1050.3	1045.8	1041.4
25°	1017.1	1006.1	995.0	987.5	983.3	979.3	975.3	971.2
27.5°	954.2	941.3	928.4	918.7	912.3	905.9	899.4	893.0
30°	909.7	896.0	882.2	871.7	864.4	857.1	849.9	842.6
32.5°	865.1	849.4	833.6	822.4	815.6	808.7	801.8	795.0
35°	795.2	778.2	761.2	749.7	743.8	737.8	731.9	726.0
37.5°	727.1	708.4	689.7	676.9	670.2	663.4	656.6	649.7
40°	681.6	662.4	643.3	630.3	623.2	616.2	609.2	602.1
42.5°	635.6	615.8	596.0	582.7	575.9	569.1	562.4	555.6
45°	568.7	549.5	530.4	517.6	511.1	504.6	498.1	491.7
47.5°	503.6	484.6	465.5	453.0	447.2	441.3	435.4	429.5
50°	461.8	443.1	424.5	412.3	406.7	401.0	395.4	389.7
52.5°	422.2	404.3	386.3	374.7	369.5	364.2	359.0	353.8
55°	362.2	346.0	329.8	319.2	314.0	308.9	303.8	298.7
57.5°	307.6	292.7	277.9	268.3	264.0	259.7	255.4	251.0
60°	269.9	256.2	242.4	233.4	229.0	224.7	220.4	216.1
62.5°	237.3	224.1	211.0	203.1	200.6	198.0	195.4	192.8
65°	192.9	183.7	174.5	169.5	168.7	167.9	167.2	166.4
67.5°	155.7	151.5	147.3	144.7	143.9	143.1	142.2	141.3
70°	135.5	132.8	130.1	128.2	127.1	126.0	124.9	123.8
72.5°	117.9	115.6	113.3	111.9	111.2	110.6	109.9	109.2
75°	93.3	91.5	89.6	88.5	88.2	87.9	87.7	87.4
77.5°	70.7	69.6	68.5	67.7	67.3	66.9	66.5	66.1
80°	56.1	55.1	53.9	53.4	53.4	53.4	53.4	53.4
82.5°	42.4	41.7	41.1	40.8	40.8	40.8	40.8	40.8
85°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
87.5°	13.6	13.3	13.0	12.9	12.9	13.0	13.0	13.1
90°	31.4	31.0	30.6	30.5	30.7	30.9	31.1	31.3
92.5°	29.4	29.5	29.6	29.6	29.7	29.7	29.8	29.8
95°	58.9	58.9	58.9	58.7	58.3	57.9	57.4	57.0
97.5°	99.0	99.0	99.0	99.0	98.9	98.9	98.9	98.9
100°	127.0	127.0	127.0	126.9	126.7	126.5	126.3	126.0
102.5°	157.5	157.6	157.8	157.8	157.6	157.4	157.2	157.0
105°	203.3	203.7	204.1	204.3	204.3	204.3	204.3	204.3
107.5°	252.6	252.8	252.9	252.5	251.7	250.7	249.8	248.8
110°	286.2	286.2	286.2	285.9	285.3	284.6	284.0	283.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	319.8	319.3	318.9	318.4	317.9	317.4	317.0	316.6
115°	371.4	371.1	370.9	370.5	369.9	369.3	368.7	368.0
117.5°	421.2	420.7	420.3	419.7	419.1	418.4	417.8	417.2
120°	454.6	454.6	454.6	454.2	453.7	453.0	452.4	451.8
122.5°	488.9	488.5	487.9	487.5	487.0	486.6	486.2	485.7
125°	539.9	539.2	538.6	538.2	538.0	537.8	537.6	537.4
127.5°	589.3	588.5	587.8	587.1	586.5	585.8	585.2	584.5
130°	623.1	622.7	622.3	621.6	620.8	620.0	619.2	618.4
132.5°	655.9	655.1	654.2	653.4	652.8	652.0	651.4	650.8
135°	704.5	704.3	704.0	703.6	703.0	702.4	701.8	701.2
137.5°	750.9	750.8	750.6	750.1	749.2	748.5	747.7	746.8
140°	782.1	782.1	782.1	781.7	780.9	780.1	779.3	778.5
142.5°	810.5	810.6	810.8	810.5	809.6	808.8	808.0	807.2
145°	853.4	853.7	853.8	853.5	852.7	851.9	851.0	850.2
147.5°	891.1	891.5	892.0	891.8	891.0	890.3	889.5	888.7
150°	915.0	915.6	916.2	916.2	915.6	915.0	914.3	913.8
152.5°	938.9	939.6	940.4	940.4	939.6	938.9	938.1	937.3
155°	969.2	970.2	971.2	971.4	970.8	970.2	969.6	968.9
157.5°	997.1	998.5	999.9	1000.1	999.1	998.1	997.2	996.2
160°	1013.8	1014.9	1016.2	1016.4	1015.6	1014.8	1013.9	1013.1
162.5°	1028.8	1030.2	1031.6	1031.7	1030.8	1029.8	1028.8	1027.9
165°	1048.2	1049.6	1051.1	1051.2	1050.3	1049.2	1048.2	1047.2
167.5°	1064.2	1065.6	1067.1	1067.2	1066.2	1065.1	1064.1	1063.0
170°	1073.0	1074.4	1075.9	1076.0	1074.8	1073.6	1072.3	1071.1
172.5°	1079.7	1081.1	1082.5	1082.6	1081.4	1080.1	1079.0	1077.7
175°	1086.9	1088.3	1089.7	1089.8	1088.6	1087.3	1086.2	1084.9
177.5°	1090.2	1091.2	1092.1	1092.1	1091.2	1090.2	1089.2	1088.2
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

(END OF REPORT)