

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: P332615-840

Luminaire Tested: **SA4XXDIP-C795D1035U840-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332615-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D1035U840-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

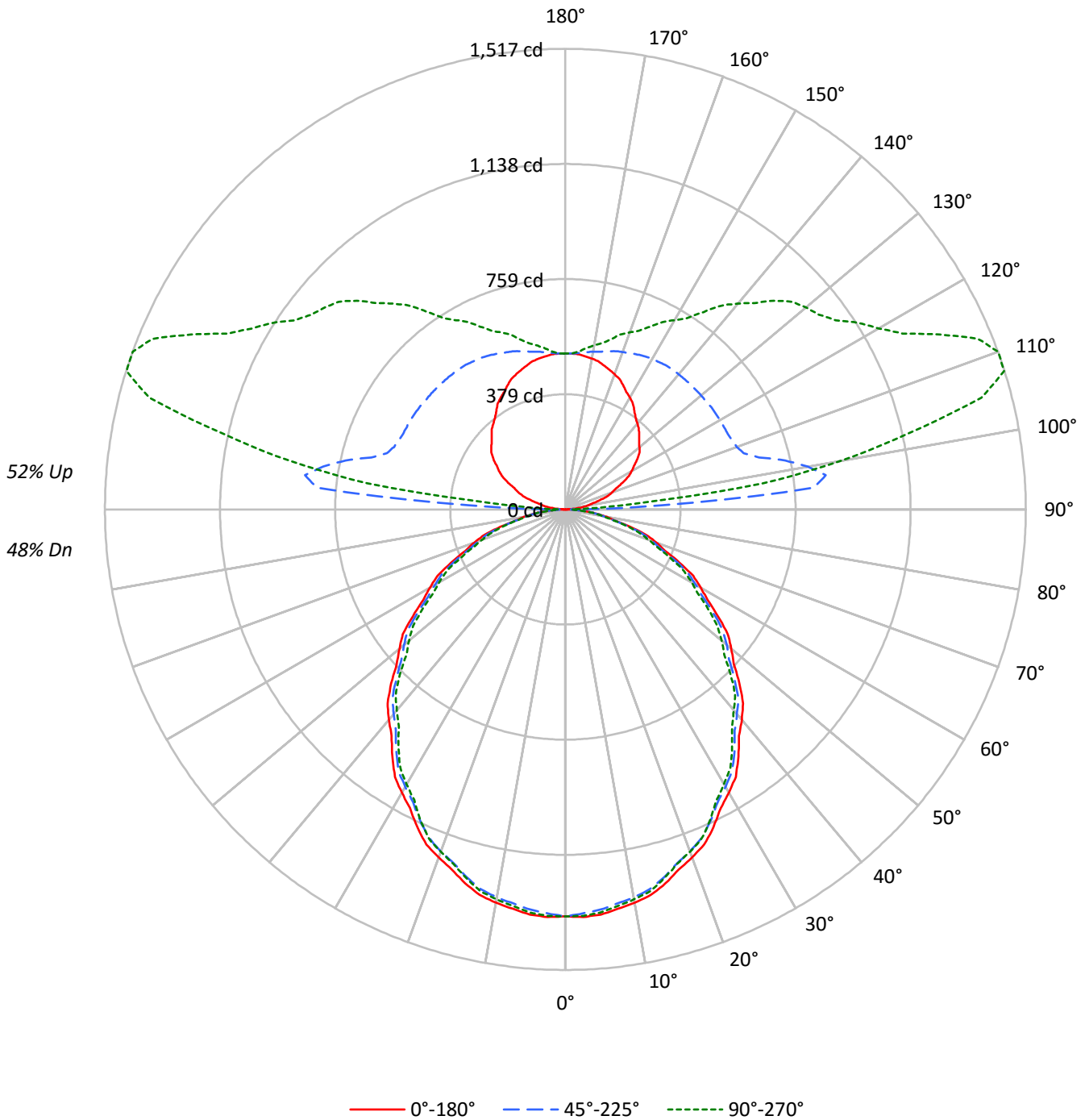
Lumens per Lamp: N/A
Luminaire Lumens: 7175.0 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 52
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									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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48	48	48	48	48	48	48	48	48	48	48	48	48																
1	97	93	89	86	89	86	82	79	72	70	67	59	58	56	48	47	46	40	40	40	40	40	40	40	40	40	40	40	40	40																
2	89	81	75	70	81	75	70	65	63	59	56	52	49	47	42	40	38	34	34	34	34	34	34	34	34	34	34	34	34	34																
3	81	71	64	58	74	66	59	54	56	51	47	46	43	40	37	35	33	29	29	29	29	29	29	29	29	29	29	29	29	29																
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	31	28	25	25	25	25	25	25	25	25	25	25	25	25	25																
5	68	56	48	42	62	52	45	40	44	39	34	37	33	29	30	27	25	21	21	21	21	21	21	21	21	21	21	21	21	21																
6	62	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19	19	19	19	19	19	19	19	19	19	19	19	19																
7	58	45	38	32	53	42	35	30	36	31	26	30	26	23	25	22	19	17	17	17	17	17	17	17	17	17	17	17	17	17																
8	54	41	34	28	49	38	31	27	33	27	23	28	23	20	23	20	17	15	15	15	15	15	15	15	15	15	15	15	15	15																
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	13	13	13	13	13	13	13	13	13	13	13	13	13																
10	47	35	27	23	43	32	26	21	28	23	19	24	19	17	20	16	14	12	12	12	12	12	12	12	12	12	12	12	12	12																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10823	10823	10823
5°	10855	10724	10802
10°	10787	10637	10690
15°	10657	10486	10513
20°	10483	10299	10308
25°	10286	10085	10056
30°	10043	9833	9743
35°	9792	9570	9443
40°	9531	9271	9101
45°	9259	8977	8805
50°	8959	8715	8446
55°	8633	8376	8103
60°	8307	7995	7753
65°	7941	7633	7324
70°	7530	7152	6871
75°	6903	6569	6400
80°	6141	5890	5742
85°	5372	5169	5067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.2	1.8
10°-20°	355.7	5.0
20°-30°	523.5	7.3
30°-40°	608.6	8.5
40°-50°	608.7	8.5
50°-60°	532.4	7.4
60°-70°	395.4	5.5
70°-80°	224.6	3.1
80°-90°	67.7	0.9
90°-100°	370.6	5.2
100°-110°	771.4	10.8
110°-120°	690.9	9.6
120°-130°	581.2	8.1
130°-140°	484.6	6.8
140°-150°	370.2	5.2
150°-160°	260.2	3.6
160°-170°	153.1	2.1
170°-180°	49.8	0.7
0°-30°	1005.5	14.0
0°-40°	1614.1	22.5
0°-60°	2755.2	38.4
0°-90°	3442.9	48.0
90°-120°	1833.0	25.5
90°-150°	3269.0	45.6
90°-180°	3732.0	52.0
0°-180°	7175.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1340	1335	1323	1334	1333	127
15°	1275	1270	1255	1260	1258	359
25°	1155	1147	1132	1133	1129	531
35°	994	986	971	964	958	621
45°	811	803	786	775	771	625
55°	613	609	595	583	576	549
65°	416	410	400	389	383	411
75°	221	216	211	206	205	235
85°	58	58	56	56	55	64
90°	1	8	18	20	21	5
95°	33	105	822	407	246	37
105°	118	171	661	1424	1418	126
115°	208	261	590	1133	1362	206
125°	289	344	587	964	1087	258
135°	344	409	582	856	972	266
145°	396	454	579	722	794	249
155°	451	486	563	637	664	208
165°	491	506	539	571	580	139
175°	512	513	517	524	522	49
180°	513	513	513	513	513	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1344.0	1343.4	1342.8	1342.3	1341.7	1340.4	1338.3	1336.2	1334.0	1332.0	1333.8
5°	1339.5	1338.6	1337.6	1336.7	1335.6	1333.8	1331.2	1328.6	1326.0	1323.3	1326.0
7.5°	1327.1	1326.1	1325.1	1324.1	1323.2	1321.3	1318.4	1315.5	1312.5	1309.6	1311.7
10°	1315.9	1314.9	1313.9	1313.0	1312.0	1310.0	1306.9	1303.8	1300.7	1297.6	1299.5
12.5°	1301.2	1300.3	1299.3	1298.4	1297.5	1295.3	1292.0	1288.7	1285.5	1282.1	1284.2
15°	1275.1	1274.0	1273.1	1272.1	1271.2	1269.0	1265.4	1261.8	1258.2	1254.7	1256.1
17.5°	1243.4	1242.2	1241.0	1239.9	1238.7	1236.4	1233.0	1229.6	1226.2	1222.8	1223.8
20°	1220.2	1219.0	1217.9	1216.7	1215.5	1213.0	1209.5	1205.9	1202.3	1198.8	1199.5
22.5°	1195.4	1193.8	1192.1	1190.6	1189.0	1186.5	1182.9	1179.3	1175.7	1172.2	1173.5
25°	1154.7	1153.1	1151.3	1149.7	1148.0	1145.5	1142.2	1138.8	1135.5	1132.2	1132.4
27.5°	1108.3	1106.6	1104.9	1103.2	1101.5	1099.0	1095.9	1092.9	1089.7	1086.6	1086.0
30°	1077.4	1075.5	1073.6	1071.7	1069.8	1067.2	1064.1	1061.1	1057.9	1054.8	1053.9
32.5°	1044.7	1043.0	1041.3	1039.6	1037.8	1035.3	1032.1	1028.7	1025.5	1022.2	1021.1
35°	993.6	991.9	990.3	988.6	986.9	984.4	981.1	977.8	974.4	971.1	969.4
37.5°	939.7	938.2	936.6	935.1	933.5	931.0	927.5	923.8	920.3	916.7	914.8
40°	904.4	902.5	900.6	898.7	896.8	894.0	890.5	886.9	883.3	879.7	877.4
42.5°	866.7	865.5	864.3	863.2	862.0	859.5	855.6	851.6	847.6	843.6	840.9
45°	811.0	809.3	807.7	806.0	804.4	801.5	797.8	794.0	790.1	786.3	783.7
47.5°	752.8	751.6	750.5	749.3	748.2	745.9	742.4	738.8	735.3	731.7	728.7
50°	713.3	712.3	711.3	710.3	709.4	707.3	704.0	700.6	697.2	693.9	690.5
52.5°	674.6	673.5	672.3	671.2	669.9	667.6	664.1	660.6	657.0	653.5	650.6
55°	613.4	612.6	611.9	611.2	610.5	608.4	605.1	601.8	598.4	595.1	592.2
57.5°	554.9	554.1	553.3	552.5	551.7	549.6	546.3	543.0	539.8	536.4	533.7
60°	514.5	513.3	512.1	511.0	509.8	507.6	504.5	501.4	498.3	495.2	493.0
62.5°	475.0	474.0	473.0	472.0	471.0	468.9	465.5	462.2	459.0	455.7	453.7
65°	415.7	414.5	413.3	412.1	410.9	409.1	406.8	404.3	401.9	399.6	397.2
67.5°	356.0	354.9	353.8	352.6	351.6	349.9	347.6	345.3	343.1	340.7	338.4
70°	319.0	317.4	315.7	314.0	312.4	310.5	308.6	306.7	304.8	303.0	301.0
72.5°	279.5	277.8	276.2	274.5	272.8	271.2	269.7	268.1	266.6	265.1	263.6
75°	221.3	220.0	218.9	217.7	216.5	215.3	214.1	212.9	211.8	210.6	209.5
77.5°	165.6	165.1	164.6	164.1	163.5	162.8	161.7	160.7	159.6	158.5	158.2
80°	132.1	131.4	130.7	130.0	129.3	128.7	128.2	127.7	127.2	126.7	126.2
82.5°	99.5	99.2	98.8	98.5	98.2	98.0	97.9	97.8	97.7	97.6	97.3
85°	58.0	58.0	58.0	58.0	58.0	57.8	57.3	56.9	56.4	55.8	55.8
87.5°	22.5	22.7	23.1	23.2	23.2	23.0	24.0	23.8	24.0	24.2	24.0
90°	1.0	3.0	6.1	7.1	8.1	8.1	14.1	14.1	16.2	18.2	17.2
92.5°	11.5	16.8	26.3	38.5	53.2	74.2	125.4	203.7	279.8	319.8	266.4
95°	33.2	36.3	46.4	59.5	83.7	126.0	213.7	379.1	620.1	821.6	844.9
97.5°	59.7	59.7	68.4	80.5	101.2	136.7	204.3	340.7	580.3	865.4	1061.4
100°	76.6	76.6	83.7	95.7	114.9	147.2	206.7	320.6	526.2	810.5	1068.6
102.5°	92.7	94.3	100.6	111.9	130.3	160.9	214.7	315.0	490.0	742.0	1008.1
105°	118.0	121.0	126.0	138.1	156.2	185.5	233.9	317.6	458.7	661.4	898.3
107.5°	145.8	147.8	152.8	165.7	183.1	211.9	256.3	332.4	453.0	616.2	809.5
110°	164.3	166.3	171.4	183.5	201.7	228.8	273.2	343.8	454.6	600.9	765.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	182.1	184.1	190.0	201.3	219.3	246.6	289.3	355.9	459.5	593.6	740.2
115°	207.7	210.7	217.7	227.8	247.0	274.2	314.6	375.1	468.8	589.8	716.8
117.5°	234.3	237.1	243.4	254.5	272.4	300.6	338.9	394.6	478.7	588.8	706.3
120°	252.1	254.1	261.2	272.2	289.3	317.6	355.9	408.3	485.9	588.8	700.6
122.5°	268.2	270.1	277.2	287.5	306.3	333.7	372.0	421.2	493.2	587.9	694.2
125°	289.3	293.4	299.4	310.5	329.6	357.9	394.2	440.6	504.1	586.7	683.6
127.5°	308.1	311.3	318.6	331.2	351.2	379.7	414.8	457.3	512.7	584.5	669.2
130°	318.6	322.7	330.6	345.8	365.0	394.2	428.5	467.8	519.2	583.7	660.4
132.5°	329.0	332.2	342.7	357.1	377.9	405.5	439.8	478.3	524.8	582.9	652.3
135°	343.8	347.8	357.9	375.1	396.2	422.4	455.7	492.0	533.3	581.7	640.2
137.5°	358.5	362.3	373.4	389.7	411.7	436.8	467.8	501.7	538.4	581.5	629.7
140°	369.0	372.0	383.1	400.2	421.4	445.7	475.8	508.1	542.4	580.7	624.1
142.5°	380.3	383.3	393.5	409.9	430.3	453.6	483.1	512.9	545.6	580.7	619.2
145°	396.2	399.2	409.3	423.4	442.6	464.7	491.0	518.2	547.4	578.7	611.0
147.5°	414.1	415.2	424.0	438.6	454.4	474.4	499.1	522.8	548.5	575.0	603.5
150°	425.5	426.5	434.5	446.7	461.7	480.9	503.1	525.2	548.5	572.6	597.8
152.5°	436.0	436.2	444.2	455.4	469.0	486.6	506.3	526.8	546.8	568.6	591.4
155°	450.6	451.6	457.7	467.8	478.9	494.0	511.1	528.3	544.4	562.6	581.7
157.5°	464.9	464.9	470.6	478.5	488.2	500.1	514.5	528.3	541.8	556.3	571.8
160°	473.8	473.8	477.9	484.9	493.0	504.1	516.1	528.3	539.4	551.5	564.6
162.5°	481.9	481.1	484.3	490.6	497.9	506.5	517.8	528.3	536.9	546.6	558.2
165°	491.0	491.0	493.0	498.1	503.1	509.1	518.2	526.2	532.3	539.4	547.4
167.5°	500.1	499.1	500.1	503.9	506.8	511.3	518.0	523.8	527.5	532.1	537.8
170°	504.1	503.1	504.1	507.2	509.1	512.1	517.2	522.2	524.2	527.3	531.3
172.5°	508.1	507.2	507.3	509.5	510.7	512.9	516.3	520.6	521.0	522.4	525.6
175°	512.1	511.1	511.1	512.1	513.1	513.1	515.1	518.2	517.2	517.2	519.2
177.5°	513.9	513.1	512.3	513.1	513.1	513.1	513.9	515.5	513.9	513.9	514.7
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1335.7	1337.7	1339.6	1340.5	1340.3	1340.1	1339.9	1339.7
5°	1328.6	1331.2	1333.8	1334.9	1334.4	1334.0	1333.5	1333.0
7.5°	1313.8	1316.0	1318.0	1318.9	1318.7	1318.4	1318.1	1317.8
10°	1301.4	1303.3	1305.3	1306.0	1305.5	1304.9	1304.5	1304.0
12.5°	1286.4	1288.4	1290.5	1291.2	1290.6	1289.9	1289.2	1288.6
15°	1257.5	1258.9	1260.3	1260.7	1260.0	1259.3	1258.6	1257.9
17.5°	1224.7	1225.6	1226.5	1226.7	1226.2	1225.7	1225.3	1224.8
20°	1200.2	1200.9	1201.6	1201.7	1201.2	1200.8	1200.3	1199.8
22.5°	1174.7	1176.0	1177.3	1177.5	1176.6	1175.8	1174.9	1174.1
25°	1132.7	1132.9	1133.2	1132.8	1131.9	1130.8	1129.9	1128.9
27.5°	1085.5	1084.9	1084.3	1083.5	1082.3	1081.1	1079.8	1078.6
30°	1052.9	1052.0	1051.0	1050.0	1048.7	1047.5	1046.3	1045.2
32.5°	1019.9	1018.8	1017.6	1016.4	1015.2	1014.0	1012.8	1011.7
35°	967.8	966.0	964.3	962.9	961.7	960.6	959.4	958.2
37.5°	913.0	911.2	909.5	907.8	906.2	904.6	903.0	901.4
40°	874.9	872.6	870.2	868.4	867.2	866.1	864.8	863.6
42.5°	838.1	835.4	832.5	830.8	830.0	829.2	828.4	827.6
45°	781.0	778.4	775.8	774.2	773.4	772.6	771.9	771.2
47.5°	725.8	722.9	719.8	717.5	715.7	713.9	712.1	710.2
50°	687.2	683.9	680.5	678.1	676.7	675.3	673.9	672.5
52.5°	647.6	644.6	641.7	639.3	637.5	635.7	633.9	632.1
55°	589.4	586.5	583.6	581.5	580.1	578.7	577.1	575.7
57.5°	531.0	528.3	525.5	523.5	522.1	520.7	519.4	518.0
60°	490.9	488.8	486.6	484.9	483.7	482.5	481.3	480.2
62.5°	451.7	449.8	447.9	446.3	445.0	443.8	442.7	441.5
65°	394.9	392.4	390.0	388.3	387.1	385.9	384.7	383.4
67.5°	336.2	333.9	331.5	330.2	329.9	329.6	329.2	328.9
70°	299.1	297.2	295.3	294.0	293.3	292.6	291.9	291.1
72.5°	262.1	260.5	259.0	257.9	257.1	256.4	255.7	255.0
75°	208.6	207.6	206.7	206.1	205.9	205.6	205.4	205.2
77.5°	157.9	157.6	157.4	156.9	156.3	155.7	155.1	154.5
80°	125.8	125.3	124.8	124.5	124.2	124.0	123.8	123.5
82.5°	96.9	96.6	96.3	96.1	95.9	95.6	95.4	95.1
85°	55.8	55.8	55.8	55.7	55.5	55.2	55.0	54.7
87.5°	24.2	24.4	24.6	24.6	24.8	25.0	24.8	24.8
90°	18.2	19.2	20.2	20.2	21.2	22.2	21.2	21.2
92.5°	198.0	149.1	118.6	98.4	86.5	81.1	77.7	77.7
95°	747.0	590.8	455.7	357.9	308.5	277.2	259.1	246.0
97.5°	1103.8	1045.6	947.1	841.8	769.4	708.7	678.5	657.5
100°	1215.9	1236.0	1186.6	1112.0	1024.3	962.8	932.5	924.5
102.5°	1210.2	1310.2	1324.5	1293.4	1239.6	1195.1	1163.3	1156.8
105°	1129.1	1303.5	1403.3	1444.7	1446.7	1438.7	1424.5	1418.5
107.5°	1014.0	1199.7	1340.3	1430.2	1480.0	1503.0	1513.1	1515.7
110°	944.6	1119.0	1265.3	1376.1	1447.7	1490.1	1508.2	1517.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	893.8	1048.0	1186.2	1297.1	1378.4	1429.6	1455.0	1469.7
115°	842.8	966.8	1084.8	1181.5	1261.2	1321.7	1353.9	1362.0
117.5°	817.8	920.5	1013.2	1095.3	1163.3	1214.1	1246.7	1252.9
120°	806.5	900.3	981.0	1052.5	1109.9	1154.4	1180.5	1191.6
122.5°	796.9	887.4	960.8	1023.5	1072.1	1109.9	1132.2	1143.3
125°	780.3	867.0	936.5	992.0	1032.4	1061.6	1080.8	1086.8
127.5°	760.1	843.0	912.4	965.0	1005.5	1031.6	1047.6	1053.7
130°	744.1	823.6	892.2	945.6	986.9	1012.2	1028.3	1034.4
132.5°	727.1	801.9	868.8	922.3	962.8	991.2	1006.5	1012.6
135°	703.7	769.2	830.7	881.1	921.5	949.7	965.8	971.9
137.5°	682.6	738.0	789.8	835.4	873.0	900.9	914.2	921.5
140°	670.4	717.8	763.2	805.5	840.8	863.0	877.1	885.1
142.5°	659.1	700.8	739.8	776.5	807.7	828.3	840.8	846.5
145°	643.2	677.5	707.7	736.0	761.1	778.3	788.4	793.5
147.5°	630.1	657.3	681.6	703.7	722.3	737.0	744.7	746.4
150°	622.1	645.2	665.4	683.6	699.6	712.8	718.8	719.8
152.5°	613.2	633.1	651.7	666.6	680.3	690.9	694.6	695.6
155°	599.9	616.0	631.1	643.2	653.3	661.4	664.4	664.4
157.5°	585.5	599.1	611.8	621.5	629.0	635.1	636.9	636.9
160°	576.6	587.7	598.8	606.9	613.0	619.0	620.1	620.1
162.5°	567.7	577.2	585.9	593.2	597.6	603.7	604.7	603.9
165°	555.5	561.6	568.6	573.6	577.6	581.7	580.7	579.7
167.5°	543.6	548.3	553.9	556.9	559.0	561.6	561.4	560.6
170°	536.3	539.4	543.4	546.4	548.5	549.5	548.5	548.5
172.5°	529.9	532.1	534.5	536.7	538.0	539.0	538.0	536.3
175°	521.2	522.2	524.2	524.2	524.2	526.2	524.2	522.2
177.5°	515.5	516.3	516.3	517.2	516.3	517.2	515.5	513.9
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1

(END OF REPORT)