

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: P333006-927

Luminaire Tested: **SA4XXRDIP-C1195D1035U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P333006-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C1195D1035U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7090.6 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

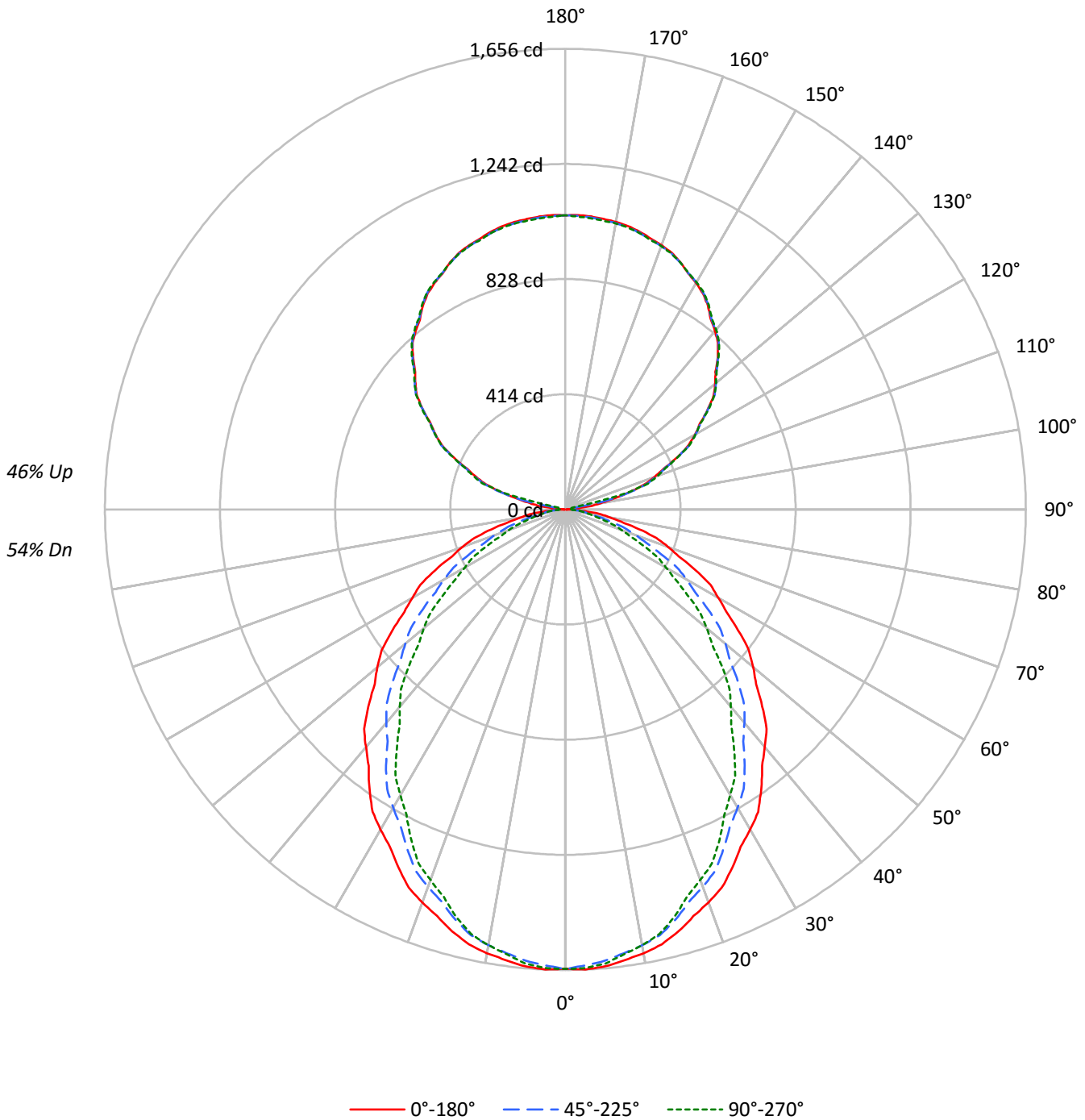
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54
1	99	95	91	87	92	88	85	82	75	73	71	64	62	61	53	52	51	46
2	90	83	77	72	84	77	72	68	66	62	59	56	54	51	47	45	43	39
3	83	73	66	60	76	68	62	57	59	54	50	50	47	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	38	35	32	29
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	33	37	32	29	31	28	25	22
7	59	47	39	34	55	44	37	32	39	33	29	33	29	26	28	25	22	20
8	55	43	35	30	51	40	33	29	35	30	26	31	26	23	26	23	20	18
9	51	39	32	27	48	37	30	26	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	25	21	26	22	19	22	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13337	13337	13337
5°	13367	13203	13285
10°	13283	13045	13045
15°	13131	12771	12676
20°	12921	12411	12182
25°	12653	11989	11685
30°	12393	11544	11060
35°	12105	11083	10435
40°	11758	10559	9759
45°	11439	10038	9070
50°	11074	9437	8341
55°	10683	8812	7548
60°	10253	8128	6739
65°	9859	7272	5945
70°	9286	6331	5046
75°	8562	5250	4105
80°	7471	3998	3766
85°	6326	3631	3399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	2.2
10°-20°	432.8	6.1
20°-30°	624.9	8.8
30°-40°	708.3	10.0
40°-50°	684.0	9.6
50°-60°	568.8	8.0
60°-70°	392.8	5.5
70°-80°	199.1	2.8
80°-90°	54.1	0.8
90°-100°	36.2	0.5
100°-110°	230.6	3.3
110°-120°	441.1	6.2
120°-130°	559.9	7.9
130°-140°	599.1	8.4
140°-150°	560.2	7.9
150°-160°	451.8	6.4
160°-170°	291.4	4.1
170°-180°	100.4	1.4
0°-30°	1212.9	17.1
0°-40°	1921.2	27.1
0°-60°	3174.0	44.8
0°-90°	3820.0	53.9
90°-120°	707.8	10.0
90°-150°	2427.0	34.2
90°-180°	3271.0	46.1
0°-180°	7090.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1652	1652	1652	1652	1652	
5°	1650	1644	1629	1641	1639	156
15°	1571	1559	1528	1525	1517	442
25°	1420	1396	1346	1325	1312	654
35°	1228	1186	1125	1083	1059	767
45°	1002	953	879	819	794	772
55°	759	707	626	563	536	679
65°	516	460	381	328	311	509
75°	274	227	168	140	132	290
85°	68	44	39	37	37	77
90°	2	11	17	22	24	5
95°	44	18	17	22	23	56
105°	238	243	247	252	225	249
115°	444	447	446	448	448	437
125°	625	628	626	629	630	558
135°	775	774	777	779	780	597
145°	894	896	896	897	898	558
155°	980	980	978	981	979	452
165°	1034	1030	1030	1035	1029	292
175°	1057	1053	1053	1060	1051	101
180°	1057	1057	1057	1057	1057	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0
2.5°	1656.1	1655.2	1654.3	1653.4	1652.5	1650.8	1648.4	1645.8	1643.4	1640.9	1643.4
5°	1649.5	1648.4	1647.3	1646.2	1645.0	1642.7	1639.4	1636.0	1632.7	1629.3	1632.1
7.5°	1634.6	1633.4	1632.2	1631.0	1629.8	1627.1	1622.7	1618.3	1613.9	1609.6	1611.4
10°	1620.4	1619.0	1617.6	1616.2	1614.8	1611.5	1606.5	1601.5	1596.4	1591.3	1592.4
12.5°	1602.2	1600.6	1598.9	1597.3	1595.7	1591.9	1585.9	1580.0	1574.0	1568.0	1568.8
15°	1571.1	1568.5	1566.1	1563.5	1561.0	1556.2	1549.2	1542.1	1535.1	1528.0	1527.5
17.5°	1533.4	1529.7	1526.1	1522.4	1518.8	1512.8	1504.3	1495.9	1487.4	1479.0	1477.4
20°	1504.0	1500.4	1496.7	1493.1	1489.5	1482.8	1473.3	1463.7	1454.1	1444.6	1442.3
22.5°	1471.6	1467.6	1463.5	1459.4	1455.2	1448.1	1437.8	1427.6	1417.4	1407.2	1403.7
25°	1420.5	1415.5	1410.4	1405.4	1400.3	1392.0	1380.5	1369.0	1357.5	1345.9	1341.2
27.5°	1366.9	1360.6	1354.2	1347.9	1341.5	1332.2	1319.9	1307.6	1295.2	1282.9	1277.0
30°	1329.5	1322.5	1315.4	1308.4	1301.4	1291.3	1278.0	1264.8	1251.6	1238.4	1231.4
32.5°	1290.0	1282.1	1274.1	1266.2	1258.3	1247.5	1233.8	1220.2	1206.5	1192.9	1184.7
35°	1228.3	1219.2	1210.3	1201.3	1192.3	1180.7	1166.7	1152.7	1138.6	1124.6	1115.0
37.5°	1162.3	1152.9	1143.7	1134.4	1125.1	1112.7	1097.2	1081.6	1066.0	1050.4	1039.7
40°	1115.7	1106.4	1097.2	1087.9	1078.6	1066.0	1050.0	1033.9	1017.9	1001.9	990.1
42.5°	1071.2	1061.4	1051.7	1042.0	1032.3	1019.1	1002.3	985.6	969.0	952.3	940.2
45°	1001.9	991.4	981.0	970.7	960.3	946.6	929.8	912.9	896.0	879.2	865.4
47.5°	930.3	919.5	908.8	898.0	887.3	873.1	855.6	838.0	820.5	803.0	788.7
50°	881.7	870.7	859.8	848.8	837.8	823.3	805.3	787.3	769.4	751.4	737.4
52.5°	832.1	821.3	810.6	799.9	789.2	774.5	756.1	737.7	719.2	700.8	686.5
55°	759.0	747.7	736.5	725.2	714.0	699.3	681.0	662.7	644.4	626.1	611.6
57.5°	686.6	674.9	663.2	651.6	639.8	625.0	607.0	589.0	571.0	553.0	538.2
60°	635.0	623.8	612.5	601.3	590.0	575.4	557.5	539.5	521.4	503.4	488.9
62.5°	588.4	576.8	565.1	553.4	541.7	526.6	508.2	489.7	471.3	452.9	439.3
65°	516.1	504.0	491.9	479.8	467.8	452.7	434.7	416.8	398.8	380.7	368.7
67.5°	440.9	429.4	417.8	406.2	394.7	380.5	363.8	347.1	330.4	313.7	303.3
70°	393.4	381.6	369.8	358.0	346.2	332.2	316.2	300.2	284.2	268.2	258.9
72.5°	342.8	332.2	321.5	310.8	300.1	287.2	272.0	256.9	241.8	226.6	218.7
75°	274.5	264.1	253.7	243.3	232.9	221.1	207.9	194.6	181.5	168.3	161.8
77.5°	205.2	196.4	187.5	178.7	169.8	160.1	149.4	138.8	128.1	117.4	113.6
80°	160.7	152.5	144.3	136.2	128.0	119.8	111.3	102.9	94.4	86.0	85.2
82.5°	122.2	114.7	107.3	99.7	92.3	86.1	81.3	76.4	71.6	66.8	66.1
85°	68.3	62.7	57.0	51.4	45.8	42.6	41.7	40.9	40.1	39.2	38.7
87.5°	23.8	22.3	20.9	19.5	18.1	17.4	17.5	17.5	17.6	17.7	17.7
90°	2.4	4.3	6.3	8.2	10.1	11.8	13.2	14.6	16.0	17.4	18.5
92.5°	10.0	10.1	10.1	10.3	10.4	11.2	12.5	13.9	15.4	16.8	17.8
95°	43.5	37.5	31.5	25.6	19.6	16.7	16.9	17.0	17.2	17.4	18.5
97.5°	92.4	96.1	99.8	103.5	107.3	99.3	79.7	60.1	40.5	20.9	21.0
100°	129.7	132.8	136.0	139.2	142.4	131.8	107.6	83.3	59.0	34.8	31.8
102.5°	171.4	173.8	176.1	178.4	180.7	180.3	177.1	174.0	170.8	167.6	135.4
105°	238.1	239.1	240.1	241.2	242.2	243.2	244.1	244.9	245.9	246.8	248.3
107.5°	299.8	300.4	301.0	301.4	302.0	302.9	304.0	305.2	306.4	307.6	308.4
110°	341.7	342.1	342.7	343.2	343.7	344.5	345.5	346.7	347.7	348.7	349.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.1	383.1	384.0	385.0	386.0	386.7	387.1	387.6	388.1	388.6	388.6
115°	444.4	445.0	445.5	446.0	446.6	446.7	446.6	446.4	446.2	446.0	446.4
117.5°	500.6	501.3	502.0	502.7	503.4	503.9	504.3	504.7	505.1	505.5	505.4
120°	538.5	539.2	540.0	540.7	541.4	541.6	541.5	541.3	541.1	540.9	541.3
122.5°	573.9	574.4	574.8	575.2	575.7	576.0	576.2	576.5	576.7	576.9	577.2
125°	624.7	625.4	626.1	626.9	627.6	627.7	627.4	627.0	626.7	626.3	626.9
127.5°	672.8	673.0	673.2	673.4	673.5	674.0	674.9	675.7	676.4	677.2	677.2
130°	703.9	704.0	704.2	704.3	704.5	704.9	705.4	705.9	706.5	707.0	707.2
132.5°	732.3	732.6	732.9	733.2	733.6	734.0	734.7	735.4	736.0	736.7	736.9
135°	775.0	774.8	774.7	774.4	774.3	774.5	775.2	775.9	776.7	777.4	777.7
137.5°	812.8	812.9	812.9	813.0	813.1	813.5	814.3	815.1	815.8	816.6	817.0
140°	837.5	837.8	838.2	838.5	838.8	839.2	839.6	840.0	840.3	840.7	841.1
142.5°	859.6	860.2	860.9	861.5	862.1	862.5	862.8	863.0	863.2	863.4	863.8
145°	893.6	894.1	894.7	895.2	895.7	896.0	896.0	896.0	896.0	896.0	896.2
147.5°	920.7	921.6	922.7	923.6	924.6	925.0	924.8	924.6	924.5	924.3	924.5
150°	940.2	941.0	941.7	942.4	943.1	943.3	943.2	943.0	942.9	942.6	942.6
152.5°	956.7	957.3	957.8	958.4	958.9	959.1	958.8	958.5	958.1	957.8	958.1
155°	979.9	980.0	980.2	980.3	980.5	980.3	979.9	979.3	978.7	978.3	978.9
157.5°	999.3	999.2	999.0	998.9	998.9	998.5	997.9	997.3	996.7	996.1	997.0
160°	1010.7	1010.1	1009.6	1009.1	1008.5	1008.2	1008.1	1007.8	1007.7	1007.5	1008.5
162.5°	1020.8	1020.1	1019.5	1018.7	1018.1	1017.7	1017.5	1017.3	1017.2	1017.0	1018.0
165°	1033.6	1032.7	1031.8	1030.9	1030.1	1029.6	1029.6	1029.6	1029.6	1029.6	1031.0
167.5°	1043.7	1042.8	1041.9	1041.0	1040.1	1039.6	1039.4	1039.3	1039.3	1039.1	1040.7
170°	1049.4	1048.4	1047.3	1046.2	1045.2	1044.7	1044.9	1045.1	1045.3	1045.4	1046.9
172.5°	1053.2	1052.2	1051.1	1050.0	1049.0	1048.5	1048.7	1048.9	1049.1	1049.2	1050.7
175°	1057.3	1056.3	1055.2	1054.2	1053.1	1052.7	1052.8	1053.0	1053.2	1053.4	1054.9
177.5°	1059.2	1058.2	1057.2	1056.3	1055.3	1054.9	1055.2	1055.5	1055.7	1056.1	1057.2
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0
2.5°	1645.8	1648.4	1650.8	1651.9	1651.7	1651.5	1651.2	1651.1
5°	1634.9	1637.7	1640.5	1641.6	1641.1	1640.5	1640.0	1639.4
7.5°	1613.1	1614.9	1616.8	1617.2	1616.3	1615.4	1614.5	1613.6
10°	1593.6	1594.7	1595.9	1595.9	1594.7	1593.6	1592.4	1591.3
12.5°	1569.4	1570.1	1570.7	1570.3	1568.8	1567.2	1565.6	1564.0
15°	1526.9	1526.4	1525.8	1524.6	1522.6	1520.6	1518.7	1516.7
17.5°	1475.8	1474.3	1472.7	1470.4	1467.4	1464.4	1461.5	1458.5
20°	1440.1	1437.8	1435.6	1432.7	1429.0	1425.4	1421.7	1418.0
22.5°	1400.4	1397.0	1393.7	1390.5	1387.5	1384.5	1381.6	1378.6
25°	1336.3	1331.6	1326.8	1323.0	1320.2	1317.4	1314.5	1311.8
27.5°	1271.1	1265.2	1259.3	1254.3	1250.3	1246.3	1242.2	1238.2
30°	1224.3	1217.3	1210.3	1204.5	1200.0	1195.6	1191.0	1186.5
32.5°	1176.5	1168.4	1160.2	1154.1	1149.8	1145.5	1141.2	1136.9
35°	1105.4	1095.9	1086.3	1079.0	1074.0	1068.9	1063.8	1058.8
37.5°	1029.0	1018.4	1007.7	999.8	994.7	989.7	984.7	979.6
40°	978.3	966.5	954.7	946.2	941.1	936.0	931.1	926.0
42.5°	928.2	916.2	904.1	895.5	890.2	884.9	879.6	874.3
45°	851.6	837.8	824.0	814.6	809.6	804.5	799.5	794.4
47.5°	774.4	760.2	745.9	735.9	730.4	724.8	719.2	713.7
50°	723.3	709.2	695.1	685.5	680.2	674.8	669.5	664.1
52.5°	672.2	658.0	643.6	633.7	628.2	622.7	617.0	611.5
55°	596.9	582.3	567.7	557.7	552.4	547.0	541.7	536.3
57.5°	523.4	508.5	493.7	484.3	480.2	476.1	472.1	468.0
60°	474.2	459.6	445.0	435.5	430.9	426.4	421.9	417.4
62.5°	425.9	412.4	398.9	390.3	386.7	383.2	379.5	376.0
65°	356.6	344.5	332.4	324.6	321.3	317.9	314.6	311.2
67.5°	292.9	282.5	272.1	265.1	261.3	257.6	253.9	250.2
70°	249.6	240.3	231.1	225.1	222.2	219.4	216.6	213.8
72.5°	210.8	202.9	195.0	189.7	187.1	184.6	182.0	179.4
75°	155.3	148.9	142.4	138.3	136.7	134.9	133.2	131.6
77.5°	109.9	106.1	102.3	100.2	99.7	99.2	98.7	98.2
80°	84.4	83.5	82.6	82.1	81.8	81.5	81.3	81.0
82.5°	65.6	65.0	64.3	63.8	63.6	63.3	63.1	62.7
85°	38.1	37.5	37.0	36.7	36.7	36.7	36.7	36.7
87.5°	17.6	17.6	17.6	17.7	18.1	18.3	18.6	18.9
90°	19.5	20.6	21.6	22.3	22.7	23.1	23.4	23.7
92.5°	18.9	20.0	21.0	21.5	21.6	21.7	21.8	21.9
95°	19.5	20.6	21.6	22.3	22.4	22.6	22.7	22.9
97.5°	21.1	21.2	21.3	21.5	21.6	21.8	21.9	22.2
100°	28.8	25.8	22.8	21.5	21.6	21.8	21.9	22.2
102.5°	103.2	71.0	38.7	22.7	22.7	22.7	22.7	22.8
105°	249.9	251.4	253.0	250.7	244.4	238.1	231.7	225.4
107.5°	309.2	310.0	310.7	311.4	312.1	312.8	313.5	314.1
110°	349.4	349.8	350.1	350.6	351.1	351.6	352.2	352.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.5	388.4	388.3	388.6	389.3	390.0	390.6	391.3
115°	446.7	447.1	447.4	447.6	447.6	447.6	447.6	447.6
117.5°	505.3	505.3	505.2	505.2	505.1	505.0	504.9	504.9
120°	541.6	541.9	542.3	542.3	541.9	541.6	541.3	540.9
122.5°	577.4	577.6	577.8	577.7	577.4	577.0	576.7	576.3
125°	627.4	627.9	628.4	628.8	629.0	629.2	629.3	629.5
127.5°	677.1	676.9	676.8	676.7	676.6	676.4	676.3	676.1
130°	707.3	707.5	707.7	707.8	707.8	707.8	707.8	707.8
132.5°	737.0	737.3	737.4	737.4	737.3	737.1	737.0	736.9
135°	778.1	778.4	778.8	779.1	779.5	779.8	780.1	780.5
137.5°	817.4	817.8	818.2	818.2	818.2	818.1	817.9	817.8
140°	841.7	842.2	842.7	843.1	843.3	843.4	843.6	843.8
142.5°	864.2	864.6	865.0	865.1	865.2	865.2	865.3	865.3
145°	896.4	896.5	896.7	897.0	897.3	897.6	898.0	898.3
147.5°	924.6	924.7	924.9	925.0	925.2	925.3	925.6	925.7
150°	942.6	942.6	942.6	942.7	942.9	943.1	943.3	943.4
152.5°	958.4	958.7	958.9	959.0	958.9	958.9	958.7	958.6
155°	979.6	980.3	981.0	981.1	980.6	980.1	979.5	979.1
157.5°	997.9	998.9	999.7	999.7	998.9	997.9	997.0	996.1
160°	1009.6	1010.7	1011.7	1011.7	1010.7	1009.6	1008.5	1007.5
162.5°	1019.1	1020.2	1021.2	1021.1	1019.9	1018.7	1017.6	1016.4
165°	1032.5	1033.9	1035.2	1035.1	1033.6	1032.0	1030.4	1028.8
167.5°	1042.2	1043.8	1045.3	1045.2	1043.5	1041.7	1039.9	1038.2
170°	1048.3	1049.6	1051.1	1050.9	1049.2	1047.4	1045.6	1043.9
172.5°	1052.1	1053.4	1054.9	1054.6	1052.7	1050.8	1048.9	1047.0
175°	1056.5	1058.1	1059.7	1059.4	1057.3	1055.2	1053.1	1051.0
177.5°	1058.3	1059.4	1060.6	1060.3	1058.6	1056.9	1055.2	1053.5
180°	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3	1057.3

(END OF REPORT)