

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: P332382-935

Luminaire Tested: **S123RDIP-S1165D1025U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332382-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D1025U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6804.5 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

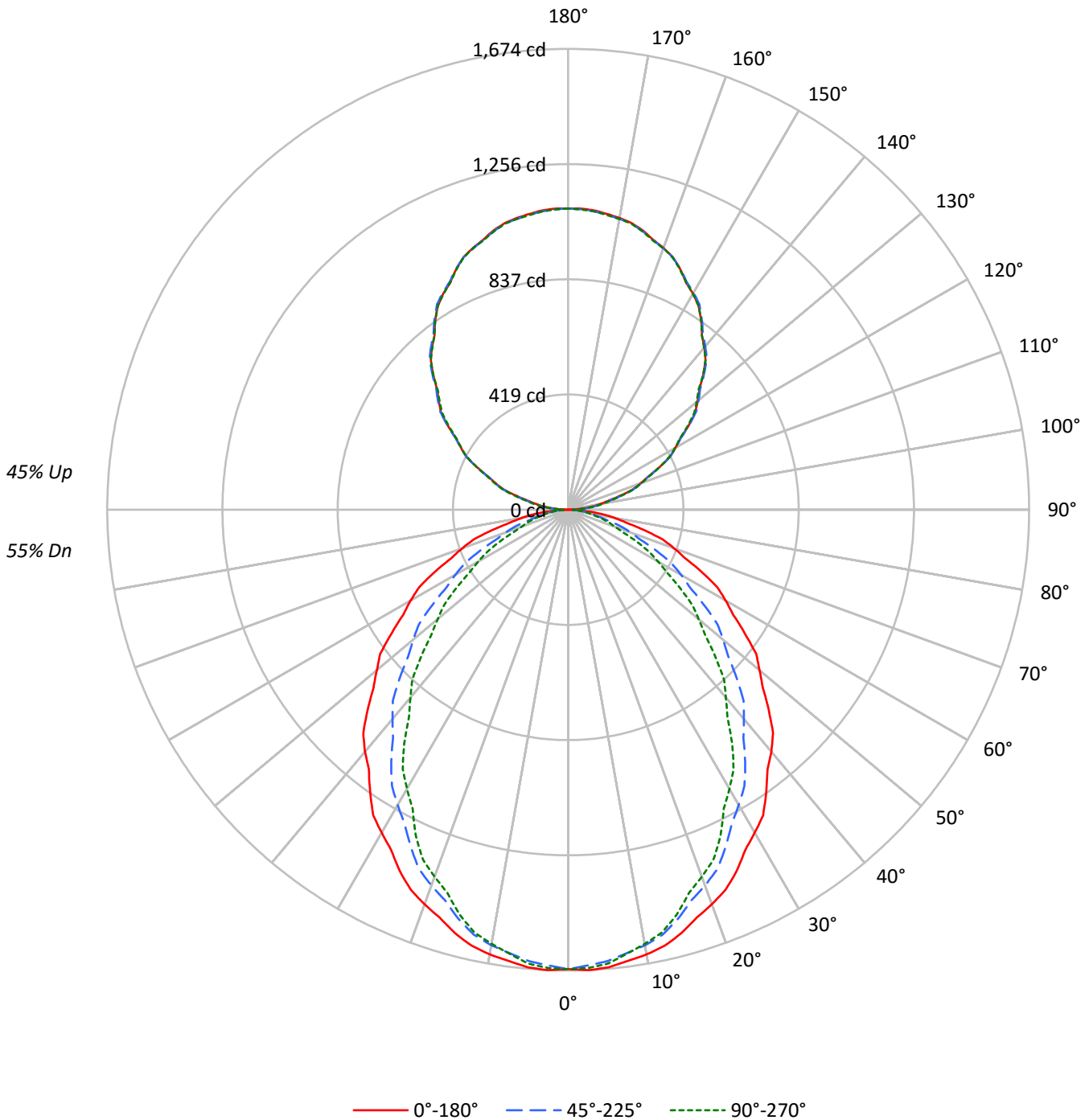
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108		101	101	101	101		86	86	86		73	73	73			61	61	61	55
1	99	95	91	88		92	89	85	82		76	74	72		65	63	62			55	53	52	47
2	91	83	77	72		84	78	73	68		67	63	60		58	55	52			48	46	45	40
3	83	74	66	61		77	69	62	57		60	55	51		51	48	44			43	41	38	35
4	76	65	58	52		71	61	54	49		53	48	44		46	42	38			39	36	33	30
5	70	59	50	45		65	55	48	42		48	42	38		41	37	33			35	32	29	26
6	65	53	45	39		60	49	42	37		43	37	33		37	33	30			32	29	26	23
7	60	48	40	34		56	45	38	33		39	34	29		34	30	26			29	26	23	21
8	56	43	36	30		52	41	34	29		36	30	26		31	27	24			27	23	21	19
9	52	40	32	27		48	37	31	26		33	27	24		29	24	21			25	21	19	17
10	49	36	29	24		45	34	28	23		30	25	21		27	22	19			23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17963	17963	17963
5°	18031	17782	17884
10°	17930	17559	17500
15°	17736	17149	16967
20°	17472	16635	16247
25°	17199	16057	15543
30°	16839	15392	14551
35°	16469	14725	13641
40°	16127	13939	12513
45°	15678	13164	11496
50°	15185	12285	10357
55°	14681	11277	9295
60°	14219	10198	8129
65°	13616	9032	6963
70°	12862	7582	5624
75°	11761	5964	5294
80°	10488	5281	4866
85°	8855	4681	4347



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.7	2.3
10°-20°	436.0	6.4
20°-30°	627.8	9.2
30°-40°	707.2	10.4
40°-50°	676.5	9.9
50°-60°	554.0	8.1
60°-70°	373.8	5.5
70°-80°	188.1	2.8
80°-90°	53.0	0.8
90°-100°	71.3	1.0
100°-110°	213.3	3.1
110°-120°	362.8	5.3
120°-130°	477.3	7.0
130°-140°	536.4	7.9
140°-150°	527.3	7.7
150°-160°	443.9	6.5
160°-170°	295.5	4.3
170°-180°	103.5	1.5
0°-30°	1220.5	17.9
0°-40°	1927.7	28.3
0°-60°	3158.3	46.4
0°-90°	3773.1	55.5
90°-120°	647.5	9.5
90°-150°	2188.5	32.2
90°-180°	3031.0	44.5
0°-180°	6804.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1669	1662	1646	1657	1655	158
15°	1592	1575	1539	1532	1523	448
25°	1448	1413	1352	1324	1309	666
35°	1253	1203	1121	1064	1038	784
45°	1030	967	865	790	755	794
55°	782	713	601	525	495	701
65°	535	458	355	291	273	529
75°	283	217	143	131	127	302
85°	72	43	38	35	35	81
90°	1	10	21	24	26	7
95°	51	57	64	67	67	57
105°	193	195	203	203	205	207
115°	365	368	366	367	366	361
125°	535	537	536	532	529	477
135°	694	698	698	694	693	534
145°	841	843	846	845	841	525
155°	964	964	964	967	962	443
165°	1049	1047	1047	1051	1046	296
175°	1092	1088	1088	1093	1087	104
180°	1094	1094	1094	1094	1094	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1674.2	1673.2	1672.2	1671.3	1670.3	1668.4	1665.5	1662.6	1659.7	1656.8	1659.5
5°	1668.8	1667.2	1665.8	1664.2	1662.8	1660.2	1656.6	1652.9	1649.3	1645.7	1648.5
7.5°	1653.3	1651.7	1650.1	1648.5	1646.8	1643.6	1639.0	1634.3	1629.6	1624.9	1626.4
10°	1640.4	1638.2	1636.2	1634.0	1631.9	1628.2	1622.7	1617.3	1611.9	1606.5	1606.8
12.5°	1622.0	1619.6	1617.2	1614.9	1612.6	1608.1	1601.5	1594.8	1588.2	1581.6	1581.4
15°	1591.6	1588.3	1585.0	1581.7	1578.4	1572.5	1564.1	1555.7	1547.2	1538.9	1537.3
17.5°	1553.4	1549.6	1545.8	1541.9	1538.1	1530.8	1520.1	1509.3	1498.7	1488.0	1484.8
20°	1525.3	1520.5	1515.7	1510.9	1506.1	1498.0	1486.5	1475.1	1463.6	1452.2	1448.3
22.5°	1493.9	1488.3	1482.8	1477.3	1471.8	1462.9	1450.8	1438.6	1426.5	1414.3	1409.5
25°	1448.1	1440.6	1433.1	1425.6	1418.1	1407.4	1393.5	1379.8	1365.9	1352.0	1345.7
27.5°	1392.7	1384.4	1376.1	1367.8	1359.4	1347.6	1332.2	1316.8	1301.4	1286.0	1277.2
30°	1354.8	1345.7	1336.7	1327.7	1318.7	1305.7	1288.9	1272.0	1255.3	1238.4	1228.1
32.5°	1316.9	1306.7	1296.4	1286.2	1276.0	1262.0	1244.1	1226.3	1208.5	1190.8	1179.6
35°	1253.3	1242.4	1231.6	1220.8	1210.0	1195.2	1176.6	1158.0	1139.3	1120.6	1107.7
37.5°	1188.9	1176.8	1164.8	1152.7	1140.7	1124.7	1104.8	1084.9	1065.1	1045.1	1030.4
40°	1147.7	1134.5	1121.2	1108.0	1094.8	1077.5	1056.1	1034.7	1013.4	992.0	976.4
42.5°	1101.1	1087.9	1074.7	1061.4	1048.2	1030.5	1008.5	986.4	964.3	942.3	925.1
45°	1029.9	1016.4	1002.9	989.4	975.8	957.4	934.3	911.1	887.9	864.8	847.7
47.5°	958.7	943.9	929.0	914.2	899.3	880.3	857.1	834.0	810.8	787.7	769.0
50°	906.8	892.7	878.5	864.4	850.2	831.0	806.7	782.3	757.9	733.6	714.9
52.5°	860.2	844.9	829.6	814.2	798.8	779.1	755.0	730.9	706.8	682.7	663.3
55°	782.3	767.5	752.8	738.0	723.3	703.2	677.6	652.0	626.5	600.9	583.5
57.5°	710.2	694.2	678.1	662.1	646.0	625.2	599.5	573.8	548.1	522.5	505.9
60°	660.5	643.9	627.4	610.9	594.3	573.5	548.5	523.7	498.7	473.7	457.4
62.5°	610.6	594.1	577.6	561.0	544.5	523.7	498.8	473.8	448.8	423.9	408.6
65°	534.6	518.1	501.5	485.0	468.5	448.4	425.0	401.5	378.1	354.6	339.8
67.5°	458.6	441.8	425.1	408.4	391.7	372.0	349.6	327.0	304.5	282.1	271.0
70°	408.7	392.5	376.3	360.0	343.8	325.1	304.1	283.0	262.0	240.9	230.4
72.5°	359.0	342.9	326.9	310.9	294.9	277.3	258.2	239.1	220.0	200.9	192.3
75°	282.8	268.5	254.0	239.5	225.2	209.7	193.1	176.5	160.0	143.4	140.4
77.5°	213.5	200.5	187.4	174.4	161.4	149.5	138.9	128.2	117.5	106.9	105.3
80°	169.2	156.9	144.5	132.2	119.9	110.6	104.2	97.9	91.6	85.2	84.4
82.5°	126.9	116.3	105.6	95.0	84.4	77.6	74.6	71.6	68.7	65.8	64.8
85°	71.7	65.1	58.5	51.9	45.3	41.5	40.6	39.7	38.8	37.9	37.3
87.5°	26.2	23.8	21.6	19.4	17.1	16.2	16.7	17.2	17.7	18.2	18.1
90°	0.9	2.8	4.6	6.6	8.5	10.7	13.2	15.7	18.2	20.7	21.4
92.5°	20.8	22.1	23.4	24.7	26.0	27.4	28.8	30.1	31.6	33.0	33.6
95°	50.7	52.0	53.4	54.8	56.1	57.5	59.0	60.5	62.1	63.6	64.4
97.5°	90.1	91.1	92.0	93.1	94.0	95.1	96.2	97.3	98.4	99.5	100.4
100°	116.9	118.0	119.2	120.3	121.5	122.5	123.5	124.4	125.4	126.3	126.9
102.5°	147.8	148.5	149.2	149.9	150.6	151.5	152.8	154.0	155.3	156.6	157.1
105°	193.4	193.7	194.2	194.5	194.9	196.0	197.7	199.4	201.1	202.9	202.9
107.5°	246.3	246.6	246.8	247.0	247.3	247.7	248.4	249.1	249.8	250.5	251.1
110°	279.3	279.7	280.1	280.4	280.9	281.2	281.6	282.0	282.4	282.8	283.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.7	313.9	314.2	314.4	314.6	314.8	314.9	315.0	315.0	315.0	316.0
115°	365.2	365.8	366.4	367.0	367.6	367.6	367.3	366.9	366.5	366.1	366.4
117.5°	417.2	417.6	417.9	418.4	418.7	418.6	418.2	417.7	417.2	416.6	416.6
120°	449.5	450.6	451.8	453.0	454.1	454.2	453.2	452.3	451.3	450.4	450.1
122.5°	483.2	484.1	484.8	485.7	486.6	486.7	486.2	485.7	485.3	484.7	484.2
125°	534.6	535.2	535.7	536.3	536.8	537.0	536.6	536.2	535.8	535.5	534.7
127.5°	582.0	583.2	584.4	585.7	586.9	587.3	586.9	586.5	586.1	585.7	584.5
130°	613.6	615.2	616.7	618.2	619.7	620.3	619.7	619.1	618.5	617.9	617.2
132.5°	645.3	646.8	648.3	649.9	651.4	651.9	651.5	651.1	650.7	650.2	649.4
135°	693.6	694.7	695.9	697.0	698.2	698.6	698.4	698.3	698.1	697.8	697.2
137.5°	738.3	739.3	740.2	741.1	742.1	742.8	743.3	743.8	744.3	744.8	744.0
140°	769.2	770.2	771.1	772.1	773.0	773.6	773.8	774.0	774.2	774.4	774.2
142.5°	797.4	798.3	799.4	800.3	801.2	801.8	802.2	802.5	802.9	803.2	803.1
145°	841.4	841.8	842.1	842.6	842.9	843.4	844.0	844.6	845.2	845.7	845.5
147.5°	879.9	880.6	881.3	882.0	882.7	883.3	883.8	884.3	884.8	885.5	885.5
150°	906.7	907.1	907.5	907.8	908.3	908.6	909.0	909.4	909.8	910.2	910.2
152.5°	928.8	929.3	929.8	930.3	930.8	931.3	931.5	931.7	931.9	932.2	932.5
155°	963.5	963.5	963.5	963.5	963.5	963.5	963.7	963.9	964.1	964.3	965.1
157.5°	993.0	992.8	992.6	992.3	992.1	992.0	992.2	992.4	992.6	992.6	993.5
160°	1011.6	1011.2	1010.8	1010.5	1010.0	1009.9	1009.9	1009.9	1009.9	1009.9	1010.8
162.5°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.8	1025.9	1026.1	1026.2	1026.4	1027.3
165°	1049.4	1048.8	1048.3	1047.7	1047.1	1046.8	1046.8	1046.8	1046.8	1046.8	1047.9
167.5°	1066.4	1065.7	1064.9	1064.1	1063.3	1063.1	1063.2	1063.3	1063.5	1063.7	1064.9
170°	1076.1	1075.3	1074.5	1073.8	1073.0	1072.6	1072.6	1072.6	1072.6	1072.6	1073.9
172.5°	1083.6	1082.9	1082.1	1081.3	1080.6	1080.1	1080.1	1080.1	1080.1	1080.1	1081.3
175°	1091.5	1090.7	1089.9	1089.3	1088.5	1088.0	1088.0	1088.0	1088.0	1088.0	1089.3
177.5°	1094.8	1094.2	1093.6	1093.0	1092.4	1092.0	1092.0	1092.0	1092.0	1092.0	1093.0
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1662.2	1664.8	1667.4	1668.5	1668.0	1667.6	1667.1	1666.6
5°	1651.1	1653.9	1656.6	1657.6	1657.0	1656.4	1655.8	1655.2
7.5°	1627.9	1629.4	1630.9	1631.2	1630.1	1629.1	1628.1	1627.0
10°	1607.1	1607.4	1607.7	1607.1	1605.6	1604.1	1602.6	1601.1
12.5°	1581.2	1581.1	1580.9	1579.9	1578.2	1576.4	1574.7	1573.0
15°	1535.9	1534.3	1532.8	1531.0	1528.9	1526.8	1524.7	1522.6
17.5°	1481.6	1478.3	1475.2	1472.1	1468.9	1465.8	1462.7	1459.5
20°	1444.4	1440.5	1436.6	1432.8	1429.2	1425.6	1422.0	1418.4
22.5°	1404.5	1399.7	1394.8	1390.7	1387.3	1384.0	1380.6	1377.3
25°	1339.5	1333.1	1326.8	1322.0	1318.7	1315.3	1312.1	1308.7
27.5°	1268.4	1259.6	1250.9	1244.0	1238.9	1233.9	1228.8	1223.7
30°	1217.9	1207.7	1197.5	1190.0	1185.2	1180.3	1175.5	1170.7
32.5°	1168.4	1157.2	1146.0	1137.9	1132.8	1127.7	1122.7	1117.7
35°	1094.8	1081.8	1068.9	1059.7	1054.3	1048.9	1043.4	1038.1
37.5°	1015.7	1001.1	986.4	975.7	969.1	962.3	955.7	949.0
40°	960.8	945.1	929.5	918.3	911.3	904.4	897.5	890.5
42.5°	908.1	891.0	873.9	862.3	856.1	849.9	843.7	837.5
45°	830.5	813.4	796.3	784.1	776.9	769.6	762.4	755.2
47.5°	750.4	731.8	713.1	700.6	694.1	687.7	681.2	674.9
50°	696.3	677.6	658.9	646.2	639.3	632.3	625.4	618.5
52.5°	643.9	624.6	605.2	592.4	586.2	580.1	573.9	567.7
55°	566.0	548.5	531.2	519.4	513.4	507.4	501.4	495.3
57.5°	489.5	472.9	456.5	445.7	440.6	435.5	430.3	425.2
60°	441.2	425.0	408.7	398.0	393.0	387.8	382.7	377.6
62.5°	393.3	378.1	362.7	352.5	347.1	341.7	336.4	331.1
65°	325.1	310.4	295.7	286.6	283.4	280.0	276.7	273.4
67.5°	260.0	249.0	238.0	230.7	227.2	223.6	220.1	216.5
70°	219.8	209.3	198.8	191.9	188.6	185.3	181.9	178.7
72.5°	183.7	175.0	166.4	161.4	160.1	158.7	157.3	155.9
75°	137.4	134.4	131.4	129.7	129.1	128.5	127.9	127.3
77.5°	103.7	102.0	100.4	99.3	98.7	98.1	97.5	96.9
80°	83.4	82.6	81.6	80.9	80.3	79.7	79.1	78.5
82.5°	64.0	63.1	62.2	61.6	61.6	61.4	61.3	61.2
85°	36.7	36.1	35.5	35.2	35.2	35.2	35.2	35.2
87.5°	18.0	17.9	17.8	17.7	17.6	17.4	17.2	17.0
90°	22.1	22.9	23.7	24.3	24.6	25.1	25.4	25.7
92.5°	34.3	34.9	35.5	35.6	35.4	35.2	35.0	34.7
95°	65.1	65.9	66.6	67.1	67.1	67.1	67.1	67.1
97.5°	101.3	102.2	103.1	103.4	103.4	103.3	103.2	103.1
100°	127.5	128.0	128.6	129.2	129.5	129.8	130.3	130.6
102.5°	157.7	158.3	158.9	159.1	159.0	158.9	158.9	158.9
105°	202.9	202.9	202.9	203.0	203.4	203.8	204.1	204.6
107.5°	251.7	252.3	252.9	253.0	252.9	252.6	252.4	252.2
110°	284.3	285.1	285.9	286.0	285.6	285.2	284.9	284.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.9	317.8	318.7	319.2	319.1	319.0	318.9	318.8
115°	366.5	366.7	366.9	366.9	366.7	366.5	366.4	366.1
117.5°	416.6	416.6	416.6	416.2	415.7	415.2	414.7	414.1
120°	450.0	449.8	449.6	449.3	448.9	448.6	448.2	447.8
122.5°	483.7	483.3	482.8	482.2	481.7	481.1	480.6	480.1
125°	533.9	533.1	532.4	531.6	530.9	530.1	529.3	528.6
127.5°	583.5	582.5	581.3	580.4	579.5	578.6	577.7	576.9
130°	616.4	615.6	614.9	613.8	612.5	611.1	609.8	608.5
132.5°	648.4	647.6	646.6	645.7	644.6	643.6	642.6	641.5
135°	696.4	695.6	694.8	694.2	693.9	693.4	693.1	692.8
137.5°	743.2	742.4	741.6	740.8	740.1	739.3	738.7	738.0
140°	774.0	773.8	773.6	772.8	771.5	770.2	768.9	767.5
142.5°	802.9	802.7	802.5	801.8	800.8	799.8	798.7	797.7
145°	845.3	845.2	844.9	844.5	843.7	842.9	842.1	841.4
147.5°	885.5	885.5	885.5	884.8	883.7	882.5	881.4	880.3
150°	910.2	910.2	910.2	909.6	908.4	907.3	906.1	905.0
152.5°	932.8	933.1	933.4	933.1	932.0	931.1	930.1	929.1
155°	965.9	966.6	967.3	967.1	965.8	964.4	963.0	961.7
157.5°	994.3	995.1	995.9	995.7	994.7	993.6	992.6	991.4
160°	1011.8	1012.7	1013.7	1013.7	1013.1	1012.3	1011.5	1010.7
162.5°	1028.3	1029.2	1030.2	1030.0	1028.8	1027.6	1026.4	1025.2
165°	1049.1	1050.2	1051.4	1051.3	1050.0	1048.6	1047.3	1045.9
167.5°	1066.0	1067.2	1068.4	1068.4	1067.2	1066.0	1064.9	1063.7
170°	1075.3	1076.6	1078.0	1078.0	1076.6	1075.3	1073.9	1072.6
172.5°	1082.5	1083.7	1084.9	1084.9	1083.5	1082.2	1080.8	1079.4
175°	1090.4	1091.5	1092.7	1092.5	1091.2	1089.9	1088.6	1087.2
177.5°	1093.9	1094.8	1095.7	1095.6	1094.6	1093.5	1092.4	1091.3
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1

(END OF REPORT)