

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: P332070-830

Luminaire Tested: **S123DIP-S1165D805U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332070-830
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: S123DIP-S1165D805U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7085.6 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

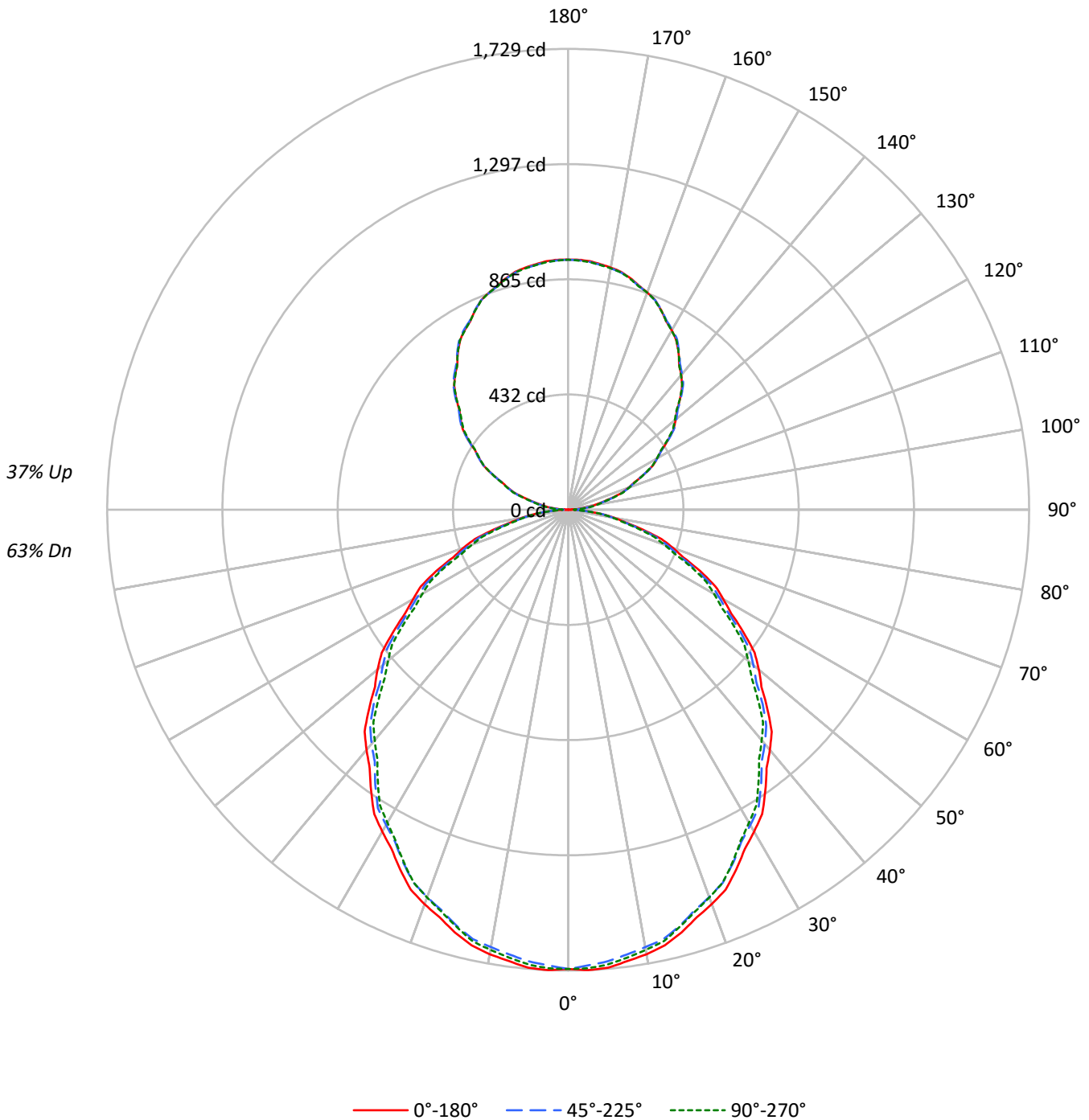
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	110	110	110	110	103	103	103	103	91	91	91		79	79	79		68	68	68	63
1	101	96	92	89	94	90	87	84	80	77	74		70	68	66		60	59	58	53
2	92	84	78	72	86	79	73	69	70	65	62		61	58	55		53	51	48	44
3	84	74	66	60	78	70	63	57	61	56	52		54	50	46		47	44	41	38
4	77	65	57	51	71	62	54	49	55	49	44		48	43	40		42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38		43	38	35		38	34	31	28
6	65	52	44	38	61	50	42	37	44	38	33		39	34	30		34	30	27	25
7	60	47	39	33	56	45	37	32	40	34	29		36	31	27		31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26		33	28	24		29	25	22	19
9	52	39	32	27	49	37	30	26	34	28	24		30	25	22		27	23	20	18
10	49	36	29	24	46	34	28	23	31	25	21		28	23	20		25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18547	18547	18547
5°	18634	18377	18506
10°	18510	18218	18332
15°	18293	18013	18046
20°	18040	17718	17734
25°	17701	17368	17332
30°	17329	16978	16850
35°	16938	16567	16353
40°	16530	16114	15864
45°	16081	15696	15314
50°	15630	15183	14763
55°	15041	14653	14208
60°	14449	14034	13586
65°	13924	13359	12944
70°	13149	12589	12032
75°	12015	11582	11088
80°	10835	10377	10290
85°	9510	9152	8793



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	2.3
10°-20°	458.3	6.5
20°-30°	677.0	9.6
30°-40°	790.8	11.2
40°-50°	795.1	11.2
50°-60°	698.4	9.9
60°-70°	520.3	7.3
70°-80°	296.4	4.2
80°-90°	87.9	1.2
90°-100°	61.1	0.9
100°-110°	182.9	2.6
110°-120°	311.1	4.4
120°-130°	409.2	5.8
130°-140°	460.0	6.5
140°-150°	452.1	6.4
150°-160°	380.6	5.4
160°-170°	253.4	3.6
170°-180°	88.7	1.3
0°-30°	1297.6	18.3
0°-40°	2088.4	29.5
0°-60°	3581.8	50.6
0°-90°	4486.4	63.3
90°-120°	555.1	7.8
90°-150°	1876.4	26.5
90°-180°	2599.0	36.7
0°-180°	7085.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1725	1717	1701	1715	1713	163
15°	1642	1635	1616	1627	1619	463
25°	1490	1481	1462	1464	1459	686
35°	1289	1280	1261	1252	1244	806
45°	1056	1050	1031	1014	1006	815
55°	802	799	781	765	757	718
65°	547	539	524	513	508	539
75°	289	283	278	271	267	309
85°	77	74	74	71	71	85
90°	1	8	18	21	22	7
95°	44	49	55	57	58	49
105°	166	168	174	174	175	178
115°	313	315	314	315	314	310
125°	458	460	459	456	453	409
135°	595	599	598	596	594	458
145°	721	723	725	724	721	450
155°	826	826	827	829	825	380
165°	900	898	898	901	897	254
175°	936	933	933	937	932	89
180°	938	938	938	938	938	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1
2.5°	1729.0	1728.0	1726.9	1725.9	1724.8	1722.8	1720.0	1717.0	1714.1	1711.2	1713.8
5°	1724.6	1723.0	1721.3	1719.7	1718.0	1715.3	1711.8	1708.1	1704.5	1700.8	1704.1
7.5°	1707.7	1706.0	1704.4	1702.7	1701.1	1698.4	1694.6	1690.9	1687.2	1683.4	1686.3
10°	1693.5	1691.8	1690.2	1688.5	1686.9	1683.9	1679.6	1675.4	1671.0	1666.8	1669.7
12.5°	1674.5	1673.1	1671.7	1670.4	1669.0	1666.2	1662.3	1658.2	1654.2	1650.2	1652.4
15°	1641.6	1640.3	1639.0	1637.7	1636.3	1633.5	1629.3	1624.9	1620.7	1616.4	1619.0
17.5°	1603.4	1601.7	1600.0	1598.3	1596.5	1593.6	1589.2	1585.0	1580.6	1576.4	1578.3
20°	1574.9	1572.9	1570.9	1569.0	1567.1	1563.9	1559.6	1555.4	1551.0	1546.8	1548.1
22.5°	1542.9	1541.0	1539.0	1537.0	1535.0	1531.9	1527.6	1523.3	1519.1	1514.8	1515.8
25°	1490.4	1488.5	1486.5	1484.5	1482.6	1479.4	1475.2	1470.9	1466.6	1462.4	1462.6
27.5°	1434.5	1432.6	1430.7	1428.7	1426.8	1423.6	1419.0	1414.4	1409.8	1405.1	1405.4
30°	1394.2	1392.5	1390.9	1389.2	1387.6	1384.5	1379.9	1375.3	1370.6	1366.0	1366.0
32.5°	1353.9	1351.7	1349.5	1347.4	1345.2	1342.3	1338.8	1335.2	1331.6	1328.1	1326.3
35°	1289.0	1287.0	1285.1	1283.1	1281.1	1278.0	1273.7	1269.4	1265.1	1260.8	1258.9
37.5°	1222.6	1220.1	1217.6	1215.1	1212.6	1209.2	1204.9	1200.5	1196.2	1191.8	1189.4
40°	1176.4	1174.4	1172.4	1170.4	1168.5	1165.2	1160.6	1155.9	1151.3	1146.8	1144.2
42.5°	1130.1	1127.9	1125.7	1123.4	1121.2	1117.8	1113.1	1108.5	1103.9	1099.4	1096.7
45°	1056.4	1055.1	1053.8	1052.4	1051.1	1048.3	1044.1	1039.7	1035.5	1031.1	1027.3
47.5°	983.2	981.3	979.4	977.4	975.5	972.6	968.6	964.5	960.5	956.5	952.6
50°	933.4	931.8	930.1	928.5	926.8	923.9	919.5	915.3	911.0	906.7	903.1
52.5°	881.3	880.1	879.0	877.9	876.8	873.9	869.4	864.9	860.4	855.7	852.6
55°	801.5	801.3	800.9	800.6	800.2	798.0	793.6	789.4	785.0	780.8	777.2
57.5°	725.7	724.5	723.4	722.4	721.2	719.0	715.5	712.1	708.7	705.2	702.0
60°	671.2	670.8	670.5	670.1	669.9	667.7	663.7	659.8	655.8	651.9	648.9
62.5°	622.5	621.7	620.9	620.0	619.2	616.7	612.7	608.8	604.9	601.0	597.9
65°	546.7	545.1	543.4	541.8	540.1	537.6	534.3	531.0	527.7	524.5	521.9
67.5°	466.4	465.0	463.5	462.0	460.6	458.6	456.1	453.6	451.1	448.7	446.3
70°	417.8	415.8	413.9	411.9	409.9	407.9	406.0	404.0	402.0	400.0	397.8
72.5°	366.8	365.4	363.9	362.5	361.1	359.2	356.9	354.7	352.5	350.2	348.2
75°	288.9	287.6	286.3	284.9	283.6	282.5	281.5	280.5	279.6	278.5	276.9
77.5°	219.9	219.1	218.4	217.7	217.0	216.0	214.8	213.7	212.4	211.3	210.2
80°	174.8	173.8	172.9	171.8	170.9	170.0	169.4	168.7	168.1	167.4	167.1
82.5°	131.0	130.7	130.5	130.4	130.2	130.0	129.9	129.8	129.6	129.5	128.9
85°	77.0	76.3	75.7	75.0	74.4	74.1	74.1	74.1	74.1	74.1	73.4
87.5°	31.0	30.5	30.1	29.6	29.1	28.9	29.1	29.3	29.4	29.6	29.5
90°	0.8	2.4	4.1	5.7	7.3	9.1	11.3	13.4	15.6	17.7	18.4
92.5°	17.8	18.9	20.1	21.2	22.2	23.5	24.7	25.9	27.1	28.3	28.8
95°	43.5	44.6	45.8	46.9	48.1	49.3	50.6	51.9	53.3	54.6	55.2
97.5°	77.2	78.0	78.9	79.7	80.7	81.5	82.5	83.4	84.4	85.3	86.1
100°	100.2	101.2	102.2	103.2	104.2	105.1	105.8	106.7	107.5	108.3	108.9
102.5°	126.8	127.3	127.9	128.6	129.1	130.0	131.0	132.1	133.2	134.3	134.8
105°	165.8	166.2	166.5	166.8	167.1	168.1	169.5	171.0	172.5	173.9	173.9
107.5°	211.2	211.4	211.6	211.8	212.0	212.4	213.0	213.6	214.1	214.7	215.3
110°	239.5	239.8	240.2	240.4	240.8	241.1	241.5	241.8	242.1	242.4	243.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	269.0	269.2	269.4	269.6	269.8	269.8	269.9	270.0	270.1	270.1	271.0
115°	313.2	313.7	314.1	314.6	315.2	315.3	314.9	314.6	314.2	314.0	314.1
117.5°	357.7	358.1	358.4	358.6	359.0	358.9	358.5	358.1	357.7	357.2	357.2
120°	385.4	386.3	387.4	388.3	389.4	389.5	388.6	387.8	387.0	386.2	386.0
122.5°	414.3	415.0	415.8	416.4	417.2	417.4	416.9	416.5	416.0	415.7	415.2
125°	458.4	458.8	459.3	459.9	460.3	460.4	460.1	459.8	459.4	459.1	458.5
127.5°	499.1	500.1	501.1	502.2	503.2	503.6	503.2	502.8	502.5	502.1	501.2
130°	526.1	527.4	528.8	530.1	531.4	531.8	531.3	530.8	530.4	529.8	529.1
132.5°	553.3	554.6	555.9	557.2	558.6	559.0	558.6	558.3	557.9	557.5	556.8
135°	594.7	595.7	596.6	597.7	598.6	599.1	598.9	598.7	598.5	598.4	597.8
137.5°	633.0	633.9	634.6	635.5	636.3	636.9	637.3	637.7	638.2	638.6	637.9
140°	659.5	660.3	661.2	662.0	662.8	663.3	663.5	663.6	663.8	663.9	663.8
142.5°	683.7	684.6	685.3	686.2	687.0	687.6	687.9	688.2	688.4	688.7	688.5
145°	721.4	721.8	722.1	722.5	722.7	723.1	723.7	724.2	724.6	725.1	725.0
147.5°	754.5	755.1	755.6	756.2	756.9	757.3	757.8	758.3	758.7	759.2	759.2
150°	777.4	777.8	778.1	778.4	778.7	779.1	779.4	779.8	780.0	780.4	780.4
152.5°	796.4	796.7	797.2	797.7	798.1	798.5	798.7	798.9	799.1	799.3	799.6
155°	826.0	826.0	826.0	826.0	826.0	826.1	826.3	826.5	826.7	826.8	827.5
157.5°	851.4	851.2	851.0	850.8	850.6	850.6	850.7	850.9	851.0	851.1	851.9
160°	867.3	867.0	866.7	866.4	866.0	865.9	865.9	865.9	865.9	865.9	866.7
162.5°	881.5	881.1	880.6	880.1	879.7	879.5	879.7	879.8	879.9	880.1	880.8
165°	899.8	899.3	898.8	898.3	897.8	897.6	897.6	897.6	897.6	897.6	898.5
167.5°	914.4	913.7	913.0	912.4	911.7	911.5	911.6	911.7	911.9	912.0	913.0
170°	922.7	922.0	921.3	920.7	920.0	919.6	919.6	919.6	919.6	919.6	920.9
172.5°	929.1	928.5	927.8	927.2	926.5	926.1	926.1	926.1	926.1	926.1	927.2
175°	935.9	935.2	934.6	934.0	933.3	932.9	932.9	932.9	932.9	932.9	934.0
177.5°	938.7	938.2	937.6	937.1	936.6	936.3	936.3	936.3	936.3	936.3	937.1
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1
2.5°	1716.5	1719.1	1721.7	1723.0	1722.7	1722.4	1722.1	1721.9
5°	1707.4	1710.7	1714.0	1715.3	1714.7	1714.0	1713.4	1712.7
7.5°	1689.3	1692.2	1695.3	1696.5	1696.1	1695.7	1695.4	1695.0
10°	1672.7	1675.7	1678.7	1679.8	1679.1	1678.5	1677.8	1677.2
12.5°	1654.5	1656.7	1658.9	1659.8	1659.3	1659.0	1658.6	1658.2
15°	1621.6	1624.3	1626.9	1627.3	1625.3	1623.3	1621.4	1619.4
17.5°	1580.1	1582.0	1583.8	1584.3	1583.7	1582.9	1582.2	1581.5
20°	1549.4	1550.8	1552.1	1552.2	1551.2	1550.2	1549.3	1548.2
22.5°	1516.9	1518.0	1519.0	1518.9	1517.7	1516.4	1515.1	1513.9
25°	1463.0	1463.3	1463.7	1463.3	1462.4	1461.3	1460.4	1459.3
27.5°	1405.7	1405.9	1406.2	1405.7	1404.5	1403.2	1401.9	1400.7
30°	1366.0	1366.0	1366.0	1364.9	1362.5	1360.3	1357.9	1355.7
32.5°	1324.4	1322.6	1320.7	1319.2	1318.0	1316.6	1315.4	1314.2
35°	1256.9	1254.9	1252.9	1251.1	1249.4	1247.8	1246.1	1244.5
37.5°	1187.0	1184.7	1182.3	1180.6	1179.5	1178.5	1177.4	1176.4
40°	1141.5	1138.9	1136.2	1134.3	1132.9	1131.6	1130.3	1129.0
42.5°	1094.1	1091.5	1088.8	1086.8	1085.5	1084.2	1082.9	1081.6
45°	1023.3	1019.4	1015.4	1012.6	1011.0	1009.3	1007.7	1006.0
47.5°	948.8	944.9	940.9	938.3	936.9	935.4	934.0	932.6
50°	899.5	895.9	892.2	889.5	887.5	885.5	883.5	881.6
52.5°	849.6	846.5	843.4	840.8	838.9	836.9	834.9	832.9
55°	773.5	770.0	766.3	763.6	762.0	760.3	758.7	757.1
57.5°	698.8	695.6	692.3	689.8	687.9	686.0	684.0	682.1
60°	646.0	643.0	640.1	637.7	636.1	634.4	632.8	631.1
62.5°	595.0	592.0	589.1	587.0	585.9	584.8	583.7	582.6
65°	519.2	516.6	514.0	512.2	511.1	510.2	509.2	508.2
67.5°	444.0	441.7	439.4	437.5	436.2	434.8	433.4	432.1
70°	395.4	393.1	390.8	388.8	387.2	385.5	383.9	382.3
72.5°	346.2	344.1	342.0	340.6	339.8	338.9	338.1	337.2
75°	275.2	273.6	271.9	270.6	269.7	268.6	267.7	266.6
77.5°	209.1	207.9	206.8	206.2	206.2	206.2	206.2	206.2
80°	166.7	166.5	166.1	166.0	166.0	166.0	166.0	166.0
82.5°	128.3	127.7	127.1	126.7	126.4	126.2	125.9	125.6
85°	72.8	72.1	71.4	71.2	71.2	71.2	71.2	71.2
87.5°	29.3	29.2	29.1	29.0	29.1	29.2	29.2	29.3
90°	19.0	19.6	20.3	20.8	21.1	21.5	21.8	22.1
92.5°	29.3	29.9	30.3	30.5	30.3	30.2	30.0	29.8
95°	55.8	56.5	57.1	57.5	57.5	57.5	57.5	57.5
97.5°	86.8	87.6	88.3	88.7	88.6	88.6	88.5	88.4
100°	109.3	109.8	110.3	110.7	111.0	111.3	111.7	112.0
102.5°	135.3	135.7	136.2	136.5	136.4	136.3	136.3	136.2
105°	173.9	173.9	173.9	174.1	174.4	174.7	175.0	175.4
107.5°	215.7	216.3	216.9	217.0	216.8	216.6	216.4	216.2
110°	243.7	244.4	245.1	245.2	244.9	244.6	244.2	243.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.7	272.5	273.3	273.6	273.6	273.5	273.4	273.4
115°	314.2	314.4	314.6	314.6	314.4	314.2	314.1	314.0
117.5°	357.2	357.1	357.1	356.8	356.5	356.0	355.5	355.1
120°	385.8	385.7	385.5	385.2	384.9	384.6	384.3	383.9
122.5°	414.8	414.3	414.0	413.5	413.0	412.6	412.1	411.6
125°	457.8	457.1	456.5	455.8	455.2	454.5	453.8	453.2
127.5°	500.3	499.4	498.5	497.7	496.9	496.2	495.4	494.6
130°	528.6	527.9	527.3	526.3	525.2	524.1	522.9	521.7
132.5°	556.0	555.2	554.4	553.6	552.7	551.8	550.9	550.1
135°	597.1	596.4	595.8	595.3	594.9	594.7	594.3	594.0
137.5°	637.3	636.6	635.8	635.2	634.6	634.0	633.4	632.7
140°	663.6	663.5	663.3	662.7	661.5	660.3	659.2	658.1
142.5°	688.4	688.2	688.1	687.6	686.6	685.8	684.9	684.0
145°	724.8	724.6	724.4	724.1	723.4	722.7	722.1	721.4
147.5°	759.2	759.2	759.2	758.7	757.7	756.7	755.7	754.8
150°	780.4	780.4	780.4	780.0	778.9	778.0	776.9	776.0
152.5°	799.7	800.0	800.3	800.0	799.2	798.3	797.5	796.6
155°	828.1	828.8	829.4	829.2	828.0	826.9	825.8	824.6
157.5°	852.5	853.2	853.8	853.8	852.9	852.0	851.0	850.1
160°	867.5	868.4	869.1	869.2	868.6	867.9	867.2	866.6
162.5°	881.7	882.5	883.4	883.2	882.1	881.1	880.1	879.0
165°	899.6	900.5	901.5	901.4	900.3	899.1	898.0	896.8
167.5°	914.1	915.0	916.1	916.1	915.0	914.1	913.0	912.0
170°	922.0	923.1	924.3	924.3	923.1	922.0	920.9	919.6
172.5°	928.2	929.3	930.2	930.2	929.0	927.8	926.7	925.6
175°	934.9	935.9	936.9	936.8	935.7	934.5	933.3	932.2
177.5°	937.9	938.7	939.4	939.4	938.5	937.5	936.7	935.8
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1

(END OF REPORT)