

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: P333007-927

Luminaire Tested: **S124RDIP-S1195D1035U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333007-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S1195D1035U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6656.5 lumens
Efficiency: N/A
Efficacy: 99.6 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

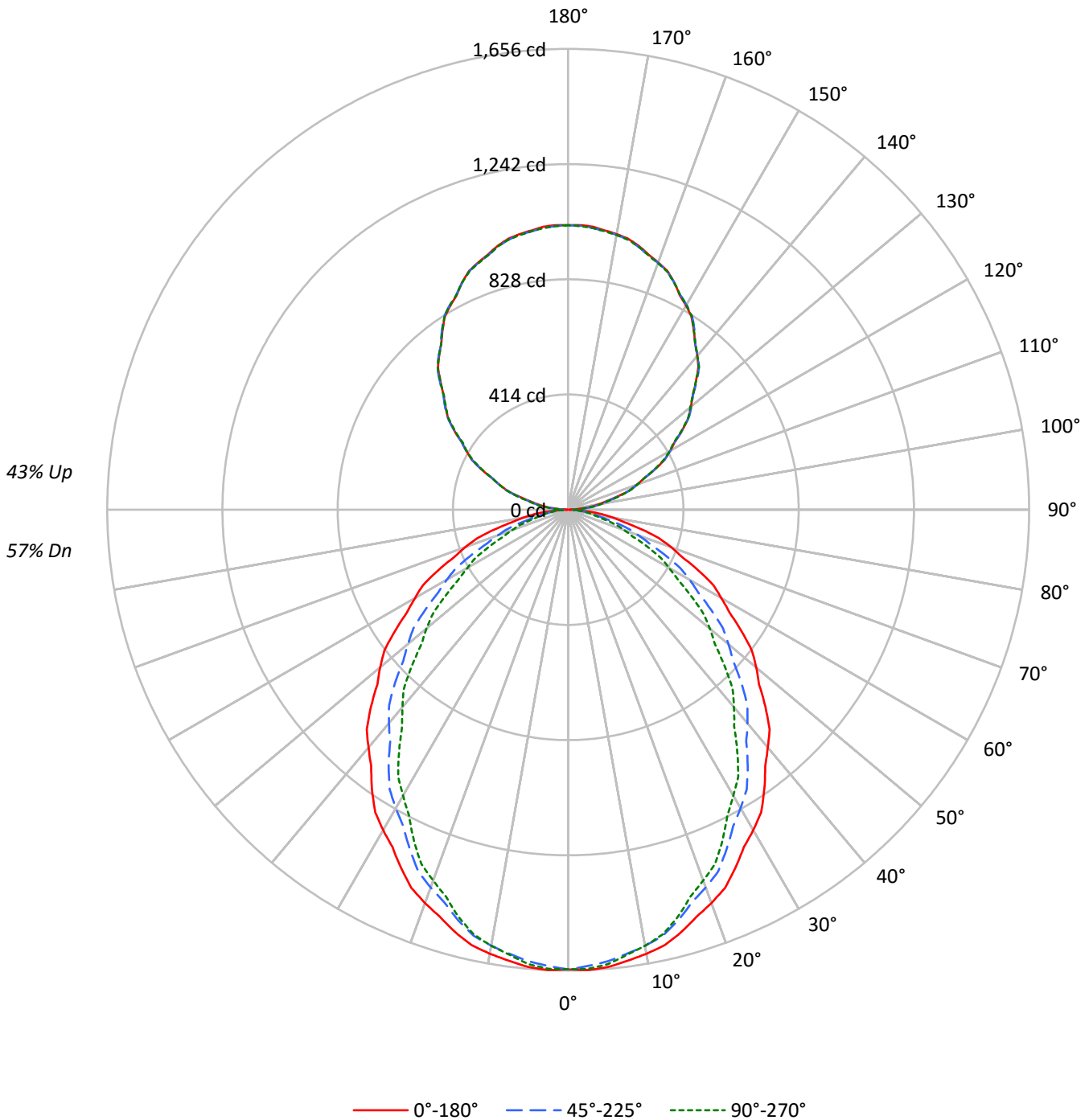
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87		75	75	75		63	63	63	57
1	100	95	92	88	93	89	86	83	77	75	73		66	64	63		56	55	54	49
2	91	84	78	73	85	78	73	68	68	64	61		59	56	53		50	48	46	41
3	83	74	67	61	77	69	63	58	60	55	51		52	48	45		44	42	39	35
4	76	66	58	52	71	61	54	49	54	48	44		46	42	39		40	37	34	31
5	70	59	51	45	65	55	48	42	48	42	38		42	37	34		36	33	30	27
6	65	53	45	39	60	50	42	37	44	38	33		38	33	30		33	29	26	24
7	60	48	40	34	56	45	38	33	40	34	30		35	30	27		30	26	24	21
8	56	43	36	30	52	41	34	29	36	30	26		32	27	24		28	24	21	19
9	52	40	32	27	48	38	31	26	33	28	24		29	25	21		26	22	19	17
10	49	37	29	24	45	35	28	23	31	25	21		27	23	19		24	20	18	16

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	2.3
10°-20°	432.8	6.5
20°-30°	624.9	9.4
30°-40°	708.3	10.6
40°-50°	684.0	10.3
50°-60°	568.8	8.5
60°-70°	392.8	5.9
70°-80°	199.1	3.0
80°-90°	54.1	0.8
90°-100°	67.4	1.0
100°-110°	199.8	3.0
110°-120°	339.1	5.1
120°-130°	447.1	6.7
130°-140°	502.1	7.5
140°-150°	493.4	7.4
150°-160°	415.0	6.2
160°-170°	276.1	4.1
170°-180°	96.7	1.5
0°-30°	1212.9	18.2
0°-40°	1921.2	28.9
0°-60°	3174.0	47.7
0°-90°	3820.0	57.4
90°-120°	606.3	9.1
90°-150°	2048.8	30.8
90°-180°	2837.0	42.6
0°-180°	6656.5	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	6
95°	48	54	60	62	62	53
105°	184	185	188	191	193	196
115°	345	345	343	342	342	340
125°	502	502	501	500	498	447
135°	648	652	652	651	648	501
145°	787	790	791	790	788	492
155°	901	901	901	903	901	415
165°	981	979	977	982	979	276
175°	1021	1017	1016	1021	1016	97
180°	1022	1022	1022	1022	1022	



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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°	17.0	19.2	21.3	23.5	25.7	27.4	28.4	29.3	30.3	31.3	31.9
95°	47.5	49.0	50.6	52.2	53.8	55.1	56.4	57.7	58.9	60.1	60.6
97.5°	82.9	84.1	85.4	86.7	87.9	89.3	90.7	92.1	93.6	95.1	95.7
100°	110.7	111.4	112.1	112.8	113.5	114.6	116.2	117.8	119.4	121.0	121.4
102.5°	139.8	140.1	140.4	140.6	140.9	141.8	143.2	144.7	146.1	147.6	148.1
105°	184.3	184.4	184.6	184.7	185.0	185.4	186.1	186.8	187.5	188.2	188.7
107.5°	230.9	231.1	231.3	231.6	231.7	231.9	232.0	232.1	232.2	232.3	232.8
110°	262.5	262.8	263.2	263.6	264.0	264.0	263.8	263.6	263.5	263.3	262.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.4	295.5	295.6	295.6	295.7	295.6	295.2	294.9	294.6	294.3	294.2
115°	344.8	344.8	344.8	344.8	344.8	344.6	344.2	343.9	343.5	343.2	343.0
117.5°	391.3	391.4	391.5	391.7	391.8	391.7	391.5	391.3	391.0	390.8	390.1
120°	422.2	422.9	423.7	424.4	425.1	425.2	424.6	424.1	423.6	423.0	422.2
122.5°	454.5	454.8	455.0	455.3	455.6	455.7	455.4	455.1	454.9	454.6	454.1
125°	502.1	502.1	502.1	502.1	502.1	502.0	501.8	501.7	501.5	501.3	501.0
127.5°	545.3	545.8	546.3	546.8	547.4	547.5	547.2	546.9	546.7	546.4	546.1
130°	575.6	576.2	576.7	577.2	577.7	578.0	578.0	578.0	578.0	578.0	577.7
132.5°	606.7	607.0	607.4	607.8	608.2	608.3	608.2	608.0	607.8	607.8	607.4
135°	647.6	648.6	649.7	650.8	651.8	652.4	652.4	652.4	652.4	652.4	652.0
137.5°	692.2	692.7	693.2	693.6	694.2	694.5	694.8	695.1	695.4	695.7	695.2
140°	721.9	722.2	722.6	722.9	723.3	723.5	723.5	723.5	723.5	723.5	723.3
142.5°	749.1	749.5	749.8	750.2	750.5	750.6	750.5	750.4	750.2	750.0	750.0
145°	786.7	787.4	788.1	788.9	789.6	790.0	790.2	790.4	790.5	790.7	790.5
147.5°	824.1	824.9	825.8	826.6	827.4	827.8	827.7	827.5	827.4	827.3	827.1
150°	846.8	847.6	848.3	849.0	849.7	850.0	850.0	850.0	850.0	850.0	850.0
152.5°	868.4	868.8	869.2	869.7	870.1	870.3	870.4	870.6	870.8	870.8	871.3
155°	901.4	901.4	901.4	901.4	901.4	901.3	901.1	900.9	900.8	900.6	901.3
157.5°	929.2	928.9	928.6	928.3	928.0	927.8	927.7	927.7	927.7	927.6	928.2
160°	945.7	945.5	945.3	945.2	945.0	944.8	944.6	944.4	944.3	944.1	944.6
162.5°	960.8	960.4	960.0	959.5	959.0	958.7	958.5	958.4	958.2	958.0	958.9
165°	981.3	980.7	980.2	979.7	979.1	978.7	978.3	978.0	977.6	977.3	978.3
167.5°	997.0	996.2	995.5	994.7	994.0	993.6	993.6	993.7	993.7	993.8	994.8
170°	1005.8	1004.9	1004.0	1003.1	1002.3	1001.9	1002.1	1002.3	1002.4	1002.6	1003.7
172.5°	1012.1	1011.4	1010.7	1009.9	1009.2	1008.8	1008.8	1008.8	1008.9	1008.9	1010.1
175°	1020.8	1019.9	1019.1	1018.2	1017.3	1016.8	1016.6	1016.4	1016.2	1016.1	1017.3
177.5°	1023.7	1022.9	1022.2	1021.5	1020.8	1020.5	1020.5	1020.5	1020.5	1020.5	1021.4
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4



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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°	32.6	33.2	33.8	34.3	34.5	34.7	34.9	35.1
95°	61.2	61.7	62.2	62.5	62.5	62.5	62.5	62.5
97.5°	96.3	97.0	97.6	97.9	97.9	97.9	97.9	97.9
100°	121.7	122.0	122.4	122.6	122.6	122.6	122.6	122.6
102.5°	148.5	149.0	149.5	149.8	150.0	150.1	150.3	150.4
105°	189.3	189.8	190.3	190.8	191.3	191.9	192.4	192.9
107.5°	233.3	233.8	234.2	234.5	234.5	234.4	234.4	234.3
110°	262.6	262.2	261.9	262.0	262.5	263.0	263.6	264.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.1	294.1	294.1	294.1	294.1	294.2	294.4	294.5
115°	342.8	342.6	342.5	342.3	342.1	341.9	341.7	341.6
117.5°	389.6	389.0	388.4	387.9	387.5	387.2	386.8	386.5
120°	421.3	420.4	419.5	419.2	419.6	419.9	420.3	420.6
122.5°	453.4	452.9	452.3	451.6	451.0	450.4	449.7	449.1
125°	500.6	500.3	499.9	499.6	499.2	498.8	498.5	498.1
127.5°	545.7	545.3	544.9	544.6	544.4	544.1	543.8	543.5
130°	577.3	576.9	576.6	576.1	575.4	574.6	573.9	573.2
132.5°	607.0	606.7	606.3	606.0	605.7	605.5	605.1	604.9
135°	651.6	651.3	650.9	650.5	650.0	649.4	648.9	648.4
137.5°	694.7	694.3	693.9	693.6	693.8	693.9	694.0	694.1
140°	723.2	722.9	722.8	722.6	722.5	722.2	722.1	721.9
142.5°	750.0	750.0	750.0	749.9	749.9	749.8	749.8	749.7
145°	790.4	790.2	790.0	789.6	789.1	788.6	788.1	787.5
147.5°	827.0	826.8	826.6	826.5	826.3	826.2	826.0	825.9
150°	850.0	850.0	850.0	849.9	849.8	849.5	849.4	849.2
152.5°	871.7	872.1	872.6	872.6	872.1	871.6	871.2	870.7
155°	902.1	902.7	903.4	903.4	902.7	902.1	901.3	900.6
157.5°	928.7	929.2	929.8	929.7	929.2	928.5	928.0	927.3
160°	945.2	945.7	946.2	946.0	945.2	944.3	943.4	942.5
162.5°	959.9	960.8	961.8	961.9	961.0	960.1	959.3	958.3
165°	979.5	980.5	981.5	981.7	981.0	980.3	979.6	978.9
167.5°	995.9	997.0	998.0	998.0	996.9	995.8	994.7	993.6
170°	1004.7	1005.8	1006.9	1006.7	1005.5	1004.2	1003.1	1001.8
172.5°	1011.3	1012.5	1013.8	1013.7	1012.5	1011.2	1010.0	1008.8
175°	1018.5	1019.8	1021.0	1021.0	1019.8	1018.5	1017.3	1016.1
177.5°	1022.5	1023.4	1024.5	1024.4	1023.3	1022.1	1021.0	1019.9
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4

(END OF REPORT)