

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: P332067-840

Luminaire Tested: **S123DIP-S1165D805U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332067-840
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-S1165D805U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP 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: 7684.7 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

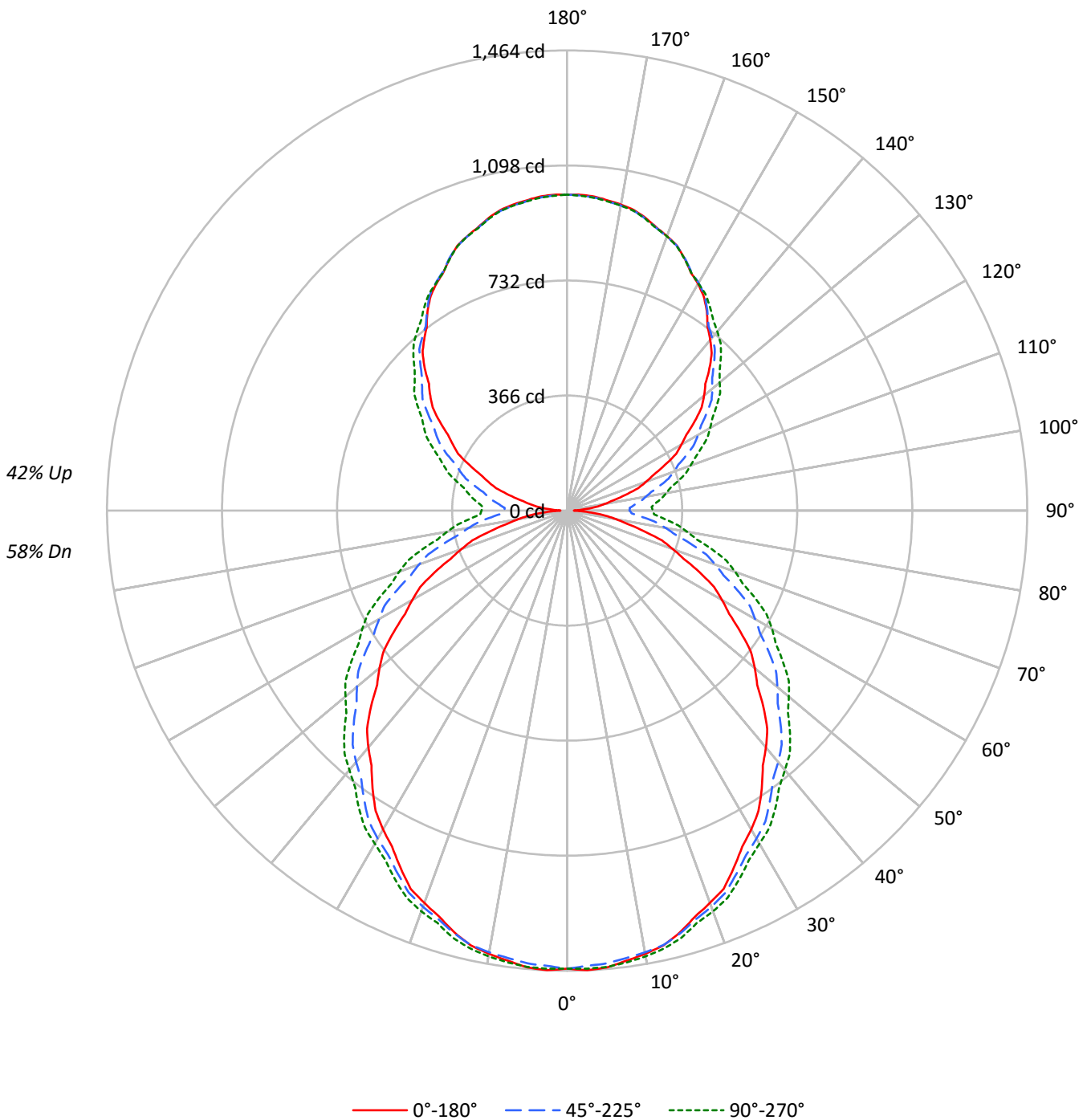
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58				
1	98	94	89	85	91	87	83	80	75	72	70	65	62	60	54	53	51	47				
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38				
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32				
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27				
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23				
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18				
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16				
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14				
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15685	15685	15685
5°	15735	15290	15299
10°	15593	14937	14863
15°	15393	14539	14387
20°	15105	14082	13865
25°	14751	13556	13315
30°	14388	13084	12757
35°	13980	12583	12311
40°	13592	12128	11834
45°	13161	11692	11453
50°	12735	11259	11034
55°	12267	10818	10657
60°	11808	10368	10270
65°	11339	9889	9809
70°	10633	9352	9336
75°	9740	8736	8855
80°	8709	8132	8306
85°	7760	7716	7988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.1	1.8
10°-20°	393.8	5.1
20°-30°	589.0	7.7
30°-40°	703.4	9.2
40°-50°	735.9	9.6
50°-60°	690.6	9.0
60°-70°	576.8	7.5
70°-80°	412.7	5.4
80°-90°	249.1	3.2
90°-100°	219.9	2.9
100°-110°	309.5	4.0
110°-120°	409.1	5.3
120°-130°	481.7	6.3
130°-140°	512.2	6.7
140°-150°	488.6	6.4
150°-160°	407.8	5.3
160°-170°	271.5	3.5
170°-180°	95.1	1.2
0°-30°	1120.9	14.6
0°-40°	1824.3	23.7
0°-60°	3250.8	42.3
0°-90°	4489.4	58.4
90°-120°	938.5	12.2
90°-150°	2421.0	31.5
90°-180°	3195.0	41.6
0°-180°	7684.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1457	1457	1457	1457	1457	
5°	1459	1455	1446	1458	1457	138
15°	1389	1393	1392	1407	1406	391
25°	1254	1269	1275	1294	1295	578
35°	1079	1105	1126	1148	1156	675
45°	883	921	960	990	1003	680
55°	673	726	783	824	838	602
65°	465	528	597	643	660	459
75°	252	327	406	457	478	270
85°	78	157	241	293	311	82
90°	21	107	198	253	273	17
95°	64	132	216	266	284	66
105°	190	232	305	348	366	203
115°	344	367	420	458	471	340
125°	496	501	543	572	581	443
135°	640	644	660	685	692	493
145°	775	775	777	788	792	483
155°	885	885	886	889	884	407
165°	964	962	962	966	961	272
175°	1003	1000	1000	1004	999	95
180°	1005	1005	1005	1005	1005	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1463.6	1462.8	1461.9	1461.1	1460.2	1458.6	1456.4	1454.1	1451.9	1449.7	1451.9
5°	1458.9	1458.1	1457.4	1456.7	1456.0	1454.6	1452.5	1450.4	1448.2	1446.1	1449.0
7.5°	1444.5	1444.7	1444.8	1445.0	1445.1	1444.2	1442.1	1440.1	1438.0	1435.9	1439.5
10°	1431.9	1432.6	1433.3	1434.0	1434.7	1434.1	1432.4	1430.6	1428.9	1427.0	1430.6
12.5°	1416.6	1417.5	1418.6	1419.6	1420.6	1420.5	1419.3	1418.1	1416.8	1415.6	1418.9
15°	1389.0	1390.1	1391.1	1392.2	1393.2	1393.6	1393.2	1392.9	1392.5	1392.2	1395.7
17.5°	1354.0	1356.1	1358.3	1360.4	1362.5	1363.5	1363.4	1363.2	1363.1	1362.9	1366.1
20°	1328.7	1330.8	1332.9	1335.0	1337.2	1338.6	1339.3	1340.0	1340.7	1341.4	1344.5
22.5°	1302.0	1304.1	1306.3	1308.4	1310.5	1312.0	1313.0	1314.0	1314.9	1316.0	1320.0
25°	1254.1	1257.6	1261.1	1264.7	1268.2	1270.4	1271.5	1272.5	1273.6	1274.7	1279.3
27.5°	1205.8	1209.8	1213.9	1217.9	1221.8	1225.1	1227.3	1229.5	1231.8	1234.1	1238.0
30°	1171.5	1176.1	1180.6	1185.3	1189.8	1193.6	1196.4	1199.2	1202.0	1204.9	1209.1
32.5°	1133.4	1138.5	1143.7	1148.8	1154.0	1158.4	1162.1	1165.8	1169.4	1173.1	1177.6
35°	1079.4	1085.1	1090.8	1096.4	1102.1	1107.1	1111.8	1116.3	1120.8	1125.5	1130.7
37.5°	1022.3	1028.6	1035.0	1041.4	1047.7	1053.7	1059.3	1065.0	1070.7	1076.3	1082.3
40°	984.2	990.6	996.9	1003.2	1009.6	1016.3	1023.4	1030.4	1037.4	1044.5	1050.6
42.5°	942.3	950.1	957.9	965.5	973.3	980.9	988.3	995.5	1002.9	1010.3	1016.8
45°	882.6	891.1	899.5	908.0	916.5	925.1	933.9	942.7	951.6	960.4	967.0
47.5°	820.0	829.6	839.2	848.9	858.5	868.3	878.4	888.5	898.6	908.7	916.1
50°	779.4	789.3	799.2	809.0	818.9	829.3	840.3	851.2	862.1	873.0	881.2
52.5°	736.3	746.7	757.1	767.6	778.0	789.3	801.3	813.3	825.5	837.5	846.0
55°	673.1	684.7	696.3	708.0	719.6	731.7	744.5	757.2	769.9	782.6	792.1
57.5°	611.5	623.6	635.7	647.8	660.0	673.1	686.9	700.8	714.7	728.6	738.2
60°	568.3	581.0	593.7	606.4	619.0	632.7	647.1	661.6	676.1	690.5	700.4
62.5°	527.7	540.7	553.6	566.6	579.6	593.7	609.0	624.3	639.6	655.0	664.8
65°	465.1	478.9	492.6	506.3	520.2	534.8	550.3	565.8	581.4	596.8	607.4
67.5°	401.6	416.3	430.8	445.5	460.0	475.2	491.0	506.9	522.6	538.5	550.0
70°	357.2	372.3	387.5	402.6	417.9	433.9	450.8	467.8	484.7	501.6	512.9
72.5°	316.5	331.7	346.9	362.0	377.2	393.5	411.0	428.5	446.1	463.5	475.1
75°	252.4	269.0	285.6	302.2	318.7	335.8	353.5	371.1	388.7	406.4	418.0
77.5°	196.5	213.3	229.9	246.7	263.4	280.6	298.4	316.2	334.0	351.7	364.1
80°	157.1	174.4	191.8	209.0	226.3	244.1	262.5	280.8	299.1	317.5	329.5
82.5°	122.9	140.5	158.0	175.6	193.1	211.3	229.8	248.5	267.1	285.7	297.7
85°	77.8	95.4	113.1	130.7	148.3	166.5	185.2	203.9	222.6	241.3	253.3
87.5°	42.4	60.3	78.3	96.1	114.0	132.2	150.7	169.2	187.5	206.0	218.1
90°	21.4	40.5	59.5	78.6	97.6	117.2	137.5	157.7	178.0	198.3	211.1
92.5°	38.5	55.2	72.0	88.9	105.6	123.5	142.5	161.5	180.6	199.5	211.8
95°	64.0	79.1	94.0	109.0	124.0	140.9	159.6	178.2	196.9	215.6	227.2
97.5°	98.3	111.6	124.9	138.3	151.6	167.0	184.6	202.1	219.6	237.1	248.4
100°	121.7	134.0	146.3	158.6	171.1	185.7	202.9	219.9	237.0	254.2	264.9
102.5°	148.9	159.7	170.4	181.2	192.0	205.9	223.1	240.1	257.2	274.4	284.8
105°	190.4	199.1	208.0	216.8	225.6	238.4	255.2	271.9	288.6	305.4	315.3
107.5°	237.1	244.5	251.9	259.3	266.7	277.9	293.0	308.0	323.0	338.0	348.0
110°	266.1	272.9	279.5	286.2	293.0	303.5	318.0	332.4	346.9	361.3	371.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.7	303.2	308.6	314.0	319.4	328.9	342.5	356.2	369.8	383.4	393.1
115°	343.5	348.3	353.0	357.8	362.5	371.1	383.4	395.8	408.1	420.5	429.1
117.5°	390.9	393.8	396.8	399.7	402.7	409.9	421.4	432.8	444.3	455.8	464.1
120°	419.3	422.1	425.0	427.8	430.5	437.4	448.1	458.9	469.6	480.4	488.4
122.5°	450.2	451.9	453.6	455.3	457.0	463.1	473.7	484.4	495.0	505.6	513.0
125°	495.8	496.3	497.0	497.5	498.0	503.2	513.0	522.9	532.8	542.7	549.4
127.5°	539.5	540.2	541.0	541.8	542.5	546.9	555.0	563.1	571.2	579.3	585.3
130°	568.6	569.6	570.6	571.7	572.7	576.5	583.0	589.6	596.1	602.6	608.6
132.5°	596.3	597.6	599.0	600.3	601.6	604.9	610.2	615.4	620.7	625.9	631.6
135°	640.4	641.1	641.8	642.5	643.2	645.3	649.0	652.8	656.5	660.1	665.8
137.5°	681.1	681.7	682.3	682.9	683.5	685.1	687.7	690.3	693.0	695.7	700.5
140°	708.2	709.1	710.0	710.8	711.8	712.8	714.1	715.3	716.5	717.7	722.9
142.5°	734.2	734.8	735.3	735.9	736.5	737.1	737.6	738.1	738.6	739.2	743.8
145°	774.6	774.6	774.6	774.6	774.6	774.8	775.4	775.9	776.4	776.9	779.6
147.5°	808.4	809.0	809.6	810.2	810.9	811.4	811.9	812.4	812.9	813.4	814.3
150°	832.9	833.3	833.6	834.0	834.4	834.8	835.1	835.5	835.8	836.2	836.2
152.5°	853.2	853.6	854.1	854.6	855.2	855.6	855.8	856.0	856.2	856.4	856.7
155°	885.0	885.0	885.0	885.0	885.0	885.1	885.3	885.6	885.8	885.9	886.6
157.5°	912.2	912.0	911.8	911.6	911.4	911.4	911.5	911.7	911.8	911.9	912.7
160°	929.3	929.0	928.6	928.3	927.9	927.8	927.8	927.8	927.8	927.8	928.6
162.5°	944.4	944.0	943.5	943.0	942.5	942.3	942.5	942.6	942.7	942.9	943.7
165°	964.0	963.5	963.0	962.5	961.9	961.7	961.7	961.7	961.7	961.7	962.7
167.5°	979.7	979.0	978.3	977.5	976.8	976.6	976.7	976.8	977.0	977.1	978.3
170°	988.6	987.8	987.1	986.4	985.7	985.3	985.3	985.3	985.3	985.3	986.6
172.5°	995.4	994.8	994.1	993.4	992.7	992.3	992.3	992.3	992.3	992.3	993.4
175°	1002.7	1002.0	1001.4	1000.7	1000.0	999.6	999.6	999.6	999.6	999.6	1000.7
177.5°	1005.7	1005.2	1004.6	1004.0	1003.5	1003.2	1003.2	1003.2	1003.2	1003.2	1004.0
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1454.1	1456.4	1458.6	1459.7	1459.4	1459.1	1458.8	1458.5
5°	1451.8	1454.6	1457.4	1458.6	1458.3	1457.9	1457.6	1457.2
7.5°	1443.0	1446.5	1450.1	1451.7	1451.2	1450.8	1450.4	1450.0
10°	1434.1	1437.6	1441.2	1442.6	1441.9	1441.2	1440.5	1439.8
12.5°	1422.2	1425.4	1428.7	1429.9	1429.2	1428.5	1427.7	1427.0
15°	1399.2	1402.7	1406.2	1407.9	1407.5	1407.1	1406.8	1406.4
17.5°	1369.3	1372.5	1375.6	1377.0	1376.5	1376.0	1375.5	1375.0
20°	1347.7	1350.9	1354.0	1355.8	1356.1	1356.6	1356.9	1357.3
22.5°	1324.0	1328.1	1332.0	1333.9	1333.7	1333.5	1333.3	1333.1
25°	1283.8	1288.5	1293.0	1295.4	1295.4	1295.4	1295.4	1295.4
27.5°	1241.9	1245.9	1249.8	1251.9	1252.2	1252.5	1252.8	1253.1
30°	1213.4	1217.6	1221.7	1223.9	1223.9	1223.9	1223.9	1223.9
32.5°	1182.1	1186.7	1191.1	1193.9	1194.7	1195.6	1196.4	1197.2
35°	1136.1	1141.3	1146.6	1150.0	1151.4	1152.9	1154.3	1155.6
37.5°	1088.2	1094.3	1100.2	1103.8	1105.0	1106.1	1107.2	1108.3
40°	1056.5	1062.5	1068.5	1072.2	1073.6	1075.0	1076.4	1077.8
42.5°	1023.4	1030.0	1036.5	1040.8	1042.7	1044.7	1046.6	1048.6
45°	973.8	980.5	987.2	992.0	994.8	997.6	1000.5	1003.2
47.5°	923.7	931.3	938.9	943.7	945.8	948.1	950.3	952.4
50°	889.3	897.5	905.5	910.8	913.3	915.7	918.3	920.7
52.5°	854.3	862.7	871.1	876.9	879.9	882.9	886.0	889.0
55°	801.6	811.1	820.7	826.9	829.7	832.5	835.4	838.2
57.5°	747.8	757.4	767.0	773.5	776.8	780.1	783.5	786.7
60°	710.2	720.1	730.0	736.9	740.8	744.7	748.5	752.5
62.5°	674.7	684.6	694.5	701.3	704.8	708.4	712.1	715.6
65°	618.0	628.6	639.2	646.2	649.7	653.3	656.8	660.4
67.5°	561.6	573.2	584.7	592.0	595.0	597.9	600.9	603.9
70°	524.2	535.5	546.7	554.2	557.7	561.3	564.7	568.3
72.5°	486.7	498.3	509.8	517.4	520.9	524.4	528.0	531.5
75°	429.7	441.3	452.9	460.9	465.1	469.4	473.6	477.8
77.5°	376.3	388.6	400.9	408.6	411.9	415.2	418.4	421.6
80°	341.4	353.5	365.5	373.2	376.8	380.3	383.8	387.3
82.5°	309.7	321.7	333.7	341.4	345.0	348.5	352.0	355.6
85°	265.3	277.3	289.2	297.0	300.5	304.1	307.6	311.1
87.5°	230.2	242.5	254.6	262.5	266.0	269.6	273.3	276.8
90°	223.7	236.4	249.1	257.4	261.3	265.2	269.0	272.9
92.5°	224.1	236.3	248.6	256.3	259.3	262.4	265.4	268.4
95°	238.8	250.4	262.2	269.7	273.3	276.8	280.3	283.9
97.5°	259.8	271.1	282.5	289.8	293.3	296.7	300.2	303.7
100°	275.7	286.4	297.2	304.5	308.4	312.3	316.2	320.0
102.5°	295.3	305.8	316.2	323.2	326.7	330.1	333.6	337.0
105°	325.2	335.1	344.9	351.6	355.2	358.6	362.1	365.7
107.5°	358.1	368.1	378.1	384.6	387.4	390.3	393.2	396.1
110°	381.1	391.0	400.8	407.0	409.5	411.9	414.4	416.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	402.9	412.6	422.3	428.7	431.8	434.8	437.9	440.9
115°	437.8	446.4	455.0	460.7	463.3	466.0	468.7	471.3
117.5°	472.5	480.9	489.3	494.5	496.9	499.1	501.3	503.6
120°	496.2	504.2	512.1	517.2	519.3	521.4	523.5	525.6
122.5°	520.4	527.8	535.1	539.8	541.8	543.8	545.7	547.8
125°	556.1	562.8	569.6	573.7	575.5	577.2	579.1	580.8
127.5°	591.3	597.2	603.3	607.1	608.6	610.3	611.9	613.5
130°	614.6	620.7	626.6	630.1	631.0	631.9	632.7	633.6
132.5°	637.1	642.7	648.2	651.8	653.2	654.7	656.1	657.6
135°	671.5	677.1	682.8	686.3	687.7	689.1	690.5	692.0
137.5°	705.3	710.1	715.0	718.0	719.0	720.1	721.2	722.4
140°	728.0	733.1	738.2	741.0	741.5	742.1	742.7	743.2
142.5°	748.3	752.9	757.4	760.1	760.9	761.7	762.5	763.4
145°	782.2	784.9	787.5	789.2	789.9	790.6	791.3	792.0
147.5°	815.1	816.0	816.8	817.3	817.5	817.8	818.0	818.2
150°	836.2	836.2	836.2	836.0	835.7	835.3	835.0	834.6
152.5°	856.9	857.2	857.5	857.3	856.5	855.7	855.0	854.1
155°	887.3	888.0	888.7	888.4	887.2	886.0	884.7	883.5
157.5°	913.4	914.1	914.8	914.7	913.8	912.8	911.8	910.8
160°	929.5	930.4	931.2	931.3	930.6	929.9	929.2	928.5
162.5°	944.6	945.5	946.4	946.2	945.1	944.0	942.9	941.8
165°	963.8	964.8	965.9	965.8	964.6	963.3	962.1	960.9
167.5°	979.4	980.4	981.5	981.5	980.4	979.4	978.3	977.1
170°	987.8	989.1	990.3	990.3	989.1	987.8	986.6	985.3
172.5°	994.5	995.6	996.6	996.6	995.3	994.1	992.9	991.7
175°	1001.7	1002.7	1003.8	1003.7	1002.5	1001.3	1000.0	998.8
177.5°	1004.9	1005.7	1006.5	1006.5	1005.5	1004.5	1003.6	1002.6
180°	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1	1005.1

(END OF REPORT)