

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: P332085-840

Luminaire Tested: **S123DIP-S1165D1195U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332085-840
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-S1165D1195U840-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9039.8 lumens
Efficiency: N/A
Efficacy: 126.1 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

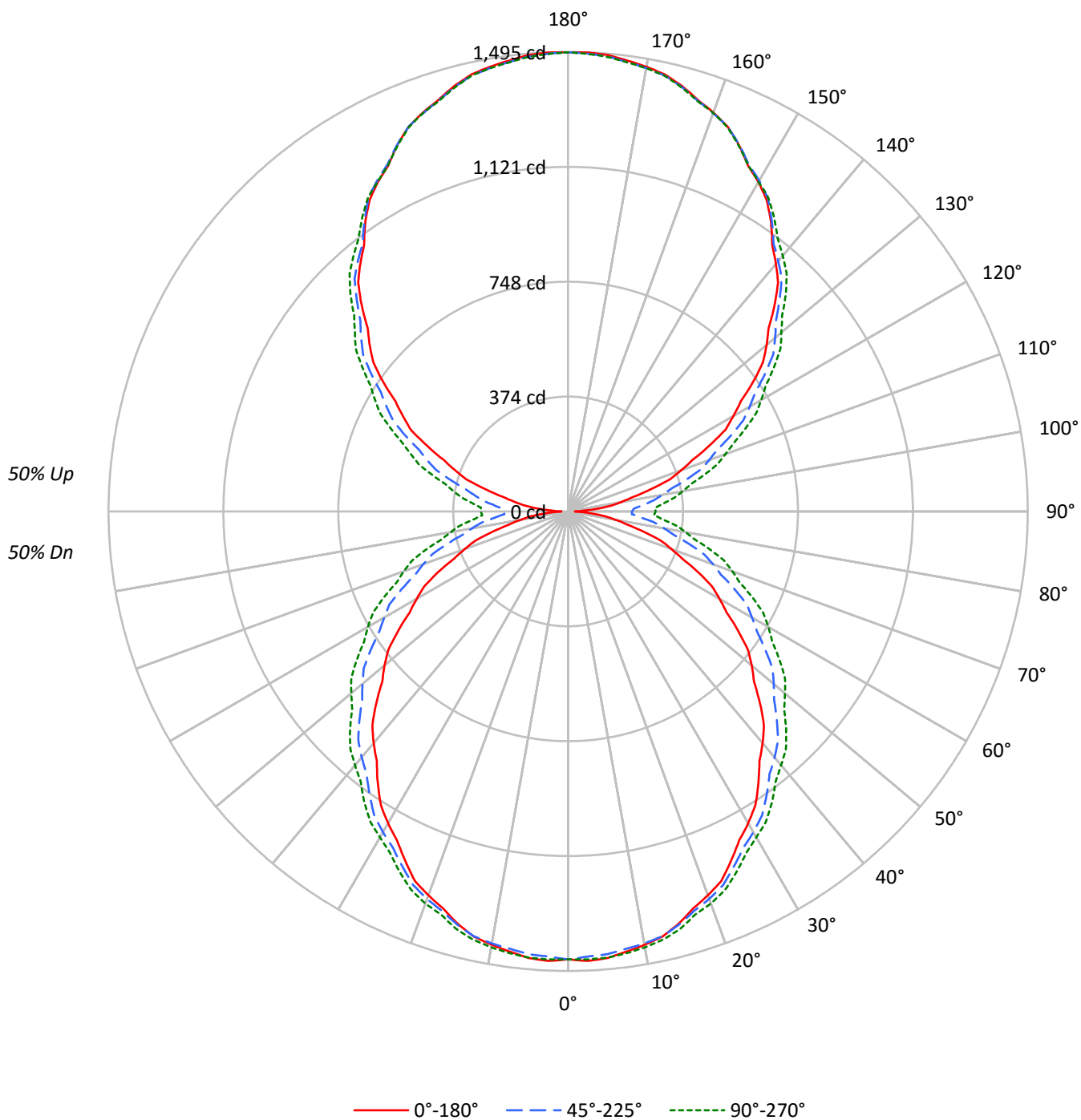
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	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	1.5
10°-20°	393.8	4.4
20°-30°	589.0	6.5
30°-40°	703.4	7.8
40°-50°	735.9	8.1
50°-60°	690.6	7.6
60°-70°	576.8	6.4
70°-80°	412.7	4.6
80°-90°	250.5	2.8
90°-100°	251.7	2.8
100°-110°	404.7	4.5
110°-120°	571.1	6.3
120°-130°	694.9	7.7
130°-140°	751.8	8.3
140°-150°	724.0	8.0
150°-160°	606.1	6.7
160°-170°	403.4	4.5
170°-180°	141.3	1.6
0°-30°	1120.9	12.4
0°-40°	1824.3	20.2
0°-60°	3250.8	36.0
0°-90°	4490.8	49.7
90°-120°	1227.6	13.6
90°-150°	3398.3	37.6
90°-180°	4549.0	50.3
0°-180°	9039.8	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°	22	112	208	264	284	18
95°	87	158	244	296	314	91
105°	277	319	396	439	457	296
115°	507	531	584	622	635	501
125°	735	740	782	809	817	655
135°	950	956	972	995	1001	732
145°	1150	1151	1155	1166	1168	718
155°	1315	1315	1316	1320	1313	605
165°	1433	1429	1429	1435	1428	404
175°	1490	1486	1485	1492	1484	141
180°	1494	1494	1494	1494	1494	

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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	60.6	78.7	96.7	114.8	133.2	151.9	170.6	189.2	207.8	220.0
90°	21.8	41.7	61.6	81.5	101.4	122.0	143.4	164.8	186.1	207.5	220.6
92.5°	47.8	65.1	82.5	99.9	117.2	135.7	155.3	175.0	194.6	214.3	226.8
95°	86.6	102.3	117.9	133.4	149.1	166.5	185.9	205.2	224.6	244.0	256.0
97.5°	138.6	152.3	166.0	179.9	193.6	209.5	227.5	245.6	263.6	281.6	293.3
100°	173.9	186.7	199.5	212.4	225.3	240.4	258.0	275.5	293.1	310.6	321.6
102.5°	214.8	225.9	237.0	248.1	259.2	273.6	291.2	308.9	326.6	344.3	355.0
105°	276.7	285.7	294.7	303.7	312.7	325.9	343.5	360.9	378.5	396.0	405.9
107.5°	347.1	354.6	362.1	369.6	377.1	388.5	403.8	419.2	434.5	449.9	460.1
110°	390.8	397.7	404.7	411.5	418.4	429.1	443.7	458.4	473.0	487.7	497.9

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	437.8	443.3	448.9	454.4	459.9	469.5	483.2	496.9	510.5	524.1	534.2
115°	506.6	511.6	516.6	521.7	526.6	535.2	547.4	559.7	571.8	584.0	592.7
117.5°	577.1	580.3	583.4	586.5	589.7	596.8	608.1	619.4	630.7	641.9	650.2
120°	620.1	623.3	626.6	630.0	633.3	640.2	650.5	660.9	671.2	681.5	689.3
122.5°	666.0	668.0	670.1	672.2	674.3	680.4	690.8	701.3	711.7	722.1	729.2
125°	734.6	735.4	736.2	736.9	737.7	743.0	752.7	762.3	772.0	781.8	788.2
127.5°	799.3	800.6	801.9	803.3	804.7	809.2	817.1	825.0	832.9	840.8	846.3
130°	842.5	844.2	846.0	847.7	849.5	853.4	859.7	866.1	872.3	878.6	884.2
132.5°	884.4	886.5	888.5	890.5	892.5	896.1	901.1	906.2	911.3	916.4	921.5
135°	950.1	951.3	952.5	953.7	954.9	957.4	961.0	964.5	968.2	971.8	977.1
137.5°	1010.8	1011.8	1012.8	1013.8	1014.8	1016.8	1019.7	1022.5	1025.4	1028.2	1032.7
140°	1051.8	1053.0	1054.3	1055.6	1056.9	1058.2	1059.6	1060.9	1062.2	1063.5	1068.5
142.5°	1090.3	1091.3	1092.3	1093.3	1094.3	1095.2	1095.8	1096.5	1097.2	1097.9	1102.4
145°	1150.3	1150.4	1150.6	1150.8	1150.9	1151.4	1152.3	1153.0	1153.8	1154.6	1157.1
147.5°	1201.2	1202.2	1203.2	1204.1	1205.1	1205.9	1206.6	1207.3	1208.0	1208.8	1209.6
150°	1237.9	1238.4	1238.9	1239.4	1240.0	1240.5	1241.0	1241.5	1242.0	1242.5	1242.5
152.5°	1267.9	1268.7	1269.4	1270.1	1270.8	1271.3	1271.6	1272.0	1272.3	1272.6	1273.0
155°	1315.3	1315.3	1315.3	1315.3	1315.3	1315.5	1315.8	1316.0	1316.3	1316.5	1317.6
157.5°	1355.6	1355.3	1355.0	1354.7	1354.4	1354.3	1354.6	1354.8	1355.0	1355.2	1356.3
160°	1381.0	1380.5	1380.0	1379.5	1379.0	1378.7	1378.7	1378.7	1378.7	1378.7	1380.0
162.5°	1403.5	1402.8	1402.1	1401.4	1400.7	1400.4	1400.6	1400.8	1401.0	1401.2	1402.5
165°	1432.7	1431.9	1431.1	1430.3	1429.6	1429.2	1429.2	1429.2	1429.2	1429.2	1430.7
167.5°	1455.9	1454.8	1453.8	1452.8	1451.7	1451.3	1451.5	1451.7	1451.9	1452.1	1453.7
170°	1469.1	1467.9	1466.9	1465.9	1464.8	1464.3	1464.3	1464.3	1464.3	1464.3	1466.1
172.5°	1479.4	1478.3	1477.2	1476.2	1475.2	1474.7	1474.7	1474.7	1474.7	1474.7	1476.3
175°	1490.2	1489.1	1488.0	1487.0	1486.0	1485.4	1485.4	1485.4	1485.4	1485.4	1487.0
177.5°	1494.6	1493.8	1493.0	1492.1	1491.3	1490.9	1490.9	1490.9	1490.9	1490.9	1492.1
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7

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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°	232.3	244.5	256.7	264.6	268.2	271.9	275.5	279.1
90°	233.6	246.6	259.6	268.2	272.3	276.3	280.3	284.4
92.5°	239.3	252.0	264.5	272.2	275.1	278.0	281.0	284.0
95°	267.9	279.9	291.9	299.6	303.2	306.7	310.2	313.8
97.5°	305.0	316.7	328.4	336.0	339.4	342.8	346.3	349.7
100°	332.6	343.7	354.7	362.1	366.2	370.2	374.4	378.4
102.5°	365.8	376.5	387.2	394.3	397.7	401.1	404.6	408.0
105°	415.8	425.6	435.5	442.2	446.0	449.7	453.3	457.1
107.5°	470.4	480.7	491.0	497.6	500.4	503.1	505.9	508.7
110°	508.1	518.3	528.5	534.7	537.0	539.4	541.7	543.9

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	544.4	554.5	564.7	571.3	574.2	577.2	580.3	583.3
115°	601.5	610.2	618.8	624.5	627.1	629.7	632.2	634.8
117.5°	658.5	666.9	675.2	680.4	682.5	684.5	686.5	688.5
120°	697.2	705.1	712.9	717.8	719.7	721.8	723.7	725.6
122.5°	736.4	743.6	750.7	755.2	756.9	758.6	760.3	762.1
125°	794.6	800.9	807.3	811.1	812.5	814.0	815.5	816.9
127.5°	851.8	857.4	862.9	866.3	867.5	868.7	869.8	871.0
130°	889.9	895.5	901.2	904.1	904.4	904.7	905.0	905.3
132.5°	926.7	931.8	937.0	940.1	941.1	942.1	943.0	944.0
135°	982.4	987.7	993.0	996.3	997.5	998.8	1000.1	1001.3
137.5°	1037.2	1041.7	1046.1	1048.7	1049.6	1050.4	1051.1	1051.9
140°	1073.6	1078.6	1083.7	1086.1	1086.1	1086.0	1085.9	1085.9
142.5°	1106.8	1111.3	1115.7	1118.1	1118.5	1118.8	1119.2	1119.5
145°	1159.7	1162.3	1164.8	1166.3	1166.7	1167.0	1167.4	1167.7
147.5°	1210.4	1211.3	1212.1	1212.4	1212.1	1211.8	1211.5	1211.2
150°	1242.5	1242.5	1242.5	1242.1	1241.3	1240.4	1239.6	1238.7
152.5°	1273.4	1273.8	1274.2	1273.8	1272.6	1271.4	1270.2	1269.0
155°	1318.6	1319.6	1320.7	1320.3	1318.5	1316.7	1314.8	1312.9
157.5°	1357.4	1358.5	1359.6	1359.4	1358.0	1356.5	1355.0	1353.5
160°	1381.3	1382.6	1383.9	1384.0	1383.0	1381.9	1380.9	1379.9
162.5°	1403.8	1405.1	1406.4	1406.2	1404.5	1402.9	1401.2	1399.6
165°	1432.3	1433.8	1435.4	1435.2	1433.4	1431.6	1429.8	1427.9
167.5°	1455.3	1456.9	1458.5	1458.5	1456.9	1455.3	1453.7	1452.1
170°	1467.9	1469.9	1471.7	1471.7	1469.9	1467.9	1466.1	1464.3
172.5°	1477.9	1479.6	1481.2	1481.1	1479.1	1477.3	1475.5	1473.7
175°	1488.5	1490.2	1491.7	1491.6	1489.8	1487.9	1486.1	1484.3
177.5°	1493.4	1494.6	1495.8	1495.7	1494.3	1492.8	1491.4	1490.0
180°	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7	1493.7

(END OF REPORT)