

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: P333062

Luminaire Tested: **S124RDIW-S795D770U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333062  
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: S124RDIW-S795D770U835-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5874.9 lumens  
Efficiency: N/A  
Efficacy: 130.6 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

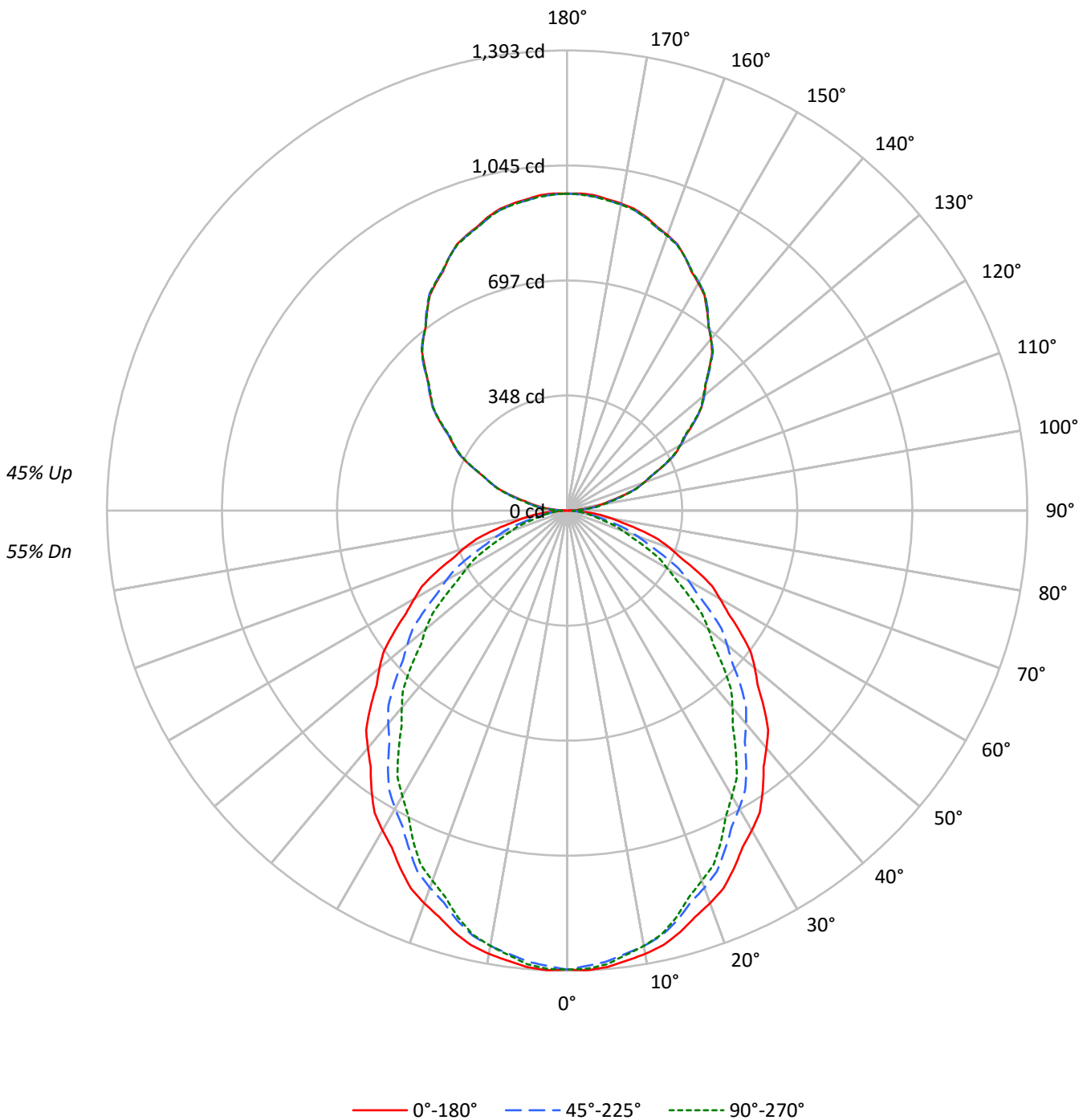
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	86	86	86	73	73	73	60	60	60	55
1	99	95	91	88	92	88	85	82	76	73	71	64	63	61	54	53	52	47
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	40
3	83	73	66	60	77	68	62	57	59	54	50	51	47	44	43	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	54	47	42	47	42	37	41	36	33	35	31	29	26
6	64	52	44	38	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	39	34	55	44	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	35	30	51	40	33	29	35	30	26	31	26	23	26	23	20	18
9	52	39	32	27	48	37	30	26	33	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11215	11215	11215
5°	11240	11102	11171
10°	11170	10969	10969
15°	11041	10739	10659
20°	10865	10436	10244
25°	10640	10081	9825
30°	10421	9707	9300
35°	10178	9319	8774
40°	9887	8878	8205
45°	9618	8440	7626
50°	9311	7935	7013
55°	8983	7410	6348
60°	8622	6835	5667
65°	8290	6117	4999
70°	7808	5323	4244
75°	7199	4414	3450
80°	6281	3361	3166
85°	5317	3057	2853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.5	2.2
10°-20°	363.9	6.2
20°-30°	525.5	8.9
30°-40°	595.6	10.1
40°-50°	575.2	9.8
50°-60°	478.3	8.1
60°-70°	330.3	5.6
70°-80°	167.4	2.8
80°-90°	45.8	0.8
90°-100°	63.3	1.1
100°-110°	187.5	3.2
110°-120°	318.2	5.4
120°-130°	419.6	7.1
130°-140°	471.3	8.0
140°-150°	463.1	7.9
150°-160°	389.5	6.6
160°-170°	259.1	4.4
170°-180°	90.7	1.5
0°-30°	1019.8	17.4
0°-40°	1615.5	27.5
0°-60°	2668.9	45.4
0°-90°	3212.4	54.7
90°-120°	569.0	9.7
90°-150°	1923.1	32.7
90°-180°	2662.0	45.3
0°-180°	5874.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1387	1382	1370	1380	1378	132
15°	1321	1311	1285	1282	1275	372
25°	1194	1174	1132	1114	1103	550
35°	1033	998	946	910	890	645
45°	842	802	739	689	668	649
55°	638	594	526	473	451	571
65°	434	387	320	276	262	428
75°	231	191	142	118	111	244
85°	57	37	33	31	31	65
90°	2	10	16	21	22	6
95°	44	51	56	58	59	50
105°	173	174	177	179	181	183
115°	324	324	322	321	321	319
125°	471	471	470	469	468	420
135°	608	612	612	611	609	470
145°	738	741	742	741	739	462
155°	846	846	845	848	845	389
165°	921	919	917	921	919	260
175°	958	955	954	958	954	91
180°	960	960	960	960	960	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1392.6	1391.8	1391.0	1390.3	1389.5	1388.1	1386.0	1384.0	1381.9	1379.8	1381.9
5°	1387.0	1386.1	1385.1	1384.2	1383.2	1381.4	1378.5	1375.7	1372.8	1370.0	1372.4
7.5°	1374.5	1373.5	1372.5	1371.5	1370.5	1368.2	1364.5	1360.8	1357.1	1353.4	1354.9
10°	1362.6	1361.4	1360.2	1359.0	1357.8	1355.1	1350.9	1346.6	1342.4	1338.1	1339.0
12.5°	1347.2	1345.9	1344.5	1343.1	1341.8	1338.6	1333.6	1328.5	1323.5	1318.5	1319.1
15°	1321.1	1319.0	1316.8	1314.7	1312.6	1308.6	1302.6	1296.7	1290.8	1284.9	1284.4
17.5°	1289.4	1286.3	1283.2	1280.2	1277.1	1272.0	1264.9	1257.8	1250.7	1243.6	1242.3
20°	1264.7	1261.6	1258.6	1255.5	1252.4	1246.9	1238.8	1230.8	1222.7	1214.7	1212.8
22.5°	1237.5	1234.0	1230.6	1227.1	1223.7	1217.6	1209.0	1200.4	1191.8	1183.2	1180.4
25°	1194.5	1190.2	1186.0	1181.7	1177.5	1170.5	1160.8	1151.1	1141.4	1131.7	1127.7
27.5°	1149.4	1144.1	1138.7	1133.4	1128.0	1120.2	1109.8	1099.5	1089.1	1078.8	1073.8
30°	1117.9	1112.0	1106.1	1100.2	1094.3	1085.8	1074.7	1063.6	1052.4	1041.3	1035.4
32.5°	1084.7	1078.1	1071.4	1064.7	1058.1	1049.0	1037.5	1026.0	1014.5	1003.0	996.2
35°	1032.8	1025.3	1017.7	1010.1	1002.6	992.9	981.1	969.2	957.4	945.6	937.6
37.5°	977.3	969.5	961.7	953.9	946.1	935.7	922.6	909.5	896.4	883.3	874.3
40°	938.2	930.4	922.6	914.8	907.0	896.3	882.8	869.4	855.9	842.4	832.5
42.5°	900.7	892.5	884.4	876.2	868.0	856.9	842.9	828.8	814.8	800.7	790.6
45°	842.4	833.7	824.9	816.2	807.4	796.0	781.8	767.6	753.4	739.3	727.7
47.5°	782.2	773.2	764.2	755.1	746.1	734.2	719.5	704.7	690.0	675.2	663.2
50°	741.4	732.2	722.9	713.7	704.5	692.3	677.2	662.1	646.9	631.8	620.0
52.5°	699.7	690.7	681.6	672.6	663.6	651.3	635.8	620.3	604.8	589.3	577.3
55°	638.2	628.7	619.3	609.8	600.4	588.0	572.6	557.2	541.9	526.5	514.2
57.5°	577.4	567.5	557.7	547.9	538.0	525.5	510.4	495.3	480.2	465.0	452.6
60°	534.0	524.5	515.1	505.6	496.1	483.9	468.7	453.6	438.5	423.3	411.0
62.5°	494.8	485.0	475.2	465.3	455.5	442.8	427.3	411.8	396.3	380.8	369.4
65°	434.0	423.8	413.6	403.5	393.3	380.7	365.5	350.4	335.3	320.2	310.0
67.5°	370.8	361.1	351.3	341.6	331.8	320.0	305.9	291.9	277.8	263.8	255.0
70°	330.8	320.9	310.9	301.0	291.1	279.4	265.9	252.4	239.0	225.5	217.7
72.5°	288.3	279.3	270.3	261.3	252.3	241.5	228.8	216.0	203.3	190.6	183.9
75°	230.8	222.1	213.3	204.6	195.8	185.9	174.8	163.7	152.6	141.5	136.0
77.5°	172.5	165.1	157.7	150.3	142.8	134.6	125.7	116.7	107.7	98.7	95.5
80°	135.1	128.2	121.4	114.5	107.7	100.7	93.6	86.5	79.4	72.3	71.6
82.5°	102.8	96.5	90.2	83.9	77.6	72.4	68.4	64.3	60.2	56.2	55.6
85°	57.4	52.7	48.0	43.3	38.5	35.8	35.1	34.4	33.7	33.0	32.5
87.5°	20.0	18.9	17.7	16.6	15.4	14.9	15.0	15.0	15.1	15.2	15.2
90°	2.2	4.0	5.9	7.7	9.5	11.1	12.4	13.7	15.0	16.3	17.3
92.5°	15.9	18.0	20.0	22.1	24.2	25.7	26.6	27.5	28.5	29.4	30.0
95°	44.5	46.0	47.5	49.0	50.5	51.8	52.9	54.1	55.3	56.4	56.9
97.5°	77.8	79.0	80.2	81.3	82.5	83.8	85.2	86.5	87.9	89.2	89.8
100°	103.9	104.6	105.2	105.9	106.5	107.6	109.1	110.6	112.1	113.6	113.9
102.5°	131.2	131.5	131.7	132.0	132.3	133.1	134.4	135.8	137.1	138.5	139.0
105°	172.9	173.1	173.3	173.4	173.6	174.0	174.7	175.3	176.0	176.6	177.1
107.5°	216.7	216.9	217.1	217.3	217.5	217.7	217.8	217.9	218.0	218.1	218.5
110°	246.4	246.7	247.1	247.4	247.7	247.8	247.6	247.5	247.3	247.1	246.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	277.3	277.3	277.4	277.5	277.5	277.4	277.1	276.8	276.5	276.2	276.2
115°	323.6	323.6	323.6	323.6	323.6	323.4	323.1	322.8	322.4	322.1	321.9
117.5°	367.2	367.4	367.5	367.6	367.8	367.7	367.5	367.3	367.0	366.8	366.2
120°	396.3	397.0	397.6	398.3	399.0	399.0	398.6	398.1	397.6	397.1	396.2
122.5°	426.6	426.9	427.1	427.4	427.7	427.7	427.5	427.2	427.0	426.8	426.2
125°	471.3	471.3	471.3	471.3	471.3	471.2	471.0	470.9	470.7	470.5	470.2
127.5°	511.8	512.3	512.8	513.3	513.8	513.9	513.6	513.4	513.1	512.9	512.5
130°	540.3	540.8	541.3	541.8	542.3	542.5	542.5	542.5	542.5	542.5	542.2
132.5°	569.4	569.8	570.1	570.5	570.9	571.0	570.8	570.7	570.6	570.4	570.1
135°	607.9	608.8	609.8	610.8	611.8	612.3	612.3	612.3	612.3	612.3	612.0
137.5°	649.7	650.2	650.6	651.1	651.6	651.9	652.2	652.4	652.7	653.0	652.5
140°	677.6	677.9	678.3	678.6	678.9	679.1	679.1	679.1	679.1	679.1	678.9
142.5°	703.1	703.5	703.8	704.1	704.5	704.6	704.4	704.3	704.2	704.0	704.0
145°	738.5	739.1	739.8	740.5	741.1	741.5	741.7	741.9	742.0	742.2	742.0
147.5°	773.5	774.3	775.1	775.9	776.7	777.0	776.9	776.7	776.6	776.5	776.3
150°	794.9	795.5	796.2	796.9	797.5	797.9	797.9	797.9	797.9	797.9	797.9
152.5°	815.1	815.5	815.9	816.3	816.7	816.9	817.0	817.2	817.3	817.4	817.8
155°	846.1	846.1	846.1	846.1	846.1	846.0	845.8	845.7	845.5	845.4	846.0
157.5°	872.2	871.9	871.6	871.3	871.0	870.9	870.8	870.8	870.8	870.7	871.2
160°	887.7	887.5	887.3	887.2	887.0	886.8	886.7	886.5	886.3	886.2	886.7
162.5°	901.9	901.5	901.0	900.6	900.2	899.9	899.7	899.6	899.4	899.2	900.1
165°	921.1	920.6	920.1	919.6	919.1	918.7	918.3	918.0	917.7	917.3	918.3
167.5°	935.7	935.1	934.4	933.7	933.0	932.6	932.7	932.7	932.7	932.8	933.8
170°	944.1	943.2	942.4	941.6	940.8	940.4	940.6	940.8	940.9	941.1	942.1
172.5°	950.0	949.3	948.6	947.9	947.2	946.9	946.9	947.0	947.0	947.0	948.2
175°	958.2	957.3	956.5	955.7	954.9	954.4	954.2	954.0	953.9	953.7	954.9
177.5°	960.8	960.2	959.5	958.9	958.2	957.9	957.9	957.9	957.9	957.9	958.8
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2	1389.2
2.5°	1384.0	1386.0	1388.1	1389.1	1388.9	1388.7	1388.5	1388.3
5°	1374.7	1377.1	1379.5	1380.4	1379.9	1379.5	1379.0	1378.5
7.5°	1356.4	1358.0	1359.5	1359.8	1359.1	1358.3	1357.6	1356.8
10°	1340.0	1340.9	1341.9	1341.9	1340.9	1340.0	1339.0	1338.1
12.5°	1319.7	1320.2	1320.8	1320.4	1319.1	1317.8	1316.4	1315.1
15°	1284.0	1283.5	1283.0	1282.0	1280.3	1278.6	1277.0	1275.3
17.5°	1241.0	1239.7	1238.3	1236.4	1233.9	1231.4	1228.9	1226.4
20°	1210.9	1209.0	1207.1	1204.7	1201.6	1198.5	1195.4	1192.4
22.5°	1177.6	1174.7	1171.9	1169.2	1166.7	1164.2	1161.7	1159.2
25°	1123.7	1119.7	1115.7	1112.5	1110.1	1107.8	1105.4	1103.0
27.5°	1068.8	1063.9	1058.9	1054.7	1051.3	1047.9	1044.5	1041.1
30°	1029.5	1023.6	1017.7	1012.8	1009.1	1005.3	1001.5	997.7
32.5°	989.3	982.5	975.6	970.4	966.8	963.2	959.6	956.0
35°	929.5	921.5	913.5	907.3	903.1	898.8	894.5	890.3
37.5°	865.3	856.3	847.3	840.7	836.5	832.2	828.0	823.7
40°	822.6	812.6	802.7	795.6	791.4	787.1	782.9	778.6
42.5°	780.5	770.4	760.3	753.0	748.5	744.1	739.7	735.2
45°	716.1	704.5	692.9	685.0	680.7	676.5	672.2	668.0
47.5°	651.2	639.2	627.2	618.8	614.2	609.5	604.8	600.1
50°	608.2	596.4	584.5	576.4	571.9	567.4	562.9	558.4
52.5°	565.3	553.3	541.2	532.9	528.2	523.5	518.9	514.2
55°	501.9	489.6	477.4	469.0	464.5	460.0	455.5	451.0
57.5°	440.1	427.6	415.1	407.2	403.8	400.4	397.0	393.6
60°	398.8	386.5	374.2	366.1	362.4	358.6	354.8	351.0
62.5°	358.1	346.8	335.4	328.2	325.2	322.2	319.1	316.1
65°	299.8	289.7	279.5	273.0	270.2	267.3	264.5	261.7
67.5°	246.3	237.6	228.8	222.9	219.8	216.6	213.5	210.4
70°	209.9	202.1	194.3	189.2	186.9	184.5	182.1	179.8
72.5°	177.3	170.6	163.9	159.5	157.4	155.2	153.0	150.8
75°	130.6	125.2	119.7	116.3	114.9	113.5	112.0	110.6
77.5°	92.4	89.2	86.0	84.2	83.8	83.4	83.0	82.5
80°	70.9	70.2	69.5	69.0	68.8	68.5	68.3	68.1
82.5°	55.1	54.6	54.1	53.7	53.5	53.2	53.0	52.8
85°	32.0	31.6	31.1	30.8	30.8	30.8	30.8	30.8
87.5°	15.2	15.2	15.2	15.3	15.6	15.9	16.1	16.4
90°	18.3	19.3	20.3	20.9	21.3	21.6	21.9	22.3
92.5°	30.6	31.2	31.8	32.2	32.4	32.6	32.8	33.0
95°	57.4	57.9	58.4	58.6	58.6	58.6	58.6	58.6
97.5°	90.4	91.0	91.6	91.9	91.9	91.9	91.9	91.9
100°	114.2	114.5	114.9	115.0	115.0	115.0	115.0	115.0
102.5°	139.4	139.9	140.3	140.6	140.8	140.9	141.0	141.2
105°	177.6	178.1	178.6	179.1	179.6	180.1	180.6	181.1
107.5°	219.0	219.4	219.9	220.1	220.1	220.1	220.0	220.0
110°	246.5	246.2	245.8	245.9	246.4	246.9	247.4	247.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	276.1	276.0	276.0	276.0	276.1	276.2	276.3	276.4
115°	321.8	321.6	321.4	321.3	321.1	321.0	320.8	320.6
117.5°	365.7	365.1	364.5	364.1	363.8	363.4	363.1	362.8
120°	395.4	394.6	393.8	393.5	393.9	394.2	394.5	394.8
122.5°	425.6	425.1	424.5	423.9	423.3	422.7	422.2	421.6
125°	469.9	469.6	469.2	468.9	468.6	468.2	467.9	467.6
127.5°	512.2	511.9	511.5	511.2	511.0	510.7	510.4	510.2
130°	541.9	541.5	541.2	540.7	540.1	539.4	538.7	538.1
132.5°	569.8	569.5	569.1	568.8	568.6	568.3	568.0	567.8
135°	611.6	611.3	611.0	610.6	610.1	609.6	609.1	608.6
137.5°	652.1	651.7	651.3	651.1	651.2	651.3	651.4	651.5
140°	678.8	678.6	678.4	678.3	678.1	677.9	677.8	677.6
142.5°	704.0	703.9	703.9	703.9	703.8	703.8	703.8	703.7
145°	741.9	741.7	741.5	741.2	740.7	740.2	739.7	739.2
147.5°	776.2	776.1	775.9	775.8	775.6	775.5	775.3	775.1
150°	797.9	797.9	797.9	797.8	797.6	797.4	797.3	797.1
152.5°	818.2	818.6	819.0	819.0	818.6	818.2	817.7	817.3
155°	846.7	847.3	848.0	848.0	847.3	846.7	846.0	845.4
157.5°	871.7	872.2	872.7	872.7	872.1	871.6	871.0	870.4
160°	887.2	887.7	888.2	888.0	887.2	886.3	885.5	884.7
162.5°	901.0	901.9	902.8	902.8	902.0	901.2	900.4	899.5
165°	919.3	920.3	921.3	921.5	920.8	920.1	919.5	918.8
167.5°	934.8	935.7	936.7	936.7	935.7	934.7	933.7	932.6
170°	943.1	944.1	945.1	945.0	943.8	942.7	941.5	940.4
172.5°	949.3	950.4	951.5	951.5	950.3	949.2	948.0	946.9
175°	956.0	957.2	958.3	958.3	957.2	956.0	954.9	953.7
177.5°	959.7	960.6	961.6	961.5	960.4	959.4	958.3	957.3
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6

(END OF REPORT)