

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: P332191-927

Luminaire Tested: **S123DIW-S1000D755U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332191-927
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: S123DIW-S1000D755U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5338.9 lumens
Efficiency: N/A
Efficacy: 99.6 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

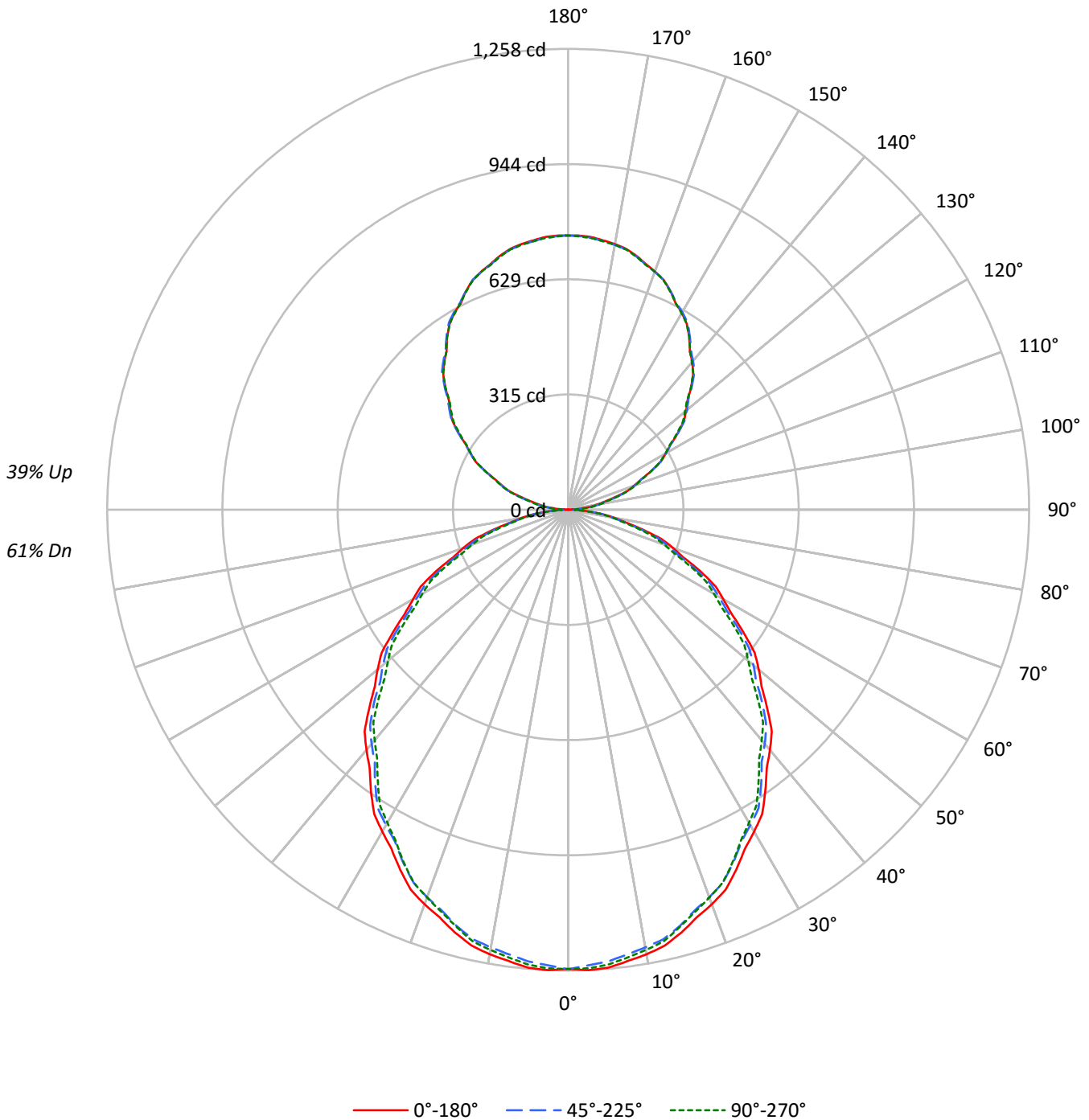
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	90	90	77	77	77	66	66	66	61
1	100	96	92	88	94	90	86	83	78	76	73	68	66	64	59	57	56	51
2	91	84	77	72	85	78	73	68	69	64	61	60	57	54	51	49	47	43
3	83	73	66	60	78	69	62	57	61	55	51	53	49	45	46	43	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	27
6	64	52	44	38	60	49	42	36	44	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	27	24	21
8	55	43	35	29	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	25	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	22	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13497	13497	13497
5°	13560	13374	13467
10°	13470	13258	13340
15°	13312	13108	13133
20°	13128	12893	12906
25°	12883	12638	12613
30°	12609	12356	12261
35°	12326	12056	11901
40°	12029	11726	11545
45°	11702	11423	11144
50°	11375	11050	10742
55°	10946	10663	10340
60°	10514	10213	9888
65°	10132	9722	9419
70°	9567	9161	8752
75°	8742	8430	8072
80°	7885	7550	7482
85°	6928	6657	6385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	2.2
10°-20°	333.5	6.2
20°-30°	492.7	9.2
30°-40°	575.5	10.8
40°-50°	578.6	10.8
50°-60°	508.2	9.5
60°-70°	378.6	7.1
70°-80°	215.7	4.0
80°-90°	64.1	1.2
90°-100°	48.8	0.9
100°-110°	145.9	2.7
110°-120°	248.2	4.6
120°-130°	326.5	6.1
130°-140°	367.0	6.9
140°-150°	360.7	6.8
150°-160°	303.7	5.7
160°-170°	202.2	3.8
170°-180°	70.8	1.3
0°-30°	944.3	17.7
0°-40°	1519.8	28.5
0°-60°	2606.6	48.8
0°-90°	3265.1	61.2
90°-120°	442.9	8.3
90°-150°	1497.2	28.0
90°-180°	2074.0	38.8
0°-180°	5338.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1255	1249	1238	1248	1246	119
15°	1195	1190	1176	1184	1178	337
25°	1085	1078	1064	1065	1062	499
35°	938	931	918	911	906	587
45°	769	764	750	738	732	593
55°	583	582	568	557	551	522
65°	398	392	382	373	370	392
75°	210	206	203	197	194	225
85°	56	54	54	52	52	62
90°	1	7	14	16	18	5
95°	35	39	44	46	46	39
105°	132	134	139	139	140	142
115°	250	251	250	251	250	247
125°	366	367	366	364	362	326
135°	474	478	477	475	474	366
145°	576	577	579	578	576	359
155°	659	659	660	662	658	303
165°	718	716	716	719	716	202
175°	747	745	744	748	744	71
180°	748	748	748	748	748	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1258.2	1257.5	1256.7	1255.9	1255.2	1253.7	1251.6	1249.5	1247.4	1245.3	1247.2
5°	1255.0	1253.8	1252.6	1251.4	1250.2	1248.3	1245.7	1243.0	1240.4	1237.8	1240.2
7.5°	1242.7	1241.5	1240.3	1239.1	1237.9	1236.0	1233.3	1230.5	1227.8	1225.0	1227.2
10°	1232.4	1231.2	1229.9	1228.8	1227.6	1225.4	1222.3	1219.2	1216.1	1213.0	1215.1
12.5°	1218.5	1217.6	1216.6	1215.5	1214.6	1212.6	1209.7	1206.7	1203.8	1200.9	1202.5
15°	1194.6	1193.7	1192.7	1191.8	1190.8	1188.7	1185.7	1182.6	1179.4	1176.3	1178.2
17.5°	1166.8	1165.5	1164.3	1163.1	1161.8	1159.7	1156.5	1153.4	1150.3	1147.2	1148.5
20°	1146.1	1144.7	1143.3	1141.8	1140.3	1138.0	1135.0	1131.9	1128.8	1125.6	1126.6
22.5°	1122.8	1121.4	1120.0	1118.5	1117.1	1114.8	1111.7	1108.6	1105.5	1102.3	1103.1
25°	1084.7	1083.2	1081.8	1080.4	1078.9	1076.7	1073.5	1070.4	1067.3	1064.1	1064.4
27.5°	1043.9	1042.5	1041.1	1039.7	1038.3	1035.9	1032.6	1029.3	1025.9	1022.5	1022.7
30°	1014.5	1013.4	1012.2	1011.0	1009.8	1007.5	1004.2	1000.8	997.4	994.1	994.1
32.5°	985.2	983.7	982.1	980.5	978.9	976.8	974.2	971.7	969.1	966.5	965.1
35°	938.0	936.6	935.2	933.7	932.2	930.0	926.9	923.8	920.7	917.5	916.1
37.5°	889.7	887.9	886.1	884.2	882.4	880.0	876.8	873.6	870.4	867.3	865.5
40°	856.1	854.6	853.2	851.8	850.3	848.0	844.5	841.2	837.9	834.5	832.6
42.5°	822.4	820.8	819.2	817.5	815.9	813.4	810.1	806.8	803.4	800.0	798.1
45°	768.7	767.8	766.8	765.9	764.9	762.9	759.8	756.6	753.5	750.4	747.6
47.5°	715.5	714.1	712.7	711.3	710.0	707.7	704.9	702.0	699.0	696.1	693.2
50°	679.3	678.0	676.8	675.7	674.5	672.3	669.2	666.1	663.0	659.9	657.2
52.5°	641.3	640.5	639.7	638.9	638.0	636.0	632.7	629.4	626.1	622.7	620.5
55°	583.3	583.0	582.8	582.6	582.3	580.7	577.6	574.4	571.3	568.2	565.5
57.5°	528.1	527.3	526.5	525.7	524.8	523.2	520.7	518.2	515.7	513.3	510.9
60°	488.4	488.1	487.9	487.7	487.4	485.9	483.0	480.1	477.3	474.4	472.2
62.5°	453.0	452.4	451.8	451.1	450.6	448.9	445.9	443.1	440.2	437.3	435.1
65°	397.8	396.6	395.5	394.3	393.1	391.3	388.9	386.5	384.0	381.7	379.8
67.5°	339.5	338.3	337.3	336.3	335.2	333.7	331.9	330.1	328.3	326.5	324.8
70°	304.0	302.6	301.2	299.8	298.3	296.8	295.4	294.0	292.6	291.1	289.5
72.5°	267.0	265.9	264.8	263.8	262.8	261.4	259.8	258.2	256.5	254.8	253.4
75°	210.2	209.3	208.3	207.4	206.4	205.6	204.9	204.1	203.4	202.7	201.5
77.5°	160.0	159.5	158.9	158.4	157.9	157.2	156.4	155.5	154.6	153.8	153.0
80°	127.2	126.5	125.8	125.1	124.4	123.7	123.3	122.8	122.3	121.8	121.6
82.5°	95.3	95.1	95.1	94.9	94.7	94.6	94.5	94.4	94.3	94.3	93.8
85°	56.1	55.6	55.1	54.7	54.2	53.9	53.9	53.9	53.9	53.9	53.4
87.5°	22.6	22.3	21.9	21.6	21.3	21.2	21.4	21.5	21.6	21.8	21.7
90°	0.6	1.9	3.2	4.5	5.8	7.3	9.0	10.7	12.4	14.1	14.7
92.5°	14.3	15.1	16.0	16.9	17.7	18.7	19.6	20.7	21.6	22.6	23.0
95°	34.7	35.6	36.5	37.5	38.3	39.3	40.4	41.4	42.5	43.5	44.0
97.5°	61.6	62.3	63.0	63.7	64.3	65.0	65.8	66.5	67.3	68.1	68.7
100°	79.9	80.7	81.5	82.3	83.1	83.8	84.4	85.2	85.8	86.4	86.8
102.5°	101.2	101.6	102.1	102.5	103.0	103.7	104.6	105.4	106.2	107.1	107.5
105°	132.3	132.5	132.8	133.1	133.3	134.0	135.2	136.4	137.6	138.8	138.8
107.5°	168.5	168.7	168.8	169.0	169.1	169.4	169.9	170.4	170.9	171.3	171.7
110°	191.1	191.4	191.6	191.9	192.1	192.4	192.7	192.9	193.2	193.5	194.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	214.6	214.8	214.9	215.1	215.2	215.3	215.4	215.5	215.5	215.6	216.2
115°	249.9	250.3	250.6	251.0	251.4	251.5	251.3	251.0	250.7	250.5	250.6
117.5°	285.4	285.7	285.9	286.2	286.5	286.5	286.1	285.7	285.4	285.0	285.0
120°	307.5	308.3	309.1	309.9	310.7	310.7	310.1	309.4	308.8	308.1	308.0
122.5°	330.6	331.1	331.7	332.3	332.9	333.0	332.6	332.3	332.0	331.6	331.3
125°	365.8	366.1	366.5	366.9	367.3	367.3	367.1	366.9	366.5	366.3	365.8
127.5°	398.2	399.0	399.9	400.7	401.6	401.8	401.6	401.2	400.9	400.7	399.9
130°	419.9	420.9	421.9	422.9	424.0	424.4	424.0	423.6	423.2	422.8	422.2
132.5°	441.5	442.5	443.5	444.6	445.7	446.0	445.8	445.4	445.1	444.9	444.3
135°	474.5	475.3	476.1	476.9	477.6	478.0	477.8	477.7	477.6	477.4	476.9
137.5°	505.1	505.7	506.4	507.1	507.7	508.2	508.5	508.9	509.2	509.5	509.0
140°	526.2	526.9	527.6	528.2	528.9	529.3	529.4	529.5	529.7	529.8	529.7
142.5°	545.6	546.2	546.8	547.5	548.1	548.6	548.8	549.1	549.3	549.5	549.4
145°	575.7	575.9	576.2	576.4	576.7	577.0	577.4	577.8	578.2	578.6	578.5
147.5°	602.0	602.5	602.9	603.4	603.9	604.3	604.7	605.0	605.4	605.8	605.8
150°	620.4	620.6	620.8	621.2	621.4	621.6	621.9	622.2	622.4	622.7	622.7
152.5°	635.4	635.7	636.1	636.5	636.8	637.1	637.2	637.4	637.5	637.7	637.9
155°	659.2	659.2	659.2	659.2	659.2	659.2	659.3	659.5	659.6	659.7	660.3
157.5°	679.4	679.2	679.1	678.9	678.7	678.7	678.8	678.9	679.1	679.1	679.7
160°	692.1	691.8	691.6	691.3	691.0	690.9	690.9	690.9	690.9	690.9	691.6
162.5°	703.4	703.0	702.6	702.3	701.9	701.8	701.9	702.0	702.1	702.2	702.8
165°	718.0	717.6	717.2	716.8	716.4	716.1	716.1	716.1	716.1	716.1	716.9
167.5°	729.6	729.0	728.6	728.0	727.5	727.3	727.4	727.5	727.6	727.7	728.5
170°	736.2	735.6	735.1	734.6	734.0	733.8	733.8	733.8	733.8	733.8	734.7
172.5°	741.3	740.8	740.3	739.7	739.3	738.9	738.9	738.9	738.9	738.9	739.8
175°	746.7	746.2	745.7	745.2	744.7	744.4	744.4	744.4	744.4	744.4	745.2
177.5°	749.0	748.5	748.1	747.7	747.3	747.1	747.1	747.1	747.1	747.1	747.7
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1249.1	1251.1	1253.0	1253.9	1253.6	1253.5	1253.2	1253.1
5°	1242.5	1244.9	1247.4	1248.3	1247.8	1247.4	1246.9	1246.4
7.5°	1229.4	1231.5	1233.7	1234.6	1234.3	1234.1	1233.7	1233.4
10°	1217.3	1219.4	1221.6	1222.4	1221.9	1221.5	1221.0	1220.5
12.5°	1204.0	1205.6	1207.2	1207.8	1207.6	1207.3	1207.0	1206.7
15°	1180.1	1182.0	1184.0	1184.2	1182.8	1181.3	1179.9	1178.5
17.5°	1149.9	1151.2	1152.5	1152.9	1152.5	1151.9	1151.4	1150.9
20°	1127.5	1128.5	1129.5	1129.6	1128.9	1128.1	1127.4	1126.7
22.5°	1103.9	1104.6	1105.4	1105.3	1104.5	1103.5	1102.6	1101.7
25°	1064.6	1064.9	1065.2	1064.9	1064.1	1063.4	1062.7	1062.0
27.5°	1022.9	1023.1	1023.3	1022.9	1022.1	1021.1	1020.3	1019.3
30°	994.1	994.1	994.1	993.2	991.6	989.9	988.2	986.5
32.5°	963.8	962.5	961.2	960.0	959.1	958.1	957.3	956.3
35°	914.7	913.2	911.8	910.5	909.3	908.1	906.9	905.7
37.5°	863.9	862.1	860.4	859.1	858.4	857.6	856.8	856.1
40°	830.7	828.8	826.9	825.4	824.4	823.5	822.5	821.6
42.5°	796.1	794.2	792.3	790.9	790.0	789.0	788.1	787.1
45°	744.7	741.8	738.9	736.9	735.7	734.5	733.3	732.1
47.5°	690.4	687.6	684.8	682.9	681.8	680.7	679.7	678.6
50°	654.6	652.0	649.3	647.3	645.9	644.4	642.9	641.5
52.5°	618.2	616.0	613.8	611.9	610.5	609.0	607.6	606.2
55°	562.9	560.3	557.7	555.7	554.5	553.3	552.2	551.0
57.5°	508.5	506.2	503.8	501.9	500.6	499.2	497.8	496.4
60°	470.1	467.9	465.8	464.1	462.9	461.7	460.5	459.3
62.5°	433.0	430.9	428.6	427.2	426.4	425.6	424.8	424.0
65°	377.9	375.9	374.0	372.7	372.0	371.3	370.5	369.8
67.5°	323.1	321.5	319.8	318.5	317.4	316.4	315.4	314.4
70°	287.7	286.1	284.4	283.0	281.8	280.6	279.4	278.1
72.5°	251.9	250.4	248.9	247.9	247.2	246.6	246.1	245.4
75°	200.3	199.1	197.9	196.9	196.2	195.5	194.8	194.1
77.5°	152.1	151.3	150.5	150.1	150.1	150.1	150.1	150.1
80°	121.4	121.1	120.9	120.7	120.7	120.7	120.7	120.7
82.5°	93.4	92.9	92.5	92.2	92.0	91.8	91.7	91.4
85°	52.9	52.4	52.0	51.7	51.7	51.7	51.7	51.7
87.5°	21.6	21.5	21.5	21.5	21.5	21.5	21.6	21.6
90°	15.1	15.7	16.2	16.6	16.9	17.1	17.3	17.7
92.5°	23.4	23.8	24.2	24.4	24.2	24.1	23.9	23.8
95°	44.5	45.1	45.6	45.9	45.9	45.9	45.9	45.9
97.5°	69.3	69.9	70.5	70.7	70.7	70.7	70.6	70.6
100°	87.2	87.6	88.0	88.3	88.6	88.9	89.1	89.4
102.5°	107.9	108.3	108.7	108.8	108.8	108.8	108.7	108.7
105°	138.8	138.8	138.8	138.9	139.2	139.4	139.7	140.0
107.5°	172.1	172.6	173.0	173.2	173.0	172.9	172.7	172.5
110°	194.5	195.0	195.5	195.7	195.4	195.1	194.9	194.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	216.8	217.5	218.1	218.3	218.3	218.2	218.2	218.2
115°	250.7	250.9	251.0	251.0	250.9	250.7	250.6	250.5
117.5°	285.0	284.9	284.9	284.8	284.4	284.0	283.7	283.3
120°	307.8	307.7	307.6	307.4	307.1	306.9	306.6	306.3
122.5°	331.0	330.6	330.3	329.9	329.5	329.2	328.8	328.4
125°	365.3	364.7	364.2	363.7	363.2	362.7	362.1	361.6
127.5°	399.2	398.5	397.8	397.0	396.5	395.9	395.3	394.7
130°	421.8	421.2	420.6	419.9	419.1	418.1	417.2	416.3
132.5°	443.6	443.0	442.4	441.7	441.0	440.3	439.6	438.9
135°	476.4	475.9	475.4	475.0	474.7	474.4	474.2	473.9
137.5°	508.4	507.9	507.4	506.8	506.4	505.8	505.3	504.9
140°	529.5	529.4	529.3	528.7	527.8	526.9	526.0	525.1
142.5°	549.3	549.1	549.0	548.6	547.9	547.2	546.4	545.7
145°	578.3	578.2	578.1	577.7	577.2	576.7	576.2	575.7
147.5°	605.8	605.8	605.8	605.4	604.6	603.8	603.0	602.2
150°	622.7	622.7	622.7	622.3	621.5	620.8	620.0	619.2
152.5°	638.2	638.3	638.6	638.3	637.6	637.0	636.3	635.6
155°	660.8	661.3	661.8	661.6	660.7	659.8	658.9	658.0
157.5°	680.2	680.8	681.4	681.2	680.5	679.8	679.1	678.3
160°	692.2	692.8	693.5	693.6	693.1	692.5	692.0	691.5
162.5°	703.5	704.2	704.8	704.7	703.9	703.1	702.2	701.3
165°	717.7	718.5	719.3	719.2	718.4	717.4	716.5	715.6
167.5°	729.3	730.2	730.9	730.9	730.2	729.3	728.5	727.7
170°	735.6	736.6	737.4	737.4	736.6	735.6	734.7	733.8
172.5°	740.6	741.4	742.2	742.2	741.2	740.4	739.4	738.6
175°	746.0	746.7	747.5	747.5	746.6	745.6	744.7	743.8
177.5°	748.4	749.0	749.6	749.6	748.8	748.1	747.3	746.6
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5

(END OF REPORT)