

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: P332189-935

Luminaire Tested: **S123DIW-S1000D755U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332189-935
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-S1000D755U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP 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: 5871.4 lumens
Efficiency: N/A
Efficacy: 109.5 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

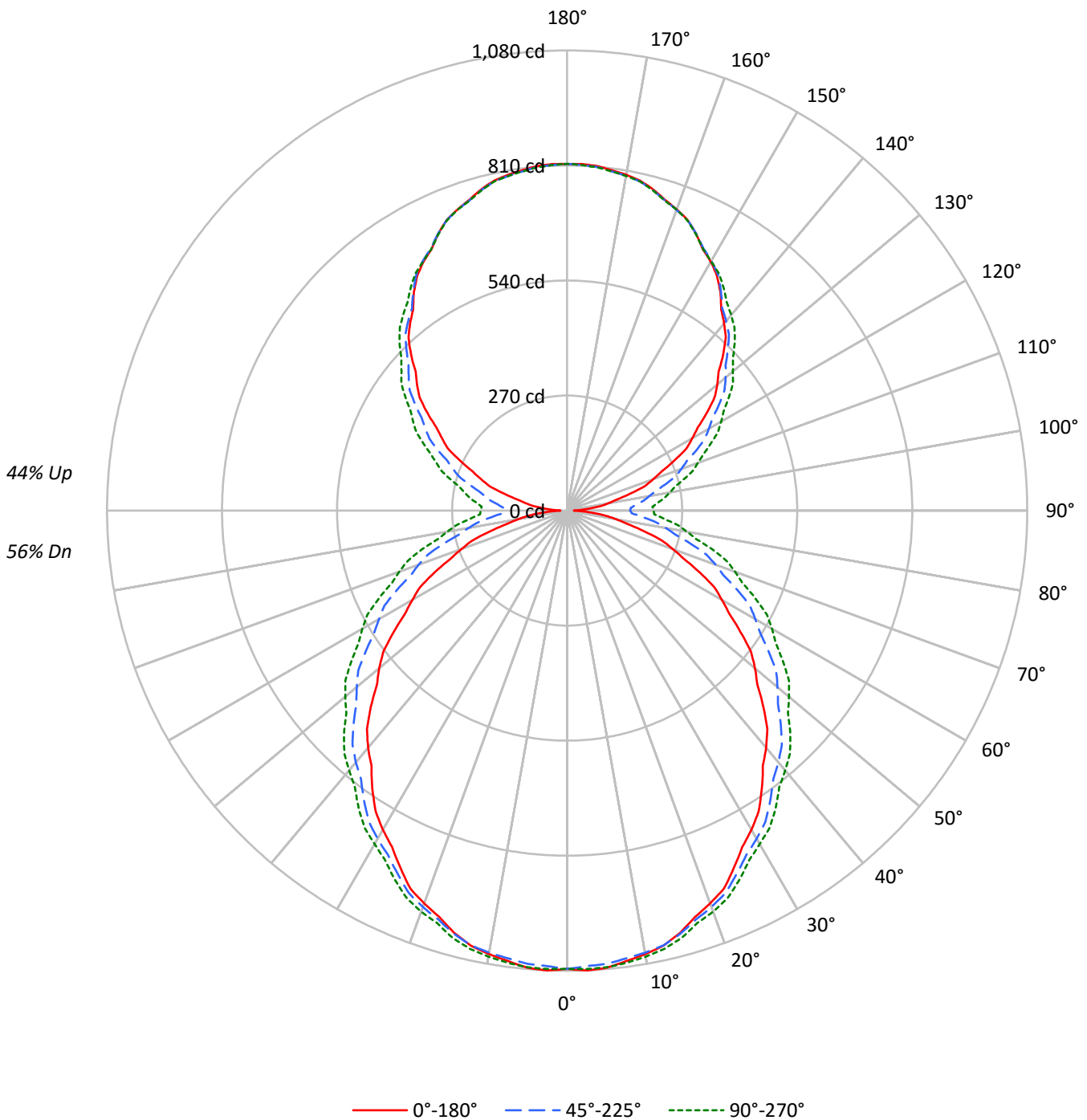
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	51	49	46	43	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	29	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26	22
6	62	50	41	35	57	46	39	33	40	34	29	34	30	26	29	25	22	19
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.7
10°-20°	290.7	5.0
20°-30°	434.8	7.4
30°-40°	519.2	8.8
40°-50°	543.3	9.3
50°-60°	509.8	8.7
60°-70°	425.8	7.3
70°-80°	304.6	5.2
80°-90°	184.1	3.1
90°-100°	167.0	2.8
100°-110°	242.4	4.1
110°-120°	325.7	5.5
120°-130°	386.8	6.6
130°-140°	413.2	7.0
140°-150°	395.2	6.7
150°-160°	330.1	5.6
160°-170°	219.7	3.7
170°-180°	76.9	1.3
0°-30°	827.5	14.1
0°-40°	1346.7	22.9
0°-60°	2399.8	40.9
0°-90°	3314.3	56.4
90°-120°	735.1	12.5
90°-150°	1930.4	32.9
90°-180°	2557.0	43.5
0°-180°	5871.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	80	148	189	203	13
95°	51	101	163	201	214	52
105°	153	184	239	270	283	163
115°	278	295	334	362	372	275
125°	401	405	436	457	463	358
135°	518	521	533	551	556	399
145°	627	627	629	637	640	391
155°	716	716	717	719	715	330
165°	780	778	778	782	778	220
175°	812	809	809	812	808	77
180°	814	814	814	814	814	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.5	57.8	71.0	84.3	97.7	111.4	125.1	138.7	152.4	161.4
90°	15.8	30.0	44.3	58.4	72.6	87.2	102.4	117.5	132.6	147.7	157.2
92.5°	29.8	42.3	54.7	67.2	79.6	93.0	107.1	121.2	135.3	149.5	158.6
95°	50.6	61.7	72.9	84.0	95.2	107.7	121.6	135.5	149.4	163.3	171.9
97.5°	78.4	88.3	98.2	108.1	118.0	129.5	142.6	155.6	168.6	181.6	190.0
100°	97.5	106.7	115.8	125.0	134.2	145.2	157.8	170.5	183.2	195.9	203.9
102.5°	119.5	127.5	135.5	143.5	151.5	162.0	174.6	187.4	200.1	212.8	220.5
105°	153.2	159.7	166.3	172.8	179.3	188.8	201.3	213.8	226.3	238.7	246.0
107.5°	191.1	196.6	202.1	207.6	213.1	221.4	232.5	243.7	254.8	265.9	273.4
110°	214.7	219.7	224.6	229.6	234.6	242.5	253.1	263.8	274.6	285.2	292.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	240.3	244.4	248.3	252.4	256.4	263.5	273.5	283.5	293.6	303.7	310.9
115°	277.5	281.0	284.6	288.1	291.7	298.0	307.1	316.2	325.3	334.3	340.8
117.5°	315.8	318.1	320.3	322.4	324.7	330.0	338.5	346.9	355.3	363.7	369.9
120°	338.9	341.0	343.2	345.3	347.5	352.6	360.4	368.3	376.2	384.1	389.9
122.5°	363.9	365.2	366.6	367.9	369.2	373.8	381.5	389.3	397.2	404.9	410.4
125°	401.1	401.5	401.8	402.3	402.7	406.6	413.8	421.1	428.3	435.7	440.6
127.5°	436.3	437.0	437.6	438.2	438.9	442.2	448.2	454.1	460.0	465.9	470.3
130°	459.8	460.7	461.6	462.4	463.3	466.1	471.0	475.7	480.5	485.3	489.7
132.5°	482.4	483.5	484.6	485.6	486.7	489.2	493.0	496.9	500.8	504.6	508.7
135°	518.1	518.7	519.3	519.9	520.5	522.1	524.8	527.5	530.3	533.0	537.1
137.5°	551.0	551.6	552.1	552.6	553.1	554.3	556.3	558.3	560.3	562.2	565.8
140°	573.2	573.9	574.5	575.2	576.0	576.8	577.7	578.7	579.5	580.5	584.3
142.5°	594.1	594.6	595.1	595.6	596.1	596.6	597.0	597.4	597.8	598.2	601.6
145°	626.8	626.8	626.9	626.9	626.9	627.2	627.6	628.0	628.4	628.9	630.8
147.5°	654.3	654.8	655.3	655.8	656.3	656.8	657.2	657.5	658.0	658.4	659.0
150°	674.2	674.5	674.8	675.1	675.4	675.6	675.9	676.2	676.5	676.7	676.7
152.5°	690.6	691.0	691.4	691.8	692.2	692.4	692.6	692.8	692.9	693.1	693.4
155°	716.4	716.4	716.4	716.4	716.4	716.4	716.6	716.8	716.9	717.0	717.6
157.5°	738.4	738.2	738.0	737.9	737.7	737.7	737.8	737.9	738.0	738.1	738.7
160°	752.2	751.9	751.7	751.3	751.1	750.9	750.9	750.9	750.9	750.9	751.7
162.5°	764.5	764.1	763.6	763.3	762.8	762.8	762.8	762.9	763.1	763.2	763.9
165°	780.3	779.9	779.5	779.0	778.6	778.3	778.3	778.3	778.3	778.3	779.2
167.5°	793.0	792.4	791.9	791.3	790.7	790.5	790.6	790.7	790.8	790.9	791.8
170°	800.1	799.5	799.0	798.4	797.8	797.5	797.5	797.5	797.5	797.5	798.6
172.5°	805.7	805.2	804.6	804.0	803.5	803.1	803.1	803.1	803.1	803.1	804.1
175°	811.6	811.1	810.5	809.9	809.3	809.1	809.1	809.1	809.1	809.1	809.9
177.5°	814.1	813.6	813.1	812.7	812.3	812.0	812.0	812.0	812.0	812.0	812.7
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	170.3	179.3	188.2	194.1	196.7	199.4	202.0	204.7
90°	166.6	176.0	185.5	191.6	194.5	197.3	200.3	203.2
92.5°	167.6	176.8	185.9	191.5	193.7	196.0	198.2	200.4
95°	180.6	189.2	197.9	203.5	206.1	208.7	211.3	213.9
97.5°	198.4	206.8	215.2	220.7	223.3	225.8	228.3	230.9
100°	211.9	219.8	227.8	233.2	236.1	239.0	241.9	244.8
102.5°	228.3	236.1	243.8	249.0	251.6	254.1	256.7	259.2
105°	253.3	260.6	267.9	272.9	275.4	278.1	280.7	283.4
107.5°	280.8	288.2	295.7	300.4	302.6	304.6	306.8	308.9
110°	300.0	307.3	314.6	319.2	321.0	322.8	324.6	326.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	318.1	325.4	332.6	337.3	339.6	341.8	344.1	346.3
115°	347.2	353.5	359.9	364.1	366.0	368.0	369.9	371.9
117.5°	376.1	382.2	388.4	392.3	393.9	395.5	397.2	398.8
120°	395.8	401.7	407.5	411.2	412.7	414.2	415.8	417.3
122.5°	415.8	421.2	426.6	430.1	431.4	432.9	434.3	435.8
125°	445.5	450.3	455.2	458.3	459.6	460.8	462.1	463.3
127.5°	474.7	479.0	483.4	486.1	487.2	488.4	489.5	490.6
130°	494.0	498.4	502.8	505.2	505.8	506.4	507.0	507.6
132.5°	512.7	516.8	520.8	523.4	524.3	525.4	526.4	527.4
135°	541.2	545.4	549.5	552.1	553.0	554.1	555.1	556.1
137.5°	569.3	572.8	576.4	578.5	579.2	580.0	580.7	581.5
140°	588.0	591.8	595.6	597.6	597.9	598.2	598.5	598.8
142.5°	604.9	608.3	611.6	613.5	614.1	614.6	615.2	615.7
145°	632.7	634.6	636.6	637.8	638.3	638.8	639.2	639.7
147.5°	659.6	660.2	660.9	661.2	661.3	661.4	661.5	661.6
150°	676.7	676.7	676.7	676.6	676.3	676.0	675.6	675.3
152.5°	693.6	693.8	694.1	693.9	693.2	692.6	691.9	691.3
155°	718.2	718.8	719.3	719.1	718.1	717.1	716.1	715.1
157.5°	739.3	739.9	740.5	740.4	739.6	738.8	738.0	737.2
160°	752.3	753.0	753.7	753.8	753.3	752.7	752.1	751.6
162.5°	764.6	765.3	766.0	765.9	765.0	764.1	763.2	762.2
165°	780.1	780.9	781.8	781.7	780.8	779.7	778.8	777.7
167.5°	792.6	793.6	794.4	794.4	793.6	792.6	791.8	790.9
170°	799.5	800.6	801.5	801.5	800.6	799.5	798.6	797.5
172.5°	804.9	805.8	806.7	806.7	805.6	804.7	803.7	802.7
175°	810.8	811.6	812.4	812.4	811.4	810.4	809.4	808.4
177.5°	813.4	814.1	814.8	814.7	813.9	813.0	812.3	811.5
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6

(END OF REPORT)