

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: P331274-840

Luminaire Tested: **SA2XXDIP-C290D925U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331274-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D925U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4557.9 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

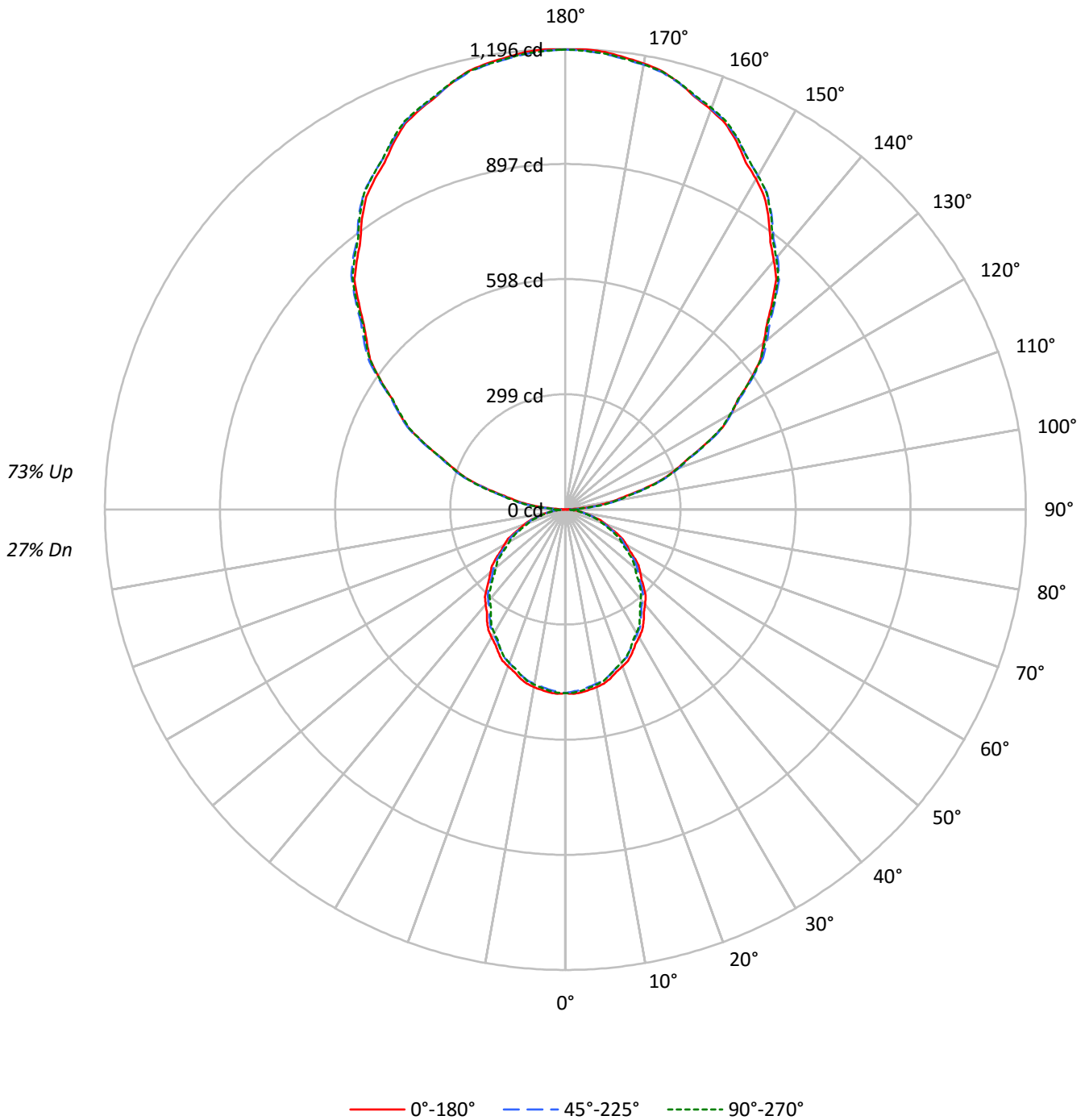
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27				27
1	93	88	85	81	82	79	76	73	62	59	58	45	44	43	31	30	29				22	
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25				19	
3	77	68	61	55	68	61	55	50	47	43	40	35	33	30	24	22	21				16	
4	70	60	52	46	62	54	47	42	42	38	34	31	28	26	21	19	18				14	
5	64	53	45	40	57	48	41	36	38	33	29	28	25	22	19	17	16				12	
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14				10	
7	55	43	35	30	49	38	32	27	30	26	22	23	20	17	16	14	12				9	
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	15	12	11				8	
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10				7	
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9				7	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7703	7703	7703
5°	7733	7621	7666
10°	7688	7543	7581
15°	7590	7447	7438
20°	7455	7301	7290
25°	7322	7119	7119
30°	7150	6952	6893
35°	6991	6753	6654
40°	6787	6555	6431
45°	6588	6357	6202
50°	6373	6154	5935
55°	6145	5917	5695
60°	5896	5628	5422
65°	5624	5349	5100
70°	5282	4999	4763
75°	4810	4604	4492
80°	4258	4138	3924
85°	3483	3316	2983



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	1.0
10°-20°	126.2	2.8
20°-30°	185.5	4.1
30°-40°	215.5	4.7
40°-50°	215.3	4.7
50°-60°	187.7	4.1
60°-70°	138.8	3.0
70°-80°	78.6	1.7
80°-90°	25.9	0.6
90°-100°	75.7	1.7
100°-110°	235.0	5.2
110°-120°	401.8	8.8
120°-130°	528.3	11.6
130°-140°	593.0	13.0
140°-150°	581.4	12.8
150°-160°	487.7	10.7
160°-170°	323.5	7.1
170°-180°	113.0	2.5
0°-30°	356.6	7.8
0°-40°	572.2	12.6
0°-60°	975.2	21.4
0°-90°	1218.6	26.7
90°-120°	712.5	15.6
90°-150°	2415.2	53.0
90°-180°	3339.0	73.3
0°-180°	4557.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	477	475	470	474	473	45
15°	454	451	446	447	445	128
25°	411	407	400	400	400	189
35°	355	350	343	340	338	221
45°	288	285	278	274	272	223
55°	218	215	210	205	202	195
65°	147	144	140	136	134	146
75°	77	76	74	71	72	82
85°	19	18	18	17	16	22
90°	1	14	35	33	34	4
95°	52	62	64	64	62	60
105°	217	220	222	224	224	229
115°	403	409	407	406	403	399
125°	586	595	593	590	588	524
135°	759	769	772	771	768	586
145°	921	928	934	935	931	575
155°	1053	1056	1059	1064	1061	485
165°	1146	1145	1145	1151	1147	323
175°	1192	1189	1187	1194	1188	113
180°	1194	1194	1194	1194	1194	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1
2.5°	479.3	478.9	478.5	478.1	477.7	477.1	476.2	475.2	474.3	473.4	474.2
5°	477.1	476.7	476.3	475.8	475.4	474.7	473.6	472.5	471.3	470.2	471.0
7.5°	472.9	472.2	471.6	471.0	470.4	469.5	468.4	467.2	466.1	464.9	465.7
10°	468.9	468.2	467.5	466.8	466.0	465.0	463.8	462.6	461.4	460.1	460.9
12.5°	463.3	462.7	462.1	461.4	460.8	459.9	458.7	457.5	456.3	455.0	455.6
15°	454.1	453.5	452.9	452.3	451.7	450.8	449.4	448.1	446.8	445.5	445.9
17.5°	442.4	441.8	441.2	440.6	440.0	439.0	437.7	436.3	434.9	433.6	434.0
20°	433.9	433.3	432.7	432.1	431.5	430.5	429.1	427.7	426.3	424.9	425.2
22.5°	425.6	424.6	423.8	422.9	422.1	421.0	419.7	418.3	417.0	415.7	415.7
25°	411.0	410.2	409.4	408.6	407.8	406.5	404.8	403.0	401.3	399.6	399.8
27.5°	394.6	393.8	393.0	392.3	391.6	390.5	389.2	387.8	386.5	385.1	384.8
30°	383.5	382.7	381.9	381.1	380.2	379.1	377.6	376.1	374.5	372.9	372.6
32.5°	371.7	371.1	370.5	369.8	369.2	368.0	366.4	364.9	363.2	361.6	361.0
35°	354.7	353.6	352.5	351.5	350.5	349.2	347.6	346.0	344.4	342.6	342.0
37.5°	335.3	334.4	333.5	332.5	331.6	330.4	328.8	327.2	325.5	323.9	323.2
40°	322.0	321.2	320.4	319.6	318.8	317.6	315.9	314.3	312.7	311.0	310.1
42.5°	309.2	308.4	307.6	306.8	306.0	304.7	303.1	301.4	299.8	298.2	297.2
45°	288.5	287.8	287.1	286.4	285.7	284.6	283.1	281.6	280.0	278.4	277.3
47.5°	268.0	267.3	266.7	266.0	265.3	264.2	262.6	261.1	259.4	257.8	256.6
50°	253.7	253.2	252.7	252.2	251.7	250.6	249.2	247.8	246.4	245.0	243.6
52.5°	239.7	239.0	238.4	237.7	237.0	236.0	234.7	233.4	232.0	230.7	229.4
55°	218.3	217.7	217.1	216.5	215.9	215.0	213.8	212.6	211.4	210.2	208.8
57.5°	196.9	196.4	195.9	195.4	194.9	194.0	192.7	191.4	190.0	188.6	187.4
60°	182.6	182.2	181.8	181.4	181.0	180.1	178.6	177.2	175.7	174.3	173.2
62.5°	168.6	167.9	167.3	166.7	166.0	165.1	164.0	163.0	161.9	160.8	159.7
65°	147.2	146.6	146.0	145.4	144.8	144.0	143.0	142.0	141.0	140.0	139.0
67.5°	125.5	125.0	124.5	124.0	123.6	122.9	121.9	121.0	120.1	119.2	118.5
70°	111.9	111.5	111.1	110.7	110.3	109.7	108.8	107.9	106.8	105.9	105.2
72.5°	98.0	97.6	97.1	96.7	96.3	95.8	95.2	94.7	94.1	93.5	92.8
75°	77.1	76.9	76.6	76.4	76.2	75.9	75.4	74.8	74.3	73.8	73.2
77.5°	58.4	58.0	57.7	57.4	57.0	56.7	56.5	56.2	56.0	55.8	55.5
80°	45.8	45.7	45.6	45.5	45.4	45.3	45.1	44.9	44.7	44.5	44.2
82.5°	34.1	34.1	34.1	34.0	34.0	33.9	33.8	33.7	33.6	33.5	33.1
85°	18.8	18.7	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.6
87.5°	6.8	7.2	7.6	8.0	8.3	8.9	9.7	10.5	11.4	12.2	11.8
90°	1.0	3.7	6.4	9.1	11.7	15.6	20.5	25.4	30.3	35.2	34.8
92.5°	18.0	19.9	21.9	23.8	25.9	27.4	28.6	29.7	30.9	32.0	32.1
95°	52.4	54.6	56.9	59.1	61.4	62.7	63.1	63.6	64.0	64.5	64.5
97.5°	95.7	97.8	99.7	101.7	103.6	105.0	105.9	106.7	107.6	108.5	108.5
100°	127.9	129.8	131.6	133.4	135.1	136.4	137.0	137.7	138.5	139.1	139.1
102.5°	161.9	163.3	164.7	166.1	167.5	168.7	169.6	170.5	171.3	172.2	172.3
105°	216.7	217.3	218.0	218.7	219.3	219.9	220.4	220.9	221.3	221.7	222.2
107.5°	271.9	272.9	273.9	274.9	275.9	276.3	276.3	276.3	276.3	276.3	276.5
110°	307.4	308.7	310.0	311.4	312.8	313.5	313.5	313.5	313.5	313.5	313.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	346.1	347.4	348.8	350.1	351.4	352.0	351.8	351.6	351.5	351.3	350.8
115°	403.1	404.5	405.8	407.2	408.5	408.9	408.5	408.1	407.6	407.2	407.0
117.5°	460.0	461.7	463.5	465.3	467.2	467.4	466.2	464.8	463.6	462.4	461.8
120°	497.9	499.7	501.4	503.2	505.0	505.0	503.2	501.4	499.7	497.9	497.9
122.5°	532.5	534.6	536.8	539.0	541.1	541.6	540.3	539.1	537.9	536.5	536.0
125°	586.5	588.5	590.6	592.6	594.6	595.3	594.6	593.9	593.3	592.6	591.9
127.5°	639.1	641.7	644.3	646.8	649.3	650.3	649.4	648.6	647.8	647.0	646.2
130°	672.2	675.1	678.0	681.0	683.9	685.1	684.6	684.2	683.8	683.3	682.9
132.5°	709.3	711.7	714.1	716.4	718.8	720.0	720.1	720.2	720.2	720.3	719.4
135°	758.9	761.3	763.8	766.3	768.7	770.2	770.6	771.0	771.5	771.9	771.7
137.5°	811.1	813.0	815.1	817.1	819.1	820.4	821.0	821.6	822.2	822.7	822.6
140°	842.5	844.6	846.6	848.6	850.6	852.1	853.2	854.3	855.6	856.7	856.7
142.5°	874.7	876.8	878.8	880.8	882.8	884.2	884.9	885.8	886.5	887.3	887.5
145°	921.1	922.7	924.2	925.8	927.4	928.9	930.2	931.5	932.9	934.2	934.4
147.5°	962.4	964.3	966.2	968.1	970.0	971.4	972.3	973.1	974.0	974.9	975.4
150°	990.7	992.0	993.3	994.7	996.0	997.1	998.0	999.0	999.9	1000.8	1001.4
152.5°	1015.6	1017.0	1018.3	1019.7	1021.1	1022.3	1023.3	1024.4	1025.4	1026.5	1027.4
155°	1053.2	1053.8	1054.5	1055.2	1055.8	1056.5	1057.2	1057.8	1058.5	1059.1	1060.4
157.5°	1085.2	1085.6	1086.1	1086.5	1087.0	1087.4	1087.8	1088.2	1088.6	1089.0	1090.6
160°	1104.6	1105.0	1105.4	1105.9	1106.3	1106.7	1106.9	1107.1	1107.3	1107.5	1108.9
162.5°	1122.3	1122.4	1122.5	1122.6	1122.7	1122.8	1123.1	1123.3	1123.5	1123.7	1125.2
165°	1145.9	1145.7	1145.4	1145.2	1145.0	1144.9	1144.9	1144.9	1144.9	1144.9	1146.4
167.5°	1165.6	1165.0	1164.3	1163.6	1163.0	1162.6	1162.6	1162.5	1162.5	1162.4	1164.0
170°	1176.1	1175.4	1174.8	1174.1	1173.4	1173.0	1172.8	1172.6	1172.3	1172.0	1173.7
172.5°	1183.4	1182.7	1182.0	1181.3	1180.6	1180.2	1180.0	1179.7	1179.5	1179.3	1180.9
175°	1192.2	1191.5	1190.8	1190.2	1189.5	1189.0	1188.5	1188.1	1187.6	1187.2	1188.7
177.5°	1195.9	1195.3	1194.8	1194.3	1193.7	1193.3	1192.9	1192.5	1192.1	1191.8	1192.9
180°	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	477.1	477.1	477.1	477.1	477.1	477.1	477.1	477.1
2.5°	475.0	475.8	476.7	477.1	476.9	476.7	476.6	476.4
5°	471.9	472.7	473.5	473.8	473.6	473.4	473.2	473.0
7.5°	466.6	467.4	468.2	468.5	468.3	468.0	467.8	467.6
10°	461.8	462.6	463.4	463.6	463.3	463.0	462.7	462.4
12.5°	456.2	456.7	457.3	457.5	457.3	457.0	456.8	456.6
15°	446.3	446.7	447.1	447.1	446.6	446.1	445.6	445.0
17.5°	434.5	435.0	435.5	435.5	434.9	434.5	434.0	433.5
20°	425.5	425.8	426.1	426.0	425.6	425.2	424.7	424.3
22.5°	415.8	415.9	415.9	415.8	415.6	415.3	415.1	414.9
25°	400.0	400.2	400.4	400.4	400.2	400.0	399.8	399.6
27.5°	384.5	384.2	383.8	383.4	382.9	382.4	382.0	381.5
30°	372.3	372.0	371.7	371.4	371.0	370.6	370.2	369.7
32.5°	360.5	359.9	359.4	358.9	358.5	358.1	357.7	357.3
35°	341.4	340.8	340.2	339.7	339.2	338.7	338.2	337.6
37.5°	322.3	321.6	320.8	320.2	319.7	319.2	318.8	318.3
40°	309.2	308.3	307.4	306.7	306.3	305.9	305.5	305.1
42.5°	296.2	295.2	294.2	293.4	292.9	292.3	291.8	291.1
45°	276.2	275.1	274.0	273.2	272.8	272.4	272.0	271.6
47.5°	255.5	254.3	253.1	252.2	251.7	251.1	250.4	249.8
50°	242.2	240.7	239.2	238.3	237.8	237.3	236.8	236.3
52.5°	228.3	227.1	225.9	225.0	224.3	223.7	223.0	222.3
55°	207.6	206.4	205.2	204.4	203.9	203.3	202.8	202.3
57.5°	186.2	185.0	183.8	183.0	182.7	182.3	181.9	181.5
60°	172.1	171.0	169.9	169.2	168.8	168.5	168.2	167.9
62.5°	158.6	157.6	156.6	155.9	155.5	155.1	154.7	154.3
65°	138.0	137.1	136.2	135.5	135.0	134.5	134.0	133.5
67.5°	117.8	117.0	116.3	115.7	115.3	114.9	114.5	114.1
70°	104.5	103.8	103.1	102.6	102.2	101.7	101.3	100.9
72.5°	92.1	91.4	90.7	90.1	89.8	89.5	89.2	88.8
75°	72.6	72.0	71.4	71.2	71.4	71.6	71.8	72.0
77.5°	55.2	54.9	54.6	54.3	54.0	53.8	53.5	53.2
80°	43.9	43.6	43.3	43.0	42.8	42.6	42.4	42.2
82.5°	32.7	32.3	31.9	31.7	31.7	31.6	31.6	31.6
85°	17.3	17.0	16.7	16.5	16.4	16.3	16.2	16.1
87.5°	11.5	11.2	10.8	10.7	10.6	10.6	10.6	10.5
90°	34.3	33.9	33.5	33.3	33.6	33.8	34.0	34.2
92.5°	32.2	32.3	32.4	32.5	32.5	32.5	32.6	32.6
95°	64.5	64.5	64.5	64.2	63.8	63.4	62.9	62.5
97.5°	108.5	108.5	108.5	108.5	108.4	108.4	108.3	108.3
100°	139.1	139.1	139.1	139.0	138.8	138.6	138.3	138.0
102.5°	172.5	172.7	172.9	172.8	172.6	172.4	172.2	172.0
105°	222.6	223.1	223.5	223.7	223.7	223.7	223.7	223.7
107.5°	276.7	276.9	277.0	276.6	275.6	274.6	273.6	272.5
110°	313.5	313.5	313.5	313.1	312.5	311.7	311.0	310.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	350.2	349.7	349.2	348.6	348.2	347.7	347.2	346.7
115°	406.7	406.5	406.3	405.8	405.2	404.5	403.7	403.1
117.5°	461.3	460.8	460.2	459.6	459.0	458.3	457.6	457.0
120°	497.9	497.9	497.9	497.6	496.9	496.1	495.5	494.8
122.5°	535.4	534.9	534.4	533.9	533.4	532.9	532.4	531.9
125°	591.3	590.6	589.9	589.5	589.3	589.0	588.8	588.5
127.5°	645.4	644.6	643.8	643.0	642.3	641.6	640.9	640.2
130°	682.4	682.0	681.5	680.9	679.9	679.0	678.1	677.2
132.5°	718.4	717.4	716.4	715.6	714.9	714.2	713.5	712.8
135°	771.5	771.3	771.0	770.6	769.9	769.3	768.6	767.9
137.5°	822.4	822.2	822.0	821.5	820.6	819.7	818.8	817.9
140°	856.7	856.7	856.7	856.2	855.3	854.3	853.5	852.6
142.5°	887.7	887.8	888.0	887.7	886.8	885.9	884.9	884.0
145°	934.6	934.9	935.1	934.8	933.9	933.0	932.1	931.2
147.5°	975.9	976.4	976.9	976.7	975.9	975.0	974.2	973.3
150°	1002.1	1002.8	1003.4	1003.4	1002.8	1002.1	1001.4	1000.8
152.5°	1028.2	1029.1	1030.0	1030.0	1029.1	1028.2	1027.4	1026.5
155°	1061.5	1062.6	1063.7	1063.9	1063.2	1062.6	1061.9	1061.2
157.5°	1092.1	1093.6	1095.1	1095.3	1094.3	1093.2	1092.1	1091.1
160°	1110.2	1111.6	1113.0	1113.2	1112.3	1111.4	1110.4	1109.5
162.5°	1126.7	1128.2	1129.7	1130.0	1128.9	1127.8	1126.8	1125.7
165°	1148.0	1149.5	1151.1	1151.3	1150.2	1149.1	1148.0	1146.9
167.5°	1165.5	1167.1	1168.6	1168.8	1167.7	1166.5	1165.4	1164.2
170°	1175.2	1176.8	1178.3	1178.4	1177.1	1175.8	1174.4	1173.1
172.5°	1182.5	1184.1	1185.6	1185.7	1184.4	1183.1	1181.6	1180.3
175°	1190.3	1191.8	1193.5	1193.6	1192.2	1190.8	1189.5	1188.2
177.5°	1194.0	1195.1	1196.1	1196.1	1195.1	1194.0	1192.9	1191.8
180°	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3	1194.3

(END OF REPORT)