

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: P332917-940

Luminaire Tested: **SA4XXRDIP-C575D1035U940-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332917-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D1035U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5290.1 lumens
Efficiency: N/A
Efficacy: 118.9 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: Semi-Indirect

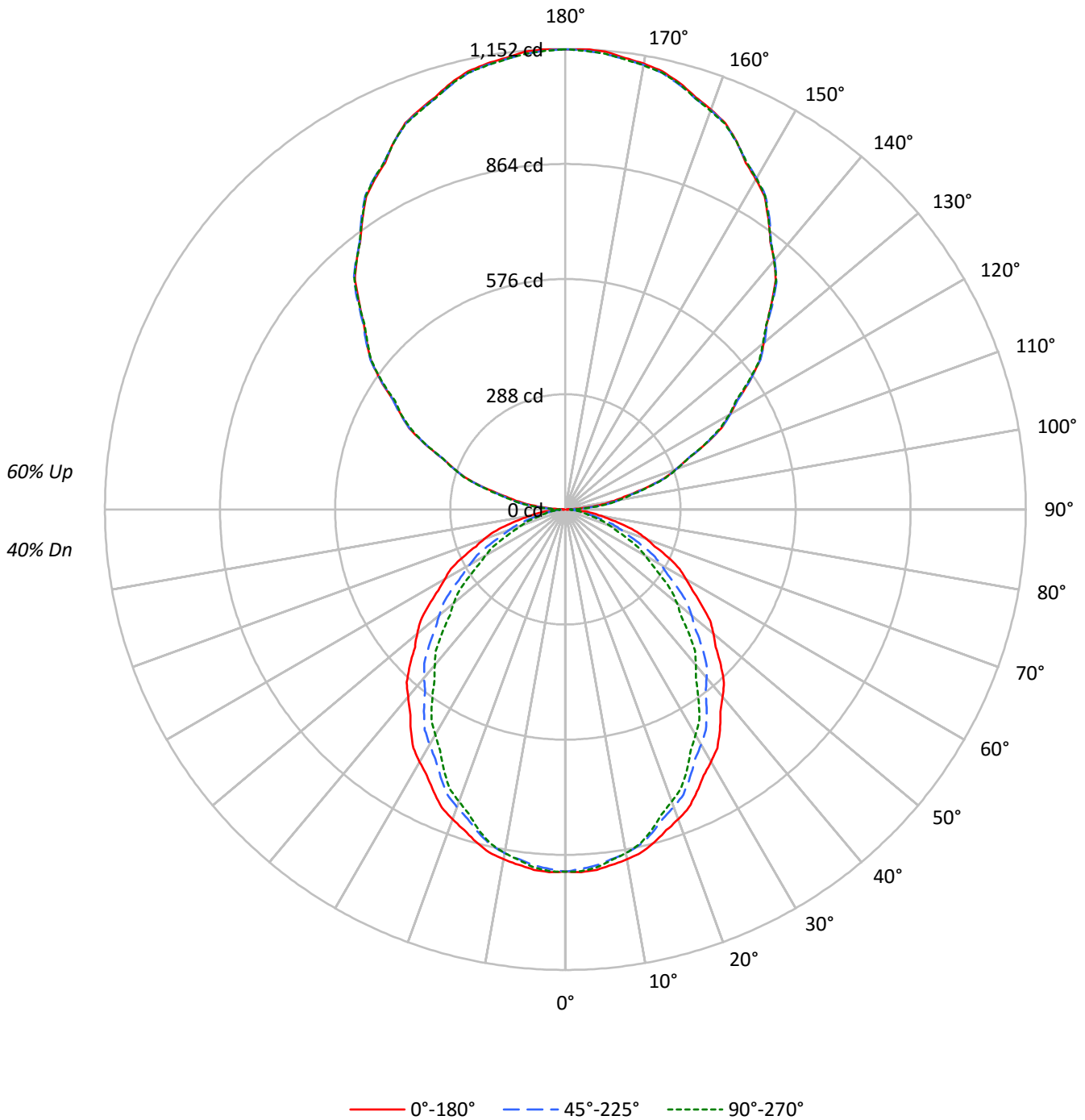
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40				
1	96	91	88	84	87	83	80	77	68	66	64	54	53	52	41	41	40	34				
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	37	35	34	29				
3	80	71	63	58	72	64	58	53	53	49	45	43	39	37	33	31	29	24				
4	73	62	55	49	66	57	51	45	47	42	38	38	34	32	29	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	27	24	22	18				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	21	19	16				
7	57	45	37	32	52	41	35	30	35	29	26	28	24	21	22	19	17	15				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	20	18	16	13				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12				
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	17	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7316	7316	7316
5°	7332	7243	7288
10°	7287	7156	7156
15°	7203	7005	6954
20°	7088	6808	6682
25°	6942	6576	6409
30°	6797	6332	6068
35°	6640	6080	5724
40°	6450	5792	5352
45°	6275	5505	4975
50°	6075	5176	4575
55°	5859	4835	4141
60°	5624	4459	3697
65°	5408	3989	3261
70°	5094	3472	2769
75°	4697	2879	2249
80°	4096	2194	2064
85°	3473	1991	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	1.6
10°-20°	237.4	4.5
20°-30°	342.8	6.5
30°-40°	388.6	7.3
40°-50°	375.2	7.1
50°-60°	312.0	5.9
60°-70°	215.4	4.1
70°-80°	109.2	2.1
80°-90°	31.5	0.6
90°-100°	75.9	1.4
100°-110°	224.9	4.3
110°-120°	381.7	7.2
120°-130°	503.2	9.5
130°-140°	565.2	10.7
140°-150°	555.4	10.5
150°-160°	467.1	8.8
160°-170°	310.8	5.9
170°-180°	108.8	2.1
0°-30°	665.3	12.6
0°-40°	1053.9	19.9
0°-60°	1741.1	32.9
0°-90°	2097.2	39.6
90°-120°	682.4	12.9
90°-150°	2306.2	43.6
90°-180°	3193.0	60.4
0°-180°	5290.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	905	902	894	900	899	86
15°	862	855	838	837	832	243
25°	779	766	738	727	720	359
35°	674	651	617	594	581	421
45°	550	523	482	449	436	424
55°	416	388	344	309	294	372
65°	283	252	209	180	171	279
75°	151	125	92	77	72	159
85°	38	24	22	20	20	42
90°	3	12	20	25	27	5
95°	53	61	68	70	70	59
105°	207	208	212	214	217	220
115°	388	388	386	385	384	383
125°	565	565	564	562	561	504
135°	729	734	734	732	730	564
145°	886	889	890	889	886	554
155°	1015	1015	1014	1017	1014	467
165°	1105	1102	1100	1105	1102	311
175°	1149	1145	1144	1149	1144	109
180°	1151	1151	1151	1151	1151	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	908.5	907.9	907.5	907.0	906.5	905.5	904.2	902.9	901.4	900.1	901.4
5°	904.8	904.2	903.6	902.9	902.4	901.2	899.3	897.4	895.5	893.8	895.3
7.5°	896.6	896.0	895.4	894.7	894.0	892.5	890.1	887.7	885.3	882.9	883.9
10°	888.9	888.1	887.3	886.5	885.8	884.0	881.3	878.4	875.7	872.9	873.5
12.5°	878.9	878.0	877.1	876.2	875.3	873.3	870.0	866.7	863.4	860.1	860.5
15°	861.8	860.4	859.1	857.6	856.2	853.6	849.8	846.0	842.0	838.2	837.9
17.5°	841.2	839.1	837.1	835.1	833.1	829.8	825.2	820.6	815.9	811.3	810.5
20°	825.0	823.0	821.0	819.0	817.0	813.4	808.2	802.9	797.6	792.5	791.2
22.5°	807.3	805.0	802.8	800.5	798.3	794.3	788.7	783.1	777.5	771.9	770.0
25°	779.3	776.5	773.6	770.9	768.1	763.6	757.2	750.9	744.6	738.3	735.7
27.5°	749.8	746.4	742.9	739.4	735.8	730.8	724.0	717.3	710.5	703.7	700.5
30°	729.2	725.4	721.6	717.7	713.9	708.3	701.1	693.8	686.5	679.3	675.5
32.5°	707.7	703.3	698.9	694.6	690.3	684.3	676.8	669.3	661.8	654.3	649.9
35°	673.8	668.9	663.9	659.0	654.1	647.7	640.0	632.3	624.6	616.9	611.6
37.5°	637.6	632.5	627.4	622.3	617.2	610.4	601.8	593.3	584.8	576.2	570.3
40°	612.0	606.9	601.8	596.7	591.7	584.7	576.0	567.1	558.4	549.6	543.1
42.5°	587.5	582.3	576.9	571.6	566.2	559.0	549.8	540.6	531.5	522.4	515.8
45°	549.6	543.9	538.1	532.4	526.7	519.2	510.0	500.8	491.5	482.2	474.7
47.5°	510.3	504.4	498.5	492.6	486.7	478.9	469.3	459.8	450.1	440.5	432.7
50°	483.7	477.6	471.6	465.6	459.6	451.7	441.8	431.9	422.0	412.1	404.5
52.5°	456.5	450.6	444.7	438.8	432.8	424.9	414.7	404.7	394.5	384.4	376.6
55°	416.3	410.2	404.0	397.8	391.6	383.5	373.5	363.6	353.5	343.5	335.5
57.5°	376.7	370.2	363.8	357.4	351.0	342.9	333.0	323.1	313.3	303.4	295.2
60°	348.3	342.1	336.0	329.8	323.7	315.7	305.8	295.9	286.1	276.2	268.1
62.5°	322.8	316.4	310.0	303.5	297.1	288.9	278.7	268.7	258.5	248.4	241.0
65°	283.1	276.5	269.8	263.2	256.5	248.3	238.4	228.6	218.7	208.8	202.2
67.5°	241.9	235.5	229.2	222.8	216.5	208.7	199.6	190.4	181.3	172.1	166.4
70°	215.8	209.3	202.9	196.4	189.9	182.3	173.4	164.7	155.9	147.1	142.0
72.5°	188.1	182.2	176.3	170.5	164.6	157.6	149.3	141.0	132.6	124.3	120.0
75°	150.6	144.9	139.2	133.5	127.8	121.3	114.0	106.7	99.5	92.3	88.7
77.5°	112.5	107.7	102.9	98.0	93.2	87.8	81.9	76.2	70.3	64.4	62.3
80°	88.1	83.6	79.2	74.7	70.3	65.7	61.1	56.4	51.8	47.2	46.7
82.5°	67.1	63.0	58.9	54.8	50.6	47.3	44.6	41.9	39.3	36.6	36.3
85°	37.5	34.4	31.3	28.2	25.1	23.4	22.9	22.5	21.9	21.5	21.2
87.5°	13.3	12.8	12.2	11.7	11.1	10.9	11.1	11.3	11.5	11.7	11.8
90°	2.7	4.8	7.0	9.2	11.4	13.3	14.8	16.4	18.0	19.6	20.8
92.5°	19.1	21.6	24.0	26.5	29.0	30.9	31.9	33.0	34.2	35.2	35.9
95°	53.4	55.2	57.0	58.8	60.5	62.1	63.5	64.9	66.3	67.7	68.2
97.5°	93.3	94.7	96.1	97.6	99.0	100.5	102.1	103.7	105.4	107.0	107.7
100°	124.6	125.4	126.2	127.0	127.8	129.0	130.8	132.6	134.4	136.2	136.6
102.5°	157.4	157.7	158.0	158.3	158.6	159.6	161.2	162.8	164.4	166.1	166.7
105°	207.4	207.6	207.8	207.9	208.2	208.7	209.5	210.3	211.1	211.9	212.4
107.5°	259.9	260.1	260.4	260.6	260.8	261.0	261.2	261.3	261.4	261.5	262.1
110°	295.5	295.9	296.3	296.7	297.1	297.2	296.9	296.8	296.6	296.4	296.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	332.5	332.6	332.7	332.8	332.9	332.7	332.3	332.0	331.6	331.3	331.2
115°	388.1	388.1	388.1	388.1	388.1	387.9	387.4	387.1	386.6	386.3	386.1
117.5°	440.4	440.6	440.7	440.9	441.0	441.0	440.7	440.4	440.1	439.9	439.2
120°	475.3	476.1	476.9	477.7	478.5	478.6	478.0	477.3	476.8	476.2	475.2
122.5°	511.6	511.9	512.2	512.6	512.8	512.9	512.6	512.3	512.0	511.8	511.1
125°	565.2	565.2	565.2	565.2	565.2	565.1	564.9	564.7	564.5	564.3	563.9
127.5°	613.8	614.4	614.9	615.5	616.2	616.3	616.0	615.6	615.4	615.0	614.7
130°	647.9	648.5	649.2	649.7	650.3	650.6	650.6	650.6	650.6	650.6	650.2
132.5°	682.9	683.3	683.7	684.1	684.6	684.7	684.6	684.4	684.2	684.1	683.7
135°	729.0	730.1	731.3	732.5	733.7	734.3	734.3	734.3	734.3	734.3	733.9
137.5°	779.2	779.7	780.2	780.8	781.4	781.8	782.1	782.5	782.7	783.1	782.6
140°	812.6	813.0	813.4	813.8	814.2	814.4	814.4	814.4	814.4	814.4	814.2
142.5°	843.2	843.6	844.0	844.5	844.8	844.9	844.8	844.6	844.5	844.3	844.3
145°	885.6	886.4	887.2	888.0	888.8	889.2	889.5	889.7	889.8	890.0	889.8
147.5°	927.6	928.5	929.5	930.5	931.4	931.8	931.7	931.5	931.3	931.2	931.0
150°	953.2	954.0	954.8	955.6	956.4	956.8	956.8	956.8	956.8	956.8	956.8
152.5°	977.5	977.9	978.4	978.9	979.4	979.6	979.8	980.0	980.2	980.3	980.8
155°	1014.7	1014.7	1014.7	1014.7	1014.7	1014.6	1014.3	1014.1	1014.0	1013.8	1014.6
157.5°	1046.0	1045.6	1045.3	1044.9	1044.6	1044.4	1044.3	1044.3	1044.3	1044.2	1044.8
160°	1064.5	1064.3	1064.1	1063.9	1063.7	1063.5	1063.3	1063.1	1062.9	1062.7	1063.3
162.5°	1081.6	1081.1	1080.6	1080.0	1079.5	1079.1	1079.0	1078.8	1078.6	1078.3	1079.4
165°	1104.6	1103.9	1103.4	1102.8	1102.2	1101.7	1101.3	1100.9	1100.5	1100.1	1101.3
167.5°	1122.2	1121.3	1120.5	1119.7	1118.8	1118.5	1118.5	1118.6	1118.6	1118.7	1119.8
170°	1132.1	1131.1	1130.2	1129.2	1128.2	1127.7	1128.0	1128.2	1128.4	1128.5	1129.8
172.5°	1139.2	1138.4	1137.6	1136.8	1136.0	1135.5	1135.6	1135.6	1135.7	1135.7	1137.0
175°	1149.1	1148.1	1147.1	1146.1	1145.1	1144.5	1144.3	1144.1	1143.9	1143.7	1145.1
177.5°	1152.3	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1149.8
180°	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.2	906.2	906.2	906.2	906.2	906.2	906.2	906.2
2.5°	902.9	904.2	905.5	906.2	906.1	905.9	905.8	905.7
5°	896.8	898.4	899.9	900.5	900.2	899.9	899.6	899.3
7.5°	884.8	885.8	886.9	887.1	886.6	886.1	885.6	885.1
10°	874.1	874.8	875.4	875.4	874.8	874.1	873.5	872.9
12.5°	860.9	861.2	861.7	861.4	860.5	859.7	858.8	857.9
15°	837.6	837.3	837.0	836.3	835.2	834.1	833.0	832.0
17.5°	809.6	808.7	807.8	806.6	804.9	803.3	801.6	800.0
20°	790.0	788.7	787.5	785.9	783.9	781.9	779.9	777.8
22.5°	768.2	766.3	764.5	762.8	761.1	759.5	757.9	756.2
25°	733.1	730.4	727.8	725.8	724.2	722.6	721.1	719.5
27.5°	697.2	694.0	690.8	688.0	685.8	683.6	681.4	679.2
30°	671.6	667.7	663.9	660.8	658.3	655.8	653.4	650.9
32.5°	645.4	641.0	636.4	633.0	630.7	628.4	626.0	623.7
35°	606.4	601.1	595.9	591.9	589.2	586.3	583.5	580.8
37.5°	564.5	558.7	552.8	548.5	545.6	542.9	540.1	537.3
40°	536.6	530.1	523.6	519.1	516.2	513.4	510.7	507.9
42.5°	509.2	502.6	496.0	491.2	488.3	485.4	482.5	479.7
45°	467.2	459.6	452.0	446.8	444.1	441.3	438.5	435.8
47.5°	424.8	417.0	409.1	403.7	400.6	397.6	394.6	391.5
50°	396.7	389.1	381.3	376.0	373.1	370.1	367.2	364.3
52.5°	368.7	360.9	353.1	347.7	344.6	341.5	338.5	335.5
55°	327.4	319.4	311.4	305.9	303.0	300.1	297.1	294.2
57.5°	287.0	278.9	270.8	265.6	263.4	261.2	259.0	256.7
60°	260.1	252.1	244.1	238.9	236.4	233.9	231.5	229.0
62.5°	233.6	226.2	218.8	214.1	212.1	210.2	208.2	206.3
65°	195.6	189.0	182.4	178.1	176.3	174.4	172.5	170.7
67.5°	160.7	155.0	149.3	145.4	143.4	141.3	139.3	137.2
70°	137.0	131.9	126.7	123.4	121.9	120.4	118.8	117.3
72.5°	115.7	111.3	106.9	104.1	102.6	101.2	99.8	98.4
75°	85.2	81.7	78.1	75.9	74.9	74.0	73.1	72.1
77.5°	60.3	58.2	56.1	54.9	54.7	54.4	54.1	53.9
80°	46.3	45.8	45.3	45.0	44.9	44.7	44.6	44.4
82.5°	35.9	35.6	35.3	35.0	34.9	34.7	34.6	34.4
85°	20.9	20.6	20.2	20.2	20.2	20.2	20.2	20.2
87.5°	11.9	12.0	12.1	12.3	12.5	12.8	12.9	13.1
90°	21.9	23.2	24.3	25.1	25.5	25.9	26.3	26.7
92.5°	36.6	37.4	38.1	38.6	38.8	39.1	39.3	39.5
95°	68.8	69.5	70.0	70.4	70.4	70.4	70.4	70.4
97.5°	108.4	109.1	109.9	110.2	110.2	110.2	110.2	110.2
100°	137.0	137.3	137.8	137.9	137.9	137.9	137.9	137.9
102.5°	167.2	167.7	168.3	168.6	168.8	169.0	169.2	169.2
105°	213.0	213.7	214.2	214.8	215.3	216.0	216.6	217.1
107.5°	262.6	263.1	263.7	263.9	263.9	263.9	263.9	263.8
110°	295.6	295.2	294.8	294.9	295.5	296.0	296.7	297.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	331.1	331.0	331.0	331.0	331.1	331.2	331.4	331.4
115°	385.8	385.7	385.5	385.3	385.1	384.9	384.7	384.5
117.5°	438.5	437.8	437.2	436.7	436.2	435.9	435.4	435.1
120°	474.2	473.2	472.3	471.9	472.3	472.7	473.1	473.5
122.5°	510.4	509.8	509.1	508.4	507.7	506.9	506.2	505.5
125°	563.5	563.1	562.7	562.3	562.0	561.5	561.2	560.7
127.5°	614.2	613.9	613.4	613.1	612.8	612.4	612.2	611.8
130°	649.9	649.4	649.1	648.5	647.6	646.8	646.0	645.2
132.5°	683.3	682.9	682.5	682.2	681.8	681.5	681.2	680.9
135°	733.5	733.1	732.7	732.2	731.6	731.0	730.4	729.9
137.5°	782.0	781.5	781.0	780.8	781.0	781.0	781.1	781.3
140°	814.0	813.8	813.6	813.4	813.2	813.0	812.8	812.6
142.5°	844.2	844.2	844.2	844.1	844.1	844.0	844.0	843.9
145°	889.7	889.5	889.2	888.9	888.2	887.7	887.1	886.4
147.5°	930.9	930.7	930.5	930.3	930.1	930.0	929.8	929.6
150°	956.8	956.8	956.8	956.7	956.5	956.3	956.1	955.9
152.5°	981.2	981.7	982.2	982.2	981.7	981.1	980.6	980.1
155°	1015.4	1016.1	1016.9	1016.9	1016.1	1015.4	1014.6	1013.8
157.5°	1045.4	1046.0	1046.6	1046.5	1045.9	1045.2	1044.6	1043.8
160°	1063.9	1064.5	1065.1	1064.9	1063.9	1062.9	1061.9	1061.0
162.5°	1080.5	1081.6	1082.6	1082.7	1081.7	1080.8	1079.8	1078.7
165°	1102.5	1103.7	1104.8	1105.0	1104.3	1103.5	1102.7	1101.9
167.5°	1121.0	1122.2	1123.4	1123.4	1122.1	1120.9	1119.6	1118.5
170°	1131.0	1132.1	1133.4	1133.2	1131.8	1130.4	1129.1	1127.7
172.5°	1138.4	1139.7	1141.1	1141.0	1139.7	1138.3	1136.9	1135.5
175°	1146.5	1147.9	1149.2	1149.2	1147.9	1146.5	1145.1	1143.7
177.5°	1150.9	1152.0	1153.2	1153.1	1151.8	1150.5	1149.2	1148.0
180°	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8

(END OF REPORT)