

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: P331685-830

Luminaire Tested: **SA2XXRDIP-C675D530U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331685-830
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: SA2XXRDIP-C675D530U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

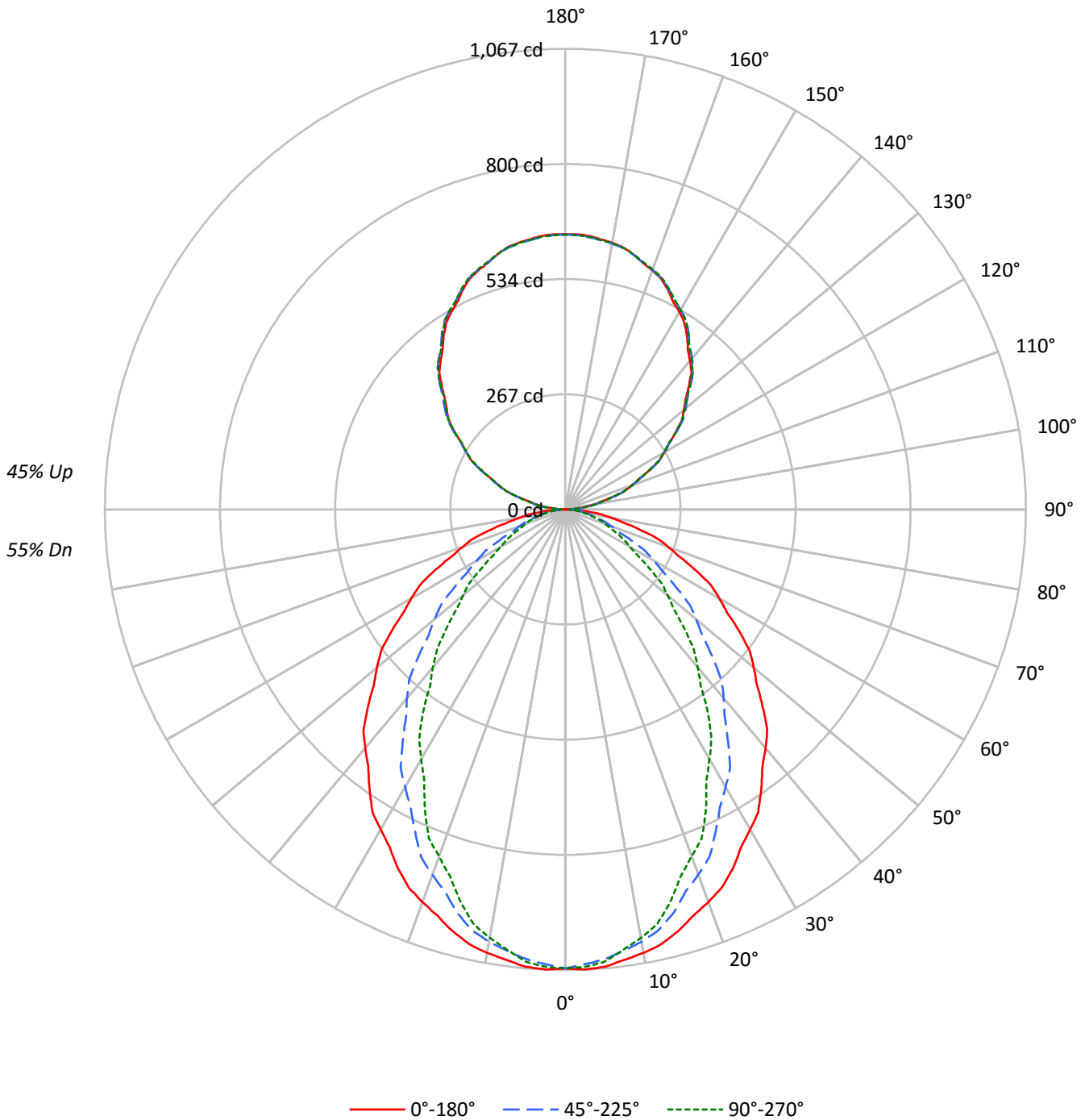
Lumens per Lamp: N/A
Luminaire Lumens: 3970.2 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.3
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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	99	95	92	88	92	89	85	83	76	74	72	65	63	62	55	53	52	47				
2	91	84	78	73	84	78	73	69	68	64	60	58	55	52	49	47	45	41				
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	41	39	35				
4	77	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34	31				
5	70	59	51	45	65	55	48	43	48	43	39	42	38	34	36	32	30	27				
6	65	53	45	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24				
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24	21				
8	56	44	36	31	52	41	35	30	37	31	27	32	27	24	28	24	22	19				
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	26	22	20	18				
10	49	37	30	25	46	35	29	24	31	26	22	27	23	20	24	20	18	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17166	17166	17166
5°	17232	16951	17045
10°	17100	16674	16531
15°	16904	16181	15714
20°	16632	15474	14698
25°	16352	14672	13714
30°	15966	13848	12450
35°	15589	12952	11341
40°	15209	12026	10058
45°	14764	10985	8896
50°	14307	9934	7759
55°	13841	8802	6663
60°	13298	7611	5532
65°	12684	6395	5039
70°	11948	5268	4631
75°	11042	4803	4323
80°	9754	4296	3933
85°	7669	3390	3390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	2.5
10°-20°	273.3	6.9
20°-30°	383.7	9.7
30°-40°	418.4	10.5
40°-50°	384.7	9.7
50°-60°	302.2	7.6
60°-70°	197.0	5.0
70°-80°	101.6	2.6
80°-90°	28.9	0.7
90°-100°	40.4	1.0
100°-110°	125.3	3.2
110°-120°	214.3	5.4
120°-130°	281.8	7.1
130°-140°	316.2	8.0
140°-150°	310.1	7.8
150°-160°	260.1	6.6
160°-170°	172.5	4.3
170°-180°	60.3	1.5
0°-30°	756.5	19.1
0°-40°	1174.9	29.6
0°-60°	1861.8	46.9
0°-90°	2189.3	55.1
90°-120°	380.0	9.6
90°-150°	1288.0	32.4
90°-180°	1781.0	44.9
0°-180°	3970.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1063	1058	1046	1054	1052	101
15°	1011	999	968	950	940	285
25°	918	885	824	786	770	422
35°	791	740	657	599	575	495
45°	647	580	481	415	390	499
55°	492	415	313	257	237	439
65°	332	254	167	136	132	329
75°	177	112	77	71	69	187
85°	41	22	18	18	18	49
90°	1	7	19	18	18	3
95°	28	33	34	34	33	32
105°	116	117	118	119	119	122
115°	215	218	217	217	215	213
125°	313	317	316	314	314	279
135°	405	410	412	411	410	312
145°	491	495	498	499	497	307
155°	562	563	565	567	566	258
165°	611	611	611	614	612	172
175°	636	634	633	637	634	60
180°	637	637	637	637	637	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1067.1	1066.2	1065.4	1064.5	1063.7	1062.2	1060.4	1058.5	1056.7	1054.8	1056.5
5°	1063.2	1062.2	1061.1	1060.0	1058.9	1057.1	1054.2	1051.5	1048.7	1045.9	1047.8
7.5°	1052.3	1050.9	1049.6	1048.3	1047.0	1044.6	1041.4	1038.2	1034.9	1031.7	1032.2
10°	1043.0	1041.5	1040.0	1038.5	1037.0	1034.2	1029.8	1025.6	1021.3	1017.0	1016.4
12.5°	1031.4	1029.6	1027.7	1026.0	1024.1	1020.5	1015.0	1009.6	1004.0	998.5	997.4
15°	1011.3	1008.9	1006.5	1004.2	1001.8	997.0	989.8	982.5	975.2	968.0	963.9
17.5°	986.5	982.9	979.3	975.6	972.0	965.6	956.3	947.0	937.6	928.3	923.5
20°	968.0	963.7	959.4	955.2	950.8	943.4	932.6	922.0	911.3	900.6	895.2
22.5°	947.9	943.2	938.4	933.6	928.8	920.4	908.3	896.3	884.2	872.1	865.3
25°	917.9	911.1	904.3	897.4	890.6	880.1	866.0	851.9	837.7	823.6	814.8
27.5°	881.7	874.3	866.9	859.4	852.0	840.3	824.4	808.5	792.6	776.7	766.5
30°	856.4	848.2	840.1	832.0	823.9	811.2	794.1	777.0	759.9	742.8	731.9
32.5°	831.7	822.2	812.8	803.2	793.7	780.2	762.8	745.4	727.9	710.5	698.0
35°	790.9	780.0	769.1	758.2	747.3	732.4	713.6	694.8	676.0	657.1	643.7
37.5°	750.2	738.1	726.1	714.2	702.2	686.2	666.2	646.1	626.0	606.0	591.2
40°	721.6	708.8	696.0	683.2	670.3	653.6	632.8	612.1	591.4	570.6	555.4
42.5°	692.4	678.9	665.3	651.9	638.4	620.9	599.5	578.1	556.6	535.2	519.4
45°	646.6	632.3	617.9	603.6	589.3	570.9	548.5	526.0	503.5	481.1	465.9
47.5°	601.9	586.7	571.6	556.4	541.2	522.1	498.9	475.7	452.5	429.3	414.2
50°	569.6	554.4	539.2	524.1	508.9	489.6	466.0	442.5	419.0	395.5	380.7
52.5°	538.1	522.2	506.3	490.5	474.6	455.2	432.2	409.2	386.2	363.2	348.9
55°	491.7	475.0	458.4	441.7	425.0	405.1	382.0	358.9	335.8	312.7	299.9
57.5°	444.1	427.1	409.9	392.9	375.7	356.1	333.8	311.7	289.5	267.3	255.5
60°	411.8	394.7	377.6	360.5	343.4	323.9	301.8	279.7	257.8	235.7	224.8
62.5°	380.2	363.2	346.0	328.9	311.8	292.8	271.8	250.8	229.8	208.8	198.4
65°	332.0	314.6	297.3	280.0	262.7	244.4	225.2	205.9	186.6	167.4	160.1
67.5°	285.4	268.2	251.0	233.8	216.6	199.3	182.0	164.8	147.4	130.1	126.8
70°	253.1	236.4	219.7	203.0	186.3	170.6	155.9	141.1	126.4	111.6	109.4
72.5°	222.3	206.2	190.3	174.3	158.3	144.4	132.5	120.6	108.9	97.0	95.2
75°	177.0	162.1	147.1	132.1	117.2	106.0	98.8	91.5	84.3	77.0	75.5
77.5°	132.6	119.4	106.3	93.2	80.1	71.7	68.2	64.8	61.3	57.8	56.8
80°	104.9	94.0	83.0	72.2	61.3	54.8	52.6	50.4	48.4	46.2	45.3
82.5°	79.5	71.0	62.5	53.9	45.4	40.4	39.0	37.5	36.1	34.7	34.1
85°	41.4	36.9	32.4	27.9	23.4	20.8	20.2	19.6	18.9	18.3	18.3
87.5°	12.4	11.3	10.3	9.1	8.1	7.8	8.4	8.9	9.4	9.9	9.7
90°	0.6	2.0	3.4	4.8	6.3	8.3	10.9	13.6	16.2	18.9	18.6
92.5°	9.6	10.7	11.7	12.7	13.8	14.6	15.3	15.8	16.5	17.1	17.2
95°	28.0	29.1	30.3	31.6	32.7	33.5	33.6	33.9	34.1	34.4	34.4
97.5°	51.1	52.1	53.2	54.2	55.2	56.0	56.5	56.9	57.4	57.9	57.9
100°	68.2	69.2	70.1	71.2	72.1	72.8	73.1	73.4	73.8	74.2	74.2
102.5°	86.3	87.1	87.8	88.6	89.4	90.0	90.5	90.9	91.3	91.8	91.9
105°	115.6	115.9	116.3	116.6	117.0	117.3	117.5	117.7	118.0	118.3	118.5
107.5°	145.1	145.5	146.1	146.6	147.1	147.4	147.4	147.4	147.4	147.4	147.5
110°	163.9	164.7	165.3	166.1	166.8	167.1	167.1	167.1	167.1	167.1	167.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.5	185.3	186.0	186.7	187.5	187.8	187.7	187.6	187.5	187.4	187.1
115°	215.0	215.7	216.4	217.2	217.8	218.1	217.8	217.6	217.4	217.2	217.1
117.5°	245.3	246.3	247.2	248.2	249.1	249.3	248.6	247.9	247.2	246.6	246.3
120°	265.5	266.5	267.4	268.3	269.4	269.4	268.3	267.4	266.5	265.5	265.5
122.5°	284.0	285.1	286.3	287.5	288.6	288.8	288.1	287.5	286.8	286.2	285.9
125°	312.8	313.9	315.0	316.0	317.1	317.4	317.1	316.8	316.4	316.0	315.7
127.5°	340.8	342.2	343.6	345.0	346.3	346.8	346.4	345.9	345.5	345.1	344.6
130°	358.5	360.1	361.6	363.2	364.7	365.3	365.1	364.9	364.7	364.4	364.2
132.5°	378.2	379.6	380.8	382.1	383.3	384.0	384.1	384.1	384.2	384.2	383.7
135°	404.7	406.0	407.4	408.7	410.0	410.8	410.9	411.2	411.5	411.7	411.6
137.5°	432.5	433.7	434.7	435.8	436.9	437.5	437.9	438.2	438.5	438.8	438.7
140°	449.3	450.4	451.5	452.5	453.6	454.5	455.1	455.6	456.3	456.9	456.9
142.5°	466.6	467.6	468.7	469.8	470.8	471.6	472.0	472.4	472.8	473.2	473.3
145°	491.3	492.1	492.9	493.8	494.6	495.4	496.1	496.8	497.6	498.2	498.3
147.5°	513.3	514.3	515.3	516.3	517.3	518.0	518.5	519.0	519.4	520.0	520.2
150°	528.4	529.0	529.8	530.5	531.2	531.8	532.3	532.7	533.2	533.8	534.0
152.5°	541.7	542.4	543.1	543.8	544.5	545.2	545.7	546.3	546.9	547.5	547.9
155°	561.7	562.0	562.4	562.7	563.1	563.5	563.8	564.2	564.5	564.9	565.5
157.5°	578.7	579.0	579.2	579.5	579.8	579.9	580.1	580.4	580.6	580.8	581.6
160°	589.1	589.3	589.6	589.7	590.0	590.2	590.3	590.4	590.6	590.7	591.4
162.5°	598.5	598.6	598.6	598.7	598.7	598.8	598.9	599.1	599.2	599.3	600.1
165°	611.1	611.0	610.9	610.8	610.7	610.6	610.6	610.6	610.6	610.6	611.4
167.5°	621.6	621.3	620.9	620.6	620.2	620.0	620.0	620.0	619.9	619.9	620.8
170°	627.3	626.9	626.5	626.1	625.8	625.6	625.5	625.3	625.2	625.1	625.9
172.5°	631.1	630.7	630.4	630.0	629.7	629.4	629.3	629.2	629.1	629.0	629.8
175°	635.8	635.5	635.1	634.8	634.4	634.1	633.9	633.7	633.4	633.1	634.0
177.5°	637.8	637.4	637.2	636.9	636.6	636.4	636.2	636.0	635.8	635.7	636.2
180°	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1058.2	1059.9	1061.6	1062.2	1062.0	1061.6	1061.3	1060.9
5°	1049.7	1051.7	1053.6	1054.2	1053.6	1052.9	1052.3	1051.7
7.5°	1032.7	1033.3	1033.9	1033.6	1032.5	1031.4	1030.3	1029.2
10°	1015.8	1015.1	1014.5	1013.5	1012.2	1011.0	1009.7	1008.3
12.5°	996.3	995.1	993.9	992.3	990.1	988.1	985.9	983.7
15°	959.9	955.7	951.7	948.6	946.5	944.3	942.2	940.1
17.5°	918.7	913.8	909.0	904.7	901.1	897.4	893.7	890.0
20°	889.9	884.6	879.2	874.2	869.5	864.8	860.1	855.4
22.5°	858.4	851.5	844.6	839.4	835.8	832.4	828.9	825.4
25°	806.1	797.3	788.5	782.6	779.4	776.2	773.0	769.8
27.5°	756.2	746.0	735.8	728.1	723.0	717.9	712.8	707.8
30°	721.0	710.1	699.2	690.9	685.0	679.3	673.5	667.8
32.5°	685.6	673.2	660.7	651.8	646.3	640.9	635.5	630.1
35°	630.3	616.8	603.3	594.2	589.5	584.8	580.1	575.4
37.5°	576.3	561.5	546.7	536.5	531.1	525.8	520.4	515.0
40°	540.2	525.0	509.8	499.5	493.9	488.3	482.8	477.2
42.5°	503.8	488.0	472.4	461.8	456.5	451.1	445.7	440.3
45°	450.7	435.5	420.4	410.2	405.1	399.9	394.8	389.6
47.5°	399.2	384.1	368.9	359.1	354.4	349.8	345.1	340.4
50°	366.0	351.2	336.5	326.8	322.3	317.8	313.4	308.9
52.5°	334.7	320.4	306.1	297.0	292.8	288.7	284.6	280.4
55°	287.1	274.2	261.4	253.0	248.9	244.8	240.7	236.7
57.5°	243.7	232.1	220.3	212.6	209.2	205.9	202.4	199.0
60°	214.0	203.0	192.1	184.9	181.5	178.1	174.7	171.3
62.5°	188.0	177.6	167.2	161.0	158.9	156.9	154.9	152.8
65°	152.9	145.6	138.4	134.4	133.7	133.1	132.4	131.9
67.5°	123.4	120.1	116.8	114.7	114.0	113.4	112.7	112.0
70°	107.4	105.2	103.0	101.6	100.7	99.8	99.0	98.1
72.5°	93.4	91.6	89.8	88.7	88.1	87.7	87.1	86.6
75°	74.0	72.5	71.0	70.1	69.9	69.7	69.5	69.3
77.5°	56.0	55.1	54.3	53.7	53.3	53.1	52.7	52.3
80°	44.5	43.6	42.8	42.3	42.3	42.3	42.3	42.3
82.5°	33.6	33.1	32.6	32.3	32.3	32.3	32.3	32.3
85°	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	9.5	9.2	9.0	9.0	9.0	9.0	9.0	9.0
90°	18.4	18.1	17.8	17.8	17.9	18.0	18.2	18.3
92.5°	17.2	17.2	17.2	17.3	17.3	17.3	17.4	17.4
95°	34.4	34.4	34.4	34.3	34.0	33.8	33.6	33.4
97.5°	57.9	57.9	57.9	57.8	57.8	57.8	57.8	57.7
100°	74.2	74.2	74.2	74.1	74.0	73.9	73.8	73.6
102.5°	92.0	92.1	92.2	92.2	92.1	91.9	91.8	91.7
105°	118.8	118.9	119.2	119.3	119.3	119.3	119.3	119.3
107.5°	147.6	147.7	147.8	147.5	146.9	146.5	145.9	145.3
110°	167.1	167.1	167.1	167.0	166.6	166.3	165.9	165.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	186.8	186.5	186.2	186.0	185.7	185.4	185.1	184.9
115°	216.9	216.8	216.7	216.4	216.0	215.7	215.4	215.0
117.5°	246.0	245.7	245.4	245.2	244.8	244.4	244.0	243.6
120°	265.5	265.5	265.5	265.3	264.9	264.7	264.3	263.9
122.5°	285.6	285.3	285.0	284.7	284.5	284.2	284.0	283.7
125°	315.3	315.0	314.6	314.3	314.2	314.1	314.0	313.9
127.5°	344.2	343.7	343.4	342.9	342.5	342.1	341.8	341.4
130°	363.9	363.7	363.4	363.1	362.6	362.1	361.7	361.2
132.5°	383.1	382.6	382.1	381.6	381.3	380.9	380.5	380.1
135°	411.5	411.3	411.2	410.9	410.7	410.3	409.9	409.5
137.5°	438.6	438.5	438.4	438.1	437.6	437.2	436.7	436.2
140°	456.9	456.9	456.9	456.7	456.1	455.6	455.2	454.7
142.5°	473.3	473.4	473.5	473.3	472.9	472.4	471.9	471.5
145°	498.5	498.6	498.7	498.5	498.0	497.6	497.1	496.6
147.5°	520.5	520.8	521.0	520.9	520.5	520.0	519.5	519.1
150°	534.4	534.8	535.2	535.2	534.8	534.4	534.0	533.8
152.5°	548.4	548.8	549.3	549.3	548.8	548.4	547.9	547.5
155°	566.1	566.7	567.3	567.4	567.0	566.7	566.3	566.0
157.5°	582.4	583.2	584.1	584.2	583.6	583.1	582.5	581.8
160°	592.1	592.9	593.5	593.7	593.2	592.8	592.2	591.7
162.5°	600.9	601.7	602.6	602.7	602.1	601.5	601.0	600.4
165°	612.3	613.1	613.9	614.1	613.4	612.8	612.3	611.6
167.5°	621.6	622.5	623.3	623.4	622.7	622.2	621.5	620.9
170°	626.8	627.6	628.4	628.5	627.7	627.1	626.3	625.7
172.5°	630.7	631.5	632.3	632.4	631.7	630.9	630.2	629.5
175°	634.8	635.7	636.5	636.6	635.8	635.1	634.4	633.7
177.5°	636.8	637.3	637.9	637.9	637.3	636.8	636.2	635.7
180°	636.9	636.9	636.9	636.9	636.9	636.9	636.9	636.9

(END OF REPORT)