

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: P331655-935

Luminaire Tested: **SA2XXRDIP-C485D530U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331655-935
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-C485D530U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 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

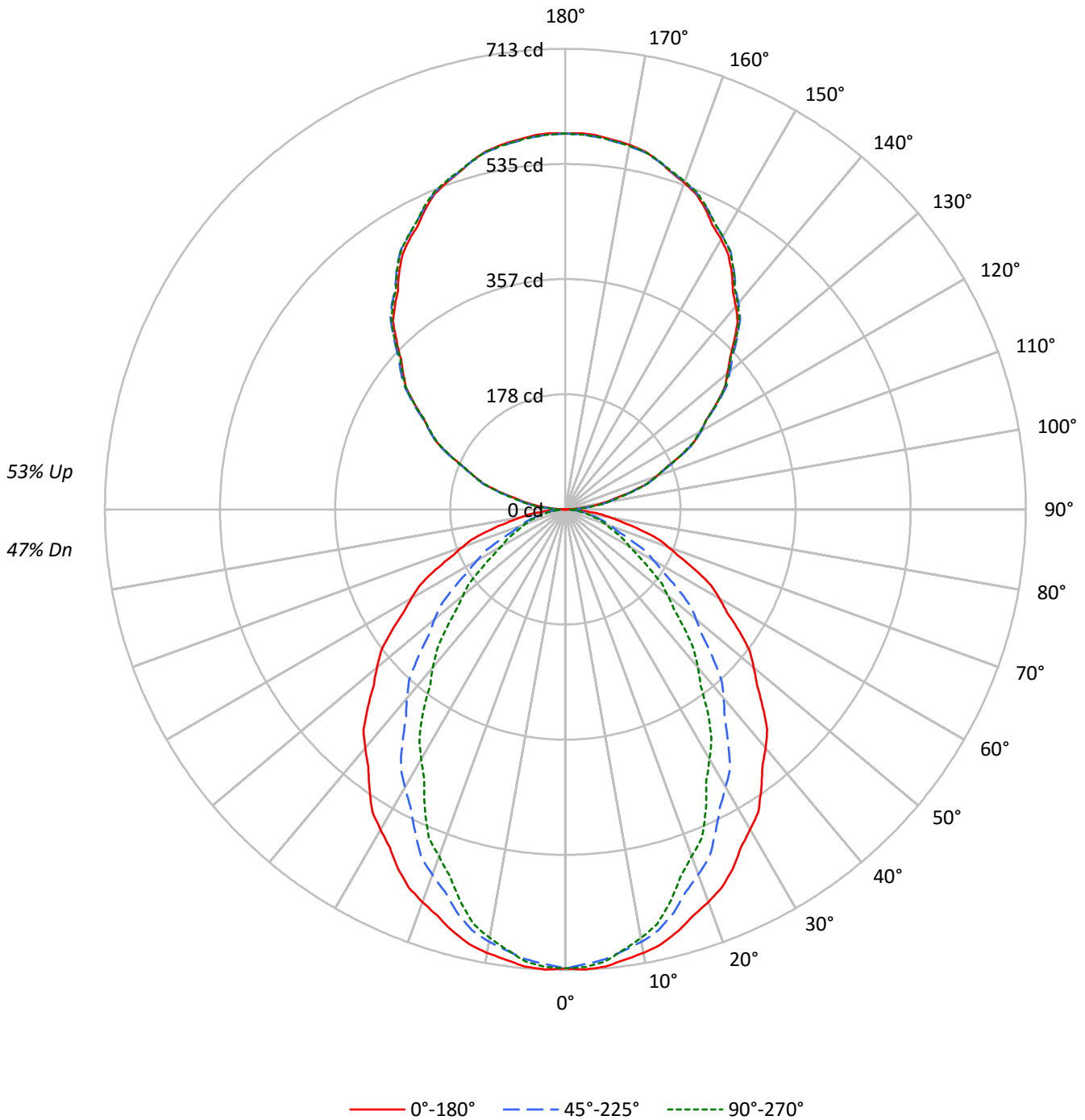
Lumens per Lamp: N/A
Luminaire Lumens: 3090.6 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47				
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41				
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35				
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	38	36	34	30				
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	35	32	30	26				
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	31	29	26	23				
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23	20				
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21	18				
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	17				
9	51	39	32	27	47	37	30	25	32	26	23	27	23	20	22	19	17	15				
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	2.2
10°-20°	182.6	5.9
20°-30°	256.4	8.3
30°-40°	279.6	9.0
40°-50°	257.1	8.3
50°-60°	201.9	6.5
60°-70°	131.7	4.3
70°-80°	67.9	2.2
80°-90°	19.9	0.6
90°-100°	36.9	1.2
100°-110°	114.5	3.7
110°-120°	195.7	6.3
120°-130°	257.4	8.3
130°-140°	288.9	9.3
140°-150°	283.3	9.2
150°-160°	237.6	7.7
160°-170°	157.6	5.1
170°-180°	55.1	1.8
0°-30°	505.6	16.4
0°-40°	785.2	25.4
0°-60°	1244.3	40.3
0°-90°	1463.7	47.4
90°-120°	347.1	11.2
90°-150°	1176.6	38.1
90°-180°	1627.0	52.6
0°-180°	3090.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	0	7	17	16	17	2
95°	26	30	31	31	30	29
105°	106	107	108	109	109	112
115°	196	199	198	198	196	194
125°	286	290	289	287	287	255
135°	370	375	376	376	374	285
145°	449	452	455	456	454	280
155°	513	515	516	518	517	236
165°	558	558	558	561	559	157
175°	581	579	578	581	579	55
180°	582	582	582	582	582	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	7.7	7.1	6.4	5.7	5.6	6.1	6.6	7.1	7.6	7.4
90°	0.5	1.8	3.1	4.4	5.8	7.6	10.0	12.4	14.8	17.2	17.0
92.5°	8.8	9.7	10.7	11.6	12.6	13.3	13.9	14.5	15.1	15.6	15.7
95°	25.6	26.6	27.7	28.8	29.9	30.6	30.7	31.0	31.2	31.4	31.4
97.5°	46.7	47.6	48.6	49.5	50.5	51.1	51.6	52.0	52.4	52.9	52.9
100°	62.3	63.2	64.1	65.0	65.9	66.5	66.8	67.1	67.4	67.8	67.8
102.5°	78.9	79.6	80.2	80.9	81.6	82.2	82.7	83.0	83.4	83.9	83.9
105°	105.6	105.9	106.2	106.5	106.9	107.1	107.4	107.5	107.8	108.1	108.2
107.5°	132.5	132.9	133.5	133.9	134.4	134.7	134.7	134.7	134.7	134.7	134.7
110°	149.7	150.4	151.0	151.7	152.4	152.7	152.7	152.7	152.7	152.7	152.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.6	169.3	169.9	170.6	171.3	171.5	171.4	171.3	171.3	171.2	170.9
115°	196.4	197.1	197.7	198.4	199.0	199.2	199.0	198.8	198.5	198.4	198.3
117.5°	224.1	225.0	225.8	226.7	227.6	227.7	227.1	226.4	225.8	225.2	225.0
120°	242.5	243.4	244.3	245.1	246.1	246.1	245.1	244.3	243.4	242.5	242.5
122.5°	259.4	260.5	261.6	262.6	263.6	263.8	263.2	262.6	262.0	261.4	261.1
125°	285.8	286.7	287.7	288.7	289.6	290.0	289.6	289.4	289.0	288.7	288.3
127.5°	311.3	312.6	313.8	315.1	316.3	316.8	316.4	316.0	315.6	315.2	314.8
130°	327.5	328.9	330.3	331.7	333.1	333.7	333.6	333.3	333.1	332.9	332.7
132.5°	345.5	346.7	347.8	349.0	350.2	350.8	350.9	350.9	350.9	350.9	350.5
135°	369.7	370.9	372.1	373.3	374.5	375.2	375.4	375.7	375.9	376.1	376.0
137.5°	395.1	396.1	397.1	398.1	399.1	399.7	400.0	400.3	400.5	400.8	400.7
140°	410.4	411.5	412.4	413.4	414.4	415.2	415.7	416.2	416.8	417.3	417.3
142.5°	426.2	427.1	428.2	429.1	430.1	430.8	431.2	431.5	431.9	432.2	432.3
145°	448.8	449.5	450.3	451.1	451.9	452.5	453.1	453.8	454.5	455.1	455.2
147.5°	468.9	469.8	470.7	471.7	472.5	473.2	473.6	474.1	474.5	475.0	475.2
150°	482.7	483.3	484.0	484.6	485.3	485.8	486.2	486.6	487.1	487.6	487.8
152.5°	494.8	495.5	496.1	496.8	497.4	498.0	498.5	499.0	499.6	500.2	500.5
155°	513.1	513.4	513.8	514.0	514.4	514.7	515.1	515.4	515.7	516.0	516.6
157.5°	528.7	528.9	529.1	529.3	529.6	529.8	529.9	530.2	530.4	530.5	531.3
160°	538.1	538.3	538.6	538.7	539.0	539.2	539.2	539.3	539.5	539.6	540.3
162.5°	546.7	546.8	546.8	546.9	546.9	547.0	547.1	547.3	547.3	547.4	548.2
165°	558.3	558.1	558.0	557.9	557.8	557.8	557.8	557.8	557.8	557.8	558.5
167.5°	567.8	567.6	567.2	566.9	566.5	566.4	566.4	566.4	566.3	566.3	567.1
170°	573.0	572.7	572.3	572.0	571.7	571.4	571.4	571.2	571.1	571.0	571.8
172.5°	576.5	576.2	575.8	575.5	575.2	575.0	574.9	574.8	574.6	574.5	575.3
175°	580.8	580.5	580.1	579.9	579.5	579.3	579.0	578.9	578.6	578.3	579.1
177.5°	582.6	582.3	582.0	581.8	581.5	581.3	581.2	581.0	580.8	580.7	581.2
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	7.2	7.1	6.9	6.9	6.9	6.9	6.9	7.0
90°	16.8	16.5	16.3	16.3	16.4	16.4	16.6	16.7
92.5°	15.7	15.8	15.8	15.8	15.8	15.8	15.9	15.9
95°	31.4	31.4	31.4	31.3	31.1	30.9	30.7	30.5
97.5°	52.9	52.9	52.9	52.8	52.8	52.8	52.8	52.7
100°	67.8	67.8	67.8	67.7	67.6	67.5	67.4	67.2
102.5°	84.0	84.1	84.2	84.2	84.1	83.9	83.9	83.8
105°	108.5	108.7	108.9	109.0	109.0	109.0	109.0	109.0
107.5°	134.8	134.9	135.0	134.7	134.2	133.8	133.3	132.8
110°	152.7	152.7	152.7	152.6	152.2	151.9	151.5	151.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	170.7	170.4	170.1	169.9	169.6	169.4	169.1	168.9
115°	198.1	198.0	197.9	197.7	197.3	197.1	196.7	196.4
117.5°	224.7	224.5	224.2	223.9	223.6	223.3	222.9	222.6
120°	242.5	242.5	242.5	242.4	242.0	241.8	241.4	241.1
122.5°	260.9	260.6	260.4	260.1	259.8	259.6	259.4	259.2
125°	288.0	287.7	287.4	287.1	287.1	287.0	286.8	286.7
127.5°	314.4	314.0	313.7	313.2	312.9	312.5	312.2	311.9
130°	332.4	332.3	332.0	331.7	331.2	330.8	330.4	329.9
132.5°	350.0	349.5	349.0	348.6	348.3	347.9	347.6	347.2
135°	375.9	375.7	375.7	375.4	375.1	374.8	374.4	374.1
137.5°	400.6	400.5	400.5	400.2	399.8	399.3	398.9	398.5
140°	417.3	417.3	417.3	417.2	416.6	416.2	415.8	415.3
142.5°	432.4	432.5	432.6	432.4	432.0	431.5	431.1	430.7
145°	455.4	455.5	455.6	455.4	455.0	454.5	454.1	453.7
147.5°	475.4	475.7	476.0	475.9	475.4	475.0	474.6	474.2
150°	488.2	488.5	488.9	488.9	488.5	488.2	487.8	487.6
152.5°	500.9	501.4	501.8	501.8	501.4	500.9	500.5	500.2
155°	517.1	517.6	518.2	518.3	518.0	517.6	517.3	517.0
157.5°	532.0	532.8	533.6	533.6	533.1	532.6	532.1	531.5
160°	540.9	541.6	542.2	542.3	541.9	541.5	541.0	540.5
162.5°	548.9	549.7	550.4	550.5	550.0	549.5	549.0	548.5
165°	559.3	560.1	560.8	560.9	560.3	559.8	559.3	558.7
167.5°	567.8	568.6	569.4	569.5	568.9	568.3	567.7	567.1
170°	572.6	573.3	574.0	574.1	573.4	572.8	572.1	571.5
172.5°	576.1	576.9	577.6	577.6	577.0	576.4	575.7	575.1
175°	579.9	580.7	581.4	581.5	580.8	580.1	579.5	578.9
177.5°	581.7	582.2	582.7	582.7	582.2	581.7	581.2	580.7
180°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8

(END OF REPORT)