

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: P331661-935

Luminaire Tested: **SA2XXRDIP-C485D725U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331661-935
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-C485D725U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

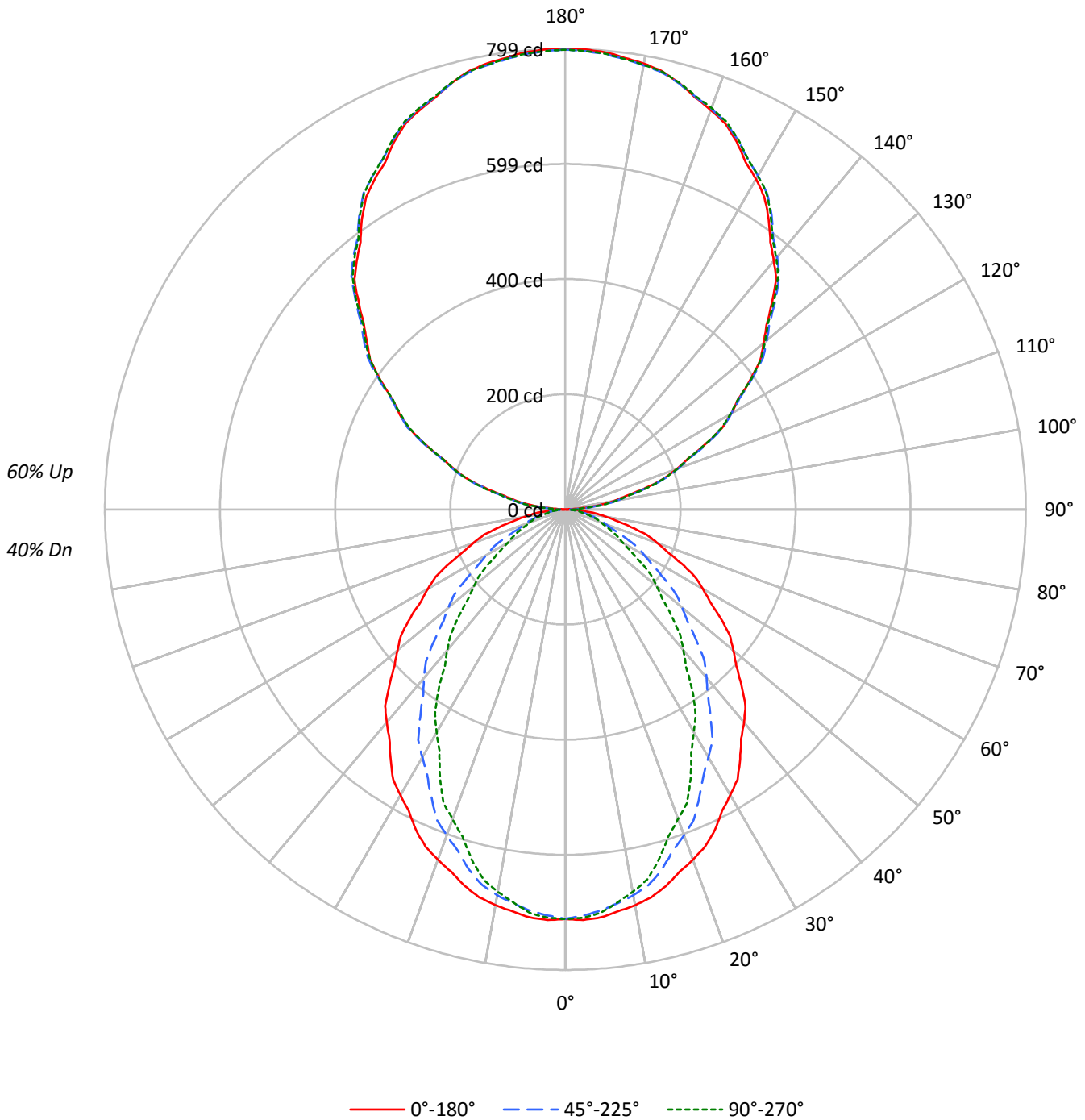
Lumens per Lamp: N/A
Luminaire Lumens: 3694.5 lumens
Efficiency: N/A
Efficacy: 96.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 38.4
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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40				
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40	34				
2	88	80	75	70	79	74	69	64	60	57	54	48	46	44	37	36	34	29				
3	80	71	64	59	73	65	59	54	54	49	46	43	40	37	33	31	30	25				
4	73	63	56	50	67	58	51	46	48	43	39	39	35	32	30	28	26	22				
5	67	56	49	43	61	52	45	40	43	38	34	35	31	28	27	25	23	19				
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	22	20	17				
7	58	46	38	33	52	42	35	31	35	30	26	29	25	22	23	20	18	15				
8	53	42	34	29	49	38	32	27	32	27	23	26	23	20	21	18	16	14				
9	50	38	31	26	45	35	29	24	30	25	21	24	21	18	19	17	15	13				
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	12				

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	1.8
10°-20°	182.6	4.9
20°-30°	256.4	6.9
30°-40°	279.6	7.6
40°-50°	257.1	7.0
50°-60°	201.9	5.5
60°-70°	131.7	3.6
70°-80°	67.9	1.8
80°-90°	20.8	0.6
90°-100°	50.5	1.4
100°-110°	157.0	4.2
110°-120°	268.3	7.3
120°-130°	352.8	9.5
130°-140°	396.0	10.7
140°-150°	388.3	10.5
150°-160°	325.7	8.8
160°-170°	216.0	5.8
170°-180°	75.5	2.0
0°-30°	505.6	13.7
0°-40°	785.2	21.3
0°-60°	1244.3	33.7
0°-90°	1464.6	39.6
90°-120°	475.8	12.9
90°-150°	1612.8	43.7
90°-180°	2230.0	60.4
0°-180°	3694.5	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°	1	9	24	22	23	3
95°	35	41	43	43	42	40
105°	145	147	148	149	149	153
115°	269	273	272	271	269	266
125°	392	397	396	394	393	350
135°	507	514	516	515	513	391
145°	615	620	624	624	622	384
155°	703	705	707	710	709	324
165°	765	765	764	769	766	216
175°	796	794	793	797	794	76
180°	798	798	798	798	798	



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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	7.8	7.2	6.7	6.1	6.2	6.9	7.5	8.2	8.9	8.6
90°	0.7	2.5	4.3	6.0	7.8	10.4	13.7	17.0	20.2	23.6	23.2
92.5°	12.0	13.3	14.6	15.9	17.2	18.3	19.0	19.8	20.7	21.4	21.4
95°	35.0	36.5	38.0	39.5	41.0	41.8	42.2	42.4	42.8	43.0	43.0
97.5°	64.0	65.3	66.6	67.8	69.2	70.2	70.7	71.3	71.8	72.4	72.4
100°	85.5	86.7	87.8	89.0	90.2	91.1	91.5	92.0	92.4	92.9	92.9
102.5°	108.1	109.0	110.0	111.0	111.9	112.7	113.2	113.8	114.3	114.9	115.0
105°	144.7	145.2	145.6	146.0	146.5	146.9	147.1	147.5	147.7	148.1	148.4
107.5°	181.6	182.3	182.9	183.6	184.2	184.5	184.5	184.5	184.5	184.5	184.7
110°	205.3	206.1	207.1	207.9	208.9	209.3	209.3	209.3	209.3	209.3	209.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	231.1	232.0	232.9	233.8	234.7	235.1	235.0	234.9	234.7	234.6	234.3
115°	269.2	270.1	271.0	271.9	272.8	273.1	272.8	272.5	272.2	271.9	271.7
117.5°	307.1	308.3	309.5	310.7	311.9	312.1	311.3	310.5	309.6	308.8	308.4
120°	332.4	333.6	334.8	336.0	337.3	337.3	336.0	334.8	333.6	332.4	332.4
122.5°	355.6	357.1	358.5	359.9	361.4	361.6	360.8	360.0	359.1	358.3	357.9
125°	391.7	393.0	394.3	395.7	397.1	397.5	397.1	396.6	396.1	395.7	395.3
127.5°	426.8	428.5	430.2	432.0	433.6	434.2	433.7	433.2	432.6	432.0	431.5
130°	448.9	450.8	452.8	454.7	456.7	457.4	457.2	456.8	456.6	456.3	456.0
132.5°	473.6	475.3	476.8	478.4	480.0	480.8	480.9	481.0	481.0	481.0	480.4
135°	506.8	508.4	510.1	511.7	513.3	514.3	514.6	514.9	515.2	515.5	515.4
137.5°	541.7	542.9	544.3	545.7	547.0	547.9	548.3	548.6	549.1	549.4	549.3
140°	562.7	564.0	565.3	566.6	568.0	569.0	569.8	570.6	571.3	572.0	572.0
142.5°	584.2	585.5	586.9	588.2	589.5	590.5	591.0	591.5	592.0	592.5	592.6
145°	615.1	616.1	617.3	618.3	619.3	620.3	621.2	622.1	622.9	623.9	624.1
147.5°	642.7	643.9	645.2	646.4	647.7	648.7	649.3	649.9	650.5	651.1	651.3
150°	661.6	662.5	663.3	664.3	665.1	665.9	666.5	667.1	667.7	668.3	668.7
152.5°	678.2	679.2	680.0	681.0	681.8	682.6	683.4	684.1	684.8	685.5	686.0
155°	703.3	703.7	704.2	704.6	705.1	705.5	705.9	706.5	706.9	707.3	708.1
157.5°	724.7	725.0	725.3	725.6	725.9	726.2	726.4	726.7	726.9	727.2	728.2
160°	737.6	737.9	738.2	738.5	738.8	739.0	739.2	739.3	739.5	739.6	740.5
162.5°	749.4	749.5	749.6	749.6	749.7	749.8	749.9	750.1	750.3	750.4	751.4
165°	765.2	765.1	764.9	764.7	764.6	764.5	764.5	764.5	764.5	764.5	765.6
167.5°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.3	776.3	776.2	777.3
170°	785.4	785.0	784.5	784.0	783.6	783.3	783.2	783.0	782.8	782.6	783.8
172.5°	790.2	789.8	789.4	788.8	788.4	788.2	788.0	787.8	787.7	787.6	788.6
175°	796.2	795.7	795.2	794.8	794.4	794.0	793.7	793.4	793.1	792.8	793.8
177.5°	798.6	798.2	797.9	797.5	797.1	796.9	796.6	796.3	796.1	795.9	796.6
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5



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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°	8.4	8.3	8.1	8.1	8.1	8.1	8.2	8.2
90°	23.0	22.6	22.4	22.3	22.5	22.6	22.7	22.9
92.5°	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.8
95°	43.0	43.0	43.0	43.0	42.6	42.4	42.0	41.8
97.5°	72.4	72.4	72.4	72.4	72.4	72.3	72.3	72.2
100°	92.9	92.9	92.9	92.8	92.6	92.5	92.4	92.2
102.5°	115.2	115.3	115.5	115.4	115.3	115.1	114.9	114.8
105°	148.7	149.0	149.3	149.4	149.4	149.4	149.4	149.4
107.5°	184.8	184.9	185.0	184.8	184.1	183.4	182.7	182.0
110°	209.3	209.3	209.3	209.1	208.6	208.2	207.8	207.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.8	233.5	233.2	232.8	232.5	232.1	231.9	231.5
115°	271.6	271.5	271.3	271.0	270.5	270.1	269.7	269.2
117.5°	308.1	307.7	307.3	306.9	306.5	306.0	305.6	305.1
120°	332.4	332.4	332.4	332.3	331.7	331.3	330.9	330.5
122.5°	357.6	357.2	356.9	356.5	356.2	355.9	355.5	355.2
125°	394.9	394.3	393.9	393.6	393.5	393.3	393.2	393.0
127.5°	431.0	430.4	429.9	429.4	429.0	428.4	428.0	427.5
130°	455.7	455.4	455.1	454.6	454.0	453.5	452.9	452.3
132.5°	479.7	479.1	478.5	477.9	477.3	476.9	476.4	476.0
135°	515.2	515.1	514.9	514.6	514.2	513.8	513.2	512.8
137.5°	549.2	549.1	549.0	548.6	548.0	547.4	546.8	546.2
140°	572.0	572.0	572.0	571.7	571.2	570.6	570.0	569.4
142.5°	592.7	592.9	593.0	592.7	592.1	591.5	591.0	590.4
145°	624.1	624.3	624.5	624.2	623.6	623.0	622.4	621.8
147.5°	651.7	652.0	652.4	652.3	651.7	651.1	650.6	650.0
150°	669.2	669.6	670.1	670.1	669.6	669.2	668.7	668.3
152.5°	686.6	687.3	687.8	687.8	687.3	686.6	686.0	685.5
155°	708.8	709.6	710.3	710.5	710.0	709.6	709.1	708.7
157.5°	729.3	730.3	731.3	731.4	730.7	730.0	729.3	728.6
160°	741.4	742.4	743.2	743.4	742.8	742.2	741.6	741.0
162.5°	752.4	753.5	754.5	754.6	753.9	753.2	752.4	751.7
165°	766.6	767.7	768.7	768.9	768.1	767.3	766.6	765.9
167.5°	778.3	779.4	780.4	780.6	779.8	779.0	778.3	777.5
170°	784.8	785.8	786.9	787.0	786.1	785.1	784.3	783.3
172.5°	789.6	790.7	791.7	791.8	790.9	790.0	789.1	788.2
175°	794.9	795.9	796.9	797.0	796.2	795.2	794.4	793.5
177.5°	797.3	798.1	798.7	798.7	798.1	797.3	796.6	795.9
180°	797.5	797.5	797.5	797.5	797.5	797.5	797.5	797.5

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