

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: P331654-940

Luminaire Tested: **SA2XXRDIP-C485D530U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331654-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D530U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

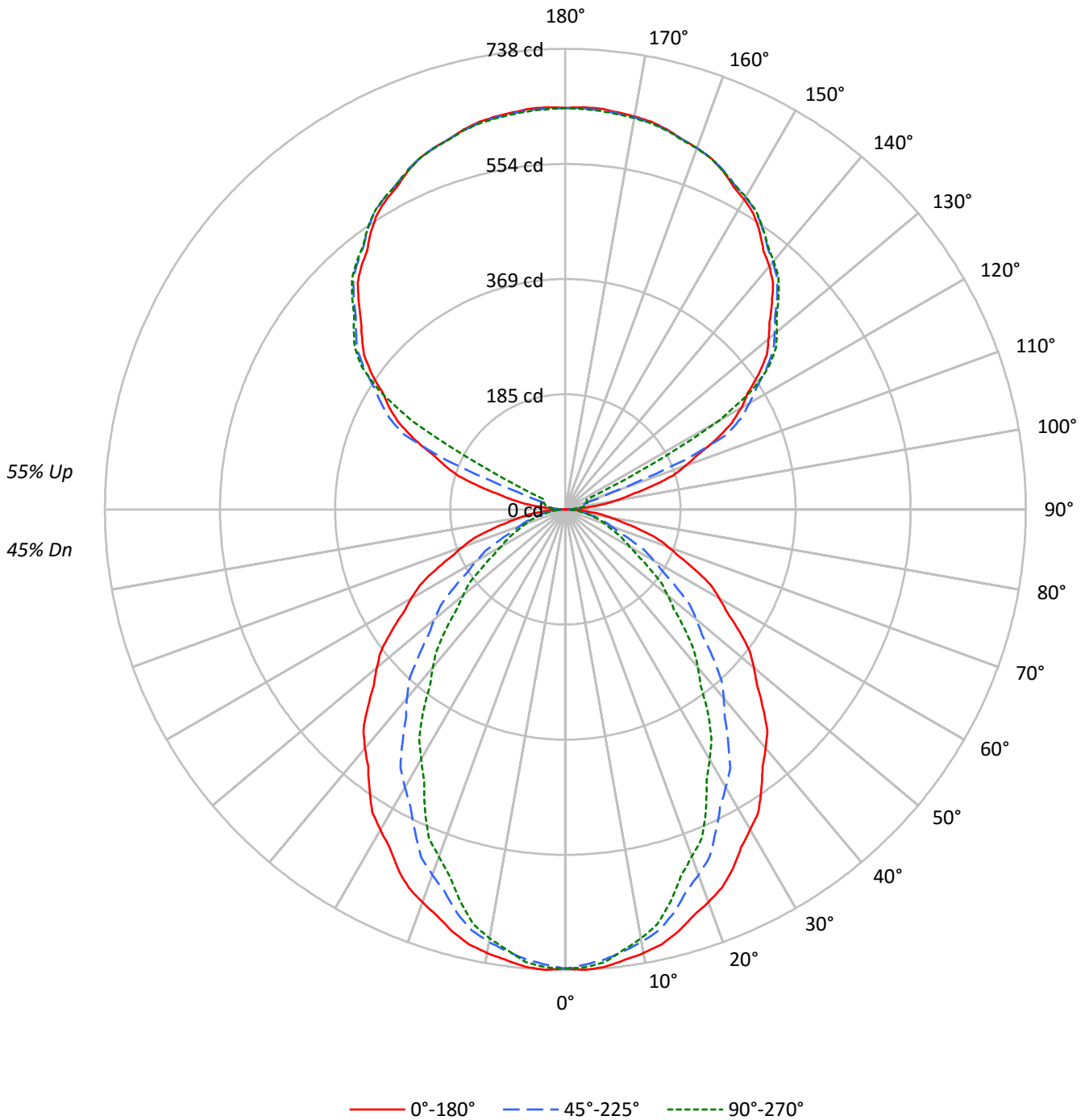
Lumens per Lamp: N/A
Luminaire Lumens: 3399.8 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38				38
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33				33
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	34	33	28				28
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25				25
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22				22
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19				19
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20	17				17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16				16
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14				14
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13				13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11880	11880	11880
5°	11925	11733	11797
10°	11835	11540	11442
15°	11699	11198	10877
20°	11510	10710	10172
25°	11318	10156	9492
30°	11050	9587	8617
35°	10789	8966	7849
40°	10526	8323	6962
45°	10218	7604	6158
50°	9902	6875	5368
55°	9579	6092	4611
60°	9203	5270	3827
65°	8779	4424	3484
70°	8266	3644	3205
75°	7642	3319	2994
80°	6750	2966	2724
85°	5298	2353	2353



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	2.0
10°-20°	189.1	5.6
20°-30°	265.6	7.8
30°-40°	289.6	8.5
40°-50°	266.3	7.8
50°-60°	209.1	6.2
60°-70°	136.4	4.0
70°-80°	70.3	2.1
80°-90°	19.8	0.6
90°-100°	21.5	0.6
100°-110°	78.7	2.3
110°-120°	210.3	6.2
120°-130°	347.1	10.2
130°-140°	369.2	10.9
140°-150°	343.1	10.1
150°-160°	275.9	8.1
160°-170°	177.8	5.2
170°-180°	61.2	1.8
0°-30°	523.6	15.4
0°-40°	813.2	23.9
0°-60°	1288.6	37.9
0°-90°	1515.1	44.6
90°-120°	310.4	9.1
90°-150°	1369.9	40.3
90°-180°	1885.0	55.4
0°-180°	3399.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	736	732	724	729	728	70
15°	700	692	670	658	651	197
25°	635	613	570	544	533	292
35°	547	512	455	414	398	342
45°	448	402	333	287	270	345
55°	340	287	216	178	164	304
65°	230	176	116	94	91	228
75°	122	77	53	49	48	130
85°	29	15	13	13	13	34
90°	0	6	9	12	13	3
95°	30	16	18	20	20	37
105°	141	148	28	33	35	151
115°	268	276	287	82	38	263
125°	378	385	393	396	398	337
135°	468	475	480	484	484	361
145°	543	543	550	553	551	340
155°	598	594	599	602	598	275
165°	630	628	629	632	629	178
175°	644	642	642	645	641	61
180°	643	643	643	643	643	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	738.5	738.0	737.4	736.7	736.2	735.2	734.0	732.6	731.3	730.0	731.2
5°	735.8	735.1	734.4	733.7	732.9	731.6	729.7	727.7	725.9	723.9	725.2
7.5°	728.3	727.4	726.5	725.5	724.6	723.0	720.8	718.5	716.3	714.1	714.4
10°	721.9	720.9	719.8	718.8	717.7	715.8	712.8	709.8	706.9	703.9	703.5
12.5°	713.9	712.7	711.3	710.1	708.8	706.3	702.5	698.7	694.9	691.2	690.4
15°	699.9	698.3	696.7	695.0	693.4	690.1	685.0	680.0	675.0	669.9	667.2
17.5°	682.8	680.3	677.8	675.3	672.8	668.3	661.9	655.4	649.0	642.5	639.2
20°	669.9	667.0	664.1	661.1	658.1	652.9	645.5	638.1	630.7	623.3	619.6
22.5°	656.1	652.8	649.4	646.1	642.8	637.0	628.7	620.3	612.0	603.6	598.9
25°	635.3	630.6	625.9	621.1	616.4	609.1	599.3	589.6	579.8	570.1	564.0
27.5°	610.3	605.1	599.9	594.9	589.7	581.6	570.6	559.5	548.6	537.5	530.5
30°	592.7	587.1	581.5	575.9	570.2	561.5	549.7	537.8	525.9	514.2	506.6
32.5°	575.7	569.1	562.5	556.0	549.4	540.0	528.0	515.9	503.8	491.8	483.1
35°	547.4	539.8	532.4	524.8	517.2	506.9	493.9	480.9	467.9	454.9	445.5
37.5°	519.2	510.9	502.6	494.3	486.1	474.9	461.1	447.2	433.3	419.5	409.1
40°	499.4	490.6	481.7	472.9	464.0	452.4	438.0	423.7	409.3	394.9	384.4
42.5°	479.2	469.8	460.5	451.2	441.8	429.7	414.9	400.0	385.2	370.4	359.5
45°	447.5	437.7	427.7	417.8	407.9	395.1	379.6	364.1	348.5	333.0	322.4
47.5°	416.6	406.1	395.7	385.1	374.6	361.3	345.3	329.2	313.2	297.1	286.7
50°	394.2	383.7	373.3	362.7	352.2	338.9	322.5	306.3	290.0	273.7	263.5
52.5°	372.4	361.4	350.4	339.5	328.5	315.0	299.1	283.2	267.2	251.4	241.5
55°	340.3	328.8	317.2	305.7	294.2	280.4	264.4	248.4	232.4	216.4	207.6
57.5°	307.4	295.6	283.7	271.9	260.0	246.5	231.1	215.7	200.4	185.0	176.8
60°	285.0	273.2	261.4	249.5	237.6	224.2	208.9	193.7	178.4	163.2	155.6
62.5°	263.1	251.4	239.5	227.7	215.8	202.7	188.2	173.6	159.1	144.5	137.3
65°	229.8	217.8	205.8	193.8	181.8	169.2	155.9	142.5	129.2	115.8	110.8
67.5°	197.5	185.7	173.7	161.8	149.9	137.9	126.0	114.0	102.0	90.1	87.7
70°	175.1	163.6	152.0	140.5	128.9	118.1	107.9	97.6	87.5	77.2	75.8
72.5°	153.8	142.8	131.7	120.6	109.6	100.0	91.8	83.6	75.3	67.1	65.9
75°	122.5	112.2	101.8	91.5	81.1	73.4	68.4	63.3	58.3	53.2	52.3
77.5°	91.8	82.7	73.6	64.5	55.5	49.7	47.3	44.9	42.4	39.9	39.3
80°	72.6	65.0	57.5	49.9	42.4	37.9	36.4	35.0	33.4	31.9	31.4
82.5°	55.0	49.1	43.2	37.4	31.5	28.0	27.0	25.9	25.0	24.0	23.6
85°	28.6	25.5	22.4	19.4	16.2	14.4	14.0	13.6	13.1	12.7	12.7
87.5°	8.6	7.9	7.1	6.4	5.7	5.4	5.6	5.8	6.0	6.2	6.2
90°	0.4	1.6	2.8	3.8	5.0	6.0	6.9	7.7	8.5	9.3	9.8
92.5°	9.4	9.3	9.2	9.1	9.0	9.2	9.5	10.0	10.3	10.8	11.1
95°	30.2	26.8	23.5	20.0	16.6	15.2	16.0	16.7	17.4	18.2	18.6
97.5°	60.0	50.4	40.8	31.2	21.6	17.6	19.3	21.0	22.6	24.3	24.7
100°	82.4	68.2	54.0	39.9	25.7	19.5	21.2	23.0	24.8	26.5	27.4
102.5°	106.9	104.0	100.9	97.9	95.0	86.1	71.4	56.7	42.0	27.3	28.4
105°	141.4	144.5	147.7	150.8	153.9	141.3	113.1	84.9	56.6	28.4	29.5
107.5°	180.8	183.3	185.8	188.3	190.8	175.1	141.3	107.5	73.6	39.8	38.6
110°	206.2	208.3	210.5	212.7	214.8	201.0	171.1	141.2	111.3	81.4	71.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	230.0	231.9	233.8	235.8	237.6	235.0	227.6	220.2	212.8	205.5	167.6
115°	267.6	269.3	271.1	272.9	274.6	276.8	279.4	282.0	284.5	287.1	239.2
117.5°	301.2	303.2	305.1	307.1	309.1	310.9	312.7	314.5	316.3	318.0	306.5
120°	325.7	327.3	328.9	330.4	332.0	333.7	335.6	337.4	339.2	341.1	342.3
122.5°	346.6	348.2	349.9	351.5	353.1	355.0	357.0	359.0	361.1	363.1	363.8
125°	378.4	379.7	381.0	382.4	383.7	385.4	387.4	389.3	391.3	393.2	394.0
127.5°	407.1	408.6	410.1	411.5	413.0	414.6	416.0	417.5	418.9	420.4	421.4
130°	425.3	427.0	428.6	430.3	431.9	433.4	434.5	435.6	436.8	437.9	439.1
132.5°	444.0	445.3	446.7	448.2	449.6	450.8	452.0	453.2	454.2	455.4	456.4
135°	468.1	469.8	471.4	473.1	474.7	476.1	477.0	478.0	478.8	479.7	480.8
137.5°	492.7	493.7	494.9	496.1	497.2	498.4	499.4	500.5	501.5	502.6	503.6
140°	508.6	509.4	510.3	511.1	511.9	512.9	514.1	515.2	516.3	517.5	518.4
142.5°	522.0	522.8	523.5	524.2	525.0	526.0	527.4	528.6	529.9	531.3	532.1
145°	543.1	543.0	542.9	542.8	542.7	543.5	545.3	547.0	548.8	550.5	551.3
147.5°	561.4	561.0	560.6	560.3	559.8	560.5	562.2	564.0	565.7	567.5	568.0
150°	573.3	572.6	571.9	571.1	570.4	570.9	572.6	574.2	575.9	577.5	578.1
152.5°	583.4	582.6	581.8	580.9	580.1	580.5	582.1	583.7	585.2	586.8	587.5
155°	598.0	597.1	596.1	595.2	594.2	594.4	595.7	596.9	598.2	599.4	600.0
157.5°	609.4	608.7	607.9	607.1	606.3	606.4	607.2	608.1	608.9	609.8	610.5
160°	616.2	615.5	614.9	614.3	613.7	613.7	614.3	614.9	615.5	616.2	616.8
162.5°	622.1	621.4	620.8	620.2	619.6	619.6	620.1	620.6	621.2	621.7	622.4
165°	630.1	629.5	628.8	628.2	627.6	627.5	627.8	628.0	628.4	628.7	629.5
167.5°	636.1	635.4	634.8	634.2	633.6	633.4	633.6	634.0	634.3	634.5	635.3
170°	639.4	638.8	638.2	637.6	636.9	636.7	636.9	637.1	637.3	637.6	638.3
172.5°	641.7	641.1	640.4	639.8	639.2	638.9	639.2	639.4	639.5	639.8	640.5
175°	644.5	643.8	643.1	642.4	641.6	641.4	641.6	641.8	641.9	642.2	642.9
177.5°	645.0	644.4	643.8	643.3	642.7	642.4	642.5	642.6	642.7	642.7	643.4
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	732.4	733.6	734.8	735.2	735.0	734.8	734.5	734.3
5°	726.6	727.9	729.2	729.7	729.2	728.8	728.3	727.9
7.5°	714.8	715.2	715.6	715.4	714.6	713.8	713.1	712.3
10°	703.0	702.6	702.1	701.5	700.6	699.7	698.8	697.9
12.5°	689.6	688.8	688.0	686.8	685.3	683.9	682.3	680.9
15°	664.3	661.6	658.7	656.6	655.1	653.6	652.1	650.7
17.5°	635.8	632.5	629.1	626.2	623.7	621.1	618.6	616.0
20°	615.9	612.2	608.5	605.0	601.8	598.5	595.3	592.0
22.5°	594.1	589.3	584.6	580.9	578.5	576.1	573.7	571.2
25°	557.9	551.9	545.8	541.6	539.4	537.2	535.0	532.8
27.5°	523.4	516.3	509.3	504.0	500.4	497.0	493.4	489.9
30°	499.0	491.5	483.9	478.1	474.1	470.2	466.2	462.2
32.5°	474.5	465.9	457.3	451.1	447.4	443.6	439.8	436.0
35°	436.2	426.9	417.6	411.3	408.0	404.7	401.5	398.2
37.5°	398.9	388.6	378.4	371.3	367.7	363.9	360.2	356.4
40°	373.9	363.4	352.8	345.7	341.9	338.0	334.1	330.3
42.5°	348.7	337.8	327.0	319.7	315.9	312.2	308.4	304.7
45°	311.9	301.5	291.0	283.9	280.4	276.8	273.2	269.7
47.5°	276.3	265.8	255.4	248.5	245.3	242.1	238.8	235.6
50°	253.2	243.1	232.8	226.2	223.1	220.0	216.9	213.7
52.5°	231.6	221.8	211.9	205.5	202.7	199.8	196.9	194.0
55°	198.7	189.8	180.9	175.0	172.3	169.4	166.7	163.8
57.5°	168.7	160.6	152.5	147.2	144.8	142.5	140.1	137.7
60°	148.0	140.5	133.0	128.0	125.6	123.2	120.9	118.5
62.5°	130.1	123.0	115.7	111.5	110.0	108.6	107.2	105.8
65°	105.8	100.8	95.8	93.0	92.6	92.1	91.7	91.2
67.5°	85.4	83.1	80.8	79.5	78.9	78.5	78.0	77.5
70°	74.3	72.9	71.3	70.3	69.7	69.1	68.5	67.9
72.5°	64.6	63.4	62.2	61.3	61.0	60.6	60.3	59.9
75°	51.2	50.2	49.1	48.5	48.4	48.2	48.1	48.0
77.5°	38.8	38.2	37.6	37.2	36.9	36.7	36.5	36.2
80°	30.8	30.2	29.6	29.3	29.3	29.3	29.3	29.3
82.5°	23.3	22.9	22.6	22.4	22.4	22.4	22.4	22.4
85°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
87.5°	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.2
90°	10.3	10.9	11.4	11.8	11.9	12.1	12.4	12.6
92.5°	11.3	11.6	11.9	12.0	12.2	12.3	12.5	12.6
95°	19.2	19.7	20.2	20.4	20.3	20.2	20.2	20.0
97.5°	25.1	25.5	25.9	26.2	26.3	26.5	26.6	26.8
100°	28.2	29.0	29.9	30.3	30.6	30.8	30.9	31.2
102.5°	29.4	30.5	31.6	32.3	32.5	32.8	33.1	33.4
105°	30.7	31.8	32.9	33.7	34.2	34.5	35.0	35.4
107.5°	37.5	36.3	35.1	34.8	35.1	35.6	35.9	36.4
110°	60.7	50.4	40.0	35.1	35.5	35.9	36.4	36.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	129.9	92.2	54.5	35.8	36.1	36.5	36.8	37.1
115°	191.4	143.5	95.6	67.9	60.5	53.1	45.6	38.2
117.5°	294.9	283.3	271.7	253.7	229.2	204.7	180.3	155.8
120°	343.6	344.8	346.1	339.7	325.7	311.8	297.8	283.8
122.5°	364.5	365.3	366.0	365.1	362.4	359.6	357.0	354.2
125°	394.7	395.4	396.1	396.6	397.0	397.3	397.6	397.9
127.5°	422.5	423.6	424.6	425.2	425.3	425.3	425.3	425.4
130°	440.1	441.3	442.5	443.0	442.8	442.7	442.6	442.6
132.5°	457.4	458.3	459.3	459.7	459.6	459.5	459.4	459.3
135°	481.9	482.9	483.9	484.4	484.1	483.9	483.8	483.5
137.5°	504.6	505.6	506.7	506.9	506.6	506.2	506.0	505.6
140°	519.3	520.2	521.2	521.4	520.8	520.4	519.9	519.3
142.5°	533.0	533.8	534.7	534.8	534.3	533.8	533.2	532.7
145°	552.0	552.7	553.4	553.5	553.0	552.5	552.0	551.4
147.5°	568.6	569.1	569.6	569.6	569.3	568.8	568.4	567.9
150°	578.7	579.3	580.0	580.1	579.5	579.0	578.5	578.0
152.5°	588.1	588.7	589.3	589.2	588.6	587.9	587.2	586.6
155°	600.7	601.3	601.9	601.7	600.9	600.1	599.3	598.4
157.5°	611.2	611.9	612.6	612.6	611.7	610.9	610.1	609.3
160°	617.3	618.0	618.6	618.6	617.9	617.2	616.4	615.6
162.5°	623.1	623.8	624.6	624.5	623.6	622.7	621.8	620.9
165°	630.2	630.9	631.6	631.6	630.9	630.2	629.5	628.7
167.5°	636.0	636.8	637.5	637.4	636.4	635.5	634.5	633.6
170°	639.0	639.7	640.4	640.3	639.4	638.5	637.6	636.6
172.5°	641.2	641.9	642.7	642.6	641.7	640.7	639.8	638.8
175°	643.6	644.4	645.1	645.0	643.9	642.8	641.9	640.8
177.5°	643.9	644.5	645.1	645.0	644.3	643.5	642.7	642.0
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1

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