

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: P331655-830

Luminaire Tested: **SA2XXRDIP-C485D530U830-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331655-830
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-C485D530U830-4F0-1E-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

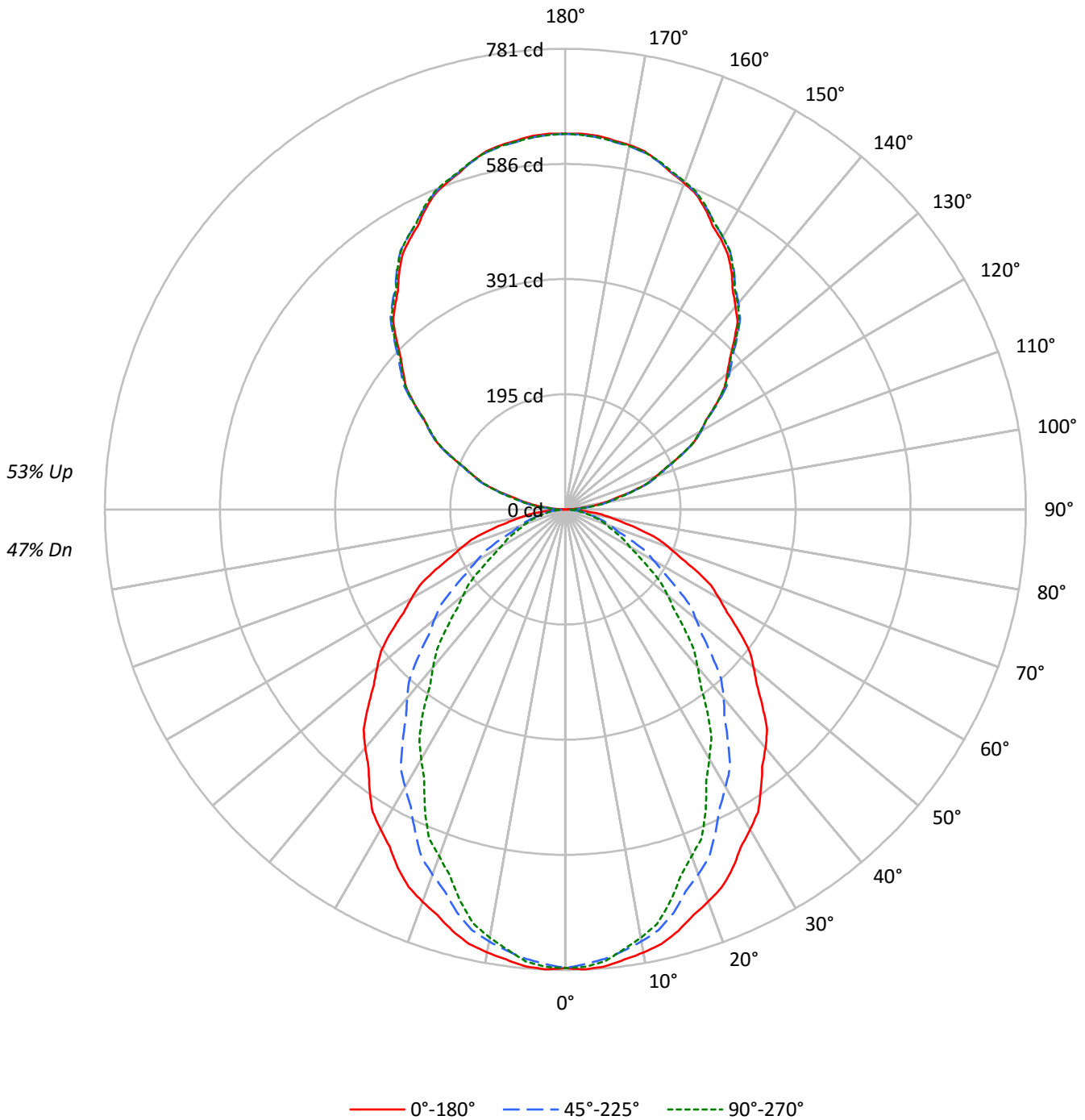
Lumens per Lamp: N/A
Luminaire Lumens: 3383.3 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12558	12558	12558
5°	12606	12402	12470
10°	12511	12198	12095
15°	12366	11836	11497
20°	12167	11320	10753
25°	11965	10735	10033
30°	11680	10133	9107
35°	11404	9477	8296
40°	11126	8800	7358
45°	10803	8035	6510
50°	10467	7267	5674
55°	10125	6441	4873
60°	9726	5570	4046
65°	9280	4676	3683
70°	8738	3852	3389
75°	8079	3512	3163
80°	7132	3133	2882
85°	5613	2482	2482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	2.2
10°-20°	199.9	5.9
20°-30°	280.7	8.3
30°-40°	306.1	9.0
40°-50°	281.5	8.3
50°-60°	221.1	6.5
60°-70°	144.1	4.3
70°-80°	74.3	2.2
80°-90°	21.8	0.6
90°-100°	40.4	1.2
100°-110°	125.3	3.7
110°-120°	214.3	6.3
120°-130°	281.8	8.3
130°-140°	316.2	9.3
140°-150°	310.1	9.2
150°-160°	260.1	7.7
160°-170°	172.5	5.1
170°-180°	60.3	1.8
0°-30°	553.4	16.4
0°-40°	859.6	25.4
0°-60°	1362.1	40.3
0°-90°	1602.4	47.4
90°-120°	380.0	11.2
90°-150°	1288.0	38.1
90°-180°	1781.0	52.6
0°-180°	3383.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	778	774	765	771	769	74
15°	740	731	708	695	688	208
25°	672	648	603	575	563	309
35°	579	541	481	438	421	362
45°	473	424	352	304	285	365
55°	360	304	229	188	173	321
65°	243	186	122	100	96	241
75°	130	82	56	52	51	137
85°	30	16	13	13	13	36
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°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	780.6	780.0	779.4	778.7	778.2	777.1	775.8	774.4	773.0	771.7	772.9
5°	777.8	777.0	776.3	775.5	774.7	773.3	771.3	769.2	767.2	765.2	766.6
7.5°	769.8	768.8	767.9	766.9	765.9	764.2	761.9	759.5	757.1	754.8	755.2
10°	763.1	762.0	760.8	759.8	758.7	756.6	753.5	750.3	747.2	744.0	743.6
12.5°	754.6	753.3	751.9	750.5	749.2	746.6	742.5	738.6	734.5	730.6	729.7
15°	739.8	738.1	736.4	734.6	732.9	729.4	724.1	718.8	713.5	708.1	705.2
17.5°	721.7	719.1	716.4	713.8	711.1	706.4	699.6	692.8	686.0	679.1	675.6
20°	708.1	705.0	701.9	698.8	695.6	690.1	682.3	674.5	666.7	658.8	655.0
22.5°	693.5	690.0	686.5	683.0	679.5	673.4	664.5	655.6	646.9	638.0	633.0
25°	671.6	666.6	661.6	656.5	651.5	643.9	633.5	623.2	612.8	602.6	596.2
27.5°	645.1	639.6	634.1	628.8	623.3	614.7	603.1	591.4	579.9	568.2	560.7
30°	626.5	620.6	614.6	608.7	602.8	593.5	581.0	568.4	555.9	543.5	535.5
32.5°	608.5	601.5	594.6	587.7	580.7	570.8	558.1	545.3	532.5	519.8	510.7
35°	578.6	570.6	562.7	554.7	546.7	535.8	522.1	508.3	494.6	480.8	470.9
37.5°	548.7	540.0	531.2	522.5	513.8	502.0	487.4	472.7	458.0	443.4	432.4
40°	527.9	518.6	509.2	499.8	490.4	478.2	463.0	447.8	432.6	417.5	406.3
42.5°	506.5	496.6	486.7	476.9	467.0	454.2	438.6	422.8	407.2	391.5	380.0
45°	473.1	462.6	452.0	441.6	431.1	417.6	401.2	384.8	368.3	351.9	340.8
47.5°	440.4	429.2	418.2	407.1	396.0	381.9	365.0	348.0	331.0	314.1	303.0
50°	416.7	405.6	394.5	383.4	372.3	358.2	340.9	323.8	306.5	289.3	278.5
52.5°	393.6	382.0	370.4	358.8	347.2	333.0	316.1	299.4	282.5	265.7	255.2
55°	359.7	347.5	335.3	323.1	310.9	296.3	279.5	262.6	245.6	228.8	219.4
57.5°	324.9	312.5	299.9	287.4	274.8	260.5	244.3	228.0	211.8	195.6	186.9
60°	301.2	288.8	276.3	263.7	251.2	237.0	220.8	204.7	188.6	172.5	164.5
62.5°	278.1	265.7	253.2	240.6	228.1	214.2	198.9	183.5	168.1	152.8	145.2
65°	242.9	230.2	217.5	204.8	192.2	178.8	164.8	150.6	136.6	122.4	117.2
67.5°	208.8	196.2	183.6	171.1	158.4	145.8	133.2	120.6	107.8	95.2	92.7
70°	185.1	173.0	160.7	148.5	136.3	124.8	114.0	103.2	92.5	81.6	80.1
72.5°	162.6	150.9	139.2	127.5	115.8	105.7	97.0	88.3	79.6	71.0	69.7
75°	129.5	118.6	107.6	96.7	85.7	77.6	72.3	66.9	61.6	56.3	55.2
77.5°	97.0	87.4	77.8	68.1	58.6	52.5	50.0	47.4	44.8	42.2	41.6
80°	76.7	68.7	60.8	52.8	44.8	40.1	38.5	36.9	35.3	33.7	33.2
82.5°	58.2	51.9	45.7	39.5	33.3	29.6	28.6	27.4	26.4	25.4	25.0
85°	30.3	27.0	23.7	20.5	17.2	15.3	14.8	14.3	13.9	13.4	13.4
87.5°	9.1	8.4	7.7	7.0	6.2	6.1	6.7	7.3	7.7	8.3	8.1
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°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	774.1	775.4	776.7	777.1	776.9	776.7	776.4	776.2
5°	768.0	769.4	770.8	771.3	770.8	770.3	769.9	769.4
7.5°	755.5	755.9	756.4	756.2	755.4	754.5	753.8	752.9
10°	743.1	742.6	742.2	741.5	740.6	739.6	738.7	737.7
12.5°	728.9	728.0	727.2	725.9	724.3	722.8	721.2	719.7
15°	702.2	699.3	696.3	694.0	692.4	690.9	689.3	687.8
17.5°	672.0	668.5	665.0	661.9	659.2	656.5	653.8	651.1
20°	651.0	647.1	643.2	639.5	636.1	632.6	629.2	625.8
22.5°	627.9	622.9	617.9	614.1	611.5	609.0	606.4	603.8
25°	589.7	583.3	576.9	572.5	570.1	567.8	565.5	563.2
27.5°	553.3	545.7	538.3	532.7	529.0	525.3	521.5	517.8
30°	527.4	519.5	511.5	505.4	501.1	497.0	492.8	488.5
32.5°	501.5	492.5	483.3	476.8	472.9	468.9	464.9	460.9
35°	461.1	451.2	441.4	434.7	431.3	427.8	424.4	420.9
37.5°	421.6	410.8	399.9	392.5	388.6	384.7	380.7	376.7
40°	395.2	384.1	373.0	365.4	361.4	357.3	353.2	349.1
42.5°	368.5	357.0	345.6	337.9	333.9	330.0	326.0	322.1
45°	329.7	318.7	307.6	300.1	296.3	292.6	288.8	285.1
47.5°	292.0	281.0	269.9	262.7	259.3	255.9	252.4	249.0
50°	267.7	256.9	246.1	239.1	235.8	232.5	229.2	225.9
52.5°	244.8	234.4	223.9	217.3	214.2	211.2	208.1	205.1
55°	210.0	200.6	191.2	185.0	182.1	179.1	176.2	173.1
57.5°	178.3	169.8	161.2	155.6	153.1	150.6	148.1	145.5
60°	156.5	148.5	140.5	135.3	132.8	130.3	127.8	125.3
62.5°	137.5	130.0	122.3	117.8	116.3	114.8	113.3	111.8
65°	111.9	106.5	101.2	98.3	97.8	97.4	96.9	96.4
67.5°	90.3	87.8	85.4	84.0	83.4	82.9	82.5	81.9
70°	78.5	77.0	75.4	74.3	73.7	73.0	72.4	71.8
72.5°	68.3	67.0	65.7	64.8	64.5	64.1	63.7	63.3
75°	54.1	53.1	51.9	51.3	51.2	51.0	50.8	50.7
77.5°	41.0	40.3	39.8	39.3	39.0	38.8	38.5	38.3
80°	32.5	32.0	31.3	31.0	31.0	31.0	31.0	31.0
82.5°	24.6	24.2	23.8	23.7	23.7	23.7	23.7	23.7
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
87.5°	7.9	7.7	7.5	7.5	7.5	7.5	7.5	7.6
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

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