

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: P331655-930

Luminaire Tested: **SA2XXRDIP-C485D530U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331655-930
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-C485D530U930-4F0-1E-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

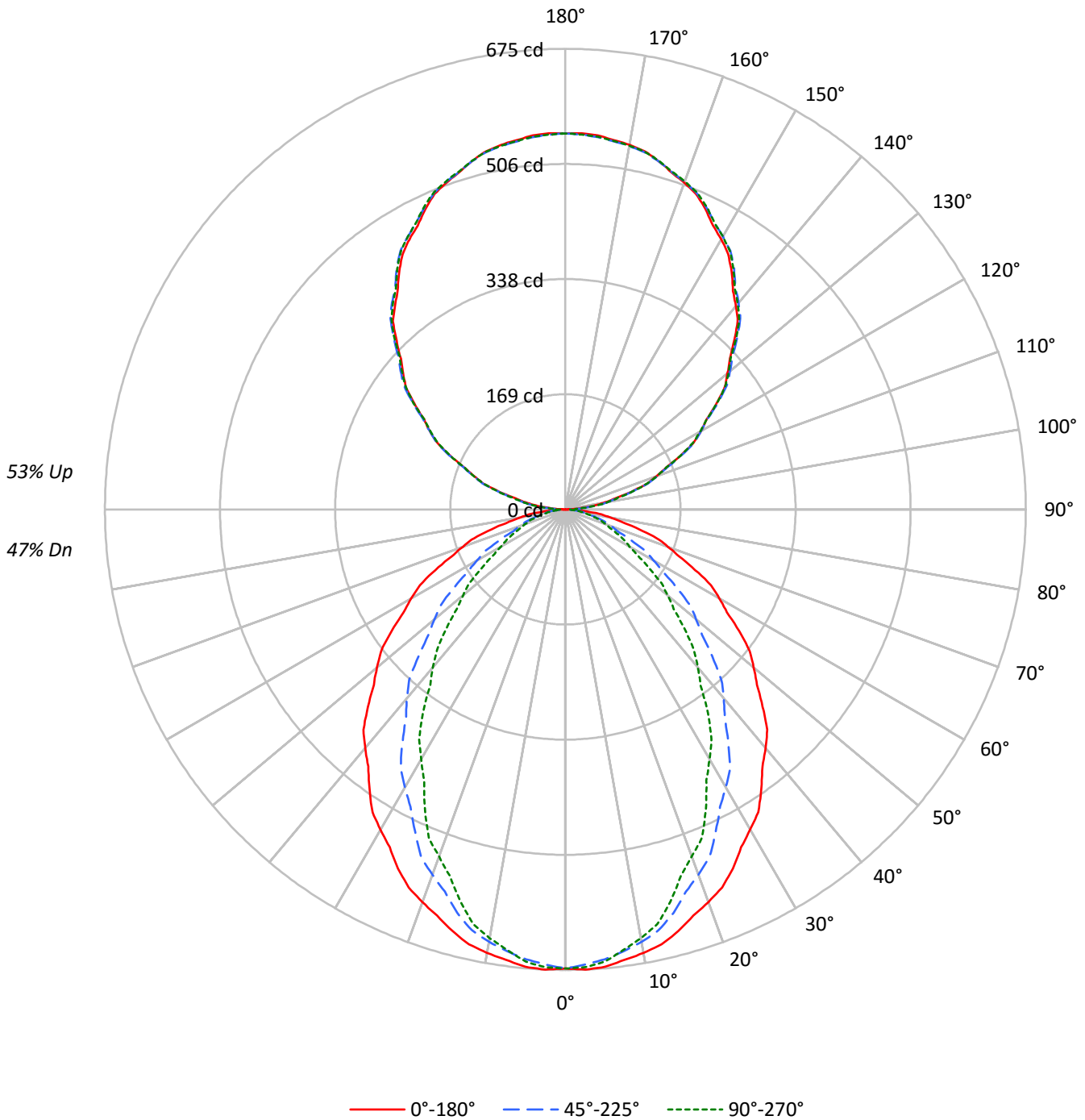
Lumens per Lamp: N/A
Luminaire Lumens: 2926.5 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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				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°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	2.2
10°-20°	172.9	5.9
20°-30°	242.8	8.3
30°-40°	264.8	9.0
40°-50°	243.5	8.3
50°-60°	191.2	6.5
60°-70°	124.7	4.3
70°-80°	64.3	2.2
80°-90°	18.9	0.6
90°-100°	34.9	1.2
100°-110°	108.4	3.7
110°-120°	185.3	6.3
120°-130°	243.7	8.3
130°-140°	273.5	9.3
140°-150°	268.2	9.2
150°-160°	225.0	7.7
160°-170°	149.2	5.1
170°-180°	52.2	1.8
0°-30°	478.7	16.4
0°-40°	743.5	25.4
0°-60°	1178.2	40.3
0°-90°	1386.0	47.4
90°-120°	328.7	11.2
90°-150°	1114.2	38.1
90°-180°	1540.0	52.6
0°-180°	2926.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	0	6	16	15	16	2
95°	24	29	30	30	29	28
105°	100	101	102	103	103	106
115°	186	189	188	187	186	184
125°	271	274	273	272	272	242
135°	350	355	356	356	354	270
145°	425	428	431	431	430	265
155°	486	487	489	491	490	224
165°	529	528	528	531	529	149
175°	550	549	548	551	548	52
180°	551	551	551	551	551	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	7.9	7.3	6.7	6.0	5.4	5.3	5.8	6.3	6.7	7.2	7.0
90°	0.5	1.7	2.9	4.2	5.5	7.2	9.5	11.7	14.0	16.3	16.1
92.5°	8.3	9.2	10.1	11.0	11.9	12.6	13.2	13.7	14.3	14.8	14.8
95°	24.2	25.2	26.3	27.3	28.3	28.9	29.1	29.4	29.5	29.8	29.8
97.5°	44.2	45.1	46.0	46.9	47.8	48.4	48.8	49.2	49.7	50.1	50.1
100°	59.0	59.8	60.7	61.6	62.4	62.9	63.3	63.5	63.8	64.2	64.2
102.5°	74.7	75.3	76.0	76.6	77.3	77.9	78.3	78.6	79.0	79.4	79.5
105°	100.0	100.3	100.6	100.9	101.2	101.4	101.7	101.8	102.1	102.3	102.5
107.5°	125.5	125.9	126.4	126.8	127.3	127.5	127.5	127.5	127.5	127.5	127.6
110°	141.8	142.4	143.0	143.7	144.3	144.6	144.6	144.6	144.6	144.6	144.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	159.6	160.3	160.9	161.5	162.2	162.4	162.3	162.2	162.2	162.1	161.8
115°	186.0	186.6	187.2	187.8	188.4	188.7	188.4	188.3	188.0	187.8	187.8
117.5°	212.2	213.0	213.9	214.7	215.5	215.6	215.1	214.4	213.9	213.3	213.0
120°	229.7	230.5	231.3	232.1	233.0	233.0	232.1	231.3	230.5	229.7	229.7
122.5°	245.6	246.6	247.7	248.7	249.6	249.8	249.2	248.7	248.1	247.5	247.3
125°	270.6	271.5	272.5	273.4	274.3	274.6	274.3	274.0	273.7	273.4	273.0
127.5°	294.8	296.0	297.2	298.4	299.5	299.9	299.6	299.2	298.9	298.5	298.1
130°	310.1	311.4	312.7	314.1	315.4	316.0	315.8	315.6	315.4	315.2	315.0
132.5°	327.2	328.3	329.4	330.5	331.6	332.2	332.2	332.2	332.3	332.3	331.9
135°	350.1	351.2	352.4	353.5	354.7	355.3	355.5	355.7	356.0	356.1	356.0
137.5°	374.1	375.1	376.0	377.0	377.9	378.5	378.8	379.0	379.3	379.5	379.4
140°	388.7	389.6	390.5	391.4	392.4	393.1	393.6	394.1	394.7	395.2	395.2
142.5°	403.6	404.5	405.4	406.3	407.2	407.9	408.3	408.6	409.0	409.3	409.4
145°	424.9	425.7	426.4	427.1	427.9	428.5	429.1	429.7	430.4	431.0	431.0
147.5°	444.0	444.8	445.7	446.6	447.4	448.1	448.5	448.9	449.3	449.8	450.0
150°	457.1	457.6	458.3	458.9	459.5	460.0	460.4	460.8	461.2	461.7	461.9
152.5°	468.6	469.2	469.8	470.4	471.0	471.6	472.1	472.5	473.0	473.6	473.9
155°	485.8	486.2	486.5	486.7	487.1	487.4	487.7	488.0	488.3	488.6	489.2
157.5°	500.6	500.8	501.0	501.2	501.5	501.7	501.8	502.1	502.2	502.4	503.1
160°	509.6	509.7	510.0	510.1	510.4	510.5	510.6	510.7	510.9	510.9	511.6
162.5°	517.7	517.8	517.8	517.9	517.9	518.0	518.0	518.2	518.3	518.4	519.1
165°	528.6	528.5	528.4	528.3	528.2	528.2	528.2	528.2	528.2	528.2	528.9
167.5°	537.7	537.4	537.1	536.8	536.5	536.3	536.3	536.3	536.2	536.2	537.0
170°	542.6	542.3	541.9	541.6	541.4	541.1	541.0	540.9	540.8	540.7	541.4
172.5°	545.9	545.6	545.3	544.9	544.7	544.5	544.4	544.3	544.1	544.0	544.8
175°	550.0	549.7	549.3	549.1	548.8	548.5	548.3	548.1	547.9	547.6	548.4
177.5°	551.7	551.4	551.1	550.9	550.7	550.5	550.3	550.2	550.0	549.8	550.3
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	6.8	6.7	6.5	6.5	6.5	6.5	6.5	6.6
90°	15.9	15.7	15.4	15.4	15.5	15.6	15.7	15.8
92.5°	14.8	14.9	14.9	15.0	15.0	15.0	15.1	15.1
95°	29.8	29.8	29.8	29.7	29.4	29.3	29.0	28.9
97.5°	50.1	50.1	50.1	50.0	50.0	50.0	50.0	49.9
100°	64.2	64.2	64.2	64.1	64.0	63.9	63.8	63.7
102.5°	79.6	79.7	79.7	79.7	79.7	79.5	79.4	79.3
105°	102.7	102.9	103.1	103.2	103.2	103.2	103.2	103.2
107.5°	127.7	127.8	127.8	127.6	127.1	126.7	126.2	125.7
110°	144.6	144.6	144.6	144.5	144.1	143.8	143.5	143.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	161.6	161.3	161.1	160.9	160.6	160.4	160.1	160.0
115°	187.6	187.5	187.4	187.2	186.9	186.6	186.3	186.0
117.5°	212.8	212.5	212.3	212.1	211.7	211.4	211.1	210.8
120°	229.7	229.7	229.7	229.5	229.2	228.9	228.6	228.3
122.5°	247.0	246.8	246.5	246.3	246.1	245.8	245.6	245.4
125°	272.7	272.5	272.1	271.9	271.8	271.7	271.6	271.5
127.5°	297.7	297.3	297.0	296.6	296.3	296.0	295.6	295.3
130°	314.8	314.6	314.4	314.1	313.6	313.2	312.8	312.4
132.5°	331.4	330.9	330.5	330.1	329.8	329.5	329.1	328.8
135°	356.0	355.8	355.7	355.5	355.2	354.9	354.6	354.2
137.5°	379.4	379.3	379.2	379.0	378.5	378.1	377.7	377.3
140°	395.2	395.2	395.2	395.0	394.5	394.1	393.7	393.3
142.5°	409.4	409.5	409.6	409.4	409.0	408.6	408.2	407.8
145°	431.2	431.3	431.4	431.2	430.8	430.4	430.0	429.6
147.5°	450.2	450.5	450.7	450.6	450.2	449.8	449.4	449.0
150°	462.3	462.6	462.9	462.9	462.6	462.3	461.9	461.7
152.5°	474.3	474.7	475.2	475.2	474.7	474.3	473.9	473.6
155°	489.7	490.2	490.7	490.8	490.5	490.2	489.8	489.6
157.5°	503.8	504.5	505.2	505.3	504.8	504.3	503.9	503.3
160°	512.2	512.8	513.4	513.6	513.1	512.7	512.3	511.8
162.5°	519.8	520.5	521.2	521.3	520.8	520.3	519.8	519.3
165°	529.6	530.4	531.0	531.2	530.6	530.1	529.6	529.0
167.5°	537.7	538.4	539.2	539.2	538.7	538.2	537.6	537.0
170°	542.2	542.9	543.6	543.6	543.0	542.4	541.8	541.2
172.5°	545.5	546.3	546.9	547.0	546.4	545.8	545.1	544.5
175°	549.1	549.8	550.6	550.7	550.0	549.3	548.8	548.1
177.5°	550.8	551.3	551.8	551.8	551.3	550.8	550.3	549.8
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9

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