

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: P331625-927

Luminaire Tested: **SA2XXRDIP-C290D530U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331625-927  
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-C290D530U927-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 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**

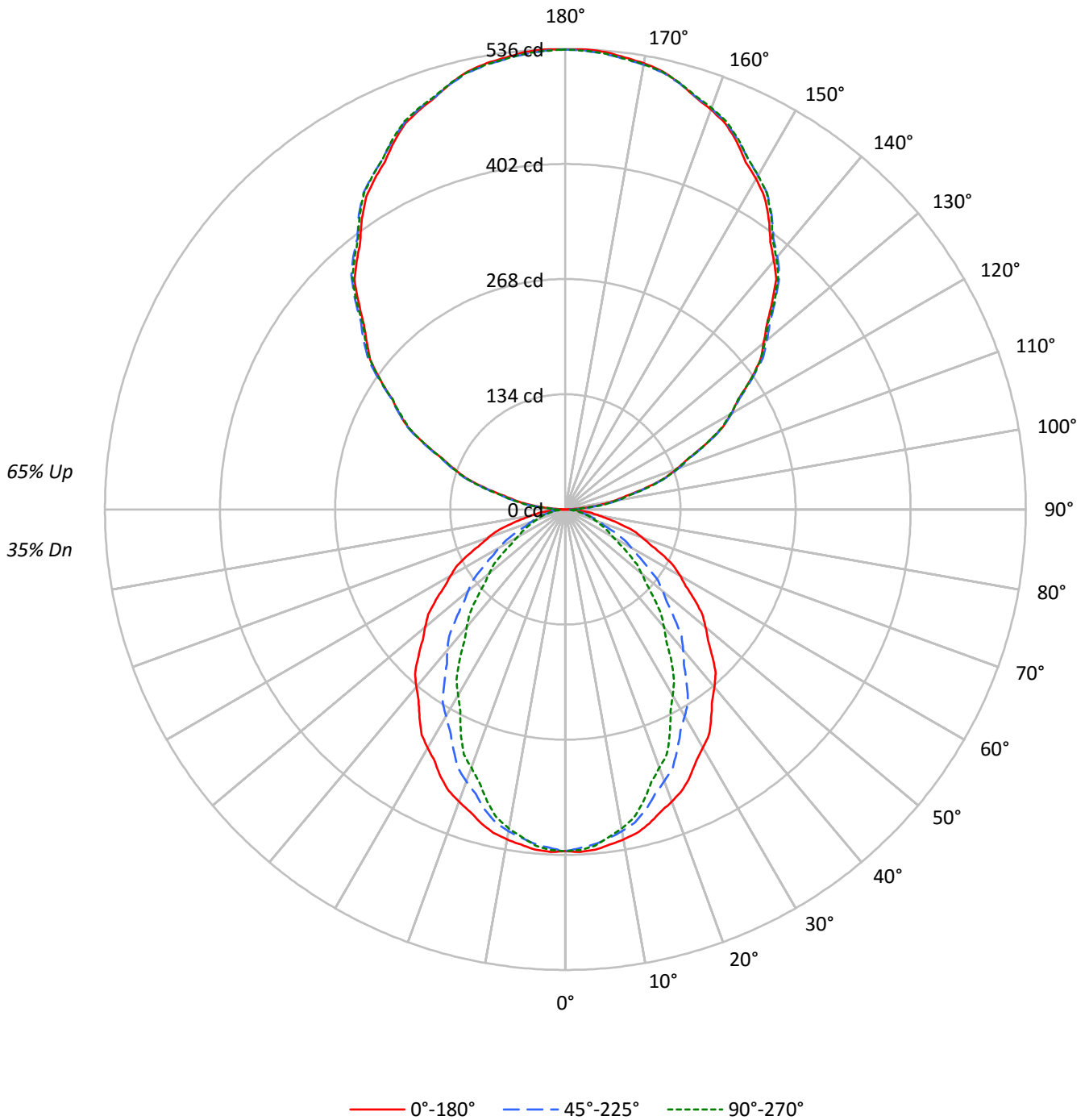
Lumens per Lamp: N/A  
Luminaire Lumens: 2316.8 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 25.6  
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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35				
1	95	91	87	84	86	82	79	76	66	64	62	52	50	49	38	37	37	30				
2	87	80	74	69	78	72	67	63	58	55	52	46	43	41	34	33	31	26				
3	79	70	63	58	71	64	58	53	52	48	44	41	38	35	30	29	27	22				
4	73	62	55	49	65	57	50	45	46	42	38	36	33	31	27	25	24	20				
5	67	56	48	42	60	51	44	39	41	37	33	33	29	27	25	23	21	17				
6	61	50	42	37	55	46	39	34	37	32	29	30	26	23	23	20	18	15				
7	57	45	37	32	51	41	35	30	34	29	25	27	24	21	21	18	16	14				
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12				
9	49	37	30	25	44	34	28	24	28	24	20	23	19	17	18	15	13	11				
10	46	34	27	23	42	31	25	21	26	21	18	21	18	15	16	14	12	10				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6421	6421	6421
5°	6446	6340	6374
10°	6396	6237	6184
15°	6322	6051	5877
20°	6220	5787	5498
25°	6116	5489	5129
30°	5972	5179	4657
35°	5830	4845	4242
40°	5689	4498	3762
45°	5523	4108	3329
50°	5350	3715	2901
55°	5177	3291	2494
60°	4973	2848	2070
65°	4741	2392	1883
70°	4471	1969	1733
75°	4130	1797	1616
80°	3645	1609	1469
85°	2853	1260	1260



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.2	1.6
10°-20°	102.2	4.4
20°-30°	143.5	6.2
30°-40°	156.5	6.8
40°-50°	143.9	6.2
50°-60°	113.0	4.9
60°-70°	73.7	3.2
70°-80°	38.0	1.6
80°-90°	12.0	0.5
90°-100°	33.9	1.5
100°-110°	105.4	4.5
110°-120°	180.1	7.8
120°-130°	236.8	10.2
130°-140°	265.8	11.5
140°-150°	260.6	11.2
150°-160°	218.6	9.4
160°-170°	145.0	6.3
170°-180°	50.7	2.2
0°-30°	282.9	12.2
0°-40°	439.4	19.0
0°-60°	696.4	30.1
0°-90°	820.0	35.4
90°-120°	319.4	13.8
90°-150°	1082.6	46.7
90°-180°	1497.0	64.6
0°-180°	2316.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	398	396	391	394	393	38
15°	378	374	362	355	352	106
25°	343	331	308	294	288	158
35°	296	277	246	224	215	185
45°	242	217	180	155	146	187
55°	184	155	117	96	89	164
65°	124	95	63	51	49	123
75°	66	42	29	26	26	70
85°	15	8	7	7	7	18
90°	0	6	16	15	15	2
95°	24	28	29	29	28	27
105°	97	98	99	100	100	103
115°	181	183	182	182	181	179
125°	263	267	266	264	264	235
135°	340	345	346	346	344	263
145°	413	416	419	419	417	258
155°	472	473	475	477	476	217
165°	514	513	513	516	514	145
175°	534	533	532	535	533	51
180°	535	535	535	535	535	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	399.1	398.8	398.5	398.2	397.8	397.3	396.6	395.9	395.2	394.5	395.1
5°	397.7	397.3	396.9	396.5	396.1	395.3	394.3	393.2	392.2	391.2	391.9
7.5°	393.6	393.1	392.5	392.1	391.6	390.7	389.5	388.2	387.1	385.9	386.0
10°	390.1	389.5	389.0	388.4	387.9	386.7	385.2	383.6	382.0	380.4	380.2
12.5°	385.8	385.1	384.4	383.7	383.0	381.7	379.6	377.6	375.5	373.4	373.0
15°	378.2	377.3	376.4	375.6	374.7	372.9	370.2	367.5	364.7	362.0	360.5
17.5°	368.9	367.6	366.2	364.9	363.5	361.2	357.7	354.2	350.7	347.2	345.4
20°	362.0	360.4	358.9	357.2	355.6	352.8	348.8	344.8	340.9	336.8	334.9
22.5°	354.6	352.8	350.9	349.2	347.4	344.2	339.7	335.2	330.7	326.2	323.6
25°	343.3	340.7	338.2	335.6	333.1	329.2	323.8	318.6	313.3	308.1	304.8
27.5°	329.8	327.0	324.2	321.5	318.6	314.3	308.3	302.4	296.4	290.5	286.7
30°	320.3	317.3	314.2	311.2	308.2	303.4	297.0	290.7	284.2	277.8	273.8
32.5°	311.1	307.5	304.0	300.4	296.8	291.8	285.3	278.8	272.3	265.7	261.1
35°	295.8	291.8	287.6	283.6	279.5	273.9	266.9	259.8	252.9	245.8	240.7
37.5°	280.6	276.1	271.6	267.1	262.6	256.7	249.1	241.6	234.2	226.6	221.1
40°	269.9	265.1	260.3	255.5	250.7	244.5	236.7	228.9	221.2	213.4	207.7
42.5°	259.0	253.9	248.8	243.8	238.8	232.2	224.2	216.2	208.2	200.2	194.3
45°	241.9	236.5	231.1	225.8	220.4	213.5	205.1	196.7	188.3	179.9	174.3
47.5°	225.1	219.4	213.8	208.1	202.4	195.3	186.6	177.9	169.2	160.6	155.0
50°	213.0	207.4	201.7	196.0	190.4	183.1	174.3	165.5	156.7	147.9	142.4
52.5°	201.2	195.3	189.4	183.5	177.5	170.2	161.6	153.0	144.4	135.8	130.5
55°	183.9	177.7	171.4	165.2	158.9	151.5	142.8	134.2	125.6	116.9	112.2
57.5°	166.1	159.7	153.3	146.9	140.5	133.2	124.8	116.6	108.3	100.0	95.5
60°	154.0	147.7	141.2	134.8	128.4	121.1	112.9	104.6	96.4	88.2	84.1
62.5°	142.2	135.9	129.4	123.0	116.6	109.5	101.6	93.8	86.0	78.1	74.2
65°	124.1	117.6	111.2	104.7	98.2	91.4	84.2	77.0	69.8	62.6	59.9
67.5°	106.7	100.3	93.9	87.5	81.0	74.5	68.0	61.6	55.1	48.6	47.4
70°	94.7	88.4	82.1	76.0	69.7	63.8	58.3	52.8	47.3	41.7	41.0
72.5°	83.1	77.2	71.1	65.2	59.2	54.0	49.6	45.2	40.7	36.3	35.6
75°	66.2	60.6	55.1	49.4	43.8	39.7	36.9	34.2	31.5	28.8	28.2
77.5°	49.6	44.7	39.8	34.9	29.9	26.9	25.5	24.2	22.9	21.6	21.3
80°	39.2	35.2	31.1	27.0	22.9	20.4	19.6	18.9	18.1	17.3	17.0
82.5°	29.7	26.5	23.4	20.2	17.0	15.1	14.6	14.0	13.5	13.0	12.8
85°	15.4	13.8	12.1	10.5	8.8	7.8	7.5	7.3	7.1	6.8	6.8
87.5°	4.7	4.4	4.1	3.9	3.6	3.7	4.1	4.6	5.0	5.5	5.4
90°	0.5	1.7	2.9	4.0	5.3	7.0	9.2	11.4	13.6	15.8	15.6
92.5°	8.1	9.0	9.8	10.7	11.6	12.3	12.8	13.3	13.9	14.3	14.4
95°	23.5	24.5	25.5	26.5	27.5	28.1	28.3	28.5	28.7	28.9	28.9
97.5°	42.9	43.8	44.7	45.6	46.4	47.1	47.5	47.8	48.2	48.6	48.6
100°	57.4	58.1	58.9	59.8	60.6	61.2	61.5	61.7	62.0	62.3	62.3
102.5°	72.6	73.2	73.8	74.5	75.1	75.7	76.0	76.4	76.8	77.2	77.2
105°	97.1	97.4	97.8	98.0	98.3	98.5	98.8	98.9	99.2	99.4	99.6
107.5°	121.9	122.3	122.8	123.2	123.7	123.9	123.9	123.9	123.9	123.9	124.0
110°	137.8	138.4	138.9	139.6	140.2	140.5	140.5	140.5	140.5	140.5	140.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.1	155.7	156.3	156.9	157.6	157.8	157.7	157.6	157.6	157.5	157.2
115°	180.7	181.3	181.9	182.5	183.1	183.3	183.1	182.9	182.7	182.5	182.4
117.5°	206.2	207.0	207.8	208.6	209.4	209.5	209.0	208.3	207.8	207.2	207.0
120°	223.2	223.9	224.7	225.5	226.4	226.4	225.5	224.7	223.9	223.2	223.2
122.5°	238.7	239.6	240.7	241.6	242.6	242.7	242.2	241.6	241.1	240.5	240.3
125°	262.9	263.8	264.7	265.6	266.5	266.8	266.5	266.3	265.9	265.6	265.3
127.5°	286.5	287.6	288.8	289.9	291.0	291.4	291.1	290.7	290.4	290.0	289.6
130°	301.3	302.6	303.9	305.2	306.5	307.0	306.9	306.7	306.5	306.3	306.1
132.5°	317.9	319.0	320.0	321.2	322.2	322.7	322.8	322.8	322.9	322.9	322.5
135°	340.2	341.3	342.4	343.5	344.6	345.2	345.4	345.6	345.9	346.0	345.9
137.5°	363.5	364.5	365.4	366.3	367.2	367.7	368.0	368.3	368.5	368.8	368.7
140°	377.6	378.6	379.5	380.3	381.3	382.0	382.5	382.9	383.5	384.0	384.0
142.5°	392.1	393.0	394.0	394.8	395.7	396.3	396.7	397.0	397.4	397.7	397.8
145°	412.9	413.6	414.3	415.0	415.7	416.4	416.9	417.6	418.2	418.7	418.8
147.5°	431.4	432.2	433.1	434.0	434.7	435.4	435.8	436.2	436.6	437.0	437.2
150°	444.1	444.7	445.3	445.8	446.5	446.9	447.3	447.7	448.1	448.6	448.9
152.5°	455.3	455.9	456.5	457.1	457.6	458.2	458.7	459.1	459.6	460.2	460.5
155°	472.1	472.4	472.7	472.9	473.2	473.6	473.9	474.2	474.4	474.8	475.3
157.5°	486.4	486.6	486.8	487.0	487.3	487.4	487.6	487.8	488.0	488.1	488.9
160°	495.1	495.3	495.5	495.7	495.9	496.1	496.1	496.2	496.4	496.5	497.1
162.5°	503.0	503.1	503.1	503.2	503.2	503.3	503.4	503.5	503.6	503.7	504.4
165°	513.7	513.5	513.4	513.3	513.3	513.2	513.2	513.2	513.2	513.2	513.9
167.5°	522.4	522.2	521.9	521.6	521.3	521.1	521.1	521.1	521.0	521.0	521.7
170°	527.2	526.9	526.6	526.2	526.0	525.8	525.7	525.5	525.5	525.4	526.1
172.5°	530.4	530.1	529.8	529.5	529.3	529.0	528.9	528.9	528.7	528.6	529.3
175°	534.4	534.1	533.8	533.5	533.2	533.0	532.7	532.6	532.3	532.1	532.8
177.5°	536.1	535.8	535.5	535.3	535.0	534.9	534.7	534.6	534.4	534.2	534.7
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	395.8	396.4	397.0	397.3	397.2	397.0	396.9	396.8
5°	392.6	393.3	394.0	394.3	394.0	393.8	393.6	393.3
7.5°	386.3	386.5	386.7	386.6	386.2	385.7	385.3	384.9
10°	379.9	379.7	379.5	379.1	378.6	378.1	377.6	377.2
12.5°	372.6	372.2	371.8	371.1	370.3	369.6	368.8	368.0
15°	359.0	357.4	355.9	354.8	354.0	353.2	352.4	351.6
17.5°	343.6	341.7	340.0	338.4	337.0	335.6	334.2	332.9
20°	332.9	330.8	328.8	326.9	325.2	323.4	321.7	320.0
22.5°	321.1	318.5	315.9	313.9	312.6	311.3	310.0	308.7
25°	301.5	298.2	294.9	292.7	291.5	290.3	289.1	287.9
27.5°	282.8	279.0	275.2	272.4	270.5	268.5	266.6	264.7
30°	269.7	265.6	261.5	258.4	256.2	254.1	251.9	249.8
32.5°	256.4	251.8	247.1	243.8	241.8	239.7	237.7	235.7
35°	235.8	230.7	225.6	222.2	220.5	218.7	217.0	215.2
37.5°	215.6	210.0	204.5	200.7	198.7	196.6	194.6	192.6
40°	202.1	196.4	190.7	186.8	184.7	182.7	180.5	178.5
42.5°	188.4	182.5	176.7	172.8	170.7	168.7	166.7	164.7
45°	168.6	162.9	157.2	153.4	151.5	149.6	147.7	145.8
47.5°	149.2	143.6	138.0	134.3	132.5	130.8	129.0	127.3
50°	136.9	131.3	125.8	122.2	120.6	118.9	117.2	115.5
52.5°	125.2	119.9	114.5	111.1	109.6	108.0	106.4	104.9
55°	107.3	102.6	97.8	94.6	93.1	91.6	90.1	88.6
57.5°	91.2	86.7	82.4	79.5	78.3	77.0	75.7	74.4
60°	80.0	76.0	71.9	69.2	67.9	66.6	65.4	64.1
62.5°	70.3	66.5	62.6	60.2	59.4	58.7	57.9	57.1
65°	57.2	54.4	51.7	50.2	50.0	49.7	49.5	49.3
67.5°	46.2	44.9	43.6	42.9	42.6	42.4	42.1	41.9
70°	40.2	39.4	38.6	38.0	37.6	37.3	37.0	36.7
72.5°	34.9	34.2	33.6	33.2	33.0	32.8	32.6	32.4
75°	27.6	27.1	26.5	26.2	26.1	26.1	26.0	25.9
77.5°	20.9	20.6	20.3	20.1	20.0	19.8	19.7	19.6
80°	16.6	16.3	16.0	15.8	15.8	15.8	15.8	15.8
82.5°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
87.5°	5.2	5.1	5.1	5.0	5.0	5.1	5.1	5.1
90°	15.4	15.2	15.0	15.0	15.1	15.1	15.3	15.4
92.5°	14.4	14.5	14.5	14.6	14.6	14.6	14.7	14.7
95°	28.9	28.9	28.9	28.8	28.6	28.4	28.2	28.0
97.5°	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.5
100°	62.3	62.3	62.3	62.3	62.2	62.1	62.0	61.9
102.5°	77.3	77.4	77.5	77.5	77.4	77.2	77.2	77.1
105°	99.8	100.0	100.2	100.3	100.3	100.3	100.3	100.3
107.5°	124.1	124.1	124.2	124.0	123.5	123.1	122.6	122.2
110°	140.5	140.5	140.5	140.4	140.1	139.7	139.4	139.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.0	156.8	156.5	156.3	156.1	155.8	155.6	155.4
115°	182.3	182.2	182.1	181.9	181.6	181.3	181.0	180.7
117.5°	206.8	206.5	206.3	206.0	205.7	205.4	205.1	204.8
120°	223.2	223.2	223.2	223.0	222.7	222.4	222.1	221.8
122.5°	240.0	239.8	239.6	239.3	239.1	238.8	238.7	238.4
125°	265.0	264.7	264.4	264.2	264.1	264.0	263.9	263.8
127.5°	289.3	288.9	288.6	288.2	287.9	287.6	287.2	286.9
130°	305.9	305.7	305.5	305.1	304.8	304.4	304.0	303.6
132.5°	322.0	321.5	321.2	320.8	320.4	320.1	319.8	319.5
135°	345.9	345.7	345.6	345.4	345.2	344.8	344.5	344.2
137.5°	368.6	368.5	368.4	368.2	367.8	367.4	367.0	366.6
140°	384.0	384.0	384.0	383.8	383.3	382.9	382.5	382.1
142.5°	397.8	397.9	398.0	397.8	397.4	397.0	396.6	396.2
145°	419.0	419.1	419.1	419.0	418.6	418.2	417.8	417.4
147.5°	437.4	437.7	437.9	437.8	437.4	437.0	436.7	436.3
150°	449.2	449.5	449.8	449.8	449.5	449.2	448.9	448.6
152.5°	460.9	461.3	461.7	461.7	461.3	460.9	460.5	460.2
155°	475.8	476.3	476.8	476.9	476.6	476.3	475.9	475.7
157.5°	489.5	490.2	490.9	491.0	490.5	490.0	489.6	489.0
160°	497.6	498.3	498.8	499.0	498.6	498.2	497.7	497.3
162.5°	505.0	505.7	506.4	506.5	506.0	505.6	505.1	504.6
165°	514.6	515.3	515.9	516.1	515.6	515.1	514.6	514.0
167.5°	522.4	523.2	523.9	523.9	523.4	522.9	522.4	521.8
170°	526.8	527.5	528.1	528.2	527.6	527.0	526.4	525.9
172.5°	530.0	530.8	531.4	531.5	530.9	530.3	529.7	529.1
175°	533.5	534.2	535.0	535.0	534.4	533.8	533.2	532.6
177.5°	535.2	535.7	536.1	536.1	535.7	535.2	534.7	534.2
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3

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