

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: P334441

Luminaire Tested: **S122IP-S530U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334441  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122IP-S530U830-4F0-1E-UDD-4  
Description: DEFINE 2 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 530 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1948.3 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Indirect

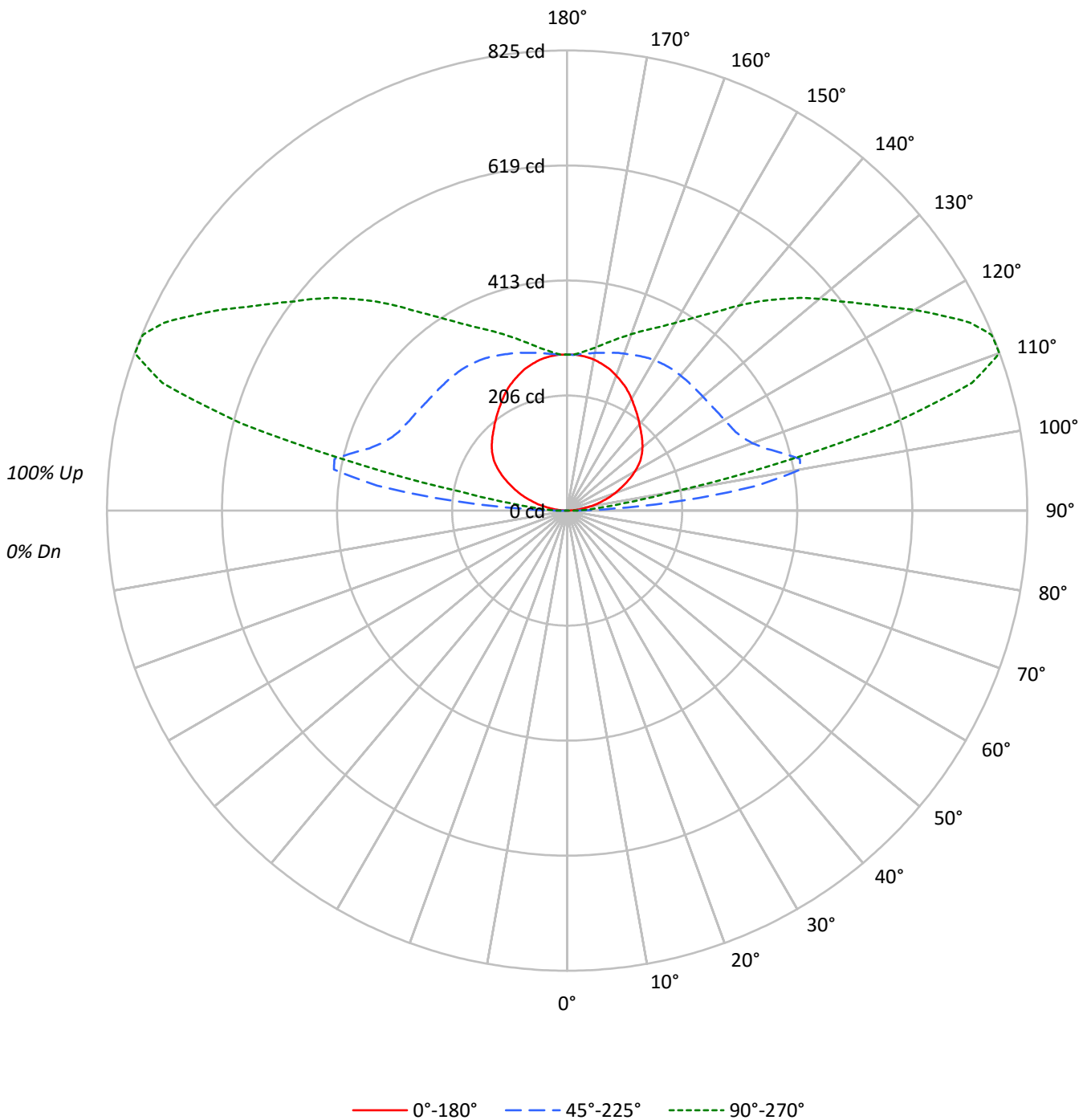
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

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

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	1.8	0.1
90°-100°	109.0	5.6
100°-110°	383.7	19.7
110°-120°	403.0	20.7
120°-130°	331.5	17.0
130°-140°	266.3	13.7
140°-150°	201.2	10.3
150°-160°	141.4	7.3
160°-170°	83.3	4.3
170°-180°	27.1	1.4
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.8	0.1
90°-120°	895.7	46.0
90°-150°	1694.8	87.0
90°-180°	1947.0	99.9
0°-180°	1948.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	7	18	17	18	1
95°	19	46	211	80	61	19
105°	66	99	398	712	606	70
115°	116	146	333	688	797	115
125°	161	191	320	557	647	143
135°	189	226	317	468	536	146
145°	216	248	315	391	428	136
155°	246	265	306	346	360	113
165°	268	276	293	311	316	76
175°	279	279	282	285	284	27
180°	280	280	280	280	280	



TEST NUMBER: P334441

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.5	2.2	4.3	5.4	6.5	8.1	10.8	14.5	17.7	18.3	17.7
92.5°	8.1	11.3	15.6	18.3	22.6	28.5	43.0	63.4	81.7	82.8	69.3
95°	18.8	21.0	26.3	31.2	39.8	52.7	77.4	124.2	186.5	210.7	184.4
97.5°	28.0	31.2	37.1	44.1	53.8	68.3	100.0	165.0	265.5	343.5	346.2
100°	41.4	43.0	47.8	56.4	67.2	82.2	110.7	176.3	292.4	424.6	502.0
102.5°	53.8	54.8	59.7	68.3	79.6	94.6	120.4	176.8	282.2	427.3	560.1
105°	65.6	67.7	71.5	79.6	91.4	106.4	131.7	179.5	268.2	398.3	541.3
107.5°	78.5	80.1	83.9	91.4	103.2	118.3	143.0	185.4	260.7	371.4	501.5
110°	91.4	93.5	96.8	103.7	115.0	130.6	154.3	193.0	258.5	353.2	464.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	103.2	105.4	109.1	115.6	126.3	142.4	165.0	201.0	259.1	341.3	438.6
115°	115.6	118.3	121.5	127.9	138.7	153.2	176.3	209.1	261.2	333.3	418.2
117.5°	128.5	130.6	133.8	139.8	150.0	165.0	186.5	217.7	264.5	329.0	404.2
120°	140.3	142.4	145.7	150.5	161.3	176.3	197.3	226.3	267.7	325.2	393.5
122.5°	151.6	153.2	156.4	161.8	172.5	188.1	207.5	233.8	271.4	323.0	384.3
125°	161.3	162.9	166.1	172.5	183.3	198.3	217.7	241.9	275.2	320.4	375.7
127.5°	169.3	171.5	175.8	182.8	193.0	208.6	227.4	249.4	279.0	318.7	367.7
130°	176.3	178.5	183.8	191.4	202.1	217.2	236.0	256.4	283.3	317.7	359.6
132.5°	182.8	185.4	191.4	199.4	210.7	225.8	243.5	263.4	287.6	317.1	353.2
135°	189.2	191.4	197.8	205.9	218.2	233.3	250.5	269.3	290.8	316.6	347.2
137.5°	195.1	197.8	204.3	212.9	225.2	239.2	256.4	274.1	294.0	316.6	342.9
140°	202.1	204.3	210.7	219.3	231.1	245.1	261.2	277.9	296.2	316.1	339.2
142.5°	209.1	210.7	216.6	225.2	236.5	249.4	265.0	281.1	297.8	316.1	335.4
145°	216.1	218.2	223.6	231.7	242.4	254.2	268.8	283.8	298.9	315.0	332.2
147.5°	223.6	225.2	230.6	238.1	247.3	258.0	272.0	285.4	299.4	313.4	329.0
150°	231.1	232.7	237.0	244.0	252.1	261.8	274.1	286.5	298.9	311.8	324.7
152.5°	238.7	239.2	243.5	249.4	256.9	265.5	276.3	287.0	297.8	309.1	320.9
155°	245.6	246.2	249.4	255.3	261.2	269.3	278.4	287.6	296.7	305.8	316.1
157.5°	251.6	252.1	254.8	260.2	265.0	272.0	280.0	287.6	294.6	302.6	311.8
160°	257.5	258.0	260.2	264.5	268.8	274.7	281.1	287.6	292.9	299.4	306.9
162.5°	263.4	262.8	265.0	268.2	272.0	276.3	281.7	287.0	291.3	296.7	302.6
165°	267.7	267.1	268.2	271.4	274.1	277.4	282.2	286.0	289.2	292.9	297.8
167.5°	271.4	270.9	272.0	274.1	276.3	278.4	282.2	285.4	287.0	289.7	292.9
170°	275.2	274.1	274.7	276.3	277.4	279.0	281.7	284.3	285.4	287.0	289.2
172.5°	277.4	276.8	276.3	277.9	278.4	279.5	281.1	282.7	283.3	283.8	285.4
175°	279.0	278.4	277.9	279.0	279.0	279.5	280.6	281.7	281.1	281.7	282.2
177.5°	280.0	279.0	278.4	279.5	279.5	279.5	280.0	281.1	280.0	279.5	280.0
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	17.2	16.1	17.2	17.7	17.7	17.7	17.7	17.7
92.5°	54.3	46.2	40.3	36.0	35.5	33.3	33.9	32.8
95°	140.8	108.0	85.5	73.6	66.7	62.4	60.7	61.3
97.5°	288.1	230.1	175.8	143.5	122.6	111.8	105.9	102.7
100°	490.8	424.1	350.5	285.4	240.8	217.7	202.1	192.4
102.5°	623.5	621.4	572.5	502.6	453.1	409.6	389.2	375.2
105°	653.1	713.8	720.8	703.1	669.8	636.4	613.3	605.8
107.5°	621.4	711.7	764.4	785.9	785.3	780.5	773.5	761.1
110°	577.8	674.1	742.9	786.9	810.0	820.3	825.1	824.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	538.1	629.4	704.2	756.3	790.7	809.5	819.7	823.5
115°	506.9	589.7	660.1	715.4	753.6	778.3	792.3	797.1
117.5°	481.1	555.3	620.8	673.5	712.8	739.1	753.6	757.4
120°	462.8	529.5	586.4	635.3	673.0	698.2	713.8	719.2
122.5°	448.3	508.0	561.2	604.2	637.0	661.7	675.1	679.4
125°	434.3	489.7	537.0	577.3	608.5	628.9	642.3	646.6
127.5°	420.3	471.4	516.6	554.2	581.6	600.9	612.8	616.0
130°	406.9	453.1	495.6	531.1	557.4	575.7	586.4	590.7
132.5°	394.0	435.9	474.1	506.9	532.7	551.0	560.6	564.4
135°	382.2	417.7	453.1	483.2	506.3	524.1	533.8	535.9
137.5°	372.5	403.1	432.2	459.0	481.1	496.7	505.3	508.5
140°	363.4	389.2	413.9	437.5	454.7	468.7	476.8	480.0
142.5°	355.8	376.8	397.2	416.0	432.2	444.5	451.5	451.5
145°	348.9	366.6	383.3	398.8	411.7	420.9	426.3	427.9
147.5°	343.5	358.0	371.4	383.3	394.5	402.1	405.8	406.9
150°	337.6	349.4	360.7	370.4	378.4	384.9	388.1	388.6
152.5°	331.7	342.4	351.5	359.6	365.5	370.9	373.0	373.0
155°	326.3	334.9	342.9	348.9	354.8	358.5	360.7	359.6
157.5°	319.8	327.3	334.3	339.2	343.5	346.7	347.8	347.8
160°	313.9	319.8	325.7	329.5	333.3	336.0	336.5	336.5
162.5°	308.0	312.8	317.7	320.4	324.1	325.7	326.3	325.7
165°	302.1	305.8	309.6	311.8	313.9	316.1	316.1	315.5
167.5°	296.2	299.4	302.1	304.2	305.3	306.4	306.4	305.8
170°	291.9	293.5	295.6	296.7	297.2	298.9	298.3	297.2
172.5°	287.0	288.1	289.7	290.3	290.8	291.3	290.8	290.3
175°	283.8	284.3	284.9	285.4	285.4	286.0	285.4	284.3
177.5°	281.1	281.1	281.7	281.7	281.7	281.7	281.1	280.0
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5

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