

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: P334641

Luminaire Tested: **S123IP-S585U935-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334641  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123IP-S585U935-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 585 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

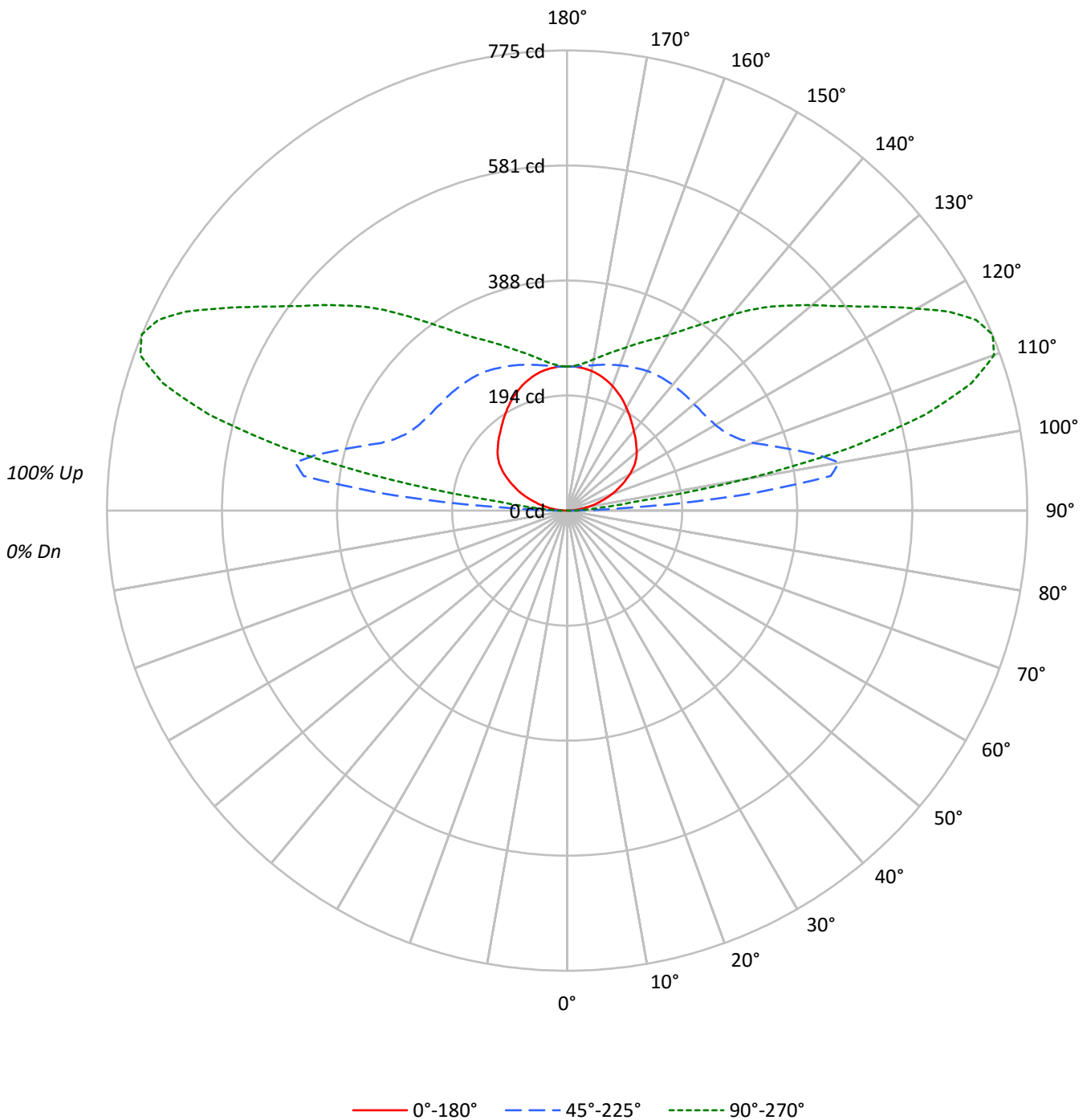
Lumens per Lamp: N/A  
Luminaire Lumens: 1826.2 lumens  
Efficiency: N/A  
Efficacy: 97.1 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

Input Watts (W): 18.8  
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	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°	1.3	0.1
90°-100°	131.6	7.2
100°-110°	385.4	21.1
110°-120°	376.4	20.6
120°-130°	299.7	16.4
130°-140°	236.5	13.0
140°-150°	176.4	9.7
150°-160°	123.0	6.7
160°-170°	72.3	4.0
170°-180°	23.5	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.3	0.1
90°-120°	893.4	48.9
90°-150°	1606.1	87.9
90°-180°	1825.0	99.9
0°-180°	1826.2	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°	1	6	12	14	14	1
95°	17	54	291	85	57	18
105°	57	84	395	690	625	61
115°	101	125	302	662	760	100
125°	140	165	282	511	599	124
135°	164	196	278	421	486	127
145°	187	214	274	345	380	117
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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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°	1.0	2.0	2.9	4.4	5.4	6.4	7.9	9.3	10.8	12.3	11.8
92.5°	7.4	10.8	15.7	20.1	25.0	33.9	49.6	75.6	101.2	91.3	68.3
95°	16.7	18.2	23.6	31.9	44.7	63.8	105.6	178.8	259.3	291.2	236.2
97.5°	26.5	27.0	31.4	38.8	51.6	72.7	113.9	198.9	334.4	447.9	463.1
100°	36.3	36.8	40.3	47.1	58.9	78.1	112.5	185.1	314.3	465.1	561.8
102.5°	46.7	47.6	50.6	57.0	67.3	84.5	114.4	173.4	284.8	433.1	566.7
105°	57.0	58.4	61.4	67.3	76.6	91.8	118.4	168.9	261.8	394.8	535.8
107.5°	67.8	69.2	72.2	78.1	86.9	101.2	124.7	168.0	245.1	361.0	491.6
110°	79.6	81.0	83.5	88.9	97.2	111.0	133.1	170.4	236.2	333.0	450.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	90.4	91.8	94.3	99.7	108.0	121.3	141.4	175.3	231.3	314.3	414.5
115°	100.7	102.6	105.6	110.5	118.8	132.1	150.8	180.7	230.8	302.0	387.0
117.5°	111.0	113.4	115.9	120.3	129.6	141.9	160.6	187.6	231.3	293.7	368.8
120°	121.8	123.3	125.7	130.6	140.0	152.2	169.9	195.5	233.3	288.3	355.1
122.5°	131.1	132.6	135.1	140.5	149.3	162.6	179.7	202.8	236.7	284.8	343.8
125°	140.0	140.9	143.9	149.3	158.6	171.9	189.1	210.7	240.1	281.9	334.4
127.5°	146.8	148.3	151.7	157.1	167.5	180.7	197.4	217.1	244.1	280.4	325.6
130°	153.2	154.7	159.1	165.0	175.3	188.6	204.8	223.4	248.0	278.9	318.7
132.5°	158.1	160.1	165.0	172.4	182.7	195.5	211.2	229.3	250.9	278.4	312.3
135°	164.0	166.0	171.4	178.8	189.1	202.3	217.6	234.3	253.9	278.0	306.9
137.5°	169.4	171.4	176.8	184.7	195.0	207.2	222.0	238.2	255.9	277.0	302.0
140°	174.8	177.3	182.2	190.1	199.9	212.2	226.4	241.1	257.8	276.5	297.6
142.5°	180.7	182.7	188.1	195.0	204.8	216.1	229.8	244.1	259.3	275.5	293.7
145°	187.1	188.6	193.0	200.4	208.7	220.0	232.8	246.0	259.8	274.5	290.2
147.5°	193.5	194.5	198.9	205.3	213.6	223.4	235.2	247.5	259.8	273.0	286.8
150°	199.9	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.1	283.4
152.5°	206.3	206.3	210.2	215.6	221.5	229.8	239.2	249.0	258.3	268.6	279.4
155°	212.6	212.6	215.6	220.5	225.9	232.8	241.1	249.0	257.3	265.7	275.5
157.5°	217.6	218.0	220.5	224.9	229.8	235.2	242.1	249.5	255.9	263.2	271.1
160°	223.4	223.4	225.4	229.3	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.9	227.9	229.3	232.3	235.2	239.2	244.1	249.0	252.9	257.3	262.2
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.6	248.0	250.9	254.4	258.3
167.5°	235.7	235.2	235.7	237.7	239.2	241.6	244.6	247.5	249.0	251.4	254.4
170°	238.7	237.7	238.2	239.7	240.6	241.6	244.1	246.0	247.0	248.5	250.9
172.5°	240.6	240.1	240.1	241.1	241.6	242.1	244.1	245.5	245.5	246.0	247.5
175°	242.1	241.6	241.1	242.1	242.1	242.6	243.6	244.6	244.1	244.1	245.1
177.5°	243.1	242.6	242.1	242.6	242.6	242.6	243.1	244.1	243.1	242.6	243.1
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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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°	12.3	12.8	13.3	14.2	13.8	14.2	14.7	14.2
92.5°	48.6	37.8	32.9	29.5	28.5	26.5	27.0	26.0
95°	176.8	119.8	93.8	76.1	66.8	62.4	58.9	57.0
97.5°	406.1	306.4	241.6	185.6	152.7	134.1	122.3	116.9
100°	579.0	539.2	481.8	412.0	362.4	326.6	307.4	307.9
102.5°	636.5	644.8	617.3	579.5	543.6	517.1	501.9	487.7
105°	638.4	687.5	696.9	684.1	661.5	642.8	627.1	624.7
107.5°	609.0	686.1	724.4	737.6	734.7	725.8	719.4	714.0
110°	562.8	653.2	715.0	749.4	763.2	767.1	766.1	765.1





TEST NUMBER: P334641

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	517.1	609.9	681.1	727.8	755.8	770.0	774.9	775.4
115°	477.8	563.3	635.5	689.0	725.8	747.4	757.3	759.7
117.5°	447.4	523.0	589.3	644.8	683.1	707.2	721.9	725.3
120°	424.3	490.6	549.5	599.1	637.9	665.4	677.2	680.2
122.5°	406.1	464.6	518.1	563.3	596.7	620.7	634.0	637.9
125°	390.4	443.9	491.1	530.4	561.8	583.4	595.7	599.1
127.5°	376.2	424.8	468.0	504.4	532.8	551.5	562.8	565.7
130°	362.9	407.1	446.9	480.3	506.3	524.0	534.3	538.2
132.5°	350.6	390.4	426.8	458.2	482.3	499.9	508.8	511.2
135°	339.8	374.7	406.6	434.6	458.7	473.4	482.3	485.7
137.5°	329.5	359.0	387.5	412.5	433.1	448.4	455.7	458.7
140°	320.7	345.7	369.3	390.4	409.1	422.8	430.7	430.2
142.5°	312.3	333.0	352.6	370.3	385.5	397.3	404.2	403.7
145°	306.0	322.2	337.9	352.1	364.4	374.7	378.6	379.6
147.5°	300.5	313.8	327.1	337.4	347.2	354.6	358.5	359.0
150°	294.7	306.0	316.3	325.6	333.0	338.4	341.3	341.3
152.5°	289.3	298.6	307.4	314.8	320.2	325.1	326.6	326.6
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	278.0	284.8	290.7	295.6	299.6	302.5	303.5	303.5
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	267.2	271.6	276.0	278.9	280.9	283.4	283.4	282.9
165°	262.2	265.2	268.6	271.1	273.0	275.0	274.5	274.5
167.5°	257.8	260.3	262.2	264.2	265.2	266.7	266.2	266.2
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	249.5	250.5	251.9	252.4	252.4	253.4	252.4	251.9
175°	246.0	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.6	244.1	244.6	244.6	244.1	244.6	243.6	243.6
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

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