

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: P334444

Luminaire Tested: **S122IP-S1080U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334444  
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-S1080U830-4F0-1E-UDD-4  
Description: DEFINE 2 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1080 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3968.7 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Indirect

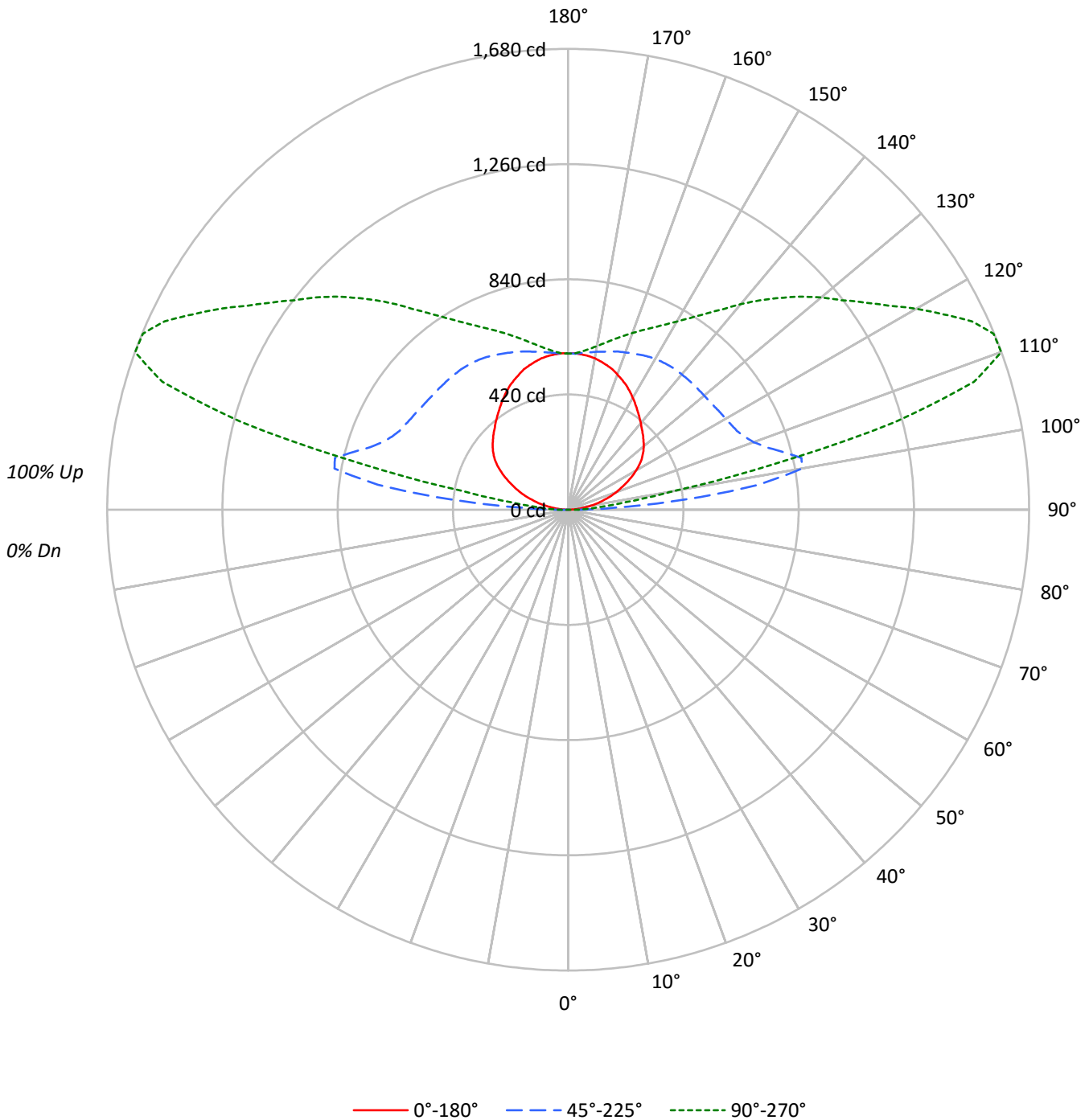
Input Watts (W): 41.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3.7	0.1
90°-100°	221.9	5.6
100°-110°	781.6	19.7
110°-120°	820.9	20.7
120°-130°	675.3	17.0
130°-140°	542.5	13.7
140°-150°	409.8	10.3
150°-160°	288.1	7.3
160°-170°	169.6	4.3
170°-180°	55.2	1.4
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	3.7	0.1
90°-120°	1824.5	46.0
90°-150°	3452.2	87.0
90°-180°	3965.0	99.9
0°-180°	3968.7	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	15	37	36	36	3
95°	38	94	429	162	125	40
105°	134	201	811	1450	1234	142
115°	235	297	679	1401	1624	233
125°	328	389	653	1135	1317	292
135°	385	460	645	954	1092	298
145°	440	506	642	797	872	276
155°	500	540	623	705	732	230
165°	545	562	597	633	643	154
175°	568	569	574	581	579	54
180°	569	569	569	569	569	



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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°	1.1	4.4	8.8	10.9	13.1	16.4	21.9	29.6	36.1	37.2	36.1
92.5°	16.4	23.0	31.8	37.2	46.0	58.0	87.6	129.2	166.4	168.6	141.2
95°	38.3	42.7	53.7	63.5	81.0	107.3	157.7	252.9	379.9	429.2	375.6
97.5°	56.9	63.5	75.5	89.8	109.5	139.1	203.7	336.1	540.9	699.7	705.1
100°	84.3	87.6	97.4	115.0	136.9	167.5	225.6	359.1	595.6	865.0	1022.7
102.5°	109.5	111.7	121.5	139.1	162.0	192.7	245.3	360.2	574.8	870.5	1140.9
105°	133.6	138.0	145.6	162.0	186.1	216.8	268.3	365.7	546.4	811.3	1102.6
107.5°	159.9	163.1	170.8	186.1	210.2	240.9	291.3	377.7	531.0	756.6	1021.6
110°	186.1	190.5	197.1	211.3	234.3	266.1	314.2	393.1	526.7	719.4	946.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.2	214.6	222.3	235.4	257.3	290.2	336.1	409.5	527.8	695.3	893.5
115°	235.4	240.9	247.5	260.6	282.5	312.1	359.1	425.9	532.1	678.9	851.9
117.5°	261.7	266.1	272.6	284.7	305.5	336.1	379.9	443.4	538.7	670.1	823.4
120°	285.8	290.2	296.7	306.6	328.5	359.1	401.8	461.0	545.3	662.4	801.5
122.5°	308.8	312.1	318.6	329.6	351.5	383.2	422.6	476.3	552.9	658.0	782.9
125°	328.5	331.8	338.3	351.5	373.4	404.0	443.4	492.7	560.6	652.6	765.4
127.5°	344.9	349.3	358.0	372.3	393.1	424.8	463.2	508.0	568.3	649.3	748.9
130°	359.1	363.5	374.5	389.8	411.7	442.3	480.7	522.3	577.0	647.1	732.5
132.5°	372.3	377.7	389.8	406.2	429.2	459.9	496.0	536.5	585.8	646.0	719.4
135°	385.4	389.8	402.9	419.4	444.5	475.2	510.2	548.6	592.4	644.9	707.3
137.5°	397.5	402.9	416.1	433.6	458.8	487.2	522.3	558.4	598.9	644.9	698.6
140°	411.7	416.1	429.2	446.7	470.8	499.3	532.1	566.1	603.3	643.8	690.9
142.5°	425.9	429.2	441.3	458.8	481.8	508.0	539.8	572.6	606.6	643.8	683.2
145°	440.2	444.5	455.5	471.9	493.8	517.9	547.5	578.1	608.8	641.6	676.7
147.5°	455.5	458.8	469.7	485.1	503.7	525.6	554.0	581.4	609.9	638.3	670.1
150°	470.8	474.1	482.9	497.1	513.5	533.2	558.4	583.6	608.8	635.1	661.3
152.5°	486.1	487.2	496.0	508.0	523.4	540.9	562.8	584.7	606.6	629.6	653.7
155°	500.4	501.5	508.0	520.1	532.1	548.6	567.2	585.8	604.4	623.0	643.8
157.5°	512.4	513.5	519.0	529.9	539.8	554.0	570.5	585.8	600.0	616.4	635.1
160°	524.5	525.6	529.9	538.7	547.5	559.5	572.6	585.8	596.7	609.9	625.2
162.5°	536.5	535.4	539.8	546.4	554.0	562.8	573.7	584.7	593.4	604.4	616.4
165°	545.3	544.2	546.4	552.9	558.4	565.0	574.8	582.5	589.1	596.7	606.6
167.5°	552.9	551.8	554.0	558.4	562.8	567.2	574.8	581.4	584.7	590.2	596.7
170°	560.6	558.4	559.5	562.8	565.0	568.3	573.7	579.2	581.4	584.7	589.1
172.5°	565.0	563.9	562.8	566.1	567.2	569.4	572.6	575.9	577.0	578.1	581.4
175°	568.3	567.2	566.1	568.3	568.3	569.4	571.6	573.7	572.6	573.7	574.8
177.5°	570.5	568.3	567.2	569.4	569.4	569.4	570.5	572.6	570.5	569.4	570.5
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



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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°	35.0	32.8	35.0	36.1	36.1	36.1	36.1	36.1
92.5°	110.6	94.2	82.1	73.4	72.3	67.9	69.0	66.8
95°	286.9	220.1	174.1	150.0	135.8	127.0	123.7	124.8
97.5°	586.9	468.6	358.0	292.3	249.6	227.7	215.7	209.1
100°	999.7	863.9	713.9	581.4	490.5	443.4	411.7	392.0
102.5°	1270.1	1265.7	1166.1	1023.8	923.0	834.3	792.7	764.3
105°	1330.3	1454.1	1468.3	1432.2	1364.3	1296.4	1249.3	1234.0
107.5°	1265.7	1449.7	1557.0	1600.8	1599.7	1589.8	1575.6	1550.4
110°	1177.0	1373.0	1513.2	1603.0	1650.1	1670.9	1680.7	1679.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1096.0	1282.2	1434.4	1540.6	1610.6	1649.0	1669.8	1677.4
115°	1032.5	1201.1	1344.6	1457.3	1535.1	1585.5	1613.9	1623.8
117.5°	980.0	1131.1	1264.6	1371.9	1451.9	1505.5	1535.1	1542.7
120°	942.7	1078.5	1194.6	1294.2	1370.8	1422.3	1454.1	1465.0
122.5°	913.2	1034.7	1143.1	1230.7	1297.5	1347.9	1375.2	1384.0
125°	884.7	997.5	1093.8	1175.9	1239.5	1281.1	1308.4	1317.2
127.5°	856.2	960.2	1052.2	1128.9	1184.7	1224.1	1248.2	1254.8
130°	828.9	923.0	1009.5	1081.8	1135.4	1172.7	1194.6	1203.3
132.5°	802.6	888.0	965.7	1032.5	1085.1	1122.3	1142.0	1149.7
135°	778.5	850.8	923.0	984.3	1031.4	1067.6	1087.3	1091.6
137.5°	758.8	821.2	880.3	935.1	980.0	1011.7	1029.2	1035.8
140°	740.2	792.7	843.1	891.3	926.3	954.8	971.2	977.8
142.5°	724.8	767.5	809.1	847.5	880.3	905.5	919.7	919.7
145°	710.6	746.7	780.7	812.4	838.7	857.3	868.3	871.6
147.5°	699.7	729.2	756.6	780.7	803.7	819.0	826.7	828.9
150°	687.6	711.7	734.7	754.4	770.8	784.0	790.5	791.6
152.5°	675.6	697.5	716.1	732.5	744.5	755.5	759.9	759.9
155°	664.6	682.1	698.6	710.6	722.7	730.3	734.7	732.5
157.5°	651.5	666.8	681.0	690.9	699.7	706.2	708.4	708.4
160°	639.4	651.5	663.5	671.2	678.9	684.3	685.4	685.4
162.5°	627.4	637.2	647.1	652.6	660.2	663.5	664.6	663.5
165°	615.3	623.0	630.7	635.1	639.4	643.8	643.8	642.7
167.5°	603.3	609.9	615.3	619.7	621.9	624.1	624.1	623.0
170°	594.5	597.8	602.2	604.4	605.5	608.8	607.7	605.5
172.5°	584.7	586.9	590.2	591.3	592.4	593.4	592.4	591.3
175°	578.1	579.2	580.3	581.4	581.4	582.5	581.4	579.2
177.5°	572.6	572.6	573.7	573.7	573.7	573.7	572.6	570.5
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4

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