

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: P334628

Luminaire Tested: **S123IP-S1025U840-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334628  
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-S1025U840-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1025 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3748.5 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

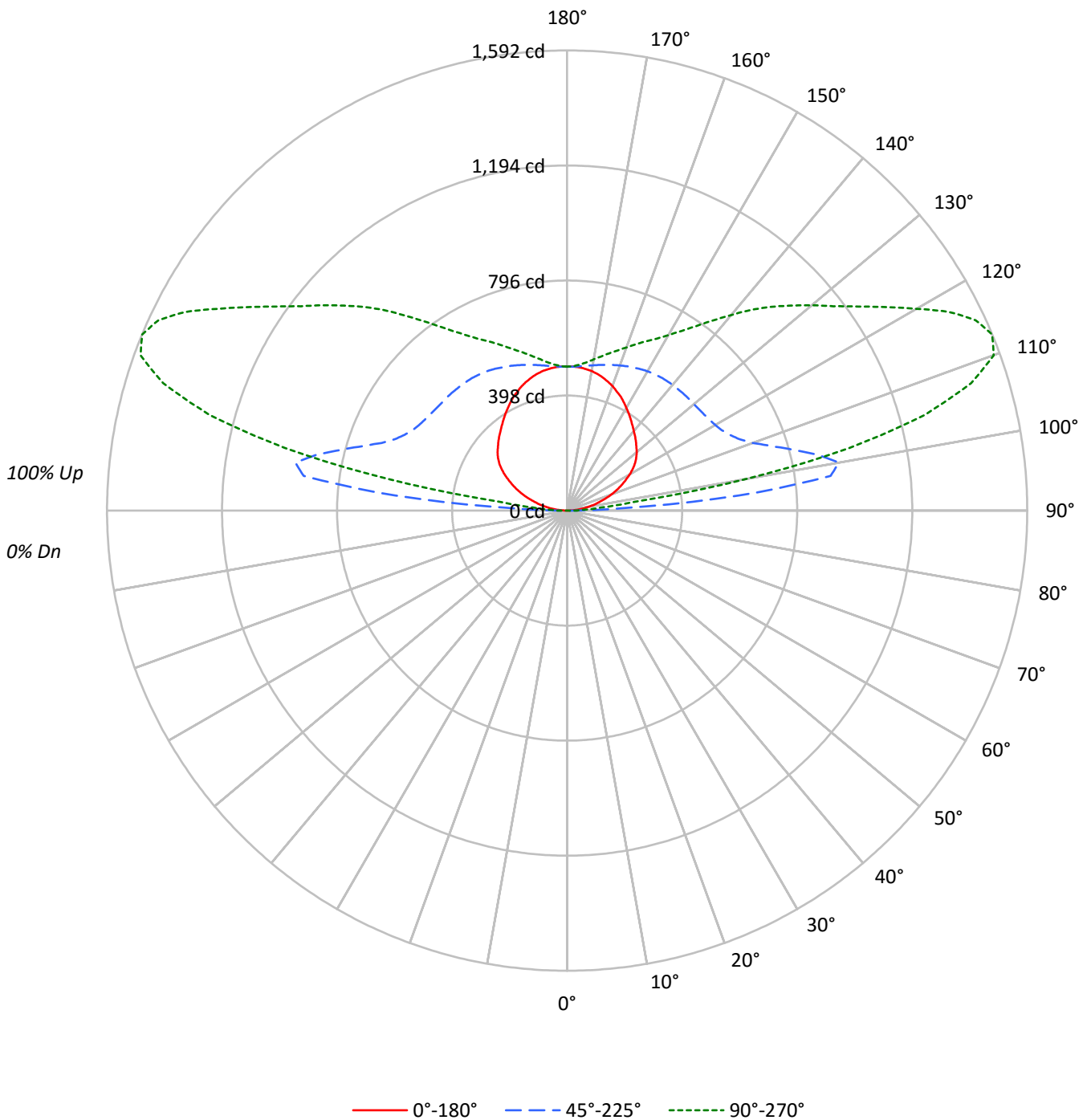
Input Watts (W): 35.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2.7	0.1
90°-100°	270.2	7.2
100°-110°	791.1	21.1
110°-120°	772.6	20.6
120°-130°	615.3	16.4
130°-140°	485.4	12.9
140°-150°	362.1	9.7
150°-160°	252.5	6.7
160°-170°	148.3	4.0
170°-180°	48.2	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.7	0.1
90°-120°	1833.9	48.9
90°-150°	3296.7	87.9
90°-180°	3746.0	99.9
0°-180°	3748.5	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°	2	12	25	28	29	3
95°	34	111	598	174	117	36
105°	117	173	810	1417	1282	124
115°	207	258	620	1359	1559	205
125°	287	339	579	1048	1230	255
135°	337	402	570	863	997	260
145°	384	440	564	708	779	241
155°	436	471	545	620	646	201
165°	477	490	522	554	564	134
175°	497	498	501	508	507	47
180°	498	498	498	498	498	



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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°	2.0	4.0	6.0	9.1	11.1	13.1	16.1	19.2	22.2	25.2	24.2
92.5°	15.1	22.2	32.3	41.3	51.4	69.6	101.8	155.2	207.7	187.5	140.1
95°	34.3	37.3	48.4	65.5	91.7	131.0	216.7	366.9	532.2	597.8	484.9
97.5°	54.4	55.4	64.5	79.6	105.8	149.2	233.9	408.3	686.5	919.3	950.6
100°	74.6	75.6	82.7	96.8	121.0	160.3	230.8	380.0	645.1	954.6	1153.2
102.5°	95.8	97.8	103.8	116.9	138.1	173.4	234.9	355.8	584.7	889.1	1163.3
105°	116.9	120.0	126.0	138.1	157.3	188.5	242.9	346.8	537.3	810.5	1099.8
107.5°	139.1	142.1	148.2	160.3	178.4	207.7	256.0	344.7	503.0	740.9	1009.0
110°	163.3	166.3	171.4	182.5	199.6	227.8	273.2	349.8	484.9	683.4	924.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.5	188.5	193.5	204.6	221.8	249.0	290.3	359.9	474.8	645.1	850.8
115°	206.6	210.7	216.7	226.8	243.9	271.2	309.5	371.0	473.8	619.9	794.3
117.5°	227.8	232.9	237.9	247.0	266.1	291.3	329.6	385.1	474.8	602.8	757.0
120°	250.0	253.0	258.1	268.1	287.3	312.5	348.8	401.2	478.8	591.7	728.8
122.5°	269.1	272.2	277.2	288.3	306.4	333.7	368.9	416.3	485.9	584.7	705.6
125°	287.3	289.3	295.4	306.4	325.6	352.8	388.1	432.4	492.9	578.6	686.5
127.5°	301.4	304.4	311.5	322.6	343.7	371.0	405.2	445.5	501.0	575.6	668.3
130°	314.5	317.5	326.6	338.7	359.9	387.1	420.3	458.7	509.1	572.6	654.2
132.5°	324.6	328.6	338.7	353.8	375.0	401.2	433.5	470.7	515.1	571.6	641.1
135°	336.7	340.7	351.8	366.9	388.1	415.3	446.6	480.8	521.1	570.5	630.0
137.5°	347.8	351.8	362.9	379.0	400.2	425.4	455.6	488.9	525.2	568.5	619.9
140°	358.9	363.9	374.0	390.1	410.3	435.5	464.7	494.9	529.2	567.5	610.9
142.5°	371.0	375.0	386.1	400.2	420.3	443.5	471.8	501.0	532.2	565.5	602.8
145°	384.1	387.1	396.2	411.3	428.4	451.6	477.8	505.0	533.2	563.5	595.7
147.5°	397.2	399.2	408.3	421.4	438.5	458.7	482.8	508.0	533.2	560.5	588.7
150°	410.3	411.3	419.3	432.4	446.6	464.7	487.9	509.1	533.2	556.4	581.6
152.5°	423.4	423.4	431.4	442.5	454.6	471.8	490.9	511.1	530.2	551.4	573.6
155°	436.5	436.5	442.5	452.6	463.7	477.8	494.9	511.1	528.2	545.3	565.5
157.5°	446.6	447.6	452.6	461.7	471.8	482.8	497.0	512.1	525.2	540.3	556.4
160°	458.7	458.7	462.7	470.7	477.8	487.9	500.0	512.1	523.2	534.3	547.4
162.5°	467.7	467.7	470.7	476.8	482.8	490.9	501.0	511.1	519.1	528.2	538.3
165°	476.8	475.8	477.8	482.8	486.9	493.9	502.0	509.1	515.1	522.2	530.2
167.5°	483.9	482.8	483.9	487.9	490.9	495.9	502.0	508.0	511.1	516.1	522.2
170°	489.9	487.9	488.9	491.9	493.9	495.9	501.0	505.0	507.0	510.1	515.1
172.5°	493.9	492.9	492.9	494.9	495.9	497.0	501.0	504.0	504.0	505.0	508.0
175°	497.0	495.9	494.9	497.0	497.0	498.0	500.0	502.0	501.0	501.0	503.0
177.5°	499.0	498.0	497.0	498.0	498.0	498.0	499.0	501.0	499.0	498.0	499.0
180°	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0



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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°	25.2	26.2	27.2	29.2	28.2	29.2	30.2	29.2
92.5°	99.8	77.6	67.5	60.5	58.5	54.4	55.4	53.4
95°	362.9	246.0	192.5	156.2	137.1	128.0	121.0	116.9
97.5°	833.6	629.0	495.9	381.0	313.5	275.2	251.0	239.9
100°	1188.5	1106.8	988.9	845.7	743.9	670.3	631.0	632.0
102.5°	1306.4	1323.5	1267.1	1189.5	1115.9	1061.5	1030.2	1001.0
105°	1310.4	1411.2	1430.4	1404.2	1357.8	1319.5	1287.2	1282.2
107.5°	1250.0	1408.2	1486.8	1514.1	1508.0	1489.9	1476.8	1465.7
110°	1155.2	1340.7	1467.7	1538.2	1566.5	1574.5	1572.5	1570.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1061.5	1252.0	1398.1	1493.9	1551.4	1580.6	1590.7	1591.7
115°	980.8	1156.2	1304.4	1414.3	1489.9	1534.2	1554.4	1559.4
117.5°	918.3	1073.5	1209.6	1323.5	1402.2	1451.6	1481.8	1488.9
120°	870.9	1007.0	1128.0	1229.8	1309.4	1365.9	1390.1	1396.1
122.5°	833.6	953.6	1063.5	1156.2	1224.8	1274.1	1301.4	1309.4
125°	801.4	911.3	1008.0	1088.7	1153.2	1197.5	1222.7	1229.8
127.5°	772.1	871.9	960.6	1035.2	1093.7	1132.0	1155.2	1161.2
130°	744.9	835.7	917.3	985.8	1039.3	1075.6	1096.7	1104.8
132.5°	719.7	801.4	876.0	940.5	989.9	1026.2	1044.3	1049.4
135°	697.6	769.1	834.6	892.1	941.5	971.7	989.9	996.9
137.5°	676.4	736.9	795.3	846.7	889.1	920.3	935.4	941.5
140°	658.2	709.7	758.0	801.4	839.7	867.9	884.0	883.0
142.5°	641.1	683.4	723.8	760.1	791.3	815.5	829.6	828.6
145°	628.0	661.3	693.5	722.8	748.0	769.1	777.2	779.2
147.5°	616.9	644.1	671.3	692.5	712.7	727.8	735.9	736.9
150°	604.8	628.0	649.2	668.3	683.4	694.5	700.6	700.6
152.5°	593.7	612.9	631.0	646.1	657.2	667.3	670.3	670.3
155°	582.6	598.8	613.9	626.0	635.1	643.1	645.1	646.1
157.5°	570.5	584.7	596.8	606.8	614.9	620.9	623.0	623.0
160°	560.5	571.6	581.6	588.7	595.7	601.8	601.8	600.8
162.5°	548.4	557.4	566.5	572.6	576.6	581.6	581.6	580.6
165°	538.3	544.3	551.4	556.4	560.5	564.5	563.5	563.5
167.5°	529.2	534.3	538.3	542.3	544.3	547.4	546.4	546.4
170°	520.1	523.2	527.2	529.2	530.2	532.2	531.2	531.2
172.5°	512.1	514.1	517.1	518.1	518.1	520.1	518.1	517.1
175°	505.0	506.0	508.0	508.0	508.0	509.1	508.0	507.0
177.5°	500.0	501.0	502.0	502.0	501.0	502.0	500.0	500.0
180°	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0

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