

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: P334793

Luminaire Tested: **S124IP-S1035U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334793  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124IP-S1035U830-4F0-1E-UDD-4  
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1035 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

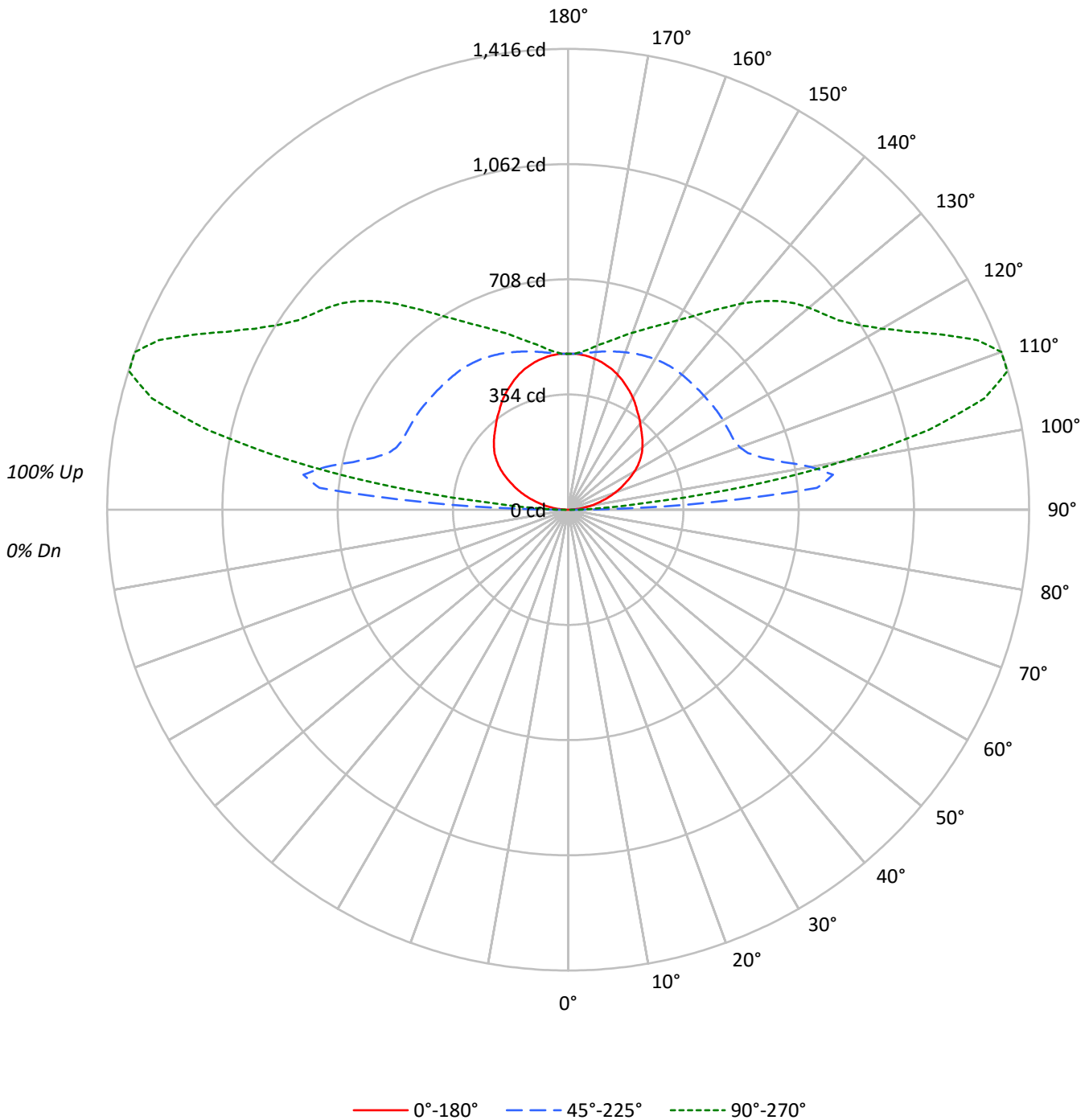
Lumens per Lamp: N/A  
Luminaire Lumens: 3490.1 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Indirect

Input Watts (W): 35.1  
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°	1.9	0.1
90°-100°	347.1	9.9
100°-110°	724.7	20.8
110°-120°	644.2	18.5
120°-130°	542.3	15.5
130°-140°	452.4	13.0
140°-150°	345.4	9.9
150°-160°	242.8	7.0
160°-170°	142.8	4.1
170°-180°	46.5	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.9	0.1
90°-120°	1716.0	49.2
90°-150°	3056.1	87.6
90°-180°	3488.0	99.9
0°-180°	3490.1	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	8	17	19	20	2
95°	31	98	767	380	230	34
105°	110	159	617	1329	1324	117
115°	194	243	550	1058	1271	192
125°	270	321	548	900	1014	241
135°	321	382	543	799	907	248
145°	370	423	540	674	740	232
155°	421	454	525	595	620	194
165°	458	472	503	533	541	129
175°	478	479	483	489	487	45
180°	479	479	479	479	479	



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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°	0.9	2.8	5.6	6.6	7.5	7.5	13.2	13.2	15.1	16.9	16.0
92.5°	13.2	18.8	29.2	43.3	60.2	84.7	143.0	234.3	322.7	368.9	306.7
95°	31.1	33.9	43.3	55.5	78.1	117.6	199.5	353.8	578.7	766.9	788.5
97.5°	51.8	51.8	60.2	71.5	91.3	125.1	190.1	322.7	554.2	820.5	988.9
100°	71.5	71.5	78.1	89.4	107.3	137.4	192.9	299.2	491.2	756.5	997.4
102.5°	90.3	92.2	97.9	108.2	125.1	153.4	202.3	292.6	448.8	676.5	926.8
105°	110.1	112.9	117.6	128.9	145.8	173.1	218.3	296.4	428.1	617.3	838.4
107.5°	131.7	133.6	138.3	150.6	166.5	193.8	235.2	307.7	422.5	578.7	765.9
110°	153.4	155.3	160.0	171.3	188.2	213.6	255.0	320.9	424.4	560.8	714.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.1	176.0	181.6	192.0	208.9	234.3	273.8	335.0	430.0	552.3	685.0
115°	193.8	196.7	203.2	212.7	230.5	255.9	293.6	350.0	437.5	550.5	669.0
117.5°	214.5	217.4	223.0	233.4	250.3	276.6	312.4	365.1	445.1	549.5	660.5
120°	235.2	237.1	243.7	254.1	270.1	296.4	332.2	381.1	453.5	549.5	654.0
122.5°	254.1	255.9	262.5	271.9	289.8	315.2	351.0	396.1	462.0	548.6	646.4
125°	270.1	273.8	279.5	289.8	307.7	334.0	367.9	411.2	470.5	547.6	638.0
127.5°	285.1	287.9	294.5	305.8	324.6	351.0	383.9	424.4	477.1	545.8	626.7
130°	297.3	301.1	308.6	322.7	340.6	367.9	399.9	436.6	484.6	544.8	616.3
132.5°	309.6	312.4	322.7	335.9	355.7	381.1	413.1	448.8	491.2	543.9	606.9
135°	320.9	324.6	334.0	350.0	369.8	394.3	425.3	459.2	497.8	542.9	597.5
137.5°	332.2	335.9	346.3	361.3	382.0	405.5	434.7	466.7	501.5	542.9	589.0
140°	344.4	347.2	357.6	373.6	393.3	415.9	444.1	474.2	506.2	542.0	582.4
142.5°	357.6	360.4	369.8	384.8	403.7	425.3	452.6	479.9	510.0	542.0	576.8
145°	369.8	372.6	382.0	395.2	413.1	433.8	458.2	483.6	510.9	540.1	570.2
147.5°	383.9	384.8	393.3	407.4	422.5	441.3	464.8	487.4	511.9	537.3	564.6
150°	397.1	398.0	405.5	416.8	431.0	448.8	469.5	490.2	511.9	534.5	558.0
152.5°	409.3	409.3	416.8	427.2	439.4	455.4	473.3	492.1	510.0	529.8	550.5
155°	420.6	421.5	427.2	436.6	447.0	461.1	477.1	493.1	508.1	525.1	542.9
157.5°	431.9	431.9	437.5	445.1	454.5	465.8	479.9	493.1	506.2	520.3	535.4
160°	442.2	442.2	446.0	452.6	460.1	470.5	481.8	493.1	503.4	514.7	526.9
162.5°	451.7	450.7	453.5	459.2	465.8	473.3	483.6	493.1	500.6	509.1	519.4
165°	458.2	458.2	460.1	464.8	469.5	475.2	483.6	491.2	496.8	503.4	510.9
167.5°	465.8	464.8	465.8	469.5	472.4	477.1	483.6	489.3	493.1	497.8	503.4
170°	470.5	469.5	470.5	473.3	475.2	478.0	482.7	487.4	489.3	492.1	495.9
172.5°	475.2	474.2	474.2	476.1	477.1	478.9	481.8	485.5	485.5	486.5	489.3
175°	478.0	477.1	477.1	478.0	478.9	478.9	480.8	483.6	482.7	482.7	484.6
177.5°	479.9	478.9	478.0	478.9	478.9	478.9	479.9	481.8	479.9	479.9	480.8
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9



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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°	16.9	17.9	18.8	18.8	19.8	20.7	19.8	19.8
92.5°	226.8	169.4	133.6	110.1	96.0	89.4	85.6	85.6
95°	697.2	551.4	425.3	334.0	287.9	258.8	241.8	229.6
97.5°	1004.0	931.5	828.0	722.6	658.7	602.2	574.0	551.4
100°	1134.8	1153.6	1107.5	1037.9	956.0	898.6	870.4	862.9
102.5°	1128.2	1240.2	1268.4	1249.6	1207.2	1169.6	1139.5	1133.8
105°	1053.9	1216.6	1309.8	1348.4	1350.3	1342.7	1329.6	1323.9
107.5°	962.6	1138.5	1268.4	1347.4	1388.8	1405.8	1413.3	1414.2
110°	881.7	1044.5	1180.9	1284.4	1351.2	1390.7	1407.7	1416.1





TEST NUMBER: P334793

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	822.4	961.7	1088.7	1192.2	1270.3	1320.2	1345.6	1360.6
115°	786.6	902.4	1012.5	1102.8	1177.1	1233.6	1263.7	1271.2
117.5°	765.9	863.8	953.2	1032.2	1098.1	1147.0	1179.0	1183.7
120°	752.8	840.3	915.5	982.4	1036.0	1077.4	1101.9	1112.2
122.5°	741.5	825.2	892.0	948.5	991.8	1025.6	1045.4	1055.7
125°	728.3	809.2	874.1	925.9	963.5	990.8	1008.7	1014.3
127.5°	713.2	791.3	856.3	905.2	942.8	967.3	982.4	988.0
130°	694.4	768.8	832.7	882.6	921.2	944.7	959.8	965.4
132.5°	674.7	743.4	805.5	855.3	893.0	920.2	934.4	940.0
135°	656.8	717.9	775.3	822.4	860.0	886.4	901.4	907.1
137.5°	639.8	693.5	743.4	786.6	822.4	849.7	861.9	868.5
140°	625.7	670.0	712.3	751.8	784.8	805.5	818.6	826.2
142.5°	612.6	650.2	685.0	717.9	746.2	765.0	776.3	781.0
145°	600.3	632.3	660.5	686.9	710.4	726.4	735.8	740.5
147.5°	590.0	616.3	639.8	661.5	679.4	693.5	701.0	702.9
150°	580.6	602.2	621.0	638.0	653.0	665.3	670.9	671.8
152.5°	570.2	588.1	605.0	618.2	630.4	639.8	642.7	643.6
155°	559.9	574.9	589.0	600.3	609.7	617.3	620.1	620.1
157.5°	548.6	561.7	574.0	583.4	590.9	596.6	598.4	598.4
160°	538.2	548.6	558.9	566.5	572.1	577.7	578.7	578.7
162.5°	527.9	536.3	543.9	550.5	554.2	559.9	560.8	559.9
165°	518.5	524.1	530.7	535.4	539.2	542.9	542.0	541.0
167.5°	509.1	513.8	519.4	522.2	524.1	526.9	526.9	526.0
170°	500.6	503.4	507.2	510.0	511.9	512.8	511.9	511.9
172.5°	493.1	494.9	496.8	498.7	499.6	500.6	499.6	497.8
175°	486.5	487.4	489.3	489.3	489.3	491.2	489.3	487.4
177.5°	481.8	482.7	482.7	483.6	482.7	483.6	481.8	479.9
180°	478.9	478.9	478.9	478.9	478.9	478.9	478.9	478.9

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