

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: P334618

Luminaire Tested: **S123IP-S1025U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334618  
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-S1025U830-4F0-1E-UDD-4  
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 1025 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3498.6 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Indirect

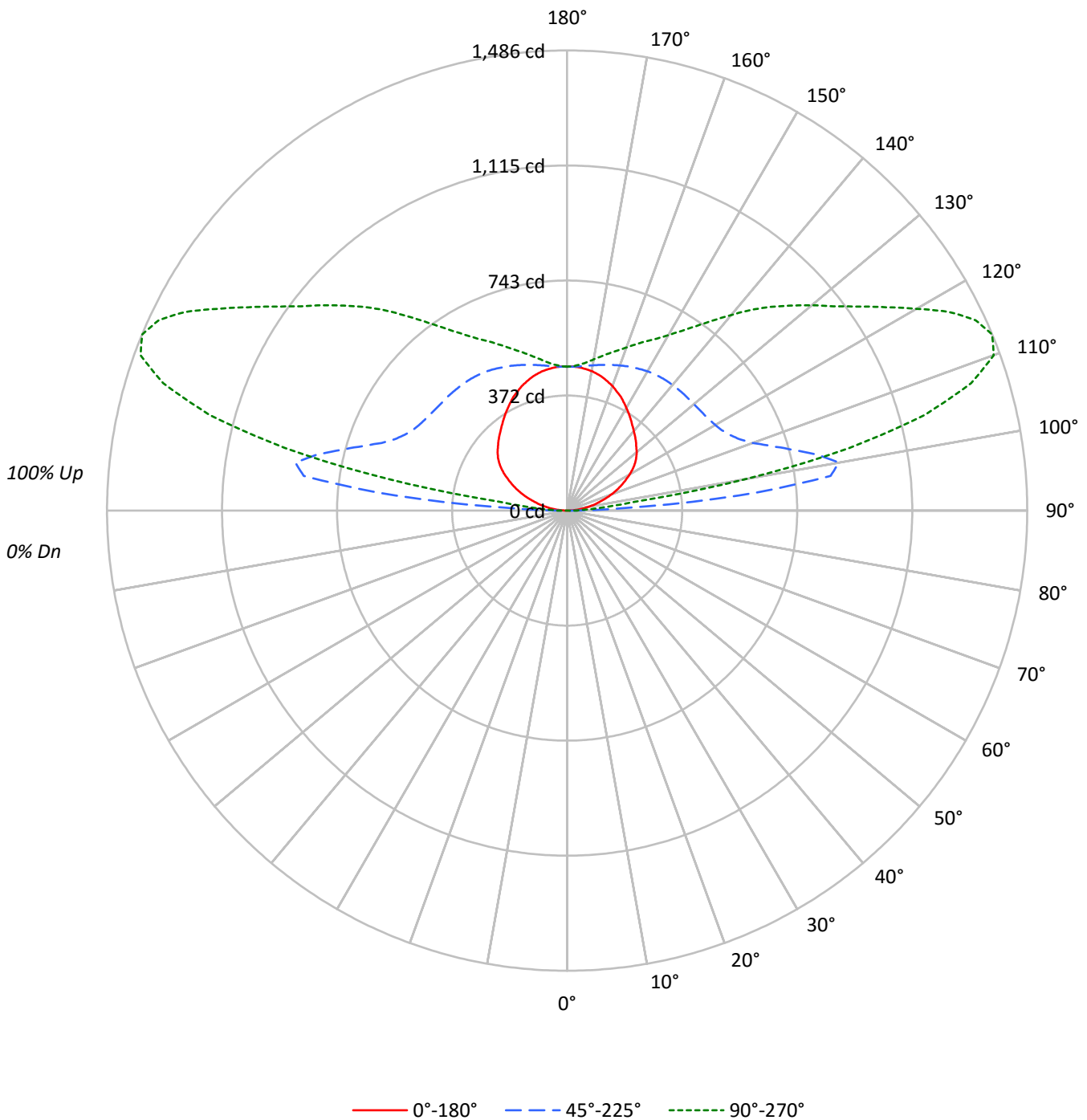
Input Watts (W): 35.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2.6	0.1
90°-100°	252.2	7.2
100°-110°	738.4	21.1
110°-120°	721.0	20.6
120°-130°	574.2	16.4
130°-140°	453.1	12.9
140°-150°	338.0	9.7
150°-160°	235.7	6.7
160°-170°	138.4	4.0
170°-180°	45.0	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.6	0.1
90°-120°	1711.6	48.9
90°-150°	3076.9	87.9
90°-180°	3496.0	99.9
0°-180°	3498.6	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	11	24	26	27	2
95°	32	104	558	163	109	34
105°	109	161	756	1323	1197	116
115°	193	240	579	1269	1456	191
125°	268	317	540	978	1148	238
135°	314	375	532	806	930	243
145°	358	411	526	661	727	225
155°	407	439	509	579	603	187
165°	445	458	487	517	526	125
175°	464	464	468	474	473	44
180°	465	465	465	465	465	



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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°	1.9	3.8	5.6	8.5	10.3	12.2	15.1	17.9	20.7	23.5	22.6
92.5°	14.1	20.7	30.1	38.6	48.0	64.9	95.0	144.9	193.8	175.0	130.8
95°	32.0	34.8	45.2	61.2	85.6	122.3	202.3	342.5	496.8	557.9	452.5
97.5°	50.8	51.7	60.2	74.3	98.8	139.2	218.3	381.0	640.7	858.0	887.2
100°	69.6	70.6	77.1	90.3	112.9	149.6	215.4	354.7	602.1	891.0	1076.3
102.5°	89.4	91.3	96.9	109.1	128.9	161.8	219.2	332.1	545.7	829.8	1085.7
105°	109.1	112.0	117.6	128.9	146.8	175.9	226.7	323.6	501.5	756.4	1026.4
107.5°	129.8	132.7	138.3	149.6	166.5	193.8	239.0	321.8	469.5	691.5	941.8
110°	152.4	155.2	159.9	170.3	186.3	212.6	255.0	326.5	452.5	637.9	862.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.1	175.9	180.6	191.0	207.0	232.4	271.0	335.9	443.1	602.1	794.1
115°	192.9	196.6	202.3	211.7	227.7	253.1	288.8	346.2	442.2	578.6	741.4
117.5°	212.6	217.3	222.0	230.5	248.4	271.9	307.7	359.4	443.1	562.6	706.6
120°	233.3	236.1	240.9	250.3	268.1	291.7	325.5	374.4	446.9	552.3	680.2
122.5°	251.2	254.0	258.7	269.1	286.0	311.4	344.3	388.6	453.5	545.7	658.6
125°	268.1	270.0	275.7	286.0	303.9	329.3	362.2	403.6	460.1	540.0	640.7
127.5°	281.3	284.1	290.7	301.1	320.8	346.2	378.2	415.8	467.6	537.2	623.8
130°	293.5	296.4	304.8	316.1	335.9	361.3	392.3	428.1	475.1	534.4	610.6
132.5°	302.9	306.7	316.1	330.2	350.0	374.4	404.6	439.4	480.8	533.4	598.4
135°	314.2	318.0	328.3	342.5	362.2	387.6	416.8	448.8	486.4	532.5	588.0
137.5°	324.6	328.3	338.7	353.8	373.5	397.0	425.3	456.3	490.2	530.6	578.6
140°	334.9	339.6	349.0	364.1	382.9	406.4	433.7	461.9	493.9	529.7	570.1
142.5°	346.2	350.0	360.3	373.5	392.3	414.0	440.3	467.6	496.8	527.8	562.6
145°	358.5	361.3	369.7	383.9	399.9	421.5	446.0	471.4	497.7	525.9	556.0
147.5°	370.7	372.6	381.0	393.3	409.3	428.1	450.7	474.2	497.7	523.1	549.4
150°	382.9	383.9	391.4	403.6	416.8	433.7	455.4	475.1	497.7	519.3	542.9
152.5°	395.1	395.1	402.7	413.0	424.3	440.3	458.2	477.0	494.9	514.6	535.3
155°	407.4	407.4	413.0	422.4	432.8	446.0	461.9	477.0	493.0	509.0	527.8
157.5°	416.8	417.7	422.4	430.9	440.3	450.7	463.8	477.9	490.2	504.3	519.3
160°	428.1	428.1	431.8	439.4	446.0	455.4	466.6	477.9	488.3	498.6	510.9
162.5°	436.5	436.5	439.4	445.0	450.7	458.2	467.6	477.0	484.5	493.0	502.4
165°	445.0	444.1	446.0	450.7	454.4	461.0	468.5	475.1	480.8	487.3	494.9
167.5°	451.6	450.7	451.6	455.4	458.2	462.9	468.5	474.2	477.0	481.7	487.3
170°	457.2	455.4	456.3	459.1	461.0	462.9	467.6	471.4	473.2	476.1	480.8
172.5°	461.0	460.1	460.1	461.9	462.9	463.8	467.6	470.4	470.4	471.4	474.2
175°	463.8	462.9	461.9	463.8	463.8	464.8	466.6	468.5	467.6	467.6	469.5
177.5°	465.7	464.8	463.8	464.8	464.8	464.8	465.7	467.6	465.7	464.8	465.7
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



TEST NUMBER: P334618

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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°	23.5	24.5	25.4	27.3	26.3	27.3	28.2	27.3
92.5°	93.1	72.4	63.0	56.4	54.6	50.8	51.7	49.9
95°	338.7	229.6	179.7	145.8	128.0	119.5	112.9	109.1
97.5°	778.1	587.1	462.9	355.6	292.6	256.8	234.3	223.9
100°	1109.2	1033.0	923.0	789.4	694.3	625.6	589.0	589.9
102.5°	1219.3	1235.3	1182.6	1110.2	1041.5	990.7	961.5	934.2
105°	1223.1	1317.2	1335.0	1310.6	1267.3	1231.5	1201.4	1196.7
107.5°	1166.6	1314.3	1387.7	1413.1	1407.5	1390.5	1378.3	1368.0
110°	1078.2	1251.3	1369.8	1435.7	1462.0	1469.6	1467.7	1465.8





TEST NUMBER: P334618

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	990.7	1168.5	1304.9	1394.3	1447.9	1475.2	1484.6	1485.6
115°	915.4	1079.1	1217.4	1320.0	1390.5	1431.9	1450.8	1455.5
117.5°	857.1	1002.0	1129.0	1235.3	1308.7	1354.8	1383.0	1389.6
120°	812.9	939.9	1052.8	1147.8	1222.1	1274.8	1297.4	1303.0
122.5°	778.1	890.0	992.6	1079.1	1143.1	1189.2	1214.6	1222.1
125°	748.0	850.5	940.8	1016.1	1076.3	1117.7	1141.2	1147.8
127.5°	720.7	813.8	896.6	966.2	1020.8	1056.5	1078.2	1083.8
130°	695.3	779.9	856.2	920.1	970.0	1003.9	1023.6	1031.1
132.5°	671.7	748.0	817.6	877.8	923.9	957.8	974.7	979.4
135°	651.1	717.9	779.0	832.6	878.7	907.0	923.9	930.5
137.5°	631.3	687.7	742.3	790.3	829.8	859.0	873.1	878.7
140°	614.4	662.3	707.5	748.0	783.7	810.1	825.1	824.2
142.5°	598.4	637.9	675.5	709.4	738.5	761.1	774.3	773.4
145°	586.1	617.2	647.3	674.6	698.1	717.9	725.4	727.3
147.5°	575.8	601.2	626.6	646.3	665.2	679.3	686.8	687.7
150°	564.5	586.1	605.9	623.8	637.9	648.2	653.9	653.9
152.5°	554.1	572.0	589.0	603.1	613.4	622.8	625.6	625.6
155°	543.8	558.9	573.0	584.3	592.7	600.2	602.1	603.1
157.5°	532.5	545.7	557.0	566.4	573.9	579.5	581.4	581.4
160°	523.1	533.4	542.9	549.4	556.0	561.7	561.7	560.7
162.5°	511.8	520.3	528.7	534.4	538.2	542.9	542.9	541.9
165°	502.4	508.0	514.6	519.3	523.1	526.9	525.9	525.9
167.5°	493.9	498.6	502.4	506.2	508.0	510.9	509.9	509.9
170°	485.5	488.3	492.1	493.9	494.9	496.8	495.8	495.8
172.5°	477.9	479.8	482.6	483.6	483.6	485.5	483.6	482.6
175°	471.4	472.3	474.2	474.2	474.2	475.1	474.2	473.2
177.5°	466.6	467.6	468.5	468.5	467.6	468.5	466.6	466.6
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8

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