

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: P334619

Luminaire Tested: **S123IP-S1195U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334619
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-S1195U830-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1195 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

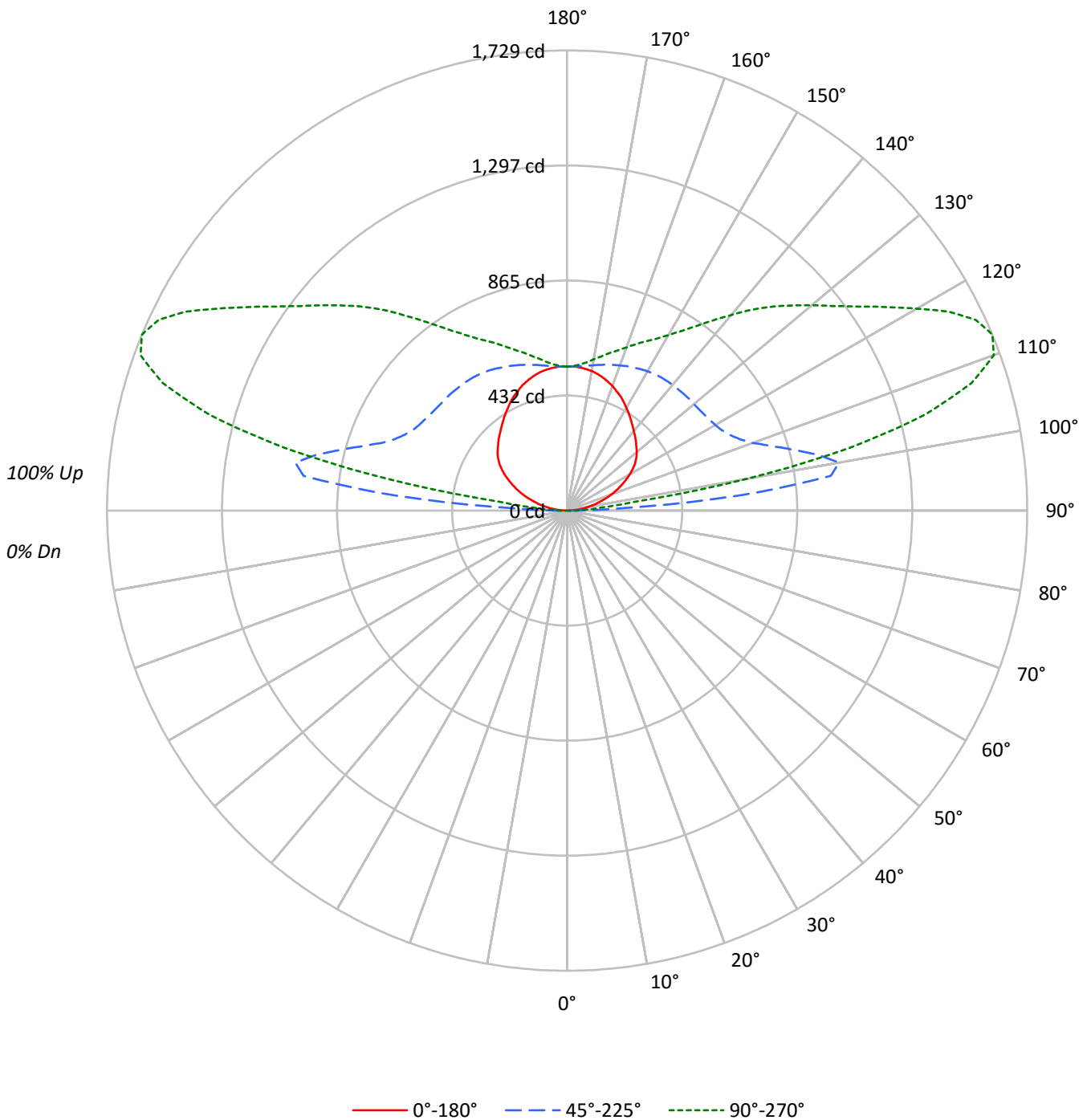
Lumens per Lamp: N/A
Luminaire Lumens: 4072.3 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 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°	3.0	0.1
90°-100°	293.6	7.2
100°-110°	859.4	21.1
110°-120°	839.3	20.6
120°-130°	668.4	16.4
130°-140°	527.4	12.9
140°-150°	393.4	9.7
150°-160°	274.3	6.7
160°-170°	161.1	4.0
170°-180°	52.4	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	3.0	0.1
90°-120°	1992.3	48.9
90°-150°	3581.4	87.9
90°-180°	4069.0	99.9
0°-180°	4072.3	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	13	27	31	32	3
95°	37	121	649	189	127	39
105°	127	188	880	1540	1393	135
115°	224	280	674	1477	1694	222
125°	312	368	629	1139	1336	277
135°	366	436	620	938	1083	283
145°	417	478	612	769	846	262
155°	474	511	592	674	702	218
165°	518	533	567	602	612	146
175°	540	540	544	552	551	51
180°	541	541	541	541	541	



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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°	2.2	4.4	6.6	9.9	12.0	14.2	17.5	20.8	24.1	27.4	26.3
92.5°	16.4	24.1	35.0	44.9	55.8	75.6	110.6	168.6	225.6	203.7	152.2
95°	37.2	40.5	52.6	71.2	99.7	142.4	235.4	398.6	578.2	649.4	526.7
97.5°	59.1	60.2	70.1	86.5	115.0	162.1	254.1	443.5	745.8	998.7	1032.7
100°	81.0	82.1	89.8	105.1	131.4	174.1	250.8	412.8	700.9	1037.1	1252.8
102.5°	104.0	106.2	112.8	127.0	150.0	188.4	255.2	386.6	635.2	965.9	1263.7
105°	127.0	130.3	136.9	150.0	170.8	204.8	263.9	376.7	583.7	880.5	1194.7
107.5°	151.1	154.4	161.0	174.1	193.8	225.6	278.2	374.5	546.5	804.9	1096.2
110°	177.4	180.7	186.2	198.2	216.8	247.5	296.8	380.0	526.7	742.5	1004.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.5	204.8	210.3	222.3	240.9	270.5	315.4	390.9	515.8	700.9	924.3
115°	224.5	228.9	235.4	246.4	265.0	294.6	336.2	403.0	514.7	673.5	862.9
117.5°	247.5	253.0	258.4	268.3	289.1	316.5	358.1	418.3	515.8	654.9	822.4
120°	271.6	274.9	280.3	291.3	312.1	339.5	378.9	435.8	520.2	642.8	791.8
122.5°	292.4	295.7	301.1	313.2	332.9	362.5	400.8	452.3	527.8	635.2	766.6
125°	312.1	314.3	320.9	332.9	353.7	383.3	421.6	469.8	535.5	628.6	745.8
127.5°	327.4	330.7	338.4	350.4	373.4	403.0	440.2	484.0	544.3	625.3	726.0
130°	341.7	345.0	354.8	368.0	390.9	420.5	456.7	498.3	553.0	622.0	710.7
132.5°	352.6	357.0	368.0	384.4	407.4	435.8	470.9	511.4	559.6	620.9	696.5
135°	365.8	370.1	382.2	398.6	421.6	451.2	485.1	522.4	566.2	619.8	684.4
137.5°	377.8	382.2	394.2	411.8	434.8	462.1	495.0	531.1	570.5	617.6	673.5
140°	389.9	395.3	406.3	423.8	445.7	473.1	504.8	537.7	574.9	616.5	663.6
142.5°	403.0	407.4	419.4	434.8	456.7	481.8	512.5	544.3	578.2	614.3	654.9
145°	417.2	420.5	430.4	446.8	465.4	490.6	519.1	548.6	579.3	612.2	647.2
147.5°	431.5	433.7	443.5	457.7	476.4	498.3	524.5	551.9	579.3	608.9	639.5
150°	445.7	446.8	455.6	469.8	485.1	504.8	530.0	553.0	579.3	604.5	631.9
152.5°	459.9	459.9	468.7	480.7	493.9	512.5	533.3	555.2	576.0	599.0	623.1
155°	474.2	474.2	480.7	491.7	503.7	519.1	537.7	555.2	573.8	592.4	614.3
157.5°	485.1	486.2	491.7	501.6	512.5	524.5	539.9	556.3	570.5	587.0	604.5
160°	498.3	498.3	502.6	511.4	519.1	530.0	543.2	556.3	568.4	580.4	594.6
162.5°	508.1	508.1	511.4	518.0	524.5	533.3	544.3	555.2	564.0	573.8	584.8
165°	518.0	516.9	519.1	524.5	528.9	536.6	545.4	553.0	559.6	567.3	576.0
167.5°	525.6	524.5	525.6	530.0	533.3	538.8	545.4	551.9	555.2	560.7	567.3
170°	532.2	530.0	531.1	534.4	536.6	538.8	544.3	548.6	550.8	554.1	559.6
172.5°	536.6	535.5	535.5	537.7	538.8	539.9	544.3	547.5	547.5	548.6	551.9
175°	539.9	538.8	537.7	539.9	539.9	541.0	543.2	545.4	544.3	544.3	546.5
177.5°	542.1	541.0	539.9	541.0	541.0	541.0	542.1	544.3	542.1	541.0	542.1
180°	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0



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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°	27.4	28.5	29.6	31.8	30.7	31.8	32.9	31.8
92.5°	108.4	84.3	73.4	65.7	63.5	59.1	60.2	58.0
95°	394.2	267.2	209.2	169.7	148.9	139.1	131.4	127.0
97.5°	905.6	683.3	538.8	413.9	340.6	299.0	272.7	260.6
100°	1291.1	1202.4	1074.3	918.8	808.2	728.2	685.5	686.6
102.5°	1419.2	1437.9	1376.5	1292.2	1212.3	1153.1	1119.2	1087.4
105°	1423.6	1533.1	1553.9	1525.5	1475.1	1433.5	1398.4	1393.0
107.5°	1357.9	1529.8	1615.3	1644.8	1638.3	1618.5	1604.3	1592.3
110°	1255.0	1456.5	1594.5	1671.1	1701.8	1710.5	1708.3	1706.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1153.1	1360.1	1518.9	1622.9	1685.3	1717.1	1728.1	1729.1
115°	1065.5	1256.1	1417.0	1536.4	1618.5	1666.7	1688.6	1694.1
117.5°	997.6	1166.3	1314.1	1437.9	1523.3	1576.9	1609.8	1617.4
120°	946.2	1094.0	1225.4	1336.0	1422.5	1483.8	1510.1	1516.7
122.5°	905.6	1036.0	1155.3	1256.1	1330.5	1384.2	1413.8	1422.5
125°	870.6	990.0	1095.1	1182.7	1252.8	1301.0	1328.3	1336.0
127.5°	838.8	947.3	1043.6	1124.7	1188.2	1229.8	1255.0	1261.5
130°	809.3	907.8	996.5	1071.0	1129.0	1168.5	1191.5	1200.2
132.5°	781.9	870.6	951.6	1021.7	1075.4	1114.8	1134.5	1140.0
135°	757.8	835.6	906.7	969.2	1022.8	1055.7	1075.4	1083.0
137.5°	734.8	800.5	864.0	919.9	965.9	999.8	1016.2	1022.8
140°	715.1	770.9	823.5	870.6	912.2	942.9	960.4	959.3
142.5°	696.5	742.5	786.3	825.7	859.6	885.9	901.3	900.2
145°	682.2	718.4	753.4	785.2	812.6	835.6	844.3	846.5
147.5°	670.2	699.8	729.3	752.3	774.2	790.7	799.4	800.5
150°	657.1	682.2	705.2	726.0	742.5	754.5	761.1	761.1
152.5°	645.0	665.8	685.5	702.0	714.0	725.0	728.2	728.2
155°	633.0	650.5	666.9	680.1	689.9	698.7	700.9	702.0
157.5°	619.8	635.2	648.3	659.2	668.0	674.6	676.8	676.8
160°	608.9	620.9	631.9	639.5	647.2	653.8	653.8	652.7
162.5°	595.7	605.6	615.4	622.0	626.4	631.9	631.9	630.8
165°	584.8	591.3	599.0	604.5	608.9	613.3	612.2	612.2
167.5°	574.9	580.4	584.8	589.2	591.3	594.6	593.5	593.5
170°	565.1	568.4	572.7	574.9	576.0	578.2	577.1	577.1
172.5°	556.3	558.5	561.8	562.9	562.9	565.1	562.9	561.8
175°	548.6	549.7	551.9	551.9	551.9	553.0	551.9	550.8
177.5°	543.2	544.3	545.4	545.4	544.3	545.4	543.2	543.2
180°	541.0	541.0	541.0	541.0	541.0	541.0	541.0	541.0

(END OF REPORT)