

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: P334644

Luminaire Tested: **S123IP-S1195U935-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334644
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-S1195U935-4F0-1E-UDD-4
Description: DEFINE 3 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1195 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3720.0 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Indirect

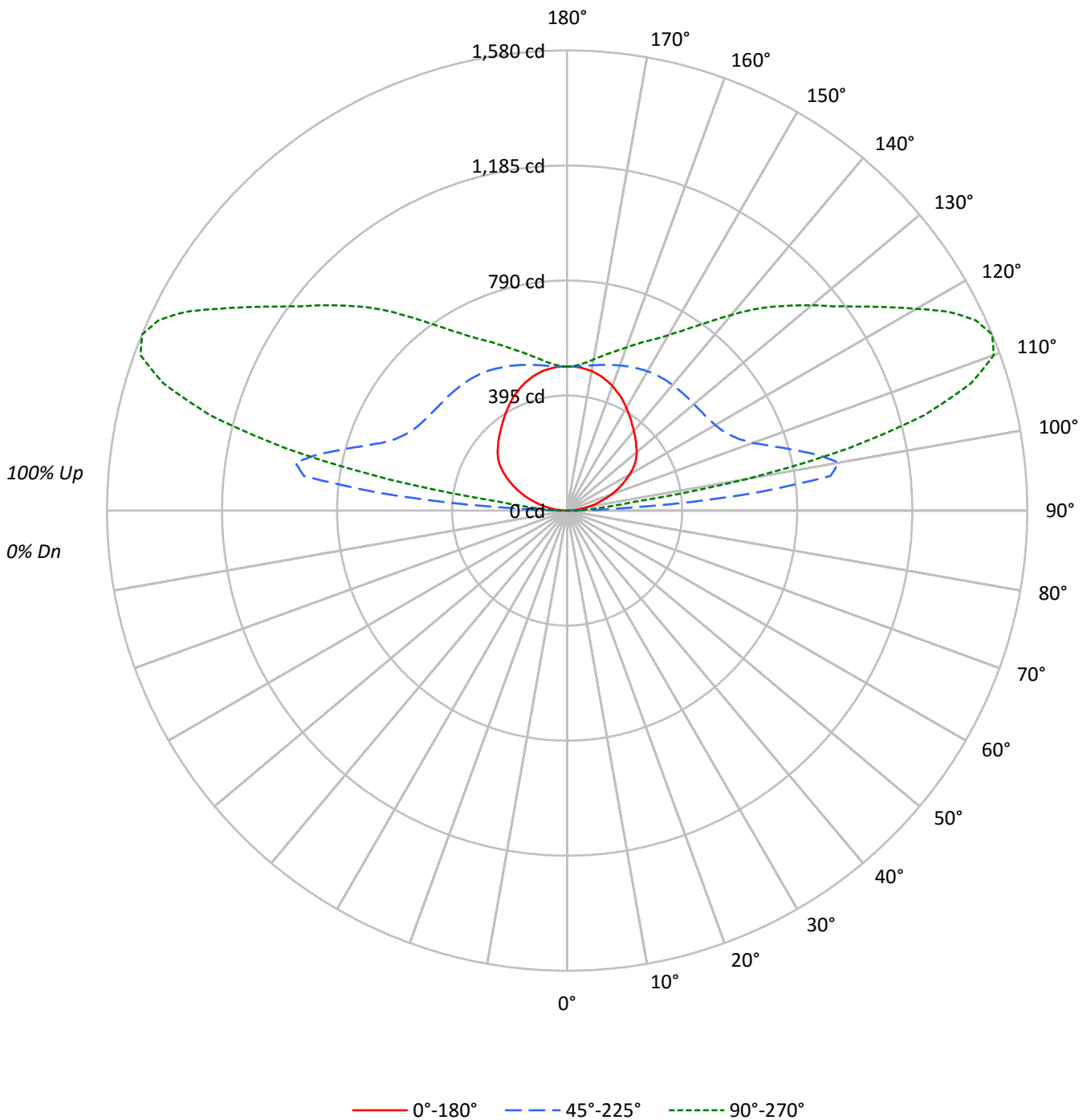
Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	268.2	7.2
100°-110°	785.1	21.1
110°-120°	766.7	20.6
120°-130°	610.6	16.4
130°-140°	481.7	12.9
140°-150°	359.4	9.7
150°-160°	250.6	6.7
160°-170°	147.2	4.0
170°-180°	47.9	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°	1819.9	48.9
90°-150°	3271.6	87.9
90°-180°	3717.0	99.9
0°-180°	3720.0	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	110	593	173	116	36
105°	116	172	804	1406	1272	123
115°	205	256	615	1349	1548	203
125°	285	337	574	1040	1220	253
135°	334	399	566	857	989	258
145°	381	437	559	703	773	239
155°	433	467	541	615	641	199
165°	473	487	518	550	559	133
175°	493	494	497	504	503	47
180°	494	494	494	494	494	



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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	9.0	11.0	13.0	16.0	19.0	22.0	25.0	24.0
92.5°	15.0	22.0	32.0	41.0	51.0	69.0	101.0	154.1	206.1	186.1	139.0
95°	34.0	37.0	48.0	65.0	91.0	130.0	215.1	364.1	528.2	593.2	481.2
97.5°	54.0	55.0	64.0	79.0	105.0	148.1	232.1	405.1	681.2	912.3	943.3
100°	74.0	75.0	82.0	96.0	120.0	159.1	229.1	377.1	640.2	947.3	1144.4
102.5°	95.0	97.0	103.0	116.0	137.0	172.1	233.1	353.1	580.2	882.3	1154.4
105°	116.0	119.0	125.0	137.0	156.1	187.1	241.1	344.1	533.2	804.3	1091.4
107.5°	138.0	141.0	147.1	159.1	177.1	206.1	254.1	342.1	499.2	735.3	1001.4
110°	162.1	165.1	170.1	181.1	198.1	226.1	271.1	347.1	481.2	678.2	917.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.1	187.1	192.1	203.1	220.1	247.1	288.1	357.1	471.2	640.2	844.3
115°	205.1	209.1	215.1	225.1	242.1	269.1	307.1	368.1	470.2	615.2	788.3
117.5°	226.1	231.1	236.1	245.1	264.1	289.1	327.1	382.1	471.2	598.2	751.3
120°	248.1	251.1	256.1	266.1	285.1	310.1	346.1	398.1	475.2	587.2	723.3
122.5°	267.1	270.1	275.1	286.1	304.1	331.1	366.1	413.1	482.2	580.2	700.2
125°	285.1	287.1	293.1	304.1	323.1	350.1	385.1	429.2	489.2	574.2	681.2
127.5°	299.1	302.1	309.1	320.1	341.1	368.1	402.1	442.2	497.2	571.2	663.2
130°	312.1	315.1	324.1	336.1	357.1	384.1	417.1	455.2	505.2	568.2	649.2
132.5°	322.1	326.1	336.1	351.1	372.1	398.1	430.2	467.2	511.2	567.2	636.2
135°	334.1	338.1	349.1	364.1	385.1	412.1	443.2	477.2	517.2	566.2	625.2
137.5°	345.1	349.1	360.1	376.1	397.1	422.1	452.2	485.2	521.2	564.2	615.2
140°	356.1	361.1	371.1	387.1	407.1	432.2	461.2	491.2	525.2	563.2	606.2
142.5°	368.1	372.1	383.1	397.1	417.1	440.2	468.2	497.2	528.2	561.2	598.2
145°	381.1	384.1	393.1	408.1	425.1	448.2	474.2	501.2	529.2	559.2	591.2
147.5°	394.1	396.1	405.1	418.1	435.2	455.2	479.2	504.2	529.2	556.2	584.2
150°	407.1	408.1	416.1	429.2	443.2	461.2	484.2	505.2	529.2	552.2	577.2
152.5°	420.1	420.1	428.2	439.2	451.2	468.2	487.2	507.2	526.2	547.2	569.2
155°	433.2	433.2	439.2	449.2	460.2	474.2	491.2	507.2	524.2	541.2	561.2
157.5°	443.2	444.2	449.2	458.2	468.2	479.2	493.2	508.2	521.2	536.2	552.2
160°	455.2	455.2	459.2	467.2	474.2	484.2	496.2	508.2	519.2	530.2	543.2
162.5°	464.2	464.2	467.2	473.2	479.2	487.2	497.2	507.2	515.2	524.2	534.2
165°	473.2	472.2	474.2	479.2	483.2	490.2	498.2	505.2	511.2	518.2	526.2
167.5°	480.2	479.2	480.2	484.2	487.2	492.2	498.2	504.2	507.2	512.2	518.2
170°	486.2	484.2	485.2	488.2	490.2	492.2	497.2	501.2	503.2	506.2	511.2
172.5°	490.2	489.2	489.2	491.2	492.2	493.2	497.2	500.2	500.2	501.2	504.2
175°	493.2	492.2	491.2	493.2	493.2	494.2	496.2	498.2	497.2	497.2	499.2
177.5°	495.2	494.2	493.2	494.2	494.2	494.2	495.2	497.2	495.2	494.2	495.2
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2



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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°	25.0	26.0	27.0	29.0	28.0	29.0	30.0	29.0
92.5°	99.0	77.0	67.0	60.0	58.0	54.0	55.0	53.0
95°	360.1	244.1	191.1	155.1	136.0	127.0	120.0	116.0
97.5°	827.3	624.2	492.2	378.1	311.1	273.1	249.1	238.1
100°	1179.4	1098.4	981.3	839.3	738.3	665.2	626.2	627.2
102.5°	1296.5	1313.5	1257.4	1180.4	1107.4	1053.4	1022.4	993.3
105°	1300.5	1400.5	1419.5	1393.5	1347.5	1309.5	1277.4	1272.4
107.5°	1240.4	1397.5	1475.5	1502.5	1496.5	1478.5	1465.5	1454.5
110°	1146.4	1330.5	1456.5	1526.5	1554.5	1562.5	1560.5	1558.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1053.4	1242.4	1387.5	1482.5	1539.5	1568.6	1578.6	1579.6
115°	973.3	1147.4	1294.5	1403.5	1478.5	1522.5	1542.5	1547.5
117.5°	911.3	1065.4	1200.4	1313.5	1391.5	1440.5	1470.5	1477.5
120°	864.3	999.4	1119.4	1220.4	1299.5	1355.5	1379.5	1385.5
122.5°	827.3	946.3	1055.4	1147.4	1215.4	1264.4	1291.5	1299.5
125°	795.3	904.3	1000.4	1080.4	1144.4	1188.4	1213.4	1220.4
127.5°	766.3	865.3	953.3	1027.4	1085.4	1123.4	1146.4	1152.4
130°	739.3	829.3	910.3	978.3	1031.4	1067.4	1088.4	1096.4
132.5°	714.3	795.3	869.3	933.3	982.3	1018.4	1036.4	1041.4
135°	692.2	763.3	828.3	885.3	934.3	964.3	982.3	989.3
137.5°	671.2	731.3	789.3	840.3	882.3	913.3	928.3	934.3
140°	653.2	704.2	752.3	795.3	833.3	861.3	877.3	876.3
142.5°	636.2	678.2	718.3	754.3	785.3	809.3	823.3	822.3
145°	623.2	656.2	688.2	717.3	742.3	763.3	771.3	773.3
147.5°	612.2	639.2	666.2	687.2	707.2	722.3	730.3	731.3
150°	600.2	623.2	644.2	663.2	678.2	689.2	695.2	695.2
152.5°	589.2	608.2	626.2	641.2	652.2	662.2	665.2	665.2
155°	578.2	594.2	609.2	621.2	630.2	638.2	640.2	641.2
157.5°	566.2	580.2	592.2	602.2	610.2	616.2	618.2	618.2
160°	556.2	567.2	577.2	584.2	591.2	597.2	597.2	596.2
162.5°	544.2	553.2	562.2	568.2	572.2	577.2	577.2	576.2
165°	534.2	540.2	547.2	552.2	556.2	560.2	559.2	559.2
167.5°	525.2	530.2	534.2	538.2	540.2	543.2	542.2	542.2
170°	516.2	519.2	523.2	525.2	526.2	528.2	527.2	527.2
172.5°	508.2	510.2	513.2	514.2	514.2	516.2	514.2	513.2
175°	501.2	502.2	504.2	504.2	504.2	505.2	504.2	503.2
177.5°	496.2	497.2	498.2	498.2	497.2	498.2	496.2	496.2
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2

(END OF REPORT)