

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: P334803

Luminaire Tested: **S124IP-S1035U840-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334803
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-S1035U840-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 1035 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

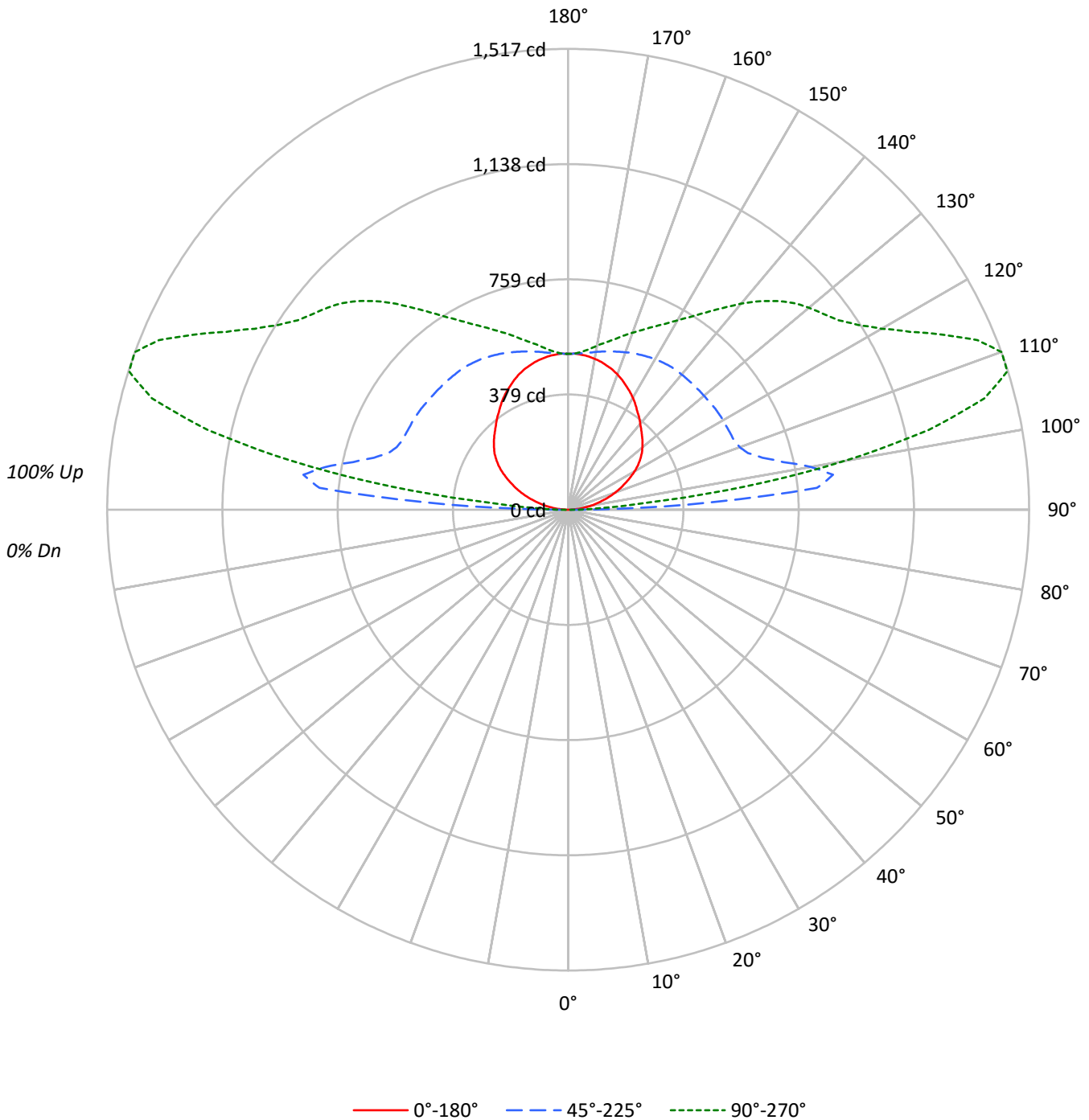
Lumens per Lamp: N/A
Luminaire Lumens: 3739.4 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

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°	2.0	0.1
90°-100°	371.9	9.9
100°-110°	776.5	20.8
110°-120°	690.2	18.5
120°-130°	581.0	15.5
130°-140°	484.7	13.0
140°-150°	370.1	9.9
150°-160°	260.2	7.0
160°-170°	153.0	4.1
170°-180°	49.8	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.0	0.1
90°-120°	1838.6	49.2
90°-150°	3274.4	87.6
90°-180°	3737.0	99.9
0°-180°	3739.4	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	18	20	21	2
95°	33	105	822	407	246	36
105°	118	171	661	1424	1418	126
115°	208	261	590	1133	1362	206
125°	289	344	587	964	1087	258
135°	344	409	582	856	972	266
145°	396	454	579	722	793	249
155°	451	486	563	637	664	208
165°	491	506	539	571	580	139
175°	512	513	517	524	522	49
180°	513	513	513	513	513	



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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°	1.0	3.0	6.0	7.1	8.1	8.1	14.1	14.1	16.1	18.1	17.1
92.5°	14.1	20.2	31.3	46.4	64.5	90.7	153.2	251.0	345.8	395.2	328.7
95°	33.3	36.3	46.4	59.5	83.7	126.0	213.7	379.1	620.0	821.6	844.8
97.5°	55.4	55.4	64.5	76.6	97.8	134.1	203.6	345.8	593.8	879.1	1059.6
100°	76.6	76.6	83.7	95.8	114.9	147.2	206.7	320.6	526.3	810.6	1068.6
102.5°	96.8	98.8	104.8	115.9	134.1	164.3	216.8	313.5	480.9	724.9	993.0
105°	118.0	121.0	126.0	138.1	156.3	185.5	233.9	317.6	458.7	661.4	898.3
107.5°	141.1	143.2	148.2	161.3	178.4	207.7	252.0	329.7	452.7	620.0	820.6
110°	164.3	166.3	171.4	183.5	201.6	228.9	273.2	343.8	454.7	600.9	765.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	186.5	188.5	194.6	205.7	223.8	251.0	293.4	358.9	460.7	591.8	733.9
115°	207.7	210.7	217.8	227.8	247.0	274.2	314.5	375.0	468.8	589.8	716.8
117.5°	229.9	232.9	238.9	250.0	268.2	296.4	334.7	391.2	476.9	588.8	707.7
120°	252.0	254.1	261.1	272.2	289.3	317.6	355.9	408.3	485.9	588.8	700.7
122.5°	272.2	274.2	281.3	291.4	310.5	337.7	376.0	424.4	495.0	587.8	692.6
125°	289.3	293.4	299.4	310.5	329.7	357.9	394.2	440.6	504.1	586.7	683.5
127.5°	305.5	308.5	315.6	327.7	347.8	376.0	411.3	454.7	511.1	584.7	671.4
130°	318.6	322.6	330.7	345.8	365.0	394.2	428.5	467.8	519.2	583.7	660.3
132.5°	331.7	334.7	345.8	359.9	381.1	408.3	442.6	480.9	526.3	582.7	650.3
135°	343.8	347.8	357.9	375.0	396.2	422.4	455.7	492.0	533.3	581.7	640.2
137.5°	355.9	359.9	371.0	387.1	409.3	434.5	465.8	500.0	537.3	581.7	631.1
140°	369.0	372.0	383.1	400.2	421.4	445.6	475.9	508.1	542.4	580.7	624.1
142.5°	383.1	386.1	396.2	412.3	432.5	455.7	484.9	514.2	546.4	580.7	618.0
145°	396.2	399.2	409.3	423.4	442.6	464.8	491.0	518.2	547.4	578.7	610.9
147.5°	411.3	412.3	421.4	436.5	452.7	472.8	498.0	522.2	548.4	575.7	604.9
150°	425.4	426.5	434.5	446.6	461.7	480.9	503.1	525.3	548.4	572.6	597.8
152.5°	438.5	438.5	446.6	457.7	470.8	487.9	507.1	527.3	546.4	567.6	589.8
155°	450.6	451.7	457.7	467.8	478.9	494.0	511.1	528.3	544.4	562.6	581.7
157.5°	462.7	462.7	468.8	476.9	486.9	499.0	514.2	528.3	542.4	557.5	573.6
160°	473.8	473.8	477.9	484.9	493.0	504.1	516.2	528.3	539.4	551.5	564.6
162.5°	483.9	482.9	485.9	492.0	499.0	507.1	518.2	528.3	536.3	545.4	556.5
165°	491.0	491.0	493.0	498.0	503.1	509.1	518.2	526.3	532.3	539.4	547.4
167.5°	499.0	498.0	499.0	503.1	506.1	511.1	518.2	524.2	528.3	533.3	539.4
170°	504.1	503.1	504.1	507.1	509.1	512.1	517.2	522.2	524.2	527.3	531.3
172.5°	509.1	508.1	508.1	510.1	511.1	513.2	516.2	520.2	520.2	521.2	524.2
175°	512.1	511.1	511.1	512.1	513.2	513.2	515.2	518.2	517.2	517.2	519.2
177.5°	514.2	513.2	512.1	513.2	513.2	513.2	514.2	516.2	514.2	514.2	515.2
180°	513.2	513.2	513.2	513.2	513.2	513.2	513.2	513.2	513.2	513.2	513.2



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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°	18.1	19.2	20.2	20.2	21.2	22.2	21.2	21.2
92.5°	243.0	181.5	143.2	118.0	102.8	95.8	91.7	91.7
95°	747.0	590.8	455.7	357.9	308.5	277.2	259.1	246.0
97.5°	1075.7	998.1	887.2	774.3	705.7	645.2	615.0	590.8
100°	1215.8	1236.0	1186.6	1112.0	1024.3	962.8	932.5	924.5
102.5°	1208.8	1328.8	1359.0	1338.8	1293.5	1253.1	1220.9	1214.8
105°	1129.1	1303.5	1403.4	1444.7	1446.7	1438.6	1424.5	1418.5
107.5°	1031.3	1219.9	1359.0	1443.7	1488.0	1506.2	1514.3	1515.3
110°	944.6	1119.1	1265.2	1376.1	1447.7	1490.1	1508.2	1517.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	881.1	1030.3	1166.4	1277.3	1361.0	1414.4	1441.7	1457.8
115°	842.8	966.8	1084.8	1181.6	1261.2	1321.7	1354.0	1362.0
117.5°	820.6	925.5	1021.3	1105.9	1176.5	1228.9	1263.2	1268.3
120°	806.5	900.3	980.9	1052.5	1110.0	1154.3	1180.6	1191.6
122.5°	794.4	884.2	955.7	1016.2	1062.6	1098.9	1120.1	1131.2
125°	780.3	867.0	936.6	992.0	1032.4	1061.6	1080.7	1086.8
127.5°	764.2	847.9	917.4	969.8	1010.2	1036.4	1052.5	1058.6
130°	744.0	823.7	892.2	945.7	987.0	1012.2	1028.3	1034.4
132.5°	722.8	796.4	863.0	916.4	956.7	986.0	1001.1	1007.2
135°	703.7	769.2	830.7	881.1	921.5	949.7	965.8	971.9
137.5°	685.5	743.0	796.4	842.8	881.1	910.4	923.5	930.5
140°	670.4	717.8	763.2	805.5	840.8	863.0	877.1	885.2
142.5°	656.3	696.6	733.9	769.2	799.5	819.6	831.7	836.8
145°	643.2	677.5	707.7	736.0	761.2	778.3	788.4	793.4
147.5°	632.1	660.3	685.5	708.7	727.9	743.0	751.1	753.1
150°	622.0	645.2	665.4	683.5	699.7	712.8	718.8	719.8
152.5°	610.9	630.1	648.2	662.4	675.5	685.5	688.6	689.6
155°	599.9	616.0	631.1	643.2	653.3	661.4	664.4	664.4
157.5°	587.8	601.9	615.0	625.1	633.1	639.2	641.2	641.2
160°	576.7	587.8	598.8	606.9	613.0	619.0	620.0	620.0
162.5°	565.6	574.7	582.7	589.8	593.8	599.9	600.9	599.9
165°	555.5	561.5	568.6	573.6	577.7	581.7	580.7	579.7
167.5°	545.4	550.5	556.5	559.5	561.5	564.6	564.6	563.6
170°	536.3	539.4	543.4	546.4	548.4	549.4	548.4	548.4
172.5°	528.3	530.3	532.3	534.3	535.3	536.3	535.3	533.3
175°	521.2	522.2	524.2	524.2	524.2	526.3	524.2	522.2
177.5°	516.2	517.2	517.2	518.2	517.2	518.2	516.2	514.2
180°	513.2	513.2	513.2	513.2	513.2	513.2	513.2	513.2

(END OF REPORT)