

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: P334790

Luminaire Tested: **S124IP-S365U830-4F0-1E-UDD-4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334790  
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-S365U830-4F0-1E-UDD-4  
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC  
PENDANT MOUNT, 365 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1235.6 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Indirect

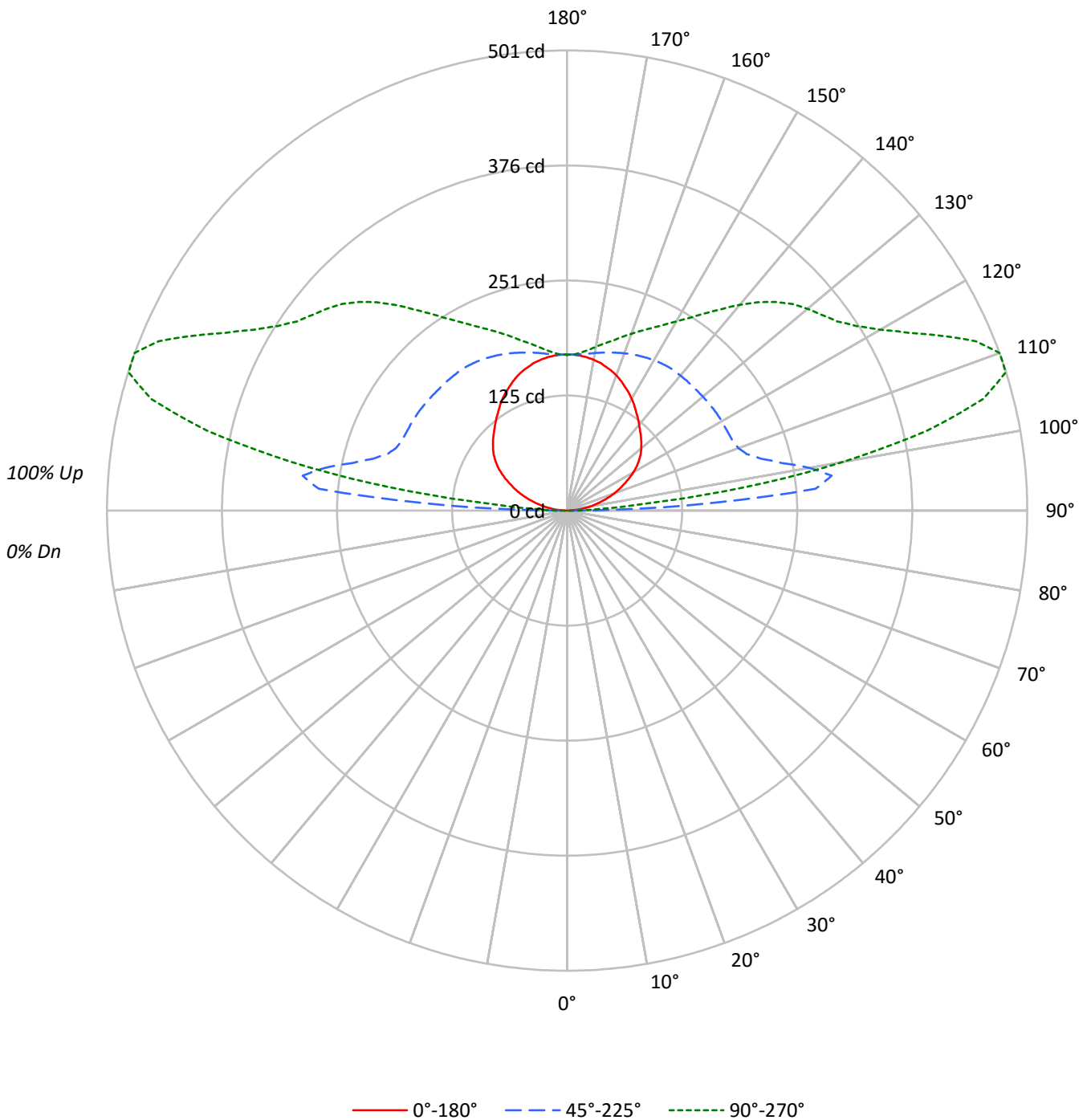
Input Watts (W): 11.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	0.7	0.1
90°-100°	122.9	9.9
100°-110°	256.6	20.8
110°-120°	228.1	18.5
120°-130°	192.0	15.5
130°-140°	160.2	13.0
140°-150°	122.3	9.9
150°-160°	86.0	7.0
160°-170°	50.6	4.1
170°-180°	16.4	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	0.7	0.1
90°-120°	607.5	49.2
90°-150°	1081.9	87.6
90°-180°	1235.0	100.0
0°-180°	1235.6	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°	0	3	6	7	7	1
95°	11	35	272	134	81	12
105°	39	56	218	471	469	42
115°	69	86	195	374	450	68
125°	96	114	194	319	359	85
135°	114	135	192	283	321	88
145°	131	150	191	239	262	82
155°	149	161	186	210	220	69
165°	162	167	178	189	192	46
175°	169	170	171	173	173	16
180°	170	170	170	170	170	



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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°	0.3	1.0	2.0	2.3	2.7	2.7	4.7	4.7	5.3	6.0	5.7
92.5°	4.7	6.7	10.3	15.3	21.3	30.0	50.6	82.9	114.3	130.6	108.6
95°	11.0	12.0	15.3	19.7	27.6	41.6	70.6	125.3	204.9	271.5	279.2
97.5°	18.3	18.3	21.3	25.3	32.3	44.3	67.3	114.3	196.2	290.5	350.1
100°	25.3	25.3	27.6	31.6	38.0	48.6	68.3	105.9	173.9	267.8	353.1
102.5°	32.0	32.6	34.6	38.3	44.3	54.3	71.6	103.6	158.9	239.5	328.1
105°	39.0	40.0	41.6	45.6	51.6	61.3	77.3	104.9	151.6	218.5	296.8
107.5°	46.6	47.3	49.0	53.3	59.0	68.6	83.3	108.9	149.6	204.9	271.2
110°	54.3	55.0	56.6	60.6	66.6	75.6	90.3	113.6	150.2	198.5	252.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	61.6	62.3	64.3	68.0	74.0	82.9	96.9	118.6	152.2	195.5	242.5
115°	68.6	69.6	72.0	75.3	81.6	90.6	103.9	123.9	154.9	194.9	236.8
117.5°	76.0	77.0	78.9	82.6	88.6	97.9	110.6	129.3	157.6	194.5	233.9
120°	83.3	83.9	86.3	89.9	95.6	104.9	117.6	134.9	160.6	194.5	231.5
122.5°	89.9	90.6	92.9	96.3	102.6	111.6	124.3	140.2	163.6	194.2	228.9
125°	95.6	96.9	98.9	102.6	108.9	118.3	130.3	145.6	166.6	193.9	225.9
127.5°	100.9	101.9	104.3	108.3	114.9	124.3	135.9	150.2	168.9	193.2	221.9
130°	105.3	106.6	109.3	114.3	120.6	130.3	141.6	154.6	171.6	192.9	218.2
132.5°	109.6	110.6	114.3	118.9	125.9	134.9	146.2	158.9	173.9	192.5	214.9
135°	113.6	114.9	118.3	123.9	130.9	139.6	150.6	162.6	176.2	192.2	211.5
137.5°	117.6	118.9	122.6	127.9	135.2	143.6	153.9	165.2	177.6	192.2	208.5
140°	121.9	122.9	126.6	132.2	139.2	147.2	157.2	167.9	179.2	191.9	206.2
142.5°	126.6	127.6	130.9	136.2	142.9	150.6	160.2	169.9	180.6	191.9	204.2
145°	130.9	131.9	135.2	139.9	146.2	153.6	162.2	171.2	180.9	191.2	201.9
147.5°	135.9	136.2	139.2	144.2	149.6	156.2	164.6	172.6	181.2	190.2	199.9
150°	140.6	140.9	143.6	147.6	152.6	158.9	166.2	173.6	181.2	189.2	197.5
152.5°	144.9	144.9	147.6	151.2	155.6	161.2	167.6	174.2	180.6	187.5	194.9
155°	148.9	149.2	151.2	154.6	158.2	163.2	168.9	174.6	179.9	185.9	192.2
157.5°	152.9	152.9	154.9	157.6	160.9	164.9	169.9	174.6	179.2	184.2	189.5
160°	156.6	156.6	157.9	160.2	162.9	166.6	170.6	174.6	178.2	182.2	186.5
162.5°	159.9	159.6	160.6	162.6	164.9	167.6	171.2	174.6	177.2	180.2	183.9
165°	162.2	162.2	162.9	164.6	166.2	168.2	171.2	173.9	175.9	178.2	180.9
167.5°	164.9	164.6	164.9	166.2	167.2	168.9	171.2	173.2	174.6	176.2	178.2
170°	166.6	166.2	166.6	167.6	168.2	169.2	170.9	172.6	173.2	174.2	175.6
172.5°	168.2	167.9	167.9	168.6	168.9	169.6	170.6	171.9	171.9	172.2	173.2
175°	169.2	168.9	168.9	169.2	169.6	169.6	170.2	171.2	170.9	170.9	171.6
177.5°	169.9	169.6	169.2	169.6	169.6	169.6	169.9	170.6	169.9	169.9	170.2
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6



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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°	6.0	6.3	6.7	6.7	7.0	7.3	7.0	7.0
92.5°	80.3	60.0	47.3	39.0	34.0	31.6	30.3	30.3
95°	246.8	195.2	150.6	118.3	101.9	91.6	85.6	81.3
97.5°	355.4	329.8	293.1	255.8	233.2	213.2	203.2	195.2
100°	401.7	408.4	392.1	367.4	338.5	318.1	308.1	305.5
102.5°	399.4	439.1	449.0	442.4	427.4	414.1	403.4	401.4
105°	373.1	430.7	463.7	477.4	478.0	475.4	470.7	468.7
107.5°	340.8	403.1	449.0	477.0	491.7	497.7	500.3	500.7
110°	312.1	369.8	418.1	454.7	478.4	492.4	498.3	501.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.1	340.4	385.4	422.1	449.7	467.4	476.4	481.7
115°	278.5	319.5	358.4	390.4	416.7	436.7	447.4	450.0
117.5°	271.2	305.8	337.5	365.4	388.8	406.1	417.4	419.1
120°	266.5	297.5	324.1	347.8	366.8	381.4	390.1	393.7
122.5°	262.5	292.1	315.8	335.8	351.1	363.1	370.1	373.8
125°	257.8	286.5	309.5	327.8	341.1	350.8	357.1	359.1
127.5°	252.5	280.2	303.1	320.5	333.8	342.4	347.8	349.8
130°	245.8	272.2	294.8	312.5	326.1	334.5	339.8	341.8
132.5°	238.8	263.2	285.2	302.8	316.1	325.8	330.8	332.8
135°	232.5	254.2	274.5	291.1	304.5	313.8	319.1	321.1
137.5°	226.5	245.5	263.2	278.5	291.1	300.8	305.1	307.5
140°	221.5	237.2	252.2	266.2	277.8	285.2	289.8	292.5
142.5°	216.9	230.2	242.5	254.2	264.2	270.8	274.8	276.5
145°	212.5	223.9	233.9	243.2	251.5	257.2	260.5	262.2
147.5°	208.9	218.2	226.5	234.2	240.5	245.5	248.2	248.8
150°	205.5	213.2	219.9	225.9	231.2	235.5	237.5	237.8
152.5°	201.9	208.2	214.2	218.9	223.2	226.5	227.5	227.9
155°	198.2	203.5	208.5	212.5	215.9	218.5	219.5	219.5
157.5°	194.2	198.9	203.2	206.5	209.2	211.2	211.9	211.9
160°	190.5	194.2	197.9	200.5	202.5	204.5	204.9	204.9
162.5°	186.9	189.9	192.5	194.9	196.2	198.2	198.5	198.2
165°	183.5	185.5	187.9	189.5	190.9	192.2	191.9	191.5
167.5°	180.2	181.9	183.9	184.9	185.5	186.5	186.5	186.2
170°	177.2	178.2	179.6	180.6	181.2	181.6	181.2	181.2
172.5°	174.6	175.2	175.9	176.6	176.9	177.2	176.9	176.2
175°	172.2	172.6	173.2	173.2	173.2	173.9	173.2	172.6
177.5°	170.6	170.9	170.9	171.2	170.9	171.2	170.6	169.9
180°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6

(END OF REPORT)