

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: FAIL-SAFE

Report Number: P837966

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1STD-30-120-EDD-90**

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-08
Report Number: P837966
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-1STD-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

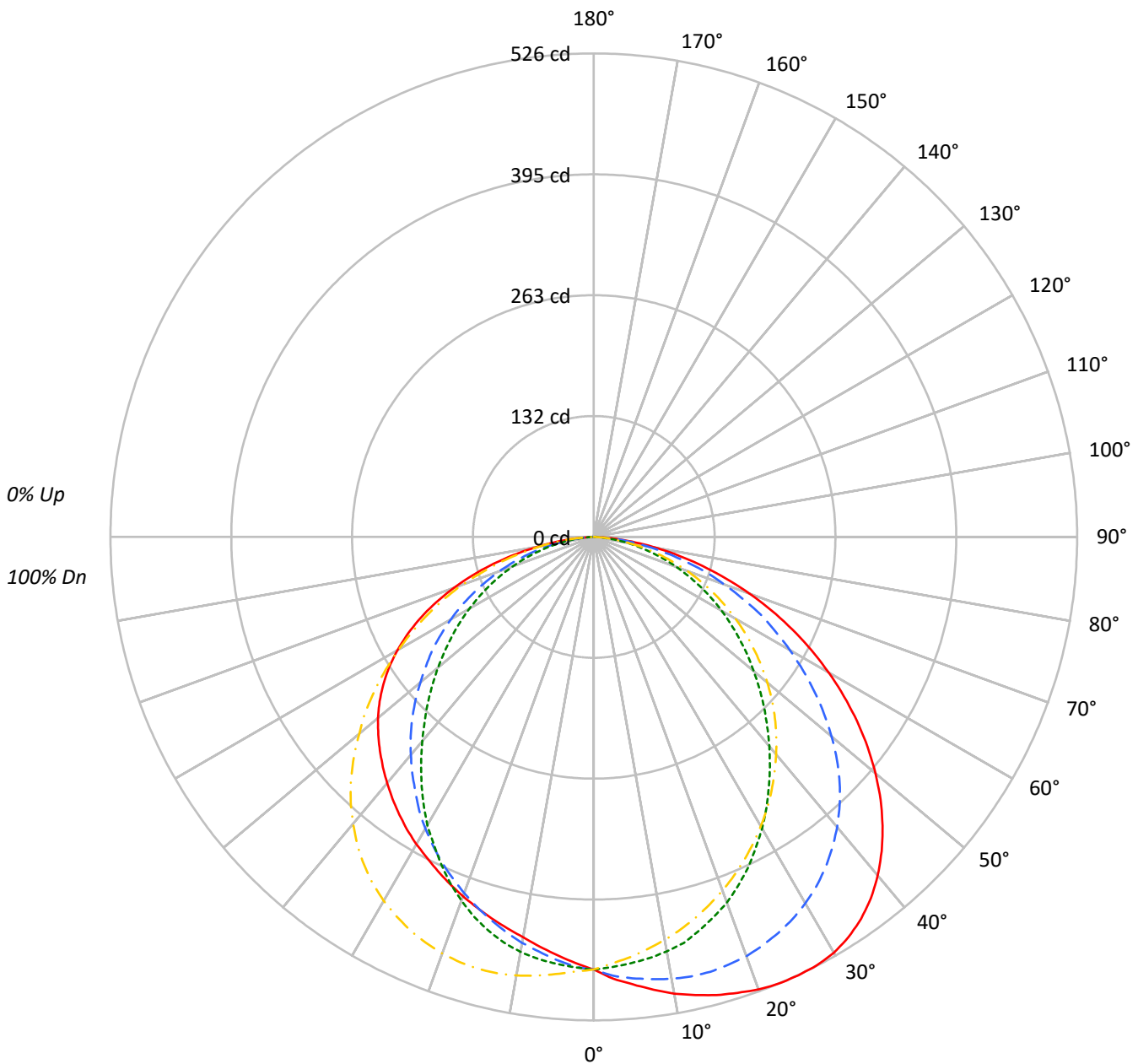
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1380.9 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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

TEST NUMBER: P837966
CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-1STD-30-120-EDD-90

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - 90°-270° - · · - 135°-315°

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1267	1267	1267	1267
5°	1320	1257	1234	1260
10°	1379	1251	1209	1253
15°	1438	1235	1197	1235
20°	1501	1213	1192	1206
25°	1563	1179	1192	1167
30°	1623	1138	1199	1125
35°	1666	1091	1212	1074
40°	1689	1044	1228	1020
45°	1692	997	1252	972
50°	1676	951	1283	926
55°	1641	909	1311	883
60°	1589	864	1329	842
65°	1519	814	1322	795
70°	1419	754	1275	740
75°	1276	673	1170	669
80°	1082	563	984	572
85°	753	374	624	383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.7	3.2
10°-20°	129.4	9.4
20°-30°	198.3	14.4
30°-40°	241.1	17.5
40°-50°	250.7	18.2
50°-60°	226.4	16.4
60°-70°	172.2	12.5
70°-80°	96.0	7.0
80°-90°	22.1	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	372.4	27.0
0°-40°	613.6	44.4
0°-60°	1090.7	79.0
0°-90°	1380.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1380.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	471	471	471	471	471	
5°	489	466	457	466	489	47
15°	516	443	430	443	516	146
25°	526	397	401	393	526	243
35°	507	332	369	327	507	317
45°	444	262	329	255	444	342
55°	350	194	280	188	350	312
65°	238	128	208	125	238	236
75°	123	65	112	64	123	130
85°	24	12	20	12	24	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	481.1	474.1	474.2	480.3	475.6	477.9	471.3	473.9	473.1	473.6	468.3
5°	488.7	481.1	481.0	486.3	481.0	482.0	473.6	475.3	472.9	471.3	465.5
7.5°	496.7	489.1	488.4	493.0	486.0	485.3	476.1	476.1	471.7	467.8	462.3
10°	504.6	496.8	495.8	499.3	490.8	488.2	477.0	475.3	469.5	463.8	457.8
12.5°	510.5	502.6	501.9	504.1	494.4	489.8	477.0	473.6	465.1	457.1	452.4
15°	516.1	508.0	505.9	507.0	495.9	489.8	475.5	470.2	459.3	448.7	443.3
17.5°	520.1	512.3	510.2	510.1	496.7	487.9	472.2	465.0	451.8	439.1	433.7
20°	524.0	516.2	513.6	511.6	496.5	485.4	467.4	457.6	442.2	428.0	423.5
22.5°	526.0	518.0	515.1	512.2	495.0	480.8	461.5	449.0	431.5	414.5	410.7
25°	526.3	518.1	515.0	510.7	492.2	475.3	453.8	438.7	419.1	400.2	397.0
27.5°	525.5	516.5	513.4	508.2	487.9	468.6	444.7	427.0	405.9	385.0	381.6
30°	522.4	513.3	510.3	503.6	481.9	460.4	434.7	413.9	391.3	369.1	366.2
32.5°	516.2	507.3	504.9	498.2	475.3	450.8	423.0	399.9	375.2	354.0	349.6
35°	507.2	498.3	496.8	489.8	466.1	439.4	410.3	384.5	358.0	336.4	332.1
37.5°	495.5	488.0	485.7	478.8	455.2	426.4	395.7	367.8	340.6	317.3	314.7
40°	480.7	473.6	471.9	465.7	442.6	412.0	379.9	350.6	322.6	300.9	297.2
42.5°	463.8	457.2	456.2	449.8	427.0	396.1	362.8	332.7	303.8	282.9	279.2
45°	444.5	438.2	438.0	431.9	410.0	378.5	344.7	314.6	285.5	263.8	261.9
47.5°	423.4	417.6	417.6	412.0	391.0	359.0	326.2	295.7	267.0	247.9	244.4
50°	400.3	394.9	393.3	390.5	370.0	337.8	306.6	277.2	248.8	230.6	227.2
52.5°	375.7	371.1	372.2	367.1	347.3	315.8	286.9	256.5	230.5	213.9	210.5
55°	349.8	343.2	344.2	342.3	323.6	293.0	264.7	239.3	212.4	196.9	193.7
57.5°	322.9	314.3	317.8	316.7	298.3	269.8	244.4	219.9	194.6	180.2	177.1
60°	295.3	287.1	290.7	289.7	272.4	246.5	223.4	200.7	176.8	163.7	160.6
62.5°	267.0	259.4	262.7	262.0	246.0	222.7	202.6	181.7	158.9	147.1	144.3
65°	238.5	231.2	234.2	233.6	218.9	201.1	181.2	162.1	140.9	130.7	127.8
67.5°	209.3	202.6	205.3	205.3	191.8	174.8	159.6	142.2	123.2	114.4	111.8
70°	180.3	174.0	176.4	176.2	164.8	151.0	137.9	122.3	105.3	98.0	95.8
72.5°	151.1	145.6	147.8	147.6	138.0	129.1	116.2	102.7	87.8	82.0	80.0
75°	122.7	117.6	119.7	119.5	111.7	103.3	94.6	83.4	70.7	66.6	64.7
77.5°	95.7	90.5	92.2	92.2	86.5	80.5	73.6	64.9	55.9	51.5	50.1
80°	69.8	67.3	66.4	66.5	62.7	58.7	55.2	46.9	40.3	37.3	36.3
82.5°	45.9	43.8	42.9	43.1	41.0	38.5	36.3	30.5	26.1	24.4	23.8
85°	24.4	22.8	22.1	22.6	22.2	20.9	19.8	15.8	13.1	12.4	12.1
87.5°	7.7	6.7	6.1	8.1	6.9	6.1	5.9	4.7	3.6	3.6	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	470.0	470.0	465.7	464.7	464.3	464.9	460.6	459.8	466.0	463.9	459.1
5°	466.3	466.1	460.0	458.9	458.9	458.3	453.4	452.3	458.5	456.7	451.6
7.5°	461.7	461.0	453.9	453.1	452.0	451.6	446.2	445.4	450.7	449.6	444.8
10°	456.1	455.4	447.0	446.4	445.2	444.3	439.3	438.7	444.1	442.3	438.5
12.5°	448.7	447.5	438.8	438.3	437.3	437.0	432.0	431.8	437.7	436.0	431.9
15°	439.1	438.1	428.4	428.6	428.7	428.7	424.8	424.6	430.4	429.6	425.2
17.5°	428.4	427.1	417.9	418.5	419.3	420.2	417.1	417.6	423.8	422.8	418.9
20°	416.3	415.0	406.0	407.9	409.5	411.3	409.3	410.8	416.5	416.1	413.1
22.5°	402.8	401.5	393.2	396.0	398.8	402.1	401.2	402.9	409.0	408.9	406.2
25°	386.4	386.7	379.3	382.8	387.5	392.1	392.4	395.2	401.9	401.3	398.9
27.5°	371.0	371.4	363.6	369.6	375.7	381.6	383.1	387.0	393.8	393.3	391.2
30°	354.8	355.4	347.8	355.9	363.4	370.7	373.7	379.1	386.0	386.0	383.8
32.5°	338.0	339.0	331.1	342.0	350.7	359.1	364.5	370.1	378.0	377.8	375.9
35°	320.8	321.9	314.7	328.5	337.2	347.5	354.2	361.7	368.7	368.8	367.4
37.5°	303.2	304.6	298.0	313.1	323.0	335.2	343.8	351.2	359.0	359.5	358.1
40°	285.8	287.2	281.5	296.1	308.6	322.2	332.1	340.9	349.5	349.7	348.8
42.5°	268.3	269.9	265.6	279.9	294.0	308.6	320.3	330.3	339.0	339.6	338.6
45°	251.3	252.6	249.6	265.1	278.8	294.7	308.1	319.4	328.3	329.0	328.7
47.5°	234.4	235.6	232.9	247.1	262.8	279.7	295.2	307.7	317.2	318.1	317.8
50°	217.8	218.8	215.8	230.8	246.4	264.4	280.5	295.0	305.5	306.4	306.3
52.5°	201.4	202.3	199.8	215.5	229.7	248.7	266.2	281.9	292.4	293.7	293.9
55°	185.4	185.9	183.9	198.9	212.7	232.5	252.7	268.0	278.4	279.5	280.2
57.5°	169.5	169.6	168.0	182.4	195.5	215.8	237.0	253.1	262.9	264.0	265.0
60°	153.7	153.6	151.7	165.7	178.3	198.4	220.5	236.4	245.9	246.9	248.2
62.5°	138.0	137.7	136.0	148.9	160.7	180.6	202.8	218.2	227.3	227.9	229.7
65°	122.4	122.1	120.6	132.4	143.2	162.2	183.9	198.5	206.7	207.6	207.3
67.5°	107.0	106.4	105.2	115.8	125.6	143.2	164.0	178.0	184.8	185.5	187.6
70°	91.7	90.9	88.2	99.5	108.0	123.7	143.2	155.6	161.3	162.1	161.7
72.5°	76.5	75.8	72.8	83.2	90.5	104.2	121.5	131.9	136.8	137.5	137.5
75°	61.8	61.4	59.5	67.4	73.5	84.6	99.4	107.9	111.8	112.5	112.3
77.5°	47.6	47.3	45.5	52.3	57.0	65.3	77.2	83.9	86.7	87.6	89.5
80°	34.1	34.0	31.1	37.8	39.9	46.9	55.6	60.7	62.3	63.5	64.8
82.5°	21.8	22.0	19.0	24.7	25.6	30.1	35.5	38.6	39.7	40.7	41.7
85°	10.6	11.1	9.4	13.1	13.2	15.5	17.8	19.0	19.4	20.2	21.1
87.5°	2.7	3.2	1.8	3.7	3.3	4.3	4.9	5.3	5.2	5.7	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	460.7	464.2	462.4	468.1	470.3	466.8	473.0	473.1	468.7	473.9	476.7
5°	453.5	457.2	456.1	462.0	464.7	461.7	469.1	470.6	466.3	472.1	476.7
7.5°	446.3	450.6	449.2	455.2	458.5	456.1	464.1	466.4	463.1	469.5	475.6
10°	440.0	443.7	442.1	448.5	451.4	449.4	457.3	461.6	458.5	466.3	473.6
12.5°	433.9	436.9	435.1	440.4	443.1	440.6	450.3	454.2	452.0	460.1	469.6
15°	426.0	429.3	426.9	431.6	433.7	431.5	439.4	446.2	443.4	452.3	462.8
17.5°	420.0	421.8	418.5	422.3	423.5	420.5	428.5	435.2	433.2	442.9	455.0
20°	413.3	414.8	410.2	412.3	412.2	408.4	415.8	422.4	421.0	431.7	445.4
22.5°	405.8	406.6	401.2	401.6	401.4	395.2	401.8	408.5	408.0	418.7	434.1
25°	397.9	398.0	391.1	390.9	388.4	381.2	387.0	394.6	392.9	404.6	420.7
27.5°	390.1	389.0	380.6	378.7	374.8	366.2	371.3	378.1	377.1	388.6	406.4
30°	381.7	380.3	370.1	366.5	360.9	350.9	355.2	361.5	362.1	372.1	390.9
32.5°	373.8	370.2	358.9	353.6	346.6	335.0	337.3	343.8	344.6	354.7	374.1
35°	363.6	361.2	347.3	338.3	331.3	318.6	321.0	325.5	326.8	336.7	356.4
37.5°	354.0	350.1	335.3	324.3	315.4	302.0	302.7	307.3	308.6	318.6	338.0
40°	344.0	338.5	322.6	309.7	299.5	285.5	284.7	289.5	290.5	300.3	317.8
42.5°	333.3	326.7	308.8	294.8	283.0	268.8	267.2	271.4	272.5	282.1	299.3
45°	322.6	314.7	294.8	279.4	266.6	252.0	250.4	253.6	255.3	264.3	280.8
47.5°	311.1	301.9	280.3	263.2	249.9	235.3	233.4	236.6	237.9	246.8	262.5
50°	299.2	288.0	265.4	246.5	233.3	218.9	216.2	219.9	221.1	229.5	244.8
52.5°	286.0	273.6	249.4	229.7	216.5	202.8	199.5	203.1	204.5	212.7	226.8
55°	272.1	258.7	233.4	214.2	199.9	186.5	183.8	185.2	188.3	196.0	209.2
57.5°	256.4	243.1	216.5	197.0	183.2	170.4	168.1	169.4	172.3	179.7	191.6
60°	239.7	225.6	199.3	179.7	166.4	154.3	152.2	153.4	156.5	163.3	174.2
62.5°	223.2	207.4	181.5	162.1	150.0	138.7	138.1	137.7	140.5	147.1	156.8
65°	203.2	188.1	162.9	144.5	133.5	123.3	121.1	122.1	124.8	130.9	141.0
67.5°	181.8	168.1	143.9	126.9	117.1	108.0	106.2	106.6	109.5	114.7	123.5
70°	159.1	147.0	124.5	109.2	101.0	92.4	91.2	91.3	94.1	98.7	106.4
72.5°	135.3	124.4	104.9	91.8	85.0	78.8	77.7	76.4	78.9	82.9	89.5
75°	111.0	101.4	85.3	74.7	69.3	64.1	63.1	61.8	64.3	67.7	72.9
77.5°	86.5	78.8	66.3	58.1	53.9	50.1	49.2	47.8	50.3	52.8	56.9
80°	62.6	57.0	49.5	40.8	39.4	36.9	36.0	34.5	36.9	38.5	41.6
82.5°	40.4	36.7	32.4	26.3	26.1	24.3	23.8	22.1	24.3	25.3	27.6
85°	20.4	18.7	17.6	13.4	13.8	12.6	12.5	10.6	12.4	12.8	14.2
87.5°	5.8	6.1	5.5	3.3	4.2	4.0	4.0	2.9	4.0	4.0	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	470.7	470.7	470.7	470.7	470.7	470.7	470.7	470.7
2.5°	471.1	473.0	473.4	473.3	474.5	481.1	478.9	481.1
5°	472.2	476.4	477.5	479.0	481.0	488.5	486.0	488.7
7.5°	472.9	479.1	481.5	484.5	487.7	496.0	494.1	496.7
10°	472.9	481.0	484.5	489.4	493.7	503.4	501.5	504.6
12.5°	470.9	481.3	486.3	493.2	498.7	509.1	508.3	510.5
15°	466.8	479.7	486.5	495.4	502.2	513.8	513.5	516.1
17.5°	461.3	476.8	485.1	496.3	504.8	517.9	518.7	520.1
20°	454.4	471.4	482.2	495.9	506.7	521.1	522.1	524.0
22.5°	445.3	465.0	477.9	494.5	506.9	522.4	524.1	526.0
25°	434.6	457.2	472.3	491.8	505.8	522.3	524.7	526.3
27.5°	422.3	447.1	465.2	487.4	502.7	520.5	523.5	525.5
30°	408.0	436.3	457.1	481.7	498.6	517.2	520.4	522.4
32.5°	393.3	424.5	447.4	474.3	492.5	512.0	514.7	516.2
35°	377.2	410.1	435.8	464.9	484.7	503.5	505.6	507.2
37.5°	359.8	394.5	422.5	454.2	473.7	491.8	493.6	495.5
40°	341.8	378.1	407.5	441.1	460.7	477.4	479.3	480.7
42.5°	323.7	360.0	391.6	425.8	445.2	461.2	462.4	463.8
45°	305.3	341.2	373.7	408.8	428.0	443.0	443.4	444.5
47.5°	286.7	321.8	354.1	389.3	408.3	422.0	422.5	423.4
50°	267.9	302.4	333.1	368.3	386.9	401.4	399.4	400.3
52.5°	249.4	281.9	313.3	345.7	364.1	376.9	377.5	375.7
55°	231.3	262.0	290.8	322.0	339.5	349.5	349.1	349.8
57.5°	213.0	241.8	268.2	296.8	313.8	323.2	325.2	322.9
60°	194.3	221.3	245.1	270.9	287.3	295.2	297.5	295.3
62.5°	175.8	200.6	222.1	244.6	259.9	269.6	269.4	267.0
65°	157.2	179.7	198.9	218.0	231.3	241.1	240.7	238.5
67.5°	140.1	158.6	175.9	191.4	202.9	209.6	211.9	209.3
70°	121.2	137.2	152.4	164.8	174.3	180.4	182.6	180.3
72.5°	102.3	115.9	126.6	138.6	145.9	151.0	153.3	151.1
75°	83.7	94.9	103.5	112.9	118.0	122.3	124.9	122.7
77.5°	65.5	74.2	81.1	87.9	93.9	94.9	97.2	95.7
80°	48.3	54.6	59.6	64.1	68.4	68.8	70.7	69.8
82.5°	32.2	36.3	37.7	42.4	45.1	44.7	46.6	45.9
85°	17.0	19.5	21.8	23.3	24.8	23.4	25.0	24.4
87.5°	5.7	6.0	5.3	7.5	8.2	7.0	8.0	7.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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