

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: SHAPER

Report Number: P368724

Luminaire Tested: **673-16-L3/830**

Issue Date: 11/13/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368724  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1804-721-6)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 11/13/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 673-16-L3/830  
Description: 16" 673 SERIES LUMINOUS WALL SCONCE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

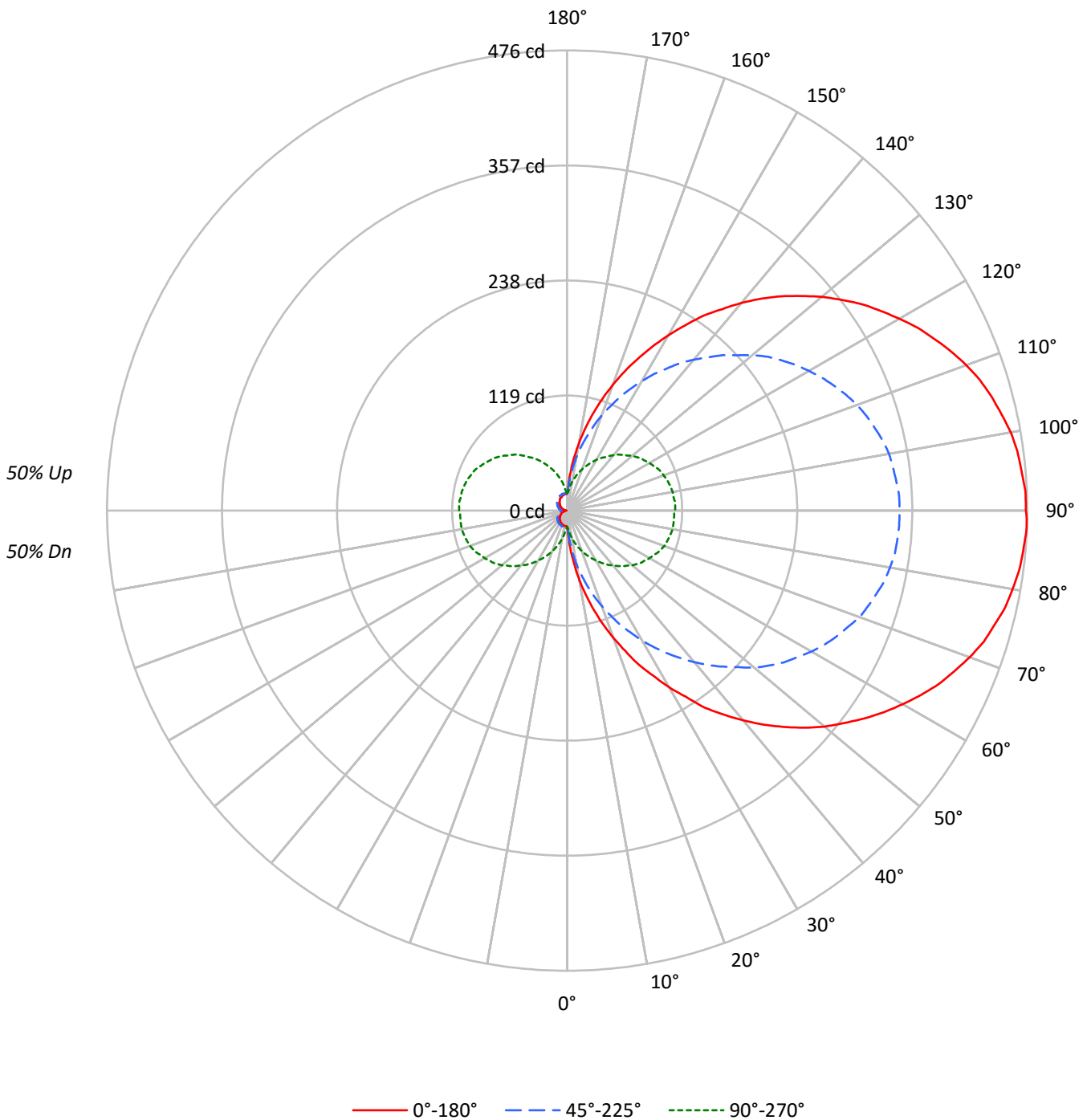
Lumens per Lamp: N/A  
Luminaire Lumens: 1724.0 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 5.61 / 4.12 / 4.63  
Luminous Opening: Rectangular w/ Sides (W: 0.71' x L: 0.25' x H: 1.33')  
CIE Type: General Diffuse

Input Watts (W): 22.5  
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	92	85	79	74	84	78	73	68	65	60	57	52	49	46	41	38	36	31
2	82	71	63	56	74	65	58	51	53	48	43	43	38	34	33	29	26	21
3	73	61	52	44	66	56	47	40	45	39	33	36	31	27	27	23	20	15
4	66	53	43	36	60	48	39	33	39	32	27	31	26	21	23	19	16	12
5	60	46	37	29	54	42	33	27	34	27	22	27	22	17	20	16	13	9
6	55	41	31	25	50	37	29	23	30	24	19	24	19	15	18	14	11	7
7	51	37	27	21	46	33	25	19	27	21	16	22	16	12	16	12	9	6
8	47	33	24	18	42	30	22	17	25	18	14	19	14	11	15	11	8	5
9	43	30	21	16	39	27	20	14	22	16	12	18	13	9	13	9	7	4
10	40	27	19	14	37	25	18	13	20	14	10	16	11	8	12	9	6	4

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	1033	1033	1033
5°	1693	1142	670
10°	2319	1362	512
15°	2749	1544	417
20°	3083	1708	334
25°	3389	1861	273
30°	3634	2008	244
35°	3904	2151	193
40°	4104	2273	178
45°	4293	2431	155
50°	4469	2569	122
55°	4613	2695	105
60°	4757	2811	90
65°	4907	2947	76
70°	5032	3081	65
75°	5140	3187	43
80°	5242	3322	31
85°	5331	3432	21



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.7	0.2
10°-20°	14.2	0.8
20°-30°	34.3	2.0
30°-40°	62.0	3.6
40°-50°	94.7	5.5
50°-60°	128.0	7.4
60°-70°	157.7	9.2
70°-80°	179.8	10.4
80°-90°	190.4	11.0
90°-100°	190.0	11.0
100°-110°	178.8	10.4
110°-120°	156.7	9.1
120°-130°	127.1	7.4
130°-140°	94.2	5.5
140°-150°	61.9	3.6
150°-160°	34.4	2.0
160°-170°	14.2	0.8
170°-180°	2.8	0.2
0°-30°	51.2	3.0
0°-40°	113.2	6.6
0°-60°	335.9	19.5
0°-90°	863.9	50.1
90°-120°	525.5	30.5
90°-150°	808.7	46.9
90°-180°	860.0	49.9
0°-180°	1724.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	17	17	17	17	17	
5°	41	32	22	17	16	5
15°	106	80	37	17	16	31
25°	176	131	52	16	14	82
35°	249	180	67	15	12	156
45°	316	228	82	14	11	245
55°	375	274	94	12	8	337
65°	424	308	103	10	7	420
75°	458	332	109	8	4	484
85°	474	343	111	7	2	386
90°	474	344	112	6	1	260
95°	472	342	112	7	2	384
105°	455	330	109	8	4	480
115°	420	305	103	10	7	416
125°	372	271	94	12	8	334
135°	314	227	82	14	11	243
145°	246	179	67	16	13	155
155°	173	130	53	17	15	81
165°	104	80	38	18	16	31
175°	40	33	22	17	17	5
180°	18	18	18	18	18	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
2.5°	24.6	22.7	22.7	22.7	20.8	20.8	20.8	19.9	18.9	18.9	18.0
5°	40.7	39.8	38.8	37.9	35.0	32.2	30.3	27.5	25.6	22.7	21.8
7.5°	55.9	55.9	54.0	52.1	48.3	44.5	39.8	36.0	31.3	27.5	25.6
10°	72.9	71.0	69.1	67.2	61.6	56.8	50.2	44.5	37.9	32.2	29.4
12.5°	89.0	88.1	85.2	81.5	75.8	68.2	59.7	52.1	43.6	36.0	33.1
15°	106.1	105.1	102.3	97.6	90.0	80.5	70.1	60.6	50.2	41.7	36.9
17.5°	123.1	122.2	118.4	112.7	104.2	92.8	80.5	68.2	56.8	45.5	40.7
20°	140.2	139.2	135.4	127.9	117.4	105.1	90.9	76.7	62.5	50.2	44.5
22.5°	157.2	156.3	152.5	143.0	131.6	117.4	101.3	85.2	69.1	54.9	48.3
25°	176.2	174.3	169.5	160.1	146.8	130.7	111.8	93.8	75.8	59.7	52.1
27.5°	192.3	192.3	186.6	175.2	160.1	142.1	123.1	102.3	82.4	64.4	55.9
30°	211.2	210.3	203.6	191.3	175.2	155.3	133.5	110.8	89.0	68.2	59.7
32.5°	228.3	227.3	220.7	206.5	189.4	167.6	144.0	119.3	94.7	72.9	63.5
35°	249.1	247.2	237.7	222.6	203.6	180.0	154.4	126.9	101.3	77.7	67.2
37.5°	266.1	265.2	256.7	238.7	217.8	192.3	164.8	135.4	108.0	82.4	71.0
40°	283.2	281.3	272.8	255.7	232.0	204.6	174.3	143.0	113.7	86.2	73.9
42.5°	300.2	299.3	289.8	271.8	248.1	216.9	184.7	151.5	119.3	90.9	77.7
45°	316.3	315.4	305.0	286.0	261.4	228.3	194.2	159.1	126.0	94.7	81.5
47.5°	332.4	330.5	321.1	301.2	273.7	239.6	203.6	166.7	131.6	98.5	84.3
50°	347.6	345.7	336.2	315.4	287.0	252.9	213.1	174.3	137.3	102.3	88.1
52.5°	360.9	360.9	349.5	327.7	298.3	263.3	221.6	180.9	142.1	106.1	90.9
55°	375.1	375.1	363.7	341.0	310.7	273.7	230.1	187.5	146.8	109.9	93.8
57.5°	388.3	386.4	376.0	352.3	321.1	282.2	237.7	193.2	151.5	112.7	95.7
60°	400.6	399.7	388.3	363.7	331.5	291.7	246.2	199.8	155.3	116.5	98.5
62.5°	412.9	411.0	398.7	374.1	341.0	300.2	253.8	205.5	160.1	119.3	100.4
65°	424.3	422.4	410.1	384.5	349.5	307.8	260.5	210.3	163.9	121.2	103.2
67.5°	433.8	431.9	419.6	393.1	358.0	314.4	266.1	215.0	167.6	124.1	105.1
70°	443.2	441.4	428.1	401.6	365.6	322.0	271.8	219.7	170.5	126.0	107.0
72.5°	451.8	449.9	435.7	409.2	372.2	326.8	276.6	223.5	173.3	127.9	108.0
75°	457.5	456.5	442.3	415.8	377.9	331.5	281.3	226.4	175.2	129.8	108.9
77.5°	464.1	462.2	448.0	420.5	382.6	336.2	284.1	228.3	177.1	130.7	109.9
80°	467.9	466.9	452.7	425.3	386.4	339.1	287.0	231.1	179.0	131.6	110.8
82.5°	471.7	469.8	455.6	427.1	389.3	341.9	288.9	232.0	180.0	132.6	110.8
85°	473.6	472.6	457.5	430.0	390.2	342.9	289.8	233.0	180.0	132.6	110.8
87.5°	475.5	473.6	459.4	430.9	392.1	343.8	290.8	233.0	180.9	132.6	110.8
89°	475.5	473.6	459.4	430.9	392.1	343.8	290.8	233.9	180.9	132.6	110.8
90°	474.5	472.6	458.4	430.9	391.2	343.8	290.8	233.9	180.9	132.6	111.8
92.5°	474.5	471.7	457.5	430.0	391.2	343.8	290.8	233.0	180.9	132.6	111.8
95°	471.7	470.7	456.5	428.1	390.2	341.9	289.8	233.0	180.9	132.6	111.8
97.5°	469.8	467.9	452.7	426.2	387.4	340.0	287.9	232.0	180.0	132.6	110.8
100°	466.0	464.1	449.9	422.4	384.5	338.1	286.0	230.1	179.0	131.6	110.8
102.5°	460.3	458.4	444.2	417.7	379.8	334.3	283.2	228.3	177.1	130.7	109.9
105°	454.6	452.7	439.5	412.9	375.1	329.6	279.4	225.4	175.2	129.8	108.9
107.5°	448.0	446.1	431.9	406.3	369.4	324.9	275.6	222.6	172.4	127.9	108.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	439.5	437.6	424.3	398.7	362.7	319.2	270.9	218.8	170.5	126.0	106.1
112.5°	430.0	428.1	415.8	390.2	355.2	312.5	265.2	214.0	166.7	124.1	105.1
115°	419.6	417.7	405.4	379.8	346.6	305.0	258.6	209.3	162.9	121.2	103.2
117.5°	409.2	408.2	394.9	371.3	338.1	297.4	252.9	204.6	159.1	118.4	100.4
120°	396.8	395.9	383.6	359.9	328.6	288.9	243.4	198.9	155.3	116.5	98.5
122.5°	384.5	383.6	372.2	348.5	318.2	280.3	236.8	193.2	150.6	112.7	95.7
125°	372.2	370.3	359.0	337.2	306.9	270.9	228.3	187.5	146.8	109.9	93.8
127.5°	358.0	357.1	345.7	324.9	296.4	261.4	220.7	180.9	141.1	106.1	90.9
130°	343.8	341.9	331.5	311.6	284.1	250.0	211.2	173.3	136.4	102.3	88.1
132.5°	328.6	327.7	318.2	299.3	271.8	237.7	203.6	166.7	130.7	99.4	84.3
135°	313.5	311.6	303.1	285.1	259.5	227.3	194.2	159.1	125.0	94.7	81.5
137.5°	297.4	296.4	287.0	269.9	246.2	215.0	183.7	151.5	119.3	90.9	78.6
140°	280.3	280.3	270.9	255.7	230.1	203.6	174.3	144.0	113.7	87.1	74.8
142.5°	262.4	262.4	253.8	236.8	216.9	192.3	163.9	135.4	107.0	82.4	71.0
145°	246.2	244.4	235.8	221.6	202.7	179.0	153.4	126.9	101.3	77.7	67.2
147.5°	227.3	226.4	219.7	206.5	188.5	167.6	144.0	119.3	95.7	73.9	64.4
150°	209.3	209.3	202.7	191.3	174.3	154.4	133.5	110.8	89.0	69.1	60.6
152.5°	191.3	191.3	184.7	174.3	160.1	142.1	122.2	102.3	82.4	64.4	56.8
155°	173.3	173.3	167.6	159.1	145.9	129.8	111.8	93.8	75.8	59.7	53.0
157.5°	156.3	156.3	151.5	144.0	131.6	116.5	101.3	85.2	70.1	54.9	49.2
160°	138.3	139.2	134.5	127.9	117.4	105.1	90.9	76.7	63.5	51.1	45.5
162.5°	121.2	121.2	117.4	111.8	103.2	91.9	80.5	68.2	56.8	46.4	41.7
165°	104.2	104.2	101.3	96.6	89.0	79.6	70.1	59.7	50.2	41.7	37.9
167.5°	87.1	87.1	85.2	81.5	74.8	68.2	60.6	52.1	44.5	36.9	34.1
170°	71.0	71.0	70.1	67.2	61.6	56.8	50.2	44.5	37.9	32.2	30.3
172.5°	54.9	55.9	54.0	52.1	48.3	44.5	40.7	36.0	32.2	28.4	26.5
175°	39.8	39.8	38.8	37.9	35.0	33.1	30.3	27.5	25.6	22.7	21.8
177.5°	23.7	23.7	23.7	23.7	22.7	21.8	21.8	20.8	19.9	18.9	18.9
180°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
2.5°	18.0	18.0	17.0	17.0	17.0	17.0	17.0	16.1	16.1	16.1
5°	20.8	18.9	18.0	17.0	17.0	17.0	16.1	16.1	16.1	16.1
7.5°	23.7	20.8	18.9	18.0	17.0	17.0	16.1	16.1	16.1	16.1
10°	27.5	23.7	20.8	18.0	17.0	16.1	16.1	16.1	16.1	16.1
12.5°	30.3	25.6	21.8	18.9	17.0	16.1	16.1	16.1	16.1	16.1
15°	33.1	27.5	22.7	18.9	17.0	16.1	16.1	16.1	16.1	16.1
17.5°	36.0	29.4	23.7	18.9	17.0	16.1	15.2	15.2	15.2	15.2
20°	38.8	30.3	23.7	19.9	17.0	15.2	15.2	15.2	15.2	15.2
22.5°	42.6	32.2	24.6	19.9	16.1	15.2	15.2	15.2	15.2	15.2
25°	45.5	34.1	25.6	19.9	16.1	15.2	14.2	14.2	14.2	14.2
27.5°	48.3	36.0	26.5	19.9	16.1	14.2	14.2	14.2	14.2	14.2
30°	51.1	37.9	27.5	20.8	16.1	14.2	14.2	14.2	14.2	14.2
32.5°	54.0	39.8	28.4	20.8	16.1	13.3	13.3	13.3	13.3	13.3
35°	57.8	40.7	29.4	20.8	15.2	13.3	13.3	13.3	12.3	12.3
37.5°	60.6	42.6	29.4	20.8	15.2	12.3	12.3	12.3	12.3	12.3
40°	63.5	44.5	30.3	20.8	15.2	12.3	12.3	12.3	12.3	12.3
42.5°	66.3	46.4	31.3	20.8	14.2	11.4	11.4	11.4	11.4	11.4
45°	69.1	47.4	31.3	20.8	14.2	11.4	11.4	10.4	11.4	11.4
47.5°	71.0	49.2	32.2	20.8	13.3	10.4	10.4	10.4	10.4	10.4
50°	73.9	50.2	33.1	20.8	13.3	10.4	9.5	9.5	9.5	9.5
52.5°	75.8	51.1	33.1	20.8	12.3	9.5	9.5	9.5	9.5	9.5
55°	78.6	53.0	34.1	20.8	12.3	8.5	8.5	8.5	8.5	8.5
57.5°	80.5	54.0	34.1	19.9	11.4	8.5	7.6	8.5	7.6	7.6
60°	82.4	54.9	34.1	19.9	11.4	7.6	7.6	7.6	7.6	7.6
62.5°	84.3	55.9	35.0	19.9	11.4	6.6	6.6	6.6	6.6	6.6
65°	85.2	56.8	35.0	19.9	10.4	6.6	6.6	6.6	6.6	6.6
67.5°	87.1	56.8	35.0	19.9	10.4	5.7	5.7	5.7	5.7	5.7
70°	88.1	57.8	35.0	19.9	9.5	5.7	5.7	5.7	5.7	5.7
72.5°	89.0	58.7	35.0	18.9	9.5	4.7	4.7	4.7	4.7	4.7
75°	90.0	58.7	35.0	18.9	8.5	3.8	3.8	3.8	3.8	3.8
77.5°	90.9	58.7	35.0	18.9	8.5	3.8	3.8	3.8	3.8	3.8
80°	90.9	58.7	35.0	18.0	7.6	2.8	2.8	2.8	2.8	2.8
82.5°	91.9	58.7	34.1	18.0	7.6	2.8	2.8	2.8	2.8	2.8
85°	91.9	58.7	34.1	17.0	6.6	1.9	1.9	1.9	1.9	1.9
87.5°	91.9	58.7	34.1	17.0	5.7	1.9	1.9	1.9	1.9	0.9
89°	91.9	58.7	34.1	17.0	5.7	0.9	0.9	0.9	0.9	0.9
90°	91.9	58.7	34.1	17.0	5.7	0.9	0.9	0.9	0.9	0.9
92.5°	91.9	58.7	34.1	17.0	5.7	1.9	0.9	0.9	0.9	0.9
95°	91.9	58.7	34.1	17.0	6.6	1.9	1.9	1.9	1.9	1.9
97.5°	91.9	58.7	34.1	18.0	7.6	2.8	2.8	2.8	2.8	2.8
100°	91.9	58.7	35.0	18.0	7.6	2.8	2.8	2.8	2.8	2.8
102.5°	90.9	58.7	35.0	18.0	8.5	3.8	3.8	3.8	3.8	3.8
105°	90.0	58.7	35.0	18.9	8.5	3.8	3.8	3.8	3.8	3.8
107.5°	89.0	58.7	35.0	18.9	9.5	4.7	4.7	4.7	4.7	4.7





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	88.1	57.8	35.0	19.9	9.5	5.7	5.7	5.7	5.7	5.7
112.5°	87.1	57.8	35.0	19.9	10.4	5.7	5.7	5.7	5.7	5.7
115°	85.2	56.8	35.0	19.9	10.4	6.6	6.6	6.6	6.6	6.6
117.5°	84.3	55.9	35.0	19.9	11.4	7.6	6.6	6.6	6.6	6.6
120°	82.4	54.9	35.0	20.8	11.4	7.6	7.6	7.6	7.6	7.6
122.5°	80.5	54.0	34.1	20.8	12.3	8.5	8.5	8.5	8.5	8.5
125°	78.6	53.0	34.1	20.8	12.3	8.5	8.5	8.5	8.5	8.5
127.5°	75.8	52.1	33.1	20.8	13.3	9.5	9.5	9.5	9.5	9.5
130°	73.9	50.2	33.1	20.8	13.3	10.4	9.5	10.4	9.5	9.5
132.5°	71.0	49.2	32.2	20.8	14.2	10.4	10.4	10.4	10.4	10.4
135°	69.1	47.4	32.2	20.8	14.2	11.4	11.4	11.4	11.4	11.4
137.5°	66.3	46.4	31.3	20.8	14.2	12.3	11.4	11.4	11.4	11.4
140°	63.5	44.5	30.3	20.8	15.2	12.3	12.3	12.3	12.3	12.3
142.5°	60.6	42.6	30.3	20.8	15.2	13.3	13.3	12.3	12.3	12.3
145°	57.8	41.7	29.4	20.8	16.1	13.3	13.3	13.3	13.3	13.3
147.5°	54.9	39.8	28.4	20.8	16.1	14.2	14.2	14.2	14.2	14.2
150°	52.1	37.9	28.4	20.8	16.1	14.2	14.2	14.2	14.2	14.2
152.5°	49.2	36.9	27.5	20.8	17.0	15.2	15.2	15.2	15.2	15.2
155°	46.4	35.0	26.5	20.8	17.0	15.2	15.2	15.2	15.2	15.2
157.5°	42.6	33.1	25.6	20.8	17.0	16.1	15.2	15.2	15.2	15.2
160°	39.8	31.3	24.6	19.9	17.0	16.1	16.1	16.1	16.1	16.1
162.5°	36.9	29.4	23.7	19.9	18.0	16.1	16.1	16.1	16.1	16.1
165°	34.1	27.5	22.7	19.9	18.0	17.0	16.1	16.1	16.1	16.1
167.5°	31.3	25.6	21.8	18.9	18.0	17.0	17.0	17.0	16.1	17.0
170°	27.5	23.7	20.8	18.9	18.0	17.0	17.0	17.0	17.0	17.0
172.5°	24.6	21.8	19.9	18.9	18.0	17.0	17.0	17.0	17.0	17.0
175°	20.8	19.9	18.9	18.0	17.0	17.0	17.0	17.0	17.0	17.0
177.5°	18.9	18.9	18.0	18.0	18.0	17.0	17.0	17.0	17.0	17.0
180°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

(END OF REPORT)