

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: P368725

Luminaire Tested: **673-16-L3/835**

Issue Date: 11/13/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368725  
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-L3/835  
Description: 16" 673 SERIES LUMINOUS WALL SCONCE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

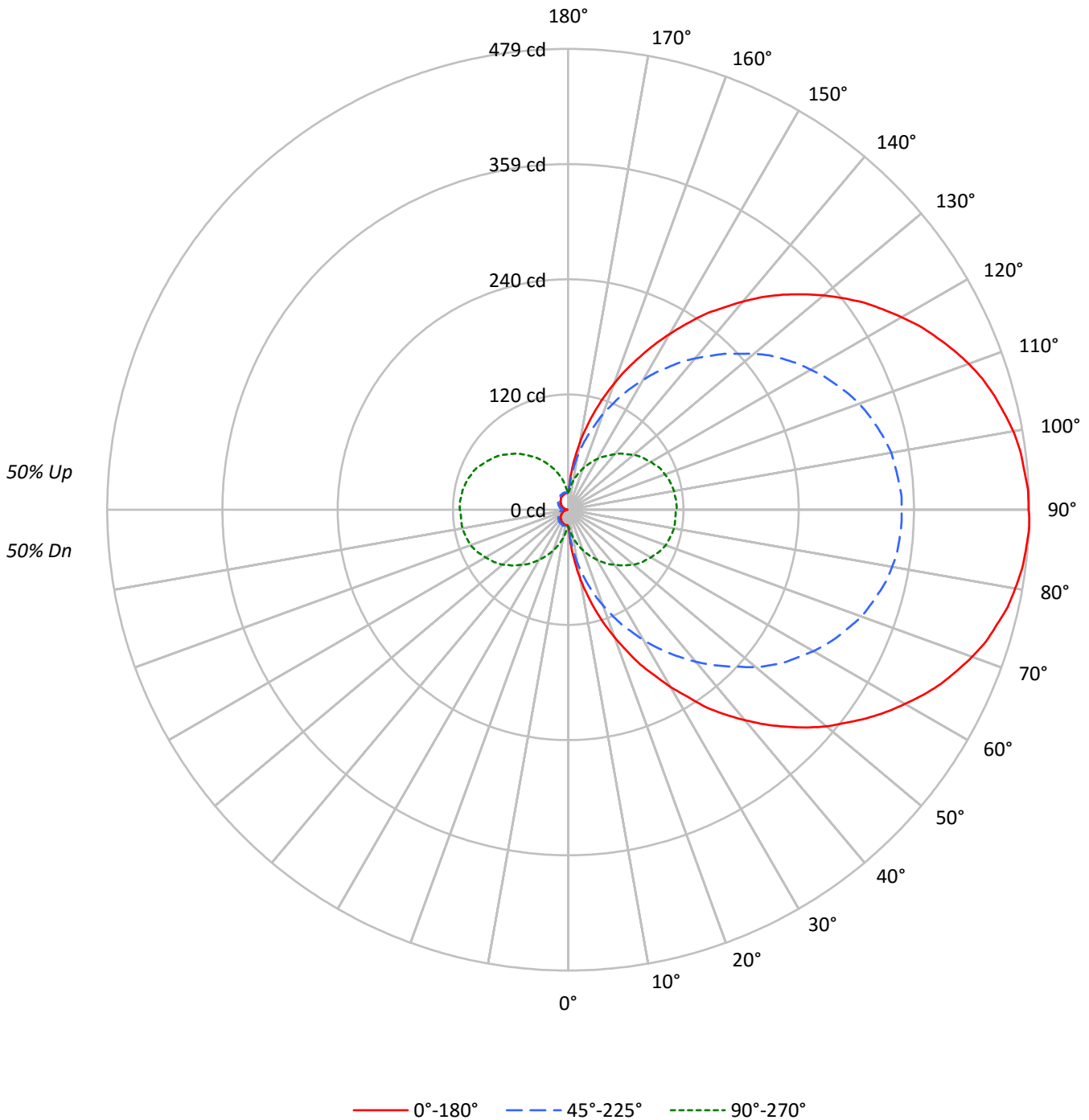
Lumens per Lamp: N/A  
Luminaire Lumens: 1738.0 lumens  
Efficiency: N/A  
Efficacy: 77.2 lumens/watt  
Spacing Criteria (0/90/45): 5.61 / 4.12 / 4.63  
Luminous Opening: Rectangular w/ Sides (W: 0.71' x L: 0.25' x H: 1.33')  
CIE Type: General Diffuse

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°	1045	1045	1045
5°	1710	1153	674
10°	2338	1372	515
15°	2769	1556	420
20°	3108	1724	336
25°	3416	1875	275
30°	3663	2025	246
35°	3936	2170	194
40°	4138	2292	180
45°	4328	2449	156
50°	4505	2589	122
55°	4650	2715	106
60°	4796	2834	90
65°	4946	2973	77
70°	5073	3107	65
75°	5181	3213	43
80°	5284	3349	32
85°	5374	3460	21



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.8	0.2
10°-20°	14.3	0.8
20°-30°	34.6	2.0
30°-40°	62.5	3.6
40°-50°	95.4	5.5
50°-60°	129.0	7.4
60°-70°	159.0	9.2
70°-80°	181.3	10.4
80°-90°	192.0	11.0
90°-100°	191.6	11.0
100°-110°	180.3	10.4
110°-120°	157.9	9.1
120°-130°	128.1	7.4
130°-140°	95.0	5.5
140°-150°	62.4	3.6
150°-160°	34.7	2.0
160°-170°	14.4	0.8
170°-180°	2.8	0.2
0°-30°	51.7	3.0
0°-40°	114.1	6.6
0°-60°	338.6	19.5
0°-90°	870.9	50.1
90°-120°	529.8	30.5
90°-150°	815.3	46.9
90°-180°	867.0	49.9
0°-180°	1738.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	17	17	17	17	17	
5°	41	32	22	17	16	5
15°	107	81	37	17	16	31
25°	178	132	52	16	14	83
35°	251	181	68	15	12	158
45°	319	230	82	14	12	247
55°	378	276	94	12	9	339
65°	428	310	104	10	7	424
75°	461	334	110	9	4	488
85°	477	346	112	7	2	389
90°	478	347	113	6	1	262
95°	476	345	113	7	2	388
105°	458	332	110	9	4	484
115°	423	307	104	10	7	420
125°	375	273	94	12	9	336
135°	316	229	82	14	12	245
145°	248	180	68	16	13	156
155°	175	131	54	17	15	82
165°	105	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°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
2.5°	24.8	22.9	22.9	22.9	21.0	21.0	21.0	20.1	19.1	19.1	18.1
5°	41.1	40.1	39.1	38.2	35.3	32.5	30.6	27.7	25.8	22.9	22.0
7.5°	56.3	56.3	54.4	52.5	48.7	44.9	40.1	36.3	31.5	27.7	25.8
10°	73.5	71.6	69.7	67.8	62.1	57.3	50.6	44.9	38.2	32.5	29.6
12.5°	89.7	88.8	85.9	82.1	76.4	68.7	60.2	52.5	43.9	36.3	33.4
15°	106.9	106.0	103.1	98.3	90.7	81.2	70.7	61.1	50.6	42.0	37.2
17.5°	124.1	123.2	119.3	113.6	105.0	93.6	81.2	68.7	57.3	45.8	41.1
20°	141.3	140.4	136.5	128.9	118.4	106.0	91.7	77.3	63.0	50.6	44.9
22.5°	158.5	157.5	153.7	144.2	132.7	118.4	102.2	85.9	69.7	55.4	48.7
25°	177.6	175.7	170.9	161.4	148.0	131.8	112.7	94.5	76.4	60.2	52.5
27.5°	193.8	193.8	188.1	176.6	161.4	143.2	124.1	103.1	83.1	64.9	56.3
30°	212.9	212.0	205.3	192.9	176.6	156.6	134.6	111.7	89.7	68.7	60.2
32.5°	230.1	229.1	222.5	208.1	191.0	169.0	145.1	120.3	95.5	73.5	64.0
35°	251.1	249.2	239.7	224.4	205.3	181.4	155.6	127.9	102.2	78.3	67.8
37.5°	268.3	267.3	258.7	240.6	219.6	193.8	166.1	136.5	108.8	83.1	71.6
40°	285.5	283.6	275.0	257.8	233.9	206.2	175.7	144.2	114.6	86.9	74.5
42.5°	302.7	301.7	292.2	274.0	250.2	218.6	186.2	152.8	120.3	91.7	78.3
45°	318.9	317.9	307.4	288.3	263.5	230.1	195.7	160.4	127.0	95.5	82.1
47.5°	335.1	333.2	323.7	303.6	275.9	241.6	205.3	168.0	132.7	99.3	85.0
50°	350.4	348.5	338.9	317.9	289.3	254.9	214.8	175.7	138.4	103.1	88.8
52.5°	363.8	363.8	352.3	330.4	300.8	265.4	223.4	182.4	143.2	106.9	91.7
55°	378.1	378.1	366.6	343.7	313.2	275.9	232.0	189.0	148.0	110.8	94.5
57.5°	391.5	389.6	379.1	355.2	323.7	284.5	239.7	194.8	152.8	113.6	96.4
60°	403.9	402.9	391.5	366.6	334.2	294.1	248.2	201.5	156.6	117.4	99.3
62.5°	416.3	414.4	402.0	377.1	343.7	302.7	255.9	207.2	161.4	120.3	101.2
65°	427.7	425.8	413.4	387.6	352.3	310.3	262.6	212.0	165.2	122.2	104.1
67.5°	437.3	435.4	423.0	396.2	360.9	317.0	268.3	216.7	169.0	125.1	106.0
70°	446.8	444.9	431.6	404.8	368.5	324.6	274.0	221.5	171.9	127.0	107.9
72.5°	455.4	453.5	439.2	412.5	375.2	329.4	278.8	225.3	174.7	128.9	108.8
75°	461.2	460.2	445.9	419.2	381.0	334.2	283.6	228.2	176.6	130.8	109.8
77.5°	467.8	465.9	451.6	423.9	385.7	338.9	286.4	230.1	178.5	131.8	110.8
80°	471.7	470.7	456.4	428.7	389.6	341.8	289.3	233.0	180.5	132.7	111.7
82.5°	475.5	473.6	459.3	430.6	392.4	344.7	291.2	233.9	181.4	133.7	111.7
85°	477.4	476.4	461.2	433.5	393.4	345.6	292.2	234.9	181.4	133.7	111.7
87.5°	479.3	477.4	463.1	434.4	395.3	346.6	293.1	234.9	182.4	133.7	111.7
89°	479.3	477.4	463.1	434.4	395.3	346.6	293.1	235.8	182.4	133.7	111.7
90°	478.3	476.4	462.1	434.4	394.3	346.6	293.1	235.8	182.4	133.7	112.7
92.5°	478.3	475.5	461.2	433.5	394.3	346.6	293.1	234.9	182.4	133.7	112.7
95°	475.5	474.5	460.2	431.6	393.4	344.7	292.2	234.9	182.4	133.7	112.7
97.5°	473.6	471.7	456.4	429.7	390.5	342.8	290.3	233.9	181.4	133.7	111.7
100°	469.8	467.8	453.5	425.8	387.6	340.9	288.3	232.0	180.5	132.7	111.7
102.5°	464.0	462.1	447.8	421.1	382.9	337.0	285.5	230.1	178.5	131.8	110.8
105°	458.3	456.4	443.0	416.3	378.1	332.3	281.7	227.2	176.6	130.8	109.8
107.5°	451.6	449.7	435.4	409.6	372.4	327.5	277.8	224.4	173.8	128.9	108.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	443.0	441.1	427.7	402.0	365.7	321.8	273.1	220.6	171.9	127.0	106.9
112.5°	433.5	431.6	419.2	393.4	358.0	315.1	267.3	215.8	168.0	125.1	106.0
115°	423.0	421.1	408.6	382.9	349.5	307.4	260.7	211.0	164.2	122.2	104.1
117.5°	412.5	411.5	398.1	374.3	340.9	299.8	254.9	206.2	160.4	119.3	101.2
120°	400.1	399.1	386.7	362.8	331.3	291.2	245.4	200.5	156.6	117.4	99.3
122.5°	387.6	386.7	375.2	351.4	320.8	282.6	238.7	194.8	151.8	113.6	96.4
125°	375.2	373.3	361.9	339.9	309.4	273.1	230.1	189.0	148.0	110.8	94.5
127.5°	360.9	360.0	348.5	327.5	298.8	263.5	222.5	182.4	142.3	106.9	91.7
130°	346.6	344.7	334.2	314.1	286.4	252.1	212.9	174.7	137.5	103.1	88.8
132.5°	331.3	330.4	320.8	301.7	274.0	239.7	205.3	168.0	131.8	100.3	85.0
135°	316.0	314.1	305.5	287.4	261.6	229.1	195.7	160.4	126.0	95.5	82.1
137.5°	299.8	298.8	289.3	272.1	248.2	216.7	185.2	152.8	120.3	91.7	79.2
140°	282.6	282.6	273.1	257.8	232.0	205.3	175.7	145.1	114.6	87.8	75.4
142.5°	264.5	264.5	255.9	238.7	218.6	193.8	165.2	136.5	107.9	83.1	71.6
145°	248.2	246.3	237.7	223.4	204.3	180.5	154.7	127.9	102.2	78.3	67.8
147.5°	229.1	228.2	221.5	208.1	190.0	169.0	145.1	120.3	96.4	74.5	64.9
150°	211.0	211.0	204.3	192.9	175.7	155.6	134.6	111.7	89.7	69.7	61.1
152.5°	192.9	192.9	186.2	175.7	161.4	143.2	123.2	103.1	83.1	64.9	57.3
155°	174.7	174.7	169.0	160.4	147.0	130.8	112.7	94.5	76.4	60.2	53.5
157.5°	157.5	157.5	152.8	145.1	132.7	117.4	102.2	85.9	70.7	55.4	49.6
160°	139.4	140.4	135.6	128.9	118.4	106.0	91.7	77.3	64.0	51.6	45.8
162.5°	122.2	122.2	118.4	112.7	104.1	92.6	81.2	68.7	57.3	46.8	42.0
165°	105.0	105.0	102.2	97.4	89.7	80.2	70.7	60.2	50.6	42.0	38.2
167.5°	87.8	87.8	85.9	82.1	75.4	68.7	61.1	52.5	44.9	37.2	34.4
170°	71.6	71.6	70.7	67.8	62.1	57.3	50.6	44.9	38.2	32.5	30.6
172.5°	55.4	56.3	54.4	52.5	48.7	44.9	41.1	36.3	32.5	28.6	26.7
175°	40.1	40.1	39.1	38.2	35.3	33.4	30.6	27.7	25.8	22.9	22.0
177.5°	23.9	23.9	23.9	23.9	22.9	22.0	22.0	21.0	20.1	19.1	19.1
180°	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
2.5°	18.1	18.1	17.2	17.2	17.2	17.2	17.2	16.2	16.2	16.2
5°	21.0	19.1	18.1	17.2	17.2	17.2	16.2	16.2	16.2	16.2
7.5°	23.9	21.0	19.1	18.1	17.2	17.2	16.2	16.2	16.2	16.2
10°	27.7	23.9	21.0	18.1	17.2	16.2	16.2	16.2	16.2	16.2
12.5°	30.6	25.8	22.0	19.1	17.2	16.2	16.2	16.2	16.2	16.2
15°	33.4	27.7	22.9	19.1	17.2	16.2	16.2	16.2	16.2	16.2
17.5°	36.3	29.6	23.9	19.1	17.2	16.2	15.3	15.3	15.3	15.3
20°	39.1	30.6	23.9	20.1	17.2	15.3	15.3	15.3	15.3	15.3
22.5°	43.0	32.5	24.8	20.1	16.2	15.3	15.3	15.3	15.3	15.3
25°	45.8	34.4	25.8	20.1	16.2	15.3	14.3	14.3	14.3	14.3
27.5°	48.7	36.3	26.7	20.1	16.2	14.3	14.3	14.3	14.3	14.3
30°	51.6	38.2	27.7	21.0	16.2	14.3	14.3	14.3	14.3	14.3
32.5°	54.4	40.1	28.6	21.0	16.2	13.4	13.4	13.4	13.4	13.4
35°	58.2	41.1	29.6	21.0	15.3	13.4	13.4	13.4	12.4	12.4
37.5°	61.1	43.0	29.6	21.0	15.3	12.4	12.4	12.4	12.4	12.4
40°	64.0	44.9	30.6	21.0	15.3	12.4	12.4	12.4	12.4	12.4
42.5°	66.8	46.8	31.5	21.0	14.3	11.5	11.5	11.5	11.5	11.5
45°	69.7	47.7	31.5	21.0	14.3	11.5	11.5	10.5	11.5	11.5
47.5°	71.6	49.6	32.5	21.0	13.4	10.5	10.5	10.5	10.5	10.5
50°	74.5	50.6	33.4	21.0	13.4	10.5	9.5	9.5	9.5	9.5
52.5°	76.4	51.6	33.4	21.0	12.4	9.5	9.5	9.5	9.5	9.5
55°	79.2	53.5	34.4	21.0	12.4	8.6	8.6	8.6	8.6	8.6
57.5°	81.2	54.4	34.4	20.1	11.5	8.6	7.6	8.6	7.6	7.6
60°	83.1	55.4	34.4	20.1	11.5	7.6	7.6	7.6	7.6	7.6
62.5°	85.0	56.3	35.3	20.1	11.5	6.7	6.7	6.7	6.7	6.7
65°	85.9	57.3	35.3	20.1	10.5	6.7	6.7	6.7	6.7	6.7
67.5°	87.8	57.3	35.3	20.1	10.5	5.7	5.7	5.7	5.7	5.7
70°	88.8	58.2	35.3	20.1	9.5	5.7	5.7	5.7	5.7	5.7
72.5°	89.7	59.2	35.3	19.1	9.5	4.8	4.8	4.8	4.8	4.8
75°	90.7	59.2	35.3	19.1	8.6	3.8	3.8	3.8	3.8	3.8
77.5°	91.7	59.2	35.3	19.1	8.6	3.8	3.8	3.8	3.8	3.8
80°	91.7	59.2	35.3	18.1	7.6	2.9	2.9	2.9	2.9	2.9
82.5°	92.6	59.2	34.4	18.1	7.6	2.9	2.9	2.9	2.9	2.9
85°	92.6	59.2	34.4	17.2	6.7	1.9	1.9	1.9	1.9	1.9
87.5°	92.6	59.2	34.4	17.2	5.7	1.9	1.9	1.9	1.9	1.0
89°	92.6	59.2	34.4	17.2	5.7	1.0	1.0	1.0	1.0	1.0
90°	92.6	59.2	34.4	17.2	5.7	1.0	1.0	1.0	1.0	1.0
92.5°	92.6	59.2	34.4	17.2	5.7	1.9	1.0	1.0	1.0	1.0
95°	92.6	59.2	34.4	17.2	6.7	1.9	1.9	1.9	1.9	1.9
97.5°	92.6	59.2	34.4	18.1	7.6	2.9	2.9	2.9	2.9	2.9
100°	92.6	59.2	35.3	18.1	7.6	2.9	2.9	2.9	2.9	2.9
102.5°	91.7	59.2	35.3	18.1	8.6	3.8	3.8	3.8	3.8	3.8
105°	90.7	59.2	35.3	19.1	8.6	3.8	3.8	3.8	3.8	3.8
107.5°	89.7	59.2	35.3	19.1	9.5	4.8	4.8	4.8	4.8	4.8





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	88.8	58.2	35.3	20.1	9.5	5.7	5.7	5.7	5.7	5.7
112.5°	87.8	58.2	35.3	20.1	10.5	5.7	5.7	5.7	5.7	5.7
115°	85.9	57.3	35.3	20.1	10.5	6.7	6.7	6.7	6.7	6.7
117.5°	85.0	56.3	35.3	20.1	11.5	7.6	6.7	6.7	6.7	6.7
120°	83.1	55.4	35.3	21.0	11.5	7.6	7.6	7.6	7.6	7.6
122.5°	81.2	54.4	34.4	21.0	12.4	8.6	8.6	8.6	8.6	8.6
125°	79.2	53.5	34.4	21.0	12.4	8.6	8.6	8.6	8.6	8.6
127.5°	76.4	52.5	33.4	21.0	13.4	9.5	9.5	9.5	9.5	9.5
130°	74.5	50.6	33.4	21.0	13.4	10.5	9.5	10.5	9.5	9.5
132.5°	71.6	49.6	32.5	21.0	14.3	10.5	10.5	10.5	10.5	10.5
135°	69.7	47.7	32.5	21.0	14.3	11.5	11.5	11.5	11.5	11.5
137.5°	66.8	46.8	31.5	21.0	14.3	12.4	11.5	11.5	11.5	11.5
140°	64.0	44.9	30.6	21.0	15.3	12.4	12.4	12.4	12.4	12.4
142.5°	61.1	43.0	30.6	21.0	15.3	13.4	13.4	12.4	12.4	12.4
145°	58.2	42.0	29.6	21.0	16.2	13.4	13.4	13.4	13.4	13.4
147.5°	55.4	40.1	28.6	21.0	16.2	14.3	14.3	14.3	14.3	14.3
150°	52.5	38.2	28.6	21.0	16.2	14.3	14.3	14.3	14.3	14.3
152.5°	49.6	37.2	27.7	21.0	17.2	15.3	15.3	15.3	15.3	15.3
155°	46.8	35.3	26.7	21.0	17.2	15.3	15.3	15.3	15.3	15.3
157.5°	43.0	33.4	25.8	21.0	17.2	16.2	15.3	15.3	15.3	15.3
160°	40.1	31.5	24.8	20.1	17.2	16.2	16.2	16.2	16.2	16.2
162.5°	37.2	29.6	23.9	20.1	18.1	16.2	16.2	16.2	16.2	16.2
165°	34.4	27.7	22.9	20.1	18.1	17.2	16.2	16.2	16.2	16.2
167.5°	31.5	25.8	22.0	19.1	18.1	17.2	17.2	17.2	16.2	17.2
170°	27.7	23.9	21.0	19.1	18.1	17.2	17.2	17.2	17.2	17.2
172.5°	24.8	22.0	20.1	19.1	18.1	17.2	17.2	17.2	17.2	17.2
175°	21.0	20.1	19.1	18.1	17.2	17.2	17.2	17.2	17.2	17.2
177.5°	19.1	19.1	18.1	18.1	18.1	17.2	17.2	17.2	17.2	17.2
180°	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1

(END OF REPORT)