

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: P316055

Luminaire Tested: **ShSe-SQR-1-L40-80-UNV-STD**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316055
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1811-037-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: ShSe-SQR-1-L40-80-UNV-STD
Description: SHAPER SENSE SQUARE
LIGHT LEVEL 1
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

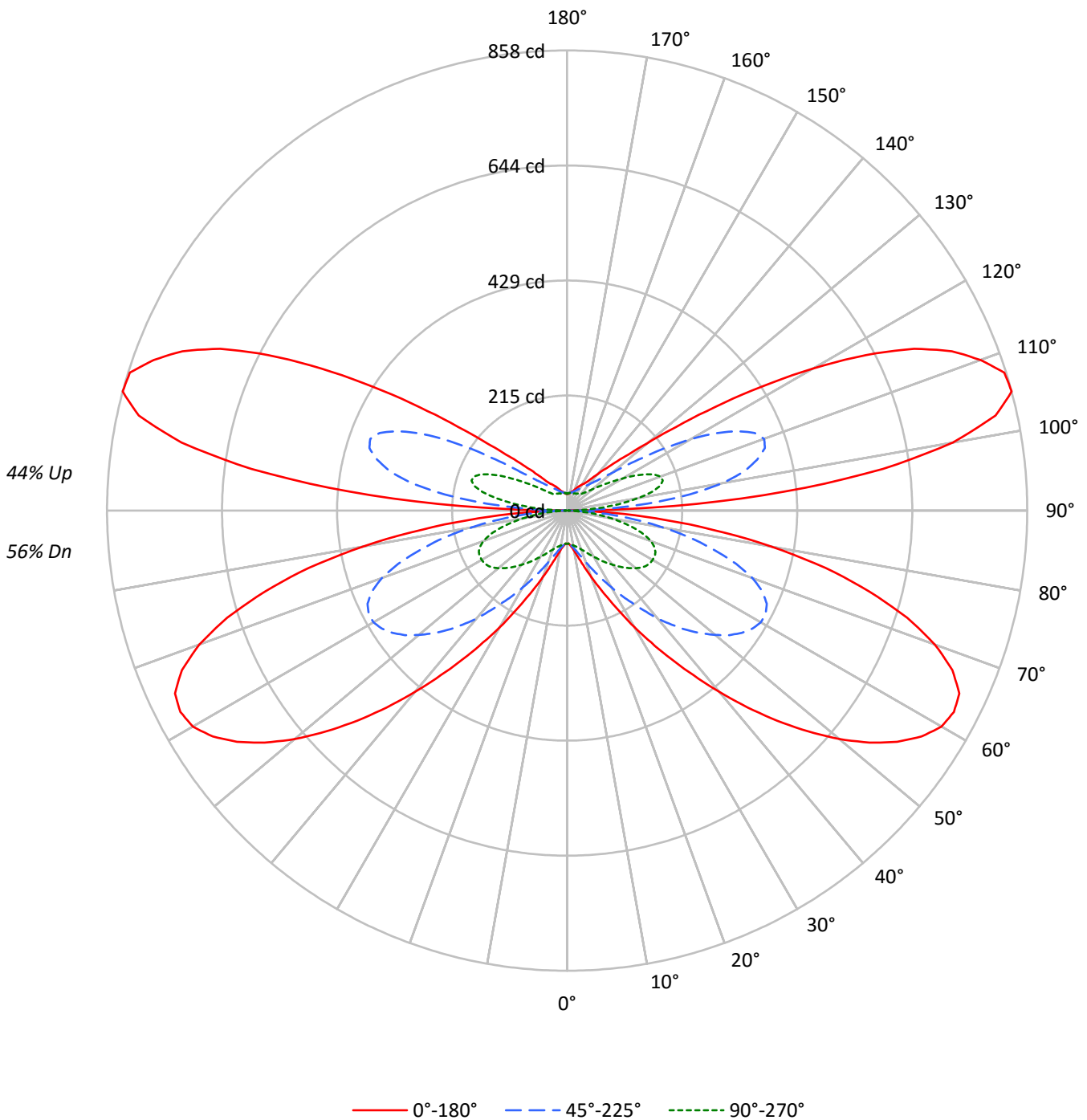
Lumens per Lamp: N/A
Luminaire Lumens: 3148.9 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 5.4 / 3.01 / 3.76
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 29.9
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	96	90	85	80	89	84	79	75	71	68	65	60	57	55	49	48	46	41
2	85	75	67	61	78	70	63	57	59	53	49	49	45	41	40	37	34	29
3	76	64	55	47	69	59	51	44	49	43	38	41	36	32	33	29	26	21
4	68	55	45	38	62	50	42	35	42	35	30	35	29	25	28	23	20	16
5	61	48	38	31	56	44	35	28	37	30	24	30	24	20	24	19	16	12
6	56	42	32	25	51	38	30	24	32	25	20	26	21	16	21	16	13	10
7	51	37	28	21	47	34	26	20	29	22	17	23	18	14	19	14	11	8
8	47	33	24	18	43	31	23	17	26	19	14	21	16	12	17	12	9	6
9	44	30	21	16	40	28	20	15	23	17	12	19	14	10	15	11	8	5
10	41	27	19	14	37	25	18	13	21	15	11	17	12	9	14	10	7	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	166	166	166
5°	175	172	169
10°	208	194	180
15°	271	233	195
20°	377	294	221
25°	534	385	257
30°	779	513	309
35°	1109	687	378
40°	1549	922	463
45°	2108	1197	573
50°	2774	1509	700
55°	3526	1863	844
60°	4337	2244	990
65°	5138	2615	1158
70°	5740	2895	1307
75°	6074	2956	1381
80°	5993	2817	1296
85°	5128	2291	1000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.3	0.2
10°-20°	24.6	0.8
20°-30°	62.7	2.0
30°-40°	139.2	4.4
40°-50°	259.1	8.2
50°-60°	385.9	12.3
60°-70°	445.2	14.1
70°-80°	342.3	10.9
80°-90°	102.9	3.3
90°-100°	211.3	6.7
100°-110°	472.0	15.0
110°-120°	387.3	12.3
120°-130°	176.3	5.6
130°-140°	67.0	2.1
140°-150°	34.2	1.1
150°-160°	19.6	0.6
160°-170°	10.1	0.3
170°-180°	3.1	0.1
0°-30°	93.6	3.0
0°-40°	232.8	7.4
0°-60°	877.8	27.9
0°-90°	1768.1	56.1
90°-120°	1070.5	34.0
90°-150°	1348.0	42.8
90°-180°	1381.0	43.9
0°-180°	3148.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	62	62	62	62	62	
5°	65	65	64	63	63	7
15°	97	94	84	74	70	29
25°	180	165	130	98	87	87
35°	338	299	209	140	115	216
45°	554	479	315	190	150	431
55°	752	640	397	230	180	670
65°	807	684	411	234	182	785
75°	584	500	284	169	133	607
85°	166	132	74	47	32	181
90°	2	3	2	1	1	37
95°	410	317	150	91	67	399
105°	858	721	367	227	180	874
115°	714	593	350	203	160	695
125°	336	275	171	106	86	313
135°	126	110	79	56	48	103
145°	66	65	53	42	39	43
155°	49	46	42	38	36	23
165°	37	37	36	34	34	11
175°	31	32	32	32	32	3
180°	31	31	31	31	31	



TEST NUMBER: P316055

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6
2.5°	61.6	61.6	61.6	61.6	61.6	62.7	61.6	61.6	61.6	61.6	62.7
5°	64.8	64.8	64.8	64.8	63.8	64.8	63.8	63.8	63.8	63.8	63.8
7.5°	69.0	69.0	69.0	69.0	69.0	69.0	68.0	68.0	68.0	66.9	66.9
10°	76.3	76.3	76.3	76.3	75.2	75.2	74.2	73.2	72.1	72.1	71.0
12.5°	85.7	85.7	84.7	84.7	83.6	83.6	81.5	80.5	79.4	78.4	76.3
15°	97.2	97.2	97.2	96.1	94.1	94.1	91.9	89.9	87.8	85.7	83.6
17.5°	112.9	112.9	111.8	110.8	107.7	106.6	104.5	101.4	99.3	95.1	91.9
20°	131.7	131.7	129.6	128.6	124.4	123.3	120.2	116.0	111.8	107.7	102.5
22.5°	153.7	154.7	151.5	148.4	144.2	142.1	139.0	133.8	127.5	121.2	115.0
25°	179.8	180.8	177.7	173.5	167.2	165.1	160.9	153.7	145.3	138.0	129.6
27.5°	212.1	212.1	208.0	202.8	194.4	192.3	186.0	177.7	167.2	156.7	146.3
30°	250.8	250.8	245.6	238.3	225.7	223.7	215.3	203.8	191.2	178.7	165.1
32.5°	291.6	289.5	284.3	276.9	263.4	259.2	250.8	235.1	218.5	201.7	187.0
35°	337.6	337.6	330.2	320.8	304.1	298.9	287.4	270.7	251.8	227.9	209.0
37.5°	386.7	385.6	379.4	366.8	346.9	340.7	327.2	306.2	283.3	259.2	234.1
40°	441.0	440.0	431.6	417.0	394.0	384.6	370.0	343.9	317.7	288.5	262.4
42.5°	497.5	496.4	486.0	468.2	442.1	430.6	413.9	384.6	353.3	319.8	288.5
45°	553.9	553.9	541.3	520.4	493.3	478.7	458.8	425.3	388.8	351.1	314.6
47.5°	609.3	608.3	593.6	570.6	540.3	523.6	500.6	464.0	423.3	379.4	338.6
50°	662.6	660.5	643.8	618.7	584.2	567.5	543.5	500.6	454.6	406.5	360.5
52.5°	710.7	708.6	689.8	662.6	623.9	606.1	580.0	533.0	483.9	430.6	381.4
55°	751.5	749.3	729.5	700.2	659.5	639.6	610.3	559.1	506.9	450.4	397.2
57.5°	783.8	781.8	761.9	729.5	686.7	664.7	633.4	578.0	523.6	465.1	409.7
60°	805.8	804.7	784.9	749.3	705.4	681.4	649.0	589.4	533.0	474.5	417.0
62.5°	813.1	814.1	795.3	758.8	712.8	688.7	655.3	594.7	537.2	475.5	417.0
65°	806.9	809.9	792.2	752.5	707.6	683.5	651.1	590.5	532.0	469.3	410.7
67.5°	777.6	785.9	769.2	728.5	684.5	662.6	633.4	573.8	516.3	453.6	394.0
70°	729.5	741.0	725.3	681.4	643.8	626.0	598.9	542.4	488.1	425.3	367.9
72.5°	664.7	679.3	663.7	615.5	585.2	571.7	547.7	494.3	444.2	385.6	330.2
75°	584.2	597.8	582.2	535.1	511.0	499.6	479.7	432.7	389.8	336.5	284.3
77.5°	493.3	502.7	492.3	447.3	426.4	417.0	400.3	356.4	323.0	279.1	236.2
80°	386.7	393.0	385.6	345.9	331.3	324.0	309.4	271.7	248.8	214.3	181.8
82.5°	273.8	279.1	273.8	242.5	232.0	224.7	215.3	184.0	169.3	149.5	127.5
85°	166.1	162.0	157.8	139.0	139.0	131.7	123.3	103.5	98.3	87.8	74.2
87.5°	65.8	61.6	59.6	53.3	54.4	50.2	47.0	36.6	36.6	34.5	29.3
90°	2.1	2.1	3.2	2.1	3.2	3.2	3.2	2.1	2.1	2.1	2.1
92.5°	199.6	193.4	181.8	175.6	154.7	144.2	132.8	109.7	97.2	81.5	68.0
95°	409.7	404.5	390.8	356.4	332.4	316.6	291.6	244.6	217.4	186.0	150.5
97.5°	593.6	599.9	578.0	518.4	492.3	470.3	444.2	373.1	335.5	285.3	230.9
100°	730.5	744.1	721.1	640.6	610.3	591.5	565.4	479.7	430.6	362.7	293.7
102.5°	818.3	838.2	813.1	717.0	687.7	675.1	648.0	559.1	500.6	418.1	338.6
105°	858.1	885.2	859.1	758.8	732.7	721.1	696.0	606.1	542.4	453.6	366.8
107.5°	854.9	887.3	865.3	779.6	748.3	732.7	708.6	620.8	554.9	468.2	386.7
110°	820.4	852.8	835.0	771.3	732.7	708.6	682.5	600.9	538.3	460.9	390.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	776.6	794.3	777.6	732.7	688.7	659.5	629.2	557.1	498.5	436.9	378.4
115°	713.8	718.0	702.3	665.7	626.0	592.6	562.3	495.4	446.2	400.3	350.1
117.5°	628.1	623.9	608.3	582.2	548.7	518.4	488.1	425.3	388.8	355.3	312.5
120°	529.9	522.6	501.6	488.1	462.0	433.7	405.5	350.1	327.2	302.0	265.4
122.5°	429.5	418.1	397.2	386.7	372.1	351.1	329.2	285.3	266.5	245.6	216.3
125°	335.5	325.0	304.1	296.8	290.5	274.9	262.4	232.0	212.1	195.4	171.4
127.5°	256.0	247.7	225.7	222.6	221.5	214.3	205.9	185.0	170.3	154.7	134.8
130°	194.4	188.1	174.5	173.5	172.5	168.3	163.1	148.4	138.0	124.4	108.7
132.5°	154.7	150.5	143.2	140.0	138.0	134.8	130.6	120.2	111.8	102.5	91.9
135°	126.4	124.4	120.2	117.0	112.9	109.7	105.5	98.3	91.9	85.7	79.4
137.5°	105.5	105.5	103.5	100.3	96.1	91.9	88.9	82.6	78.4	74.2	71.0
140°	88.9	89.9	88.9	87.8	83.6	79.4	76.3	70.0	68.0	66.9	63.8
142.5°	76.3	77.3	77.3	76.3	73.2	71.0	69.0	63.8	62.7	60.6	58.6
145°	65.8	68.0	68.0	68.0	66.9	64.8	62.7	60.6	58.6	56.4	53.3
147.5°	59.6	60.6	61.6	61.6	60.6	59.6	58.6	56.4	54.4	52.2	50.2
150°	56.4	56.4	56.4	56.4	55.4	55.4	54.4	52.2	51.2	49.1	47.0
152.5°	52.2	52.2	52.2	51.2	51.2	50.2	49.1	48.1	47.0	46.0	44.9
155°	49.1	49.1	48.1	47.0	47.0	46.0	44.9	43.9	43.9	42.9	41.8
157.5°	44.9	44.9	43.9	43.9	42.9	42.9	41.8	40.7	40.7	39.7	39.7
160°	41.8	41.8	40.7	40.7	39.7	39.7	39.7	38.7	38.7	37.7	37.7
162.5°	38.7	38.7	38.7	38.7	37.7	37.7	37.7	36.6	37.7	36.6	36.6
165°	36.6	36.6	36.6	36.6	36.6	36.6	36.6	35.5	35.5	35.5	35.5
167.5°	35.5	35.5	34.5	35.5	35.5	34.5	34.5	34.5	34.5	34.5	34.5
170°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	34.5	33.5	33.5
172.5°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	33.5	33.5	33.5
175°	31.3	31.3	31.3	31.3	32.4	32.4	32.4	32.4	32.4	32.4	32.4
177.5°	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	32.4	32.4	32.4
180°	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6
2.5°	62.7	61.6	61.6	61.6	61.6	62.7	61.6	61.6	61.6	61.6
5°	63.8	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7	62.7
7.5°	65.8	65.8	64.8	64.8	64.8	64.8	63.8	63.8	63.8	63.8
10°	70.0	69.0	68.0	68.0	66.9	66.9	65.8	65.8	65.8	65.8
12.5°	75.2	73.2	72.1	71.0	70.0	70.0	69.0	68.0	68.0	68.0
15°	81.5	78.4	77.3	75.2	74.2	73.2	72.1	71.0	70.0	70.0
17.5°	88.9	85.7	82.6	80.5	78.4	78.4	75.2	74.2	73.2	73.2
20°	98.3	94.1	89.9	85.7	84.7	83.6	80.5	78.4	77.3	77.3
22.5°	108.7	103.5	98.3	93.0	90.9	89.9	85.7	83.6	82.6	81.5
25°	121.2	113.9	107.7	101.4	98.3	97.2	91.9	89.9	87.8	86.7
27.5°	135.8	126.4	118.1	110.8	107.7	104.5	99.3	96.1	94.1	93.0
30°	152.6	140.0	129.6	121.2	117.0	113.9	107.7	103.5	100.3	99.3
32.5°	170.3	155.7	143.2	132.8	127.5	123.3	116.0	110.8	107.7	106.6
35°	190.2	172.5	157.8	145.3	140.0	134.8	126.4	119.2	117.0	115.0
37.5°	211.1	190.2	173.5	158.9	151.5	146.3	135.8	128.6	125.4	123.3
40°	234.1	209.0	189.2	172.5	165.1	157.8	147.4	138.0	134.8	131.7
42.5°	258.2	228.9	205.9	186.0	177.7	170.3	157.8	148.4	143.2	141.1
45°	281.1	249.8	221.5	199.6	190.2	181.8	168.3	157.8	152.6	150.5
47.5°	301.0	266.5	237.3	212.1	201.7	193.4	177.7	167.2	162.0	158.9
50°	319.8	282.2	251.8	223.7	212.1	202.8	187.0	175.6	170.3	167.2
52.5°	336.5	295.7	264.4	235.1	221.5	211.1	195.4	182.9	177.7	174.5
55°	349.1	307.3	273.8	243.5	229.9	218.5	201.7	188.1	182.9	179.8
57.5°	359.5	314.6	280.1	249.8	235.1	223.7	205.9	192.3	186.0	182.9
60°	364.7	319.8	282.2	252.9	238.3	226.8	208.0	194.4	188.1	184.0
62.5°	365.8	319.8	282.2	251.8	238.3	226.8	208.0	194.4	188.1	184.0
65°	360.5	314.6	275.9	246.6	234.1	223.7	204.8	191.2	186.0	181.8
67.5°	346.9	302.0	264.4	237.3	224.7	215.3	196.5	184.0	179.8	175.6
70°	326.1	283.3	245.6	220.5	211.1	201.7	184.0	172.5	169.3	166.1
72.5°	294.7	257.1	221.5	200.6	192.3	182.9	166.1	155.7	154.7	151.5
75°	258.2	224.7	193.4	176.6	169.3	160.9	144.2	136.9	135.8	132.8
77.5°	214.3	188.1	160.9	148.4	142.1	134.8	119.2	113.9	111.8	108.7
80°	167.2	147.4	126.4	115.0	111.8	104.5	91.9	88.9	86.7	83.6
82.5°	118.1	103.5	88.9	81.5	79.4	74.2	64.8	62.7	59.6	57.5
85°	70.0	61.6	53.3	48.1	47.0	43.9	37.7	37.7	34.5	32.4
87.5°	26.1	24.1	19.9	18.8	17.8	16.7	15.7	15.7	13.6	12.6
90°	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
92.5°	58.6	47.0	43.9	38.7	37.7	36.6	33.5	32.4	31.3	29.3
95°	136.9	117.0	102.5	91.9	90.9	86.7	75.2	73.2	68.0	66.9
97.5°	210.1	182.9	157.8	144.2	140.0	132.8	112.9	110.8	107.7	102.5
100°	273.8	238.3	201.7	186.0	180.8	170.3	145.3	142.1	141.1	135.8
102.5°	318.8	276.9	234.1	215.3	210.1	197.6	169.3	166.1	166.1	162.0
105°	344.9	299.9	252.9	235.1	226.8	214.3	185.0	182.9	184.0	179.8
107.5°	356.4	308.3	260.2	241.4	234.1	221.5	195.4	191.2	191.2	187.0
110°	351.1	303.1	255.0	238.3	229.9	219.5	198.6	191.2	189.2	185.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	334.4	288.5	247.7	226.8	219.5	210.1	193.4	184.0	177.7	175.6
115°	309.4	266.5	232.0	210.1	202.8	194.4	179.8	170.3	163.1	159.9
117.5°	273.8	237.3	209.0	189.2	181.8	173.5	162.0	153.7	145.3	141.1
120°	230.9	201.7	181.8	163.1	155.7	148.4	140.0	132.8	124.4	120.2
122.5°	187.0	167.2	152.6	136.9	129.6	122.2	116.0	110.8	105.5	101.4
125°	148.4	134.8	124.4	111.8	105.5	99.3	95.1	91.9	88.9	85.7
127.5°	116.0	108.7	100.3	90.9	85.7	80.5	77.3	76.3	74.2	73.2
130°	96.1	88.9	82.6	75.2	71.0	68.0	64.8	63.8	62.7	61.6
132.5°	82.6	76.3	71.0	65.8	62.7	59.6	57.5	55.4	54.4	54.4
135°	73.2	66.9	62.7	58.6	56.4	54.4	52.2	50.2	48.1	48.1
137.5°	65.8	60.6	56.4	53.3	51.2	50.2	48.1	46.0	43.9	43.9
140°	59.6	55.4	51.2	49.1	48.1	46.0	44.9	42.9	40.7	39.7
142.5°	54.4	50.2	47.0	44.9	43.9	43.9	42.9	40.7	39.7	38.7
145°	50.2	47.0	43.9	42.9	41.8	41.8	40.7	39.7	38.7	38.7
147.5°	47.0	43.9	41.8	40.7	40.7	39.7	39.7	38.7	37.7	37.7
150°	44.9	42.9	40.7	39.7	39.7	38.7	38.7	37.7	37.7	36.6
152.5°	42.9	41.8	39.7	38.7	38.7	37.7	37.7	36.6	36.6	35.5
155°	40.7	39.7	38.7	37.7	37.7	36.6	36.6	35.5	35.5	35.5
157.5°	38.7	38.7	37.7	36.6	36.6	35.5	35.5	34.5	34.5	34.5
160°	37.7	36.6	36.6	35.5	35.5	34.5	34.5	34.5	33.5	33.5
162.5°	36.6	35.5	35.5	35.5	34.5	34.5	34.5	33.5	33.5	33.5
165°	35.5	35.5	34.5	34.5	34.5	34.5	34.5	33.5	33.5	33.5
167.5°	34.5	34.5	34.5	34.5	34.5	33.5	33.5	33.5	33.5	33.5
170°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
172.5°	33.5	33.5	33.5	33.5	33.5	32.4	33.5	33.5	33.5	33.5
175°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
177.5°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
180°	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3

(END OF REPORT)