

Scaled data based on original data using  
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact  
Fluorescent Lamps

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: SHAPER

Report Number: 20063

Luminaire Tested: **676-WP-CF1/32**

Issue Date: 3/3/2020

**Test Information**

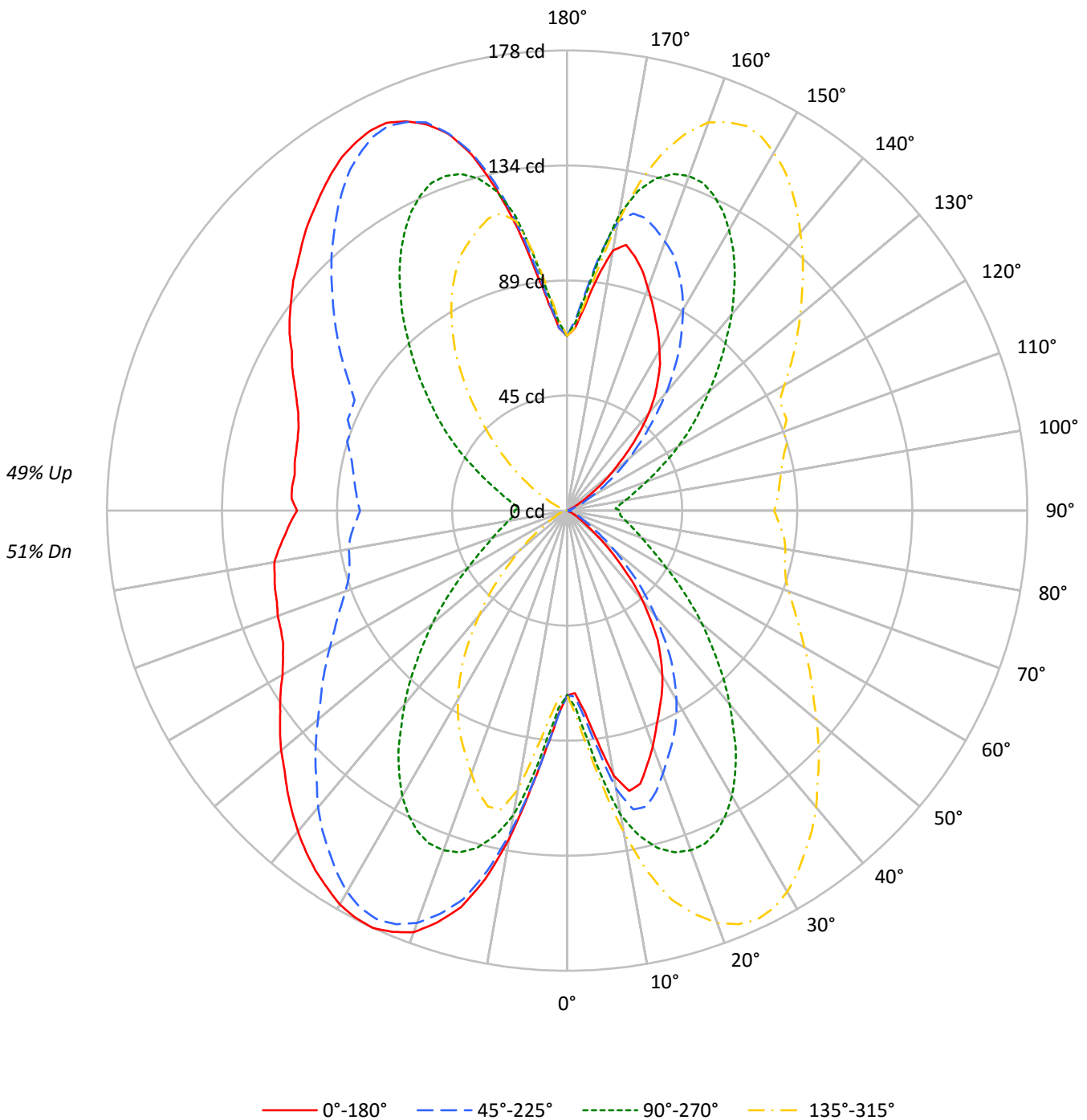
Test Method: LM-66-11  
Report Number: 20063  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 676-WP-CF1/32  
Description: EXTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS  
Light Source: ONE SYLVANIA 26 WATT CPFL LAMP  
  
CF32DT/E/841. LUMEN RATING = 2400 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 870.0 lumens  
Efficiency: 36.3%  
Efficacy: 26.4 lumens/watt  
Spacing Criteria (0/90/45): 1.91 / 1.84 / 1.73  
Luminous Opening: Rectangular (W 0.33' x L: 0.58' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 33  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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										
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	50	30	10	50	30	10	0														
RCR																																						
0	39	39	39	39	36	36	36	36	30	30	30	25	25	25	21	21	21	18						18														
1	35	33	31	30	32	30	29	28	26	25	24	21	20	20	17	17	16	14						14														
2	32	29	26	24	29	26	24	22	22	21	19	18	17	16	15	14	13	11						11														
3	29	25	22	20	26	23	21	18	19	18	16	16	15	13	13	12	11	10						10														
4	26	22	19	17	24	20	18	16	17	15	13	14	13	11	12	10	9	8						8														
5	24	20	17	14	22	18	15	13	15	13	12	13	11	10	10	9	8	7						7														
6	22	18	15	12	20	16	14	12	14	12	10	12	10	9	9	8	7	6						6														
7	20	16	13	11	19	15	12	10	13	10	9	11	9	8	9	7	6	5						5														
8	19	14	11	9	17	13	11	9	11	9	8	10	8	7	8	7	6	5						5														
9	18	13	10	8	16	12	10	8	10	8	7	9	7	6	7	6	5	4						4														
10	16	12	9	8	15	11	9	7	10	8	6	8	7	5	7	6	5	4						4														

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

	0°	90°	180°	270°
0°	4015	4015	4015	4015
5°	4409	4985	5216	4985
10°	5945	6830	7349	6830
15°	6369	7866	9251	7866
20°	5805	8367	10389	8367
25°	5250	8501	11051	8501
30°	4786	8280	11423	8280
35°	4188	7813	11657	7813
40°	3326	7180	11893	7180
45°	2283	6538	12176	6538
50°	1339	5958	12634	5958
55°	686	5402	13285	5402
60°	371	4983	14296	4983
65°	146	4830	16128	4830
70°	66	5032	19583	5032
75°	87	5736	25422	5736
80°	0	7481	37244	7481
85°	0	13292	70720	13292



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	9.3	1.1	0.4
10°-20°	38.0	4.4	1.6
20°-30°	61.7	7.1	2.6
30°-40°	71.2	8.2	3.0
40°-50°	66.7	7.7	2.8
50°-60°	56.6	6.5	2.4
60°-70°	48.9	5.6	2.0
70°-80°	45.2	5.2	1.9
80°-90°	42.4	4.9	1.8
90°-100°	40.3	4.6	1.7
100°-110°	42.7	4.9	1.8
110°-120°	47.8	5.5	2.0
120°-130°	57.4	6.6	2.4
130°-140°	66.8	7.7	2.8
140°-150°	69.9	8.0	2.9
150°-160°	59.9	6.9	2.5
160°-170°	36.2	4.2	1.5
170°-180°	8.8	1.0	0.4
0°-30°	109.0	12.5	4.5
0°-40°	180.2	20.7	7.5
0°-60°	303.5	34.9	12.6
0°-90°	440.0	50.6	18.3
90°-120°	130.9	15.0	5.5
90°-150°	325.0	37.4	13.5
90°-180°	430.0	49.4	17.9
0°-180°	870.0	100.0	36.3

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	71	71	71	71	71	
5°	78	88	92	88	78	8
15°	109	135	159	135	109	30
25°	85	137	178	137	85	39
35°	61	114	170	114	61	37
45°	29	82	153	82	29	23
55°	7	55	136	55	7	7
65°	1	36	121	36	1	1
75°	0	26	117	26	0	0
85°	0	21	110	21	0	0
90°	0	20	104	20	0	0
95°	0	20	107	20	0	0
105°	0	27	108	27	0	0
115°	0	40	116	40	0	1
125°	11	60	131	60	11	11
135°	35	85	145	85	35	27
145°	61	113	159	113	61	38
155°	81	134	166	134	81	37
165°	102	133	142	133	102	28
175°	79	84	80	84	79	8
180°	68	68	68	68	68	



TEST NUMBER: 20063  
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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	70.7	71.6	72.1	72.3	76.4	79.4	79.4	79.6	79.0	79.6	79.4
5°	78.1	79.6	81.0	82.4	88.3	93.0	92.0	92.2	92.4	92.2	92.0
7.5°	90.0	91.0	93.7	96.0	104.5	110.9	108.5	107.6	108.8	107.6	108.5
10°	104.1	106.1	109.4	113.2	119.6	127.4	126.4	127.2	128.7	127.2	126.4
12.5°	111.1	113.9	118.4	121.5	128.8	140.3	142.8	144.4	145.8	144.4	142.8
15°	109.4	112.8	118.5	122.3	135.1	149.4	155.7	158.3	158.9	158.3	155.7
17.5°	103.1	107.5	114.1	121.5	138.6	155.7	163.6	167.6	167.0	167.6	163.6
20°	97.0	101.1	108.3	120.0	139.8	159.4	169.7	173.8	173.6	173.8	169.7
22.5°	90.2	94.3	102.4	117.2	139.4	160.5	173.2	177.0	176.4	177.0	173.2
25°	84.6	88.1	97.2	112.9	137.0	159.3	174.4	177.4	178.1	177.4	174.4
27.5°	79.4	81.5	91.2	107.6	132.8	155.8	173.2	176.6	177.5	176.6	173.2
30°	73.7	75.6	84.6	100.6	127.5	151.2	170.3	174.2	175.9	174.2	170.3
32.5°	67.3	69.3	77.2	93.6	120.9	145.8	165.9	170.7	172.9	170.7	165.9
35°	61.0	62.6	69.8	85.9	113.8	139.1	160.7	166.9	169.8	166.9	160.7
37.5°	52.8	54.6	61.0	76.8	105.4	132.6	155.6	162.1	166.1	162.1	155.6
40°	45.3	47.1	53.0	68.7	97.8	125.8	149.9	157.4	162.0	157.4	149.9
42.5°	37.4	38.8	45.4	60.7	90.1	117.9	143.3	151.8	157.6	151.8	143.3
45°	28.7	31.4	37.7	52.6	82.2	111.2	137.7	147.1	153.1	147.1	137.7
47.5°	21.8	24.7	29.9	44.4	74.8	104.5	131.8	142.1	148.3	142.1	131.8
50°	15.3	17.3	23.9	37.6	68.1	98.3	125.8	137.0	144.4	137.0	125.8
52.5°	10.1	11.8	18.3	31.1	61.5	92.1	120.2	132.0	140.0	132.0	120.2
55°	7.0	8.1	13.3	24.7	55.1	87.0	115.4	127.0	135.5	127.0	115.4
57.5°	4.9	5.7	9.7	19.9	49.6	81.9	110.6	122.5	131.5	122.5	110.6
60°	3.3	3.9	7.2	15.0	44.3	77.2	106.0	117.7	127.1	117.7	106.0
62.5°	2.3	2.9	5.7	12.1	40.1	73.2	101.7	113.8	123.9	113.8	101.7
65°	1.1	2.3	4.7	10.4	36.3	69.3	97.9	109.7	121.2	109.7	97.9
67.5°	0.7	1.9	4.0	8.7	33.2	66.1	94.4	106.7	119.9	106.7	94.4
70°	0.4	1.5	3.4	7.1	30.6	63.4	91.2	105.3	119.1	105.3	91.2
72.5°	0.7	0.8	2.3	5.4	28.4	60.6	88.7	103.8	117.7	103.8	88.7
75°	0.4	0.7	1.7	4.3	26.4	58.7	87.2	102.6	117.0	102.6	87.2
77.5°	0.1	0.6	1.6	3.5	24.5	57.7	86.3	101.5	115.9	101.5	86.3
80°	0.0	0.4	1.2	2.5	23.1	56.3	85.7	100.4	115.0	100.4	85.7
82.5°	0.0	0.0	0.2	1.8	21.7	55.7	84.8	98.2	112.4	98.2	84.8
85°	0.0	0.0	0.1	0.8	20.6	54.8	83.2	95.4	109.6	95.4	83.2
87.5°	0.0	0.0	0.4	0.9	20.5	54.0	81.5	93.1	107.2	93.1	81.5
90°	0.0	0.0	0.4	0.9	20.4	53.7	80.1	90.6	104.5	90.6	80.1
92.5°	0.0	0.0	0.0	2.4	18.8	42.6	81.2	92.4	106.7	92.4	81.2
95°	0.0	0.0	0.0	2.4	19.7	43.4	82.0	92.1	106.8	92.1	82.0
97.5°	0.0	0.0	0.0	3.3	21.2	45.0	82.9	92.6	106.3	92.6	82.9
100°	0.0	0.0	0.0	4.3	22.8	46.5	84.0	93.7	107.0	93.7	84.0
102.5°	0.0	0.0	0.0	5.4	24.9	48.4	85.2	94.4	107.3	94.4	85.2
105°	0.0	0.0	0.9	7.3	26.9	50.2	87.0	96.1	107.9	96.1	87.0
107.5°	0.0	0.0	1.6	9.0	29.5	52.8	89.3	97.3	108.9	97.3	89.3
110°	0.0	0.0	2.3	10.6	32.6	55.5	88.9	100.2	110.7	100.2	88.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.0	0.5	3.3	12.9	36.2	59.1	91.9	103.1	113.3	103.1	91.9
115°	0.4	1.3	5.0	15.9	39.9	62.6	92.0	106.9	116.4	106.9	92.0
117.5°	2.3	3.7	7.6	20.2	44.8	67.2	92.7	110.3	119.9	110.3	92.7
120°	4.6	5.8	10.5	24.7	49.5	71.8	97.0	114.5	123.0	114.5	97.0
122.5°	7.6	9.2	15.0	29.8	54.8	76.8	102.0	118.7	127.3	118.7	102.0
125°	11.1	13.2	19.4	34.2	60.1	82.4	107.2	122.7	131.0	122.7	107.2
127.5°	16.5	17.6	25.0	40.3	65.6	87.8	112.3	127.5	134.5	127.5	112.3
130°	21.9	23.2	31.0	46.7	71.6	93.6	117.7	132.0	138.3	132.0	117.7
132.5°	27.6	29.5	37.2	53.4	78.1	99.4	123.1	136.8	141.4	136.8	123.1
135°	34.8	36.0	44.2	60.6	84.8	105.7	129.0	141.6	145.2	141.6	129.0
137.5°	42.0	42.8	51.5	67.9	91.5	112.1	134.8	146.6	149.0	146.6	134.8
140°	49.1	50.8	59.8	75.0	99.1	118.5	140.3	151.6	152.2	151.6	140.3
142.5°	55.6	57.1	67.3	82.6	105.9	125.0	146.1	156.4	155.7	156.4	146.1
145°	61.1	64.1	75.6	90.2	113.1	131.4	151.4	160.8	159.1	160.8	151.4
147.5°	66.8	70.3	82.5	97.5	119.5	137.2	156.3	164.2	162.1	164.2	156.3
150°	71.4	76.8	89.7	104.2	125.3	142.6	159.9	167.2	164.1	167.2	159.9
152.5°	76.4	82.5	96.2	110.7	130.5	146.3	162.9	168.4	165.5	168.4	162.9
155°	81.1	88.9	102.0	116.1	134.4	149.4	164.1	169.0	165.5	169.0	164.1
157.5°	86.3	94.2	107.2	119.7	137.2	149.7	162.6	167.1	163.0	167.1	162.6
160°	91.5	99.6	110.7	122.9	137.7	148.4	159.8	162.6	159.0	162.6	159.8
162.5°	97.0	104.7	114.1	124.2	136.5	144.9	153.0	154.9	152.8	154.9	153.0
165°	101.6	109.0	117.1	123.9	133.0	137.7	143.4	145.1	142.5	145.1	143.4
167.5°	105.3	110.7	117.7	121.8	126.6	127.1	130.2	130.2	127.6	130.2	130.2
170°	102.1	107.5	113.6	116.2	115.9	111.9	113.1	112.4	111.0	112.4	113.1
172.5°	91.4	94.9	100.7	103.7	99.5	93.8	95.5	94.6	93.3	94.6	95.5
175°	79.4	81.8	85.5	87.4	84.1	79.7	81.0	81.1	80.0	81.1	81.0
177.5°	70.6	71.8	73.8	74.1	72.7	69.9	70.7	71.1	70.6	71.1	70.7
180°	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	71.4	71.4	71.4	71.4	71.4	71.4
2.5°	79.4	76.4	72.3	72.1	71.6	70.7
5°	93.0	88.3	82.4	81.0	79.6	78.1
7.5°	110.9	104.5	96.0	93.7	91.0	90.0
10°	127.4	119.6	113.2	109.4	106.1	104.1
12.5°	140.3	128.8	121.5	118.4	113.9	111.1
15°	149.4	135.1	122.3	118.5	112.8	109.4
17.5°	155.7	138.6	121.5	114.1	107.5	103.1
20°	159.4	139.8	120.0	108.3	101.1	97.0
22.5°	160.5	139.4	117.2	102.4	94.3	90.2
25°	159.3	137.0	112.9	97.2	88.1	84.6
27.5°	155.8	132.8	107.6	91.2	81.5	79.4
30°	151.2	127.5	100.6	84.6	75.6	73.7
32.5°	145.8	120.9	93.6	77.2	69.3	67.3
35°	139.1	113.8	85.9	69.8	62.6	61.0
37.5°	132.6	105.4	76.8	61.0	54.6	52.8
40°	125.8	97.8	68.7	53.0	47.1	45.3
42.5°	117.9	90.1	60.7	45.4	38.8	37.4
45°	111.2	82.2	52.6	37.7	31.4	28.7
47.5°	104.5	74.8	44.4	29.9	24.7	21.8
50°	98.3	68.1	37.6	23.9	17.3	15.3
52.5°	92.1	61.5	31.1	18.3	11.8	10.1
55°	87.0	55.1	24.7	13.3	8.1	7.0
57.5°	81.9	49.6	19.9	9.7	5.7	4.9
60°	77.2	44.3	15.0	7.2	3.9	3.3
62.5°	73.2	40.1	12.1	5.7	2.9	2.3
65°	69.3	36.3	10.4	4.7	2.3	1.1
67.5°	66.1	33.2	8.7	4.0	1.9	0.7
70°	63.4	30.6	7.1	3.4	1.5	0.4
72.5°	60.6	28.4	5.4	2.3	0.8	0.7
75°	58.7	26.4	4.3	1.7	0.7	0.4
77.5°	57.7	24.5	3.5	1.6	0.6	0.1
80°	56.3	23.1	2.5	1.2	0.4	0.0
82.5°	55.7	21.7	1.8	0.2	0.0	0.0
85°	54.8	20.6	0.8	0.1	0.0	0.0
87.5°	54.0	20.5	0.9	0.4	0.0	0.0
90°	53.7	20.4	0.9	0.4	0.0	0.0
92.5°	42.6	18.8	2.4	0.0	0.0	0.0
95°	43.4	19.7	2.4	0.0	0.0	0.0
97.5°	45.0	21.2	3.3	0.0	0.0	0.0
100°	46.5	22.8	4.3	0.0	0.0	0.0
102.5°	48.4	24.9	5.4	0.0	0.0	0.0
105°	50.2	26.9	7.3	0.9	0.0	0.0
107.5°	52.8	29.5	9.0	1.6	0.0	0.0
110°	55.5	32.6	10.6	2.3	0.0	0.0





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CATALOG NUMBER: 676-WP-CF1/32

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	59.1	36.2	12.9	3.3	0.5	0.0
115°	62.6	39.9	15.9	5.0	1.3	0.4
117.5°	67.2	44.8	20.2	7.6	3.7	2.3
120°	71.8	49.5	24.7	10.5	5.8	4.6
122.5°	76.8	54.8	29.8	15.0	9.2	7.6
125°	82.4	60.1	34.2	19.4	13.2	11.1
127.5°	87.8	65.6	40.3	25.0	17.6	16.5
130°	93.6	71.6	46.7	31.0	23.2	21.9
132.5°	99.4	78.1	53.4	37.2	29.5	27.6
135°	105.7	84.8	60.6	44.2	36.0	34.8
137.5°	112.1	91.5	67.9	51.5	42.8	42.0
140°	118.5	99.1	75.0	59.8	50.8	49.1
142.5°	125.0	105.9	82.6	67.3	57.1	55.6
145°	131.4	113.1	90.2	75.6	64.1	61.1
147.5°	137.2	119.5	97.5	82.5	70.3	66.8
150°	142.6	125.3	104.2	89.7	76.8	71.4
152.5°	146.3	130.5	110.7	96.2	82.5	76.4
155°	149.4	134.4	116.1	102.0	88.9	81.1
157.5°	149.7	137.2	119.7	107.2	94.2	86.3
160°	148.4	137.7	122.9	110.7	99.6	91.5
162.5°	144.9	136.5	124.2	114.1	104.7	97.0
165°	137.7	133.0	123.9	117.1	109.0	101.6
167.5°	127.1	126.6	121.8	117.7	110.7	105.3
170°	111.9	115.9	116.2	113.6	107.5	102.1
172.5°	93.8	99.5	103.7	100.7	94.9	91.4
175°	79.7	84.1	87.4	85.5	81.8	79.4
177.5°	69.9	72.7	74.1	73.8	71.8	70.6
180°	67.6	67.6	67.6	67.6	67.6	67.6

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