

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: P392578

Luminaire Tested: **MWL-3-30-25-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392578  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-13 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-30-25-UNV-L935-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

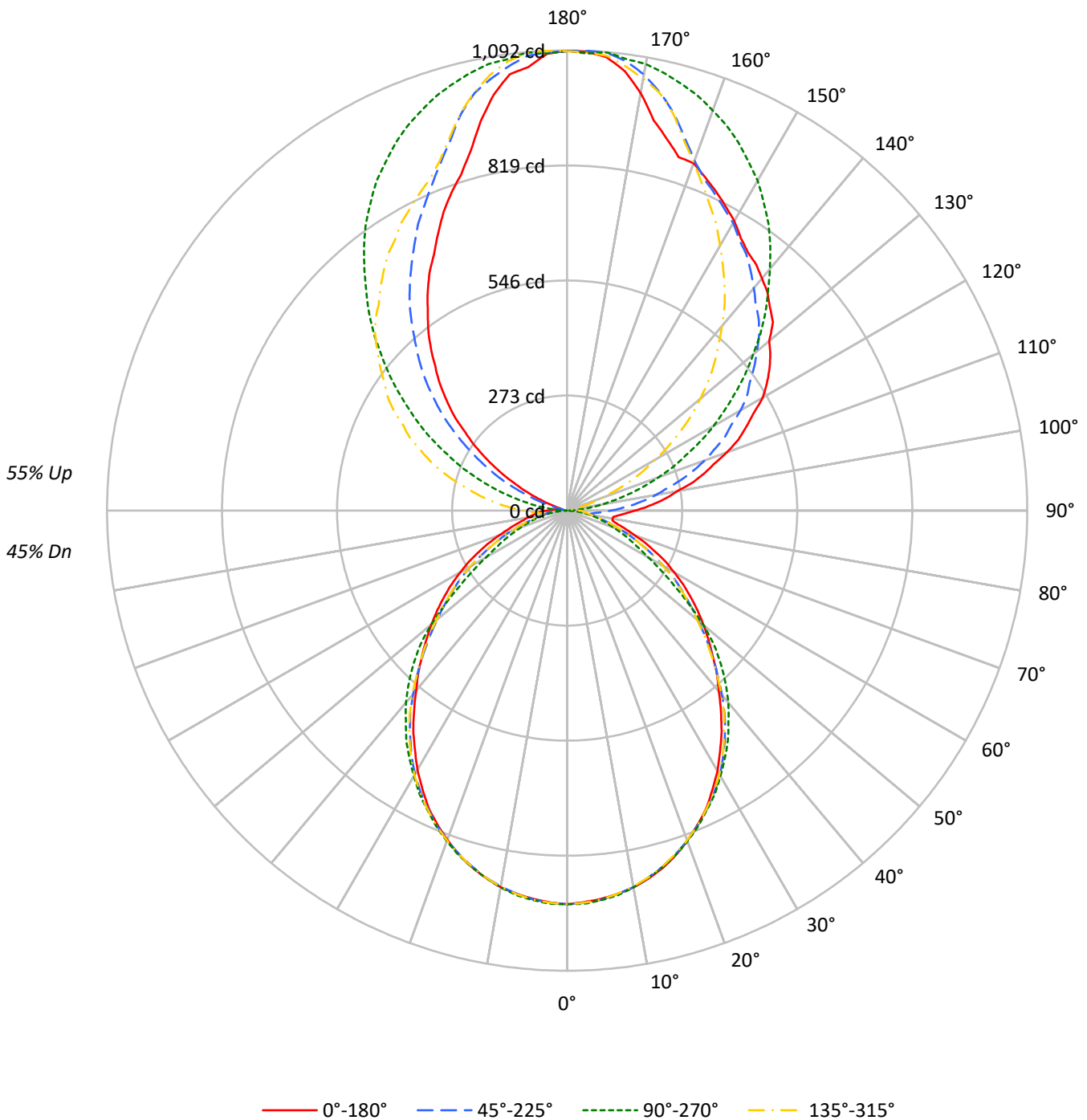
Lumens per Lamp: N/A  
Luminaire Lumens: 4750.2 lumens  
Efficiency: N/A  
Efficacy: 89.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 53.328  
Input Voltage (V): NR  
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	106	106	106	106	97	97	97	97	81	81	81		66	66	66		52	52	52	45
1	97	93	89	85	89	85	82	79	71	68	66		58	56	55		46	45	44	38
2	88	81	75	70	81	75	69	65	62	59	55		51	48	46		41	39	37	32
3	81	72	64	59	74	66	60	55	55	51	47		45	42	39		36	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40		41	37	34		33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35		37	33	30		30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31		33	29	26		27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27		30	26	23		25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24		28	24	21		23	20	17	15
9	50	38	31	26	46	36	29	24	30	25	22		26	22	19		21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19		24	20	17		19	17	14	12

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

	0°	90°	180°	270°
0°	8044	8044	8044	8044
5°	7899	7376	7899	7376
10°	7748	6748	7748	6748
15°	7546	6157	7526	6157
20°	7273	5610	7252	5610
25°	6965	5081	6943	5081
30°	6567	4585	6538	4585
35°	6121	4114	6099	4114
40°	5638	3636	5607	3636
45°	5227	3142	5202	3142
50°	4857	2574	4832	2574
55°	4479	1917	4459	1917
60°	4069	1404	4059	1404
65°	3617	1065	3617	1065
70°	3089	785	3103	785
75°	2691	572	2741	572
80°	3024	372	2619	372
85°	4746	161	2829	161



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.9	1.8
10°-20°	246.6	5.2
20°-30°	359.9	7.6
30°-40°	406.5	8.6
40°-50°	380.4	8.0
50°-60°	300.3	6.3
60°-70°	196.4	4.1
70°-80°	102.5	2.2
80°-90°	63.4	1.3
90°-100°	90.7	1.9
100°-110°	169.5	3.6
110°-120°	289.7	6.1
120°-130°	393.5	8.3
130°-140°	448.9	9.4
140°-150°	447.8	9.4
150°-160°	389.9	8.2
160°-170°	274.3	5.8
170°-180°	102.2	2.2
0°-30°	694.4	14.6
0°-40°	1100.9	23.2
0°-60°	1781.6	37.5
0°-90°	2143.8	45.1
90°-120°	549.9	11.6
90°-150°	1840.0	38.7
90°-180°	2606.0	54.9
0°-180°	4750.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	934	934	934	934	934	
5°	925	928	925	928	925	88
15°	878	876	876	876	878	247
25°	780	784	778	784	780	358
35°	639	665	637	665	639	399
45°	489	516	486	516	489	378
55°	358	310	356	310	358	320
65°	230	164	230	164	230	229
75°	123	81	125	81	123	137
85°	124	20	74	20	124	98
90°	161	1	45	1	161	89
95°	213	32	30	32	213	185
105°	335	153	10	153	335	353
115°	468	311	108	311	468	465
125°	586	488	266	488	586	523
135°	681	665	428	665	681	526
145°	748	832	576	832	748	471
155°	836	963	725	963	836	385
165°	913	1048	883	1048	913	259
175°	1080	1091	1056	1091	1080	101
180°	1090	1090	1090	1090	1090	



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CATALOG NUMBER: MWL-3-30-25-UNV-L935-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	934.1	934.1	934.1	934.1	934.1	934.1	934.1	934.1	934.1	934.1	934.1
2.5°	929.9	933.2	931.4	933.1	933.9	932.3	931.4	933.2	930.7	933.2	931.4
5°	924.9	928.1	927.2	927.2	928.0	927.2	926.4	928.1	924.9	928.1	926.4
7.5°	917.2	919.7	918.0	919.6	920.4	918.8	917.1	918.8	917.2	918.8	917.1
10°	907.8	907.8	906.9	907.8	907.8	906.9	906.0	906.1	907.8	906.1	906.0
12.5°	894.1	892.5	891.6	893.4	892.6	893.4	891.6	890.9	892.5	890.9	891.6
15°	877.9	876.4	874.7	876.4	875.7	875.7	873.9	874.8	875.6	874.8	873.9
17.5°	857.6	856.0	855.2	856.9	856.9	856.9	854.4	855.2	855.2	855.2	854.4
20°	833.8	834.8	833.1	835.8	835.0	835.0	832.4	833.1	831.4	833.1	832.4
22.5°	807.6	809.3	809.4	811.2	811.3	810.4	808.6	807.7	806.0	807.7	808.6
25°	780.5	779.6	783.1	786.6	784.1	785.8	781.5	777.2	778.1	777.2	781.5
27.5°	746.6	751.7	755.1	759.4	758.7	758.6	753.5	749.3	744.2	749.3	753.5
30°	713.4	716.0	724.5	729.7	727.3	728.0	722.2	713.6	710.3	713.6	722.2
32.5°	675.3	680.4	689.7	698.3	696.7	696.7	687.4	677.3	672.2	677.3	687.4
35°	638.9	640.6	652.5	664.3	665.4	662.0	650.1	638.3	636.6	638.3	650.1
37.5°	599.1	600.8	614.3	628.8	628.9	626.4	612.0	598.4	596.7	598.4	612.0
40°	560.0	560.9	571.9	590.6	594.9	589.1	568.8	557.8	556.9	557.8	568.8
42.5°	526.1	520.2	527.8	549.9	556.7	548.4	525.5	517.0	523.0	517.0	525.5
45°	488.8	482.0	486.2	506.6	516.0	505.1	483.2	479.8	486.5	479.8	483.2
47.5°	454.9	446.5	445.6	460.1	473.6	459.3	442.5	444.1	452.6	444.1	442.5
50°	422.6	412.5	404.9	415.1	421.2	413.6	401.9	409.4	420.4	409.4	401.9
52.5°	390.5	380.3	368.5	371.0	364.3	369.5	366.2	377.3	388.1	377.3	366.2
55°	357.5	349.0	334.5	326.2	310.1	324.6	332.3	346.7	355.9	346.7	332.3
57.5°	326.1	319.3	301.5	282.9	263.5	281.4	299.2	317.0	324.5	317.0	299.2
60°	293.1	289.7	265.9	238.9	222.8	238.2	264.4	288.2	292.4	288.2	264.4
62.5°	263.4	257.5	232.0	200.7	189.8	199.9	230.5	255.9	262.7	255.9	230.5
65°	230.4	226.2	197.3	169.4	164.4	168.6	196.6	225.4	230.4	225.4	196.6
67.5°	200.7	192.3	168.5	138.9	138.9	138.9	167.7	191.5	200.7	191.5	167.7
70°	169.5	160.9	138.9	116.0	116.8	116.0	138.9	161.7	170.3	161.7	138.9
72.5°	144.9	132.1	113.5	94.8	97.4	94.1	113.5	132.9	146.3	132.9	113.5
75°	122.8	107.5	89.8	77.1	81.4	77.1	90.6	108.3	125.1	108.3	90.6
77.5°	110.4	89.4	70.3	60.1	65.2	60.1	71.1	87.1	107.2	87.1	71.1
80°	109.0	85.0	57.3	45.7	50.0	45.7	55.8	72.6	94.4	72.6	55.8
82.5°	111.3	90.9	56.4	33.0	34.7	33.0	47.1	63.1	82.1	63.1	47.1
85°	124.3	104.7	65.8	26.8	20.3	25.3	43.4	57.6	74.1	57.6	43.4
87.5°	140.8	126.3	82.1	33.3	6.0	22.4	38.2	52.4	61.6	52.4	38.2
90°	160.7	149.7	104.8	43.5	0.8	14.2	28.5	41.1	45.3	41.1	28.5
92.5°	187.0	176.0	128.1	62.3	13.1	9.1	22.6	33.6	36.1	33.6	22.6
95°	212.8	206.5	156.2	81.7	31.7	4.7	17.5	27.8	30.3	27.8	17.5
97.5°	240.7	235.1	184.1	108.6	55.6	10.1	13.9	23.4	25.1	23.4	13.9
100°	264.8	262.4	213.7	141.8	84.8	26.3	9.7	20.6	22.3	20.6	9.7
102.5°	303.6	291.8	241.9	173.4	116.3	48.6	12.3	14.7	17.3	14.7	12.3
105°	334.6	321.3	279.6	206.4	152.6	78.6	30.9	11.8	10.5	11.8	30.9
107.5°	364.3	356.7	313.4	240.3	191.0	113.3	57.0	30.2	19.4	30.2	57.0
110°	402.8	393.6	346.6	274.1	231.1	150.2	87.1	54.8	42.5	54.8	87.1



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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°	439.8	432.9	377.4	309.6	272.7	190.3	124.1	85.7	74.0	85.7	124.1
115°	468.3	464.5	412.8	342.7	311.2	235.7	164.9	121.8	107.9	121.8	164.9
117.5°	498.3	497.5	439.0	376.7	357.4	276.5	202.6	158.0	143.4	158.0	202.6
120°	536.0	530.0	475.2	410.5	401.2	319.6	244.2	199.6	185.0	199.6	244.2
122.5°	562.3	558.5	505.9	442.8	442.8	363.5	284.2	239.6	224.3	239.6	284.2
125°	586.1	584.6	529.1	475.2	487.5	404.4	328.9	283.5	266.5	283.5	328.9
127.5°	607.7	610.0	559.2	510.7	532.9	445.9	372.7	322.8	305.0	322.8	372.7
130°	626.2	633.9	587.6	542.9	576.0	491.3	411.9	362.1	350.5	362.1	411.9
132.5°	662.4	657.8	617.8	576.0	622.2	532.9	454.5	401.3	388.2	401.3	454.5
135°	680.8	682.4	643.1	604.5	665.4	574.5	493.8	441.4	428.3	441.4	493.8
137.5°	703.1	698.5	662.3	639.2	705.4	614.5	531.4	483.7	462.9	483.7	531.4
140°	719.3	718.5	689.3	670.8	748.5	654.6	571.5	522.2	503.0	522.2	571.5
142.5°	736.3	740.9	715.5	703.9	791.7	695.4	613.9	559.9	541.5	559.9	613.9
145°	747.8	757.8	741.7	747.1	832.4	742.5	650.8	596.1	576.1	596.1	650.8
147.5°	767.1	780.1	760.9	777.0	867.9	783.3	687.8	633.9	616.1	633.9	687.8
150°	793.3	799.4	787.8	818.6	904.1	828.6	725.5	670.0	652.4	670.0	725.5
152.5°	814.1	821.7	807.8	863.2	932.5	869.5	766.3	705.5	684.7	705.5	766.3
155°	835.6	838.7	829.5	907.2	962.6	910.3	800.2	744.8	724.7	744.8	800.2
157.5°	855.7	861.8	851.1	940.2	988.8	945.7	837.9	784.0	766.3	784.0	837.9
160°	877.1	877.1	883.4	979.6	1010.3	977.3	878.0	827.1	802.5	827.1	878.0
162.5°	879.6	893.3	927.3	1006.6	1031.9	1004.2	921.1	857.0	836.3	857.0	921.1
165°	913.4	925.6	976.5	1030.4	1048.2	1028.1	974.2	907.9	883.4	907.9	974.2
167.5°	948.8	975.7	1016.6	1057.4	1063.5	1050.4	1015.0	968.8	946.5	968.8	1015.0
170°	1005.7	1029.5	1050.4	1067.4	1075.9	1068.1	1040.4	1017.3	1002.6	1017.3	1040.4
172.5°	1051.2	1066.5	1075.1	1085.9	1080.4	1077.4	1063.5	1052.0	1044.2	1052.0	1063.5
175°	1079.6	1082.8	1090.4	1086.6	1091.3	1082.9	1083.5	1088.0	1056.5	1088.0	1083.5
177.5°	1089.6	1095.0	1092.1	1085.1	1085.9	1084.3	1087.4	1089.6	1085.0	1089.6	1087.4
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	934.1	934.1	934.1	934.1	934.1	934.1
2.5°	932.3	933.9	933.1	931.4	933.2	929.9
5°	927.2	928.0	927.2	927.2	928.1	924.9
7.5°	918.8	920.4	919.6	918.0	919.7	917.2
10°	906.9	907.8	907.8	906.9	907.8	907.8
12.5°	893.4	892.6	893.4	891.6	892.5	894.1
15°	875.7	875.7	876.4	874.7	876.4	877.9
17.5°	856.9	856.9	856.9	855.2	856.0	857.6
20°	835.0	835.0	835.8	833.1	834.8	833.8
22.5°	810.4	811.3	811.2	809.4	809.3	807.6
25°	785.8	784.1	786.6	783.1	779.6	780.5
27.5°	758.6	758.7	759.4	755.1	751.7	746.6
30°	728.0	727.3	729.7	724.5	716.0	713.4
32.5°	696.7	696.7	698.3	689.7	680.4	675.3
35°	662.0	665.4	664.3	652.5	640.6	638.9
37.5°	626.4	628.9	628.8	614.3	600.8	599.1
40°	589.1	594.9	590.6	571.9	560.9	560.0
42.5°	548.4	556.7	549.9	527.8	520.2	526.1
45°	505.1	516.0	506.6	486.2	482.0	488.8
47.5°	459.3	473.6	460.1	445.6	446.5	454.9
50°	413.6	421.2	415.1	404.9	412.5	422.6
52.5°	369.5	364.3	371.0	368.5	380.3	390.5
55°	324.6	310.1	326.2	334.5	349.0	357.5
57.5°	281.4	263.5	282.9	301.5	319.3	326.1
60°	238.2	222.8	238.9	265.9	289.7	293.1
62.5°	199.9	189.8	200.7	232.0	257.5	263.4
65°	168.6	164.4	169.4	197.3	226.2	230.4
67.5°	138.9	138.9	138.9	168.5	192.3	200.7
70°	116.0	116.8	116.0	138.9	160.9	169.5
72.5°	94.1	97.4	94.8	113.5	132.1	144.9
75°	77.1	81.4	77.1	89.8	107.5	122.8
77.5°	60.1	65.2	60.1	70.3	89.4	110.4
80°	45.7	50.0	45.7	57.3	85.0	109.0
82.5°	33.0	34.7	33.0	56.4	90.9	111.3
85°	25.3	20.3	26.8	65.8	104.7	124.3
87.5°	22.4	6.0	33.3	82.1	126.3	140.8
90°	14.2	0.8	43.5	104.8	149.7	160.7
92.5°	9.1	13.1	62.3	128.1	176.0	187.0
95°	4.7	31.7	81.7	156.2	206.5	212.8
97.5°	10.1	55.6	108.6	184.1	235.1	240.7
100°	26.3	84.8	141.8	213.7	262.4	264.8
102.5°	48.6	116.3	173.4	241.9	291.8	303.6
105°	78.6	152.6	206.4	279.6	321.3	334.6
107.5°	113.3	191.0	240.3	313.4	356.7	364.3
110°	150.2	231.1	274.1	346.6	393.6	402.8





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	190.3	272.7	309.6	377.4	432.9	439.8
115°	235.7	311.2	342.7	412.8	464.5	468.3
117.5°	276.5	357.4	376.7	439.0	497.5	498.3
120°	319.6	401.2	410.5	475.2	530.0	536.0
122.5°	363.5	442.8	442.8	505.9	558.5	562.3
125°	404.4	487.5	475.2	529.1	584.6	586.1
127.5°	445.9	532.9	510.7	559.2	610.0	607.7
130°	491.3	576.0	542.9	587.6	633.9	626.2
132.5°	532.9	622.2	576.0	617.8	657.8	662.4
135°	574.5	665.4	604.5	643.1	682.4	680.8
137.5°	614.5	705.4	639.2	662.3	698.5	703.1
140°	654.6	748.5	670.8	689.3	718.5	719.3
142.5°	695.4	791.7	703.9	715.5	740.9	736.3
145°	742.5	832.4	747.1	741.7	757.8	747.8
147.5°	783.3	867.9	777.0	760.9	780.1	767.1
150°	828.6	904.1	818.6	787.8	799.4	793.3
152.5°	869.5	932.5	863.2	807.8	821.7	814.1
155°	910.3	962.6	907.2	829.5	838.7	835.6
157.5°	945.7	988.8	940.2	851.1	861.8	855.7
160°	977.3	1010.3	979.6	883.4	877.1	877.1
162.5°	1004.2	1031.9	1006.6	927.3	893.3	879.6
165°	1028.1	1048.2	1030.4	976.5	925.6	913.4
167.5°	1050.4	1063.5	1057.4	1016.6	975.7	948.8
170°	1068.1	1075.9	1067.4	1050.4	1029.5	1005.7
172.5°	1077.4	1080.4	1085.9	1075.1	1066.5	1051.2
175°	1082.9	1091.3	1086.6	1090.4	1082.8	1079.6
177.5°	1084.3	1085.9	1085.1	1092.1	1095.0	1089.6
180°	1090.4	1090.4	1090.4	1090.4	1090.4	1090.4

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