

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: P392642

Luminaire Tested: **MWL-4-26-25-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392642
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-26-25-UNV-L840-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5113.2 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: General Diffuse

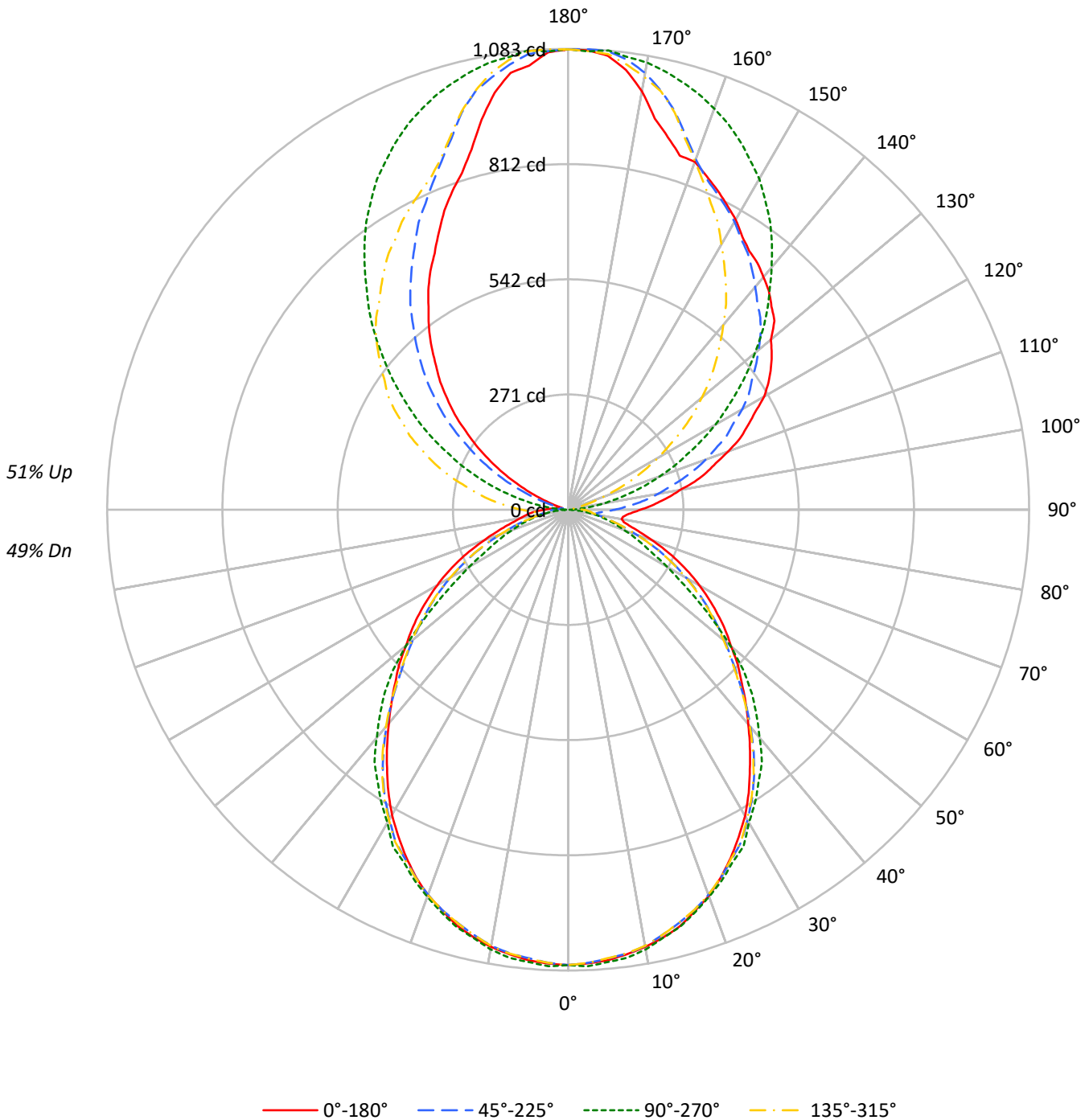
Input Watts (W): 46.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: MWL-4-26-25-UNV-L840-EDD

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	55	55	55	49
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	82	76	71	82	76	70	66	64	60	57	53	51	48	44	42	40	35
3	82	72	65	59	75	67	61	56	57	52	48	48	44	41	39	36	34	30
4	75	64	56	50	69	59	53	47	51	45	41	43	39	36	35	32	30	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	32	29	26	23
6	63	51	43	38	58	48	41	36	41	36	31	35	31	27	29	26	23	20
7	59	47	39	33	54	43	36	31	37	32	28	32	27	24	26	23	21	18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	29	25	31	26	22	27	23	20	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	25	21	18	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6912	6912	6912	6912
5°	6829	6361	6829	6361
10°	6720	5849	6720	5849
15°	6594	5351	6579	5351
20°	6395	4878	6380	4878
25°	6137	4442	6121	4442
30°	5846	4014	5824	4014
35°	5469	3617	5453	3617
40°	5104	3208	5081	3208
45°	4770	2785	4751	2785
50°	4465	2279	4445	2279
55°	4203	1713	4188	1713
60°	3897	1268	3888	1268
65°	3539	940	3539	940
70°	3076	703	3087	703
75°	2704	516	2746	516
80°	2983	333	2644	333
85°	4655	148	2977	148



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.9	2.0
10°-20°	284.7	5.6
20°-30°	418.1	8.2
30°-40°	475.2	9.3
40°-50°	447.2	8.7
50°-60°	358.6	7.0
60°-70°	238.2	4.7
70°-80°	124.9	2.4
80°-90°	72.8	1.4
90°-100°	94.0	1.8
100°-110°	169.4	3.3
110°-120°	287.8	5.6
120°-130°	390.9	7.6
130°-140°	445.7	8.7
140°-150°	444.4	8.7
150°-160°	386.9	7.6
160°-170°	272.2	5.3
170°-180°	101.4	2.0
0°-30°	803.7	15.7
0°-40°	1278.9	25.0
0°-60°	2084.7	40.8
0°-90°	2520.5	49.3
90°-120°	551.2	10.8
90°-150°	1832.2	35.8
90°-180°	2593.0	50.7
0°-180°	5113.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1070	1070	1070	1070	1070	
5°	1063	1067	1063	1067	1063	101
15°	1014	1015	1012	1015	1014	285
25°	903	914	901	914	903	415
35°	744	780	742	780	744	466
45°	577	610	574	610	577	446
55°	429	369	427	369	429	383
65°	283	194	283	194	283	280
75°	150	98	153	98	150	166
85°	138	25	88	25	138	111
90°	170	1	55	1	170	94
95°	215	32	34	32	215	187
105°	336	151	14	151	336	353
115°	465	309	107	309	465	461
125°	582	485	265	485	582	519
135°	676	661	425	661	676	521
145°	742	827	572	827	742	468
155°	829	956	719	956	829	382
165°	906	1040	876	1040	906	257
175°	1071	1083	1048	1083	1071	100
180°	1082	1082	1082	1082	1082	



TEST NUMBER: P392642

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1067.0	1066.5	1066.0	1077.8	1073.8	1077.0	1066.0	1066.5	1067.7	1066.5	1066.0
5°	1063.0	1062.5	1059.0	1068.0	1067.0	1068.0	1058.2	1062.5	1063.0	1062.5	1058.2
7.5°	1053.7	1053.2	1052.2	1059.0	1062.0	1058.2	1051.5	1052.5	1053.7	1052.5	1051.5
10°	1043.5	1043.2	1041.2	1047.2	1049.2	1046.5	1040.5	1041.7	1043.5	1041.7	1040.5
12.5°	1030.0	1032.2	1023.5	1029.5	1030.7	1029.5	1023.5	1030.7	1028.5	1030.7	1023.5
15°	1013.8	1008.2	1005.5	1014.5	1014.7	1013.7	1004.7	1006.7	1011.5	1006.7	1004.7
17.5°	988.8	990.2	986.5	991.7	991.7	991.7	985.7	989.5	986.5	989.5	985.7
20°	965.8	965.0	963.5	968.7	968.0	968.0	962.7	963.5	963.5	963.5	962.7
22.5°	936.0	939.0	936.5	940.7	943.0	940.0	935.7	937.5	934.5	937.5	935.7
25°	903.0	904.0	907.2	913.7	914.0	913.0	905.7	901.7	900.7	901.7	905.7
27.5°	867.0	871.0	880.2	888.5	892.0	887.7	878.7	868.7	864.7	868.7	878.7
30°	831.0	831.0	842.0	850.2	849.0	848.7	839.7	828.7	828.0	828.7	839.7
32.5°	789.1	789.1	804.1	818.3	816.8	816.8	801.8	786.1	786.1	786.1	801.8
35°	744.3	747.3	761.3	781.3	780.1	779.1	759.1	745.1	742.1	745.1	759.1
37.5°	701.3	699.3	715.3	738.3	747.8	736.1	713.1	697.1	699.1	697.1	713.1
40°	658.3	654.3	666.3	692.6	699.8	691.1	663.3	651.3	655.3	651.3	663.3
42.5°	617.3	610.3	616.6	643.6	654.8	642.1	614.3	607.3	614.3	607.3	614.3
45°	576.6	568.6	566.6	595.6	609.8	594.1	563.5	566.3	574.3	566.3	563.5
47.5°	540.6	529.6	521.6	539.8	557.8	539.1	518.5	527.3	538.3	527.3	518.5
50°	499.6	490.6	479.6	487.8	497.1	486.3	476.5	487.5	497.3	487.5	476.5
52.5°	465.6	454.6	438.8	439.8	432.1	438.3	436.5	451.5	463.3	451.5	436.5
55°	428.8	418.8	399.8	388.1	369.3	386.5	397.5	416.5	427.3	416.5	397.5
57.5°	392.8	385.8	360.8	337.1	313.3	335.5	358.5	383.5	391.3	383.5	358.5
60°	356.1	349.1	321.1	283.3	268.3	282.5	319.5	347.5	355.3	347.5	319.5
62.5°	320.1	315.1	282.1	239.3	225.5	238.5	280.5	313.5	319.3	313.5	280.5
65°	283.3	275.3	244.3	200.3	193.5	199.5	243.5	274.5	283.3	274.5	243.5
67.5°	245.3	237.3	206.3	168.5	167.5	168.5	205.5	236.5	245.3	236.5	205.5
70°	209.5	197.5	169.5	139.5	139.5	139.5	169.5	198.3	210.3	198.3	169.5
72.5°	177.5	162.5	138.5	115.5	118.8	114.8	138.5	163.3	179.1	163.3	138.5
75°	150.5	131.5	109.8	92.8	97.8	92.8	110.5	132.3	152.8	132.3	110.5
77.5°	133.6	110.6	85.8	72.8	78.8	72.8	86.5	108.3	130.6	108.3	86.5
80°	127.6	102.3	69.1	54.8	59.8	54.8	67.5	90.1	113.1	90.1	67.5
82.5°	129.9	104.1	66.2	38.8	41.8	38.8	57.1	76.6	100.9	76.6	57.1
85°	137.6	115.0	74.0	33.1	24.8	31.5	51.9	68.4	88.0	68.4	51.9
87.5°	151.1	134.2	88.2	37.5	8.0	26.8	44.6	60.9	72.5	60.9	44.6
90°	169.9	155.2	109.6	47.5	0.8	18.5	34.1	47.6	55.3	47.6	34.1
92.5°	193.5	181.3	131.9	64.2	13.2	11.5	27.3	40.1	43.8	40.1	27.3
95°	215.3	209.7	158.7	83.4	31.5	7.1	21.3	32.5	34.3	32.5	21.3
97.5°	241.9	239.0	186.3	107.9	55.2	10.2	17.6	29.1	28.1	29.1	17.6
100°	266.6	264.9	214.7	140.7	84.2	26.2	12.3	25.1	26.1	25.1	12.3
102.5°	304.2	293.0	241.0	172.0	115.5	48.3	13.5	18.1	20.1	18.1	13.5
105°	335.8	323.1	277.4	204.9	151.4	78.1	30.8	16.2	14.3	16.2	30.8
107.5°	363.6	354.0	311.0	238.5	189.6	112.5	56.7	30.3	21.6	30.3	56.7
110°	399.8	390.7	343.9	272.1	229.3	149.1	86.5	54.7	42.5	54.7	86.5



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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°	436.5	429.6	374.4	307.2	270.5	188.8	123.2	85.2	73.8	85.2	123.2
115°	464.7	460.9	410.5	340.0	308.7	233.9	164.6	121.1	107.4	121.1	164.6
117.5°	494.5	493.8	436.5	374.6	354.5	275.4	202.1	157.0	142.5	157.0	202.1
120°	531.9	525.8	472.4	408.2	399.1	318.1	243.3	198.2	183.7	198.2	243.3
122.5°	557.9	554.1	502.9	440.3	440.3	361.6	283.0	237.9	222.7	237.9	283.0
125°	581.6	580.0	525.8	472.4	484.6	402.1	327.3	281.5	264.7	281.5	327.3
127.5°	602.9	605.2	555.6	507.5	529.6	443.4	370.8	320.4	302.9	320.4	370.8
130°	621.3	628.9	583.9	539.6	572.4	488.4	409.8	359.4	347.9	359.4	409.8
132.5°	657.2	652.6	612.9	572.4	618.2	529.6	451.0	398.3	385.3	398.3	451.0
135°	675.5	677.0	638.1	600.7	661.0	570.9	489.9	438.0	425.0	438.0	489.9
137.5°	697.6	693.0	657.9	635.0	700.7	610.6	528.1	480.0	459.4	480.0	528.1
140°	713.7	712.9	683.9	665.6	743.4	649.5	567.1	518.2	499.1	518.2	567.1
142.5°	730.5	736.0	709.8	699.2	786.2	690.8	609.1	556.6	537.3	556.6	609.1
145°	741.9	751.8	735.8	741.2	826.6	736.6	645.7	591.5	571.6	591.5	645.7
147.5°	761.0	774.0	754.9	770.9	861.7	777.0	682.4	628.9	611.3	628.9	682.4
150°	787.0	793.1	781.6	812.2	897.6	822.0	719.8	664.8	647.2	664.8	719.8
152.5°	807.6	815.2	802.2	857.1	925.8	863.2	761.0	699.9	679.3	699.9	761.0
155°	828.9	831.9	822.8	900.6	955.6	903.7	793.8	738.9	719.0	738.9	793.8
157.5°	848.7	854.8	844.1	933.5	981.6	938.8	831.2	777.8	760.2	777.8	831.2
160°	870.1	870.1	876.2	971.7	1003.0	969.4	870.9	820.6	796.1	820.6	870.9
162.5°	872.4	886.9	919.7	998.4	1023.6	996.1	913.6	851.0	829.6	851.0	913.6
165°	906.0	919.0	968.6	1022.1	1039.6	1019.8	966.3	901.4	876.2	901.4	966.3
167.5°	941.1	968.6	1008.3	1048.8	1054.9	1041.9	1006.8	961.7	938.8	961.7	1006.8
170°	998.4	1022.1	1041.9	1058.7	1067.1	1059.5	1032.0	1009.8	995.3	1009.8	1032.0
172.5°	1042.4	1058.7	1066.3	1077.0	1072.7	1068.6	1054.9	1044.2	1035.6	1044.2	1054.9
175°	1070.7	1074.7	1081.6	1077.8	1083.4	1074.0	1074.7	1080.1	1047.8	1080.1	1074.7
177.5°	1080.6	1087.0	1083.1	1076.3	1078.0	1075.5	1078.6	1081.6	1076.0	1081.6	1078.6
180°	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1070.2	1070.2	1070.2	1070.2	1070.2	1070.2
2.5°	1077.0	1073.8	1077.8	1066.0	1066.5	1067.0
5°	1068.0	1067.0	1068.0	1059.0	1062.5	1063.0
7.5°	1058.2	1062.0	1059.0	1052.2	1053.2	1053.7
10°	1046.5	1049.2	1047.2	1041.2	1043.2	1043.5
12.5°	1029.5	1030.7	1029.5	1023.5	1032.2	1030.0
15°	1013.7	1014.7	1014.5	1005.5	1008.2	1013.8
17.5°	991.7	991.7	991.7	986.5	990.2	988.8
20°	968.0	968.0	968.7	963.5	965.0	965.8
22.5°	940.0	943.0	940.7	936.5	939.0	936.0
25°	913.0	914.0	913.7	907.2	904.0	903.0
27.5°	887.7	892.0	888.5	880.2	871.0	867.0
30°	848.7	849.0	850.2	842.0	831.0	831.0
32.5°	816.8	816.8	818.3	804.1	789.1	789.1
35°	779.1	780.1	781.3	761.3	747.3	744.3
37.5°	736.1	747.8	738.3	715.3	699.3	701.3
40°	691.1	699.8	692.6	666.3	654.3	658.3
42.5°	642.1	654.8	643.6	616.6	610.3	617.3
45°	594.1	609.8	595.6	566.6	568.6	576.6
47.5°	539.1	557.8	539.8	521.6	529.6	540.6
50°	486.3	497.1	487.8	479.6	490.6	499.6
52.5°	438.3	432.1	439.8	438.8	454.6	465.6
55°	386.5	369.3	388.1	399.8	418.8	428.8
57.5°	335.5	313.3	337.1	360.8	385.8	392.8
60°	282.5	268.3	283.3	321.1	349.1	356.1
62.5°	238.5	225.5	239.3	282.1	315.1	320.1
65°	199.5	193.5	200.3	244.3	275.3	283.3
67.5°	168.5	167.5	168.5	206.3	237.3	245.3
70°	139.5	139.5	139.5	169.5	197.5	209.5
72.5°	114.8	118.8	115.5	138.5	162.5	177.5
75°	92.8	97.8	92.8	109.8	131.5	150.5
77.5°	72.8	78.8	72.8	85.8	110.6	133.6
80°	54.8	59.8	54.8	69.1	102.3	127.6
82.5°	38.8	41.8	38.8	66.2	104.1	129.9
85°	31.5	24.8	33.1	74.0	115.0	137.6
87.5°	26.8	8.0	37.5	88.2	134.2	151.1
90°	18.5	0.8	47.5	109.6	155.2	169.9
92.5°	11.5	13.2	64.2	131.9	181.3	193.5
95°	7.1	31.5	83.4	158.7	209.7	215.3
97.5°	10.2	55.2	107.9	186.3	239.0	241.9
100°	26.2	84.2	140.7	214.7	264.9	266.6
102.5°	48.3	115.5	172.0	241.0	293.0	304.2
105°	78.1	151.4	204.9	277.4	323.1	335.8
107.5°	112.5	189.6	238.5	311.0	354.0	363.6
110°	149.1	229.3	272.1	343.9	390.7	399.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	188.8	270.5	307.2	374.4	429.6	436.5
115°	233.9	308.7	340.0	410.5	460.9	464.7
117.5°	275.4	354.5	374.6	436.5	493.8	494.5
120°	318.1	399.1	408.2	472.4	525.8	531.9
122.5°	361.6	440.3	440.3	502.9	554.1	557.9
125°	402.1	484.6	472.4	525.8	580.0	581.6
127.5°	443.4	529.6	507.5	555.6	605.2	602.9
130°	488.4	572.4	539.6	583.9	628.9	621.3
132.5°	529.6	618.2	572.4	612.9	652.6	657.2
135°	570.9	661.0	600.7	638.1	677.0	675.5
137.5°	610.6	700.7	635.0	657.9	693.0	697.6
140°	649.5	743.4	665.6	683.9	712.9	713.7
142.5°	690.8	786.2	699.2	709.8	736.0	730.5
145°	736.6	826.6	741.2	735.8	751.8	741.9
147.5°	777.0	861.7	770.9	754.9	774.0	761.0
150°	822.0	897.6	812.2	781.6	793.1	787.0
152.5°	863.2	925.8	857.1	802.2	815.2	807.6
155°	903.7	955.6	900.6	822.8	831.9	828.9
157.5°	938.8	981.6	933.5	844.1	854.8	848.7
160°	969.4	1003.0	971.7	876.2	870.1	870.1
162.5°	996.1	1023.6	998.4	919.7	886.9	872.4
165°	1019.8	1039.6	1022.1	968.6	919.0	906.0
167.5°	1041.9	1054.9	1048.8	1008.3	968.6	941.1
170°	1059.5	1067.1	1058.7	1041.9	1022.1	998.4
172.5°	1068.6	1072.7	1077.0	1066.3	1058.7	1042.4
175°	1074.0	1083.4	1077.8	1081.6	1074.7	1070.7
177.5°	1075.5	1078.0	1076.3	1083.1	1087.0	1080.6
180°	1081.6	1081.6	1081.6	1081.6	1081.6	1081.6

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