

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: P392640

Luminaire Tested: **MWL-4-26-25-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392640
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-L830-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

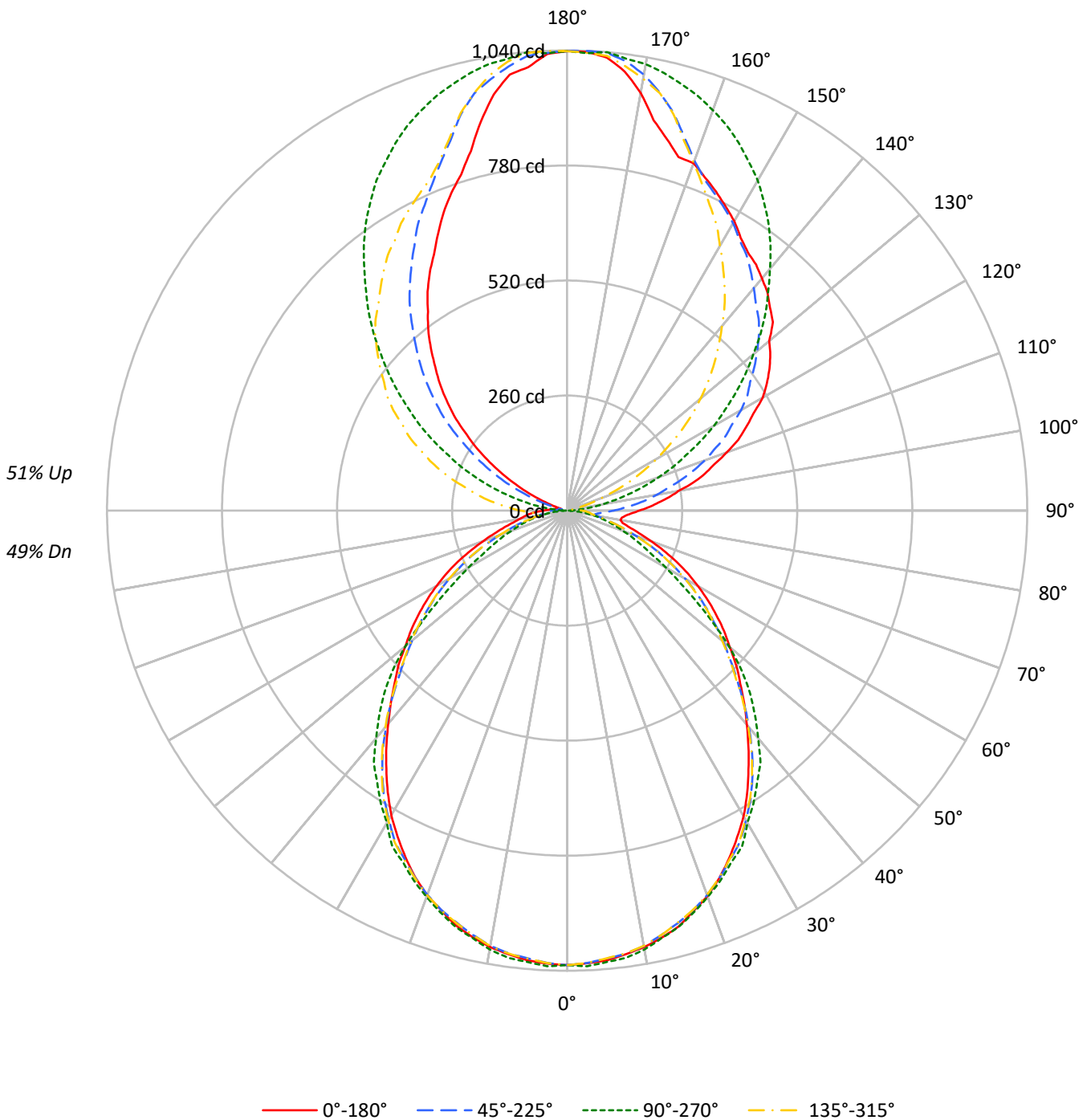
Lumens per Lamp: N/A
Luminaire Lumens: 4908.0 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: General Diffuse

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



TEST NUMBER: P392640
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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		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°	6635	6635	6635	6635
5°	6556	6106	6556	6106
10°	6451	5615	6451	5615
15°	6330	5137	6316	5137
20°	6139	4682	6124	4682
25°	5891	4264	5876	4264
30°	5611	3853	5591	3853
35°	5250	3472	5234	3472
40°	4899	3079	4877	3079
45°	4578	2673	4559	2673
50°	4286	2187	4266	2187
55°	4034	1644	4020	1644
60°	3740	1217	3731	1217
65°	3396	902	3396	902
70°	2952	675	2964	675
75°	2596	495	2636	495
80°	2864	320	2539	320
85°	4468	142	2858	142



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	2.0
10°-20°	273.3	5.6
20°-30°	401.4	8.2
30°-40°	456.1	9.3
40°-50°	429.2	8.7
50°-60°	344.2	7.0
60°-70°	228.6	4.7
70°-80°	119.9	2.4
80°-90°	69.8	1.4
90°-100°	90.2	1.8
100°-110°	162.6	3.3
110°-120°	276.2	5.6
120°-130°	375.2	7.6
130°-140°	427.8	8.7
140°-150°	426.6	8.7
150°-160°	371.4	7.6
160°-170°	261.3	5.3
170°-180°	97.3	2.0
0°-30°	771.5	15.7
0°-40°	1227.7	25.0
0°-60°	2001.1	40.8
0°-90°	2419.4	49.3
90°-120°	529.0	10.8
90°-150°	1758.6	35.8
90°-180°	2489.0	50.7
0°-180°	4908.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1027	1027	1027	1027	1027	
5°	1020	1024	1020	1024	1020	97
15°	973	974	971	974	973	274
25°	867	877	865	877	867	399
35°	714	749	712	749	714	447
45°	553	585	551	585	553	428
55°	412	354	410	354	412	368
65°	272	186	272	186	272	269
75°	144	94	147	94	144	160
85°	132	24	84	24	132	106
90°	163	1	53	1	163	90
95°	207	30	33	30	207	180
105°	322	145	14	145	322	339
115°	446	296	103	296	446	443
125°	558	465	254	465	558	498
135°	648	634	408	634	648	500
145°	712	794	549	794	712	449
155°	796	917	690	917	796	367
165°	870	998	841	998	870	247
175°	1028	1040	1006	1040	1028	96
180°	1038	1038	1038	1038	1038	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3
2.5°	1024.3	1023.8	1023.3	1034.6	1030.8	1033.9	1023.3	1023.8	1024.9	1023.8	1023.3
5°	1020.4	1019.9	1016.6	1025.2	1024.3	1025.2	1015.8	1019.9	1020.4	1019.9	1015.8
7.5°	1011.5	1011.0	1010.0	1016.6	1019.5	1015.8	1009.4	1010.3	1011.5	1010.3	1009.4
10°	1001.7	1001.4	999.5	1005.2	1007.2	1004.6	998.8	1000.0	1001.7	1000.0	998.8
12.5°	988.7	990.9	982.5	988.3	989.4	988.3	982.5	989.4	987.3	989.4	982.5
15°	973.2	967.8	965.2	973.9	974.1	973.1	964.5	966.4	971.0	966.4	964.5
17.5°	949.2	950.5	947.0	952.0	952.0	952.0	946.2	949.9	947.0	949.9	946.2
20°	927.1	926.3	924.9	929.9	929.2	929.2	924.1	924.9	924.9	924.9	924.1
22.5°	898.5	901.4	899.0	903.0	905.2	902.4	898.2	900.0	897.1	900.0	898.2
25°	866.8	867.8	870.9	877.1	877.4	876.4	869.4	865.6	864.6	865.6	869.4
27.5°	832.3	836.1	845.0	852.9	856.3	852.2	843.5	833.9	830.1	833.9	843.5
30°	797.7	797.7	808.3	816.2	815.0	814.7	806.1	795.5	794.8	795.5	806.1
32.5°	757.4	757.4	771.8	785.4	784.0	784.0	769.6	754.5	754.5	754.5	769.6
35°	714.4	717.3	730.7	749.9	748.8	747.8	728.6	715.2	712.3	715.2	728.6
37.5°	673.1	671.2	686.6	708.7	717.8	706.5	684.5	669.1	671.0	669.1	684.5
40°	631.9	628.0	639.5	664.8	671.7	663.4	636.7	625.1	629.0	625.1	636.7
42.5°	592.5	585.8	591.8	617.8	628.5	616.3	589.6	582.9	589.6	582.9	589.6
45°	553.4	545.8	543.8	571.7	585.3	570.2	540.9	543.6	551.2	543.6	540.9
47.5°	518.9	508.3	500.7	518.1	535.4	517.5	497.7	506.1	516.7	506.1	497.7
50°	479.5	470.9	460.3	468.2	477.1	466.8	457.4	467.9	477.3	467.9	457.4
52.5°	446.9	436.3	421.2	422.1	414.8	420.7	419.0	433.4	444.7	433.4	419.0
55°	411.6	402.0	383.7	372.5	354.5	371.0	381.5	399.8	410.1	399.8	381.5
57.5°	377.0	370.3	346.3	323.6	300.7	322.0	344.1	368.1	375.6	368.1	344.1
60°	341.8	335.1	308.2	271.9	257.5	271.2	306.7	333.5	341.0	333.5	306.7
62.5°	307.2	302.4	270.8	229.7	216.4	228.9	269.2	300.9	306.5	300.9	269.2
65°	271.9	264.2	234.5	192.3	185.7	191.5	233.7	263.5	271.9	263.5	233.7
67.5°	235.5	227.8	198.0	161.7	160.8	161.7	197.2	227.0	235.5	227.0	197.2
70°	201.1	189.6	162.7	133.9	133.9	133.9	162.7	190.3	201.9	190.3	162.7
72.5°	170.4	156.0	132.9	110.9	114.0	110.2	132.9	156.7	171.9	156.7	132.9
75°	144.5	126.2	105.4	89.1	93.9	89.1	106.1	127.0	146.7	127.0	106.1
77.5°	128.2	106.2	82.4	69.9	75.6	69.9	83.0	104.0	125.4	104.0	83.0
80°	122.5	98.2	66.3	52.6	57.4	52.6	64.8	86.5	108.6	86.5	64.8
82.5°	124.7	99.9	63.5	37.2	40.1	37.2	54.8	73.5	96.8	73.5	54.8
85°	132.1	110.4	71.0	31.8	23.8	30.2	49.8	65.7	84.5	65.7	49.8
87.5°	145.0	128.8	84.7	36.0	7.7	25.7	42.8	58.5	69.6	58.5	42.8
90°	163.1	149.0	105.2	45.6	0.8	17.8	32.7	45.7	53.1	45.7	32.7
92.5°	185.7	174.0	126.6	61.6	12.7	11.0	26.2	38.5	42.0	38.5	26.2
95°	206.7	201.3	152.3	80.1	30.2	6.8	20.4	31.2	32.9	31.2	20.4
97.5°	232.2	229.4	178.8	103.6	53.0	9.8	16.9	27.9	27.0	27.9	16.9
100°	255.9	254.3	206.1	135.1	80.8	25.1	11.8	24.1	25.1	24.1	11.8
102.5°	292.0	281.2	231.3	165.1	110.9	46.4	13.0	17.4	19.3	17.4	13.0
105°	322.3	310.1	266.3	196.7	145.3	75.0	29.6	15.5	13.7	15.5	29.6
107.5°	349.0	339.8	298.5	228.9	182.0	108.0	54.4	29.1	20.7	29.1	54.4
110°	383.7	375.0	330.1	261.2	220.1	143.1	83.0	52.5	40.8	52.5	83.0



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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°	419.0	412.4	359.4	294.9	259.6	181.2	118.3	81.8	70.8	81.8	118.3
115°	446.0	442.4	394.0	326.3	296.3	224.5	158.0	116.2	103.1	116.2	158.0
117.5°	474.6	474.0	419.0	359.6	340.3	264.3	194.0	150.7	136.8	150.7	194.0
120°	510.5	504.7	453.4	391.8	383.1	305.3	233.5	190.2	176.3	190.2	233.5
122.5°	535.5	531.9	482.7	422.6	422.6	347.1	271.6	228.3	213.8	228.3	271.6
125°	558.2	556.7	504.7	453.4	465.1	386.0	314.2	270.2	254.1	270.2	314.2
127.5°	578.7	580.9	533.3	487.1	508.3	425.6	355.9	307.5	290.7	307.5	355.9
130°	596.4	603.6	560.5	517.9	549.4	468.8	393.3	345.0	333.9	345.0	393.3
132.5°	630.8	626.4	588.3	549.4	593.4	508.3	432.9	382.3	369.8	382.3	432.9
135°	648.4	649.8	612.5	576.6	634.5	548.0	470.2	420.4	407.9	420.4	470.2
137.5°	669.6	665.2	631.5	609.5	672.6	586.1	506.9	460.7	441.0	460.7	506.9
140°	685.0	684.3	656.4	638.9	713.6	623.4	544.3	497.4	479.1	497.4	544.3
142.5°	701.2	706.4	681.3	671.1	754.6	663.1	584.6	534.3	515.7	534.3	584.6
145°	712.1	721.6	706.3	711.4	793.5	707.0	619.8	567.7	548.6	567.7	619.8
147.5°	730.4	742.9	724.6	739.9	827.2	745.8	655.0	603.6	586.8	603.6	655.0
150°	755.4	761.3	750.2	779.6	861.7	789.1	690.9	638.1	621.2	638.1	690.9
152.5°	775.2	782.5	770.0	822.8	888.7	828.6	730.4	671.8	652.0	671.8	730.4
155°	795.7	798.6	789.9	864.5	917.3	867.5	761.9	709.2	690.1	709.2	761.9
157.5°	814.7	820.6	810.3	896.1	942.3	901.2	797.9	746.6	729.7	746.6	797.9
160°	835.3	835.3	841.1	932.8	962.8	930.6	836.0	787.7	764.1	787.7	836.0
162.5°	837.5	851.4	882.9	958.4	982.6	956.2	877.0	816.9	796.4	816.9	877.0
165°	869.7	882.2	929.8	981.2	998.0	978.9	927.6	865.3	841.1	865.3	927.6
167.5°	903.4	929.8	967.9	1006.8	1012.6	1000.2	966.5	923.2	901.2	923.2	966.5
170°	958.4	981.2	1000.2	1016.3	1024.3	1017.1	990.7	969.4	955.4	969.4	990.7
172.5°	1000.6	1016.3	1023.6	1033.9	1029.7	1025.8	1012.6	1002.4	994.1	1002.4	1012.6
175°	1027.8	1031.6	1038.3	1034.6	1040.0	1031.0	1031.6	1036.8	1005.8	1036.8	1031.6
177.5°	1037.3	1043.5	1039.7	1033.2	1034.8	1032.4	1035.4	1038.3	1032.9	1038.3	1035.4
180°	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3



TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1027.3	1027.3	1027.3	1027.3	1027.3	1027.3
2.5°	1033.9	1030.8	1034.6	1023.3	1023.8	1024.3
5°	1025.2	1024.3	1025.2	1016.6	1019.9	1020.4
7.5°	1015.8	1019.5	1016.6	1010.0	1011.0	1011.5
10°	1004.6	1007.2	1005.2	999.5	1001.4	1001.7
12.5°	988.3	989.4	988.3	982.5	990.9	988.7
15°	973.1	974.1	973.9	965.2	967.8	973.2
17.5°	952.0	952.0	952.0	947.0	950.5	949.2
20°	929.2	929.2	929.9	924.9	926.3	927.1
22.5°	902.4	905.2	903.0	899.0	901.4	898.5
25°	876.4	877.4	877.1	870.9	867.8	866.8
27.5°	852.2	856.3	852.9	845.0	836.1	832.3
30°	814.7	815.0	816.2	808.3	797.7	797.7
32.5°	784.0	784.0	785.4	771.8	757.4	757.4
35°	747.8	748.8	749.9	730.7	717.3	714.4
37.5°	706.5	717.8	708.7	686.6	671.2	673.1
40°	663.4	671.7	664.8	639.5	628.0	631.9
42.5°	616.3	628.5	617.8	591.8	585.8	592.5
45°	570.2	585.3	571.7	543.8	545.8	553.4
47.5°	517.5	535.4	518.1	500.7	508.3	518.9
50°	466.8	477.1	468.2	460.3	470.9	479.5
52.5°	420.7	414.8	422.1	421.2	436.3	446.9
55°	371.0	354.5	372.5	383.7	402.0	411.6
57.5°	322.0	300.7	323.6	346.3	370.3	377.0
60°	271.2	257.5	271.9	308.2	335.1	341.8
62.5°	228.9	216.4	229.7	270.8	302.4	307.2
65°	191.5	185.7	192.3	234.5	264.2	271.9
67.5°	161.7	160.8	161.7	198.0	227.8	235.5
70°	133.9	133.9	133.9	162.7	189.6	201.1
72.5°	110.2	114.0	110.9	132.9	156.0	170.4
75°	89.1	93.9	89.1	105.4	126.2	144.5
77.5°	69.9	75.6	69.9	82.4	106.2	128.2
80°	52.6	57.4	52.6	66.3	98.2	122.5
82.5°	37.2	40.1	37.2	63.5	99.9	124.7
85°	30.2	23.8	31.8	71.0	110.4	132.1
87.5°	25.7	7.7	36.0	84.7	128.8	145.0
90°	17.8	0.8	45.6	105.2	149.0	163.1
92.5°	11.0	12.7	61.6	126.6	174.0	185.7
95°	6.8	30.2	80.1	152.3	201.3	206.7
97.5°	9.8	53.0	103.6	178.8	229.4	232.2
100°	25.1	80.8	135.1	206.1	254.3	255.9
102.5°	46.4	110.9	165.1	231.3	281.2	292.0
105°	75.0	145.3	196.7	266.3	310.1	322.3
107.5°	108.0	182.0	228.9	298.5	339.8	349.0
110°	143.1	220.1	261.2	330.1	375.0	383.7



TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	181.2	259.6	294.9	359.4	412.4	419.0
115°	224.5	296.3	326.3	394.0	442.4	446.0
117.5°	264.3	340.3	359.6	419.0	474.0	474.6
120°	305.3	383.1	391.8	453.4	504.7	510.5
122.5°	347.1	422.6	422.6	482.7	531.9	535.5
125°	386.0	465.1	453.4	504.7	556.7	558.2
127.5°	425.6	508.3	487.1	533.3	580.9	578.7
130°	468.8	549.4	517.9	560.5	603.6	596.4
132.5°	508.3	593.4	549.4	588.3	626.4	630.8
135°	548.0	634.5	576.6	612.5	649.8	648.4
137.5°	586.1	672.6	609.5	631.5	665.2	669.6
140°	623.4	713.6	638.9	656.4	684.3	685.0
142.5°	663.1	754.6	671.1	681.3	706.4	701.2
145°	707.0	793.5	711.4	706.3	721.6	712.1
147.5°	745.8	827.2	739.9	724.6	742.9	730.4
150°	789.1	861.7	779.6	750.2	761.3	755.4
152.5°	828.6	888.7	822.8	770.0	782.5	775.2
155°	867.5	917.3	864.5	789.9	798.6	795.7
157.5°	901.2	942.3	896.1	810.3	820.6	814.7
160°	930.6	962.8	932.8	841.1	835.3	835.3
162.5°	956.2	982.6	958.4	882.9	851.4	837.5
165°	978.9	998.0	981.2	929.8	882.2	869.7
167.5°	1000.2	1012.6	1006.8	967.9	929.8	903.4
170°	1017.1	1024.3	1016.3	1000.2	981.2	958.4
172.5°	1025.8	1029.7	1033.9	1023.6	1016.3	1000.6
175°	1031.0	1040.0	1034.6	1038.3	1031.6	1027.8
177.5°	1032.4	1034.8	1033.2	1039.7	1043.5	1037.3
180°	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3

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