

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: P392671

Luminaire Tested: **MWL-4-42-25-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392671
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-4-42-25-UNV-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

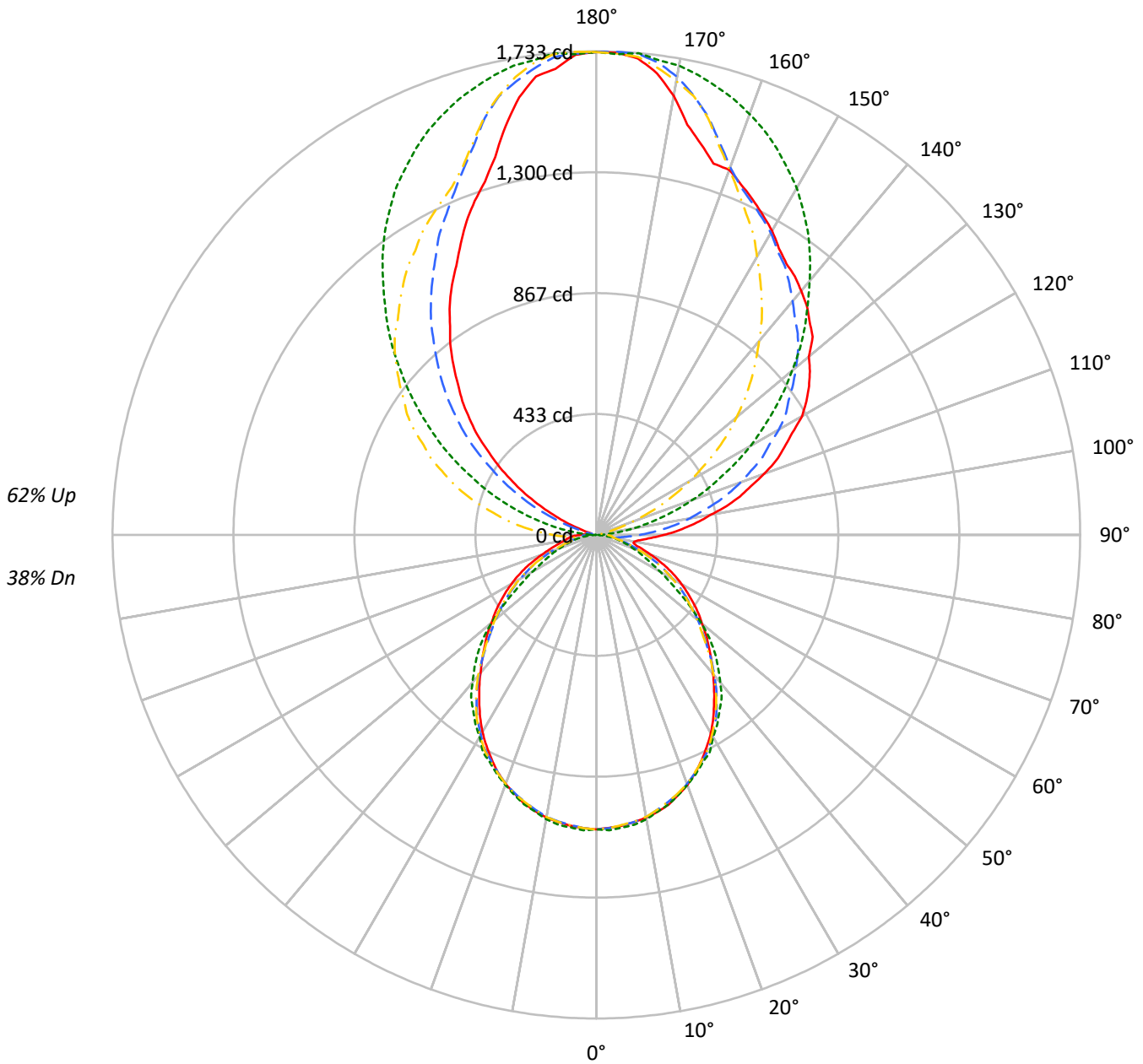
Lumens per Lamp: N/A
Luminaire Lumens: 6630.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Semi-Indirect

Input Watts (W): 66.6
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: P392671
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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - - - 135°-315°



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	83	86	82	79	76	67	65	63	53	51	50	40	39	38	32
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	72	62	54	49	66	57	50	45	46	42	38	37	33	31	28	26	24	20
5	67	55	47	42	60	51	44	39	42	36	33	33	30	27	25	23	21	17
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	19	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6815	6815	6815	6815
5°	6724	6274	6724	6274
10°	6623	5768	6623	5768
15°	6509	5272	6485	5272
20°	6314	4804	6289	4804
25°	6057	4375	6032	4375
30°	5772	3954	5738	3954
35°	5399	3564	5373	3564
40°	5042	3164	5004	3164
45°	4711	2747	4680	2747
50°	4414	2248	4380	2248
55°	4154	1689	4129	1689
60°	3850	1253	3836	1253
65°	3495	929	3495	929
70°	3038	696	3055	696
75°	2675	509	2740	509
80°	3231	330	2686	330
85°	5882	148	3193	148



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	1.5
10°-20°	280.6	4.2
20°-30°	412.2	6.2
30°-40°	468.7	7.1
40°-50°	441.2	6.7
50°-60°	353.9	5.3
60°-70°	235.3	3.5
70°-80°	124.1	1.9
80°-90°	84.3	1.3
90°-100°	138.0	2.1
100°-110°	268.5	4.1
110°-120°	459.7	6.9
120°-130°	624.7	9.4
130°-140°	712.4	10.7
140°-150°	710.6	10.7
150°-160°	618.8	9.3
160°-170°	435.3	6.6
170°-180°	162.2	2.4
0°-30°	792.3	12.0
0°-40°	1261.0	19.0
0°-60°	2056.0	31.0
0°-90°	2499.7	37.7
90°-120°	866.3	13.1
90°-150°	2914.0	44.0
90°-180°	4130.0	62.3
0°-180°	6630.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1055	1055	1055	1055	1055	
5°	1047	1052	1047	1052	1047	99
15°	1001	1000	997	1000	1001	281
25°	891	900	888	900	891	410
35°	735	768	731	768	735	460
45°	570	602	566	602	570	441
55°	424	364	421	364	424	379
65°	280	191	280	191	280	277
75°	149	96	152	96	149	167
85°	174	25	94	25	174	135
90°	241	1	58	1	241	133
95°	325	50	35	50	325	285
105°	532	242	17	242	532	559
115°	743	494	171	494	743	737
125°	930	774	422	774	930	830
135°	1080	1057	679	1057	1080	834
145°	1186	1322	914	1322	1186	748
155°	1326	1529	1150	1529	1326	611
165°	1449	1663	1402	1663	1449	411
175°	1713	1732	1677	1732	1713	160
180°	1730	1730	1730	1730	1730	



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CATALOG NUMBER: MWL-4-42-25-UNV-L835-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2
2.5°	1050.6	1051.1	1051.5	1063.5	1059.6	1062.3	1051.5	1051.1	1051.8	1051.1	1051.5
5°	1046.6	1047.1	1044.6	1053.4	1052.4	1053.4	1043.4	1047.1	1046.6	1047.1	1043.4
7.5°	1038.0	1038.5	1037.5	1044.6	1047.5	1043.4	1036.3	1037.3	1038.0	1037.3	1036.3
10°	1028.5	1028.7	1026.7	1032.6	1034.6	1031.4	1025.5	1026.2	1028.5	1026.2	1025.5
12.5°	1016.1	1017.8	1008.8	1014.7	1015.4	1014.7	1008.8	1015.4	1013.7	1015.4	1008.8
15°	1000.6	994.3	991.1	1000.0	999.7	998.7	989.8	991.8	997.0	991.8	989.8
17.5°	976.1	976.6	972.4	977.1	977.1	977.1	971.2	975.4	972.4	975.4	971.2
20°	953.5	952.2	949.8	954.5	953.3	953.3	948.6	949.8	949.8	949.8	948.6
22.5°	923.7	926.6	923.3	926.9	928.7	925.8	922.0	924.3	921.3	924.3	922.0
25°	891.3	892.3	895.0	900.4	900.2	899.2	892.5	888.6	887.6	888.6	892.5
27.5°	855.9	859.8	868.5	876.1	878.6	874.9	866.0	856.2	852.3	856.2	866.0
30°	820.5	820.5	831.3	839.0	836.3	836.5	827.7	816.9	815.7	816.9	827.7
32.5°	779.2	779.2	794.0	807.5	805.1	805.1	790.3	774.4	774.4	774.4	790.3
35°	734.8	737.8	751.5	771.2	768.5	767.5	747.9	734.1	731.2	734.1	747.9
37.5°	692.6	690.6	706.3	728.9	737.3	725.3	702.7	687.0	688.9	687.0	702.7
40°	650.3	646.4	658.2	683.5	690.1	681.1	653.2	641.4	645.4	641.4	653.2
42.5°	610.0	603.1	608.8	635.4	645.9	632.9	605.1	598.2	605.1	598.2	605.1
45°	569.5	561.6	559.7	588.2	601.6	585.7	554.8	557.9	565.8	557.9	554.8
47.5°	534.1	523.3	515.5	532.9	550.5	531.7	510.5	519.6	530.4	519.6	510.5
50°	493.8	485.0	474.2	481.8	490.4	479.3	469.3	480.1	490.1	480.1	469.3
52.5°	460.4	449.6	433.6	434.6	426.5	432.1	430.0	444.7	456.7	444.7	430.0
55°	423.8	413.9	395.3	383.3	364.3	380.8	391.6	410.3	421.3	410.3	391.6
57.5°	388.4	381.5	356.9	333.2	309.3	330.7	353.3	377.9	385.9	377.9	353.3
60°	351.8	344.9	317.4	279.8	265.1	278.6	315.0	342.5	350.6	342.5	315.0
62.5°	316.4	311.5	279.1	236.6	222.6	235.4	276.6	309.1	315.2	309.1	276.6
65°	279.8	271.9	241.5	198.2	191.1	197.0	240.3	270.8	279.8	270.8	240.3
67.5°	242.4	234.6	204.1	166.6	165.6	166.6	202.9	233.4	242.4	233.4	202.9
70°	206.9	195.1	167.6	138.1	138.1	138.1	167.6	196.3	208.1	196.3	167.6
72.5°	175.4	160.7	137.1	114.5	117.1	113.2	137.1	161.9	177.9	161.9	137.1
75°	148.9	130.2	108.3	91.6	96.5	91.6	109.6	131.4	152.5	131.4	109.6
77.5°	136.0	111.5	84.7	71.9	77.8	71.9	86.0	107.8	131.2	107.8	86.0
80°	138.2	110.0	69.8	54.2	59.2	54.2	67.3	90.4	114.9	90.4	67.3
82.5°	151.7	122.1	72.6	38.5	41.5	38.5	58.0	78.1	105.4	78.1	58.0
85°	173.9	146.9	90.7	34.4	24.8	31.9	55.2	72.4	94.4	72.4	55.2
87.5°	204.2	183.4	118.2	45.8	7.9	28.7	48.5	66.0	78.3	66.0	48.5
90°	241.1	221.9	156.4	65.6	1.2	19.2	35.4	49.6	57.7	49.6	35.4
92.5°	285.0	267.4	195.7	96.6	20.5	12.3	28.2	41.3	45.4	41.3	28.2
95°	324.8	316.4	242.3	131.0	49.8	8.8	22.3	32.9	35.1	32.9	22.3
97.5°	371.7	366.6	290.2	172.1	87.8	15.6	20.1	30.5	29.5	30.5	20.1
100°	414.4	412.3	339.3	224.7	134.2	41.3	15.4	28.4	29.4	28.4	15.4
102.5°	478.2	461.6	384.6	274.8	184.4	76.8	20.3	21.5	23.5	21.5	20.3
105°	532.0	512.9	443.4	327.4	241.8	124.4	48.6	21.5	17.4	21.5	48.6
107.5°	579.6	565.5	497.3	381.1	302.9	179.5	90.2	47.2	32.0	47.2	90.2
110°	638.8	624.2	549.8	434.9	366.5	238.1	137.9	86.3	66.7	86.3	137.9



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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°	697.5	686.5	598.7	491.1	432.4	301.7	196.6	135.2	116.9	135.2	196.6
115°	742.7	736.6	655.9	543.7	493.5	373.7	262.3	192.6	170.6	192.6	262.3
117.5°	790.3	789.2	697.5	598.4	566.9	439.6	322.2	250.1	226.8	250.1	322.2
120°	850.3	840.5	754.9	652.3	637.5	508.0	388.2	316.1	292.9	316.1	388.2
122.5°	891.8	885.7	803.8	703.6	703.6	577.7	451.8	379.6	355.2	379.6	451.8
125°	929.7	927.2	840.5	754.9	774.4	642.4	522.6	449.3	422.4	449.3	522.6
127.5°	963.9	967.5	888.1	811.2	846.6	708.5	592.3	511.6	483.5	511.6	592.3
130°	993.3	1005.5	933.3	862.5	915.1	780.6	654.7	574.0	555.7	574.0	654.7
132.5°	1050.7	1043.4	979.8	915.1	988.4	846.6	720.7	636.3	615.6	636.3	720.7
135°	1080.1	1082.5	1020.1	960.3	1056.8	912.6	783.0	699.9	679.1	699.9	783.0
137.5°	1115.4	1108.2	1051.9	1015.3	1120.4	976.2	844.1	767.1	734.1	767.1	844.1
140°	1141.2	1139.9	1093.5	1064.1	1188.8	1038.5	906.5	828.3	797.7	828.3	906.5
142.5°	1168.0	1176.4	1135.0	1117.9	1257.2	1104.4	973.7	889.1	858.8	889.1	973.7
145°	1186.4	1202.2	1176.6	1185.1	1322.0	1177.8	1032.4	945.6	913.8	945.6	1032.4
147.5°	1217.0	1237.7	1207.1	1232.8	1378.2	1242.6	1091.1	1005.5	977.4	1005.5	1091.1
150°	1258.5	1268.3	1250.0	1298.8	1435.7	1314.7	1150.9	1063.0	1034.8	1063.0	1150.9
152.5°	1291.4	1303.7	1282.9	1371.0	1480.9	1380.7	1217.0	1119.2	1086.1	1119.2	1217.0
155°	1325.7	1330.6	1315.9	1440.6	1528.6	1445.4	1269.5	1181.5	1149.7	1181.5	1269.5
157.5°	1357.5	1367.3	1350.1	1493.2	1570.2	1501.8	1329.4	1243.8	1215.7	1243.8	1329.4
160°	1391.7	1391.7	1401.5	1554.2	1604.4	1550.6	1393.0	1312.3	1273.2	1312.3	1393.0
162.5°	1395.4	1418.6	1471.2	1597.1	1637.4	1593.4	1461.4	1361.1	1326.9	1361.1	1461.4
165°	1449.2	1469.9	1549.4	1634.9	1663.0	1631.3	1545.7	1441.8	1401.5	1441.8	1545.7
167.5°	1505.4	1549.4	1612.9	1677.8	1687.5	1666.8	1610.6	1538.4	1501.8	1538.4	1610.6
170°	1597.1	1634.9	1666.8	1693.6	1707.1	1694.9	1650.8	1615.4	1592.2	1615.4	1650.8
172.5°	1668.2	1693.6	1705.9	1723.0	1715.4	1709.5	1687.5	1670.4	1657.2	1670.4	1687.5
175°	1713.4	1719.2	1730.3	1724.2	1732.5	1718.1	1719.2	1727.9	1676.8	1727.9	1719.2
177.5°	1729.3	1738.8	1732.7	1721.7	1724.0	1720.5	1725.4	1730.3	1722.0	1730.3	1725.4
180°	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3



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CATALOG NUMBER: MWL-4-42-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1055.2	1055.2	1055.2	1055.2	1055.2	1055.2
2.5°	1062.3	1059.6	1063.5	1051.5	1051.1	1050.6
5°	1053.4	1052.4	1053.4	1044.6	1047.1	1046.6
7.5°	1043.4	1047.5	1044.6	1037.5	1038.5	1038.0
10°	1031.4	1034.6	1032.6	1026.7	1028.7	1028.5
12.5°	1014.7	1015.4	1014.7	1008.8	1017.8	1016.1
15°	998.7	999.7	1000.0	991.1	994.3	1000.6
17.5°	977.1	977.1	977.1	972.4	976.6	976.1
20°	953.3	953.3	954.5	949.8	952.2	953.5
22.5°	925.8	928.7	926.9	923.3	926.6	923.7
25°	899.2	900.2	900.4	895.0	892.3	891.3
27.5°	874.9	878.6	876.1	868.5	859.8	855.9
30°	836.5	836.3	839.0	831.3	820.5	820.5
32.5°	805.1	805.1	807.5	794.0	779.2	779.2
35°	767.5	768.5	771.2	751.5	737.8	734.8
37.5°	725.3	737.3	728.9	706.3	690.6	692.6
40°	681.1	690.1	683.5	658.2	646.4	650.3
42.5°	632.9	645.9	635.4	608.8	603.1	610.0
45°	585.7	601.6	588.2	559.7	561.6	569.5
47.5°	531.7	550.5	532.9	515.5	523.3	534.1
50°	479.3	490.4	481.8	474.2	485.0	493.8
52.5°	432.1	426.5	434.6	433.6	449.6	460.4
55°	380.8	364.3	383.3	395.3	413.9	423.8
57.5°	330.7	309.3	333.2	356.9	381.5	388.4
60°	278.6	265.1	279.8	317.4	344.9	351.8
62.5°	235.4	222.6	236.6	279.1	311.5	316.4
65°	197.0	191.1	198.2	241.5	271.9	279.8
67.5°	166.6	165.6	166.6	204.1	234.6	242.4
70°	138.1	138.1	138.1	167.6	195.1	206.9
72.5°	113.2	117.1	114.5	137.1	160.7	175.4
75°	91.6	96.5	91.6	108.3	130.2	148.9
77.5°	71.9	77.8	71.9	84.7	111.5	136.0
80°	54.2	59.2	54.2	69.8	110.0	138.2
82.5°	38.5	41.5	38.5	72.6	122.1	151.7
85°	31.9	24.8	34.4	90.7	146.9	173.9
87.5°	28.7	7.9	45.8	118.2	183.4	204.2
90°	19.2	1.2	65.6	156.4	221.9	241.1
92.5°	12.3	20.5	96.6	195.7	267.4	285.0
95°	8.8	49.8	131.0	242.3	316.4	324.8
97.5°	15.6	87.8	172.1	290.2	366.6	371.7
100°	41.3	134.2	224.7	339.3	412.3	414.4
102.5°	76.8	184.4	274.8	384.6	461.6	478.2
105°	124.4	241.8	327.4	443.4	512.9	532.0
107.5°	179.5	302.9	381.1	497.3	565.5	579.6
110°	238.1	366.5	434.9	549.8	624.2	638.8



TEST NUMBER: P392671

CATALOG NUMBER: MWL-4-42-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	301.7	432.4	491.1	598.7	686.5	697.5
115°	373.7	493.5	543.7	655.9	736.6	742.7
117.5°	439.6	566.9	598.4	697.5	789.2	790.3
120°	508.0	637.5	652.3	754.9	840.5	850.3
122.5°	577.7	703.6	703.6	803.8	885.7	891.8
125°	642.4	774.4	754.9	840.5	927.2	929.7
127.5°	708.5	846.6	811.2	888.1	967.5	963.9
130°	780.6	915.1	862.5	933.3	1005.5	993.3
132.5°	846.6	988.4	915.1	979.8	1043.4	1050.7
135°	912.6	1056.8	960.3	1020.1	1082.5	1080.1
137.5°	976.2	1120.4	1015.3	1051.9	1108.2	1115.4
140°	1038.5	1188.8	1064.1	1093.5	1139.9	1141.2
142.5°	1104.4	1257.2	1117.9	1135.0	1176.4	1168.0
145°	1177.8	1322.0	1185.1	1176.6	1202.2	1186.4
147.5°	1242.6	1378.2	1232.8	1207.1	1237.7	1217.0
150°	1314.7	1435.7	1298.8	1250.0	1268.3	1258.5
152.5°	1380.7	1480.9	1371.0	1282.9	1303.7	1291.4
155°	1445.4	1528.6	1440.6	1315.9	1330.6	1325.7
157.5°	1501.8	1570.2	1493.2	1350.1	1367.3	1357.5
160°	1550.6	1604.4	1554.2	1401.5	1391.7	1391.7
162.5°	1593.4	1637.4	1597.1	1471.2	1418.6	1395.4
165°	1631.3	1663.0	1634.9	1549.4	1469.9	1449.2
167.5°	1666.8	1687.5	1677.8	1612.9	1549.4	1505.4
170°	1694.9	1707.1	1693.6	1666.8	1634.9	1597.1
172.5°	1709.5	1715.4	1723.0	1705.9	1693.6	1668.2
175°	1718.1	1732.5	1724.2	1730.3	1719.2	1713.4
177.5°	1720.5	1724.0	1721.7	1732.7	1738.8	1729.3
180°	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3

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