

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: P392593

Luminaire Tested: **MWL-3-37-25-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392593
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-3-37-25-UNV-L835-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

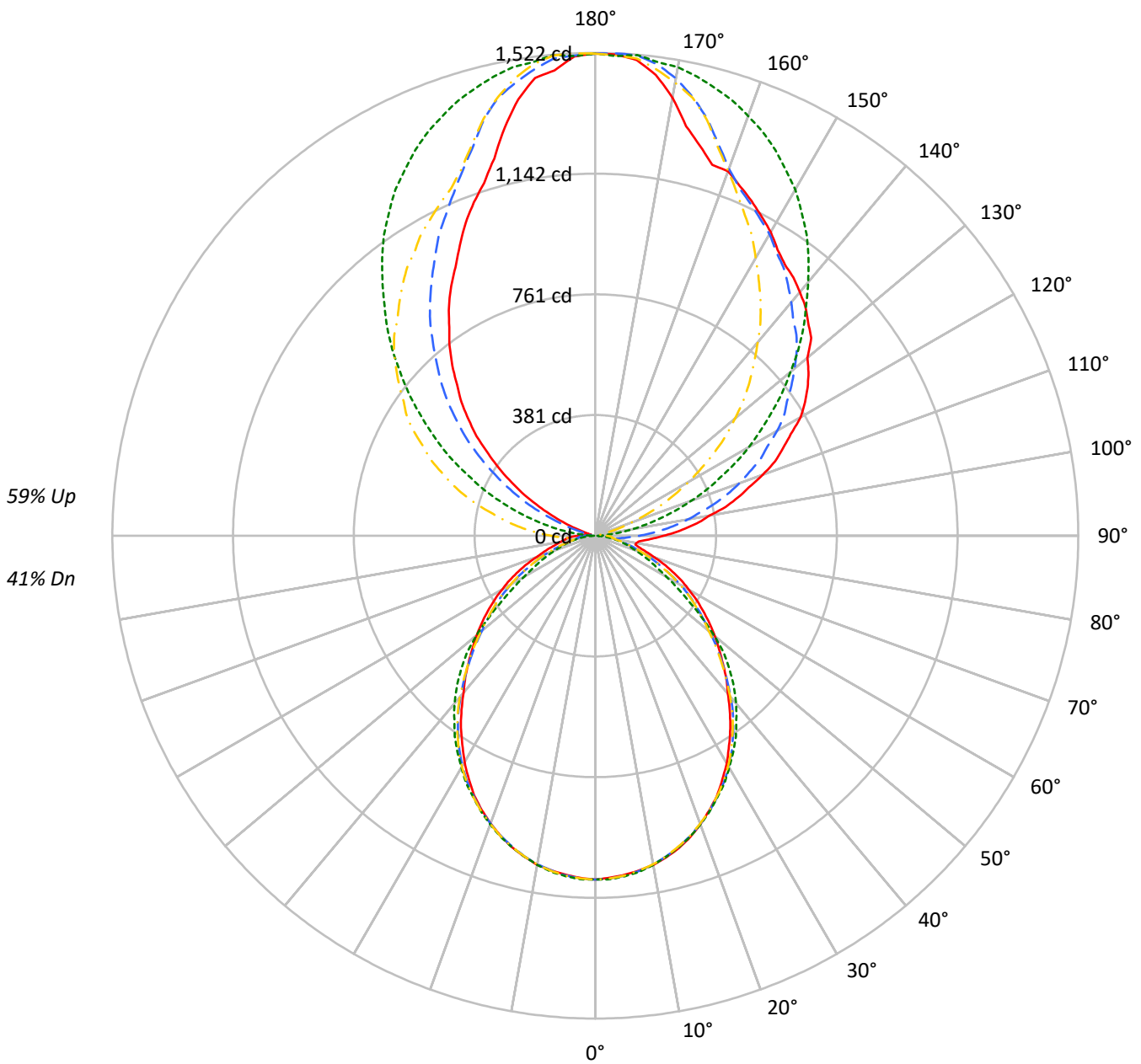
Lumens per Lamp: N/A
Luminaire Lumens: 6121.0 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 60.4
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



— 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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	64	60	57	54	48	46	44	37	36	34	29
3	80	71	64	58	73	65	59	54	53	49	45	43	40	37	33	31	30	25
4	73	63	55	49	66	58	51	46	48	43	39	39	35	32	30	28	26	22
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	27	25	23	19
6	62	50	42	37	56	46	39	34	39	33	29	31	28	25	25	22	20	17
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	28	48	38	31	27	32	27	23	26	22	20	21	18	16	14
9	50	38	30	25	45	35	28	24	29	24	21	24	20	18	19	17	15	12
10	46	34	27	23	42	32	26	21	27	22	19	22	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9332	9332	9332	9332
5°	9161	8561	9161	8561
10°	8990	7829	8990	7829
15°	8759	7142	8732	7142
20°	8444	6507	8416	6507
25°	8084	5894	8056	5894
30°	7625	5319	7586	5319
35°	7106	4773	7075	4773
40°	6547	4221	6505	4221
45°	6070	3648	6036	3648
50°	5645	2988	5607	2988
55°	5203	2226	5175	2226
60°	4727	1631	4712	1631
65°	4201	1237	4201	1237
70°	3586	912	3606	912
75°	3127	664	3199	664
80°	3639	432	3074	432
85°	6060	188	3402	188



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.7
10°-20°	286.1	4.7
20°-30°	417.6	6.8
30°-40°	471.8	7.7
40°-50°	441.6	7.2
50°-60°	348.7	5.7
60°-70°	228.1	3.7
70°-80°	119.3	1.9
80°-90°	78.4	1.3
90°-100°	122.7	2.0
100°-110°	235.5	3.8
110°-120°	403.6	6.6
120°-130°	548.2	9.0
130°-140°	625.4	10.2
140°-150°	624.0	10.2
150°-160°	543.4	8.9
160°-170°	382.3	6.2
170°-180°	142.4	2.3
0°-30°	805.7	13.2
0°-40°	1277.5	20.9
0°-60°	2067.7	33.8
0°-90°	2493.5	40.7
90°-120°	761.8	12.4
90°-150°	2559.5	41.8
90°-180°	3627.0	59.3
0°-180°	6121.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1084	1084	1084	1084	1084	
5°	1073	1077	1073	1077	1073	102
15°	1019	1016	1016	1016	1019	287
25°	906	910	903	910	906	416
35°	742	772	738	772	742	463
45°	568	599	564	599	568	439
55°	415	360	413	360	415	372
65°	268	191	268	191	268	266
75°	143	94	146	94	143	160
85°	159	24	89	24	159	124
90°	215	1	54	1	215	119
95°	290	44	36	44	290	253
105°	465	212	13	212	465	490
115°	652	434	150	434	652	647
125°	817	679	371	679	817	729
135°	949	927	597	927	949	732
145°	1042	1160	803	1160	1042	657
155°	1164	1342	1010	1342	1164	537
165°	1273	1461	1231	1461	1273	361
175°	1505	1521	1473	1521	1505	140
180°	1520	1520	1520	1520	1520	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7
2.5°	1078.6	1082.8	1080.9	1083.0	1083.9	1081.9	1080.9	1082.8	1079.7	1082.8	1080.9
5°	1072.7	1076.9	1076.0	1076.0	1077.0	1076.0	1074.9	1076.9	1072.7	1076.9	1074.9
7.5°	1064.0	1067.0	1065.1	1067.1	1068.1	1066.1	1064.1	1066.1	1064.0	1066.1	1064.1
10°	1053.3	1053.3	1052.3	1053.3	1053.3	1052.3	1051.3	1051.2	1053.3	1051.2	1051.3
12.5°	1037.6	1035.6	1034.6	1036.6	1035.5	1036.6	1034.6	1033.5	1035.6	1033.5	1034.6
15°	1019.1	1016.9	1014.9	1016.9	1015.8	1015.8	1013.9	1014.8	1015.9	1014.8	1013.9
17.5°	995.5	993.3	992.3	994.2	994.2	994.2	991.3	992.3	992.3	992.3	991.3
20°	968.0	968.8	966.8	969.6	968.5	968.5	965.7	966.8	964.8	966.8	965.7
22.5°	937.4	939.4	939.3	941.1	941.0	940.0	938.2	937.3	935.3	937.3	938.2
25°	905.9	905.0	908.8	912.6	909.6	911.5	906.7	901.8	902.8	901.8	906.7
27.5°	866.6	872.5	876.4	881.3	880.1	880.2	874.3	869.4	863.5	869.4	874.3
30°	828.3	831.2	841.1	846.9	843.7	844.8	837.9	828.1	824.1	828.1	837.9
32.5°	784.1	790.0	800.8	810.5	808.4	808.4	797.6	785.7	779.8	785.7	797.6
35°	741.7	743.7	757.4	771.2	772.0	768.0	754.3	740.5	738.5	740.5	754.3
37.5°	695.5	697.5	713.2	729.9	729.8	726.8	710.0	694.3	692.4	694.3	710.0
40°	650.3	651.3	664.0	685.7	690.5	683.5	659.8	647.0	646.1	647.0	659.8
42.5°	611.0	604.1	612.9	638.5	646.3	636.3	609.7	599.9	606.7	599.9	609.7
45°	567.7	559.9	564.8	588.4	599.1	586.2	560.4	556.6	564.5	556.6	560.4
47.5°	528.4	518.6	517.6	534.2	549.9	533.1	513.3	515.3	525.2	515.3	513.3
50°	491.1	479.3	470.4	482.1	488.9	479.9	466.1	474.9	487.8	474.9	466.1
52.5°	453.7	441.9	428.1	431.0	423.0	428.8	424.8	437.6	450.5	437.6	424.8
55°	415.3	405.4	388.7	378.8	360.0	376.6	385.5	402.2	413.1	402.2	385.5
57.5°	378.9	371.0	350.4	328.7	306.0	326.5	347.2	367.8	376.7	367.8	347.2
60°	340.5	336.5	309.0	277.5	258.8	276.4	306.9	334.4	339.4	334.4	306.9
62.5°	306.1	299.2	269.7	233.2	220.4	232.2	267.5	297.0	305.0	297.0	267.5
65°	267.6	262.7	229.3	196.9	190.9	195.8	228.2	261.6	267.6	261.6	228.2
67.5°	233.2	223.4	195.9	161.4	161.4	161.4	194.8	222.3	233.2	222.3	194.8
70°	196.8	186.9	161.4	134.9	135.8	134.9	161.4	188.0	197.9	188.0	161.4
72.5°	168.3	153.5	131.9	110.3	113.1	109.2	131.9	154.6	170.4	154.6	131.9
75°	142.7	125.0	104.3	89.5	94.5	89.5	105.4	126.1	146.0	126.1	105.4
77.5°	129.6	104.8	81.7	69.9	75.8	69.9	82.8	101.5	125.4	101.5	82.8
80°	131.2	102.0	67.2	53.2	58.1	53.2	65.1	84.9	110.8	84.9	65.1
82.5°	138.3	112.9	68.3	38.4	40.4	38.4	55.4	74.3	97.5	74.3	55.4
85°	158.7	134.3	83.1	31.8	23.7	29.7	51.9	68.8	89.1	68.8	51.9
87.5°	184.7	166.1	107.3	42.0	6.9	27.0	46.1	63.1	74.1	63.1	46.1
90°	214.7	200.0	140.1	57.7	1.1	16.9	33.8	48.8	53.7	48.8	33.8
92.5°	253.1	238.3	173.9	85.0	18.2	11.0	26.8	39.7	42.8	39.7	26.8
95°	290.1	281.6	214.1	113.6	43.9	6.3	20.9	32.6	35.7	32.6	20.9
97.5°	330.4	323.1	254.5	151.3	77.2	13.9	17.3	27.9	29.9	27.9	17.3
100°	365.3	362.3	296.8	197.4	117.9	36.4	12.4	25.3	27.2	25.3	12.4
102.5°	420.7	404.9	336.9	241.4	162.0	67.5	17.1	18.4	21.3	18.4	17.1
105°	465.3	447.3	389.5	287.6	212.4	109.4	42.9	15.8	13.4	15.8	42.9
107.5°	507.5	496.8	436.8	334.8	266.1	157.7	79.3	41.7	26.6	41.7	79.3
110°	561.1	548.3	482.9	382.1	321.9	209.3	121.2	76.0	58.9	76.0	121.2



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CATALOG NUMBER: MWL-3-37-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	612.7	603.0	525.9	431.4	379.9	265.0	172.7	118.9	102.8	118.9	172.7
115°	652.4	647.0	575.2	477.6	433.6	328.4	229.6	169.5	150.1	169.5	229.6
117.5°	694.3	693.2	611.8	524.8	497.9	385.2	282.2	219.9	199.4	219.9	282.2
120°	746.9	738.3	662.2	572.0	559.1	445.4	340.2	277.8	257.4	277.8	340.2
122.5°	783.4	778.0	705.1	617.1	617.1	506.5	396.0	333.6	312.2	333.6	396.0
125°	816.6	814.5	737.3	662.2	679.4	563.4	458.2	394.8	371.2	394.8	458.2
127.5°	846.7	849.9	779.1	711.5	742.7	621.4	519.4	449.6	424.9	449.6	519.4
130°	872.4	883.1	818.9	756.6	802.7	684.7	574.1	504.3	488.2	504.3	574.1
132.5°	922.8	916.5	860.6	802.7	867.2	742.7	633.1	559.1	540.8	559.1	633.1
135°	948.7	950.8	896.0	842.4	927.3	800.7	687.8	614.8	596.6	614.8	687.8
137.5°	979.8	973.4	922.9	890.8	983.1	856.4	740.5	673.9	644.9	673.9	740.5
140°	1002.4	1001.3	960.5	934.7	1043.2	912.1	796.2	727.5	700.7	727.5	796.2
142.5°	1025.9	1032.3	997.0	980.9	1103.3	969.1	855.3	780.1	754.4	780.1	855.3
145°	1042.1	1056.0	1033.4	1041.0	1160.2	1034.5	906.8	830.5	802.6	830.5	906.8
147.5°	1068.9	1087.1	1060.3	1082.9	1209.6	1091.4	958.3	883.1	858.5	883.1	958.3
150°	1105.4	1113.9	1097.8	1140.8	1260.0	1154.7	1010.9	933.7	909.0	933.7	1010.9
152.5°	1134.4	1145.1	1125.8	1203.2	1299.7	1211.7	1067.9	983.0	954.0	983.0	1067.9
155°	1164.4	1168.7	1155.8	1264.3	1341.6	1268.6	1115.0	1037.7	1009.8	1037.7	1115.0
157.5°	1192.3	1200.9	1185.9	1310.5	1378.1	1318.0	1167.6	1092.5	1067.8	1092.5	1167.6
160°	1222.3	1222.3	1231.0	1365.1	1408.1	1361.9	1223.4	1152.5	1118.2	1152.5	1223.4
162.5°	1225.6	1244.9	1292.1	1402.7	1438.1	1399.5	1283.6	1194.5	1165.4	1194.5	1283.6
165°	1272.8	1290.1	1360.8	1435.9	1460.6	1432.8	1357.6	1265.4	1231.0	1265.4	1357.6
167.5°	1322.2	1359.8	1416.7	1473.6	1482.1	1463.8	1414.5	1350.2	1319.0	1350.2	1414.5
170°	1401.7	1434.9	1463.8	1487.5	1499.3	1488.5	1449.9	1417.8	1397.4	1417.8	1449.9
172.5°	1465.0	1486.5	1498.2	1513.3	1505.7	1501.4	1482.1	1466.1	1455.4	1466.1	1482.1
175°	1504.7	1509.0	1519.7	1514.4	1520.7	1508.9	1510.0	1516.5	1472.6	1516.5	1510.0
177.5°	1518.7	1526.2	1521.8	1512.2	1513.3	1511.1	1515.3	1518.7	1512.3	1518.7	1515.3
180°	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7



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CATALOG NUMBER: MWL-3-37-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1083.7	1083.7	1083.7	1083.7	1083.7	1083.7
2.5°	1081.9	1083.9	1083.0	1080.9	1082.8	1078.6
5°	1076.0	1077.0	1076.0	1076.0	1076.9	1072.7
7.5°	1066.1	1068.1	1067.1	1065.1	1067.0	1064.0
10°	1052.3	1053.3	1053.3	1052.3	1053.3	1053.3
12.5°	1036.6	1035.5	1036.6	1034.6	1035.6	1037.6
15°	1015.8	1015.8	1016.9	1014.9	1016.9	1019.1
17.5°	994.2	994.2	994.2	992.3	993.3	995.5
20°	968.5	968.5	969.6	966.8	968.8	968.0
22.5°	940.0	941.0	941.1	939.3	939.4	937.4
25°	911.5	909.6	912.6	908.8	905.0	905.9
27.5°	880.2	880.1	881.3	876.4	872.5	866.6
30°	844.8	843.7	846.9	841.1	831.2	828.3
32.5°	808.4	808.4	810.5	800.8	790.0	784.1
35°	768.0	772.0	771.2	757.4	743.7	741.7
37.5°	726.8	729.8	729.9	713.2	697.5	695.5
40°	683.5	690.5	685.7	664.0	651.3	650.3
42.5°	636.3	646.3	638.5	612.9	604.1	611.0
45°	586.2	599.1	588.4	564.8	559.9	567.7
47.5°	533.1	549.9	534.2	517.6	518.6	528.4
50°	479.9	488.9	482.1	470.4	479.3	491.1
52.5°	428.8	423.0	431.0	428.1	441.9	453.7
55°	376.6	360.0	378.8	388.7	405.4	415.3
57.5°	326.5	306.0	328.7	350.4	371.0	378.9
60°	276.4	258.8	277.5	309.0	336.5	340.5
62.5°	232.2	220.4	233.2	269.7	299.2	306.1
65°	195.8	190.9	196.9	229.3	262.7	267.6
67.5°	161.4	161.4	161.4	195.9	223.4	233.2
70°	134.9	135.8	134.9	161.4	186.9	196.8
72.5°	109.2	113.1	110.3	131.9	153.5	168.3
75°	89.5	94.5	89.5	104.3	125.0	142.7
77.5°	69.9	75.8	69.9	81.7	104.8	129.6
80°	53.2	58.1	53.2	67.2	102.0	131.2
82.5°	38.4	40.4	38.4	68.3	112.9	138.3
85°	29.7	23.7	31.8	83.1	134.3	158.7
87.5°	27.0	6.9	42.0	107.3	166.1	184.7
90°	16.9	1.1	57.7	140.1	200.0	214.7
92.5°	11.0	18.2	85.0	173.9	238.3	253.1
95°	6.3	43.9	113.6	214.1	281.6	290.1
97.5°	13.9	77.2	151.3	254.5	323.1	330.4
100°	36.4	117.9	197.4	296.8	362.3	365.3
102.5°	67.5	162.0	241.4	336.9	404.9	420.7
105°	109.4	212.4	287.6	389.5	447.3	465.3
107.5°	157.7	266.1	334.8	436.8	496.8	507.5
110°	209.3	321.9	382.1	482.9	548.3	561.1



TEST NUMBER: P392593

CATALOG NUMBER: MWL-3-37-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	265.0	379.9	431.4	525.9	603.0	612.7
115°	328.4	433.6	477.6	575.2	647.0	652.4
117.5°	385.2	497.9	524.8	611.8	693.2	694.3
120°	445.4	559.1	572.0	662.2	738.3	746.9
122.5°	506.5	617.1	617.1	705.1	778.0	783.4
125°	563.4	679.4	662.2	737.3	814.5	816.6
127.5°	621.4	742.7	711.5	779.1	849.9	846.7
130°	684.7	802.7	756.6	818.9	883.1	872.4
132.5°	742.7	867.2	802.7	860.6	916.5	922.8
135°	800.7	927.3	842.4	896.0	950.8	948.7
137.5°	856.4	983.1	890.8	922.9	973.4	979.8
140°	912.1	1043.2	934.7	960.5	1001.3	1002.4
142.5°	969.1	1103.3	980.9	997.0	1032.3	1025.9
145°	1034.5	1160.2	1041.0	1033.4	1056.0	1042.1
147.5°	1091.4	1209.6	1082.9	1060.3	1087.1	1068.9
150°	1154.7	1260.0	1140.8	1097.8	1113.9	1105.4
152.5°	1211.7	1299.7	1203.2	1125.8	1145.1	1134.4
155°	1268.6	1341.6	1264.3	1155.8	1168.7	1164.4
157.5°	1318.0	1378.1	1310.5	1185.9	1200.9	1192.3
160°	1361.9	1408.1	1365.1	1231.0	1222.3	1222.3
162.5°	1399.5	1438.1	1402.7	1292.1	1244.9	1225.6
165°	1432.8	1460.6	1435.9	1360.8	1290.1	1272.8
167.5°	1463.8	1482.1	1473.6	1416.7	1359.8	1322.2
170°	1488.5	1499.3	1487.5	1463.8	1434.9	1401.7
172.5°	1501.4	1505.7	1513.3	1498.2	1486.5	1465.0
175°	1508.9	1520.7	1514.4	1519.7	1509.0	1504.7
177.5°	1511.1	1513.3	1512.2	1521.8	1526.2	1518.7
180°	1519.7	1519.7	1519.7	1519.7	1519.7	1519.7

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