

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: P392656

Luminaire Tested: **MWL-4-34-25-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392656
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-4-34-25-UNV-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

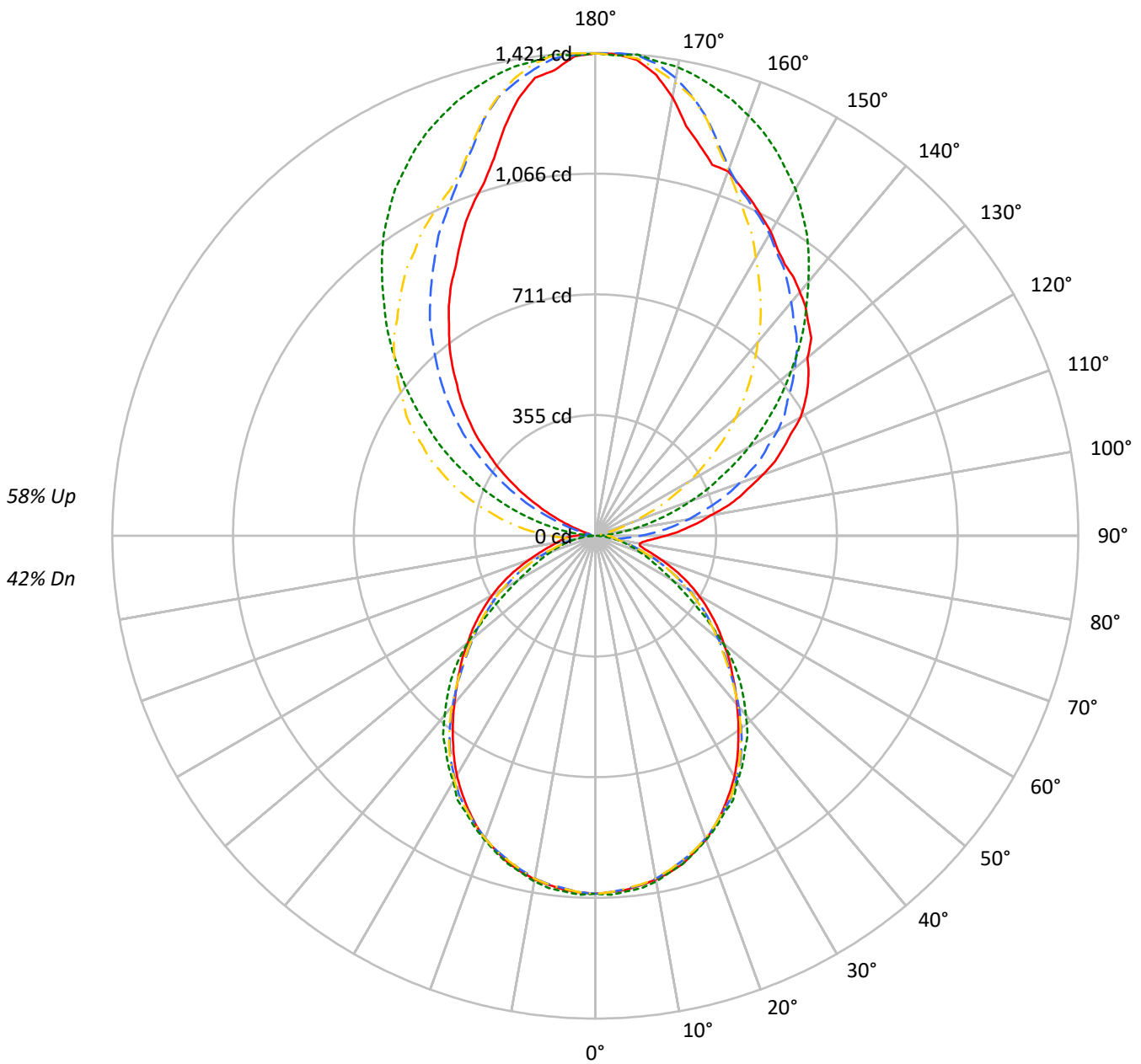
Lumens per Lamp: N/A
Luminaire Lumens: 5882.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 57.1
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: P392656
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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				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	50	30	10	0
RCR																					
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42			
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36			
2	88	80	74	69	80	74	69	64	61	57	54	49	47	44	38	37	35	30			
3	80	71	64	58	73	65	59	54	54	49	46	44	41	38	34	32	30	26			
4	73	63	55	49	67	58	51	46	48	43	39	39	36	33	31	28	26	22			
5	67	56	48	42	61	52	45	39	43	38	34	35	31	28	28	25	23	20			
6	62	50	42	37	57	46	39	34	39	34	30	32	28	25	25	23	20	17			
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	16			
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	19	16	14			
9	50	38	30	25	45	35	28	24	30	24	21	24	21	18	20	17	15	13			
10	46	35	27	23	42	32	26	21	27	22	19	23	19	16	18	16	13	11			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6805	6805	6805	6805
5°	6718	6264	6718	6264
10°	6614	5759	6614	5759
15°	6496	5266	6476	5266
20°	6301	4799	6280	4799
25°	6046	4370	6025	4370
30°	5760	3950	5732	3950
35°	5388	3560	5366	3560
40°	5029	3159	4999	3159
45°	4699	2743	4675	2743
50°	4402	2244	4375	2244
55°	4143	1687	4124	1687
60°	3840	1251	3830	1251
65°	3488	927	3488	927
70°	3030	693	3046	693
75°	2666	508	2720	508
80°	3091	329	2647	329
85°	5274	147	3068	147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	1.7
10°-20°	280.2	4.8
20°-30°	411.6	7.0
30°-40°	467.9	8.0
40°-50°	440.4	7.5
50°-60°	353.2	6.0
60°-70°	234.7	4.0
70°-80°	123.4	2.1
80°-90°	78.4	1.3
90°-100°	116.8	2.0
100°-110°	221.0	3.8
110°-120°	377.3	6.4
120°-130°	512.6	8.7
130°-140°	584.5	9.9
140°-150°	583.0	9.9
150°-160°	507.6	8.6
160°-170°	357.1	6.1
170°-180°	133.0	2.3
0°-30°	791.2	13.5
0°-40°	1259.1	21.4
0°-60°	2052.6	34.9
0°-90°	2489.2	42.3
90°-120°	715.0	12.2
90°-150°	2395.1	40.7
90°-180°	3393.0	57.7
0°-180°	5882.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1054	1054	1054	1054	1054	
5°	1046	1051	1046	1051	1046	99
15°	999	999	996	999	999	281
25°	890	899	886	899	890	409
35°	733	768	730	768	733	459
45°	568	601	565	601	568	440
55°	423	364	421	364	423	378
65°	279	191	279	191	279	276
75°	148	96	151	96	148	165
85°	156	25	91	25	156	123
90°	206	1	56	1	206	114
95°	272	41	34	41	272	238
105°	438	198	16	198	438	460
115°	609	405	140	405	609	605
125°	763	635	347	635	763	681
135°	886	867	557	867	886	684
145°	973	1085	750	1085	973	614
155°	1088	1254	943	1254	1088	502
165°	1189	1364	1150	1364	1189	337
175°	1405	1421	1375	1421	1405	131
180°	1419	1419	1419	1419	1419	



TEST NUMBER: P392656

CATALOG NUMBER: MWL-4-34-25-UNV-L835-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6
2.5°	1049.7	1049.7	1049.8	1061.6	1057.6	1060.6	1049.8	1049.7	1050.6	1049.7	1049.8
5°	1045.7	1045.7	1042.9	1051.7	1050.7	1051.7	1041.8	1045.7	1045.7	1045.7	1041.8
7.5°	1036.9	1036.9	1035.9	1042.9	1045.8	1041.8	1034.9	1035.9	1036.9	1035.9	1034.9
10°	1027.1	1027.1	1025.1	1031.0	1033.0	1030.0	1024.1	1025.1	1027.1	1025.1	1024.1
12.5°	1014.4	1016.3	1007.4	1013.3	1014.3	1013.3	1007.4	1014.3	1012.3	1014.3	1007.4
15°	998.7	992.7	989.7	998.6	998.6	997.6	988.7	990.7	995.6	990.7	988.7
17.5°	974.1	975.0	971.0	976.0	976.0	976.0	970.1	974.0	971.0	974.0	970.1
20°	951.5	950.5	948.4	953.4	952.4	952.4	947.5	948.4	948.4	948.4	947.5
22.5°	922.0	925.0	921.9	925.8	927.8	924.9	920.9	922.9	919.9	922.9	920.9
25°	889.6	890.6	893.4	899.3	899.3	898.3	891.4	887.5	886.5	887.5	891.4
27.5°	854.2	858.1	866.9	874.7	877.7	873.8	864.9	855.1	851.2	855.1	864.9
30°	818.8	818.8	829.6	837.4	835.4	835.4	826.6	815.8	814.8	815.8	826.6
32.5°	777.5	777.5	792.3	805.9	804.0	804.0	789.2	773.5	773.5	773.5	789.2
35°	733.2	736.2	749.9	769.6	767.6	766.6	747.0	733.2	730.3	733.2	747.0
37.5°	691.0	689.0	704.7	727.3	736.2	724.4	701.8	686.1	688.0	686.1	701.8
40°	648.7	644.8	656.6	682.1	689.0	680.2	652.6	640.8	644.8	640.8	652.6
42.5°	608.4	601.5	607.4	634.0	644.8	632.0	604.5	597.6	604.5	597.6	604.5
45°	568.1	560.3	558.3	586.8	600.6	584.8	554.3	557.3	565.2	557.3	554.3
47.5°	532.7	521.9	514.1	531.8	549.5	530.8	510.0	519.0	529.8	519.0	510.0
50°	492.5	483.6	472.8	480.7	489.5	478.7	468.8	479.6	489.5	479.6	468.8
52.5°	459.0	448.2	432.5	433.5	425.6	431.5	429.5	444.2	456.1	444.2	429.5
55°	422.7	412.8	394.2	382.4	363.7	380.3	391.1	409.8	420.7	409.8	391.1
57.5°	387.3	380.4	355.9	332.3	308.7	330.2	352.8	377.4	385.3	377.4	352.8
60°	350.9	344.1	316.5	279.2	264.5	278.1	314.5	342.0	350.0	342.0	314.5
62.5°	315.6	310.6	278.2	236.0	222.1	234.9	276.2	308.6	314.6	308.6	276.2
65°	279.2	271.3	240.9	197.6	190.7	196.5	239.8	270.3	279.2	270.3	239.8
67.5°	241.9	234.0	203.5	166.1	165.1	166.1	202.4	232.9	241.9	232.9	202.4
70°	206.4	194.6	167.1	137.6	137.6	137.6	167.1	195.7	207.5	195.7	167.1
72.5°	174.9	160.2	136.6	114.0	116.9	113.0	136.6	161.3	177.0	161.3	136.6
75°	148.4	129.7	108.1	91.4	96.3	91.4	109.1	130.8	151.4	130.8	109.1
77.5°	133.8	110.2	84.5	71.7	77.6	71.7	85.5	107.2	129.8	107.2	85.5
80°	132.2	105.5	68.9	54.1	59.0	54.1	66.8	89.5	113.2	89.5	66.8
82.5°	140.5	112.8	69.1	38.3	41.3	38.3	57.1	76.8	102.5	76.8	57.1
85°	155.9	131.1	82.4	33.5	24.6	31.4	53.3	70.0	90.7	70.0	53.3
87.5°	178.3	159.4	103.5	41.7	7.9	27.6	46.4	63.2	75.0	63.2	46.4
90°	206.5	189.6	133.8	56.8	1.0	18.7	34.5	48.3	56.1	48.3	34.5
92.5°	240.8	225.8	164.9	81.0	17.0	11.8	27.6	40.4	44.3	40.4	27.6
95°	272.0	265.0	202.1	108.2	41.1	8.0	21.7	32.4	34.5	32.4	21.7
97.5°	309.3	305.2	240.3	141.3	72.1	13.0	18.8	29.6	28.6	29.6	18.8
100°	343.5	341.4	279.5	184.5	110.3	34.1	13.9	26.7	27.7	26.7	13.9
102.5°	394.7	380.7	315.8	225.5	151.3	63.1	17.0	19.9	21.8	19.9	17.0
105°	437.9	421.9	363.8	268.6	198.4	102.2	40.1	18.9	15.8	18.9	40.1
107.5°	476.0	464.1	407.9	312.7	248.5	147.3	74.2	39.0	27.0	39.0	74.2
110°	524.2	512.2	451.1	356.8	300.7	195.5	113.2	71.2	55.1	71.2	113.2



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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°	572.3	563.3	491.2	402.9	354.9	247.6	161.4	111.2	96.2	111.2	161.4
115°	609.4	604.4	538.2	446.1	405.0	306.7	215.5	158.3	140.3	158.3	215.5
117.5°	648.5	647.5	572.3	491.1	465.1	360.9	264.6	205.5	186.4	205.5	264.6
120°	697.6	689.6	619.4	535.2	523.2	417.0	318.7	259.5	240.6	259.5	318.7
122.5°	731.7	726.6	659.5	577.4	577.4	474.1	370.9	311.7	291.7	311.7	370.9
125°	762.8	760.7	689.6	619.4	635.4	527.2	429.0	368.8	346.8	368.8	429.0
127.5°	790.8	793.9	728.7	665.5	694.6	581.3	486.2	419.9	396.9	419.9	486.2
130°	814.9	824.9	765.8	707.7	750.7	640.5	537.3	471.1	456.1	471.1	537.3
132.5°	862.0	856.0	803.9	750.7	810.9	694.6	591.3	522.2	505.1	522.2	591.3
135°	886.0	888.1	836.9	787.9	867.0	748.8	642.5	574.3	557.3	574.3	642.5
137.5°	915.1	909.1	863.0	833.0	919.2	800.8	692.6	629.4	602.4	629.4	692.6
140°	936.2	935.2	897.0	873.1	975.3	851.9	743.7	679.6	654.5	679.6	743.7
142.5°	958.3	965.2	931.1	917.1	1031.4	906.1	798.9	729.7	704.6	729.7	798.9
145°	973.3	986.3	965.2	972.2	1084.6	966.2	846.9	775.8	749.7	775.8	846.9
147.5°	998.4	1015.4	990.3	1011.3	1130.6	1019.4	895.1	824.9	801.8	824.9	895.1
150°	1032.4	1040.4	1025.4	1065.5	1177.7	1078.6	944.2	872.0	849.0	872.0	944.2
152.5°	1059.5	1069.5	1052.4	1124.6	1214.9	1132.6	998.4	918.2	891.1	918.2	998.4
155°	1087.5	1091.5	1079.5	1181.7	1254.0	1185.8	1041.4	969.3	943.2	969.3	1041.4
157.5°	1113.6	1121.6	1107.5	1224.9	1288.0	1231.9	1090.5	1020.4	997.3	1020.4	1090.5
160°	1141.6	1141.6	1149.7	1275.0	1316.1	1272.0	1142.6	1076.5	1044.5	1076.5	1142.6
162.5°	1144.7	1163.8	1206.8	1310.1	1343.1	1307.0	1198.8	1116.6	1088.6	1116.6	1198.8
165°	1188.8	1205.8	1271.0	1341.1	1364.2	1338.1	1267.9	1182.7	1149.7	1182.7	1267.9
167.5°	1234.9	1271.0	1323.1	1376.2	1384.3	1367.2	1321.1	1261.9	1231.9	1261.9	1321.1
170°	1310.1	1341.1	1367.2	1389.3	1400.3	1390.3	1354.2	1325.1	1306.1	1325.1	1354.2
172.5°	1368.3	1389.3	1399.3	1413.3	1407.3	1402.3	1384.3	1370.2	1359.2	1370.2	1384.3
175°	1405.3	1410.3	1419.4	1414.4	1421.3	1409.3	1410.3	1417.3	1375.2	1417.3	1410.3
177.5°	1418.4	1426.3	1421.3	1412.3	1414.3	1411.3	1415.3	1419.4	1412.3	1419.4	1415.3
180°	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1053.6	1053.6	1053.6	1053.6	1053.6	1053.6
2.5°	1060.6	1057.6	1061.6	1049.8	1049.7	1049.7
5°	1051.7	1050.7	1051.7	1042.9	1045.7	1045.7
7.5°	1041.8	1045.8	1042.9	1035.9	1036.9	1036.9
10°	1030.0	1033.0	1031.0	1025.1	1027.1	1027.1
12.5°	1013.3	1014.3	1013.3	1007.4	1016.3	1014.4
15°	997.6	998.6	998.6	989.7	992.7	998.7
17.5°	976.0	976.0	976.0	971.0	975.0	974.1
20°	952.4	952.4	953.4	948.4	950.5	951.5
22.5°	924.9	927.8	925.8	921.9	925.0	922.0
25°	898.3	899.3	899.3	893.4	890.6	889.6
27.5°	873.8	877.7	874.7	866.9	858.1	854.2
30°	835.4	835.4	837.4	829.6	818.8	818.8
32.5°	804.0	804.0	805.9	792.3	777.5	777.5
35°	766.6	767.6	769.6	749.9	736.2	733.2
37.5°	724.4	736.2	727.3	704.7	689.0	691.0
40°	680.2	689.0	682.1	656.6	644.8	648.7
42.5°	632.0	644.8	634.0	607.4	601.5	608.4
45°	584.8	600.6	586.8	558.3	560.3	568.1
47.5°	530.8	549.5	531.8	514.1	521.9	532.7
50°	478.7	489.5	480.7	472.8	483.6	492.5
52.5°	431.5	425.6	433.5	432.5	448.2	459.0
55°	380.3	363.7	382.4	394.2	412.8	422.7
57.5°	330.2	308.7	332.3	355.9	380.4	387.3
60°	278.1	264.5	279.2	316.5	344.1	350.9
62.5°	234.9	222.1	236.0	278.2	310.6	315.6
65°	196.5	190.7	197.6	240.9	271.3	279.2
67.5°	166.1	165.1	166.1	203.5	234.0	241.9
70°	137.6	137.6	137.6	167.1	194.6	206.4
72.5°	113.0	116.9	114.0	136.6	160.2	174.9
75°	91.4	96.3	91.4	108.1	129.7	148.4
77.5°	71.7	77.6	71.7	84.5	110.2	133.8
80°	54.1	59.0	54.1	68.9	105.5	132.2
82.5°	38.3	41.3	38.3	69.1	112.8	140.5
85°	31.4	24.6	33.5	82.4	131.1	155.9
87.5°	27.6	7.9	41.7	103.5	159.4	178.3
90°	18.7	1.0	56.8	133.8	189.6	206.5
92.5°	11.8	17.0	81.0	164.9	225.8	240.8
95°	8.0	41.1	108.2	202.1	265.0	272.0
97.5°	13.0	72.1	141.3	240.3	305.2	309.3
100°	34.1	110.3	184.5	279.5	341.4	343.5
102.5°	63.1	151.3	225.5	315.8	380.7	394.7
105°	102.2	198.4	268.6	363.8	421.9	437.9
107.5°	147.3	248.5	312.7	407.9	464.1	476.0
110°	195.5	300.7	356.8	451.1	512.2	524.2



TEST NUMBER: P392656

CATALOG NUMBER: MWL-4-34-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	247.6	354.9	402.9	491.2	563.3	572.3
115°	306.7	405.0	446.1	538.2	604.4	609.4
117.5°	360.9	465.1	491.1	572.3	647.5	648.5
120°	417.0	523.2	535.2	619.4	689.6	697.6
122.5°	474.1	577.4	577.4	659.5	726.6	731.7
125°	527.2	635.4	619.4	689.6	760.7	762.8
127.5°	581.3	694.6	665.5	728.7	793.9	790.8
130°	640.5	750.7	707.7	765.8	824.9	814.9
132.5°	694.6	810.9	750.7	803.9	856.0	862.0
135°	748.8	867.0	787.9	836.9	888.1	886.0
137.5°	800.8	919.2	833.0	863.0	909.1	915.1
140°	851.9	975.3	873.1	897.0	935.2	936.2
142.5°	906.1	1031.4	917.1	931.1	965.2	958.3
145°	966.2	1084.6	972.2	965.2	986.3	973.3
147.5°	1019.4	1130.6	1011.3	990.3	1015.4	998.4
150°	1078.6	1177.7	1065.5	1025.4	1040.4	1032.4
152.5°	1132.6	1214.9	1124.6	1052.4	1069.5	1059.5
155°	1185.8	1254.0	1181.7	1079.5	1091.5	1087.5
157.5°	1231.9	1288.0	1224.9	1107.5	1121.6	1113.6
160°	1272.0	1316.1	1275.0	1149.7	1141.6	1141.6
162.5°	1307.0	1343.1	1310.1	1206.8	1163.8	1144.7
165°	1338.1	1364.2	1341.1	1271.0	1205.8	1188.8
167.5°	1367.2	1384.3	1376.2	1323.1	1271.0	1234.9
170°	1390.3	1400.3	1389.3	1367.2	1341.1	1310.1
172.5°	1402.3	1407.3	1413.3	1399.3	1389.3	1368.3
175°	1409.3	1421.3	1414.4	1419.4	1410.3	1405.3
177.5°	1411.3	1414.3	1412.3	1421.3	1426.3	1418.4
180°	1419.4	1419.4	1419.4	1419.4	1419.4	1419.4

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