

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: P392592

Luminaire Tested: **MWL-3-37-25-UNV-L930-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392592
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-L930-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

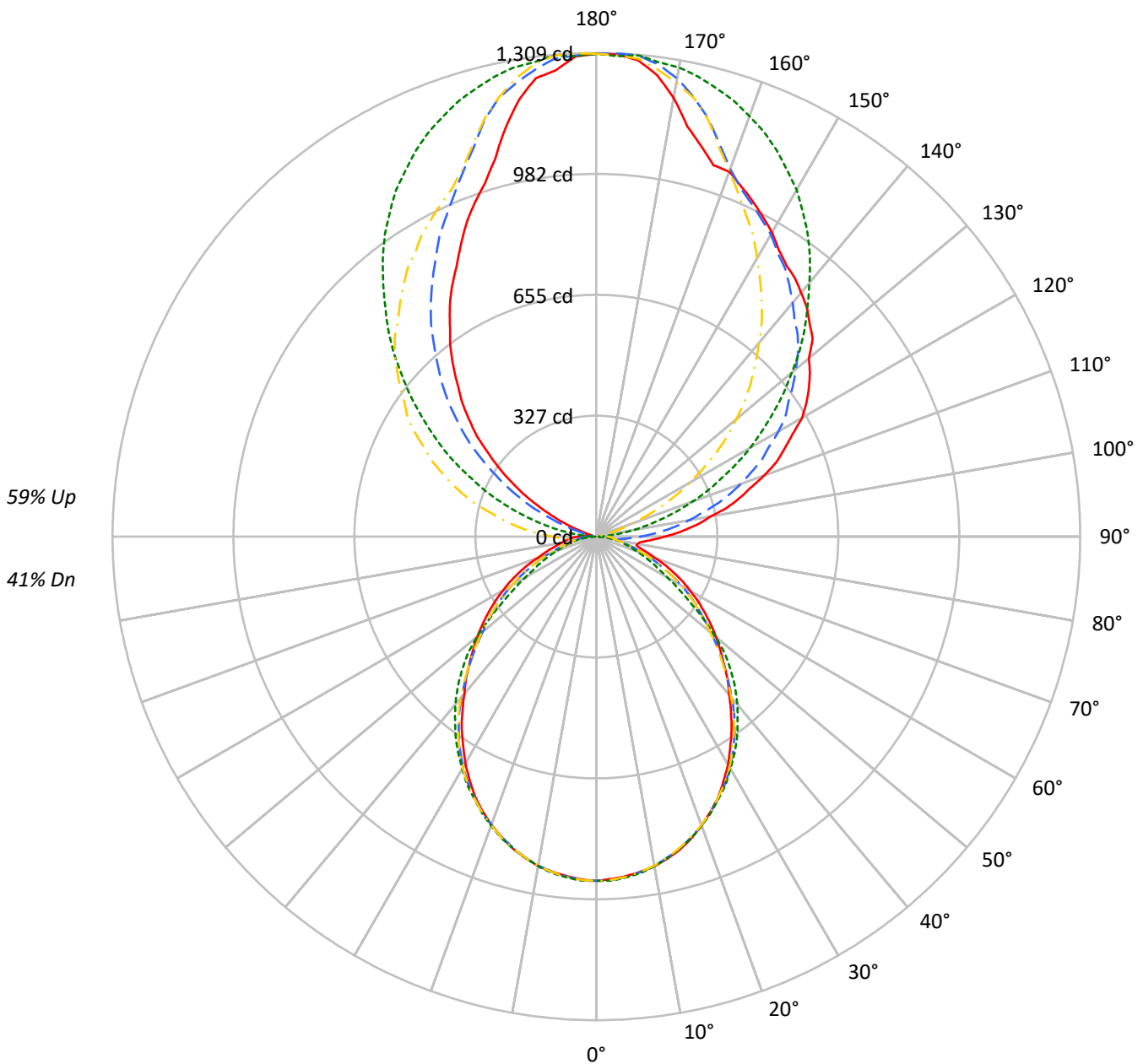
Lumens per Lamp: N/A
Luminaire Lumens: 5263.6 lumens
Efficiency: N/A
Efficacy: 86.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 61.004
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	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°	8025	8025	8025	8025
5°	7878	7361	7878	7361
10°	7731	6733	7731	6733
15°	7533	6142	7509	6142
20°	7260	5596	7237	5596
25°	6952	5068	6927	5068
30°	6556	4573	6523	4573
35°	6110	4104	6085	4104
40°	5630	3629	5594	3629
45°	5220	3137	5190	3137
50°	4854	2570	4822	2570
55°	4474	1914	4451	1914
60°	4065	1403	4052	1403
65°	3614	1063	3614	1063
70°	3083	785	3100	785
75°	2689	571	2752	571
80°	3132	371	2644	371
85°	5212	161	2925	161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	1.7
10°-20°	246.0	4.7
20°-30°	359.1	6.8
30°-40°	405.7	7.7
40°-50°	379.7	7.2
50°-60°	299.8	5.7
60°-70°	196.1	3.7
70°-80°	102.6	1.9
80°-90°	67.4	1.3
90°-100°	105.5	2.0
100°-110°	202.5	3.8
110°-120°	347.1	6.6
120°-130°	471.4	9.0
130°-140°	537.8	10.2
140°-150°	536.6	10.2
150°-160°	467.2	8.9
160°-170°	328.7	6.2
170°-180°	122.4	2.3
0°-30°	692.8	13.2
0°-40°	1098.6	20.9
0°-60°	1778.1	33.8
0°-90°	2144.3	40.7
90°-120°	655.1	12.4
90°-150°	2200.9	41.8
90°-180°	3119.0	59.3
0°-180°	5263.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	932	932	932	932	932	
5°	922	926	922	926	922	88
15°	876	874	874	874	876	247
25°	779	782	776	782	779	357
35°	638	664	635	664	638	398
45°	488	515	485	515	488	378
55°	357	310	355	310	357	320
65°	230	164	230	164	230	229
75°	123	81	126	81	123	137
85°	136	20	77	20	136	107
90°	185	1	46	1	185	102
95°	249	38	31	38	249	218
105°	400	183	12	183	400	422
115°	561	373	129	373	561	557
125°	702	584	319	584	702	627
135°	816	797	513	797	816	630
145°	896	998	690	998	896	565
155°	1001	1154	868	1154	1001	462
165°	1094	1256	1058	1256	1094	310
175°	1294	1308	1266	1308	1294	121
180°	1307	1307	1307	1307	1307	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	931.9	931.9	931.9	931.9	931.9	931.9	931.9	931.9	931.9	931.9	931.9
2.5°	927.5	931.1	929.5	931.3	932.1	930.3	929.5	931.1	928.5	931.1	929.5
5°	922.5	926.0	925.2	925.2	926.1	925.2	924.3	926.0	922.5	926.0	924.3
7.5°	914.9	917.6	915.9	917.7	918.5	916.7	915.0	916.7	914.9	916.7	915.0
10°	905.8	905.8	904.9	905.8	905.8	904.9	904.0	904.0	905.8	904.0	904.0
12.5°	892.3	890.5	889.7	891.3	890.4	891.3	889.7	888.8	890.5	888.8	889.7
15°	876.4	874.4	872.8	874.4	873.5	873.5	871.9	872.7	873.6	872.7	871.9
17.5°	856.0	854.2	853.4	855.0	855.0	855.0	852.4	853.4	853.4	853.4	852.4
20°	832.3	833.1	831.4	833.8	832.9	832.9	830.4	831.4	829.7	831.4	830.4
22.5°	806.1	807.8	807.7	809.3	809.2	808.4	806.8	806.0	804.3	806.0	806.8
25°	779.1	778.2	781.5	784.8	782.1	783.8	779.7	775.5	776.3	775.5	779.7
27.5°	745.3	750.3	753.6	757.8	756.8	756.9	751.9	747.6	742.5	747.6	751.9
30°	712.2	714.8	723.2	728.3	725.5	726.5	720.5	712.1	708.6	712.1	720.5
32.5°	674.2	679.3	688.6	697.0	695.2	695.2	685.9	675.7	670.6	675.7	685.9
35°	637.8	639.5	651.3	663.2	663.8	660.5	648.7	636.8	635.1	636.8	648.7
37.5°	598.1	599.8	613.3	627.6	627.6	625.0	610.6	597.1	595.4	597.1	610.6
40°	559.2	560.1	571.0	589.7	593.8	587.7	567.4	556.4	555.6	556.4	567.4
42.5°	525.4	519.5	527.1	549.1	555.8	547.2	524.2	515.8	521.8	515.8	524.2
45°	488.2	481.5	485.7	505.9	515.2	504.1	482.0	478.6	485.4	478.6	482.0
47.5°	454.4	446.0	445.1	459.4	472.9	458.5	441.4	443.2	451.6	443.2	441.4
50°	422.3	412.2	404.5	414.5	420.4	412.7	400.8	408.4	419.5	408.4	400.8
52.5°	390.1	380.0	368.1	370.6	363.8	368.8	365.3	376.3	387.3	376.3	365.3
55°	357.1	348.7	334.3	325.8	309.6	323.8	331.5	345.9	355.3	345.9	331.5
57.5°	325.9	319.1	301.3	282.6	263.1	280.8	298.5	316.3	323.9	316.3	298.5
60°	292.8	289.4	265.7	238.6	222.6	237.6	263.9	287.6	291.9	287.6	263.9
62.5°	263.2	257.3	231.9	200.6	189.5	199.6	230.1	255.4	262.3	255.4	230.1
65°	230.2	225.9	197.2	169.3	164.1	168.4	196.3	225.0	230.2	225.0	196.3
67.5°	200.6	192.1	168.4	138.8	138.8	138.8	167.6	191.2	200.6	191.2	167.6
70°	169.2	160.8	138.8	116.0	116.8	116.0	138.8	161.7	170.1	161.7	138.8
72.5°	144.7	132.0	113.4	94.8	97.3	93.9	113.4	133.0	146.6	133.0	113.4
75°	122.7	107.5	89.6	77.0	81.2	77.0	90.6	108.5	125.6	108.5	90.6
77.5°	111.5	90.1	70.3	60.1	65.2	60.1	71.1	87.3	107.9	87.3	71.1
80°	112.9	87.7	57.8	45.7	49.9	45.7	55.9	73.0	95.3	73.0	55.9
82.5°	119.0	97.1	58.7	33.0	34.8	33.0	47.6	63.9	83.8	63.9	47.6
85°	136.5	115.4	71.4	27.4	20.3	25.5	44.6	59.2	76.6	59.2	44.6
87.5°	158.8	142.8	92.3	36.1	5.9	23.2	39.6	54.2	63.7	54.2	39.6
90°	184.6	172.0	120.5	49.6	1.0	14.5	29.1	41.9	46.1	41.9	29.1
92.5°	217.7	204.9	149.5	73.1	15.7	9.5	23.1	34.2	36.8	34.2	23.1
95°	249.4	242.1	184.1	97.7	37.8	5.4	18.0	28.1	30.6	28.1	18.0
97.5°	284.0	277.8	218.8	130.0	66.4	11.9	14.9	24.0	25.7	24.0	14.9
100°	314.2	311.5	255.3	169.8	101.4	31.3	10.7	21.7	23.4	21.7	10.7
102.5°	361.8	348.1	289.8	207.6	139.3	58.0	14.7	15.8	18.3	15.8	14.7
105°	400.1	384.7	334.9	247.3	182.6	94.0	36.9	13.6	11.5	13.6	36.9
107.5°	436.4	427.2	375.6	287.9	228.8	135.6	68.2	35.8	22.9	35.8	68.2
110°	482.5	471.5	415.2	328.5	276.8	180.0	104.3	65.3	50.6	65.3	104.3



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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°	526.9	518.5	452.2	371.0	326.7	227.9	148.5	102.3	88.4	102.3	148.5
115°	561.1	556.4	494.7	410.7	372.8	282.4	197.4	145.7	129.1	145.7	197.4
117.5°	597.1	596.1	526.1	451.3	428.2	331.2	242.7	189.0	171.5	189.0	242.7
120°	642.3	634.8	569.4	491.9	480.8	382.9	292.5	238.9	221.4	238.9	292.5
122.5°	673.7	669.0	606.4	530.6	530.6	435.6	340.6	286.9	268.5	286.9	340.6
125°	702.2	700.4	634.0	569.4	584.2	484.5	394.0	339.5	319.3	339.5	394.0
127.5°	728.1	730.9	670.0	611.9	638.6	534.4	446.6	386.6	365.4	386.6	446.6
130°	750.2	759.4	704.1	650.7	690.3	588.8	493.7	433.6	419.8	433.6	493.7
132.5°	793.6	788.0	740.1	690.3	745.8	638.6	544.4	480.8	465.1	480.8	544.4
135°	815.8	817.5	770.5	724.5	797.4	688.6	591.5	528.7	513.1	528.7	591.5
137.5°	842.6	837.0	793.7	766.0	845.4	736.5	636.8	579.5	554.5	579.5	636.8
140°	861.9	861.0	825.9	803.8	897.1	784.3	684.7	625.6	602.5	625.6	684.7
142.5°	882.3	887.7	857.3	843.5	948.7	833.4	735.5	670.9	648.8	670.9	735.5
145°	896.1	908.1	888.7	895.2	997.7	889.6	779.8	714.2	690.2	714.2	779.8
147.5°	919.2	934.8	911.8	931.2	1040.1	938.5	824.1	759.4	738.2	759.4	824.1
150°	950.5	957.9	944.1	981.0	1083.5	992.9	869.3	802.8	781.6	802.8	869.3
152.5°	975.5	984.7	968.1	1034.7	1117.6	1042.0	918.4	845.3	820.4	845.3	918.4
155°	1001.3	1005.0	993.9	1087.2	1153.6	1090.9	958.9	892.4	868.3	892.4	958.9
157.5°	1025.3	1032.7	1019.8	1127.0	1185.1	1133.4	1004.0	939.5	918.3	939.5	1004.0
160°	1051.1	1051.1	1058.5	1174.0	1210.9	1171.2	1052.0	991.1	961.6	991.1	1052.0
162.5°	1053.9	1070.6	1111.1	1206.2	1236.7	1203.5	1103.8	1027.2	1002.2	1027.2	1103.8
165°	1094.5	1109.3	1170.2	1234.8	1256.0	1232.1	1167.5	1088.1	1058.5	1088.1	1167.5
167.5°	1137.0	1169.4	1218.3	1267.1	1274.5	1258.8	1216.3	1161.1	1134.2	1161.1	1216.3
170°	1205.4	1233.9	1258.8	1279.2	1289.3	1280.0	1246.8	1219.2	1201.6	1219.2	1246.8
172.5°	1259.8	1278.3	1288.3	1301.3	1294.8	1291.1	1274.5	1260.7	1251.5	1260.7	1274.5
175°	1294.0	1297.7	1306.8	1302.3	1307.7	1297.6	1298.5	1304.1	1266.3	1304.1	1298.5
177.5°	1306.0	1312.5	1308.7	1300.4	1301.3	1299.4	1303.1	1306.0	1300.5	1306.0	1303.1
180°	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8



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CATALOG NUMBER: MWL-3-37-25-UNV-L930-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	931.9	931.9	931.9	931.9	931.9	931.9
2.5°	930.3	932.1	931.3	929.5	931.1	927.5
5°	925.2	926.1	925.2	925.2	926.0	922.5
7.5°	916.7	918.5	917.7	915.9	917.6	914.9
10°	904.9	905.8	905.8	904.9	905.8	905.8
12.5°	891.3	890.4	891.3	889.7	890.5	892.3
15°	873.5	873.5	874.4	872.8	874.4	876.4
17.5°	855.0	855.0	855.0	853.4	854.2	856.0
20°	832.9	832.9	833.8	831.4	833.1	832.3
22.5°	808.4	809.2	809.3	807.7	807.8	806.1
25°	783.8	782.1	784.8	781.5	778.2	779.1
27.5°	756.9	756.8	757.8	753.6	750.3	745.3
30°	726.5	725.5	728.3	723.2	714.8	712.2
32.5°	695.2	695.2	697.0	688.6	679.3	674.2
35°	660.5	663.8	663.2	651.3	639.5	637.8
37.5°	625.0	627.6	627.6	613.3	599.8	598.1
40°	587.7	593.8	589.7	571.0	560.1	559.2
42.5°	547.2	555.8	549.1	527.1	519.5	525.4
45°	504.1	515.2	505.9	485.7	481.5	488.2
47.5°	458.5	472.9	459.4	445.1	446.0	454.4
50°	412.7	420.4	414.5	404.5	412.2	422.3
52.5°	368.8	363.8	370.6	368.1	380.0	390.1
55°	323.8	309.6	325.8	334.3	348.7	357.1
57.5°	280.8	263.1	282.6	301.3	319.1	325.9
60°	237.6	222.6	238.6	265.7	289.4	292.8
62.5°	199.6	189.5	200.6	231.9	257.3	263.2
65°	168.4	164.1	169.3	197.2	225.9	230.2
67.5°	138.8	138.8	138.8	168.4	192.1	200.6
70°	116.0	116.8	116.0	138.8	160.8	169.2
72.5°	93.9	97.3	94.8	113.4	132.0	144.7
75°	77.0	81.2	77.0	89.6	107.5	122.7
77.5°	60.1	65.2	60.1	70.3	90.1	111.5
80°	45.7	49.9	45.7	57.8	87.7	112.9
82.5°	33.0	34.8	33.0	58.7	97.1	119.0
85°	25.5	20.3	27.4	71.4	115.4	136.5
87.5°	23.2	5.9	36.1	92.3	142.8	158.8
90°	14.5	1.0	49.6	120.5	172.0	184.6
92.5°	9.5	15.7	73.1	149.5	204.9	217.7
95°	5.4	37.8	97.7	184.1	242.1	249.4
97.5°	11.9	66.4	130.0	218.8	277.8	284.0
100°	31.3	101.4	169.8	255.3	311.5	314.2
102.5°	58.0	139.3	207.6	289.8	348.1	361.8
105°	94.0	182.6	247.3	334.9	384.7	400.1
107.5°	135.6	228.8	287.9	375.6	427.2	436.4
110°	180.0	276.8	328.5	415.2	471.5	482.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	227.9	326.7	371.0	452.2	518.5	526.9
115°	282.4	372.8	410.7	494.7	556.4	561.1
117.5°	331.2	428.2	451.3	526.1	596.1	597.1
120°	382.9	480.8	491.9	569.4	634.8	642.3
122.5°	435.6	530.6	530.6	606.4	669.0	673.7
125°	484.5	584.2	569.4	634.0	700.4	702.2
127.5°	534.4	638.6	611.9	670.0	730.9	728.1
130°	588.8	690.3	650.7	704.1	759.4	750.2
132.5°	638.6	745.8	690.3	740.1	788.0	793.6
135°	688.6	797.4	724.5	770.5	817.5	815.8
137.5°	736.5	845.4	766.0	793.7	837.0	842.6
140°	784.3	897.1	803.8	825.9	861.0	861.9
142.5°	833.4	948.7	843.5	857.3	887.7	882.3
145°	889.6	997.7	895.2	888.7	908.1	896.1
147.5°	938.5	1040.1	931.2	911.8	934.8	919.2
150°	992.9	1083.5	981.0	944.1	957.9	950.5
152.5°	1042.0	1117.6	1034.7	968.1	984.7	975.5
155°	1090.9	1153.6	1087.2	993.9	1005.0	1001.3
157.5°	1133.4	1185.1	1127.0	1019.8	1032.7	1025.3
160°	1171.2	1210.9	1174.0	1058.5	1051.1	1051.1
162.5°	1203.5	1236.7	1206.2	1111.1	1070.6	1053.9
165°	1232.1	1256.0	1234.8	1170.2	1109.3	1094.5
167.5°	1258.8	1274.5	1267.1	1218.3	1169.4	1137.0
170°	1280.0	1289.3	1279.2	1258.8	1233.9	1205.4
172.5°	1291.1	1294.8	1301.3	1288.3	1278.3	1259.8
175°	1297.6	1307.7	1302.3	1306.8	1297.7	1294.0
177.5°	1299.4	1301.3	1300.4	1308.7	1312.5	1306.0
180°	1306.8	1306.8	1306.8	1306.8	1306.8	1306.8

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