

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: P392577

Luminaire Tested: **MWL-3-30-25-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392577
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-3-30-25-UNV-L830-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

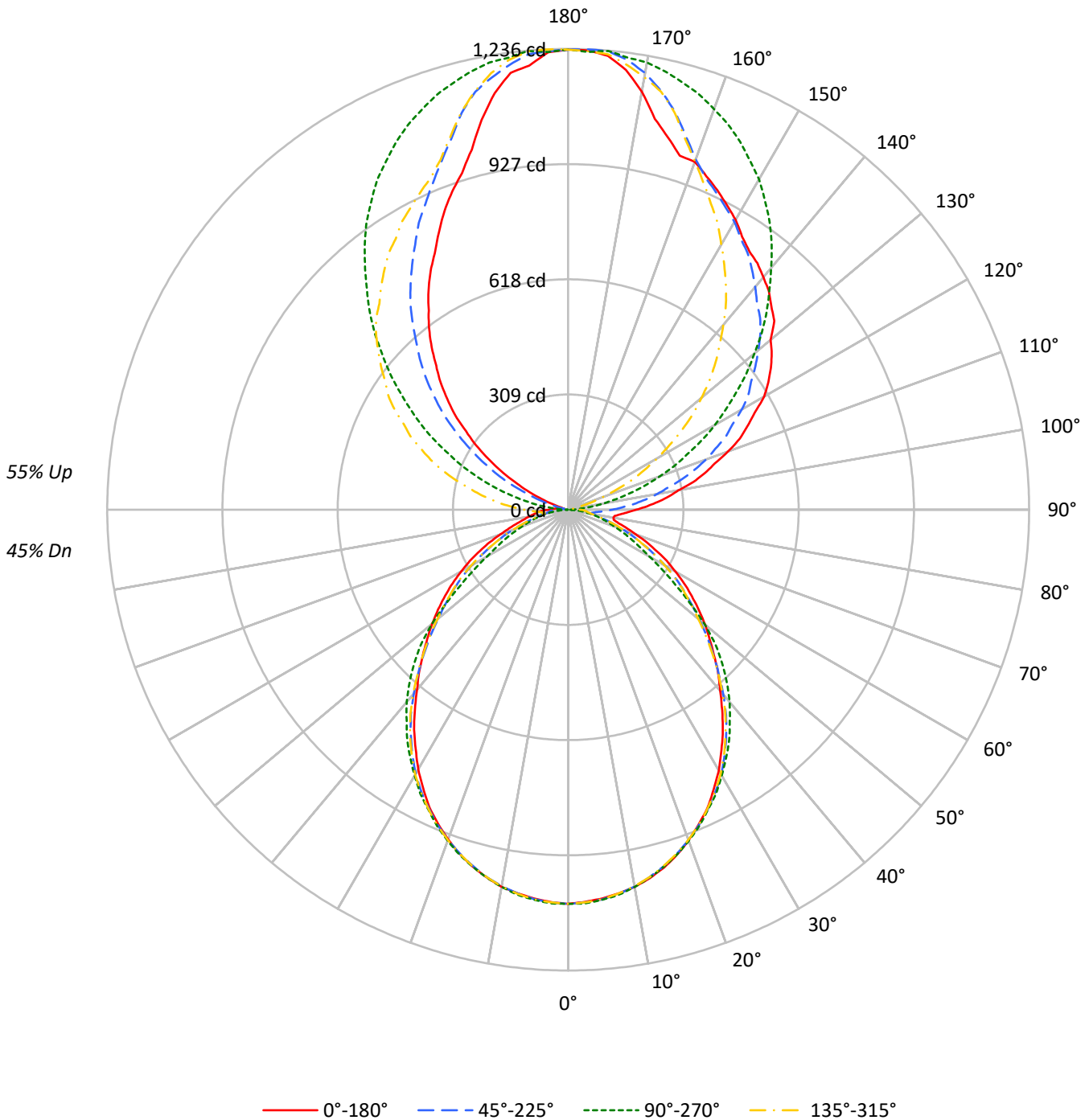
Lumens per Lamp: N/A
Luminaire Lumens: 5376.0 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (A_{in}): 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





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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	97	93	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44	38				
2	88	81	75	70	81	75	69	65	62	59	55	51	48	46	41	39	37	32				
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28				
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24				
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21				
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19				
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17				
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15				
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	17	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9103	9103	9103	9103
5°	8939	8348	8939	8348
10°	8768	7636	8768	7636
15°	8540	6968	8517	6968
20°	8232	6349	8208	6349
25°	7882	5750	7858	5750
30°	7433	5189	7400	5189
35°	6928	4656	6902	4656
40°	6381	4115	6346	4115
45°	5915	3556	5887	3556
50°	5499	2913	5469	2913
55°	5068	2170	5046	2170
60°	4605	1589	4592	1589
65°	4094	1205	4094	1205
70°	3495	889	3510	889
75°	3046	647	3103	647
80°	3420	420	2963	420
85°	5369	182	3204	182



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	1.8
10°-20°	279.1	5.2
20°-30°	407.3	7.6
30°-40°	460.1	8.6
40°-50°	430.5	8.0
50°-60°	339.9	6.3
60°-70°	222.2	4.1
70°-80°	115.9	2.2
80°-90°	71.7	1.3
90°-100°	102.7	1.9
100°-110°	191.8	3.6
110°-120°	327.9	6.1
120°-130°	445.3	8.3
130°-140°	508.0	9.4
140°-150°	506.8	9.4
150°-160°	441.3	8.2
160°-170°	310.5	5.8
170°-180°	115.6	2.2
0°-30°	785.8	14.6
0°-40°	1245.9	23.2
0°-60°	2016.3	37.5
0°-90°	2426.2	45.1
90°-120°	622.3	11.6
90°-150°	2082.4	38.7
90°-180°	2950.0	54.9
0°-180°	5376.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1057	1057	1057	1057	1057	
5°	1047	1050	1047	1050	1047	99
15°	994	991	991	991	994	280
25°	883	887	881	887	883	405
35°	723	753	720	753	723	451
45°	553	584	551	584	553	428
55°	404	351	403	351	404	362
65°	261	186	261	186	261	259
75°	139	92	142	92	139	155
85°	141	23	84	23	141	111
90°	182	1	51	1	182	101
95°	241	36	34	36	241	209
105°	379	173	12	173	379	399
115°	530	352	122	352	530	526
125°	663	552	302	552	663	592
135°	770	753	485	753	770	595
145°	846	942	652	942	846	534
155°	946	1089	820	1089	946	436
165°	1034	1186	1000	1186	1034	293
175°	1222	1235	1196	1235	1222	114
180°	1234	1234	1234	1234	1234	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1
2.5°	1052.5	1056.1	1054.1	1055.9	1056.9	1055.1	1054.1	1056.1	1053.4	1056.1	1054.1
5°	1046.7	1050.4	1049.3	1049.3	1050.3	1049.3	1048.5	1050.4	1046.7	1050.4	1048.5
7.5°	1038.0	1040.8	1038.9	1040.7	1041.6	1039.8	1037.9	1039.8	1038.0	1039.8	1037.9
10°	1027.3	1027.3	1026.4	1027.3	1027.3	1026.4	1025.4	1025.5	1027.3	1025.5	1025.4
12.5°	1011.9	1010.1	1009.1	1011.0	1010.2	1011.0	1009.1	1008.2	1010.1	1008.2	1009.1
15°	993.6	991.8	989.9	991.8	991.0	991.0	989.1	990.0	990.9	990.0	989.1
17.5°	970.5	968.8	967.8	969.9	969.9	969.9	967.0	967.8	967.8	967.8	967.0
20°	943.7	944.7	942.9	945.9	945.0	945.0	942.0	942.9	941.0	942.9	942.0
22.5°	914.0	915.9	916.0	918.0	918.1	917.2	915.2	914.1	912.2	914.1	915.2
25°	883.3	882.3	886.3	890.2	887.4	889.3	884.4	879.6	880.6	879.6	884.4
27.5°	844.9	850.7	854.6	859.4	858.6	858.5	852.8	848.0	842.2	848.0	852.8
30°	807.5	810.3	819.9	825.8	823.1	824.0	817.3	807.7	803.9	807.7	817.3
32.5°	764.3	770.0	780.6	790.3	788.5	788.5	777.9	766.5	760.7	766.5	777.9
35°	723.1	725.0	738.5	751.9	753.0	749.2	735.8	722.3	720.4	722.3	735.8
37.5°	678.0	679.9	695.3	711.6	711.7	708.9	692.6	677.2	675.3	677.2	692.6
40°	633.8	634.8	647.3	668.4	673.3	666.7	643.7	631.2	630.3	631.2	643.7
42.5°	595.4	588.7	597.4	622.3	630.1	620.6	594.8	585.2	591.9	585.2	594.8
45°	553.2	545.5	550.3	573.4	584.0	571.6	546.9	542.9	550.6	542.9	546.9
47.5°	514.8	505.2	504.3	520.7	536.0	519.8	500.8	502.6	512.2	502.6	500.8
50°	478.4	466.8	458.2	469.8	476.6	468.1	454.7	463.4	475.8	463.4	454.7
52.5°	441.9	430.4	417.0	419.9	412.3	418.2	414.4	426.9	439.3	426.9	414.4
55°	404.5	394.9	378.6	369.1	351.0	367.4	376.0	392.4	402.8	392.4	376.0
57.5°	369.0	361.4	341.2	320.2	298.2	318.5	338.6	358.8	367.3	358.8	338.6
60°	331.7	327.9	301.0	270.4	252.1	269.5	299.3	326.1	330.8	326.1	299.3
62.5°	298.1	291.4	262.6	227.2	214.8	226.3	260.9	289.7	297.2	289.7	260.9
65°	260.8	256.0	223.3	191.7	186.0	190.8	222.5	255.1	260.8	255.1	222.5
67.5°	227.2	217.6	190.7	157.2	157.2	157.2	189.8	216.7	227.2	216.7	189.8
70°	191.8	182.2	157.2	131.3	132.3	131.3	157.2	183.0	192.6	183.0	157.2
72.5°	163.9	149.5	128.4	107.3	110.3	106.4	128.4	150.4	165.7	150.4	128.4
75°	139.0	121.7	101.6	87.2	92.0	87.2	102.5	122.6	141.6	122.6	102.5
77.5°	124.9	101.2	79.6	68.0	73.8	68.0	80.4	98.6	121.3	98.6	80.4
80°	123.3	96.2	64.9	51.7	56.5	51.7	63.2	82.2	106.8	82.2	63.2
82.5°	126.0	102.8	63.8	37.3	39.3	37.3	53.4	71.4	92.9	71.4	53.4
85°	140.6	118.4	74.4	30.3	22.9	28.6	49.1	65.3	83.9	65.3	49.1
87.5°	159.4	143.0	92.9	37.7	6.7	25.4	43.3	59.3	69.7	59.3	43.3
90°	181.9	169.4	118.5	49.2	0.9	16.1	32.2	46.5	51.3	46.5	32.2
92.5°	211.6	199.3	145.0	70.5	14.9	10.4	25.6	38.0	40.8	38.0	25.6
95°	240.8	233.7	176.8	92.5	35.8	5.4	19.9	31.5	34.3	31.5	19.9
97.5°	272.5	266.1	208.4	122.9	62.9	11.4	15.7	26.5	28.4	26.5	15.7
100°	299.7	297.0	241.9	160.5	96.0	29.8	10.9	23.3	25.2	23.3	10.9
102.5°	343.6	330.3	273.7	196.2	131.7	55.0	14.0	16.6	19.5	16.6	14.0
105°	378.7	363.7	316.4	233.6	172.7	89.0	34.9	13.3	11.9	13.3	34.9
107.5°	412.3	403.7	354.7	272.0	216.2	128.2	64.6	34.2	22.0	34.2	64.6
110°	455.9	445.4	392.3	310.3	261.5	170.0	98.6	62.0	48.1	62.0	98.6



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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°	497.7	490.0	427.1	350.4	308.6	215.4	140.4	96.9	83.8	96.9	140.4
115°	530.0	525.7	467.2	387.8	352.1	266.7	186.6	137.8	122.2	137.8	186.6
117.5°	564.0	563.1	496.8	426.2	404.5	312.9	229.3	178.8	162.3	178.8	229.3
120°	606.7	599.8	537.8	464.5	454.1	361.7	276.3	225.8	209.3	225.8	276.3
122.5°	636.3	632.0	572.6	501.2	501.2	411.4	321.6	271.2	253.8	271.2	321.6
125°	663.3	661.6	598.8	537.8	551.7	457.6	372.2	320.9	301.7	320.9	372.2
127.5°	687.8	690.4	632.8	577.9	603.1	504.7	421.8	365.3	345.2	365.3	421.8
130°	708.7	717.3	665.0	614.5	651.9	556.1	466.3	409.7	396.7	409.7	466.3
132.5°	749.6	744.4	699.1	651.9	704.2	603.1	514.3	454.2	439.4	454.2	514.3
135°	770.5	772.2	727.8	684.1	753.0	650.2	558.8	499.5	484.7	499.5	558.8
137.5°	795.8	790.6	749.5	723.4	798.3	695.5	601.4	547.5	523.9	547.5	601.4
140°	814.1	813.2	780.1	759.2	847.1	740.9	646.8	591.0	569.2	591.0	646.8
142.5°	833.3	838.5	809.8	796.6	896.0	787.0	694.7	633.7	612.8	633.7	694.7
145°	846.3	857.7	839.3	845.5	942.1	840.3	736.5	674.6	652.0	674.6	736.5
147.5°	868.1	882.9	861.1	879.4	982.2	886.5	778.4	717.3	697.3	717.3	778.4
150°	897.8	904.7	891.6	926.5	1023.1	937.8	821.1	758.3	738.3	758.3	821.1
152.5°	921.3	930.0	914.2	977.0	1055.4	984.0	867.2	798.4	774.9	798.4	867.2
155°	945.7	949.1	938.8	1026.7	1089.4	1030.1	905.6	842.9	820.2	842.9	905.6
157.5°	968.3	975.3	963.1	1064.1	1119.0	1070.3	948.3	887.3	867.3	887.3	948.3
160°	992.7	992.7	999.7	1108.6	1143.4	1106.1	993.7	936.1	908.2	936.1	993.7
162.5°	995.4	1010.9	1049.4	1139.2	1167.9	1136.6	1042.4	970.0	946.5	970.0	1042.4
165°	1033.7	1047.6	1105.2	1166.1	1186.2	1163.5	1102.5	1027.5	999.7	1027.5	1102.5
167.5°	1073.8	1104.2	1150.5	1196.7	1203.7	1188.8	1148.8	1096.4	1071.2	1096.4	1148.8
170°	1138.2	1165.2	1188.8	1208.0	1217.6	1208.8	1177.5	1151.3	1134.7	1151.3	1177.5
172.5°	1189.6	1207.0	1216.7	1228.9	1222.8	1219.3	1203.7	1190.5	1181.8	1190.5	1203.7
175°	1221.8	1225.4	1234.1	1229.8	1235.0	1225.4	1226.3	1231.4	1195.7	1231.4	1226.3
177.5°	1233.1	1239.3	1235.9	1228.0	1228.9	1227.2	1230.6	1233.1	1227.9	1233.1	1230.6
180°	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1057.1	1057.1	1057.1	1057.1	1057.1	1057.1
2.5°	1055.1	1056.9	1055.9	1054.1	1056.1	1052.5
5°	1049.3	1050.3	1049.3	1049.3	1050.4	1046.7
7.5°	1039.8	1041.6	1040.7	1038.9	1040.8	1038.0
10°	1026.4	1027.3	1027.3	1026.4	1027.3	1027.3
12.5°	1011.0	1010.2	1011.0	1009.1	1010.1	1011.9
15°	991.0	991.0	991.8	989.9	991.8	993.6
17.5°	969.9	969.9	969.9	967.8	968.8	970.5
20°	945.0	945.0	945.9	942.9	944.7	943.7
22.5°	917.2	918.1	918.0	916.0	915.9	914.0
25°	889.3	887.4	890.2	886.3	882.3	883.3
27.5°	858.5	858.6	859.4	854.6	850.7	844.9
30°	824.0	823.1	825.8	819.9	810.3	807.5
32.5°	788.5	788.5	790.3	780.6	770.0	764.3
35°	749.2	753.0	751.9	738.5	725.0	723.1
37.5°	708.9	711.7	711.6	695.3	679.9	678.0
40°	666.7	673.3	668.4	647.3	634.8	633.8
42.5°	620.6	630.1	622.3	597.4	588.7	595.4
45°	571.6	584.0	573.4	550.3	545.5	553.2
47.5°	519.8	536.0	520.7	504.3	505.2	514.8
50°	468.1	476.6	469.8	458.2	466.8	478.4
52.5°	418.2	412.3	419.9	417.0	430.4	441.9
55°	367.4	351.0	369.1	378.6	394.9	404.5
57.5°	318.5	298.2	320.2	341.2	361.4	369.0
60°	269.5	252.1	270.4	301.0	327.9	331.7
62.5°	226.3	214.8	227.2	262.6	291.4	298.1
65°	190.8	186.0	191.7	223.3	256.0	260.8
67.5°	157.2	157.2	157.2	190.7	217.6	227.2
70°	131.3	132.3	131.3	157.2	182.2	191.8
72.5°	106.4	110.3	107.3	128.4	149.5	163.9
75°	87.2	92.0	87.2	101.6	121.7	139.0
77.5°	68.0	73.8	68.0	79.6	101.2	124.9
80°	51.7	56.5	51.7	64.9	96.2	123.3
82.5°	37.3	39.3	37.3	63.8	102.8	126.0
85°	28.6	22.9	30.3	74.4	118.4	140.6
87.5°	25.4	6.7	37.7	92.9	143.0	159.4
90°	16.1	0.9	49.2	118.5	169.4	181.9
92.5°	10.4	14.9	70.5	145.0	199.3	211.6
95°	5.4	35.8	92.5	176.8	233.7	240.8
97.5°	11.4	62.9	122.9	208.4	266.1	272.5
100°	29.8	96.0	160.5	241.9	297.0	299.7
102.5°	55.0	131.7	196.2	273.7	330.3	343.6
105°	89.0	172.7	233.6	316.4	363.7	378.7
107.5°	128.2	216.2	272.0	354.7	403.7	412.3
110°	170.0	261.5	310.3	392.3	445.4	455.9



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CATALOG NUMBER: MWL-3-30-25-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	215.4	308.6	350.4	427.1	490.0	497.7
115°	266.7	352.1	387.8	467.2	525.7	530.0
117.5°	312.9	404.5	426.2	496.8	563.1	564.0
120°	361.7	454.1	464.5	537.8	599.8	606.7
122.5°	411.4	501.2	501.2	572.6	632.0	636.3
125°	457.6	551.7	537.8	598.8	661.6	663.3
127.5°	504.7	603.1	577.9	632.8	690.4	687.8
130°	556.1	651.9	614.5	665.0	717.3	708.7
132.5°	603.1	704.2	651.9	699.1	744.4	749.6
135°	650.2	753.0	684.1	727.8	772.2	770.5
137.5°	695.5	798.3	723.4	749.5	790.6	795.8
140°	740.9	847.1	759.2	780.1	813.2	814.1
142.5°	787.0	896.0	796.6	809.8	838.5	833.3
145°	840.3	942.1	845.5	839.3	857.7	846.3
147.5°	886.5	982.2	879.4	861.1	882.9	868.1
150°	937.8	1023.1	926.5	891.6	904.7	897.8
152.5°	984.0	1055.4	977.0	914.2	930.0	921.3
155°	1030.1	1089.4	1026.7	938.8	949.1	945.7
157.5°	1070.3	1119.0	1064.1	963.1	975.3	968.3
160°	1106.1	1143.4	1108.6	999.7	992.7	992.7
162.5°	1136.6	1167.9	1139.2	1049.4	1010.9	995.4
165°	1163.5	1186.2	1166.1	1105.2	1047.6	1033.7
167.5°	1188.8	1203.7	1196.7	1150.5	1104.2	1073.8
170°	1208.8	1217.6	1208.0	1188.8	1165.2	1138.2
172.5°	1219.3	1222.8	1228.9	1216.7	1207.0	1189.6
175°	1225.4	1235.0	1229.8	1234.1	1225.4	1221.8
177.5°	1227.2	1228.9	1228.0	1235.9	1239.3	1233.1
180°	1234.1	1234.1	1234.1	1234.1	1234.1	1234.1

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