

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: P392563

Luminaire Tested: **MWL-3-27-25-UNV-L935-EDD**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P392563
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &
Test Lab: INNOVATION CENTER
Issue Date: 3/12/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-3-27-25-UNV-L935-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

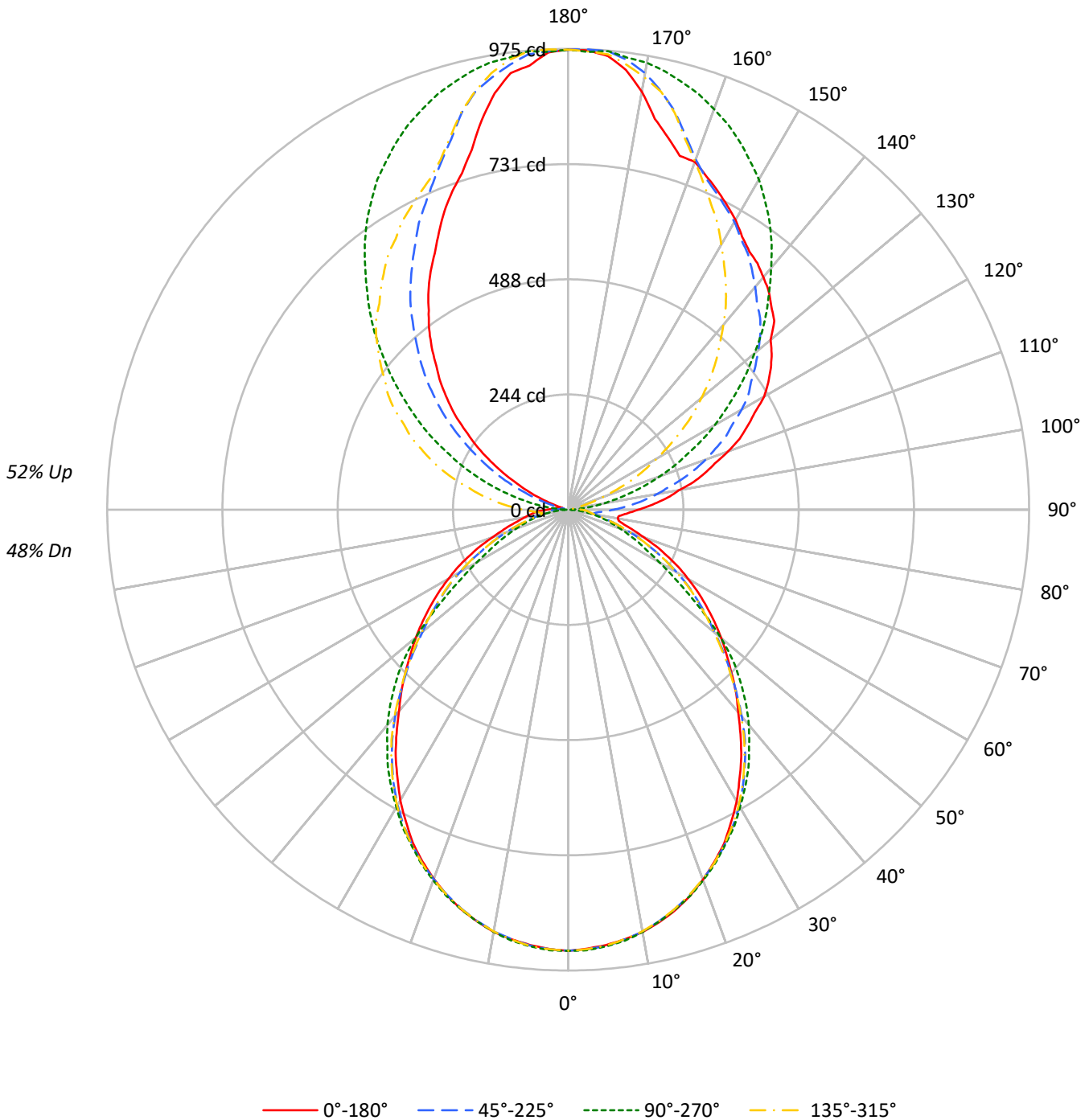
Lumens per Lamp: N/A
Luminaire Lumens: 4468.1 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 49.692
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





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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	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	97	93	89	86	89	86	83	80	72	70	68	60	58	56	48	47	46	41
2	89	82	76	71	82	75	70	66	64	60	57	53	50	48	43	41	39	34
3	81	72	65	59	75	67	60	55	56	52	48	47	44	41	38	36	34	30
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18
8	54	42	35	29	50	39	33	28	34	28	25	29	25	21	24	21	18	16
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	24	20	18	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8037	8037	8037	8037
5°	7895	7370	7895	7370
10°	7743	6743	7743	6743
15°	7539	6153	7521	6153
20°	7266	5607	7248	5607
25°	6958	5078	6939	5078
30°	6560	4582	6535	4582
35°	6114	4112	6094	4112
40°	5632	3634	5604	3634
45°	5221	3140	5199	3140
50°	4853	2572	4829	2572
55°	4474	1916	4455	1916
60°	4063	1403	4054	1403
65°	3612	1063	3612	1063
70°	3083	784	3096	784
75°	2686	571	2733	571
80°	2960	371	2599	371
85°	4483	161	2776	161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.8	2.0
10°-20°	246.4	5.5
20°-30°	359.6	8.0
30°-40°	406.2	9.1
40°-50°	380.1	8.5
50°-60°	300.0	6.7
60°-70°	196.1	4.4
70°-80°	102.2	2.3
80°-90°	61.1	1.4
90°-100°	82.7	1.8
100°-110°	151.5	3.4
110°-120°	258.7	5.8
120°-130°	351.2	7.9
130°-140°	400.7	9.0
140°-150°	399.7	8.9
150°-160°	348.0	7.8
160°-170°	244.8	5.5
170°-180°	91.2	2.0
0°-30°	693.9	15.5
0°-40°	1100.1	24.6
0°-60°	1780.2	39.8
0°-90°	2139.6	47.9
90°-120°	492.9	11.0
90°-150°	1644.5	36.8
90°-180°	2328.0	52.1
0°-180°	4468.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	933	933	933	933	933	
5°	924	927	924	927	924	88
15°	877	875	875	875	877	247
25°	780	784	778	784	780	358
35°	638	665	636	665	638	398
45°	488	516	486	516	488	378
55°	357	310	356	310	357	320
65°	230	164	230	164	230	229
75°	123	81	125	81	123	136
85°	117	20	73	20	117	94
90°	148	1	45	1	148	82
95°	193	28	30	28	193	167
105°	299	136	10	136	299	316
115°	418	278	96	278	418	415
125°	523	435	238	435	523	467
135°	608	594	382	594	608	469
145°	668	743	514	743	668	421
155°	746	859	647	859	746	344
165°	815	936	788	936	815	231
175°	964	974	943	974	964	90
180°	973	973	973	973	973	



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CATALOG NUMBER: MWL-3-27-25-UNV-L935-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	933.3	933.3	933.3	933.3	933.3	933.3	933.3	933.3	933.3	933.3	933.3
2.5°	929.5	932.6	930.6	932.1	933.0	931.5	930.6	932.6	930.3	932.6	930.6
5°	924.4	927.5	926.4	926.4	927.2	926.4	925.7	927.5	924.4	927.5	925.7
7.5°	916.7	918.9	917.2	918.7	919.6	918.0	916.6	918.2	916.7	918.2	916.6
10°	907.2	907.1	906.2	907.1	907.1	906.4	905.5	905.7	907.2	905.7	905.5
12.5°	893.3	891.8	891.1	892.8	892.2	892.8	891.1	890.4	892.0	890.4	891.1
15°	877.1	875.7	874.1	875.8	875.2	875.2	873.4	874.3	875.0	874.3	873.4
17.5°	856.7	855.3	854.6	856.5	856.5	856.5	853.9	854.6	854.6	854.6	853.9
20°	833.0	833.9	832.6	835.3	834.5	834.5	831.9	832.6	830.9	832.6	831.9
22.5°	806.8	808.5	808.9	810.7	810.8	809.9	808.2	807.2	805.4	807.2	808.2
25°	779.7	778.9	782.4	786.1	783.7	785.3	781.0	776.8	777.6	776.8	781.0
27.5°	745.8	750.8	754.4	758.8	758.2	758.1	753.1	748.8	743.7	748.8	753.1
30°	712.7	715.3	723.7	729.0	726.8	727.6	721.6	713.2	709.9	713.2	721.6
32.5°	674.5	679.6	688.9	697.6	696.3	696.3	687.0	676.9	671.8	676.9	687.0
35°	638.2	639.9	651.8	663.7	665.0	661.6	649.7	637.9	636.1	637.9	649.7
37.5°	598.4	600.1	613.7	628.1	628.5	625.9	611.5	598.0	596.3	598.0	611.5
40°	559.4	560.2	571.2	590.1	594.5	588.7	568.5	557.4	556.6	557.4	568.5
42.5°	525.5	519.6	527.3	549.4	556.3	547.9	525.2	516.7	522.7	516.7	525.2
45°	488.3	481.6	485.8	506.2	515.7	504.7	483.0	479.4	486.2	479.4	483.0
47.5°	454.4	445.9	445.1	459.7	473.2	458.9	442.3	443.8	452.3	443.8	442.3
50°	422.2	412.0	404.4	414.7	420.8	413.2	401.6	409.2	420.1	409.2	401.6
52.5°	389.9	379.8	368.1	370.6	364.0	369.2	366.0	377.0	387.9	377.0	366.0
55°	357.1	348.6	334.2	325.7	309.9	324.5	332.0	346.5	355.6	346.5	332.0
57.5°	325.7	318.9	301.1	282.5	263.2	281.2	299.0	316.8	324.3	316.8	299.0
60°	292.7	289.3	265.6	238.6	222.5	237.9	264.2	287.9	292.0	287.9	264.2
62.5°	263.0	257.1	231.7	200.5	189.6	199.8	230.3	255.8	262.3	255.8	230.3
65°	230.1	225.9	197.1	169.0	164.1	168.4	196.4	225.2	230.1	225.2	196.4
67.5°	200.5	192.0	168.3	138.8	138.8	138.8	167.6	191.3	200.5	191.3	167.6
70°	169.2	160.8	138.8	115.8	116.7	115.8	138.8	161.4	169.9	161.4	138.8
72.5°	144.6	131.9	113.3	94.7	97.3	94.0	113.3	132.6	146.0	132.6	113.3
75°	122.6	107.3	89.7	77.0	81.2	77.0	90.4	108.0	124.7	108.0	90.4
77.5°	109.5	89.0	70.2	60.1	65.1	60.1	70.9	86.8	106.7	86.8	70.9
80°	106.7	83.3	57.0	45.6	49.9	45.6	55.7	72.2	93.7	72.2	55.7
82.5°	107.1	87.3	55.1	32.9	34.6	32.9	46.8	62.6	80.9	62.6	46.8
85°	117.4	98.6	62.6	26.5	20.2	25.1	42.6	56.7	72.7	56.7	42.6
87.5°	131.1	117.3	76.5	31.8	6.0	22.1	37.4	51.3	60.4	51.3	37.4
90°	147.7	137.5	96.2	40.2	0.7	14.1	28.1	40.6	44.7	40.6	28.1
92.5°	170.3	160.4	116.5	56.3	11.9	9.0	22.3	33.2	35.7	33.2	22.3
95°	192.9	187.1	141.0	73.2	28.3	4.4	17.3	27.6	30.0	27.6	17.3
97.5°	217.2	212.1	165.2	97.0	49.6	9.1	13.5	23.0	24.8	23.0	13.5
100°	238.0	235.7	191.1	126.6	75.8	23.5	9.1	19.9	21.7	19.9	9.1
102.5°	272.1	261.4	215.9	154.7	104.0	43.4	11.2	14.0	16.6	14.0	11.2
105°	299.2	287.0	249.6	184.3	136.2	70.2	27.6	10.8	9.9	10.8	27.6
107.5°	325.3	318.5	279.8	214.5	170.6	101.1	51.1	27.1	17.4	27.1	51.1
110°	359.7	351.5	309.3	244.8	206.3	134.2	77.8	49.1	38.1	49.1	77.8



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CATALOG NUMBER: MWL-3-27-25-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	392.7	386.5	336.9	276.3	243.3	169.8	110.8	76.5	66.3	76.5	110.8
115°	418.2	414.6	368.5	305.9	277.8	210.5	147.2	108.9	96.5	108.9	147.2
117.5°	444.9	444.2	391.8	336.1	319.0	246.9	180.9	141.2	128.1	141.2	180.9
120°	478.6	473.0	424.1	366.4	358.2	285.4	218.0	178.4	165.2	178.4	218.0
122.5°	501.9	498.5	451.6	395.2	395.2	324.5	253.7	214.0	200.3	214.0	253.7
125°	523.2	521.8	472.2	424.1	435.1	360.9	293.6	253.2	238.1	253.2	293.6
127.5°	542.4	544.6	499.0	455.7	475.6	398.1	332.7	288.2	272.4	288.2	332.7
130°	559.0	565.8	524.5	484.6	514.1	438.5	367.8	323.2	313.0	323.2	367.8
132.5°	591.3	587.1	551.4	514.1	555.3	475.6	405.7	358.4	346.6	358.4	405.7
135°	607.7	609.0	574.1	539.6	593.8	512.7	440.8	394.0	382.4	394.0	440.8
137.5°	627.7	623.5	591.1	570.5	629.6	548.5	474.2	431.9	413.2	431.9	474.2
140°	642.1	641.4	615.2	598.9	668.0	584.4	510.2	466.2	449.0	466.2	510.2
142.5°	657.3	661.3	638.6	628.2	706.5	620.6	547.9	499.9	483.3	499.9	547.9
145°	667.5	676.5	662.0	666.8	743.0	662.7	580.9	532.2	514.3	532.2	580.9
147.5°	684.7	696.4	679.2	693.6	774.5	699.1	613.9	565.8	550.0	565.8	613.9
150°	708.0	713.5	703.3	730.8	806.8	739.7	647.6	598.2	582.3	598.2	647.6
152.5°	726.6	733.5	721.0	770.4	832.3	775.9	683.8	629.7	611.2	629.7	683.8
155°	745.8	748.6	740.4	809.6	859.0	812.3	714.2	664.8	646.9	664.8	714.2
157.5°	763.8	769.2	759.6	839.1	882.5	843.9	747.9	699.8	684.0	699.8	747.9
160°	783.0	783.0	788.4	874.3	901.7	872.3	783.7	738.3	716.4	738.3	783.7
162.5°	785.0	797.2	827.6	898.4	921.1	896.4	822.1	765.0	746.5	765.0	822.1
165°	815.2	826.1	871.6	919.7	935.5	917.6	869.5	810.3	788.4	810.3	869.5
167.5°	846.9	870.8	907.3	943.8	949.3	937.5	906.0	864.5	844.8	864.5	906.0
170°	897.5	918.8	937.5	952.6	960.2	953.3	928.6	907.8	894.7	907.8	928.6
172.5°	938.1	951.8	959.5	969.2	964.4	961.5	949.3	938.7	931.8	938.7	949.3
175°	963.5	966.2	973.3	969.9	974.0	966.4	967.1	971.0	942.9	971.0	967.1
177.5°	972.4	977.2	974.6	968.4	969.2	967.7	970.6	972.4	968.3	972.4	970.6
180°	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3	973.3



TEST NUMBER: P392563

CATALOG NUMBER: MWL-3-27-25-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	933.3	933.3	933.3	933.3	933.3	933.3
2.5°	931.5	933.0	932.1	930.6	932.6	929.5
5°	926.4	927.2	926.4	926.4	927.5	924.4
7.5°	918.0	919.6	918.7	917.2	918.9	916.7
10°	906.4	907.1	907.1	906.2	907.1	907.2
12.5°	892.8	892.2	892.8	891.1	891.8	893.3
15°	875.2	875.2	875.8	874.1	875.7	877.1
17.5°	856.5	856.5	856.5	854.6	855.3	856.7
20°	834.5	834.5	835.3	832.6	833.9	833.0
22.5°	809.9	810.8	810.7	808.9	808.5	806.8
25°	785.3	783.7	786.1	782.4	778.9	779.7
27.5°	758.1	758.2	758.8	754.4	750.8	745.8
30°	727.6	726.8	729.0	723.7	715.3	712.7
32.5°	696.3	696.3	697.6	688.9	679.6	674.5
35°	661.6	665.0	663.7	651.8	639.9	638.2
37.5°	625.9	628.5	628.1	613.7	600.1	598.4
40°	588.7	594.5	590.1	571.2	560.2	559.4
42.5°	547.9	556.3	549.4	527.3	519.6	525.5
45°	504.7	515.7	506.2	485.8	481.6	488.3
47.5°	458.9	473.2	459.7	445.1	445.9	454.4
50°	413.2	420.8	414.7	404.4	412.0	422.2
52.5°	369.2	364.0	370.6	368.1	379.8	389.9
55°	324.5	309.9	325.7	334.2	348.6	357.1
57.5°	281.2	263.2	282.5	301.1	318.9	325.7
60°	237.9	222.5	238.6	265.6	289.3	292.7
62.5°	199.8	189.6	200.5	231.7	257.1	263.0
65°	168.4	164.1	169.0	197.1	225.9	230.1
67.5°	138.8	138.8	138.8	168.3	192.0	200.5
70°	115.8	116.7	115.8	138.8	160.8	169.2
72.5°	94.0	97.3	94.7	113.3	131.9	144.6
75°	77.0	81.2	77.0	89.7	107.3	122.6
77.5°	60.1	65.1	60.1	70.2	89.0	109.5
80°	45.6	49.9	45.6	57.0	83.3	106.7
82.5°	32.9	34.6	32.9	55.1	87.3	107.1
85°	25.1	20.2	26.5	62.6	98.6	117.4
87.5°	22.1	6.0	31.8	76.5	117.3	131.1
90°	14.1	0.7	40.2	96.2	137.5	147.7
92.5°	9.0	11.9	56.3	116.5	160.4	170.3
95°	4.4	28.3	73.2	141.0	187.1	192.9
97.5°	9.1	49.6	97.0	165.2	212.1	217.2
100°	23.5	75.8	126.6	191.1	235.7	238.0
102.5°	43.4	104.0	154.7	215.9	261.4	272.1
105°	70.2	136.2	184.3	249.6	287.0	299.2
107.5°	101.1	170.6	214.5	279.8	318.5	325.3
110°	134.2	206.3	244.8	309.3	351.5	359.7



TEST NUMBER: P392563

CATALOG NUMBER: MWL-3-27-25-UNV-L935-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	169.8	243.3	276.3	336.9	386.5	392.7
115°	210.5	277.8	305.9	368.5	414.6	418.2
117.5°	246.9	319.0	336.1	391.8	444.2	444.9
120°	285.4	358.2	366.4	424.1	473.0	478.6
122.5°	324.5	395.2	395.2	451.6	498.5	501.9
125°	360.9	435.1	424.1	472.2	521.8	523.2
127.5°	398.1	475.6	455.7	499.0	544.6	542.4
130°	438.5	514.1	484.6	524.5	565.8	559.0
132.5°	475.6	555.3	514.1	551.4	587.1	591.3
135°	512.7	593.8	539.6	574.1	609.0	607.7
137.5°	548.5	629.6	570.5	591.1	623.5	627.7
140°	584.4	668.0	598.9	615.2	641.4	642.1
142.5°	620.6	706.5	628.2	638.6	661.3	657.3
145°	662.7	743.0	666.8	662.0	676.5	667.5
147.5°	699.1	774.5	693.6	679.2	696.4	684.7
150°	739.7	806.8	730.8	703.3	713.5	708.0
152.5°	775.9	832.3	770.4	721.0	733.5	726.6
155°	812.3	859.0	809.6	740.4	748.6	745.8
157.5°	843.9	882.5	839.1	759.6	769.2	763.8
160°	872.3	901.7	874.3	788.4	783.0	783.0
162.5°	896.4	921.1	898.4	827.6	797.2	785.0
165°	917.6	935.5	919.7	871.6	826.1	815.2
167.5°	937.5	949.3	943.8	907.3	870.8	846.9
170°	953.3	960.2	952.6	937.5	918.8	897.5
172.5°	961.5	964.4	969.2	959.5	951.8	938.1
175°	966.4	974.0	969.9	973.3	966.2	963.5
177.5°	967.7	969.2	968.4	974.6	977.2	972.4
180°	973.3	973.3	973.3	973.3	973.3	973.3

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