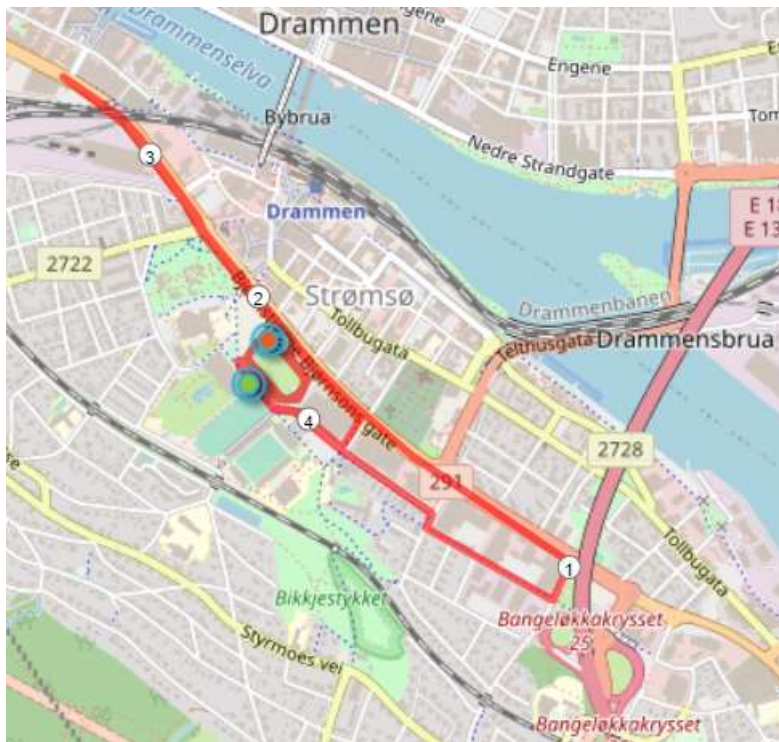


COURSE MEASUREMENT

Drammen Half Marathon – 5 km 2022



SUMMARY SHEET

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*

Promoting Organisation: UHM Holding

Name & Address of race director: André Hjorteseth

Email: Andrehjorteseth.privat@gmail.com

Distance: *The course is not less than 5,000 m*
Measured by *Peer Jensen, Denmark*

Date: *4 September 2022, 09:50-10:40*

Measurement method: *Jones counter mounted on bicycle wheel*

Elevation, if not same, of: START 0 m FINISH 0 m
Distance, in a straight line, between start & finish: *300 m*

Description of the Course

Terrain: *nearly flat*

Race surface: *tarmac roads*

Course configuration: *point to point.*

Start point: *Drammen Sport Centre, bicycle path at grating 20 m after sign “Olympic”*

Finish line: *Drammen Stadium at the official finish line*

Measurement Details

Section of road available: *On Bjørnstjerne Bjørnsons gate and on Kreftings gate only the right part of the southern part of the road is available for the runners. On all other roads all the road is available, but only the right part, because the runners meet each other. Cones will be placed in the middle of the road.*

Line to be taken at turns: *Shortest possible route.*

SIGNED: ... *Peer Jensen* DATE: *2022-09-08*

STEEL TAPING DATA

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*

For measuring a calibration course

Name of calibration course: Drammen Sport Centre

City/town and State: Drammen, Norway

Date: 4 September 2022

Start time: 09:10

Finish time: 09:30

Pavement temperature: Start 14 °C Finish 14 °C Average 14 °C

Measurements and calculations:

First measurement. 50.00 m x 6 + 7.59 cm = 307.59 m

Second measurement. 50.00 m x 6 + 7.59 = 307.59 m

Average raw (uncorrected) measurement of course: 307.59 m

Temperature correction.

Correction factor = $1 - (6 \times 0.0000115) = 0.999931$

Final (adjusted) length of calibration course $307.59 \times 0.999931 = 307.57$ m

Calibrations

Pre-measurement

Date/Time 29 May 2022 09:40

Temp. 14 °C rain

Post-measurement

Date/Time 29 May 2022 10:25

Temp 14 °C

Start	End	Reading	Start	End	Reading
252500	255783	3283	350000	353281	3281
255800	259082	3282	353300	356582	3282
259100	262382	3282	356600	359881	3281
262400	265683	3283	359900	363182	3282

Average 3282.50 Average 3281.50

Working Constant 10672.37/km

+ 1 ‰ 10.67/km

Pre-measurement constant 10683.04/km

Working Constant 10669,12/km

+ 1 ‰ 10.67/km

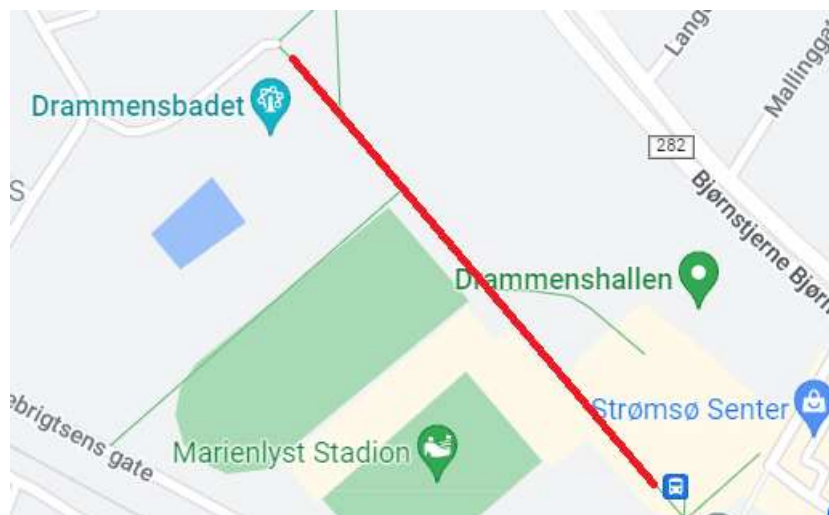
post-measurement constant 10679.79/km

Measurement working constant: **10683/km**

Constant for the Day (highest): **10683/km**

CALIBRATION COURSE MAP

EVENT: *Drammen Half Marathon – 5 km*
LOCATION: *Drammen, Norway*
DATE: *4 September 2022*



Calibration course 307.57 metres

Distance to start point 0 metres (start point is on calibration course).

MEASUREMENT PROCEDURE

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*

Measurement working constant: **10683/km**

Constant for the Day (highest): **10683/km**

Measurement of the course:

I measured from start line in running direction to a fixed turning point on Kreftings Gate 10 m before sign “Grønland”. Then I measured from finish line towards running direction to the same fixed turning point.

09:50

Counter	Counts	Distance	Fix point
267400	0	0.00 m	Half marathon start line
295535	28135	2,633.50 m	10 m before sign “Grønland”
306600	0	0.00 m	Half marathon finish line
330300	23700	2,218.50 m	10 m before sign “Grønland”

Measured distance $2,633.50 + 2,218.50 = 4,852$ m

The 5 km course is missing $5,000 - 4,852$ m = 148 meters

That means that the real turning point needs to be $148/2 = 74$ meters from the fixed turning point.

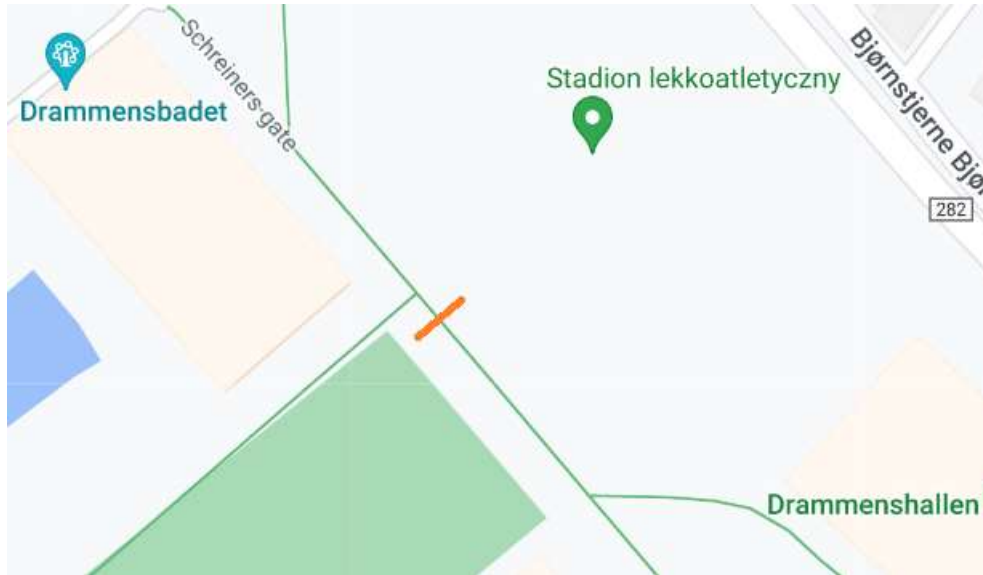
74 meters = $74 * 10,683 = 790$ counts, which I measured from the fixed turning point. Start 330410. New turning point 331200 = 64 meters after sign “Grønland”

MAP of start area

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*



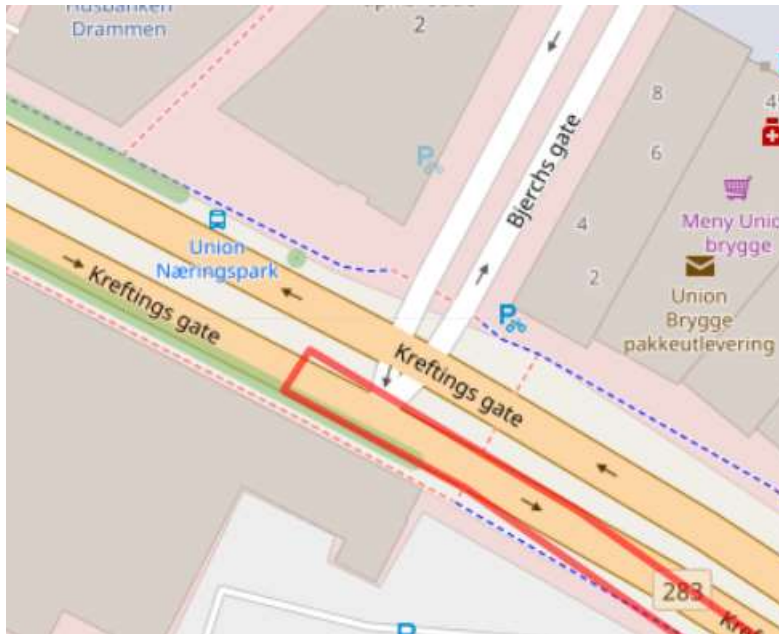
Start line: **Schreiners gate 20 m after sign “Olympic” at grating**

MAP of turning point

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*

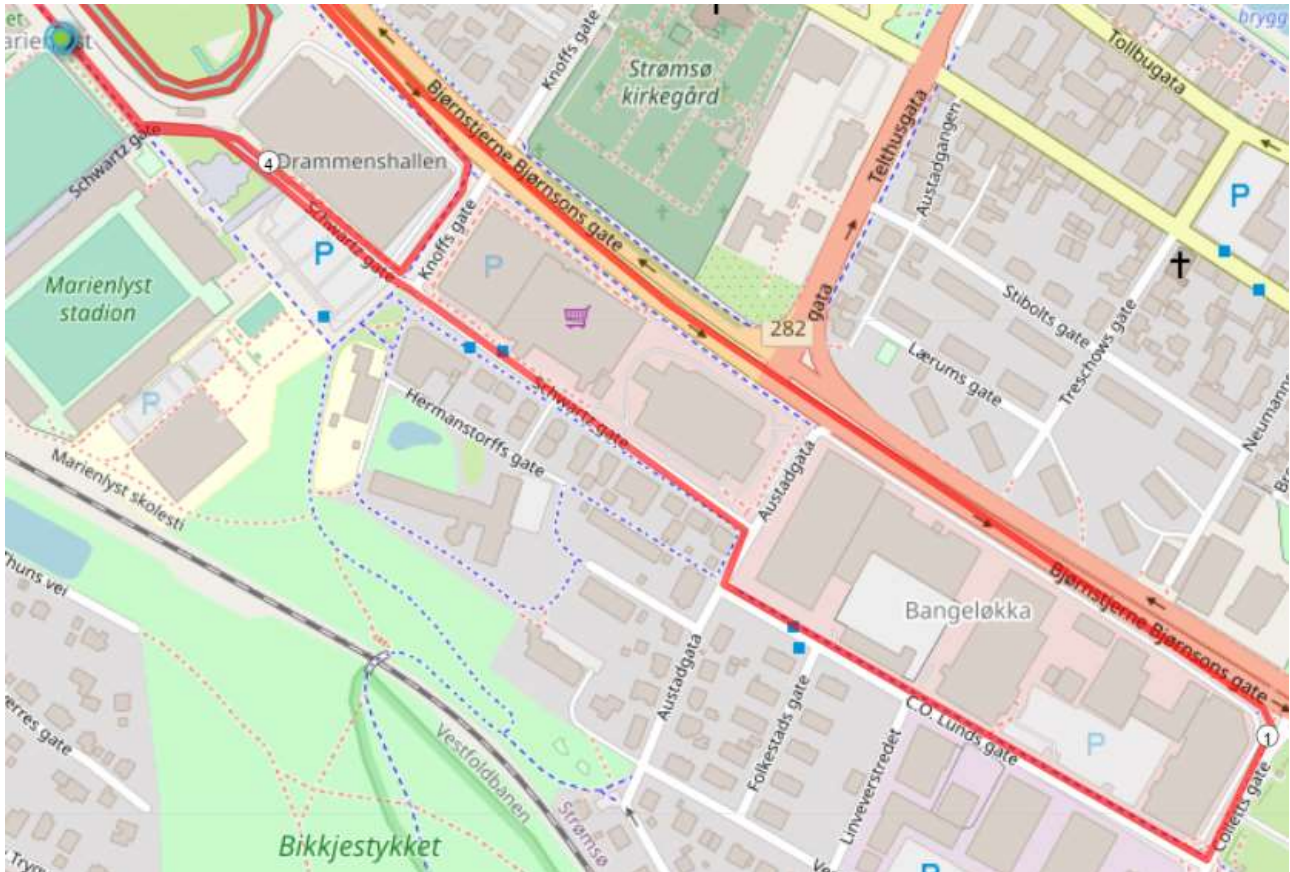


MAP of first part of the course

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*



MAP of last part of the course

EVENT: *Drammen Half Marathon – 5 km*

LOCATION: *Drammen, Norway*

DATE: *4 September 2022*

