

# RACE 1 — POST-RACE ANALYTICS

JUN 15 2025 · J/80 · 4 LEGS (↑↓↑↓) · WINDWARD-LEEWARD · FLEET: 181 · 298 · 441 — 3 of 3 selected

1ST

CAN 441 · Alchemist

Goncalves

36:05.7 elapsed

2ND

CAN 298 · Chimichuri

Bieder

+2.0 s 36:07.7

3RD

CAN 181 · Innocent B.

Doyle

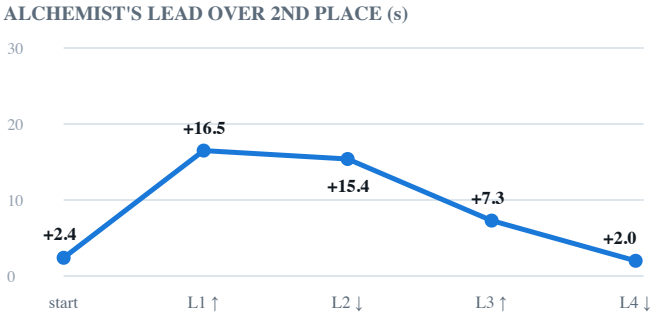
+14.7 s 36:20.4

## 01 RACE OVERVIEW

|         | 181<br>Innocent B. | 298<br>Chimichuri | 441<br>Alchemist | Lead    |
|---------|--------------------|-------------------|------------------|---------|
| Start   | +4.1               | +2.4              | 4.1 s *          | ● +2.4  |
| Leg 1 ↑ | +16.5              | +26.3             | 10:17.8 *        | ● +16.5 |
| Leg 2 ↓ | +8.7               | 7:15.4 *          | +9.8             | ● +15.4 |
| Leg 3 ↑ | +10.3              | 10:05.5 *         | +9.2             | ● +7.3  |
| Leg 4 ↓ | +3.5               | 8:02.7 *          | +5.2             | ● +2.0  |
| Finish  | +14.7              | +2.0              | 36:05.7 *        | ● WIN   |

Winner shows their segment time; others show +Δ. Start = gun→line (illustrative); legs & finish = elapsed.

★ SEGMENT WINNER · LEAD = MARGIN OVER 2ND



Margin over whoever was 2nd at each mark (181 after L1–L2, 298 after L3–finish). Never headed, nearly caught.

## 02 FULL RACE

| Metric                 | 181              | 298             | 441       | ̄ fleet |
|------------------------|------------------|-----------------|-----------|---------|
| Elapsed                | 36:20.4<br>+14.7 | 36:07.7<br>+2.0 | 36:05.7 * | 36:11.3 |
| Avg SOG <sub>kn</sub>  | 5.70             | 5.87            | 5.93      | 5.83    |
| Avg VMG <sub>kn</sub>  | 3.97             | 3.82            | 4.04      | 3.94    |
| Distance <sub>nm</sub> | 3.45             | 3.53            | 3.57      | 3.52    |
| Tacks                  | 0*               | 0*              | 0*        | —       |
| Gybes                  | 0*               | 0*              | 0*        | —       |
| Side bias              | S 71%†           | S 58%†          | P 64%†    | —       |
| Avg heel °             | 11.3             | 11.6            | 8.6       | 10.5    |

GREEN BEST · RED WORST · TIES NEITHER · ̄ NEVER COLORED

## 03 START

GUN → LINE

| Metric                           | 181 | 298 | 441 |
|----------------------------------|-----|-----|-----|
| Gun → line <sub>s</sub>          | 8.2 | 6.5 | 4.1 |
| Dist to line at gun <sub>m</sub> | 18  | 14  | 9   |
| SOG at gun <sub>kn</sub>         | 4.9 | 5.1 | 5.4 |
| SOG at line <sub>kn</sub>        | 5.5 | 5.7 | 6.0 |

COACH'S HEADLINE

Best start of the three, +26.3 s up the first beat (pointing gain: best SOG *and* VMG) — then a defensive slide. Chimichuri won **every remaining leg**, closing at ~8 s per leg. One more leg and the result flips. Review: downwind mode (Legs 2 & 4), second-beat pace.

04 LEG BY LEG

▲ VS LEG BEST · GREEN BEST · RED WORST

LEG 1

↑ BEAT

10:17.8 winning

|         | 181              | 298              | 441                |
|---------|------------------|------------------|--------------------|
| Time    | 10:34.3<br>+16.5 | 10:44.1<br>+26.3 | 10:17.8 *<br>-16.5 |
| SOG kn  | 5.31             | 5.48             | 5.65               |
| VMG kn  | 3.74†            | 3.79†            | 4.02†              |
| Dist nm | 0.94             | 0.98             | 0.97               |
| Heel °  | 13.1†            | 13.4†            | 12.0†              |

441's pointing gain built the whole race lead — best SOG and best VMG on the beat.

LEG 2

↓ RUN

7:15.4 winning

|         | 181            | 298              | 441            |
|---------|----------------|------------------|----------------|
| Time    | 7:24.1<br>+8.7 | 7:15.4 *<br>-8.7 | 7:25.2<br>+9.8 |
| SOG kn  | 6.17           | 6.32             | 6.42           |
| VMG kn  | 4.06†          | 4.15†            | 4.01†          |
| Dist nm | 0.76           | 0.76             | 0.79           |
| Heel °  | 5.2†           | 4.8†             | 5.6†           |

441 sailed hot angles that didn't pay — fastest SOG, longest path, slowest run. 298's lower mode wins the leg.

LEG 3

↑ BEAT

10:05.5 winning

|         | 181              | 298                | 441             |
|---------|------------------|--------------------|-----------------|
| Time    | 10:15.8<br>+10.3 | 10:05.5 *<br>-10.3 | 10:14.7<br>+9.2 |
| SOG kn  | 5.38             | 5.60               | 5.61            |
| VMG kn  | 3.80†            | 3.98†              | 3.95†           |
| Dist nm | 0.92             | 0.94               | 0.96            |
| Heel °  | 12.8†            | 13.0†              | 11.9†           |

298 fastest on the second beat too — 441's lead down to 7.3 s at the top mark.

LEG 4

↓ RUN

8:02.7 winning

|         | 181            | 298              | 441            |
|---------|----------------|------------------|----------------|
| Time    | 8:06.2<br>+3.5 | 8:02.7 *<br>-3.5 | 8:07.9<br>+5.2 |
| SOG kn  | 6.18           | 6.31             | 6.24           |
| VMG kn  | 4.02†          | 4.12†            | 3.99†          |
| Dist nm | 0.84           | 0.85             | 0.85           |
| Heel °  | 5.0†           | 4.6†             | 5.4†           |

298 closes to 2.0 s at the finish — one more leg and the result flips.

DATA QUALITY

\* The comparison stats show 0 tacks / 0 gybes while the maneuver engine detected 22 maneuvers — the stats panel is not wired to maneuver data (bug; see page 3 for the real counts). † Per-leg VMG, per-leg heel, side-bias %, and all Start values are illustrative placeholders. Race-scope Avg SOG and Distance are recomputed from leg data — the v2 race scope on staging appears to repeat Leg-1 values (verify in engine). Heel for 441 (8.6°) vs rivals (11+°) warrants a sensor-calibration check.

05 MANEUVERS

22 DETECTED · LOSS = METRES VS PRE-MANEUVER VMG, TO 95% RECOVERY

| Metric          | 181<br>Innocent B. | 298<br>Chimichuri            | 441<br>Alchemist   |
|-----------------|--------------------|------------------------------|--------------------|
| Maneuvers T+G   | 1 *                | 13 4+9                       | 8 4+4              |
| Total loss m    | 13†                | 182†<br>≈ 61 s               | 89†<br>≈ 30 s      |
| Avg tack loss m | 13† n=1            | 18†                          | 12†                |
| Avg gybe loss m | —                  | 12†                          | 10†                |
| Worst maneuver  | 13 m<br>11:27      | 28 m<br>11:41 tack · stalled | 15 m<br>11:26 tack |
| Avg recovery s  | 6†                 | 7.1†                         | 5.6†               |

Counts uncolored — more maneuvers is not worse without context; cost metrics carry the tri-color. J/80 benchmarks: tack good 8–12 m · typical 12–16 · poor 20+.

| TACKS · 9 fleet |                                      | GYBES · 13 fleet |                          |
|-----------------|--------------------------------------|------------------|--------------------------|
| Best            | 298 · 10 m<br>11:28 · 5 s            | Best             | 298 · 8 m<br>11:34 · 4 s |
| Worst           | 298 · 28 m<br>11:41 · 12 s · stalled | Worst            | 298 · 17 m<br>11:52      |
| Avg             | 441 12 m · 298 18 m                  | Avg              | 441 10 m · 298 12 m      |

MANEUVER READ

298 spent 182 m on maneuvers vs 441's 89 m — a ~93 m bill (≈ 31 s) — and still won Legs 2–4: at ~12 m each, five extra gybes cost ~60 m but bought the pressure that won two runs. Aggressive gybing was rational; 298's real leak is tack quality (18 m avg, one 28 m stall at 11:41 — the most expensive maneuver of the race). 441's edge: cheap, infrequent maneuvers (12 m tacks, top of the "good" band).

06 MANEUVER LOG

GROUPED BY LEG · LOSS (M) + RECOVERY (S) · GREEN ≤12 M · RED ≥20 M

| LEG 1 ↑ BEAT · 6 tacks |       |     |       |     |
|------------------------|-------|-----|-------|-----|
| 11:25:37               | ● 298 | P→S | -22 m | 9 s |
| 11:26:40               | ● 441 | P→S | -15 m | 7 s |
| 11:27:03               | ● 181 | S→P | -13 m | 6 s |
| 11:28:03               | ● 298 | S→P | -10 m | 5 s |
| 11:29:41               | ● 298 | P→S | -14 m | 6 s |
| 11:32:40               | ● 441 | S→P | -11 m | 5 s |

| LEG 2 ↓ RUN · 4 gybes |       |     |       |     |
|-----------------------|-------|-----|-------|-----|
| 11:34:12              | ● 298 | S→P | -8 m  | 4 s |
| 11:35:28              | ● 441 | S→P | -10 m | 4 s |
| 11:38:41              | ● 441 | P→S | -9 m  | 4 s |
| 11:39:38              | ● 298 | P→S | -12 m | 5 s |

Legs 3–4 (12 more maneuvers) omitted in this draft — full log with entry/low/exit speeds and SOG-dip traces in the interactive viewer.

DATA QUALITY

† All loss/recovery values are illustrative — the engine must implement the integrated VMG-deficit computation (baseline = 20–30 s pre-maneuver VMG; integrate deficit until back to 95%; recipe and J/80 benchmarks in Research-Maneuver-Metrics-Perplexity-2026-07-02). The staging maneuver list renders boat names overlapping the Dir/In columns (rendering bug) and shows UTC instead of local time. 181 logged 1 maneuver in 4 legs — detection gap; excluded from coloring.