Cool Shade Pro Art Valley Field Test

A real-world comparison between Cool Shade Pro, a similar non-reflective reference tent, and an ambient air control during Art Valley, June 2026.

Executive Summary

4.4°C
Average Cool Shade Pro advantage during 9am–5pm daylight periods

5.9°C
Average advantage during the key 9am–3pm sleep window

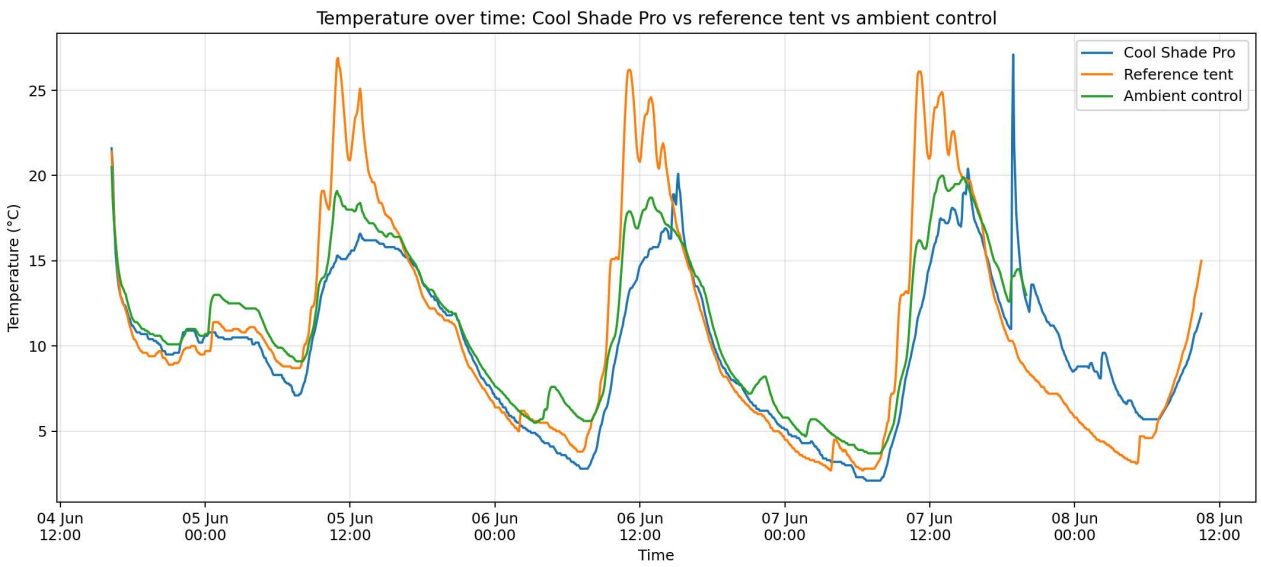
14.3°C
Largest measured difference between the reference tent and Cool Shade Pro

46%
Slower morning heat-up on the three full test days

In plain English: Cool Shade Pro was not just slightly cooler. During the period when festival tents usually become uncomfortable, it stayed meaningfully cooler than the comparable non-reflective tent.

> **Customer takeaway:** On the full test days, Cool Shade Pro averaged about 6.2°C cooler than the reference tent between 9am and 3pm. That is the window that matters most for people trying to keep sleeping after sunrise.

Technical note: The analysis uses matched five-minute readings. Tent-to-tent comparisons run from 4 June 2026 at 4:15pm to 8 June 2026 at 10:30am. Three-probe comparisons including ambient control run until 7 June 2026 at 8:00pm, matching the stated control end time.



Temperature over time for Cool Shade Pro, reference tent and ambient control.

1. Baseline Thermal Performance

The reference tent behaved like a normal festival tent: once sunlight hit it, internal temperature rose above surrounding air. Cool Shade Pro largely resisted that build-up.

+3.0°C

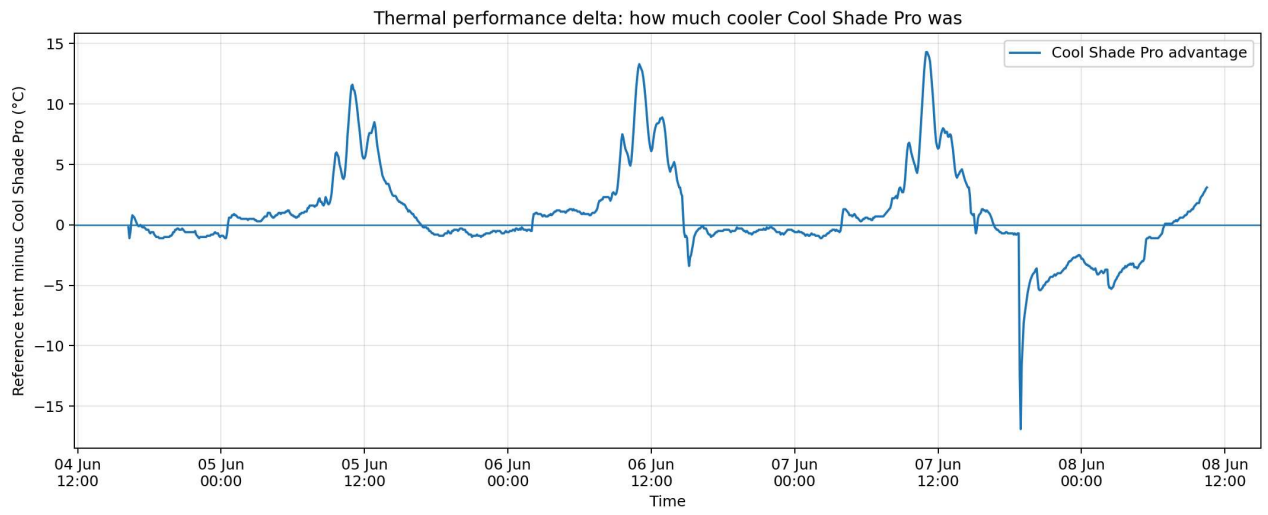
Reference tent average above ambient during daylight

-1.6°C

Cool Shade Pro average relative to ambient during daylight

> **Customer takeaway:** The standard tent tended to trap extra heat. Cool Shade Pro did not behave like a typical heat-trapping tent during this test.

Technical note: During 9am–5pm periods where all three probes were active, the reference tent averaged 3.0°C above ambient, while Cool Shade Pro averaged -1.6°C relative to ambient.



Thermal delta showing how much cooler Cool Shade Pro was compared with the reference tent.

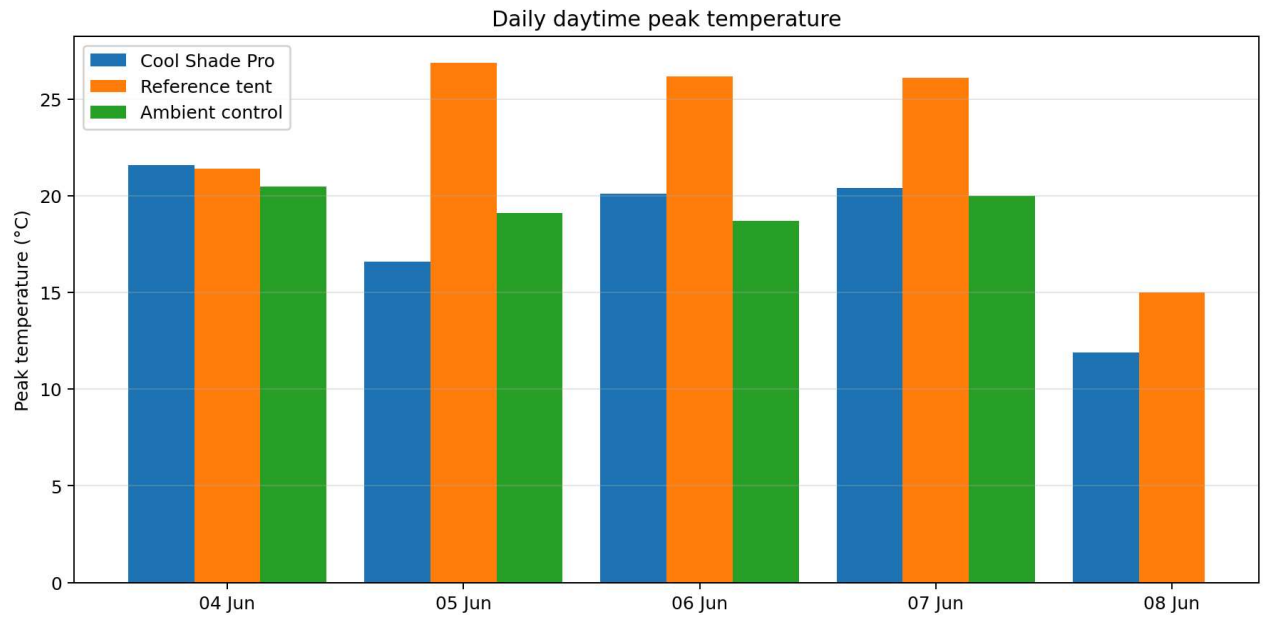
Date	9am–5pm CSP advantage	9am–3pm CSP advantage	CSP peak	Reference peak	Reference vs ambient	CSP vs ambient
04 Jun 2026	0.1		21.6	21.4	0.0	-0.1
05 Jun 2026	4.4	5.6	16.6	26.9	3.0	-1.4
06 Jun 2026	4.7	6.5	20.1	26.2	3.1	-1.6
07 Jun 2026	5.0	6.5	20.4	26.1	3.1	-1.9
08 Jun 2026	2.0	2.0	11.9	15.0		

2. Daily Peak Temperature

Peak temperature matters because it shows the worst part of the day. A tent can feel fine in the morning but become unusable once heat builds up.

> **Customer takeaway:** On the three full test days, the reference tent reached daytime peaks of about 26°C, while Cool Shade Pro stayed around 17–20°C.

Technical note: Peak values are calculated within the 9am–5pm daylight window. Monday is a partial day because the test ended at 10:30am.



Daily peak temperature comparison.

3. Key Sleep Window: 9am–3pm

This is the most important practical metric. Festival campers usually want to know whether they can keep sleeping after the sun comes up.

5.9°C

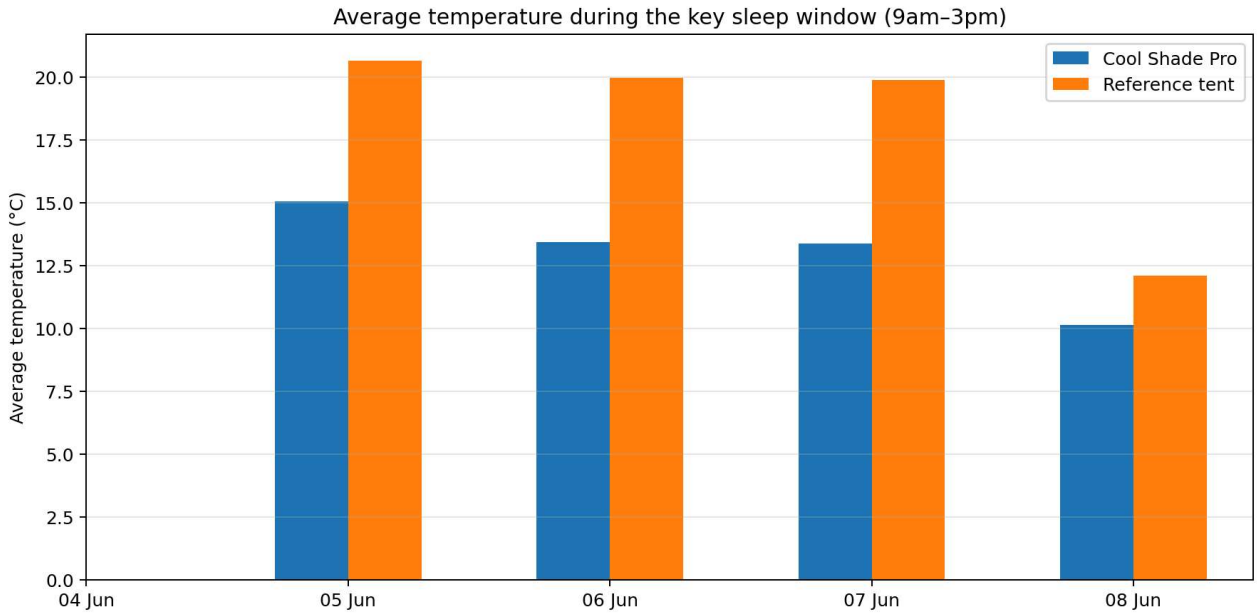
Average 9am–3pm advantage

5.7°C

Median 9am–3pm advantage

> **Customer takeaway:** During the sleep-relevant part of the day, Cool Shade Pro averaged nearly 6°C cooler than the reference tent.

Technical note: This metric uses the mean temperature difference between the reference tent and Cool Shade Pro from 9am to 3pm. Positive values mean Cool Shade Pro was cooler.



Average temperature during the 9am–3pm sleep window.

4. Morning Heat-Up Rate

A cooler tent is useful, but a tent that heats up more slowly is even more valuable. Slower heat-up gives people more usable sleep time after sunrise.

4.2°C/hr

Reference tent average morning heat-up

2.4°C/hr

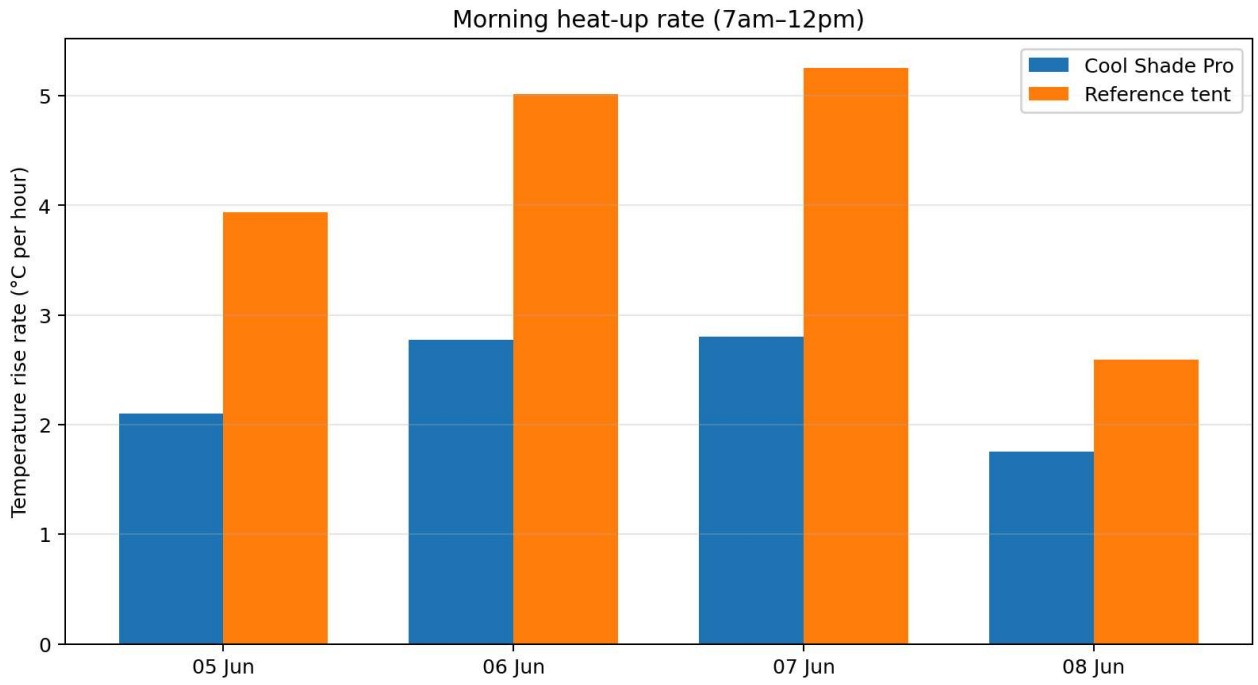
Cool Shade Pro average morning heat-up

46%

Slower heat-up on full test days

> **Customer takeaway:** On the full test days, Cool Shade Pro heated up roughly 45–47% slower than the reference tent during the morning.

Technical note: Heat-up rate is calculated with a linear temperature slope from 7am to 12pm. This shows how quickly each tent gained temperature as the day warmed.



Morning heat-up rate from 7am to 12pm.

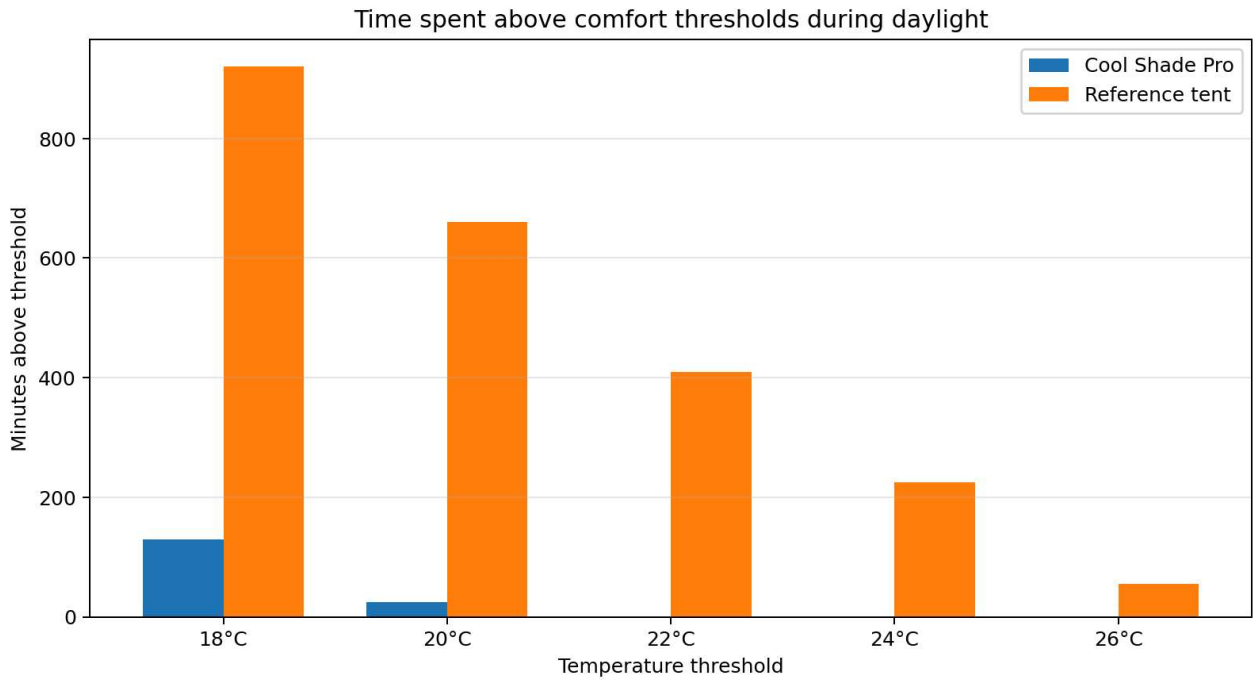
Date	Reference °C/hr	CSP °C/hr	Heat-up reduction
05 Jun 2026	3.9	2.1	46.7
06 Jun 2026	5.0	2.8	44.6
07 Jun 2026	5.3	2.8	46.7
08 Jun 2026	2.6	1.8	32.4

5. Sleep Extension and Comfort Thresholds

Instead of only asking “what was the average temperature?”, this asks a more practical question: how long did each tent stay below comfort thresholds?

> **Customer takeaway:** On the main test days, the reference tent crossed 22–24°C in the late morning. Cool Shade Pro stayed below those thresholds in this dataset.

Technical note: This analysis counts total daylight minutes above 18°C, 20°C, 22°C, 24°C and 26°C. Because this was a cool June test, these thresholds should be interpreted as relative comfort markers, not summer heat limits.



Minutes spent above comfort thresholds during daylight.

Threshold	Reference minutes above	CSP minutes above
18.0	920.0	130.0
20.0	660.0	25.0
22.0	410.0	0.0
24.0	225.0	0.0
26.0	55.0	0.0

6. Accumulated Heat Exposure: Degree-Hours

Degree-hours measure the amount of heat exposure over time. This is better than looking at one peak reading because it captures both how hot the tent got and how long it stayed hot.

99%

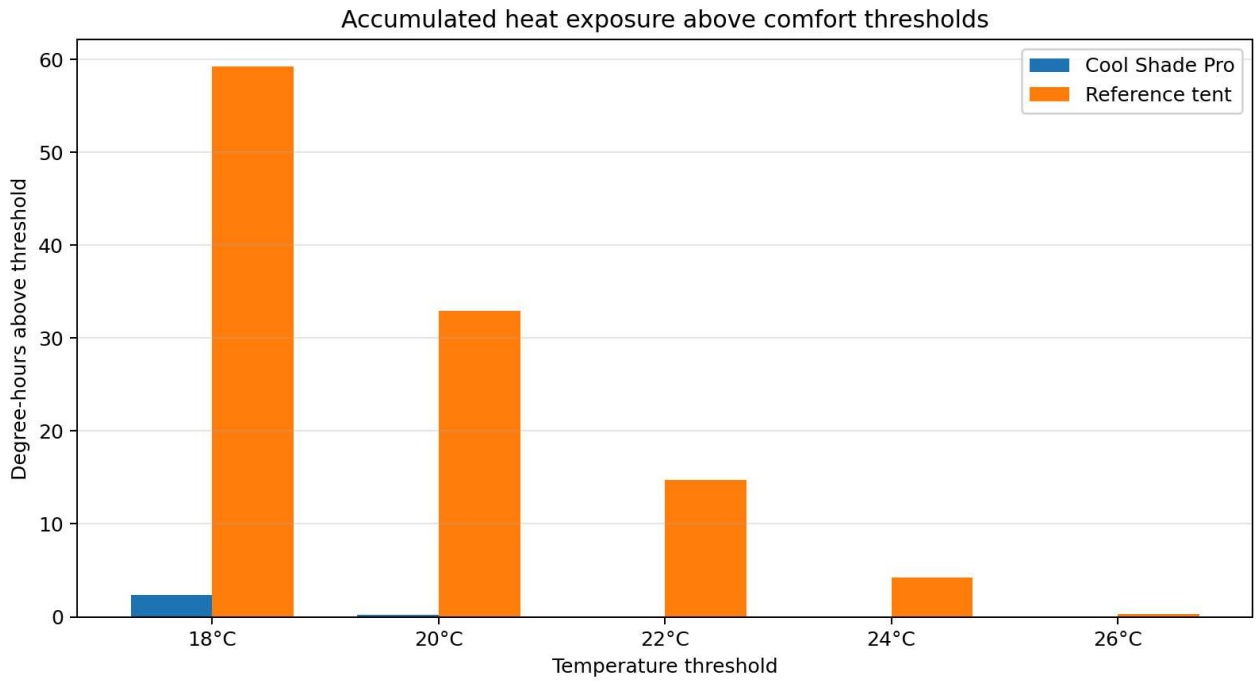
Reduction in accumulated heat exposure above 20°C

100%

Reduction in accumulated heat exposure above 22°C

> **Customer takeaway:** Cool Shade Pro did not just reduce peak heat. It dramatically reduced the total time spent in uncomfortable temperature bands.

Technical note: Degree-hours are calculated as the sum of temperature above a threshold multiplied by time. For example, 2 hours at 3°C above a threshold equals 6 degree-hours.



Accumulated degree-hours above comfort thresholds.

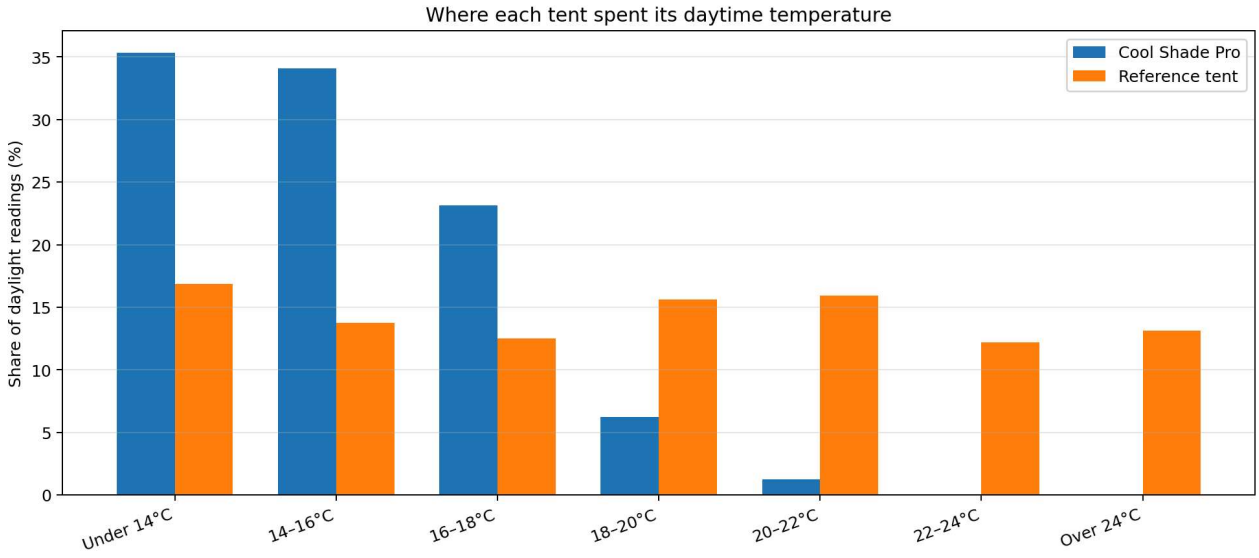
Threshold	Reference degree-hours	CSP degree-hours	Reduction
18.0	59.2	2.3	96.0
20.0	32.9	0.2	99.3
22.0	14.7	0.0	100.0
24.0	4.2	0.0	100.0
26.0	0.3	0.0	100.0

7. Temperature Distribution

This shows where each tent spent most of its daytime readings. It is one of the easiest ways to understand comfort across the whole test.

> **Customer takeaway:** Cool Shade Pro spent almost all daylight readings under 20°C in this test. The reference tent spent a much larger share of time in the 20°C+ and 24°C+ bands.

Technical note: Distribution is calculated across matched 9am–5pm tent readings. The bands show the percentage of readings that fell into each temperature range.



Percentage of daytime readings in each temperature band.

8. Peak Heat Delay

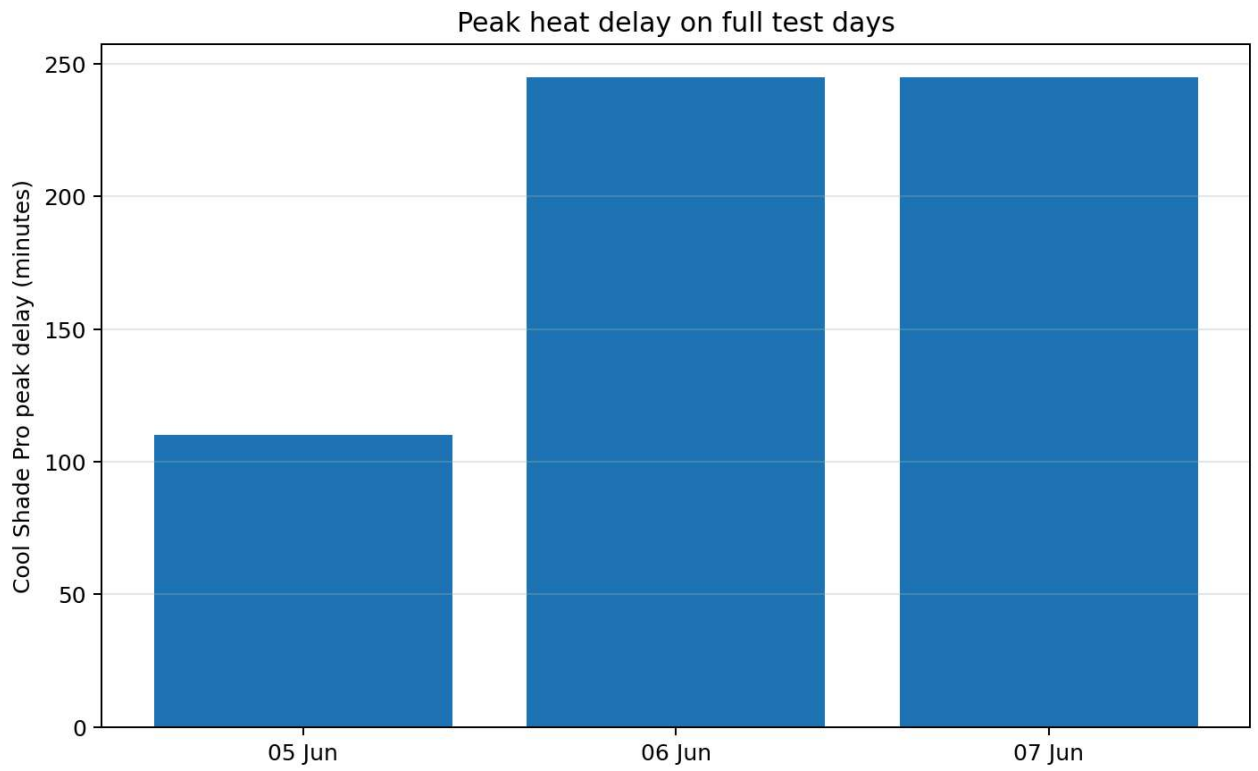
Peak delay measures whether the tent pushes the hottest point of the day later. This matters because a delayed and lower peak can mean more time before the tent becomes uncomfortable.

200 min

Average peak delay on the three full test days

> **Customer takeaway:** On the full test days, Cool Shade Pro reached its warmest point much later than the reference tent and at a lower temperature.

Technical note: Peak delay is calculated as the difference between the time of each tent's highest 6am–5pm temperature. This should be interpreted alongside peak temperature, not by itself.



Peak heat delay on full test days.

9. Thermal Stability

Comfort is not only about being cooler. A tent that swings less wildly in temperature usually feels more stable and predictable.

3.4°C

Cool Shade Pro daylight temperature variation

4.4°C

Reference tent daylight temperature variation

Technical note: Thermal stability is measured using standard deviation across daylight readings. Lower variation indicates a more stable internal temperature profile.

10. Estimated Solar Heat Gain Reduction

This estimates how much extra above-ambient heat build-up was avoided by Cool Shade Pro.

97%

Estimated reduction in positive above-ambient heat gain

Important: This is a useful engineering indicator, but it should be used carefully in public claims. It is based on this field setup, not a controlled laboratory solar chamber.

Technical note: Positive heat gain was calculated as internal tent temperature minus ambient control, clipped at zero. Average positive heat gain was 3.05°C for the reference tent and 0.11°C for Cool Shade Pro during matched daylight periods.

11. Festival Sleep Score

This is a customer-facing summary score designed to combine the main comfort drivers into one number.

94/100

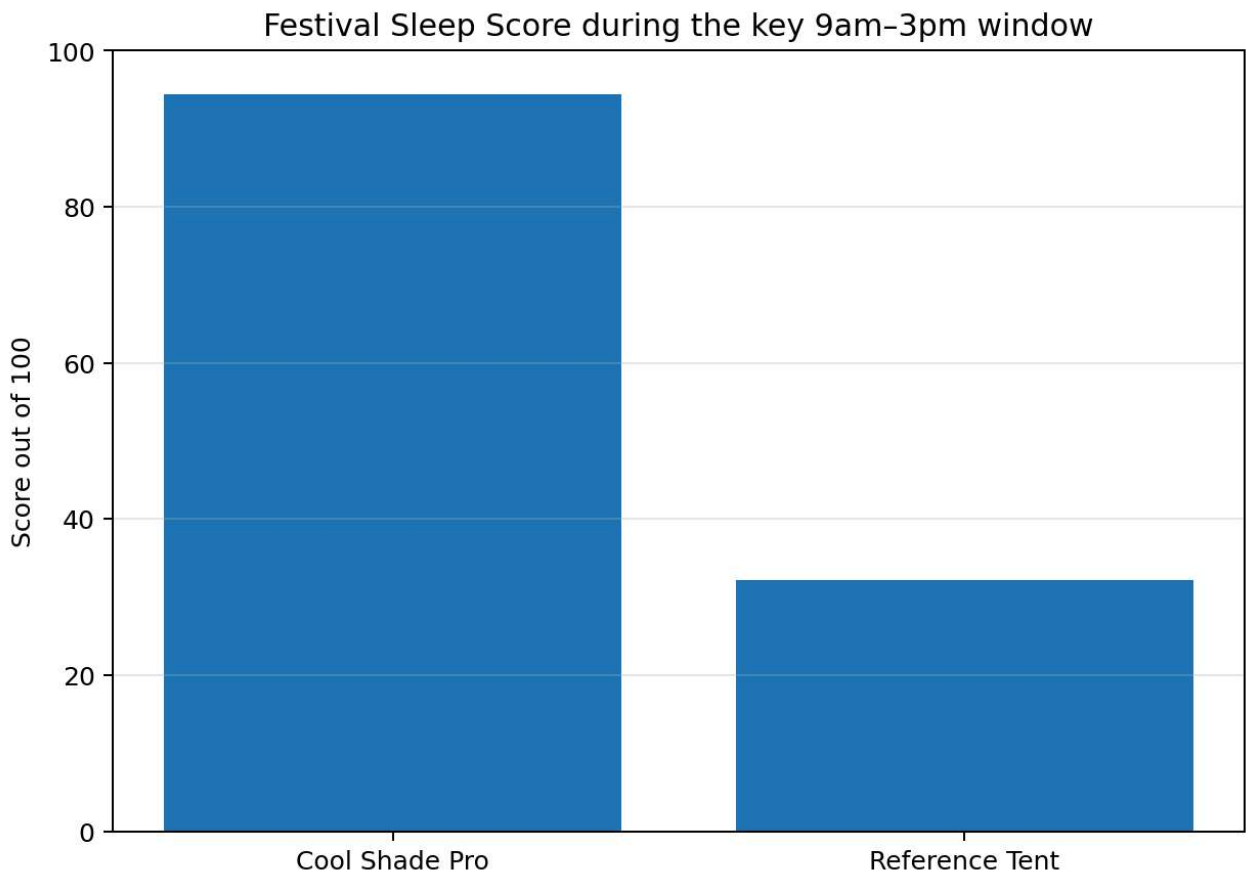
Cool Shade Pro Festival Sleep Score

32/100

Reference tent Festival Sleep Score

> **Customer takeaway:** The score summarises what the detailed data already shows: Cool Shade Pro performed much better in the conditions that matter for sleeping after sunrise.

Technical note: The score is a pilot index based on time under 20°C, time under 22°C, average temperature, peak temperature and heat-up resistance during the 9am–3pm window. It is useful for comparison within this test, but should be recalibrated after future summer tests.



Festival Sleep Score comparison.

Tent	Sleep Score	9am–3pm average	9am–3pm peak	Morning heat-up
Cool Shade Pro	94.4	13.6	19.0	2.4
Reference Tent	32.1	19.5	26.9	4.2

Data Quality and Claim Guidance

This is a strong first field test because it used three probes, a reference tent and an ambient control. It is much stronger than a single “inside my tent” reading.

Use this claim confidently:
“Real-world Art Valley field testing showed Cool Shade Pro averaged 4.4°C cooler than a

comparable non-reflective reference tent during daylight hours, and 5.9°C cooler during the key 9am–3pm sleep window.”

Do not overclaim this as final proof across every climate yet. The correct next step is to repeat the same methodology in warmer weather and at another festival.

Recommended next validation: Repeat the three-probe setup in summer, keep all probes at matched height and airflow exposure, photograph sensor placement, and add solar exposure notes for each tent. If similar deltas repeat, the performance claim becomes much harder to challenge.

Report generated from raw sensor CSV exports. All temperatures shown in degrees Celsius. The reference tent was similar in format but did not use the reflective outer system used by Cool Shade Pro.