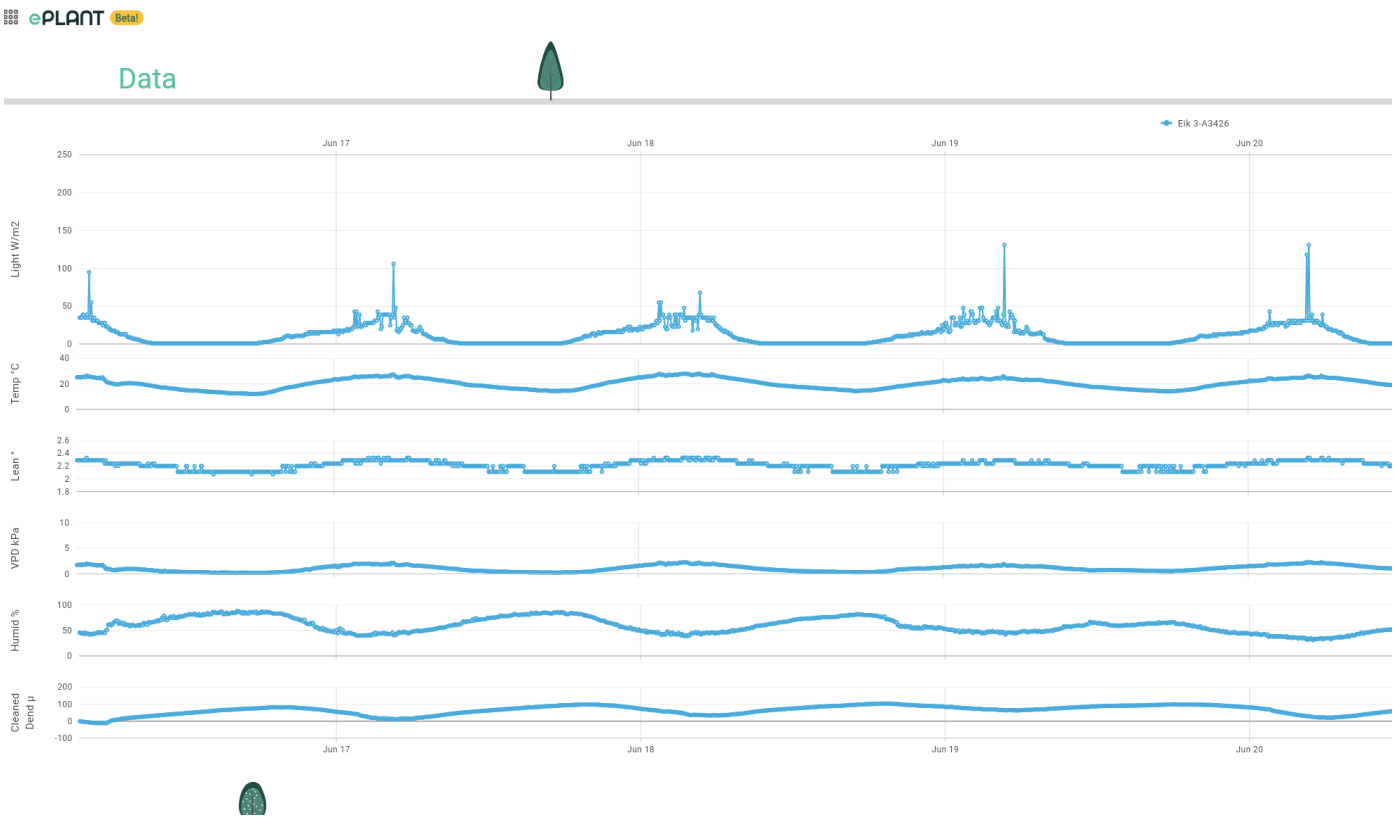
TreeTag Precision Insights – Tree A3426

Environmental & Growth Correlation

TreeTag data from Tree A3426 demonstrates the dynamic relationship between environmental conditions and tree physiology.
Captured every 5 minutes, this high-resolution dataset shows:

- Light and temperature rise during the day, peaking with VPD (Vapor Pressure Deficit), which drives transpiration.
- Humidity decreases inversely with VPD, reflecting the air's drying power.
- The dendrometer signal shows subtle stem shrinkage during the day (water loss) and swelling at night (rehydration), indicating daily water use and recharge.
- These patterns are tightly coupled, giving insight into tree stress and water balance in real time.



Lean Tracking & Dendrometer Precision

The second panel highlights TreeTag's precision tilt sensing capabilities. Lean angle (in degrees) closely tracks the light curve throughout the day, revealing minute diurnal changes in trunk orientation likely due to turgor shifts and solar-driven hydraulic movement.

Such precise lean measurements—coupled with dendrometer and environmental sensing—provide unprecedented insight into tree behavior, health, and stress response. The stability of lean direction confirms a static anchor point with no significant external mechanical disturbance during the monitoring window.

