



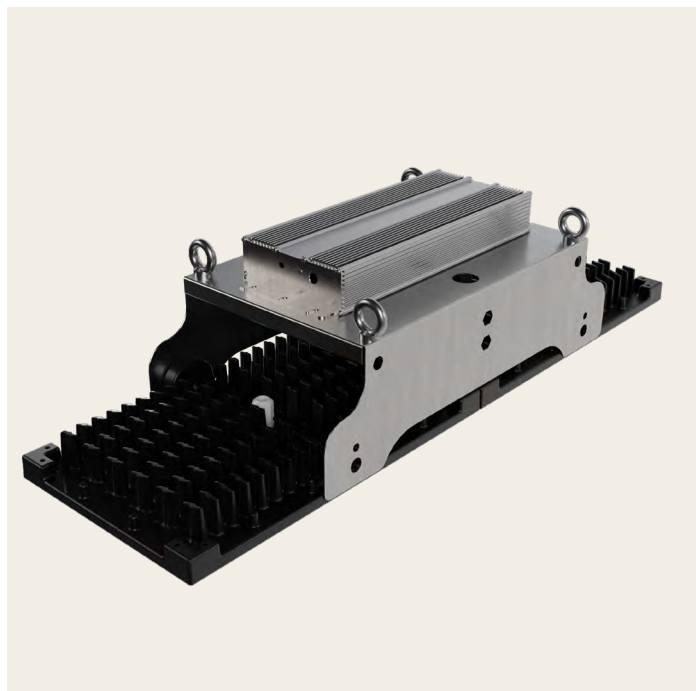
ROOT3

LIGHTING & ELECTRICAL

HORTICULTURAL
LIGHTING

UK MANUFACTURED

HORTICULTURAL PRODUCTS



Our extensive selection of Horticultural lighting solutions leads to increased yields, enhanced product quality, and greater consistency, all while optimising energy utilisation.

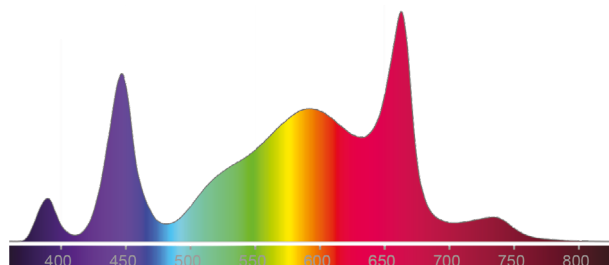
Whether you cultivate fruits, vegetables, or flowers, we offer the perfect product to deliver optimal results for your specific needs. Our solutions carry a definitive edge over traditional HID fixtures in terms of efficiency and longevity. LED technology possesses a higher $\mu\text{mol}/\text{watt}$ ratio, which results in a higher photon output with less energy. This efficiency is a win-win, resulting in lower energy consumption and a reduced carbon footprint.

Our products, with a remarkable operational lifespan of 75,000 hours at L90 B10, offer substantial reductions in maintenance expenditure. This longevity starkly contrasts with the short-lived performance of traditional HID lamps, which demand frequent replacements and thus interrupt the consistency of light exposure for plants. Our robust solution ensures an uninterrupted supply of light, optimising plant growth and productivity.

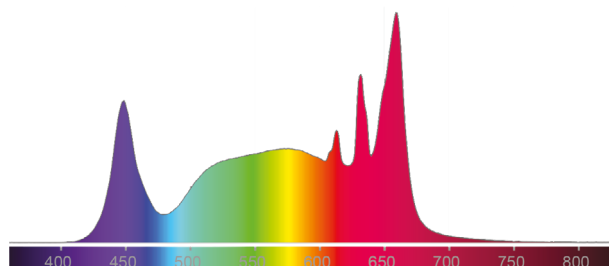
Manufacturing these lighting solutions in the UK delivers several advantages. For one, it allows us to tailor your solution. We offer flexibility & can quickly accommodate customisations or specific requirements.

We make a range of spectral blends to suit different crops & growth stages. We use a broad spectrum to replicate sunlight, working as a direct replacement for Son T & Metal halide systems. We can add UV, far red or anything else you might need to the blend, making sure it suits your requirements. UV light promotes the accumulation of phenolic compounds & enhances antioxidant activity of plant extracts. FAR RED improves stem elongation and fruiting increases flower node quantity and utilises the Emmerson effect to enhance photosynthesis of chlorophyll.

Bespoke Spectral Blends



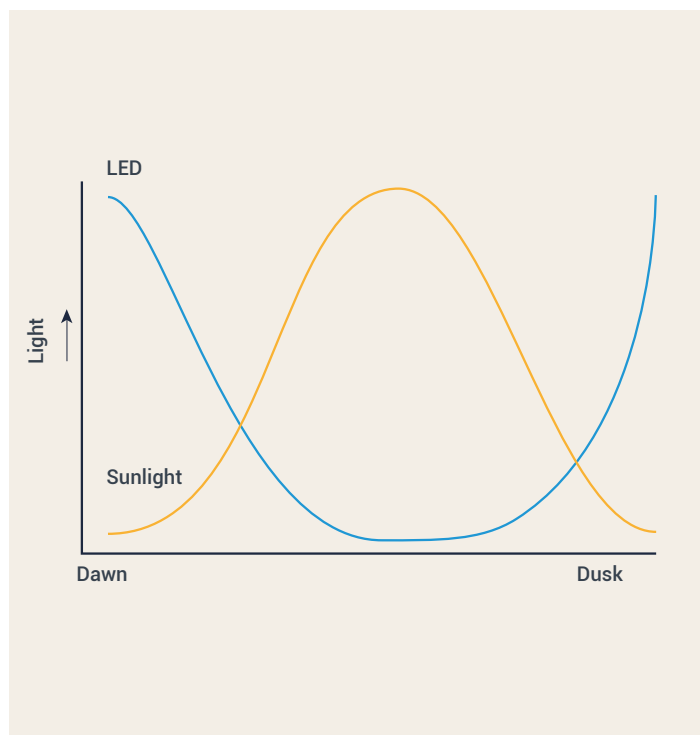
C - Medicinal Cannabis Spectra



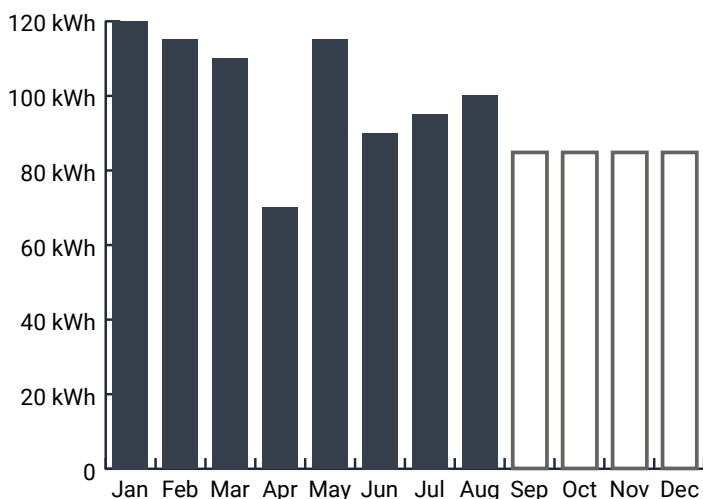
S - Solar Spectra

ENERGY SAVING

HORTICULTURAL PRODUCTS



Our smart lighting solutions deliver up to 65% energy savings compared to traditional High-Pressure Sodium (SON H) and Metal Halide systems. This impressive efficiency is made possible by advanced, lower-wattage lamps that produce high volumes of high-quality light. Designed for long life and minimal energy consumption, our fixtures significantly reduce both energy use and maintenance costs. Plus, with integrated intelligent controls, our systems optimise lighting performance even further, ensuring smarter, more sustainable illumination.



Our control systems are designed to optimise lighting conditions for your crops by syncing with the natural daylight levels. This ensures that your crops receive the exact amount of light they require - no more, no less.

This precision is particularly beneficial for maintaining healthy growth patterns and maximising crop yield. By continuously monitoring and adjusting to daylight levels, our control systems effectively complement natural light, filling in gaps during periods of insufficient daylight and scaling back when daylight is abundant.

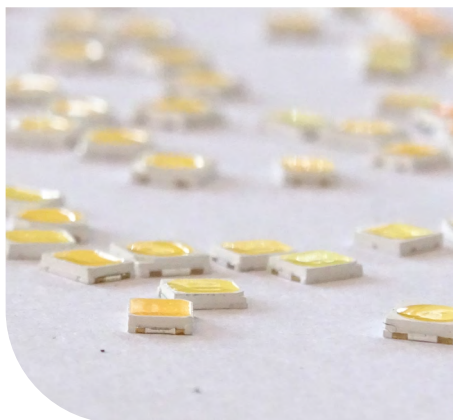
This approach not only optimises the growth environment but also conserves energy by avoiding unnecessary light usage.

Energy Usage Reporting

Our smart system offers full energy reports on each of your fittings, letting you understand your energy usage throughout your growing house instantly. You're able to select any time period to review, enabling you to easily calculate the energy and cost savings you've made.

ROBUST & EFFICIENT

HORTICULTURAL PRODUCTS



LED's

We produce all our LED PCBs in our factory in Yorkshire, allowing us to tailor the spectral blend to whichever crop you're growing. We use high quality LEDs sourced from around the world, including those from Samsung, Seoul Semiconductor & Osram, ensuring we reach the highest efficiency output.



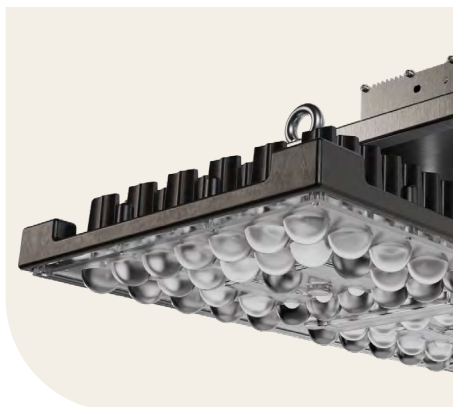
Optimal Integral Cooling

To run LEDs most efficiently, it's vital to keep them cool. We use anodised die cast aluminium with thermal bonding paste to achieve the best thermal transfer from our aluminium PCB boards.



5 Year Warranty

We offer a 5 Year warranty on all our products and parts, and our UK based team are always on hand to help you with anything you need. Our products are designed for a 20 year life span.



Lens System

We've designed unique lenses for each of our products, which effectively direct the light onto the growing surface ensuring all the plants have even exposure. They also create a strong seal ensuring the lights can withstand repeated water exposure expected in a growing environment.



Testing

Using our advanced testing facility allows us to prove spectrum and longevity expectations.

