

WAVE FOR: HORTICULTURE

As more is known about the interaction between light and the growth of plants and crops, there is a prominent focus across the horticultural industry on how to measure and monitor the quality of light, to help achieve greater efficiency and sustainability.

This is where the Wave solution comes in, providing the ability to turn complex light data into actionable tasks.



A Halma company



Wave for Growers

With the handheld WaveGo, you can actively and accurately collect full spectral photosynthetically active radiation (PAR) information to make informed decisions about the lighting for your plants.

Check your readings instantly on your smartphone for a real-time understanding or **log data** to see how your light recipe changes over time.

All data from the device is stored in the WaveCloud platform so you can continuously track improvements to your lighting.

Benefits:

- Get critical performance insights to optimize your growing environment
- Increase yields and enhance nutritional value by adjusting light characteristics
- Discover opportunities to reduce your energy bill and carbon footprint

Applications:

- Compare impact of light sources
- Verify light consistency
- Analyze lighting in different areas of the greenhouse/planting area



Wave for Horticultural Lighting Companies

Use it to facilitate innovation in R&D, as well as easily demonstrating the technical capabilities of your solution to your customers.

Field teams can use the WaveGo to efficiently commission lighting installations, proving solution quality and reassuring customers they have the light that they paid for.

Light data recorded in our WaveCloud can be integrated into your system via API, delivering increased capabilities for your lighting solution.

Benefits:

- Increase sales by showing customers the value of your solution
- Increase efficiency and quality of installation commissioning
- Improve solution capabilities = more value to your customers

Applications:

- Show the performance of your solution to your customers
- Streamline system reporting during and after lighting installation
- Integrate new sensors as part of a dynamic lighting system



What our customers say
‘We purchased the Wave solution for testing at our R&D facilities.

This innovative solution is instrumental in helping us to better understand light quality and intensity.

Wave enables us to compare light inside of our protected crop growing structures with ambient light outside the structure. This ensures we can make the critical changes needed to achieve an optimal growing environment.’

HM•CLAUSE

Research & Development
Global Resource team



Services & Support

We are passionate about light and helping people use the Wave Solution to harness its power. Check our additional services available to Wave customers, including:

- Annual calibration
- Global technical support
- Application knowledge and consulting
- Custom app development

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Power of 3



Measure, Display and Report

Working with Wave, you'll have the power to utilize the WaveGo handheld device, the App interface, and cloud platform so that your workflow is streamlined for your specific needs:

- 1 Customize the app to display only the measurements that matter to you
- 2 Talk to us about linking lighting data to your horticulture control system or data platform
- 3 Quickly compile reports from multiple CSV files at the click of a button.
 - Easily group spectral data into % of total spectrum for ultra violet, blue, green, red, and far red to uncover the secrets in light recipes per crop.
 - Compare crop yields over time, through the seasons and growing cycle with/without natural light.



WaveApp

Photosynthetically active radiation (PAR)

The range of light wavelengths that can induce photosynthesis, between 400 and 700nm.

Photosynthetic photon flux density (PPFD)

The number of photons within PAR wavelengths that fall on a surface each second.

Daily Light Integral (DLI)

The total amount of PPFD over the course of a day, assuming equal light conditions to current measurement, ranging roughly from 0 to 60. A key measurement related to plant growth optimization.

DLI Database

A database of required DLI for many common crop types, sourced from Purdue University.