



# RAISE MORE CONSISTENT AND PRODUCTIVE **LAYERS**

There's a science when it comes to successfully raising layers indoors. Between changing regulations, production costs and the unexpected, it's difficult to obtain optimal results every flock. We understand the challenge and want to help you maintain consistent success.

As the pioneer of animal lighting systems based on scientific research, we've developed innovative solutions that improve both production and animal welfare. Our rigorous scientific process has allowed us to unlock the potential of light and ensured the success of our customers.

Based on photobiology and backed up by scientific research, we have become an industry leader by focusing our efforts on finding solutions that **show proven, measurable results**<sup>†</sup>. These results leverage three key aspects of lighting needed to experience success: spectrum, intensity and photoperiod.



# Science is our secret

A thorough understanding of the way animals perceive and respond to the different characteristics of light matters. Here's why:

## Animals see differently

The spectral characteristics, as well as the intensity, affect how light is perceived. What we see is made up of light reflected from the objects we look at. But eyes aren't the only organ that processes light. Poultry identify light through extra-retinal, non-visual, pathways as well.

The Photopic Spectral Response Graphs shown to the right demonstrate how most humans, who have three visual cones, see green and yellow colors more intensely than they see blue and red. The How Poultry See graph shows that chickens, who have four visual cones, are more sensitive to blue and red light. And what about the far left, smaller peak? It's the UV spectrum. Chickens can see UV light, and humans cannot.

## Experience the benefits today!

Our cutting-edge lighting systems optimize spectral output to target an animal's highest color sensitivity. They control spectrum, photoperiod and light intensity. This results in enhanced production metrics at every stage of life.

### Improve animal welfare

By providing a natural sunrise and sunset simulation, our lighting systems eliminate extreme changes in light, eliminating multiple stress inputs and lowering mortality rates, while improving immune response. This is supported by blood assays for short and long term stress indicators, as well as behavioral stress tests.

### Reduce undesirable behaviors

Artificial lighting programs can be a useful tool to direct desirable behaviors in poultry. For example, a full bright white light spectrum can reduce floor egg and piling issues, while layers under Dim-to-Red® technology are calmer, less prone to flight and notably less aggressive.

### Enhance productivity

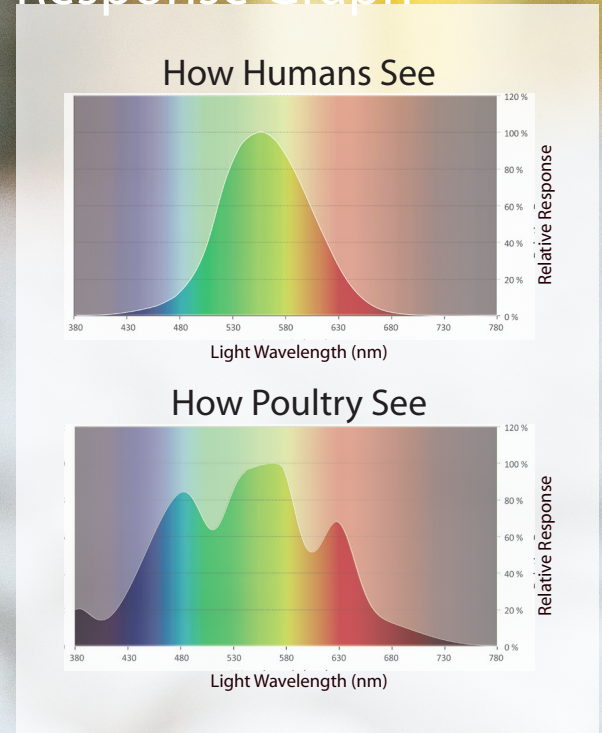
ONCE® innovative technology provides uniform coverage and a consistent light pattern, as well as the sunrise and sunset functionality. This results in minimized corticosterone levels and other stress markers to improve layers' productivity.

Studies show that hens housed under our species-specific lighting systems increased production by 8%, resulting in 28.6 more eggs over a 70-week laying cycle due to improved spectrum and light distribution when compared to regular CFL bulbs.

## See the results

We care about your animals and are dedicated to providing them with the best lighting possible. With our scientific approach to photobiology, along with our systems' rugged and durable design, we offer an optimal solution that addresses your flocks' needs. When supplied with the right tools, you'll have birds that are notably less aggressive with more consistent production.

# Photopic Spectral Response Graph



\*Patent spectral output for avian vision. Pat. [www.once.lighting/patents](http://www.once.lighting/patents) and Other World-wide Patents Pending Copyright © 2020 by ONCE® Revised January 2020