

How to achieve good uniformity of light in a poultry barn

The importance of having good uniformity of light in a poultry barn cannot be underestimated. Minimising dark spots and shadows as much as possible helps to avoid localised over-crowding and encourages an even distribution of the birds throughout the barn. It can also help to reduce floor eggs and broodiness in laying barns.

The question therefore is how can we achieve this?

Good uniformity is influenced by two primary factors: The type of lights which are used and their number and location.

At Gallina LED the first step with a new project is the lighting design. Using specialist software, the design will tell us how many lights are required, their location, the light intensity (lux levels) and, of course, the uniformity.

LED tube lights will give better uniformity compared to LED lamps when directly compared.

As an example, to achieve an average of 100 lux in a 100m x 18m barn with the lights mounted 3m from the floor, 80 28w tubes would be required compared to 240 9w lamps. Light uniformity would be 76% for tubes compared to 60% for lamps.

The reason for this is that different types of lights produce a different spread of light as illustrated. Tubes give a much broader spread of light which are easier to overlap.

Furthermore, as mentioned earlier, the number of lights and their location will also have an influence. Targeting a maximum

light intensity of 100 lux helps to ensure that there are sufficient lights to achieve good uniformity. Remember that the lights can be dimmed when there are birds in the barn.

An additional benefit is that 100 lux will provide enough light for staff to see during cleaning and maintenance!

For all projects, Gallina LED offers a lighting design service so take advantage of this and ensure that your new lighting system provides the best possible lighting environment for your birds!

LED: Improve Performance, Improve Welfare, Save Energy!

