



PHILIPS

Retail Display
Lighting

Coop, UK



A fresh approach to lighting

To reduce the discoloration of fresh prepacked meat, the Coop removed canopy lighting from their refrigerated cabinets and switched to mullion fittings in the form of Philips InteGrade narrow beam fixtures. The change led to a considerable reduction in waste, improved light uniformity and increased energy savings.



Coop Food, Luton

Did you know the right lighting can slow down the onset of discoloration?

Even when stored and displayed in refrigerated cabinets, prepacked meat products discolor over time. This leads to unnecessary waste, as products that look unattractive to customers have to be withdrawn from sale. Several factors accelerate discoloration, including light, temperature, oxygen in sealed packaging, and simply being left in the same shelf position for too long. This prompted the Coop in the UK to take a fresh look at their in-store lighting.

An effective collaboration that drives results

Initially, the Coop reduced color temperature from 4000 to 2700 K, but only gained a few hours of product shelf life. Dimming the lighting to around 50 percent significantly reduced discoloration, but also reduced the product's visual appeal. Philips Lighting suggested the Coop collaborate with Epta UK, their incumbent supplier of refrigeration cabinets, to find an alternative lighting solution, and proposed a trial with the InteGrade narrow beam system to quantify the positive effect. The trial was so successful in reducing light-related discoloration that all new Coop cabinets will be supplied with the Philips Lighting solution.

Philips InteGrade narrow beam puts the focus on the freshest-looking food

InteGrade LED engines use revolutionary integrated optics that distribute light uniformly, and exactly where it's needed, to improve the presentation and visibility of frozen and chilled merchandise and provide optimum energy usage. The narrow beam versions have extremely small dimensions for integration into doors and mullions with limited space, and vertical chillers.

“

Coop FM and Food Technology team worked extensively to identify a method of reducing wastage caused by discolouration on prepacked products. The solution was proposed by Philips Lighting, in conjunction with the Meat Packing partners, having reviewed several options to reduce the effects contributing to the problem. It was determined that modifying the light emitters to reduce the problem would be the preferred option. Philips’ InteGrade lighting system was used, and a significant improvement in product quality was observed after testing in various scenarios. This prompted the Coop to specify Philips InteGrade as the standard specification on all their refrigerated display cabinets.”

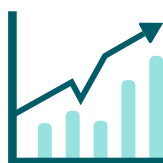
Adrian Crowther, Coop Technical Performance & Design Manager

Turning possibilities into energy saving opportunities



Philips Lighting resolved the Coop’s issues, providing the best light quality with increased visibility and attractiveness, enhancing the Coop customer experience, and prolonging the shelf life of meat products, whilst reducing energy consumption for a competitive total cost of ownership. Compared to the 118-watt usage of existing lighting in a typical 2.5m cabinet, the Philips Lighting solution uses just 87 watts; an energy saving of around 30%.

Superior visibility leads to greater purchase intent



The Philips InteGrade narrow beam fixtures use the latest generation low-powered LED chips and 30° narrow beam technology, for an overall result that reduces hotspots, increases light uniformity and improves the presentation of frozen and chilled goods, with no canopy lighting required.

Proof that InteGrade narrow beam slows down discoloration



With the Coop’s existing lighting solution, pre-packed meats on the top shelves and close to the mullions started to discolor within 24 hours. As a trial, the existing cabinets were fitted with the Philips InteGrade narrow beam solution and, after 24 hours, there were no visible signs of discoloration. After five days, there was no discoloration on the top shelf, and only early signs of discoloration on the meats closest to the mullions. By the eighth day, meats closest to the mullions showed minimal discoloration, though still at acceptable levels. Only by the thirteenth day did increased levels of discoloration appear.

“ Collaborating with the Coop and Epta UK allowed Philips to understand the cabinet design constraints and the root cause of discoloration. The InteGrade narrow beam offered a significant reduction in discoloration, provided superior lighting uniformity and reduced power consumption by eliminating the need for canopy light. By combining an ultra-thin design, 30° optics and the internal mirror, the InteGrade narrow beam fixtures reduced LED glare, enabled perfect light distribution and enhanced the consumer shopping experience.”

Karl Lord, Philips Key Account Manager

