The visual system of domestic poultry evolved under natural light environments, which differ in many respects from the artificial light provided in poultry houses.

'\textit{The facts...}.'
Vision is the dominant sense in poultry, the visual systems of which have evolved in the distinctive light environment of the Asiatic jungle. In particular, they have well developed colour vision (determined from a variety of behavioural and physiological tests (summarised in Prescott et al. (2003)). However, a high light intensity is required for this visual system to work at its full potential. As seen in the graphs to the right the intensity of daylight (through windows or outside) is many orders of magnitude brighter than the artificial light environments in poultry sheds. There are many studies which provide evidence that behaviour, health and development are negatively affected by low light intensities and that when given the choice, both broilers and layers consistently prefer higher light intensities (Manser 2006; Prescott et al. 2003). These preferences for light, change with age and with the type of behaviour being performed, usually behaviours which require visual acuity are performed under bright light and those such as resting and preening in dimmer light (Bright 2007). Therefore spatial variation in light provision is also important.

There is a big difference between artificial light spectra and that of daylight (compare the shape of spectra in Fig 1 and 2). In practical terms, this means that the colour of artificial light and that of daylight will appear quite different to poultry, particularly at the lower end of their visual spectrum (300-400nm). However, we know very little about the effect that this has on their behavior or welfare.

'......the FAI response!'
For Broilers, providing natural daylight through windows or skylights (i.e. provides spatial light variation) could be the single biggest factor, besides genetics, to improve bird welfare. For Layers, natural daylight provision through access to the outdoors as well as windows and skylights indoors is also a crucial factor in good welfare and promoting natural behaviour.