



Chroma Zona

# Evidence-based Ergonomic Lighting at Esbjerg Hospital

# Colored Lighting Distracts the Mind and Has a Calming Effect

As the first hospital in the Nordic region, Esbjerg Hospital has acquired a completely new type of scanner which performs full-body scans with new, lower doses of X-rays. To provide their patients with a positive experience, the hospital has also installed Chroma Zona ergonomic lighting by the scanner. According to the staff, the colored lighting contributes to creating a relaxing atmosphere and has a calming effect on the patients.

## Colors distracts the mind and calms the body

The staff can choose from several different light settings and colors. "I often choose a pink light because it creates a warm and calm atmosphere in the room. Some children prefer to have a colored light because it helps them think about something other than the scan they are undergoing," says Anette Gadegaard Andersen, radiographer at Esbjerg Hospital.

"The digital images are very harsh for the eyes to look at all day. Therefore, the lighting is crucial. There should be no reflections or glare from the light in the image."

Dorthe Ulrik Knudsen,  
Chief physician and radiographer.

## Improves work environment and screen image

In addition to calming the patient, Chroma Zona ergonomic lighting also has several advantages for the working environment at the hospital. Connected to the scanning room is a reading room where X-ray and scanning images are examined and described by radiologists. They often have long working days in front of a screen, and here, details and contrasts in the image are crucial for making the correct diagnosis.

## Better for the eyes

In the reading room, Chroma Zona's green light setting is often chosen. The green color enhances the contrasts in the image, while minimizing reflections. This results in reduced strain on the eyes, less tension and fatigue, as well as increased concentration for the staff.

"Many radiologists experience early visual impairment, so it is wonderful that there are people thinking about preserving our eyes—even in the future. The green light setting is very comfortable to work in as it makes my eyes relax," explains Dorthe Ulrik Knudsen.



Together with her colleagues, Dorthe Ulrik Knudsen has also noticed that the colored lighting is a significant improvement compared to working in the dark, as they used to do.

"We can have relatively bright lighting in the room today while still having a good screen image. This also means that we can take notes without needing to change the lighting," she states.

## Option for multiple settings

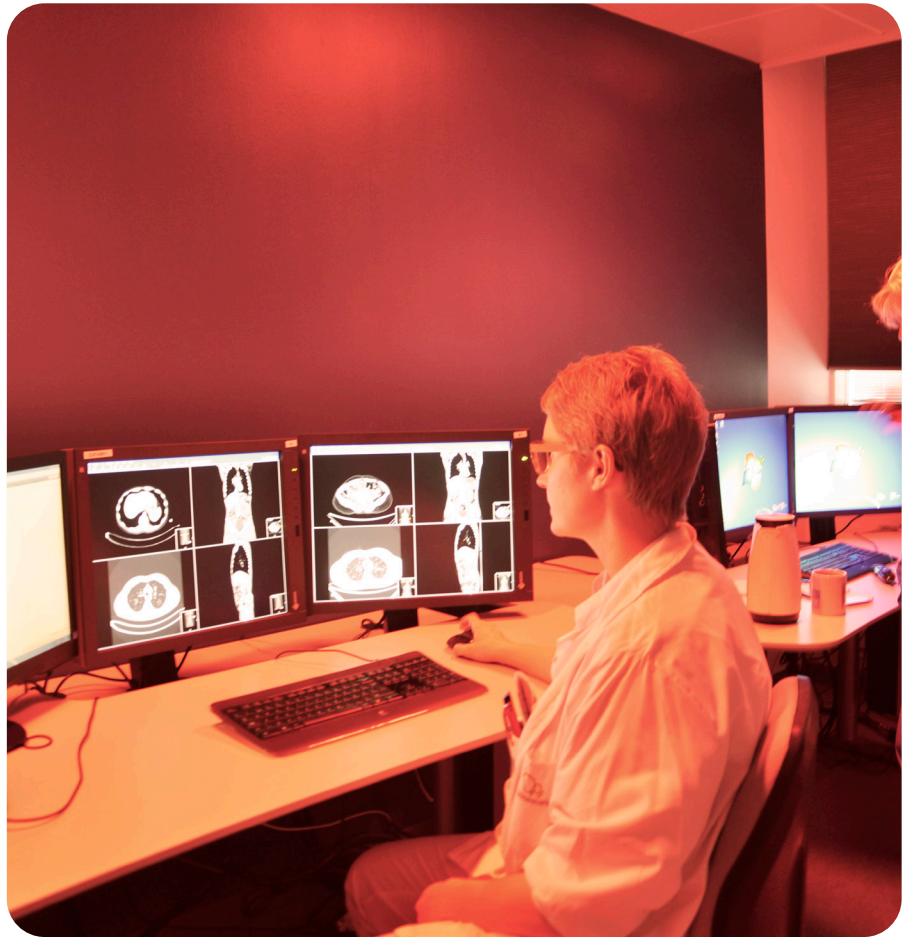
The staff has the option to change the lighting continuously. For instance, the red lighting may be beneficial for highlighting contrasts in X-ray images, as it makes it easier for the eye to distinguish shades of grey. During evening or night shifts, it is advantageous to use a warm, amber light that excludes blue colors to avoid impacting the staff's circadian rhythm. The amber-colored light resembles fire or sunlight and does not disrupt the body's production of melatonin.

If the staff need energy they have the option to choose a bright white light between procedures. The intense daylight is crucial in the middle of the day to prepare for a good night's sleep.



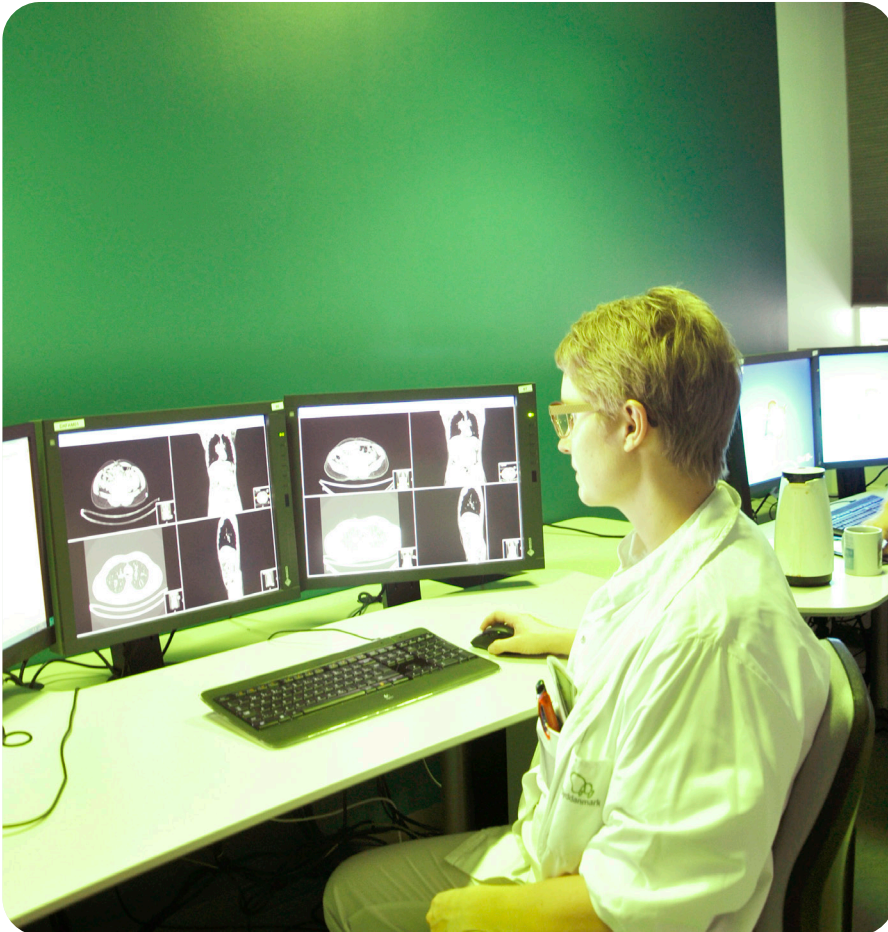
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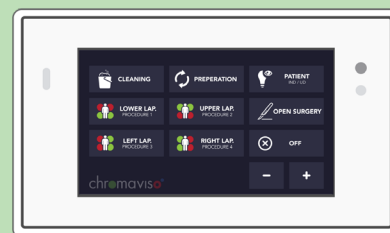


## Light settings

The lighting is tailored to the user's needs and workflows before, during and after surgeries. It is operated through Chromaviso's specially designed control system, which means that the ideal lighting is always just a single button press away.

A selection of the different light settings in both the scanning and reading rooms include:

- **Cleaning/ daylight simulation**  
Bright white light for cleaning and energy boost
- **Pink light**  
Calming light for scans
- **Green light**  
Minimizes reflections on the screen and relaxes the eyes
- **Red light**  
Enhances contrasts in X-ray images and minimizes glare
- **Warm light**  
Supports the body's circadian rhythm during evening and night shifts



**Documented effect  
in terms of minimizing  
reflections and  
glare on the screen  
and optimizing  
image quality**

## About Chromaviso

Chromaviso is changing the standards of lighting to improve health, treatment quality, care, work environment, and efficiency within the healthcare sector. Through technological innovation and close col-laboration with healthcare professionals, we create and apply integrated and highly preferred lighting solutions with proven effectiveness.

### Learn more at

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