



Chroma Zona

Evidence-based ergonomic lighting at Aarhus University Hospital

Ergonomic lighting improves patient safety and working environments

With the increasing number of laparoscopic surgeries, there has been a growing awareness that the gentle method for patients can be demanding for surgeons who spend hours working in front of screens. Therefore, Aarhus University Hospital has installed Chroma Zona ergonomic lighting, which reduces fatigue and eye strain.

At Aarhus University Hospital, Chroma Zona ergonomic lighting is installed in approximately 100 different rooms. One of the new rooms is an operating room for gynecological surgeries, both laparoscopic and open surgeries. Here, the lighting solution has been installed with the latest LED technology and interfaces with a Karl Storz touch screen within the sterile field.

“We stand in surgeries for many consecutive hours, so lighting is crucial. I feel less tired in the new lighting. I am very happy with it. It makes a big difference.”

Head physician Mikkel Seyer-Hansen, who works on the ward on a daily basis.

Combination of green and red

Chroma Zona ergonomic lighting is a zone-divided, colored, and white light solution for operating and examination rooms with screen work. The lighting solution consists of the effective combination of complementary colors, green and red light. “The contrasts are pleasant and very clear in the green and red light,” explains Mikkel Seyer-Hansen. During laparoscopic surgery, the room is divided into several light zones.

Green light behind the screen ensures high image quality and relaxes the eyes. Red ambient lighting reduces glare and reflection and provides doctors and nurses with good lighting conditions for their work, equipment retrieval, and documentation. At the same time, the anesthesia area has a white light zone for observing the patient and administering medication.

Long surgeries require optimal conditions

“We are a small team at Skejby, and we perform approximately 400 surgeries per year. These are complex laparoscopic surgeries that we undertake. We operate on 2-3 patients four days a week, with each surgery lasting between one and four hours. In addition, we have to maintain different positions and perform delicate movements. It can be quite exhausting.”



Mikkel Seyer-Hansen continues to explain:

“Chroma Zona ergonomic lighting is a helpful solution. If the contrast in the image is not optimal, you start to focus and strain your eyes, and that can make you tired.”

According to Mikkel Seyer-Hansen, it often comes down to small margins whether one can reach the third long operation. He himself says that he hits a wall after three and a half hours.

“At that point, the pace slows down, but if I manage to avoid getting tired in my eyes, it becomes a bit easier. I don’t notice the green light during the surgery, and it is clear that I feel more refreshed when the operation is over. I can feel a noticeable difference compared to the time when we simply turned off all the lights during the operation.”

Customized for each room

Chromaviso attributes the high user satisfaction to the combination of an innovative lighting concept, tailored to each room, high-quality products, user-friendly control panel, and thorough implementation.

“We always analyze the needs of the room and engage in dialogue with the project team, medical technology department, and users, providing them with advice. Once the lighting solution is installed, we follow up with user training and fine-tuning to ensure that each room has the precise lighting settings that fit its requirements,” says Claus Puggaard from Chromaviso.



“The contrasts are pleasant and very clear in the red and green light”

“I don’t notice the green light while we’re operating, and it’s evident that I feel more refreshed when the surgery is completed.”

Head Physician
Mikkel Seyer-Hansen

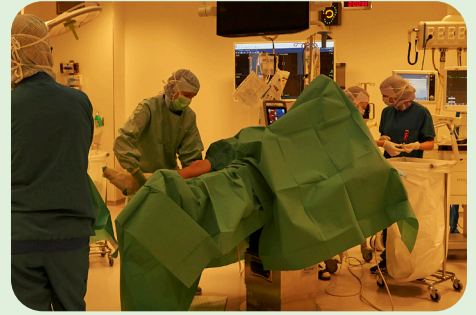


Improved screen display
Reduced fatigue
Fewer mistakes

Benefits of Chroma Zona

Chroma Zona ergonomic lighting is zone-divided, colored light for operating and examination rooms. The lighting solution consists of the effective combination of green and red light, which provides documented results in terms of work environment, procedural quality, and patient safety.

- Documented effect in minimizing reflections and glare on screens and optimizing screen quality
- Reduces eye strain and tension
- Less fatigue and increased concentration
- Zone-divided lighting creates the right illumination for everyone simultaneously
- High user satisfaction and user-friendly control interface
- Possibility for daylight simulation between procedures



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 collaboration with healthcare professionals, we create and apply integrated and highly preferred lighting solutions with proven effectiveness.

Learn more at

www.chromaviso.com, [LinkedIn/Chromaviso](#) or [Twitter/Chromaviso](#).