



Chroma Zona

Evidence-based ergonomic lighting at Länssjukhuset Sundsvall

Improved working environment with ergonomic lighting

A good working environment for all professional groups, increased safety, and quality are the results of prioritizing Chromaviso's lighting solution in the new operating department.

In May 2017, Sundsvall Hospital received 14 new operating rooms as part of an expansion to the existing hospital. These state-of-the-art operating rooms are designed for laparoscopy, general surgery, cesarean sections, and a hybrid operating room. The hospital management chose Chromaviso's ergonomic lighting for all rooms as part of a comprehensive solution. The goal was to create optimal conditions for both staff and patients.

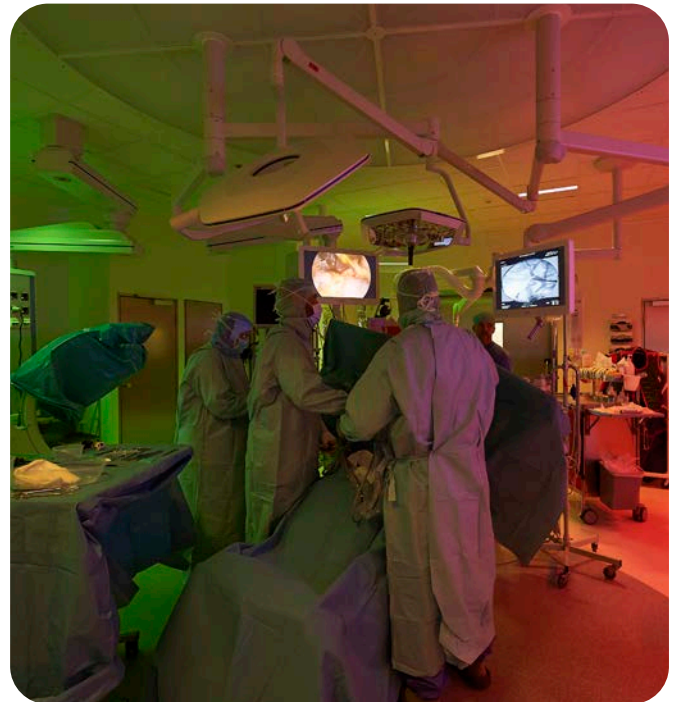
“Having a good screen image is of great importance. Patient safety is improved, the doctor can diagnose more quickly and reduce the risk of errors. Everyone in the room can better follow along and see their work more clearly. We are very satisfied with the lighting.”

Project Manager Christer Örneklyft

Clear screen image

Ergonomic lighting from Chromaviso is a well-documented concept that combines green, red, and white light to create optimal lighting conditions. The solution has been developed in collaboration with researchers, surgeons, and nurses, and caters to all professional groups by dividing the operating room into different lighting zones. It is a flexible system where the staff can choose the lighting setting that best suits each specific procedure.

“It is important that I can clearly see the screen image. I am very satisfied with the lighting, I can see well in it. I can both see what I am doing on the skin while also being able to see on the screen what I am doing on the inside,” says surgeon Alfred Janson. The rest of the staff on the ward also feel that the lighting makes a difference. “We really like the lighting. Doctors experience that colors and contrasts are more pronounced on the screen, and we nurses can see the instruments better and read more easily. The anesthesia department has white lighting in their small area and can see everything,” they say.



“We are very happy about it,” says operating room nurse Margareta Wester.

Comprehensive implementation

Before the surgery, the patient is greeted with a warm and comforting lighting, and after the surgery, the staff has the option to turn on bright white light for cleaning and preparation. The white light provides an energy boost and supports the body's circadian rhythm. As part of the solution, Chromaviso has conducted a thorough implementation of the lighting. This includes technical calibration based on the room's conditions, colors, and reflections, as well as fine-tuning after the lighting has been put into use. Additionally, comprehensive training of the staff is included, along with tips and tricks for using the lighting in everyday situations and promoting good lighting habits, ensuring that everyone benefits optimally from the lighting.

Light settings for each procedure

In laparoscopy, the background lighting is green to complement the reddish colors on the screen. During X-ray, the background lighting is red to enhance the grayscale colors on the X-ray image, while the lighting during open surgery is a clean and powerful white light that complements the surgical lamp and creates a pleasant lighting environment with minimal glare.

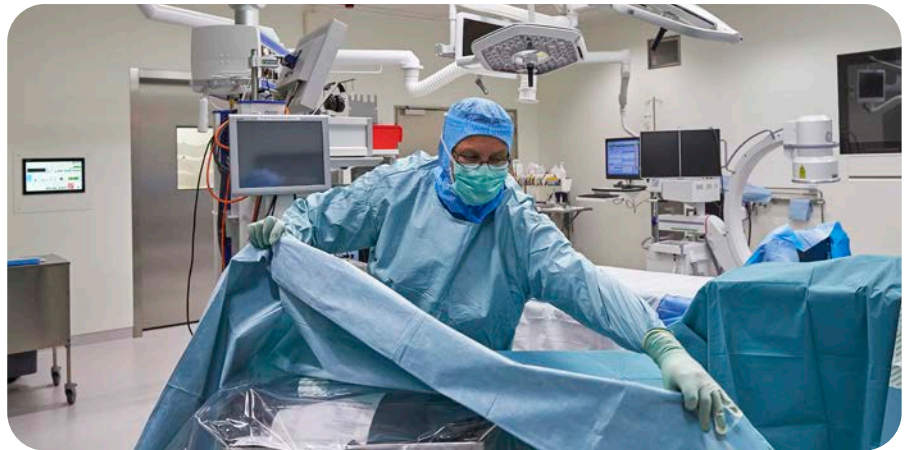


It's working, and the schedule has been running smoothly. We are very satisfied with the collaboration.

Project Manager
Christer Örnekløft

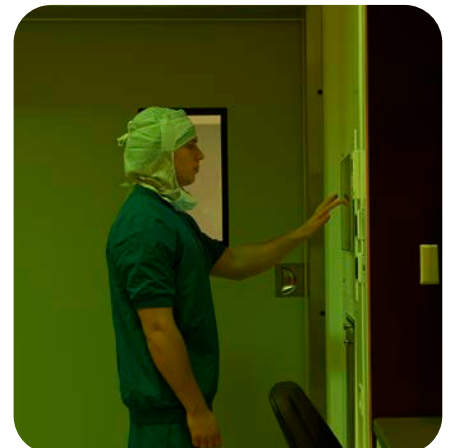
97%

Overall satisfaction
with the lighting



Easy and user-friendly

The lighting in the operating rooms is controlled on a touch-screen, a push-button panel, and as part of the general OR screen. This ensures that it is easy and quick to change the lighting when the procedure changes or when the lighting needs to be adjusted.





User survey

In collaboration with 30 hospitals and 330 personnel in Scandinavia, a user survey of ergonomic lighting has been conducted. This survey shows an overall satisfaction with the lighting at 97%. Additionally, the survey indicates that ergonomic lighting makes a significant difference in the work environment.

- 95% Reduced screen reflections
- 95% Clearer contrasts on screens
- 89% Improved visual conditions for all professionals and work functions
- 85% Reduced fatigue among surgeons
- 92% Increased concentration among surgeons
- 89% Higher 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 collaboration with healthcare professionals, we create and apply integrated and highly preferred lighting solutions with proven effectiveness..

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