



## New Philips 'Luminous Ceiling' Daylight Simulator Offers Comfort in ICU



Critically ill patients can benefit from the newly developed Philips media-enabled daylight simulator that offers dynamic energising daylight and calming visual sequences. Introduced by Berlin's Charité Campus Virchow Clinic in cooperation with GRAFT architects, this new LED based tool is part of a pioneering stress-reducing concept entitled 'Parametric Spatial Design'. It is implemented in two of the clinic's intensive care rooms in a quest to improve the healing environment and research the impact of a managed hospital room atmosphere on patients' wellbeing.

Care providers can submit the preferred parameters into the software enabled by ART+COM in order to activate the sky-like, large ceiling area and create light moods and visuals adapted to the individual patient's condition.

Whether patients are hospitalised in an ICU awaiting surgery or recovering from it, studies have shown that when their lives are at risk, people frequently perceive their environment as hostile and irritating. Components such as increased noise, inadequate lighting and social isolation become contributing factors for an increased risk of patients passing into a shock-like state according to findings published in the Oxford Journals in 2009.

There is not a lot of data currently available on the effects that the controlled environment of a hospital room has on a patient's health, hence the research will be conducted over one year to provide more answers. The collaboration between the Charité Clinic's intensive care physicians, psychologists and sleep researchers, together with its partners GRAFT architects and the ART+COM design studio is a joint venture funded by the German Federal Ministry of Economy and Technology (AiF).

Philips' expertise in lighting technology and design has been key in the design of the innovative Parametric Spatial Design concept. Now that the first prototype is in clinical use at the Berlin Charité Clinic Roger Karner, Managing Director of Philips Lighting DACH, agrees that lighting design is playing an ever increasing role in the critical ICU patient surroundings. He goes on to state that together with its partners, Philips is able to supply healthcare establishments with complete lighting solutions that can be individually tailored to a patient's specific needs, supporting their natural day and night rhythm with the consequence of aiding a healthy sleep pattern. By extending all the way into the front of the patient's bed, more than 15.000 LEDs completely fill the person's field of vision starting from the room's ceiling, creating the desired environment requested by the caregivers via the software directed tablet PC.

Preceding the Parametric Spatial Design concept were many years of Philips investigating and working on unique lighting systems for hospitals, and enhanced by the advent of digital lighting the company was able to finally realise this new technology. More recently, the German Heart Center in Berlin received Philips' first HealWell lighting installation and after its success other healthcare establishments across the world soon

followed. The benefits of the dynamic, natural daylight stimulating technology have been established by a pilot study carried out in conjunction with the University Clinic in Maastricht, which highlighted that HealWell achieved enhanced sleep quality for patients, improved overall mood and achieved higher satisfaction levels among both healthcare workers and, more importantly, patients.

Source: [Philips](#)

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