

NETWORKED LIGHTING CONTROLS IN HEALTHCARE FACILITIES

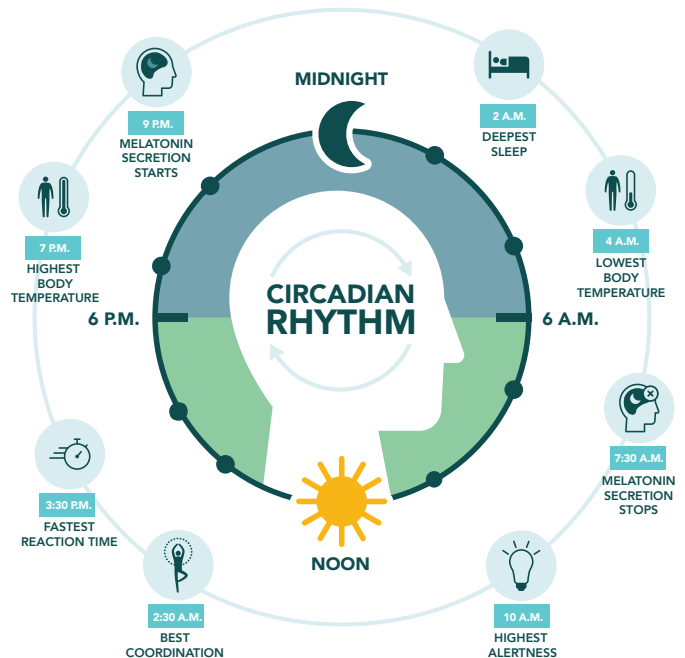
This guide highlights key concepts and design considerations best addressed with networked lighting controls systems.

Healthcare spaces encompass many project types ranging from private practice medical offices, acute care hospitals, and everything in between. Some spaces may be highly specialized such as elder care or rehab facilities. While the lighting needs of each healthcare space may vary significantly, well designed lighting control systems may improve the patient and staff experience in all of them.

LIGHT & HEALTH

It is now understood that exposure to light has an impact on human physiology and our circadian biological system. This can have profound impacts on healthcare staff and overnight patients. While research is ongoing into the relationship between light and health, there appears to be agreement on the key lighting stimulus variables related to circadian entrainment.

Until a fully vetted recommendation is achieved, evidence suggests the best path is to include networked lighting controls which may be reprogrammed and configured to align with emerging scientific consensus



SHIFT WORKERS

In the United States, an estimated 16% of the workforce spends at least part of their professional lives doing shift work. (time scheduled outside of the hours of 7am and 6pm.) Among those workers, health care professions make up a significant number.

Shift workers tend to be at increased risk for poor sleep, insomnia, and a wide variety of potential diseases. While not all healthcare workers presently work swing shifts, most will at some time in their careers.

Five key variables may be controlled by Networked Lighting Controls

Intensity – How much light

Photobiological History – Ranges of exposure of light

Spectral Power Distribution – Colors of the light

Duration – Length of exposure to the light

Timing – When is the exposure to the light



LUMINAIRE LEVEL LIGHTING CONTROLS

LLLC fixtures are appropriate for many healthcare environments including transition corridors, toilet rooms, offices, exam rooms, and covered parking.

They can offer maximum flexibility while simplifying design, installation, and operation.

They can also fit seamlessly into a comprehensive Networked Lighting Controls system implemented throughout the entire facility.



INTERNET OF THINGS

Lighting controls are increasingly being utilized as a platform on which to create the Smart Building Ecosystem. Functionality including things like asset tracking, contact tracing, and room allocation may all provide benefits to the healthcare environment.



RETROFIT OPPORTUNITY

Wireless Networked Lighting Controls systems are a perfect fit for retrofit projects with high quality aspirations and installation challenges. In almost all cases, existing wiring may be retained with new luminaires installed one for one. Wireless switches, sensors, and App-based programming completes the retrofit.