APPLICATION CASE STUDY | **LIGHTING CHALLENGE 150**

Healthcare HC

Hospital Finds Kenall's MedMaster M4 LED Luminaires a Perfect Fit for ORs, Cath Labs

Project: University of Iowa Hospital & Clinics OR Suites, Pediatric Cardiac Catheterization Laboratory
Location: Iowa City, Iowa
Engineering: IMEG Corporation, Des Moines, Iowa
Agent: Lighting Solutions, Ankeny, Iowa

"Coordinating the lighting layout with all the ceiling mounted booms, equipment, HVAC diffusers and ductwork was a challenge. I have specified Kenall many times and noticed the exceptional quality. I have never had an issue with them in the field."

– Isaac Stoll, Senior Designer, IMEG

Project Summary

The University of Iowa Hospital and Clinics needed new, state-of-the-art lighting for four new operating rooms and two pediatric cardiac catheterization labs.

Challenge: Ceiling-mounted equipment space requirements meant the lighting could not exceed a certain depth and would need to be mounted farther away from the surgical field, without compromising visual acuity. Cleaning and maintenance protocols dictate the need for long intervals between service.

Solution: Kenall's MedMaster™ M4 LED luminaires with asymmetric distribution in the ORs and Cath labs, SimpleSeal™ CSEDO LED luminaires in the Clean Core area outside the main ORs.

Benefit: High-performing, tightly sealed, easy-to-clean lighting that fits easily into the demanding space limitations and requires less frequent service than linear fluorescent.

High Performance Luminaires Put Light Exactly Where it's Needed

University of Iowa Hospital & Clinics OR Suites, Iowa City, Iowa

The University of Iowa Hospital and Clinics (UIHC) is an extraordinarily important resource for the entire state of Iowa: it is a top 100 "Great Hospital in America"[1], the state's only comprehensive medical center and a regional referral center that performs almost 21,000 surgeries per year.

In 2016, UIHC added four new main operating rooms (bringing their total to 36) and constructed two new pediatric cardiac catheterization labs to replace the one they had in service. The new spaces were constructed with the most recent technological advances, including overhead booms to accommodate power, data, anesthesia and perfusion. The booms eliminate the tripping hazard created by power and data cords being stretched across the floor. These advances, while important for performance and safety, leave less room for lighting, so the new LED luminaire housings selected by Isaac Stoll, Senior Designer at IMEG Corporation, needed to have a shallow profile.

"Coordinating the lighting layout with all the ceiling mounted booms, equipment, HVAC diffusers and ductwork was a challenge," said Stoll. He needed not only a shallow fixture, but also one that had a high CRI, asymmetrical distribution and high quality. "I have specified Kenall many times and noticed the exceptional quality. I have never had an issue with them in the field," Stoll added.

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The hospital installed a total of 88 MedMaster M4 sealed LED luminaires in the ORs and cath labs, and another 25 SimpleSeal™ CSEDO luminaires in the "clean core" area immediately outside the new ORs. The recessed lights "provide consistent, bright lighting throughout the room and are easier to clean, enhancing infection control,"[2] according to the hospital's promotional literature.

Both the MedMaster M4 and the SimpleSeal CSEDO are designed for pressurized environments and are NSF listed. The MedMaster M4 is IP65 rated, has an antimicrobial finish for infection prevention, and a grounded wireway to protect other equipment from electrical interference. The SimpleSeal is IP66 certified and is the industry's first luminaire to be certified to the NSF P442 protocol, which requires stringent pressure testing and third party certification[3].

These luminaires are built to last and backed by Kenall's 5 year power system warranty: "The facility will benefit from energy savings, and most of all, ease of maintenance. Electrical facility staff has to go through the procedure of washing and gowning up to replace fluorescent lamps in operating rooms. With the long life of LED, this goes away, saving the maintenance staff precious time," concluded Stoll.

[1] "100 Great Hospitals in America," Becker's Hospital Review, beckershospitalreview.com

[2] "Main Operating Room Facility Expansion," University of Iowa Hospital and Clinics, uihc.org

[3] NSF P442 certification was not available at the time of this installation. To find out more about this important new standard, visit kenall.com to read our white paper, Competitive Edge, Issue #2.

M4 Features/Benefits:

- 3000K, 3500K, 4000K and 5000K options
- Asymmetric distribution provides ample light to surgical field
- 80 and 90 CRI available
- Universal, one-piece, seam-welded housing accommodates both grid and flange installation
- Smooth exterior doorframe is sealed and gasketed to support infection prevention
- Antimicrobial finish helps reduce the spread of pathogens
- Grounded wireway reduces radiated emissions
- Dual stage power factor correction driver eliminates flicker
- Standard 0-10V dimming
- Serviceable LED array
- Diffused high-efficiency lens for reduced glare and uniformity

CSEDO Features/Benefits:

- Recessed ceiling mount; grid or flange
- Suitable for universal installation into 1.0" and 1.5" grid or flange (drywall) ceilings
- One piece overlapping door provides air-tight integrity of luminaire
- High-output, high-CRI LED lamp sources for accurate color rendition and lighting performance
- Diffused high-efficiency lens for reduced glare
- Optional NSF P442 protocol assures a sealed, clean environment

For more information, please visit us on the web at www.kenall.com

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