APPLICATION CASE STUDY | LIGHTING CHALLENGE 166

New Lighting with Indigo-Clean® Technology Combats Harmful Viruses & Bacteria

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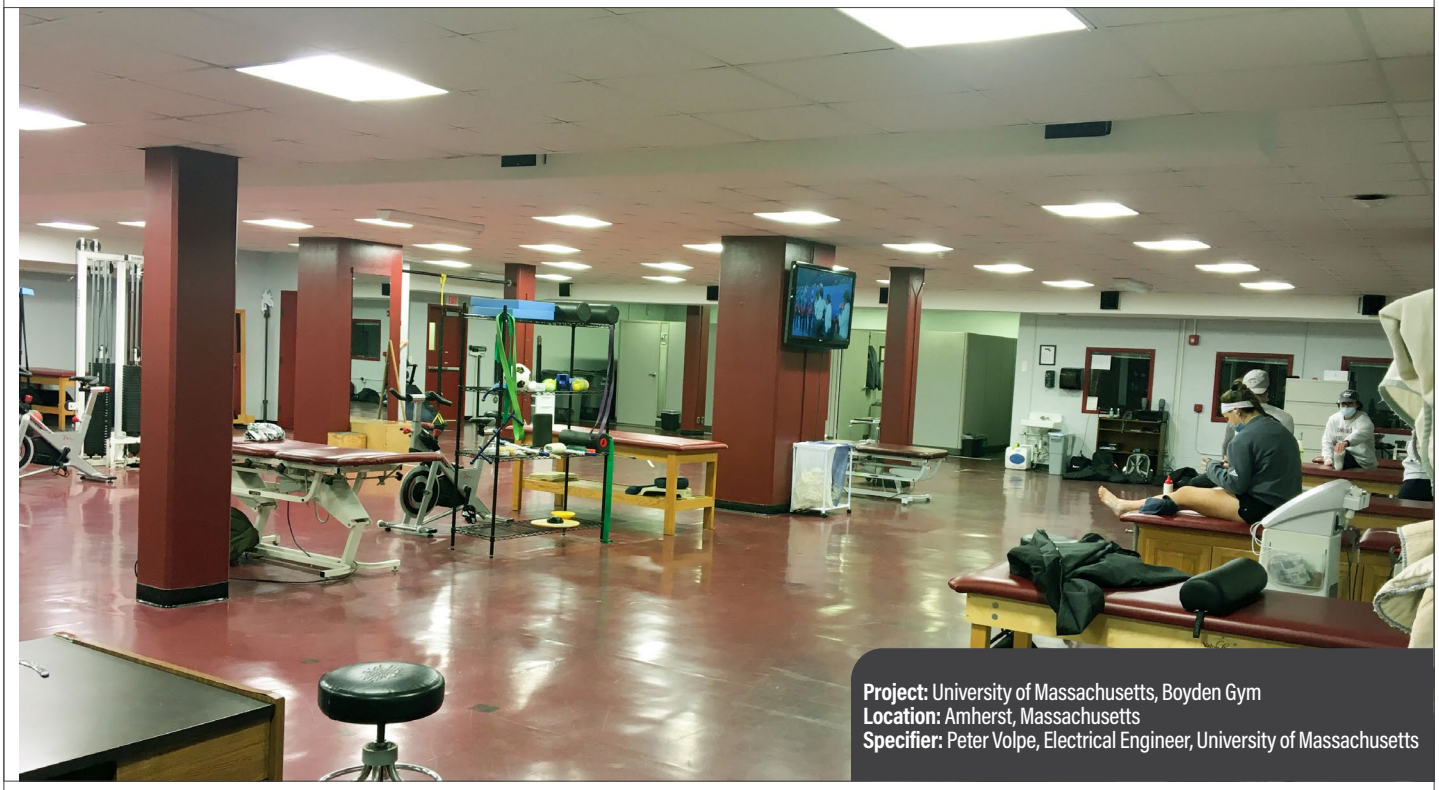
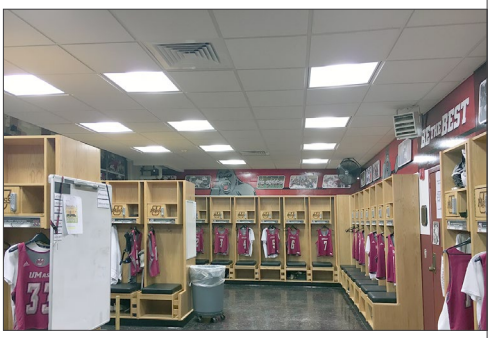


Project: University of Massachusetts, Boyden Gym
Location: Amherst, Massachusetts
Specifier: Peter Volpe, Electrical Engineer, University of Massachusetts

"The students and staff are very happy with their new Indigo lighting. It provides increased illumination levels and a greater level of comfort and security that comes with the fixtures' abilities to not only fight COVID-19, but also to reduce harmful germs and bacteria that can be found and spread in athletic-type facilities."

— Peter Volpe, Electrical Engineer, University of Massachusetts



Project Summary: Indigo-Clean Technology (ICT) visible light disinfection lighting was installed in Boyden Gym at the University of Massachusetts Amherst, both in the athletic training room and sports medicine office, to help augment current cleaning and disinfection protocols.

Challenge: Reduce harmful viruses and bacteria in key areas and help protect students' health and safety.

Solution: MedMaster™ AMB22

Benefits:

- Kills bacteria and viruses, including SARS-CoV-2, Influenza-A and staph, such as MRSA, when the lights are on
- Visible light disinfection with just a flip of the switch
- Completely safe for building occupants
- Cost effective to install and easy to use

Indigo-Clean Technology (ICT) Helps Boyden Gym Keep Students, Staff and Visitors Safe

University gymnasiums are intended to be places where students can work out and work off some of the stress of balancing their academic and social lives. But how does that change during a pandemic?

When the University of Massachusetts Amherst physical plant engineers updated the lighting at Boyden Gym, their two main goals were to replace the dated fluorescent lighting with LED fixtures to help reduce energy consumption, and to improve the quality of the lighting throughout the facility. But the Athletic Department had one additional request: "The Athletics Department requested that the new LED light fixtures for a couple of specific areas be provided with the new visible light disinfection technology that, in addition to lighting the space, could be used to kill harmful germs and bacteria," said Peter Volpe, an electrical engineer at the university.

With the help of Exposure Lighting in Western Massachusetts, the university incorporated Kenall's AMB22 luminaires using single-mode Indigo-Clean technology in the athletic training room and sports medicine office: "This was our first experience using light disinfecting technology and we had many questions regarding how it worked and how safe it was for the occupants using the space. Mark [Maziarz of Exposure Lighting] set up a meeting on campus with Kenall's Indigo-Clean Product Manager, who provided answers to all our questions," Volpe explained.

After the pandemic hit, the university discovered an added benefit: students feel more protected at the gym knowing the lights have the ability to kill *SARS-CoV-2.* "The students and staff are very happy with the new Indigo-Clean lighting. It provides increased illumination levels and a greater level of comfort and security that comes with the fixtures' abilities to not only fight COVID-19, but also to reduce harmful germs and bacteria that can be found and spread in athletic-type facilities." Volpe continued:

"We installed the Indigo-Clean light fixtures prior to the pandemic, but since these fixtures have been proven to also kill the virus associated with Covid-19, the University has investigated using these not only in locker rooms and training facilities to minimize germs and bacteria, but also in public spaces, such as lobbies and waiting areas, where they might be helpful in stopping the spread of COVID-19."

Last, but not least, the university receives all the traditional benefits of transitioning away from fluorescent lights: "These fixtures use LED technology, so they have a longer lifetime than the fluorescent lighting they replaced, which will reduce maintenance costs. The legacy lighting was uneven and did not provide enough illumination for the athletic trainers who normally use these rooms. The new Indigo-Clean fixtures do a great job of lighting the room and provide higher illumination levels than the fluorescent light fixtures they replaced—while using less energy," Volpe concluded.

MedMaster AMB Luminaire Series Featuring Indigo-Clean Technology

- Provides environmental disinfection using effective, efficient visible, 405nm LED light
- Dual-Mode Indigo-Clean technology is independently tested to kill 94% of *SARS CoV-2 and Influenza-A*[1]
- Single-Mode Indigo-Clean Technology is independently tested to kill harmful bacteria, including *staph*[2] such as *MRSA*[3]
- Tool-less access for ease of re-lamping and maintenance

[1] Rathnasinghe, R., Jangra, S., Miorin, L. et al. The virucidal effects of 405 nm visible light on SARS-CoV-2 and influenza A virus. Sci Rep 11, 19470 (2021). https://doi.org/10.1038/s41598-021-97797-0

[2] Per independent lab report #SGS-09S17036476. Contact Kenall for a copy of this report.

[3] Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016

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