

PRESS RELEASE

Groundbreaking GUV Pilot Installation at Cardigan Ridge in Minneapolis

FEBRUARY, 2025

Assessing the Role of GUV in Health, Indoor Air Quality, and Energy Efficiency.

Minneapolis, MN—Light Progress, a global innovator in UV-C disinfection technology, has completed a pioneering pilot installation at Cardigan Ridge, a Senior Living Community in Minneapolis, in partnership with **Noble Electric**, a premier electrical contractor specializing in top-notch electrical solutions energy efficiency and cutting-edge technology.

The project employs advanced Upper Room Germicidal UV (URGUV) systems, HVAC-integrated Germicidal UV (GUV) technology, and in-room air purification devices to evaluate the impact of UV-C technology on health outcomes, air quality, and energy efficiency in residential care environments.

Innovative Technology meets practical Application

The pilot installation incorporates advanced UV-C devices certified for germicidal efficacy and safety. The systems aim to achieve improved air changes per hour (ACH) while optimizing energy use, demonstrating that high indoor air quality can be maintained without increased energy demands on HVAC systems.

Noble Electric executed the installation, leveraging certified expertise through the **NALMCO GUV Certification program**. This ensured compliance with industry standards and enhanced the implementation's reliability.

High-Precision Monitoring and Data Collection

A core component of this initiative is the use of **Network Thermostat** thermostats equipped with real-time CO2 monitoring and data-logging sensors. These state-of-the-art systems continuously track CO2 levels as a marker of indoor air quality and ventilation efficiency, ensuring precise, high-quality tracking throughout the facility. This data provides critical insights into how UV-C technology enhances air changes per hour (ACH) without increasing energy consumption in HVAC systems.



Advanced Modeling and Simulation of UV-C Technology

The project, in collaboration with the **Lyles School of Civil and Construction Engineering** at **Purdue University**, will involve a comprehensive analysis of the role of GUV technology in maintaining air quality.

Renowned researchers from Purdue will lead efforts to conduct detailed modeling and simulations of the UV-C systems. Utilizing advanced tools, they will map UV-C intensity and distribution to ensure compliance with safety standards while optimizing germicidal efficacy. They will also design and simulate strategies aligned with the ASHRAE 241 standard, quantifying the effects of UV-C technology on air changes per hour (ACH). This work aims to provide actionable insights and validate the practical benefits of UV-C applications.

Comparative Health and Environmental Analysis

The project will compare health data from Cardigan Ridge with historical records and data from control facilities in the surrounding area. This approach will enable researchers to identify and quantify UV-C systems' specific benefits in enhancing residents' health outcomes.



Key Research Components

ASHRAE 241 Simulation:

Practical application of this industry-standard guideline for enhanced air cleaning and infection risk mitigation.

CO2 Monitoring & Data Logging:

Utilizing Network Thermostat technology to provide precise, actionable insights into air quality dynamics.

3D Fluence Simulation Software:

Advanced modeling of UV-C system performance and energy efficiency.

Control Group Comparison:

Assessing the differences in health and air quality outcomes between facilities with and without UV-C implementation.

Energy Impact Study:

Examining how UV-C technology enables increased ACH without additional HVAC energy consumption.

Cardigan Ridge serves as an ideal testing ground for this study due to its occupancy, sensitivity to infection prevention, and need for sustainable energy use. The findings will inform future applications of UV-C technology, supporting its adoption as a reliable solution for indoor air quality challenges.

About Us



Light Progress is a global leader in UV-C disinfection technology with decades of expertise in air, water, and surface sanitation. The company shapes the future with industry leadership, universities, international associations, and research institutes. For over 35 years, we have supplied our products in more than 50 countries worldwide.

<https://www.lightprogress.com>



Noble Electric is a distinguished electrical contractor based in Minnesota. It specializes in turn-key energy efficiency solutions and electrical services and has a strong reputation for implementing energy-saving initiatives. With a focus on innovation, customer satisfaction, and sustainability, Noble Electric's skilled team consistently delivers reliable and cost-effective solutions, cementing its position as a trusted partner for energy-efficient and technologically advanced electrical projects

<https://www.noblecs.com/>



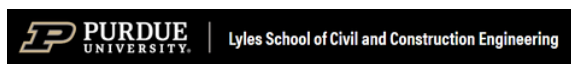
Cardigan Ridge provides a caring, community-focused environment designed for the comfort and well-being of its residents. The facility is known for offering senior living and memory care services, tailored to individual needs. With a commitment to enhancing quality of life, Cardigan Ridge emphasizes safety, modern amenities, and opportunities for active engagement among residents.

<https://www.cardiganridge.com/>



Network Thermostat specializes in advanced HVAC control solutions with a focus on energy efficiency and real-time data monitoring. Their innovative thermostats feature integrated sensors capable of tracking environmental metrics like CO2 levels, temperature, and humidity. Network Thermostat's data logging capabilities provide a robust platform for managing and analyzing air quality, making them a vital component in projects aimed at optimizing health and environmental outcomes. These systems empower facilities to achieve precise climate control and enhanced sustainability through data-driven decisions.

<https://networkthermostat.com/>



Purdue University is renowned for its emphasis on innovation, accessibility, and academic excellence. Purdue's Lyles School of Civil and Construction Engineering is among the top-ranked programs in the U.S., specializing in sustainable infrastructure and cutting-edge research. The university is also a hub for impactful collaborations, including partnerships with industry leaders to advance global research initiatives.

<https://www.purdue.edu/>



A professional organization dedicated to advancing the lighting management industry through education, certification, and advocacy. NALMCO provides rigorous training and certification programs, ensuring that professionals meet high standards of safety and expertise. The organization is a crucial resource for fostering industry best practices and connecting members with cutting-edge technologies

<https://www.nalmco.org/>