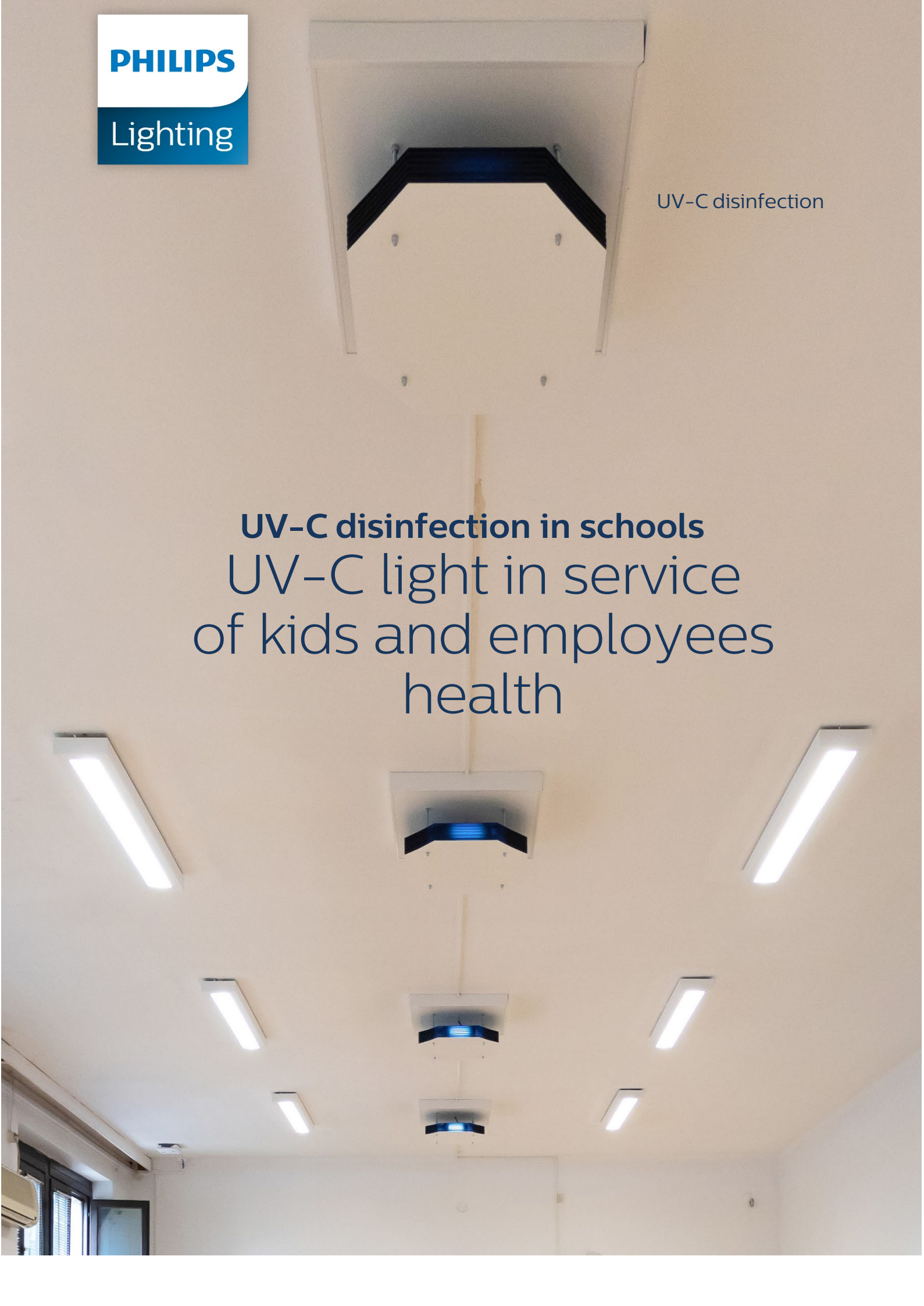


PHILIPS

Lighting

UV-C disinfection

UV-C disinfection in schools
UV-C light in service
of kids and employees
health





“Faced with a completely new challenge, and in order to provide the safest possible environment for everyone in the school during Covid-pandemic, we have implemented Philips UV-C luminaires for air disinfection which will, with the help of natural air flow, minimize the possibility of spreading the virus.”

Aleksandar Andrejić, Principle of First Belgrade gymnasium

Challenge

Since the beginning of global Covid 19 pandemic, one of the biggest concerns was the safety and health of children. The present health crisis affects activities in high-frequent rooms, like schools. Special concern is regarding the air that we breath indoors, besides all the prevention and protection measures. That is the main reason why the managing board of First Belgrade gymnasium decided to have Philips UV-C Upper Air luminaires installed in order to provide air disinfection, as the first school in this area to do so. Teachers' lounge is the first room in which the luminaries were installed.

Solution

Since the teachers' lounge is a joint room for all professors which have live classes with students in school all throughout the day, Philips UV-C Upper Air luminaires for air disinfection were the ideal solutions for providing additional safety and protection from pathogens. Philips UV-C Upper Air luminaire disinfects 99,99% of air in the room within 10 minutes. The air is being lifted up to upper levels of the room by natural air flow or by mechanical ventilation. That is when the air comes in contact with the disinfectant UV-C light, after which it comes down and combines with the air in lower room levels. This allows additional protection in a room which already has limited ventilation.

UV-C disinfection Upper Air ceiling mounted

SM345C



Case study
.....
First
Belgrade
gymnasium
.....
UV-C air
disinfection



Optimized for low ceilings (minimum 2.5m)

UV-C rays are distributed at the height of the luminaire and above. The beam of UV-C rays is controlled by specific reflectors and the louvre design. This allows for the disinfection of the air in a room, while day-to-day business activities can continue underneath the area where the device is active. Philips PL-S TUV lamp included: 4x9 W.



Inactivates pathogens

Philips UV-C disinfection upper air luminaires inactivate up to 83.6% of SARS-CoV-2 virus in air after 2 minutes. After 10 minutes of exposure in the chamber there was a 99.99% reduction of collectable active pathogen in the air. The live SARS-CoV-2 virus was not detectable at the 20-minute timepoint². UV-C light has been shown to effectively inactivate the pathogens tested³.



Safety first

The luminaire emits UV-C rays in upper areas, at a safe distance from those walking below. Therefore, activities can continue while the luminaire is in operation⁴.



Respects the environment

No ozone emissions during or after use.

1. Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae Revised, updated and expanded by Adel Haji Malayeri, Madjid Mohseni, Bill Cairns and James R. Bolton. With earlier contributions by Gabriel Chevretils (2006) and Eric Caron (2006) With peer review by Benoit Barbeau, Harold Wright (1999) and Karl G. Linden
2. Results obtained from a laboratory test conducted by Innovative Bioanalysis, CAP, CLIA, AABB Certified Safety Reference Laboratory.
3. Reed, N.G. 2010. The History of Ultraviolet Germicidal Irradiation for Air Disinfection. Public Health Reports Jan-Feb, 125 (1): 15-27.
4. Philips UV-C Superior Air Disinfection Fixture should be sold and installed only by professionals in accordance with our strict safety and legal requirements set forth in the user manual and / or instruction assembly.



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