

Restrooms

UV-KLEEN™ model EP-PRK-300W-O is utilized at a manufacturing facilities restrooms for disinfectant purposes. The following results show the time taken by the UV-KLEEN™ system to kill the virus and bacteria by 99.99%.

50mJ/cm² is the required UV-C to disinfect a room up to 99.99% from viruses and bacteria. The UV-KLEEN™ could achieve 50mJ/cm² in 8 min when the dosimeter is placed at 8.5ft away from the lamp source. The Ozone levels are measured to be 1ppm in 7min 30sec when measured at 8.5 ft, and 1ppm in 1min 30sec at 4 ft from the UV-KLEEN™ system.

Parameters	Values
Dimensions of the room	14.5x11x8.5 ft
UV-KLEEN™ location	Near center of the restroom
Temp and Humidity	70F 68%
Time for 50mJ/cm ²	8 min at 8.5ft
Ozone Levels	1 ppm in 1min 30sec @ 4ft 1 ppm in 7min 30sec @ 8.5ft
<u>Time to kill Covid19</u>	<u>8 min @ 8.5ft Surface</u> <u>7 min 30sec @ 8.5ft Air</u>



The statistical published results state that Sars-CoV-2 (Covid19) for a 99% kill rate. UV-KLEEN™ achieved 50mJ/cm², a much higher UV irradiation to kill Covid19 under 8mins at 8.5 ft from the lamp source.

While the UV can disinfect surfaces and the air that is passed through the lamp, Ozone is more beneficial to use when certain hidden spots needed sterilization. Ozone can reach every concealed or hidden area of the room, oxidizing (killing) the pathogens. The Ozone is measured at 8.5ft in the far corner of the room (when the Ozone reaches this far corner it will have permeated all other shadowed areas in the room), and it is found to be 1ppm at 7min 30sec. In other words, it took 7min 30sec to reach 1ppm at a distance of 8.5ft from the source. 1ppm is lethal for many viruses including Covid19 and other bacteria in the air.

Based on the above results, we can conclude the UV-KLEEN™ system took about 8 min to disinfect the surface of the urinals and 7min 30sec to disinfect the air and shadowed areas in restroom. The remaining Ozone took 4 mins to dissipate to under 0.2ppm with the restroom door open, a safe level to occupy the room.

