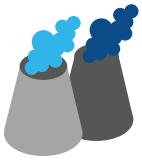
LEXINGTON PARTNERS LLC

Aura

Final Report

February 2020

Americans, on average, spend approximately 90 percent of their time indoors EPA



The concentrations of some pollutants are often up to 5 times higher than outdoor concentrations EPA

An adult ingests up to 100 mg of house dust per day

FORHEALTH.ORG

A child ingests up to 200 mg of house dust per day

FORHEALTH.ORG

Healthy Home

Particulate matter is a pollutant of special concern. Many studies have demonstrated a direct relationship between exposure to PM and negative health impacts. Smaller-diameter particles (PM2.5 or smaller) are generally more dangerous, as they can reach deep into the small airways of the body and deposit on the alveoli.

A change in air ventilation results in an improvement from the 62nd to the 70th percentile in terms of cognitive performance. This change in performance is equivalent to a $6,500 increase in salary per person per year.

Researchers at MIT have discovered that air pollution may be contributing to low levels of happiness amongst urban population.

LEED helps create living spaces where people can thrive. LEED-certified homes are designed to provide clean indoor air and ample natural light and to use safe building materials to ensure our comfort and good health. They help us reduce our energy and water consumption, thereby lowering utility bills each month, among other financial benefits. Using the strategies outlined in LEED, homeowners are having a net-positive impact on their communities.

Health

LEED homes are designed to maximize indoor fresh air and minimize exposure to airborne toxins and pollutants, making it healthier and more comfortable.

Savings

LEED homes use less energy and water, which means lower utility bills. On average, certified homes use 20 to 30 percent less energy than non-green homes, with some homes saving up to 60 percent.

Value

With proper planning, LEED homes can be built for the same cost as non-green homes. LEED homes can qualify for discounted homeowner's insurance, tax breaks and other incentives. And in many markets, certified green homes are now selling quicker and for more money than comparable non-green homes.

The Pilot

Provide a comprehensive solution for improving and managing the air quality in one of The Borden apartment homes while increasing awareness of outdoor air quality. The pilot will be executed through an interactive data-based experience providing recommendations and actionable insights for the tenants and property manager.

Schedule:

Week 1	End of week 1	Weeks 2-3	Week 4
Installation and Measurements	Comprehensive Report	Full Operation	Feedback & Summary

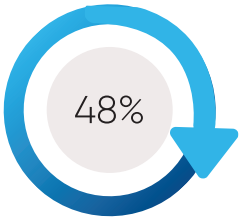
THE BORDEN
MODERN LUXURY APARTMENTS

The Results

Air Quality Improvement:

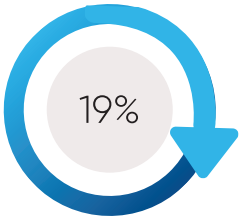
In weeks 2-3, Aura operated in the family's living room. The device disinfected and purified the air, significantly reducing the amount of harmful particles and parameters in the room:

PM 10



PM 10 levels were decreased by 48% as a result of the Ray Filter's HEPA layer

CO2

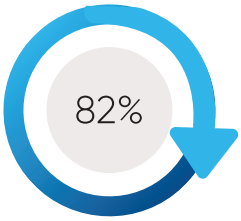


CO2 levels were decreased by 19% as a result of our recommendations

VOC

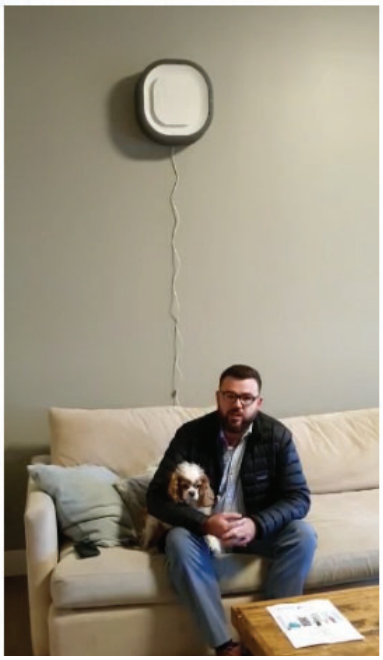
VOC levels were decreased by 34% as a results of the Ray Filter's Carbon layer

PM 2.5



PM 2.5 levels were decreased by 82% as a result of the Ray Filter's HEPA layer

User Feedback



Kevin & Kristen Kenny,

Hartford, Connecticut

"We have a dog and a two-year-old boy. At the beginning of the pilot, our expectations were relatively low, and after four weeks, we have been amazed by how better and energised we felt every day! We were very disappointed that the trial period was over. Aura Air is a product we strongly recommend to purchase! We also noticed that while everyone is getting sick in the US, we remained healthy!"

Our Filters Test Results

(From the Aura Air white paper)

The efficiency of the Sterionizer in removing different types of pollutants is presented in Table 2.

Table 2- Sterionizer efficiency tests

Substance	Substance name	Removal
Bacteria	Escherichia Coli	99%
	Escherichia Coli ATCC	91%
	Staphylococcus aureus	91%
	Pseudomonas aeruginosa	99%
	Staphylococcus aureus (MRSA)	99%
Fungus	Aspergillus Niger	97%
	Candida albicans	36%
	Dichobotrys abundans	90%
	Penicillium	95%
Mold	Cladosporium cladosporioides	97%
Spores	Bacillus subtilis var Niger	89%
Viruses	Influenza H1N1	99%
	Influenza H5N1	99%

Table 2 shows that the Sterionizer decreased the amounts of bacteria for at least 1 order of magnitude (more than 90%) for all the strains tested. It also decreased the amounts of fungus for at least 36% and the amounts of mold, spores, and viruses for at least 89% for all the tested strains.

Examples of the plates after incubation are presented in Figures 12-13:

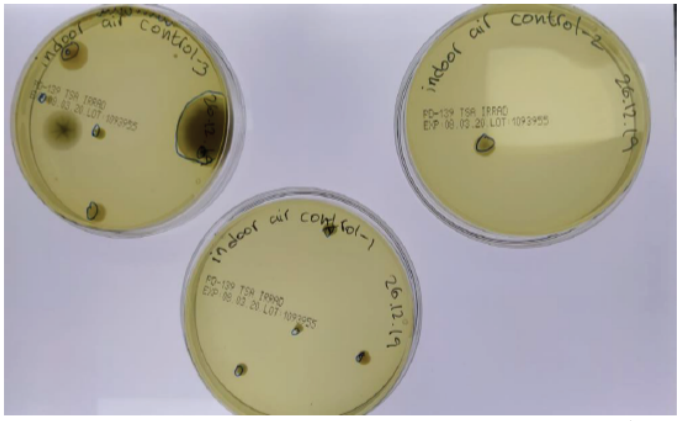
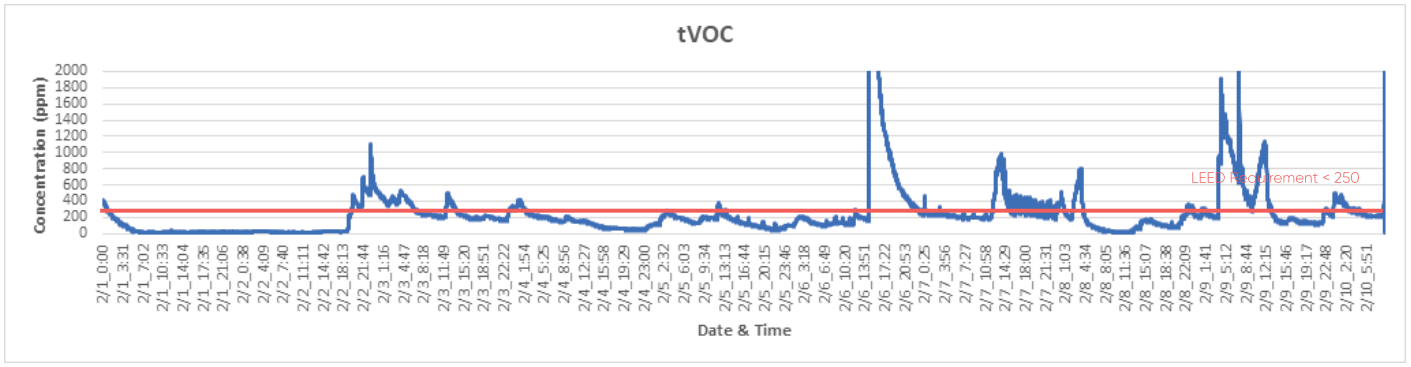
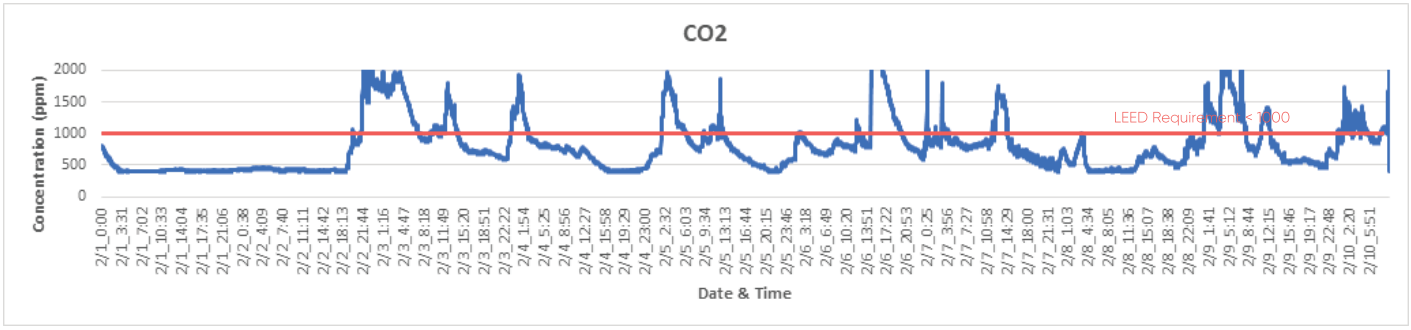


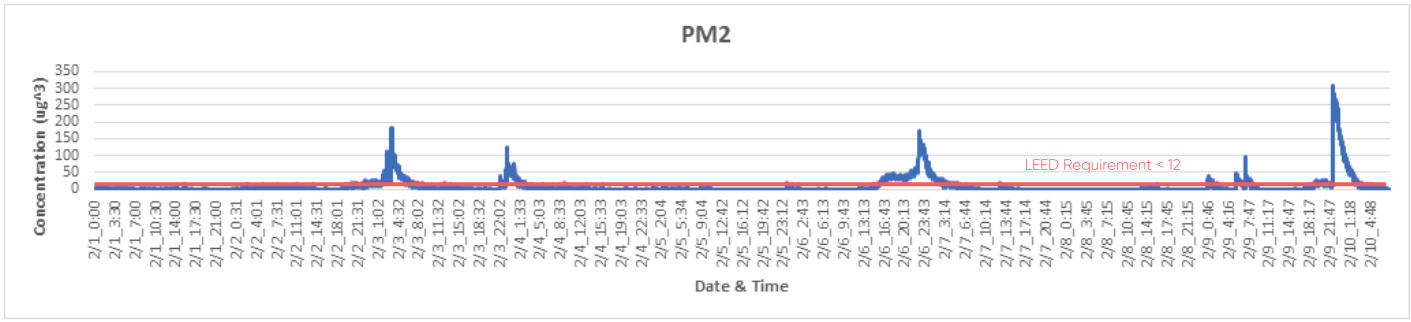
Figure 12: incubation results of the control plates on December 31st,2019

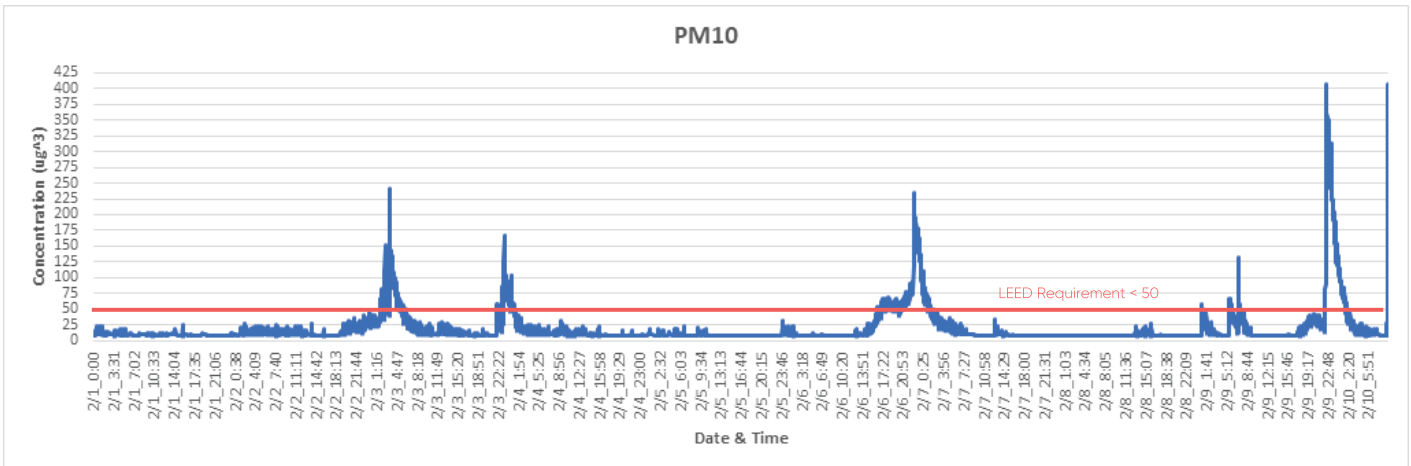
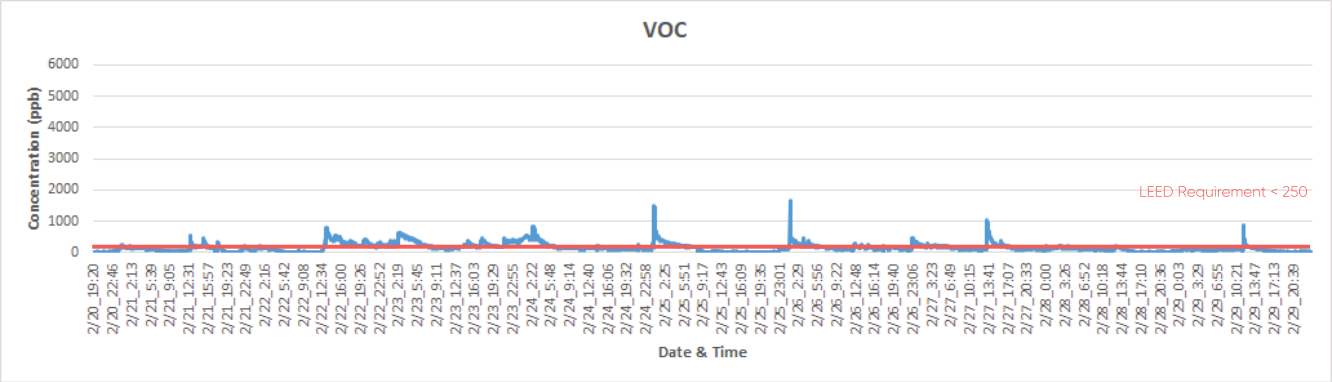
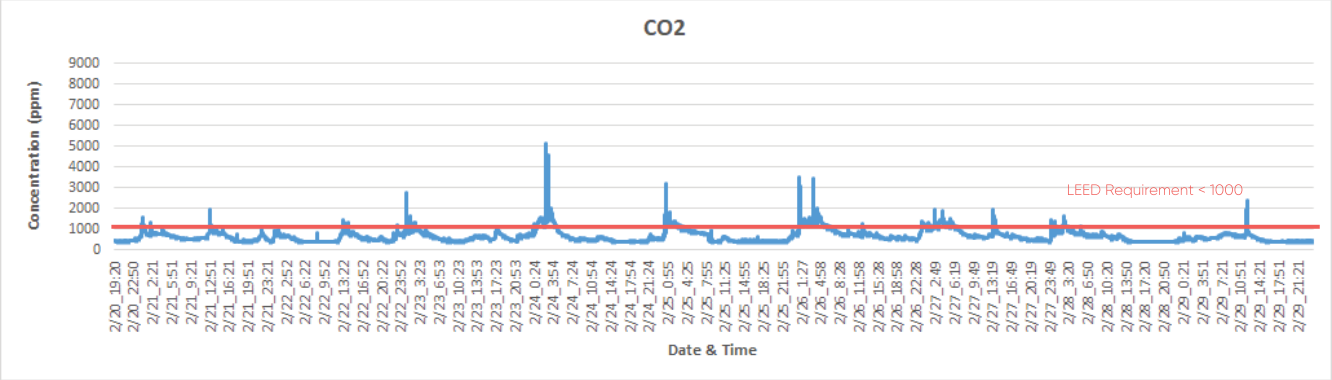
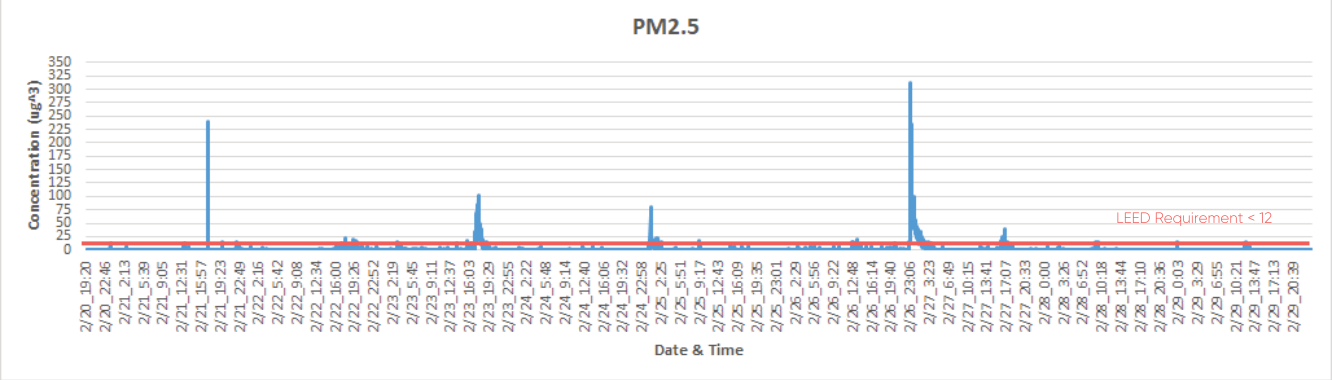
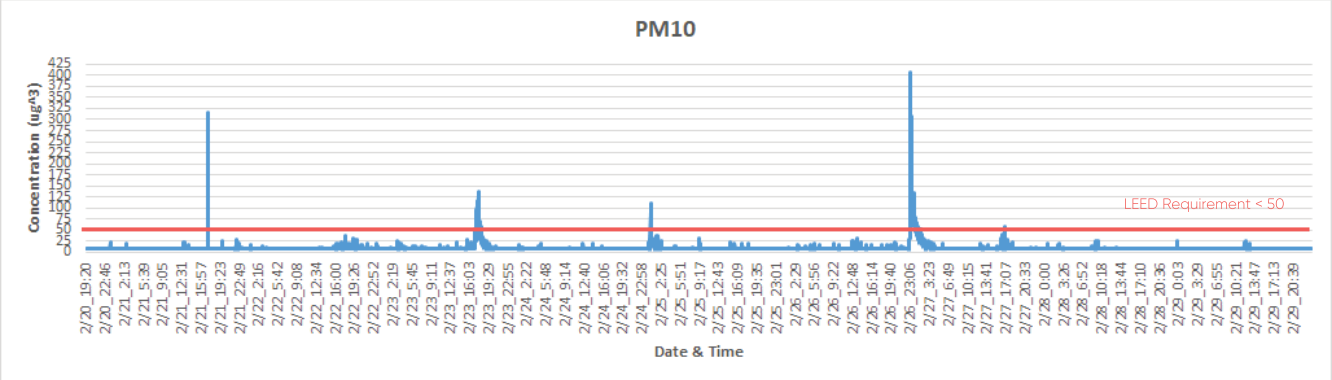
Figure 13: incubation results of the Ray filter+ Sterionizer+ UVc LEDs plates on December 31st,2019

Only Measurement Data









Active Measurement Data