

Providing clean air and reduced CO₂ levels in a busy Edmundson Electrical Branch.

CleanLight is a powerful LED panel, proven to clean the air by destroying viruses and bacteria, including COVID-19 wherever it shines.

Approved by eminent microbiologist Dr Carl Edwards and extensively tested in laboratories as well as real-world trials, CleanLight has been proven to eliminate the problem of bacteria, viruses, pollutants, and odours in the air across all indoor environments.

AIR QUALITY AUDIT



Our Air Quality Audit is a precise, scientifically verified process that accurately measures airborne pathogens and shows where the potential for onwards transmission of disease is greatest.

As part of Lightico's Centre of Excellence program the Lincoln branch of UK electrical wholesaler Edmundson Electrical was chosen as a test site for the utilisation of CleanLight. This busy distribution office, manages the fulfilment of orders across the region and also acts as a Greentech distributor specialising in green energy products.

The challenge

This busy office contains not just administrative staff but also needs to accommodate staff from both the trade counter and fulfilment warehouse. This constant heavy footfall means that social distancing is impractical. In a business heavily reliant on the manual processing of orders, the potential for cross-transmission of airborne illnesses, such as influenza and COVID-19 is very high. **The potential loss of productivity is therefore significant.**

The area had limited provision for mechanical air handling other than the ability to open external windows and doors. With the room in constant use there was minimal scope for managing poor air quality or increased CO₂ levels.

This was evident in the CO₂ level readings and bacteria collections carried out during the "before" phase of the Air Quality Audit. Throughout the testing period, CO₂ levels were close to or in excess of 2000ppm. **The HSE states that "CO₂ levels consistently higher than 1500ppm in an occupied room indicate poor ventilation and you should take action to improve it."**

The solution

Following the completion of the Air Quality Audit, a lighting design was created that replaced the existing lighting configuration ensuring lighting levels were delivered in line with CIBSE guidelines. This ensured consistent coverage of CleanLight panels that Lightico were calculated to deliver the equivalent of 8.81 ACH (air changes per hour) in excess of the recommended 5 ACH.

Through the simple replacement of the existing lighting, the CleanLight panels are now providing clean air without the need for the business to invest in installing and operating mechanical ventilation.



"As a Greentech distributor within Edmundson Electrical we were keen to understand better how Lightico's CleanLight could support our customers in increasing their energy efficiency and reducing their carbon footprint. After seeing the improvement in air quality just by changing the lights and without increased HVAC. We would recommend all our customers consider CleanLight as part of their NET ZERO strategy.

Adrian Wild — Profit Center Manager, Edmundson Electrical Lincoln

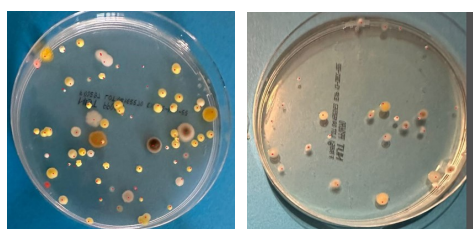
The results

Following the installation of CleanLight the “after” stage of the Air Quality Audit was completed. From this a significant improvement in air quality was identified when measuring both CO₂ level and bacteria counts. This not only will reduce the potential risk of the transmission of airborne pathogens but also means that the business will no longer need to act on high levels of CO₂ causing short term impact to productivity.

By not being forced to install mechanical air handing to maintain air quality the business has saved both a large, upfront capital investment as well as an increase in operating costs and carbon emissions.

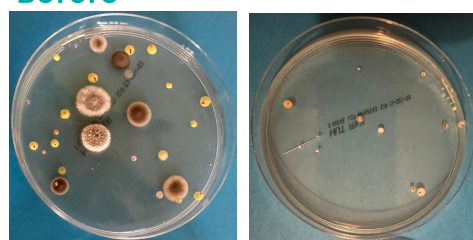
Plate location	Bacterial colony count (per plate) - CFU				% Diff
	Before Cleanlight	Before Cleanlight	After Cleanlight	After Cleanlight	
	CFU	CFU/m ³	CFU	CFU/m ³	
Location 1	70	743	26	276	-63%
Location 2	58	615	38	403	-35%
Location 3	74	785	21	223	-72%
Location 4	33	350	14	149	-58%
Site Average	59	623	25	263	-58%

According to the sanitary standards of the European Commission for non-industrial premises, the permissible limits of bacterial load is ≤ 500 CFU/m³. By reducing the level of CFU to 263 CleanLight has enabled the branch to adhere to these standards.



Before

After



Time	CO ₂ PPM		
	Before Cleanlight	After Cleanlight	% Diff
0 min	1,777	994	-44%
15 min	2,044	850	-58%
30 min	2,002	946	-53%
45 min	1,949	988	-49%
60 min	1,881	1,233	-34%
1 Hour Average	1,931	1,002	-48%

The bigger picture

CleanLight from Lightico provides a solution where your staff’s work would be compromised, by adding protocol and extra processes to better protect them.

The starting point is always an accurate assessment—using our Air Quality Audit. Once the danger areas have been identified, our CleanLight LEDs can be fitted quickly and take immediate effect. By killing airborne bacteria, viruses, pollutants, and odours with nothing but light, CleanLight provides, non-intrusive, instant and highly effective protection.

Switch CleanLight on, and switch on a new level of protection, with almost no disruption and no increase to your energy bill.