

LED Lighting, Eco2Solar Offices

Kosnic 5ft 25w LED Daylight LED Tubes were installed in the managing director's office at the Ec02Group in Kidderminster.

These re-placed 5ft 58w Colour 84 Fluorescent tubes in a twin 5ft surface mounted luminaire. You can see before and after pictures below which demonstrate how the light quality is improved.



Kosnic 5ft LED Tubes were also fitted in a similar light fitting over the MD's Desk.

Again you can see before and after pictures below:



Light Output:

LED Tubes produce a comparable light output to that of a standard fluorescent tube. A fluorescent tube will emit light at 360 degrees and this means that a lot of light is wasted or lost. An LED Tube emits light at 120 degrees and has its own internal reflector to ensure maximum downward light. When an LED Tube is used in a fluorescent fitting, performance will vary due to the type of reflector or diffuser. As a rough guide, we have found the following light output performance:

- 2ft 10w LED Tube = Same light Output as a 2ft Fluorescent Tube
- 4ft 20w LED Tube = Same light Output as a 4ft Fluorescent Tube
- 5ft 25w LED Tube = 80% light Output as a 5ft Fluorescent Tube
- 6ft 30w LED Tube = 80% light Output of a 6ft Fluorescent Tube

In the example shown in the pictures taken at Eco2Group, the Lux levels have dropped by 20%. However due to the colour rendering of the LED Tubes (Daylight White = 6,500k) the appearance is brighter and a more comfortable working light.

Energy Saving:

LED Tubes use approximately 60% less electricity. The twin fluorescent fittings used at ECO2 Solar used 5ft 58w tubes. All fluorescent fittings consume additional wattage due to their control gear so in fact each fluorescent fitting consumed 126 watts. The 5ft LED tubes only consume 25w or 50w per fitting. That's a 61% energy saving

Cost Savings:

With electricity costing £0.14 per kWh and an annual usage of 3,000 hours, the existing fluorescent tubes will cost £52.92 to run whereas the LED Tube would cost £21.00, a saving of £31.92 per fitting per year.

Payback Period:

The Payback period when considering the purchase of the LED Tubes for ECO2 Solar is 30 months.

Lamp Life:

Florescent Tubes generally have a lifespan of between 8,000 and 10,000 hours. The LED Tubes have a lifespan at least 3 times greater or 30,000 hours. Consequently, Eco2Group will not have to change an LED Tube for 10 years! This further reduces your maintenance periods and associated costs of changing tubes.