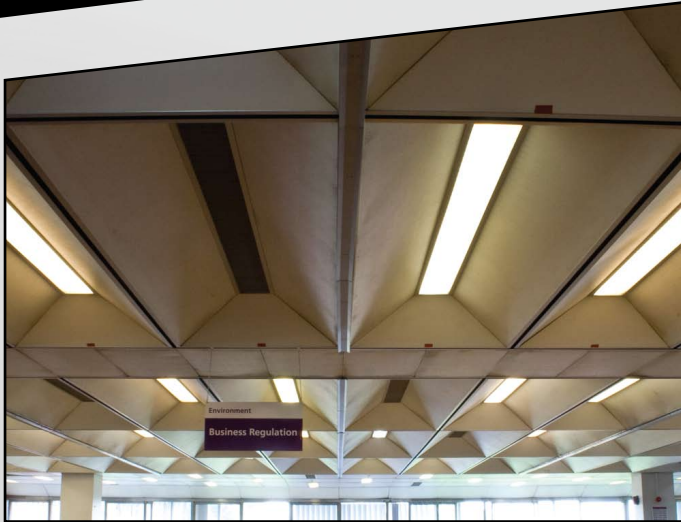


LED TUBE CASE STUDY

Hounslow Civic Centre



Original Fluorescent Lighting



New LED Lighting

The Overview:

The London borough of Hounslow were looking for a 3 year maintenance free solution for their 3 storey Civic Centre office block, including walkways and meeting rooms, staffed throughout a 14 hour day.

The lighting system already in place used power hungry T12 125w 8ft halophospher tubes, in need of frequent maintenance which have been phased out in accordance with European Directives.

The Requirement:

The client was passionate about finding a unique, sustainable, long term solution. Not only must it offer the same high quality light, it also needed to adhere to their rigorous policy of reducing their carbon footprint. Prolite LED lighting was the obvious choice.


The lights needed to offer the same light output, give a strong return on investment, reduce maintenance costs, have a high power factor, a low energy usage and have minimal recycling costs.

The Solution:

After a site evaluation, the Prolite technical team advised replacing the T12 lamps with 8ft T8 LED tubes, each using just 44W's of energy. The life expectancy of the new lighting system will vastly reduce maintenance costs for the Civic Centre as replacements will not be required for at least 10 years.

In total 3000 units have been installed across the civic centre. Unlike some other LED lighting systems currently available, Prolite's LED tubes simplified the process of upgrading luminaries with minimal inconvenience to the civic centre's working day.

With unmatched solid state technology from Prolite, the revolutionary tube design reduced wastage, maintenance and disposal costs, and was able to increase the light output by 25%.



COST SAVINGS CALCULATOR

Lamp usage information

Current Lamps:

Replacement Lamps:

Hourly Usage Per Day:

Weekdays	Weekends
<input type="text" value="14"/>	<input type="text" value="2"/>

Hours/Week: Total Hours/Year:

Active Weeks/Year: Number of Lamps: (Max 3000)

Cost of Electricity pence/kwh: e.g. 8.5 = £0.085

Running costs	T12 125w Tube	T8 Led 44w Tube
Power Consumption	<input type="text" value="140"/> (w) - Wattage including control gear	<input type="text" value="44"/> (w)
Annual Energy Cost	<input type="text" value="£153,535.20"/>	<input type="text" value="£48,253.92"/>
Lamp Life	<input type="text" value="10000"/> Hrs	<input type="text" value="40000"/> Hrs
Lamp Replacement At	<input type="text" value="2.60"/> Years	<input type="text" value="10.40"/> Years

Savings calculations

Year	Cost of energy		Lamps replaced		Cost of lamps		Cost savings
	T12 125w Tube	T8 Led 44w Tube	T12 125w Tube	T8 Led 44w Tube	T12 125w Tube	T8 Led 44w Tube	
1	£153,535.20	£48,253.92	0	0	£0.00	£0.00	-£56,000.22
2	£307,070.40	£96,507.84	0	0	£0.00	£0.00	£49,281.06
3	£460,605.60	£144,761.76	2850	0	£28,500.00	£0.00	£183,062.34
4	£614,140.80	£193,015.68	2850	0	£28,500.00	£0.00	£288,343.62
5	£767,676.00	£241,269.60	2850	0	£28,500.00	£0.00	£393,624.90
6	£921,211.20	£289,523.52	5700	0	£57,000.00	£0.00	£688,687.68
7	£1,074,746.40	£337,777.44	5700	0	£57,000.00	£0.00	£794,064.96
8	£1,228,281.60	£386,031.36	8550	0	£85,500.00	£0.00	£927,750.24
9	£1,381,816.80	£434,285.28	8550	0	£85,500.00	£0.00	£1,138,312.80

Note. Cost savings shown take into consideration the initial cost of lamps WITHOUT labour to replace

As you can see from the above cost savings table, the Civic Centre will now have a return on investment for this project at the end of year 2.