



AUDIT SUMMARY - XYZ SYSTEMS LTD

Annual Energy Usage - Existing Installation	272413	kWh
Annual Energy Usage - Powerboss Eluma Solution	73253	kWh
Projected Annual Energy Savings	199161	kWh
Projected Annual Energy Savings	73%	
Projected Annual CO2 Saving	85639	kg
Annual Running Costs - Existing Installation	£20,994	
Annual Running Costs - Powerboss Eluma Solution	£5,274	
Projected Annual Cost Savings	£15,720	
Projected Annual Cost Savings	75%	
Projected Cost Savings over 10 year period	£157,196	
Monthly Cost Saving	£1,309.96	
* Monthly Cost of Eluma Solution	£950.52	
* Immediate Monthly Cashflow Benefit	£359.45	

* Based on a 3 year fixed lease agreement

Company: XYZ Systems

OUTLINE TEST SCENARIO

A comparative test was initiated to evaluate the performance of Powerboss Eluma Intelligent Lighting versus the conventional high intensity discharge (HID) 400W metal halide lighting within the Great Malvern facility.

It was proposed that 4 x Powerboss Eluma fittings were installed and metering be undertaken to compare the relative kW usage of these fittings against the usage of 4 x metal halide fixtures.

Light levels readings were taken.

TEST / AUDIT PROCEDURE

4 x Powerboss Eluma luminaires were installed within the XYZ Systems facility.

One of the removed metal halide fittings was logged in order to assess the connected load of the existing installation.

The 4 fixture install was metered and monitored using a Circutor AR5L energy analyser in order to give the total kW consumption for the duration of the test for a period from the 30th March to 4th April 2007.

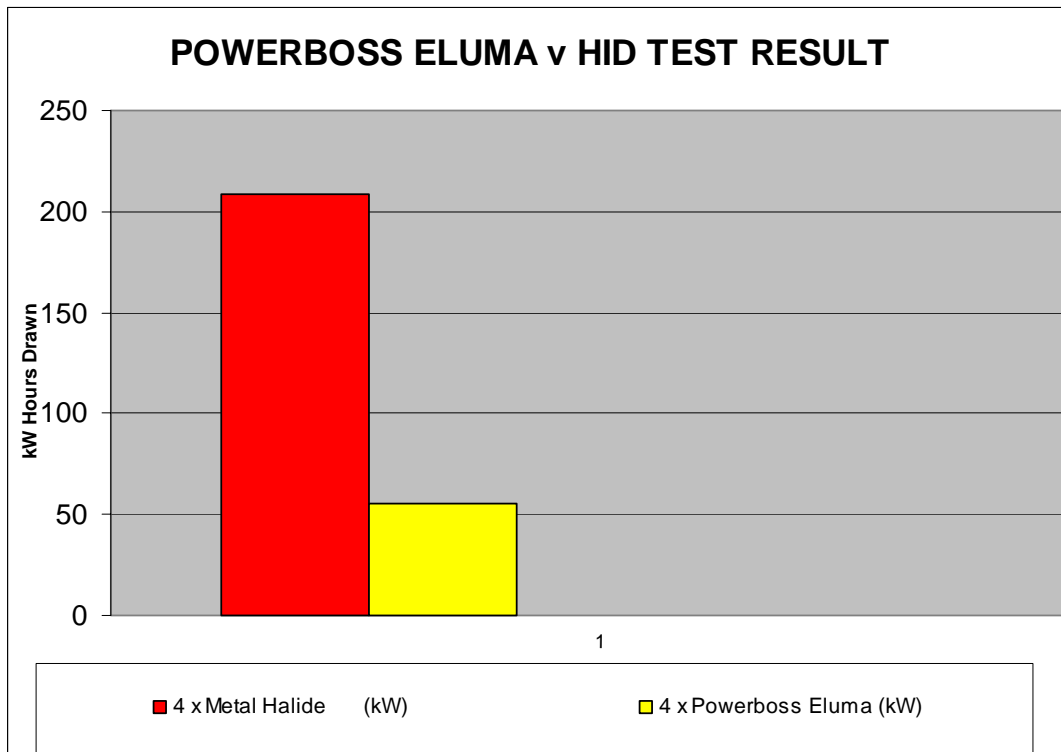
TEST RESULTS – kW

The test demonstrated kW consumption during the sample period extracted from the data as follows:

4 x Metal Halide @ 450W	208.7kW
4 x Powerboss Eluma	55.6kW

These results which equate to a 73% saving in kW are displayed on the graph on the following and attached pages.

TOTAL ENERGY USAGE



4 x Metal Halide (kW)	4 x Powerboss Eluma (kW)	% Savings
208.7	55.6	73%

OTHER OBSERVATIONS

In addition to the savings delivered, light level readings were taken prior to (metal halide) and after installation of Powerboss Eluma. Not only were the previous light levels maintained, but light levels were also improved.

Metal Halide (minus daylight contribution)	150 - 200 lux
Powerboss Eluma (minus daylight contribution)	300 – 350 lux

SUMMARY

The testing undertaken illustrated a significant kW reduction, which would equate to 199161kWh per annum (73%) and hence cost reduction from the use of Powerboss Eluma over conventional metal halide lighting.

Additionally, further optimisation of a complete facility installation would potentially deliver additional savings in the form of occupancy and daylight saving benefits.

Substantial maintenance and operator benefits will also be achieved through significant reduction of maintenance overheads associated with the existing fittings. Somar has partnered with Osram to provide a 3 year guarantee on the lamps and 5 year guarantee on the ballasts. High bay lamps suffer a 35% - 40% reduction in light output over their first 6000 burning hours. Using Osram constant output lamps, the Eluma fittings provide constant light output for 20,000 hrs, i.e. minimal reduction in light output over the lamp life.

COMMERCIAL CONSIDERATIONS

In addition to the kW load metered, a savings calculation has also been included on the basis that this trial is to be extended to an installation across the entire facility:

1. Projected savings in **electrical energy running** costs of £15270 per annum (73% saving).
2. Payback within 1.93 years in electrical energy costs alone based on quoted cost below.
3. 100% first year tax benefits are also available under the **Enhanced Capital Allowance scheme** (ECA) to which Eluma applies.
4. **Substantial maintenance costs** will be achieved owing to the low maintenance, long lamp life of the Eluma fittings.
5. **CO₂ saving of 85639kg** per annum

If the above project was supplied on the basis of a **3 year fixed term lease**, the monthly electrical energy savings of £1310 would fund a monthly lease payment of £950 and also provide an **immediate positive monthly cashflow benefit of £360** at current energy rates.



PAY-AS-YOU-SAVE OPTION - XYZ SYSTEMS LTD

Annual Running Costs - Existing Installation	£20,993.77
Annual Running Costs - Powerboss Eluma Solution	£5,274.19
Projected Annual Cost Savings	£15,719.58
Projected Annual Cost Savings	75%
Monthly Cost Saving	£1,309.96
* Monthly Cost of Eluma Solution	£950.52
* Immediate Monthly Cashflow Benefit	£359.45
Total Savings Over Lease Period	£47,158.74
Total Lease Payment	£34,218.58
* Net Cashflow Benefit Over Lease Period	£12,940.16
Net Annual Cashflow Benefit After Lease Period	£15,719.58

* Based on a 3 year fixed pay-as-you-save agreement

REMEMBER! THE COST OF THE ELUMA SOLUTION IS NOT NEW EXPENDITURE
ELUMA WILL PAY FOR ITSELF OUT OF THE SAVINGS



EXISTING INSTALLATION

Facility Area	Burning Hours per Day	Burning Days per week	Existing Fittings	Existing Connected Load per fitting (W)	No. of fittings	Total Existing Connected Load (kW)	Total existing kWh p.a.	Existing Maintenance Cost (Lamps/ Labour)	Total Running Cost £ p.a. existing fittings
Room1	24	5	Metal Halide	468	54	25.27	157697	£ 810	£ 12,164
Room2	24	5	Metal Halide	468	38	17.78	110972.16	£ 570	£ 8,560
Fluorescent	24	5	Fluorescent	100	6	0.60	3744		£ 270

PROPOSED SOLUTION

Facility Area	Burning Hours per Day	Burning Days per week	Proposed Fitting	Connected Load per PB Eluma (W)	Proposed No. of Eluma fittings	Total Proposed Connected Load with Eluma (kW)	% Saving Benefit from Occupancy / Daylight sensing	Total Proposed kWh p.a with Eluma	Maintenance Cost Eluma (Lamps/ Labour)	Total Running Cost £ p.a. proposed Eluma solution
Room1	24	5	Eluma 4x55W	220	54	11.88	42	42996		£ 3,096
Room2	24	5	Eluma 4x55W	220	38	8.36	42	30257		£ 2,178

SUMMARY INFORMATION

	EXISTING FITTINGS Annual kWhs	ELUMA SOLUTION Annual kWhs	PROJECTED SAVINGS Annual kWhs	% kWh Savings
	272413.44	73253	199161	73%
UNIT PRICE PER kWh	EXISTING FITTINGS Annual Cost	ELUMA SOLUTION Annual Cost	PROJECTED SAVINGS Annual Saving	% Cost Saving
£0.07200	£20,994XY	£5,274	£15,720	75%
	TOTAL INVESTMENT	AVERAGE PAYBACK PERIOD		CO2 SAVING kg
	£30,268	1.93 Years		85639

Somar International Ltd cannot be held responsible for any changes to the power savings indicated and/or the payback period resulting from changes to the function or use of the lighting, the supply to the facility or variations in demand at the facility beyond those shown.

TOTAL LIFETIME BENEFITS

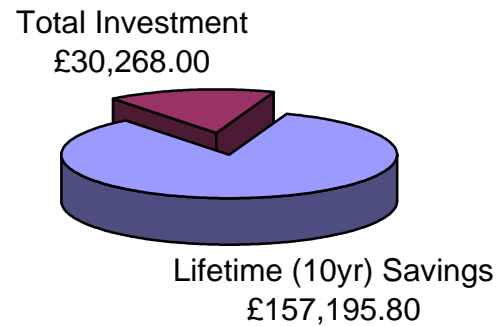
Based on 10 year lifetime



PROJECTED SAVINGS

First Year	£15,719.58
3 Years	£47,158.74
Lifetime (10yr) Savings	£157,195.80
Total Investment	£30,268.00

Lifetime Savings vs Total Investment



■ Lifetime (10yr) Savings

■ Total Investment

Comparative Usage (400W metal halide vs Powerboss Eluma)

