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AVA™
LED Lighting

- Spot Lamp Replacements

- Spot Lamp Replacements
- Fluorescent Tube Replacements

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- Fluorescent Tube Replacements
- PL Lamp Replacements

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- Flood Lighting Replacements

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- Fluorescent Tube Replacements
- PL Lamp Replacements
- Flood Lighting Replacements
- High Bay Lighting Replacements

Energy Efficient Whitehall

Whitehall – Department of Energy and Climate Change

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Envirolink North West

Whitehall – Department of Energy and Climate Change

Envirolink North West

Novah Limited


Envirolink
Northwest

Project Scope:

Upgrading The Existing Lighting in the DECC to State of the Art LED Lighting

Current Lighting in DECC:

T5 Fluorescent Tubes - indirect double fittings

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T5 Fluorescent Tubes
- indirect double fittings

PL Compact Fluorescent
- double fittings

Energy consumption per T5 Fluorescent Tube

26W x 2 per fitting

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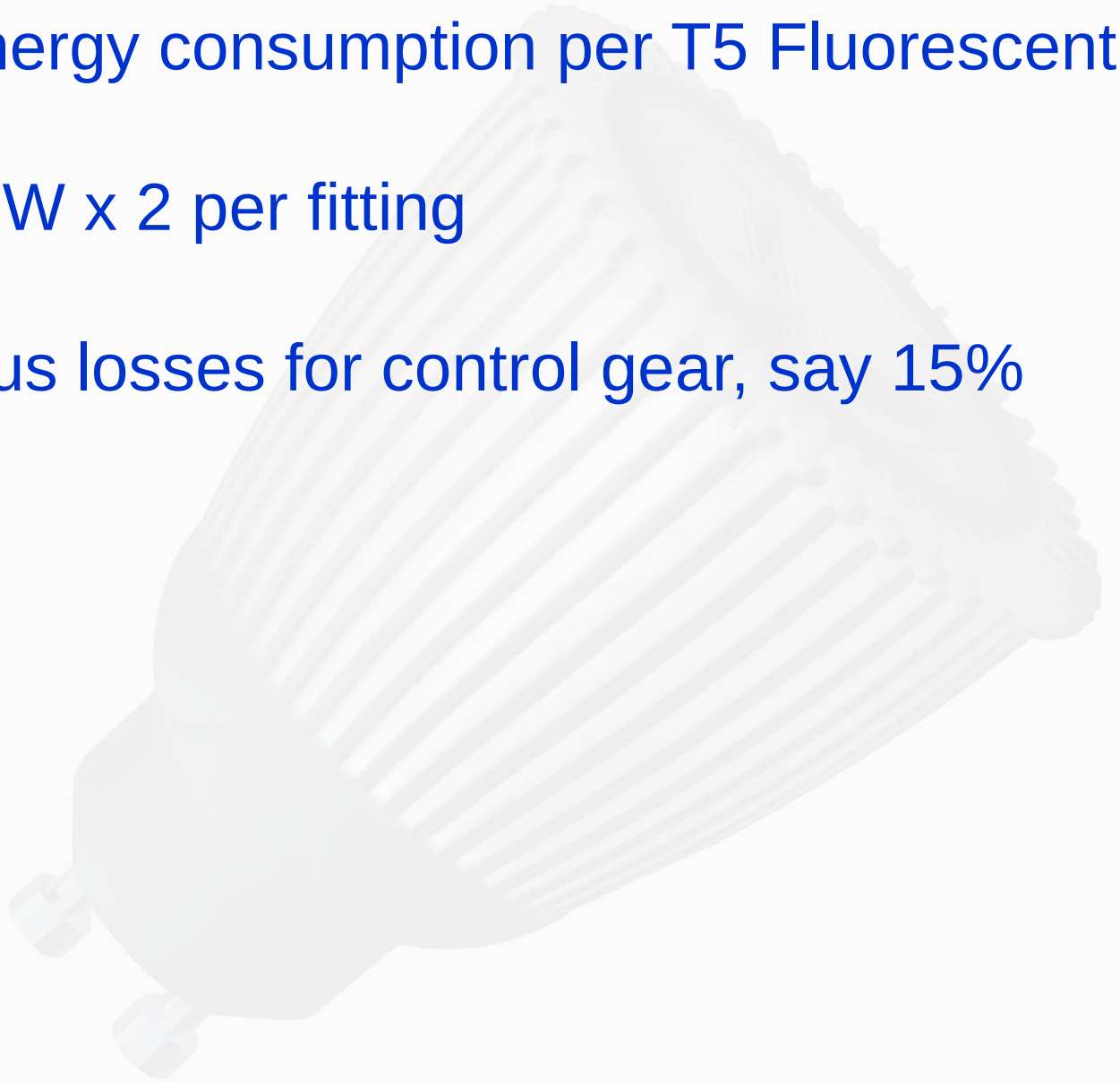
Plus losses for control gear, say 15%



Energy consumption per T5 Fluorescent Tube

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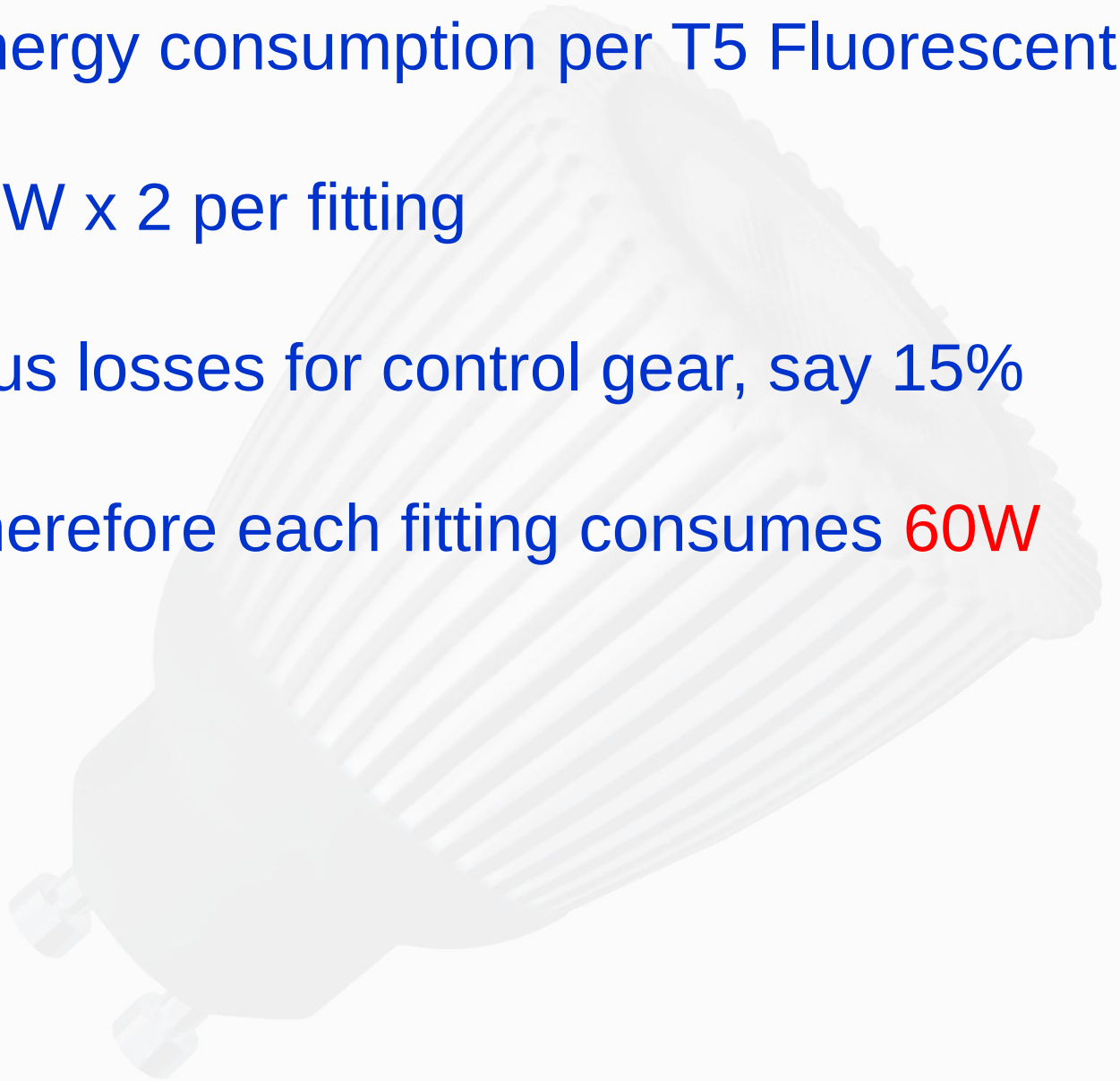
Plus losses for control gear, say 15%

Therefore each fitting consumes 60W



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Lighting spread across 3m of corridor

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Days per week = 6 days

Total time on during one year: 6240 hours

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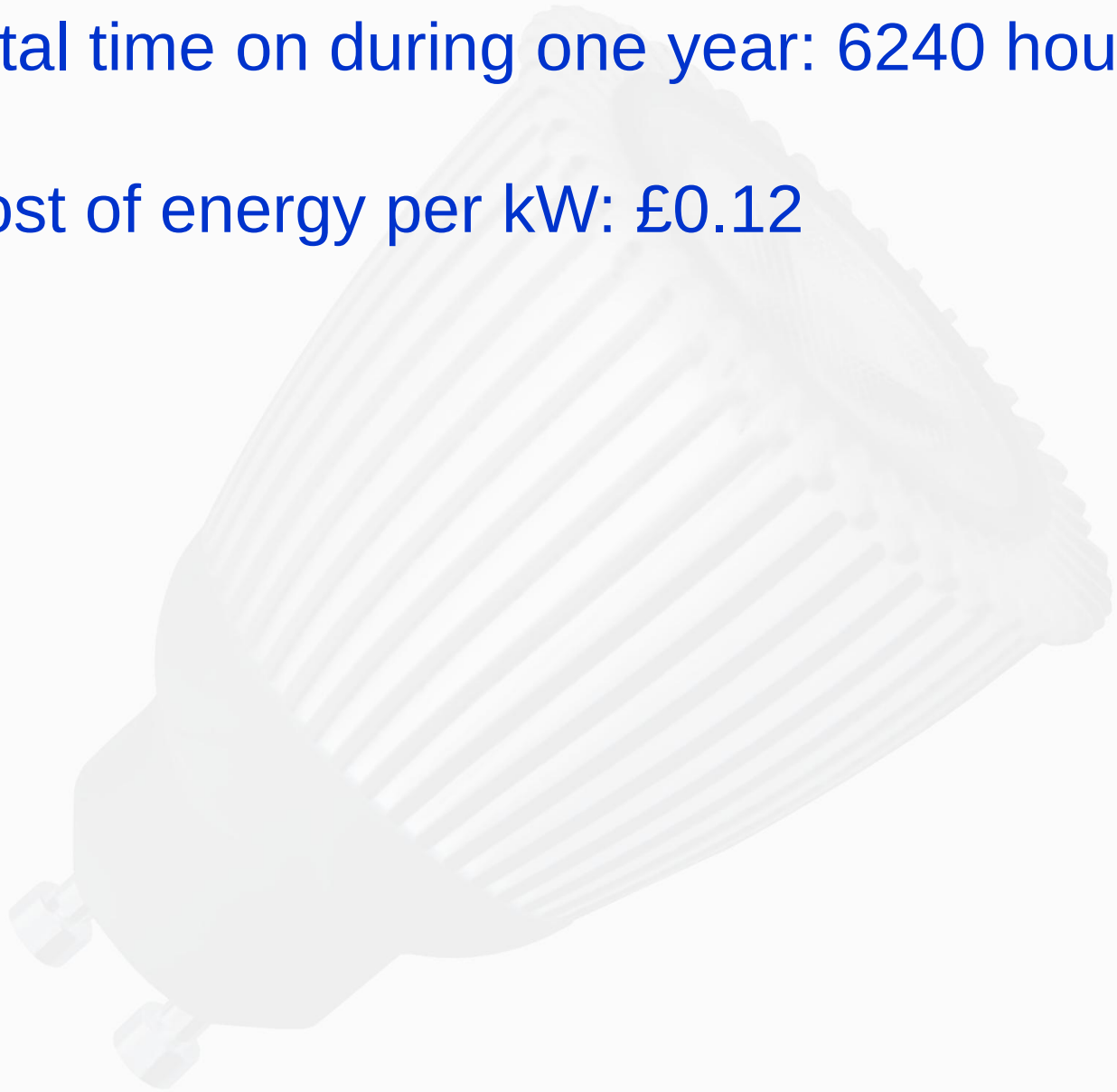

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0.06kW x 6240 hours = 374.4kWh

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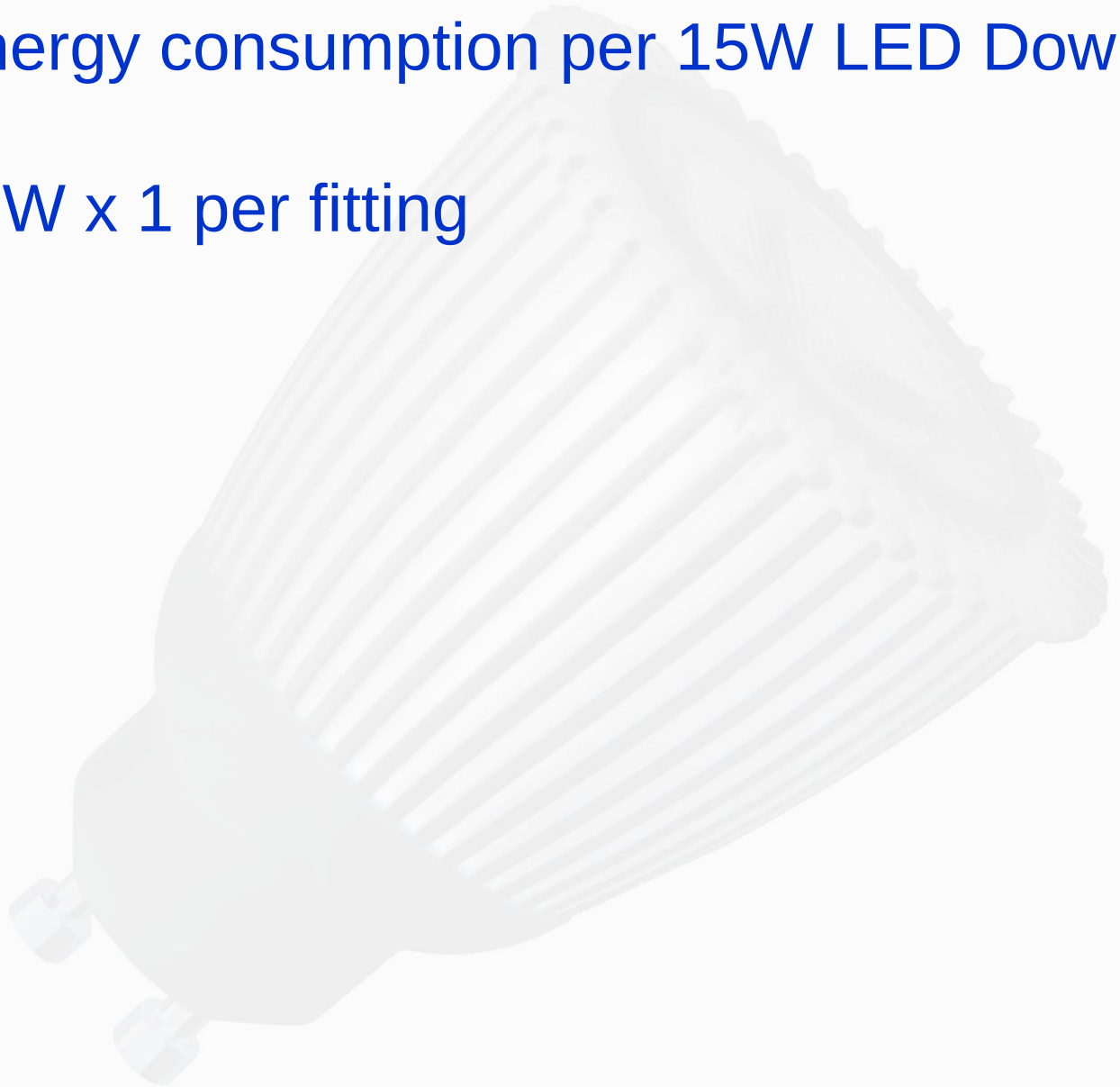
Cost of running one fitting per annum, excluding maintenance costs: £44.93

Cost of running two hundred fittings per annum,
excluding maintenance costs: £8985.60

Energy consumption per 15W LED Down light

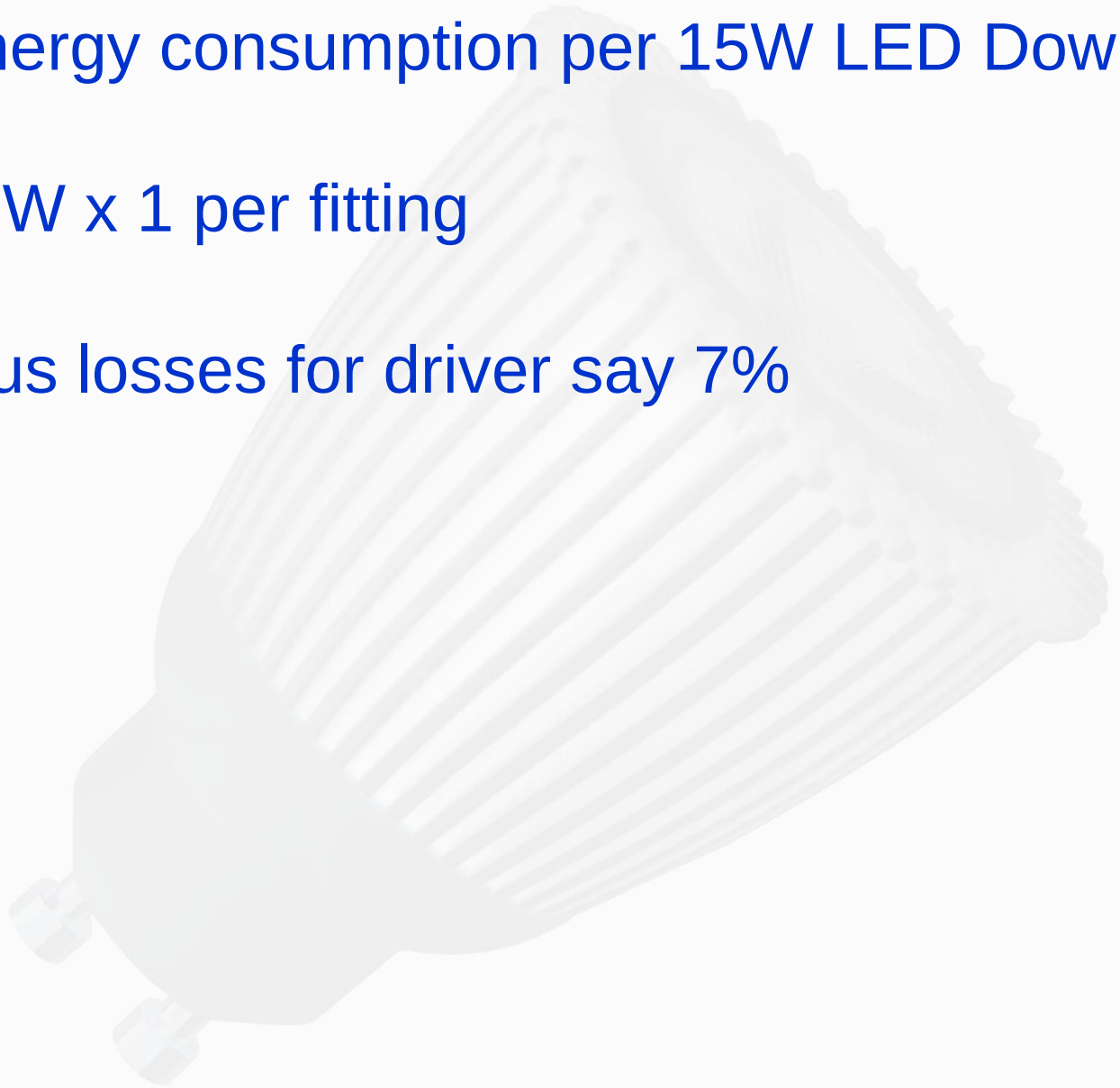
15W x 1 per fitting



Energy consumption per 15W LED Down light

15W x 1 per fitting

Plus losses for driver say 7%

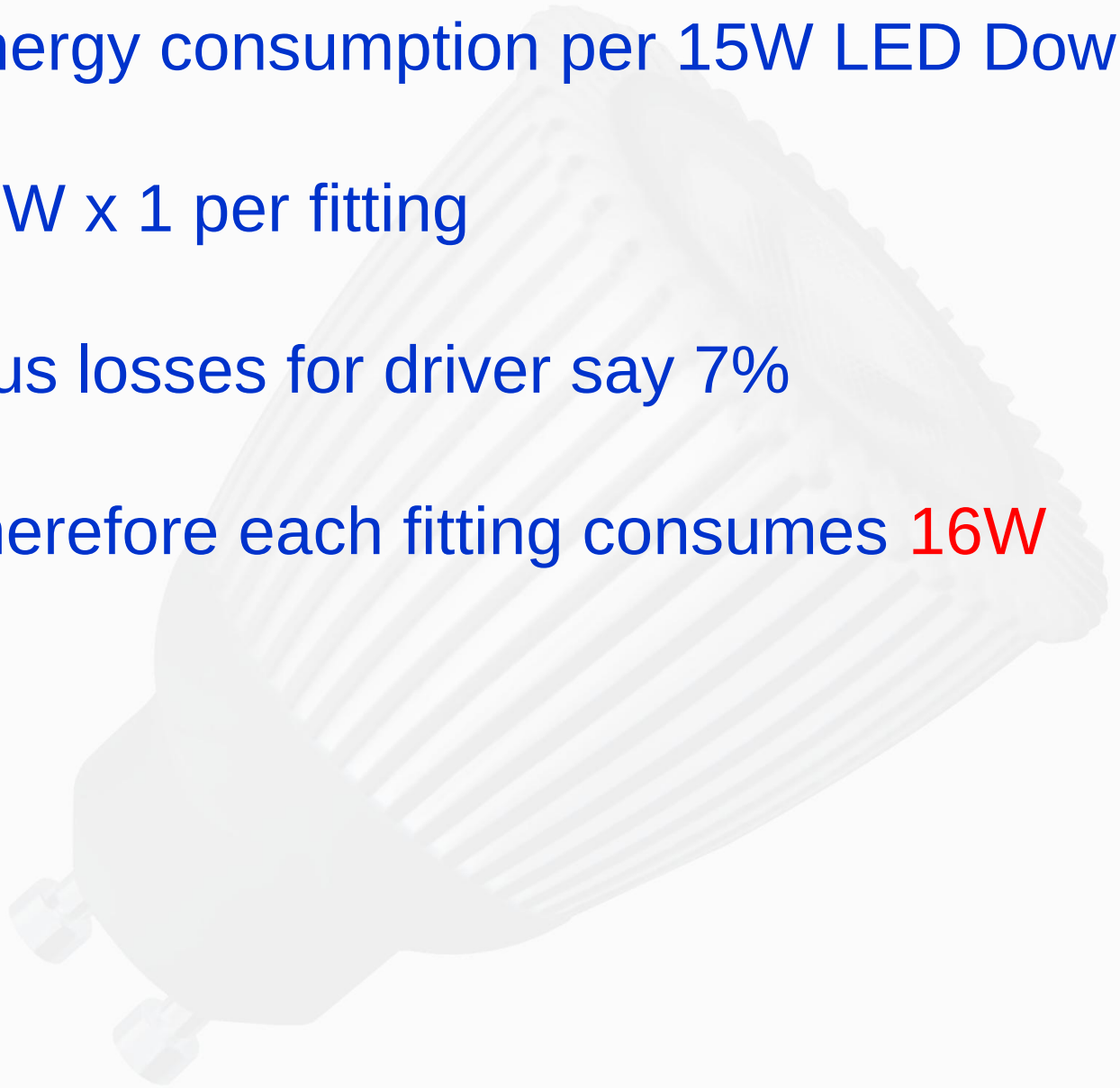


Energy consumption per 15W LED Down light

15W x 1 per fitting

Plus losses for driver say 7%

Therefore each fitting consumes 16W



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Lighting spread across 3m of corridor

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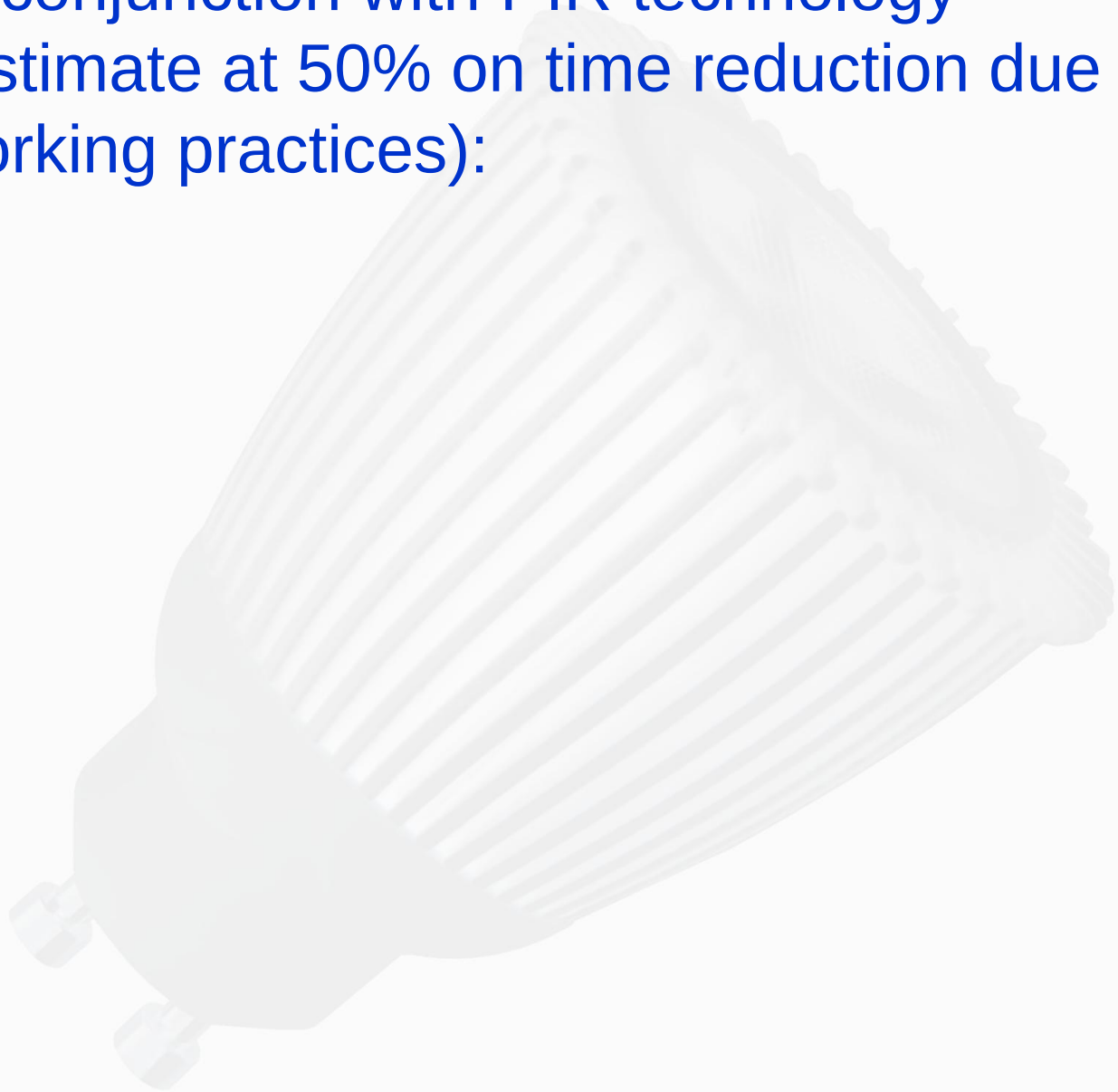
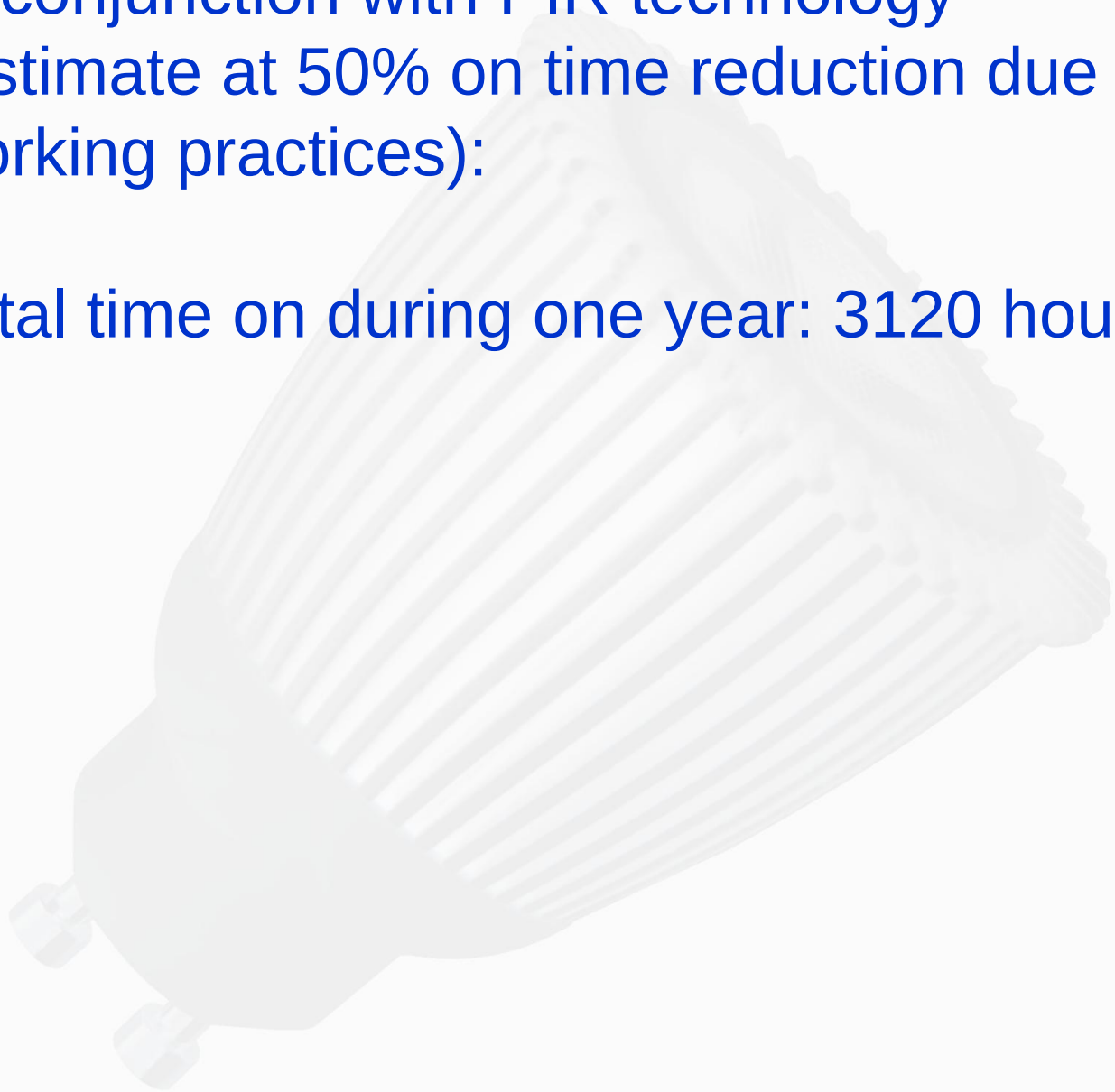
In conjunction with PIR technology (estimate at 50% on time reduction due to working practices):



In conjunction with PIR technology (estimate at 50% on time reduction due to working practices):

Total time on during one year: 3120 hours



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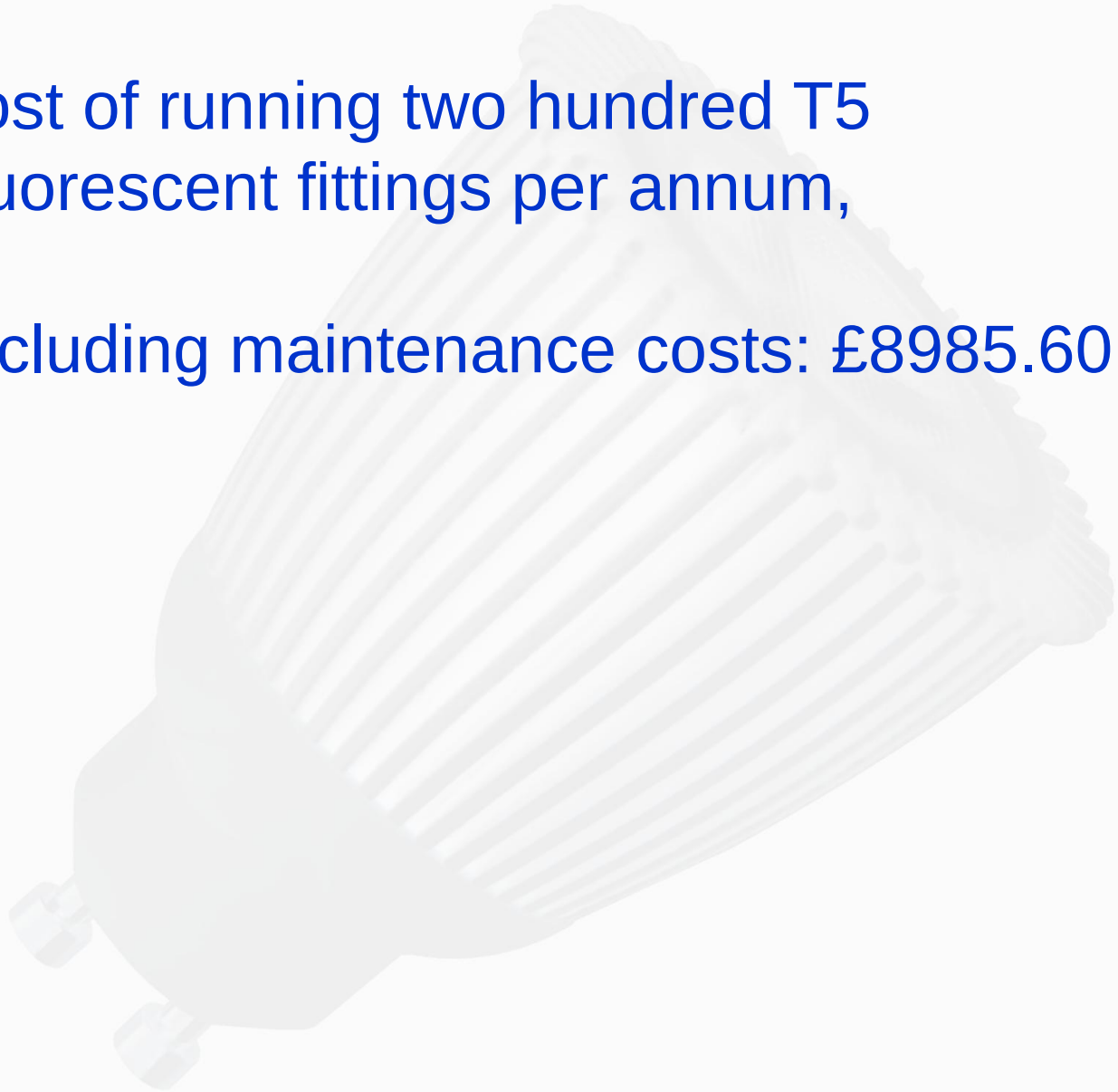
Energy used by one fitting per annum:
0.016kW x 3120 hours = 49.9kWh

Cost of running one fitting per annum,
excluding maintenance costs: £5.99

Direct Cost Comparisons

Cost of running two hundred T5 Fluorescent fittings per annum,

excluding maintenance costs: £8985.60



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AN 87% Cost Reduction on Energy Costs

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AN 87% Cost Reduction on Energy Costs

Not including maintenance or hardware costs!

Maintenance Issues – T5 Fluorescents

Lamp life upto 8000 hours

Fittings burn out / bake

Lamps contain mercury

Lamps create heat – causing damage and excessive energy usage, both by the lamp and by air conditioning units.

Slow switch on, requires lamps to 'warm up'

Maintenance Issues – LED Down Light

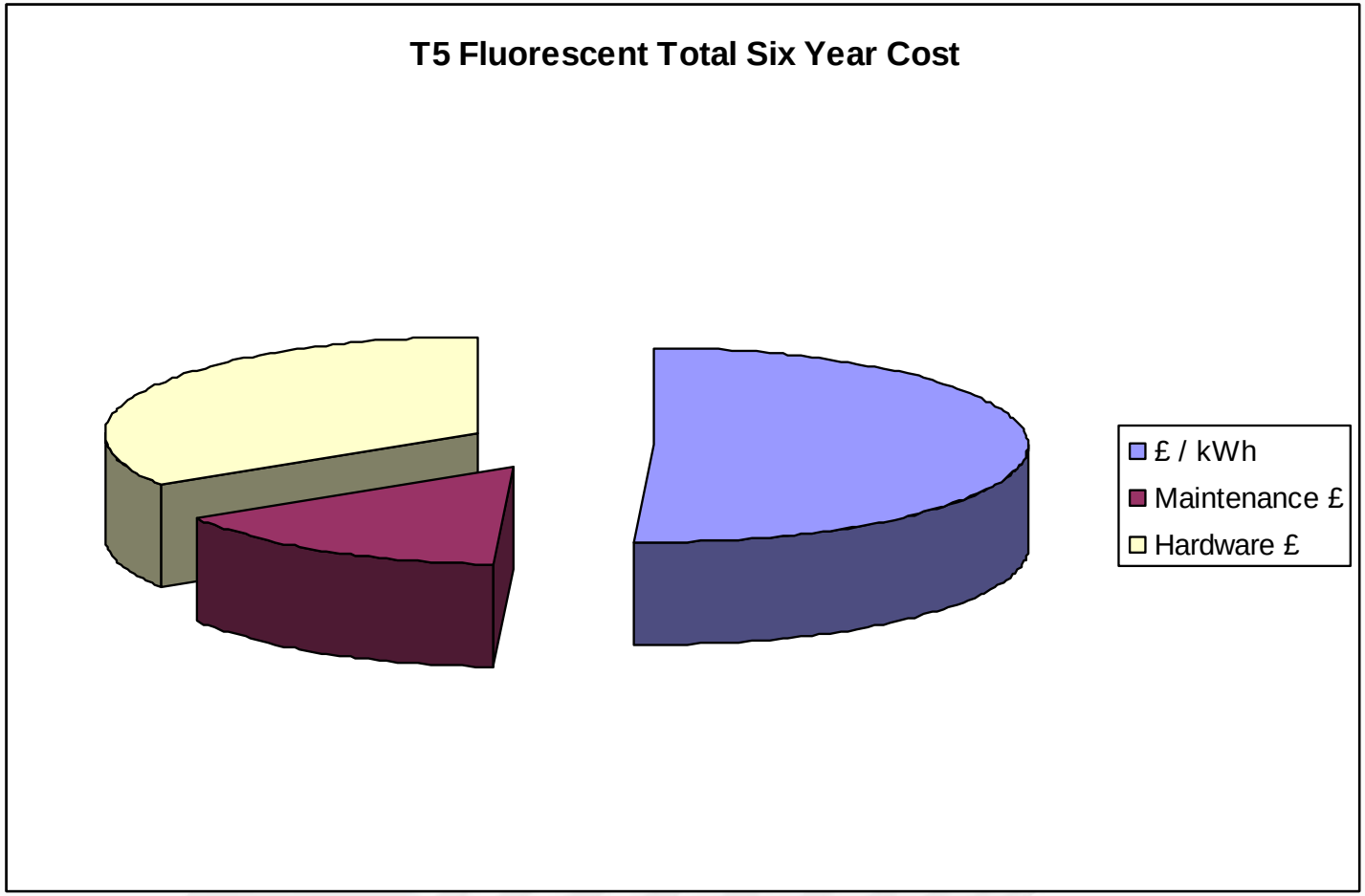
Lamp life upto 35,000 hours

Fittings run cool (< 60°C) – cause no damage to fittings

Lamps contain no harmful chemicals

Lamps emit no IR or UV or heat – no additional drain on air conditioning units

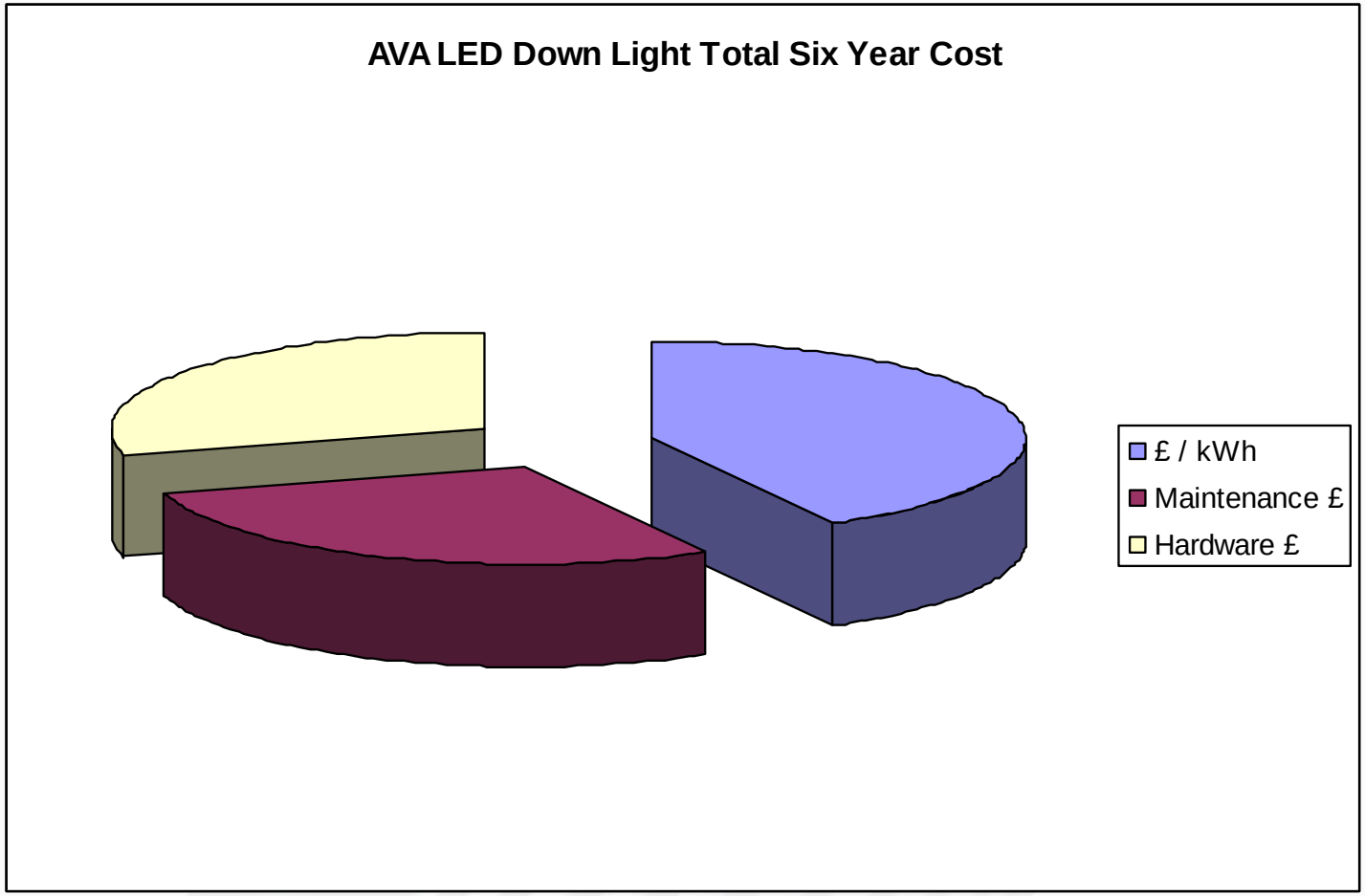
Instant switch on, ideal for use with PIR technology



Based upon 6000hrs usage per annum for six years, £0.12 per kWh – one fitting

Power kWh = £269.58 Maintenance = £80.00

Hardware = £180.00 Total = £529.58



Based upon 6000hrs usage per annum for six years, £0.12 per kWh – one fitting

Power kWh = £71.88 Maintenance = £50.00

Hardware = £50.00 Total = £171.88

Total Cost saving per fitting of £357.70 over six years

As a percentage reduction: 66%

Savings across 200 fittings over six years

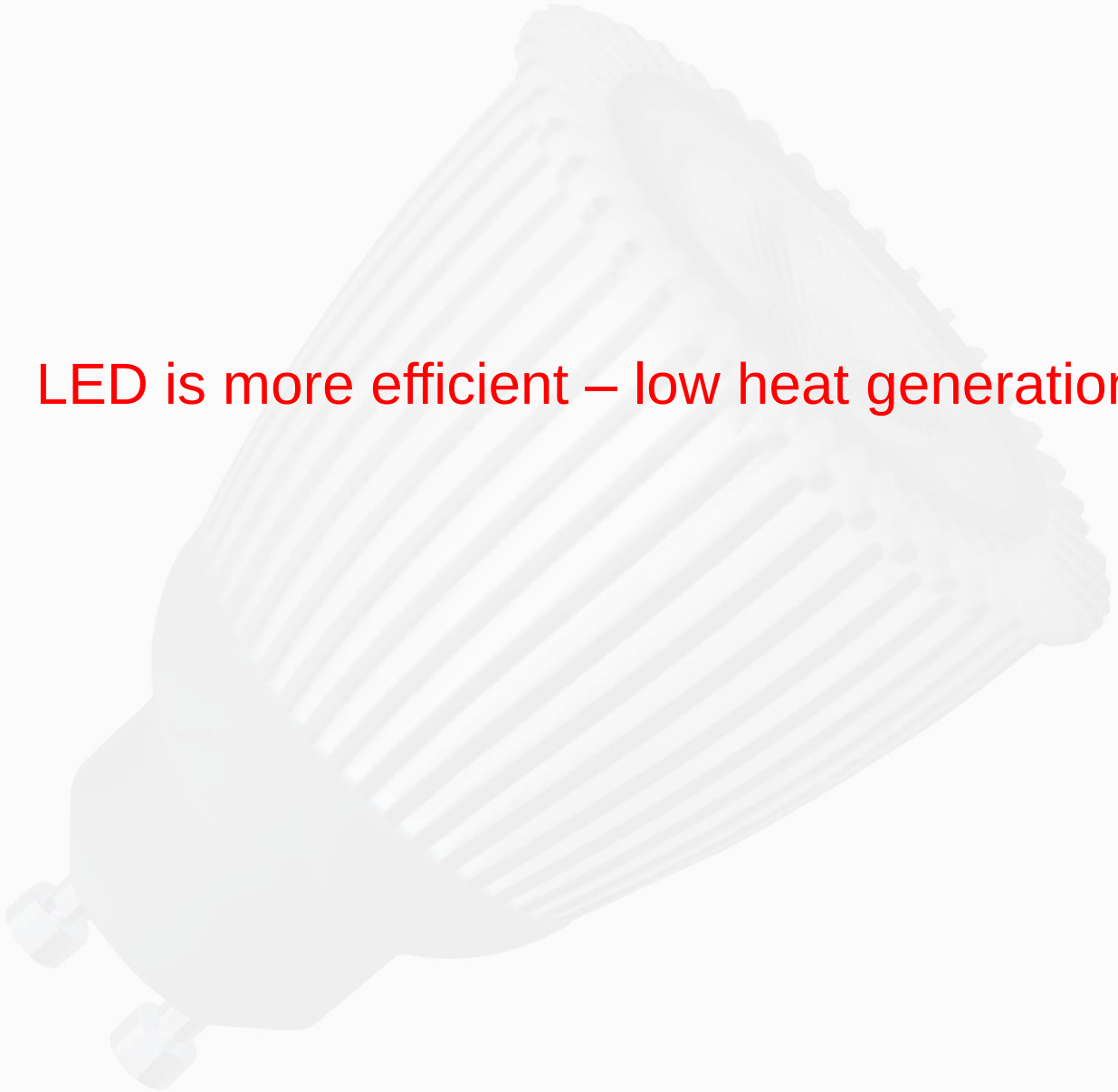
£71,540.00

- LED has lower operational costs

- LED now produces better light quality with even beam pattern

- LED has longevity

- LED is more efficient – low heat generation



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- LED can be upgraded at component level

- LED can now replace most traditional light sources

  (spot, flood, tube, ambient, motor vehicle, safety)

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