

# SON

high pressure  
sodium lamps

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## Application

Lamps for today's needs.

SON lamps combine those features important in the mobile world of industry and commerce. Business relies on mobility – the transportation safety of goods and people. SON lamps are ideal for such applications because they give long burning hours, minimising maintenance; they are very efficient so keep down energy costs; they are compact thus easily built into optical systems; and they will perform over a wide temperature range whether indoors or out. They can provide lighting for safety, security and work efficiency.



## When to replace lamps

There are two options, either

### 1. Spot replacement

This means waiting for individual lamps to fail and then replacing them as soon as possible. Because SON lamps have little depreciation in their light output the most economical life is to operate the lamps as long as possible. In the majority of situations spot replacement is the lowest cost maintenance programme.

### 2. Group replacement

There are some installations

where access to the lighting is restricted and therefore maintenance can only take place at certain times. Here reference should be made to the life survival curve to ascertain the maximum time period before the lighting falls below a minimum illuminance for the particular situation. This minimum will vary according to the type of work and the lighting layout.



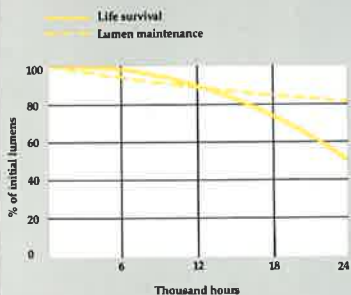
## Product detail

Thorn Lighting design and manufacture the arc tubes for their SON lamps using advanced computer optimising techniques. Narrow diameter Niobium tubing, for the electrical support of the electrode, gives the best possible seal and reduces thermal conductivity. This makes the lamp more reliable and more stable.





## Quality

The SON production facility is based adjacent to the research laboratories. This enables the continuous improvement and refinement to be immediately passed into manufacturing. Quality is monitored at each stage of the manufacturing process to ensure that every lamp is made to Thorn's demanding specification.

Life Survival and Lumen Maintenance




## Lumen Output (100 hours) by Lamp Type

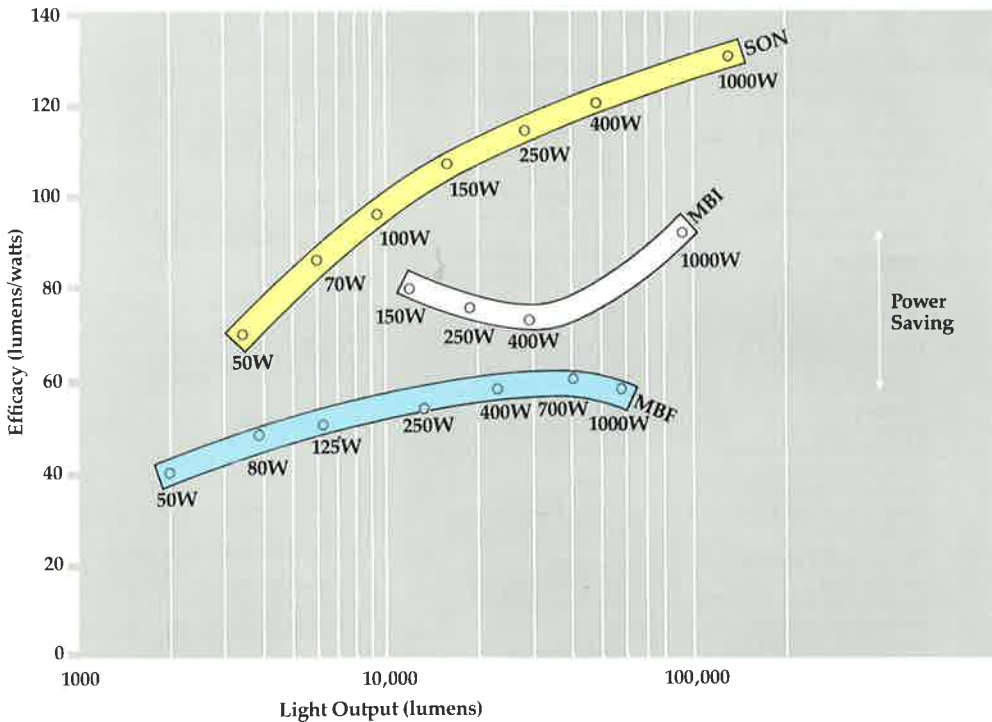
	SON-T Tubular 	SON-E Elliptical 	SON-R Reflector 	SON-TD† Linear 
50W SON	3500	3500		
70W SON	6000	5800	4800	
100W SON	9600	9200		
150W SON	16000*	15500*		
250W SON	28500*	26500*		26000
400W SON	48000*	46000*		48000
1000W SON	130000	120000		

\* Also available as DELUXE.

† For use in suitable luminaire only.

 All Thorn SON lamps for use with external igniter circuits only. Further information on specific lamp types is available from Thorn Data Sheets.

## Discharge Lamp Performance and Range



The efficiency of different lamp types can be assessed by the height of the curves.

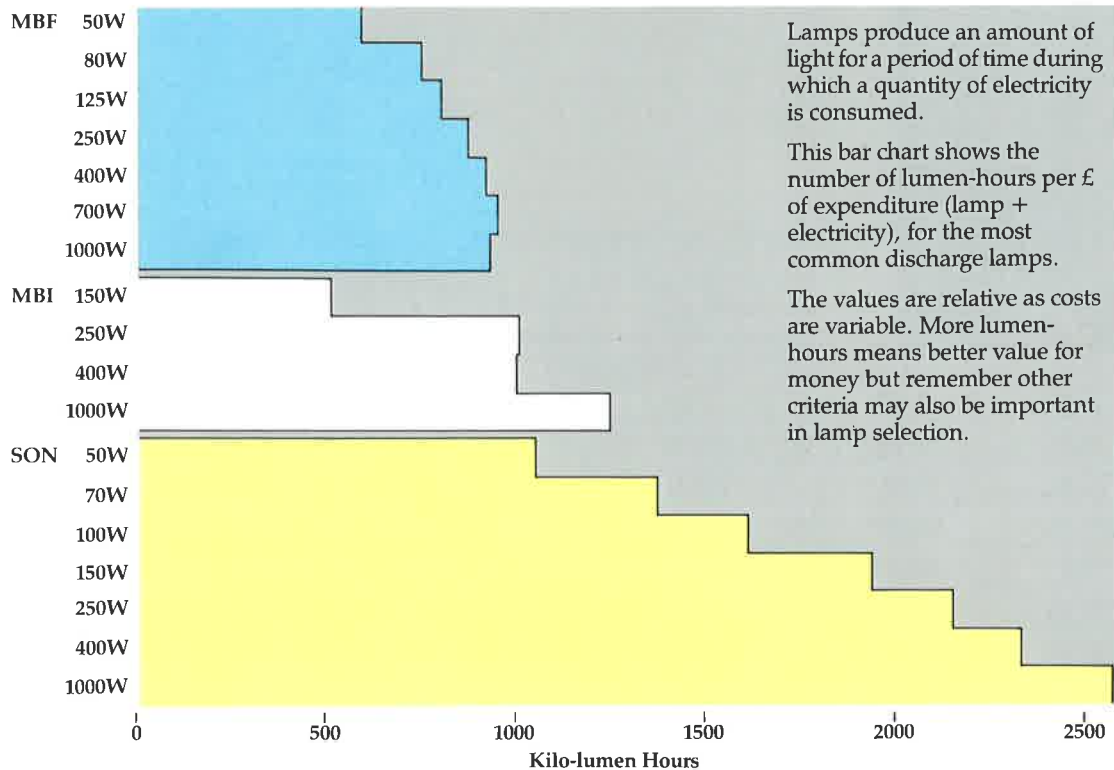
The range of lamps is shown by the length of the lines and their position on the Light Output Scale.

For particular projects where the required lumen output is known then reading vertically from the appropriate point on the Light Output Scale, the nearest actual lamp wattage can be found and the potential power saving assessed.

Tomorrow's lamps today.

# Value for Money

The relative light-time combination per £ (lamp and electricity cost)



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