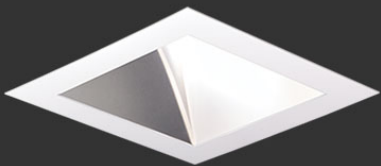


QUADRUM



The definition of LED luminaire lifetime is the period in hours after which the luminaire no longer delivers the correct amount of light, either insufficient light is produced or none at all. This may be a combination of many factors not limited to just the LED performance.

The LED light source is however, a critical part in delivering light, and its expected lifetime is widely expressed in terms of its "L" and "B" values.

The 'L' value describes the percentage of initial light still produced by the LEDs at the quoted operating hours. For example, L70 (60K) defines that 70% of the LEDs initial light output is still predicted to be emitted after 60,000 hours of operation. The 'L' value therefore describes the expected lumen depreciation of the LED light source.

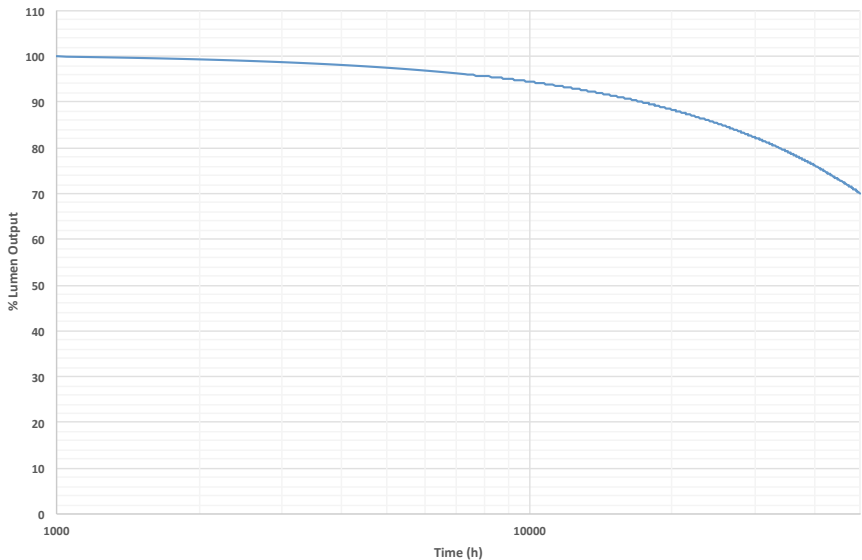
Not all LEDs within the luminaire will suffer depreciation equally. The 'B' value indicates the percentage of LEDs that may fall below the 'L' value threshold.

For example, a product's L70/B10 (60K) rating predicts that 10% of its LEDs may fail to produce 70% of their initial light output following 60,000 hours of operation.

The higher the 'B' value, the greater the risk that light levels may not be adequately maintained.

Thorlux LED lifetime predictions are based on TM-21 calculations approved by IESNA using lumen depreciation data following actual tests over 6000 to 10,000 hours to the approved IESNA LM-80-08 test method.

LUMEN DEPRECIATION CURVE



RATED LIFE	
L70/B10	50,000 hours
L80/B10	33,000 hours
L90/B10	17,000 hours
60kHr Value (TM-21)	L64/B10

All figures are based upon an ambient temperature (Ta) of 25°C. The ambient temperature can affect lifetime, please contact our Technical Department if you require lifetimes at a different temperature.

All figures quoted are for the highest wattage version in the range.

All figures are based upon the luminaire operating at maximum light output. When used in combination with our Smart lighting control systems, a greater lifetime can be expected.