

Lumax Light shelf blind

Lumax had been designed to maximise all available natural light, bringing daylight into the work place and increasing the feel good factor. At the same time Lumax protects computer screens from glare and reduces heat build up in the room. The Lumax blind works by reflecting daylight through its top louvres onto the ceiling while the remaining louvres stay closed. The light shelf is normally 15% of the drop of the blind. On gloomy days, Lumax can be operated as a normal horizontal blind and can be fully retracted when necessary.



This photo clearly demonstrates the effect of Lumax. A shaft of light is reflected onto the boardroom table from the open blind on the left whereas there is no reflected glare on the side covered by the blind in the light shelf mode. The Lumax light shelf reflects light to the ceiling increasing light levels substantially but as this is diffused it does not appear as glare at the working area.

With both blinds in light shelf mode as in this photograph the reflected light from the light shelf can be clearly seen on the ceiling. The increase in natural daylight levels enhances the feeling of well being allowing occupants to track the passing of the day and prevailing weather conditions. Dark and gloomy offices lit by artificial means depress the spirit and disorientate the occupant



The shading qualities of Lumax can be adjusted by simply tilting the slats to any angle through 90 degrees from horizontal. As in this photograph the blinds can be fully closed if needed. Slightly opening the louvres can increase the light level without introducing glare. The dual function of lumax allows precise control of the light and shade through every season, a simple solution to brighten the working day.

Lumax light shelf blind - effectively controls natural light and brings it into the everyday working environment



The importance of natural light in a working environment, and its effects on the health, is now more widely recognised.

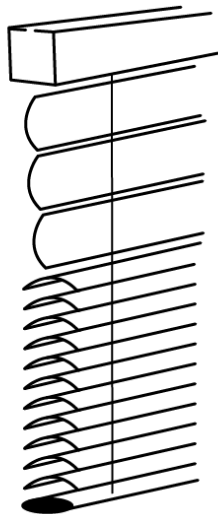
Shading designed to prevent VDU screen glare can significantly lower the light levels in the room to a dim and depressing level. Lumax allows the benefit of natural light whilst still shielding the workspace.

Natural lighting has an uplifting effect; sunlight creates vitamins in the body and suppresses the development of melanin, a natural occurring hormone generated by the body, which is produced to tell you when it is time to sleep. The passing of time throughout the day, linked to light levels and stimulation through the eye, triggers the production of this hormone. When the eyes see sunlight melamin is suppressed.

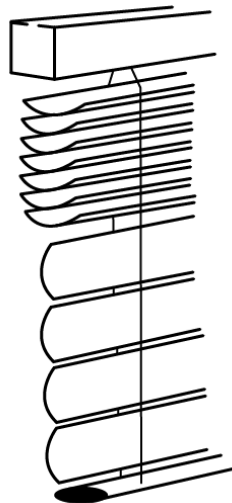
No sunlight = Lethargy and tiredness

The ability to see out of the window is also important for working comfort, giving a psychological boost to occupants of the building who unconsciously need to track the subtle changes in the progress of the daytime. Brighter views and being able to see changes in the weather and light outside also uplift the spirit.

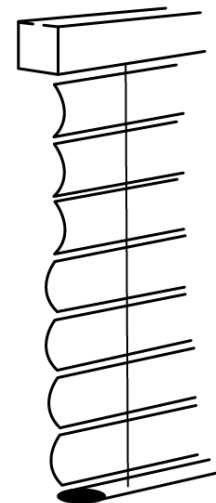
All of this has a dramatic effect on productivity. Staffing can be as much as 80% of the costs of an office building, even a 1% increase in that cost from a drop in productivity with a sleepy workforce will have a dramatic effect on the bottom line. Yet a report from the World Green Building Council* estimates that productivity losses from an uncomfortable workspace could be as high as 18%. The investment in shading will produce a quick return.



Lumax light shelf closed.
Blind open.



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Blind closed.



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Light shelf calculation

The improvement in light transmission depends on the depth of the light shelf area. Increasing the amount of the blind that is light shelf improves the light transmission figure. Compared to a standard Venetian blind a 10% light shelf will almost double the light and at 40% more that 3 times**

This has to be balanced against the need to shade and will depend on the window depth. For most glazing a light shelf should not extend below 2100mm from the floor.

**The transmittance of venetian blinds by Paul Tregenza BArch MBdGSc PhD RIBA MCIBSE CEng 30 March 2000. A report on measurements made in the building science laboratories School of Architecture, The University of Sheffield.

* World Green Building Council Health, Wellbeing & Productivity in Offices 2015