

**KOOLSHADE®**

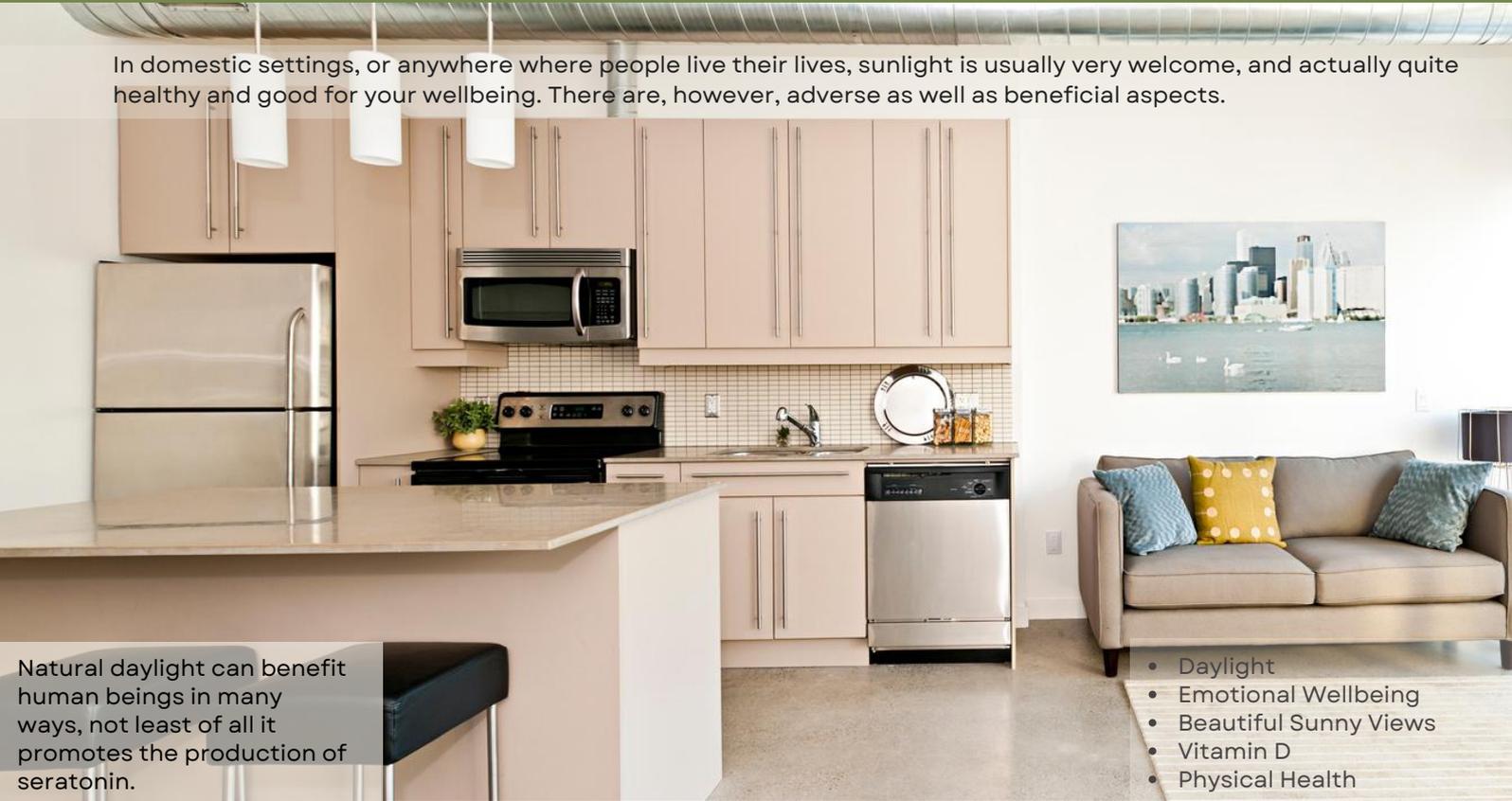
**Solar Shading Systems**  
Sustainable solar shading with unrivalled performance



Global manufacturer and distributor of MicroLouvre KoolShade®

# What is External Solar Shading?

In domestic settings, or anywhere where people live their lives, sunlight is usually very welcome, and actually quite healthy and good for your wellbeing. There are, however, adverse as well as beneficial aspects.



Natural daylight can benefit human beings in many ways, not least of all it promotes the production of serotonin.

- Daylight
- Emotional Wellbeing
- Beautiful Sunny Views
- Vitamin D
- Physical Health

## Effective External Solar Shading lets in the essentials and filters out the unwanted.

As our Planet warms, the need to manage Solar Energy is increasing.

In dwelling & working environments, it's critical that the health, welfare and well-being of occupants is managed, but **doesn't cost the Earth.**

Too much solar heat gain can be detrimental to health and wellbeing.

It can also bleach fabric and create glare.



### Prevent:

- Excessive Heat
- Glare
- Ill Health
- Unusable Rooms & Spaces
- Solar Bleaching

There are options. Some effective. Some less so. Some easy to achieve, others much less so.



- Earth SAFE
- Wind SAFE
- Fire SAFE



Nothing is more effective at removing solar heat gain whilst allowing natural daylight to flood through.



# How does **KOOLSHADE**<sup>®</sup> work?

## 100% Shading & Zero Heat Gain

### The KoolShade<sup>®</sup> Chimney Effect

KoolShade<sup>®</sup> absorbs all the heat like a sponge, sucking in cool air, dissipating heat to the outside BEFORE it ever reaches the window.

It stops all direct sun glare whilst allowing perfect natural light, ventilation and outward vision.



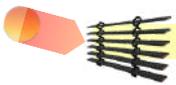
**100%** Shade is achieved

When the sun is at its **strongest**, at anything over 40°



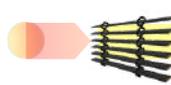
**68%** Shade is achieved

When the sun is at 30°



**55%** Shade is achieved

When the sun is at 20°



**32%** Shade is achieved

When the sun is at its **weakest** at 0°

Stopping the sun from hitting the glazing ensures thermal comfort for the occupants without the need for mechanical cooling.

But still allows light and ventilation to pass through as normal. This keeps rooms well lit and comfortably cool.

## in simple terms



It doesn't allow the hot solar radiation through, it gets deflected by the angled micro-louvers.



### Building Regulations

Approved Document O, Building Regulations. Overheating mitigation. MicroLouvre Fabric drastically reduces heat in buildings in a non-mechanical, passive way.

### Fire Safety

Approved Document B. A1/A2, BAL-40 and BAL-FZ regulation-compliant.

### Maintenance Free

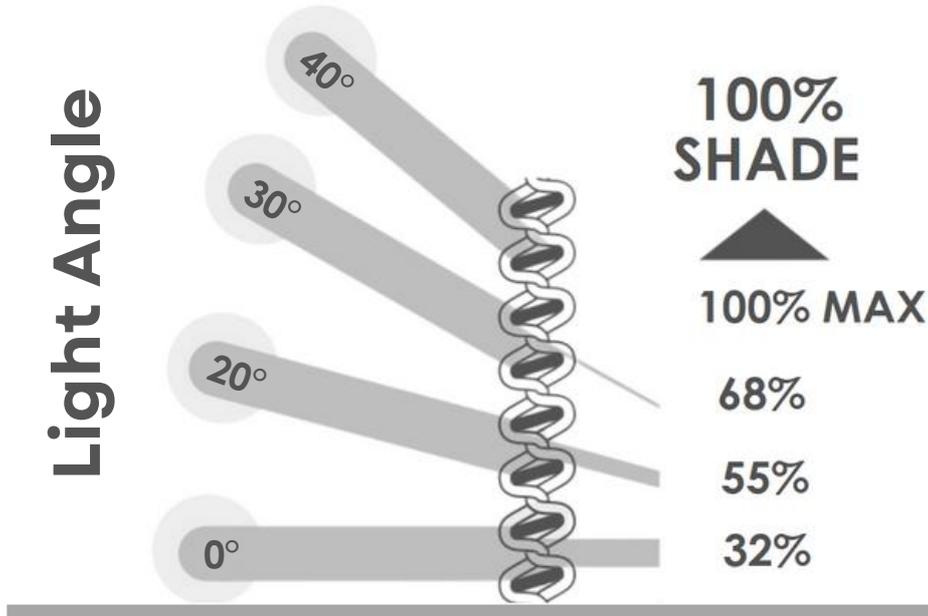
Once fitted to a building, solar shading should be maintenance and hassle-free for as long as possible. MicroLouvre screens fitted over 60 years ago are still in pristine condition.

# Our K700-17 fabric has each louvre set at 17°

**When the sun is at 40° TOTAL, 100% shading is provided**

Fraunhofer ISE states that MicroLouvre KoolShade® fabric is an angle-selective product, therefore angle-dependent transmittance and reflectance values have been tested at positive and negative angles of incidence.

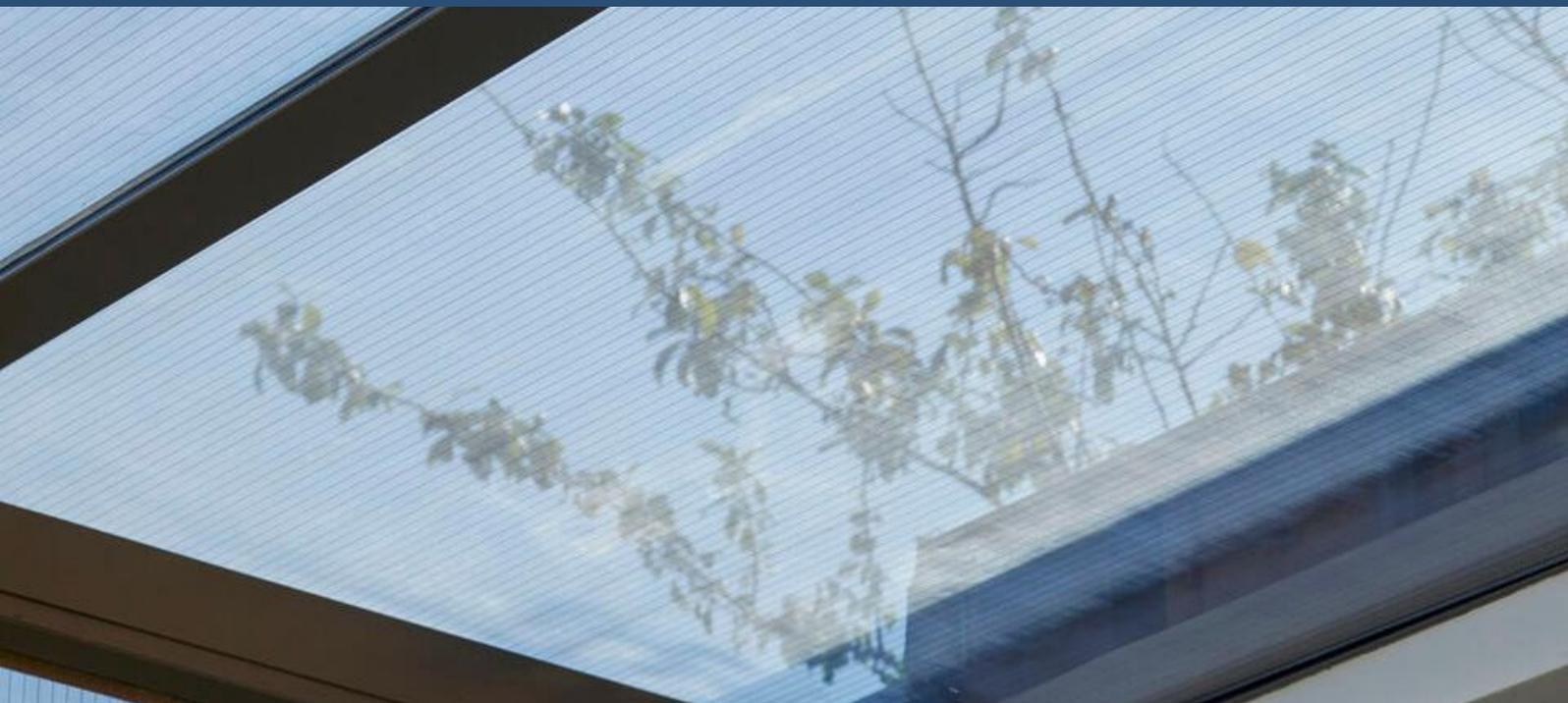
## K700-17 Fabric



 **Fraunhofer**

The Fraunhofer-Gesellschaft based in Germany is the world's leading applied research organization.

Prioritizing key future-relevant technologies and commercializing its findings in business and industry, it plays a major role in the innovation process.



- ✓ Blocks solar heat gain
- ✓ Allows full natural daylight for the occupants
- ✓ Provides essential shade

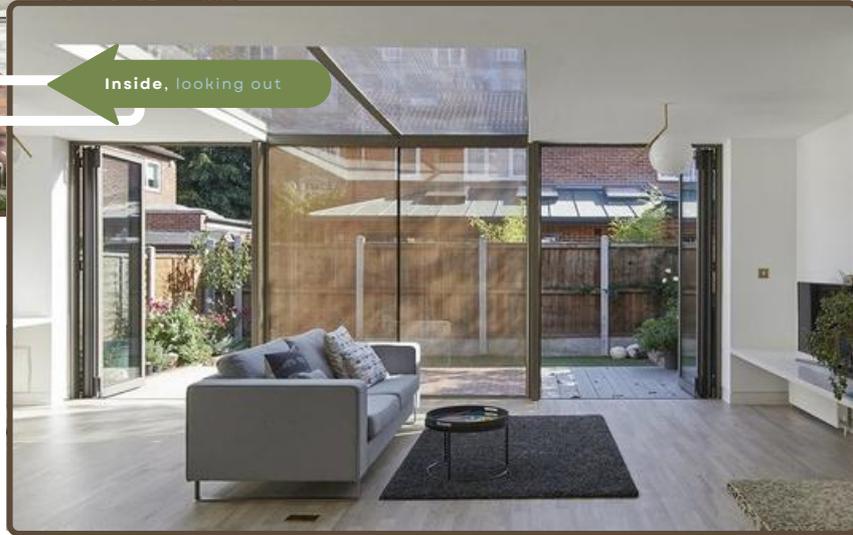
**KOOLSHADE®**

# BINARY house



Outside, looking in

Inside, looking out



## KOOLSHADE®

The **BINARY House** project was undertaken by the **SPACE Group**. The rear elevation contains a central fixed glazed panel that is seemingly wrapping up and over to become a skylight. **MicroLouvre KoolShade®** was specified as a means of solar gain control, enabling views whilst reflecting sunlight. The nature of this **MicroLouvre KoolShade®** creates very interesting halo effects when hit by light giving it an animated yet technological feel.

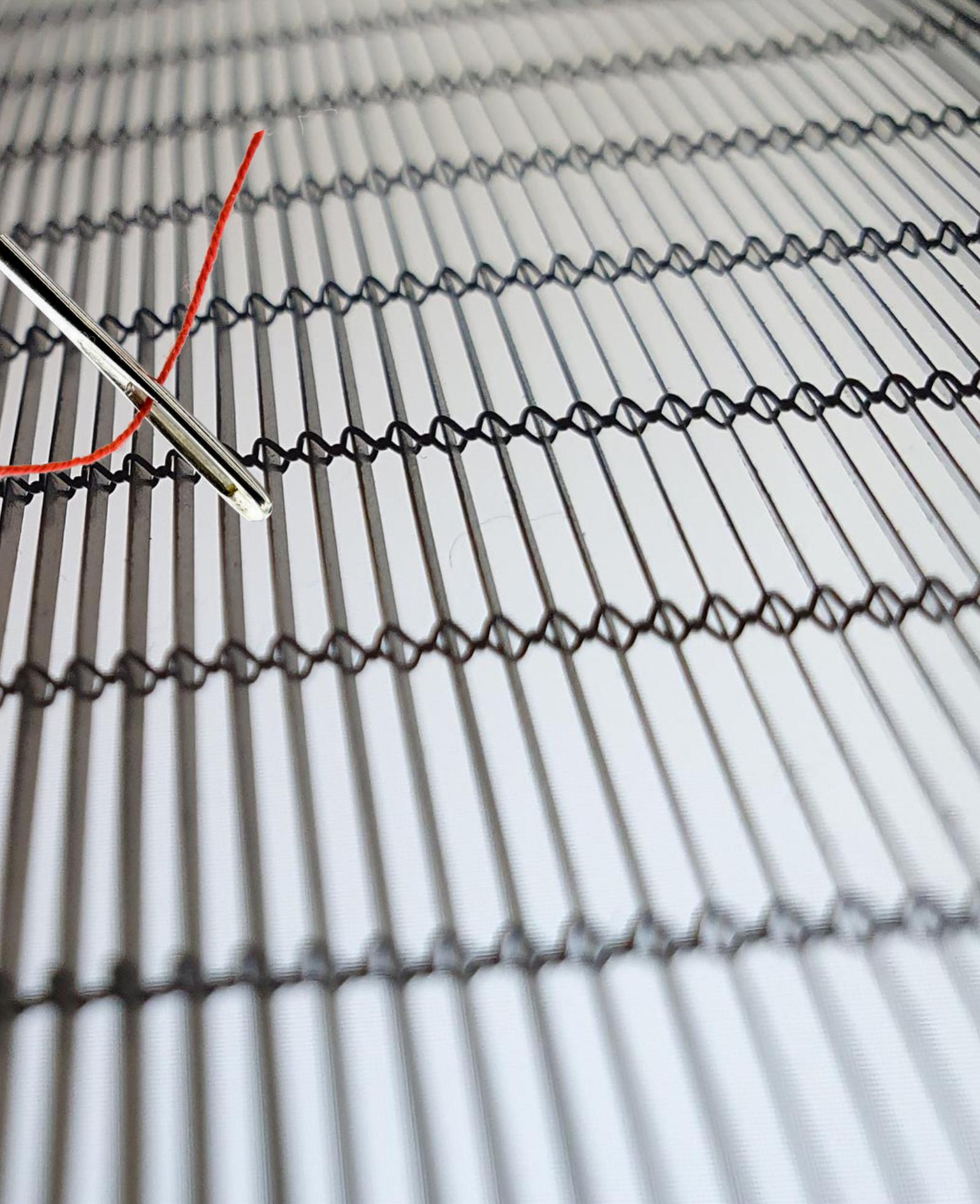


The architect used **MicroLouvre KoolShade®** brilliantly to blur the lines between the garden, the sky and the indoor spaces.



The rooms flood with daylight and remain cool from natural, passive 'air conditioning'. Solar heat gain is stopped before even reaching the living space.

## PASSIV haus



Woven in the UK, MicroLouvre KoolShade® is the world's thinnest and lightest louvre system, with up to 700 paper thin, bronze micro louvres woven into every metre of the metal fabric.

Easy to fit, simple to remove, elegant & functional

## Frame Fix & Lamination



Lamination in glass allows an unobtrusive, unnoticeable way to benefit from some of the key features of MicroLouvre KoolShade®:

### Lamination

- Remove Solar Heat Gain
- Retain Full Views Out
- Reduce the need for Air-Con
- Simple Installation
- 100% Recyclable

A popular way to install MicroLouvre KoolShade® is lamination in a frame. This allows the frames to be either fixed in place, movable, slideable, hinged and even removed.

## Frame Fix

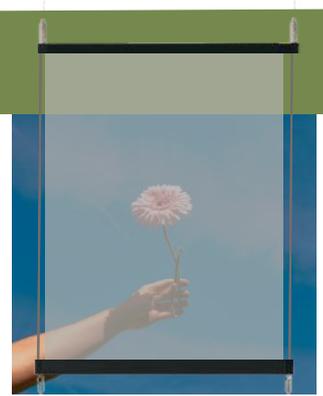
Frames are versatile and can be suspended as well as used on roofs.



# The options are endless

## Cable & Outrigger Fix

### Cable Fix



With & without  
KoolShade

Whether used on residential or commercial properties, the use of cables and outriggers can add a sophisticated and stylish aesthetic, especially on modern buildings.

A cable fix can be used to envelop a building or remove the solar heat gain from specific areas.

MicroLouvre KoolShade® won't diminish your view and maintains a flow of natural fresh air.



## Outrigger Fix

Outriggers allow a unique architectural look whilst being incredibly effective.

Finished to any RAL colour, a real statement can be made to match, compliment or contrast to the buildings design.

# Sustainability

100%

MicroLouvre KoolShade® metal fabric & frames are 100% recyclable

90%

The metal fabrics are made from over 90% recycled scrap copper

68%

Air conditioning usage can be reduced by over 68% when used as Solar Shading

60+

MicroLouvre KoolShade® has proven longevity with 60+ maintenance free years

50+

of air-conditioning equipment & cost can be saved

Miranda Kerr

*"Some sunshine is good for the soul, but I always make sure I wear a big hat."*

As our climate changes, we need to promote ways to enjoy the 'good' bits of the sun, whilst eliminating the 'bad'. While natural heat and light are essential in most buildings there are rapidly increasing occasions when the levels are dangerously high.

no maintenance, no plastic, no vinyl, no electricals, & no energy required to operate

0%

MicroLouvre KoolShade® is a passive system that requires no energy to maintain peak performance

# Longevity

Shading from the sun has been a challenge in habitats for decades.

## KOOLSHADE®



The images above show installations, still going strong, from the last 50 years.



Location  
*Malibu, USA*



Application  
*Solar Shading*



Install Date  
*1960*



Location  
*Indianapolis, USA*



Application  
*Solar Shading*



Install Date  
*1976*



Location  
*London, UK.*



Application  
*Solar Shading*



Install Date  
*1988*



Customer

**HRL  
LABORATORIES**



Customer

**INDIANAPOLIS CITY  
COUNCIL BUILDING**



Customer

**PECKHAM POLICE  
STATION**

Continually dissipates the sun's heat & energy whilst not blocking vision, daylight or ventilation.

## eco

It allows perfect outward vision, is eco-friendly & reduces the need for mechanical cooling. The ideal **Passiv Haus** shading material.

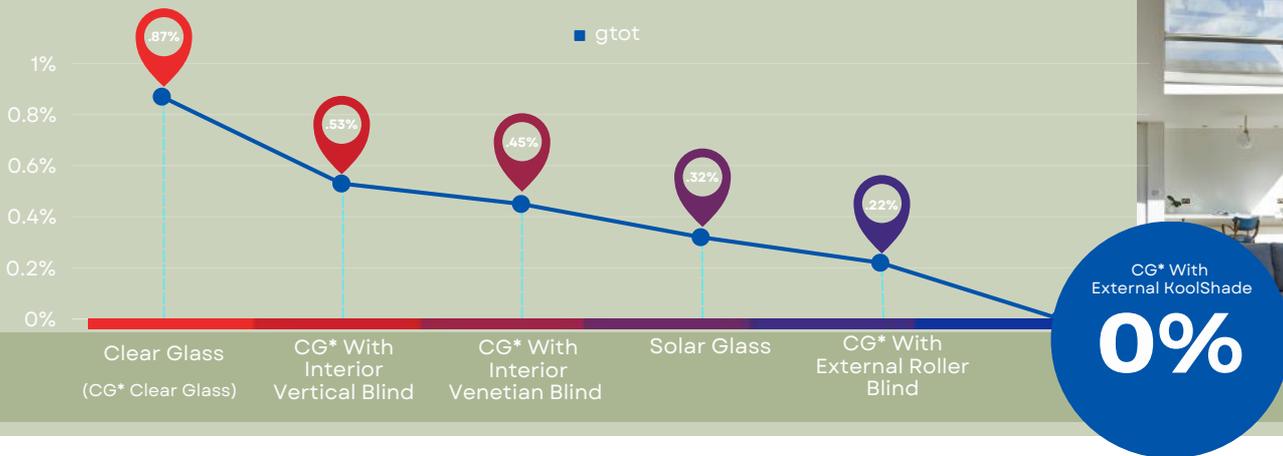
# When fitted to windows, doors, & skylights it's like a filter, allowing the good parts of sunlight and keeping the bad out.

MicroLouvre is a highly efficient and versatile woven metal fabric. Its micro-louvres are set at specific angles to **stop solar heat gain and glare**, it's **Fire-Safe** (A1 & A2 Fire Rated) it also:

- Allows **perfect vision out** and an unrestricted flow of fresh air with a Clear Open Area of 80%
- Is compliant to all aspects of **Approved Document O** (Overheating Mitigation)
- Has a lightweight construction, ideal for any height of building and is **hurricane-proof**
- Can be powder coated to **any RAL colour** to compliment any design theme
- Is made from fully **recycled and recyclable** material

## Solar Heat Gain.

The UK is warming up, great for 'staycations' but can this be very challenging in buildings, especially ones with no or limited ventilation and/or highly glazed areas. The higher the solar heat transmission, the hotter the room.

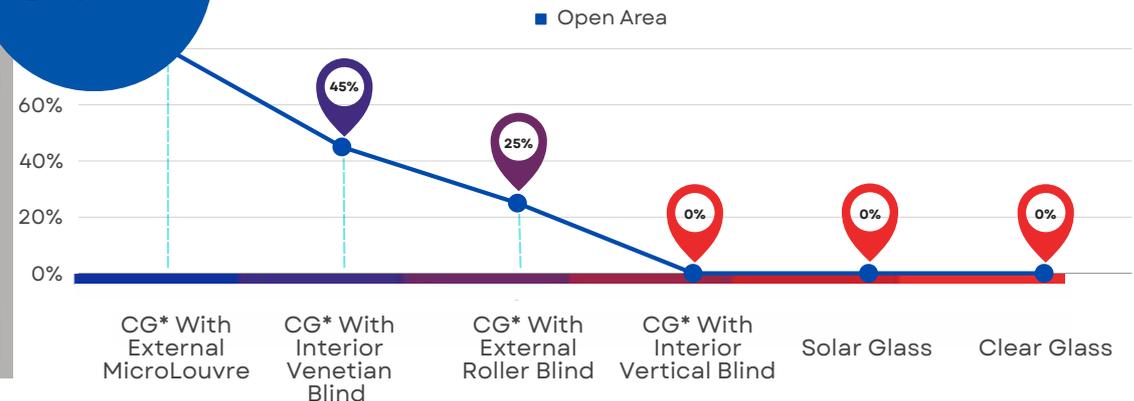


## Clear Open Area.

Blocking the sun's heat is becoming evermore important, but the ability to see out is essential too.

For wellness & well-being, a view can be priceless, as can fresh airflow.

80%



## Clear View.

Natural light has a range of benefits including an increase in levels of serotonin. So, not only will you feel happier, but levels of productivity increase in naturally lit places.





....and it's perfect to keep glasshouses cool, large or small!



**Smartlouvre**  
Technology

**SLTechnology Ltd. Global Manufacturers of MicroLouvre KoolShade Fabric**  
18 The Tanneries, Brockhampton Lane, Havant, Hampshire, PO9 1JB, UK



[info@smartlouvre.com](mailto:info@smartlouvre.com)



[smartlouvre.com](http://smartlouvre.com)



02392 456 333