

# DARK SKIES MATTER

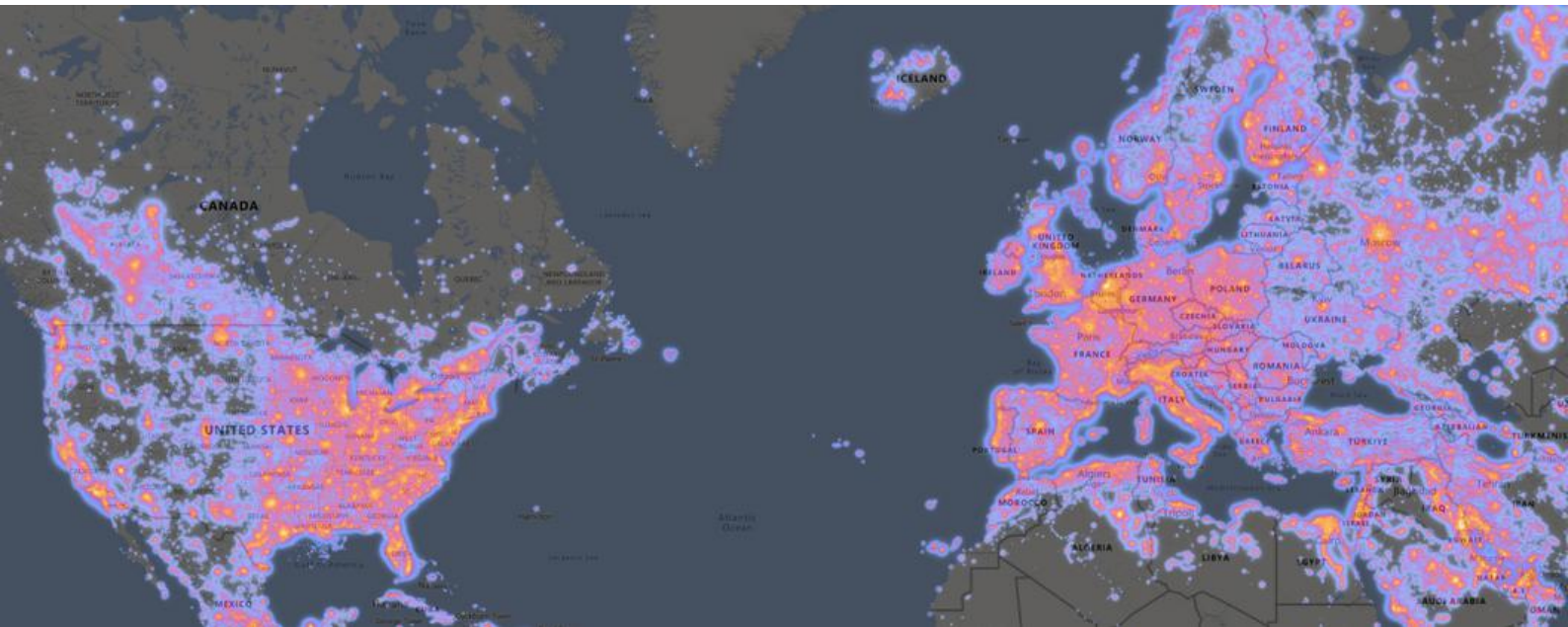


Why MicroLouvre is Perfect for  
Stopping Night Sky Pollution

# 1. How Microlouvre Prevents Light Pollution

## Blocks Unwanted Upward Light Emission (Dark-Sky Compliance)

- Microlouvre fabric is designed to **cut off light at precise angles**, ensuring that artificial light **does not escape upwards into the night sky**.
- This **reduces urban light pollution**, making cities and industrial sites **compliant with Dark-Sky regulations**.
- Essential for **astronomical observatories, eco-sensitive areas, and residential zones** where light pollution affects the environment.



## Same Principle as Sunlight Control – Stops LED Light Leakage

- Microlouvre fabric effectively **blocks direct sunlight from entering glazing**, reducing solar heat gain.
- **Logically**, this same mechanism **prevents bright LED artificial light from exiting glazing at night**, stopping **light from radiating into the sky**.
- Perfect for **glass façades, high-rise buildings, and urban developments** where excessive lighting contributes to skyglow.

## Glare Reduction & Light Spill Control

- The micro-louvres **redirect light downwards**, ensuring that it **illuminates only intended areas** instead of spreading into the atmosphere.
- Prevents **glare from office buildings, stadiums, airports, and commercial spaces**, keeping light contained within the property.

## 2. Why This is Critical for Sustainable Lighting

**Protects Nighttime Ecosystems – Reduces light pollution effects on wildlife, particularly birds, insects, and nocturnal animals.**

**Disrupting ecosystems:** Artificial light at night can disrupt ecosystems by altering the behavior of animals, such as migratory birds and sea turtles, that use the stars to navigate. It can also interfere with the mating patterns of some species.

**Improves Energy Efficiency – Ensures that artificial lighting is fully utilized within the building, not wasted into the sky.**

**Wasting energy:** The excess lighting in cities and towns results in a waste of energy, which contributes to **greenhouse gas emissions and global warming**.

**Complies with Dark Sky Regulations – Meets International Dark-Sky Association (IDA) guidelines for minimizing light trespass.**

**Health problems:** Light pollution can **disrupt the circadian rhythms of humans**, which can lead to health problems such as insomnia, depression, and increased risk of cancer.

**Enhances Nighttime Visibility – Reduces urban light haze, making stars and celestial bodies visible in cities.**

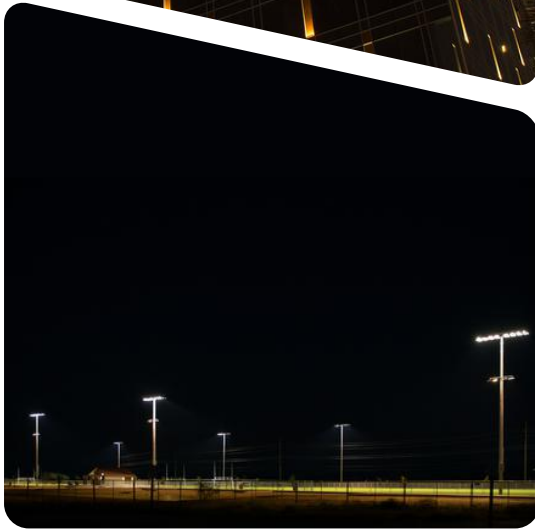
**Affecting astronomical research:** The presence of artificial light makes it difficult for astronomers to study the night sky, and it **reduces the sensitivity of telescopes**.



### 3. Key Applications for Microlouvre in Light Pollution Prevention



**Commercial Buildings & Skyscrapers** – Stops office lighting from **illuminating the sky at night**.



**Stadiums & Arenas** – Prevents **floodlights** from **spilling** into nearby neighborhoods.



**Airports & Transport Hubs** – Controls bright lighting, ensuring **clear night navigation**.



**Homes & Smart Cities** – Helps residential areas **comply with local dark-sky ordinances**.



Microlouvre **metal louvred fabric** is an advanced solution designed to **eliminate light pollution**, prevent **light trespass**, and ensure **Dark Sky compliance** by precisely controlling **artificial light distribution**.

It is ideal for **commercial, residential, and industrial applications**, ensuring lighting is directed where needed **without skyward spill**.

# MicroLouvre Metal Louvred Fabric – Light Pollution Control Technical Data Sheet.

## 1. Material Specifications

Property	Specification
Material Composition	90% CuZn15 (C230) commercial bronze and 10% CUSi3Mn1 (C655) silicon bronze
Louvre Thickness	0.3mm
Louvre Pitch (Spacing)	1.5mm
Louvre Angle Options	0°, 17°, other angles to bespoke order
Coating Options	Polyester powder coat in any RAL colour
Weight	1.1 kg/m²
Weather Resistance	Corrosion-resistant, UV-stable, windproof to 100mph+
Fire Rating	Class A1/A2-s1,d0 in accordance with BS EN 13501-1:2007+A1:2009
Durability	60+ years lifespan

## 2. Optical Performance & Light Pollution Control

Performance Metric	Value
Glare Reduction	Up to 95%
Light Spill Reduction	Up to 85%
Night Sky Pollution Control	100% blockage of direct upward light
Artificial Light Redirection	Precisely controlled to eliminate skyglow
LED Brightness Containment	Prevents excessive indoor light escaping at night
Dark Sky Compliance	Yes

## 3. How Microlouvre Stops Light Pollution

**Prevents Upward Light Spill** – Louvres redirect light downward, ensuring no skyward glow.

**Applies Same Principle as Solar Shading** – Just as it blocks sunlight from entering glass, it stops LED/artificial light from escaping glass at night.

**Maintains Internal Lighting Efficiency** – Reduces wasted artificial lighting, enhancing energy savings.

**Complies with Dark-Sky Standards** – Meets International Dark-Sky Association (IDA) recommendations for light control.

## 4. Key Applications

- **Commercial & High-Rise Buildings** – Eliminates office lighting escaping into the sky.
- **Stadiums & Sports Arenas** – Stops floodlight glare from affecting nearby areas.
- **Urban Smart Lighting & Smart Cities** – Reduces **unnecessary night sky brightness**.
- **Street & Highway Lighting** – Ensures **light is directed downward**, avoiding light pollution.
- **Residential Areas** – Controls **outdoor lighting**, preventing glare in neighbourhoods.

## 5. Benefits

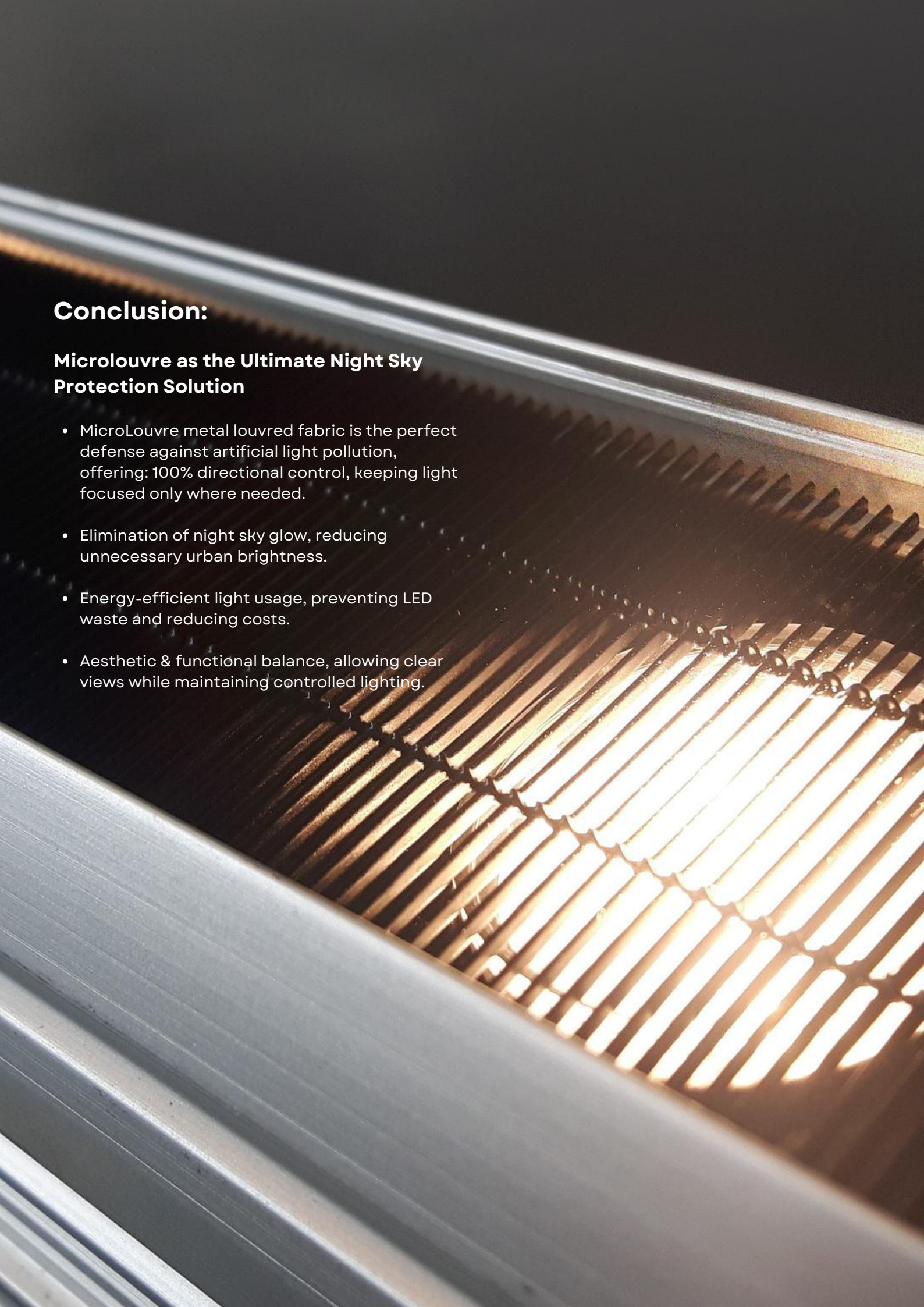
- **100% controlled artificial light direction** – Prevents unwanted light spill.
- **Reduces energy waste** – Ensures that all lighting serves its purpose.
- **Improves nighttime visibility** – Prevents excessive skyglow, making stars more visible.
- **Protects nocturnal ecosystems** – Minimizes artificial light disruption to wildlife.
- **Enhances sustainability** – Supports **eco-friendly urban lighting design**.

## 6. Installation & Integration

- **Compatible with LED lighting fixtures, floodlights, and glass façades.**
- **Can be retrofitted into existing lighting fixtures and infrastructure.**
- **Mounting options include frame-based installations or direct lamination onto glass panels.**







## Conclusion:


### MicroLouvre as the Ultimate Night Sky Protection Solution

- MicroLouvre metal louvred fabric is the perfect defense against artificial light pollution, offering: 100% directional control, keeping light focused only where needed.
- Elimination of night sky glow, reducing unnecessary urban brightness.
- Energy-efficient light usage, preventing LED waste and reducing costs.
- Aesthetic & functional balance, allowing clear views while maintaining controlled lighting.



**Contact us for a free consultation.**

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

 +44 (0)239 245 6333

For more information, please see our case studies of KoolShade® in action.

