

# Specifying daylight for commercial projects...





**breeam**

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# Leading the daylight revolution...

Solatube® Daylighting Systems deliver brilliant, natural light to new and existing buildings, allowing you to switch off lighting during the daytime, enhancing your working environment and reducing energy costs. Fully compliant with all UK building regulations, independently tested and BBA certified, Solatube Daylighting Systems can be specified and installed with complete confidence and peace of mind.

Daylight has many advantages, but there are also challenges; solar heat gain, glare and seasonal light fluctuations are all concerns when it comes to using natural light in commercial applications. Solatube Daylighting Systems overcome these challenges, meeting architectural and environmental requirements and also providing high quality lighting with predictable light output and design flexibility.

Solatube Daylighting Systems use a unique capture, transfer and delivery process to deliver natural light to spaces where it was previously thought impossible. They combine patented technologies with progressive engineering for daylighting that delivers a superior blend of:

- illumination intensity
- thermal & acoustic performance
- visual comfort



BBA Certification confirms compliance with Building Regulations including fire safety, ventilation and conservation of fuel & power.

Simple to install, often requiring no structural changes, and without the need for maintenance, Solatube Daylighting Systems are energy efficient, eco-friendly and affordable, making them the ideal choice for any application.

## Our product range:

**Brighten Up Series** - for homes and internal spaces up to 18sqm per system

**SolaMaster Series** - for piping light into larger buildings and offices

**SkyVault Series** - for high open ceiling applications

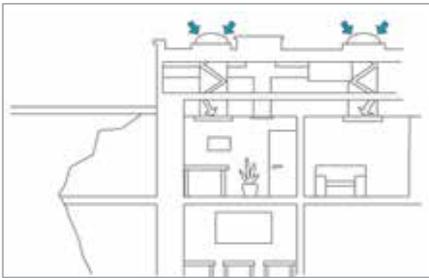


## Benefits

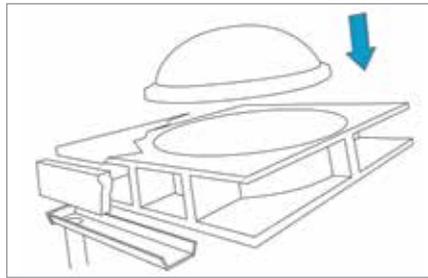
- Increased worker productivity
- Reduced staff absenteeism
- Improved student performance
- Increased property values
- Improved retail sales

# How does it work?

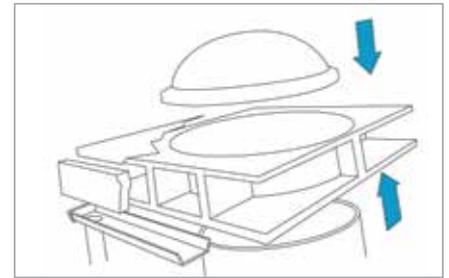
Solatube Daylighting systems pipe natural light collected at roof level through highly reflective tubes in the roof void to a diffuser in the ceiling that delivers brilliant, natural light into the room below.



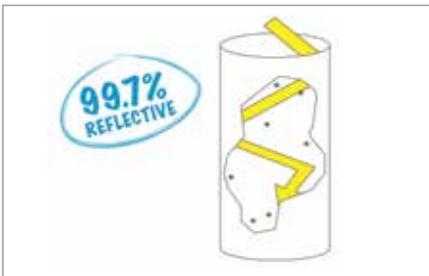
Daylight is channelled from outside to deep inside a building



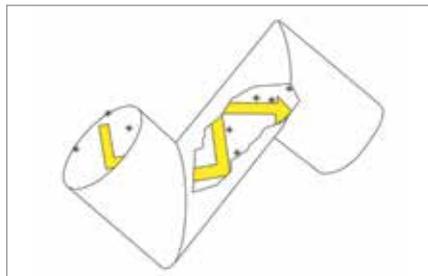
A dome sits on the roof flashing



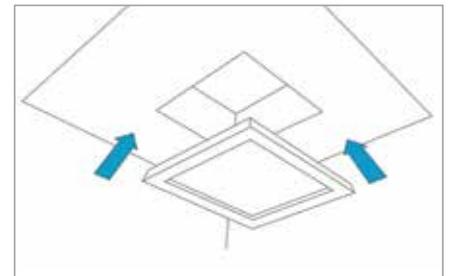
A top tube assembly goes through the roofing materials



Which is fixed to 99.7% reflective tubing



Angles avoid any obstructions en route



A diffuser which is fixed flush to the ceiling

## Solatube 99.7% reflective Spectralight Infinity tubing

is the most reflective commercially available material used in the manufacture of any tubular daylighting system. It is exclusive to Solatube and is used in all reflective surfaces. The chart below shows how even small differences in the reflective properties of a tube material can vastly affect light output.

% Reflectivity	0 bounces	5 bounces	10 bounces	15 bounces	20 bounces
99.7% Spectralight® Infinity	100%	98.51%	97.04%	95.59%	94.17%
98%	100%	90.39%	81.71%	73.86%	66.76%
96%	100%	81.54%	66.48%	54.21%	44.20%
95%	100%	77.38%	59.87%	46.33%	35.85%

Watch a short video about how Solatube Daylighting Systems work at [www.solatube.co.uk/video](http://www.solatube.co.uk/video)

# Quality and performance

Solatube Daylighting Systems are engineered for light efficiency and uniformity, thermal performance, reliability and ease of installation, with components manufactured to the highest quality to provide durable daylighting systems with unrivalled light transfer.

## SOLATUBE ROOF DOMES

Solatube roof domes are manufactured from impact-resistant polycarbonate, fire-rated for safety, and incorporate UV screening to prevent discolouration from solar radiation. The unique dome geometry maximizes light collection while providing a maintenance free surface, cleansed by the elements.



## ROOF FLASHINGS

A full range of flashings is available for virtually all UK roof types and pitches. The circular upstand diverts water thus eliminating 'reservoirs' and no environmentally unfriendly lead products are used.



## REFLECTIVE TUBING & ANGLE ADAPTORS

Our systems use proprietary 99.7% reflective Spectralight Infinity material in all tubing, reflectors and angle adaptors. With this amazing material, even tube lengths of up to 20 metres are possible. Potential of heat is removed from the harvested light before entering the building through the use of our patented Cool Tube technology incorporated in the tube material.



## DIFFUSERS & GLASS CEILING FIXTURES

Our double-glazed ceiling fittings are engineered to provide optimal light distribution. Whether your goal is to blend in beautifully or stand artfully apart, the diffuser range offers an exciting array of possibilities.



## CONDENSATION CONTROL SYSTEM

Factory-installed seals, filters and proprietary condensation control systems ensure high levels of moisture control to avoid condensation.



# Solatube SolaMaster® Series

The Solatube SolaMaster Series provides daylight to larger, more expansive areas. Often specified in the educational, healthcare and commercial sectors, these feature our 530mm diameter 99.7% reflective Spectralight Infinity tube material, making it possible to bring daylight deep into buildings where natural light has previously not been an option.



## For drywall and suspended ceiling

The Solatube 330DS-C Daylighting System for drywall and suspended ceilings features a patented transition box that ingeniously converts the 530mm diameter tubing to a 600mm square diffuser that fits neatly into a commercial suspended ceiling grid or drywall ceiling. Each system can illuminate an area up to 30 sqm, subject to application. Spectralight Infinity tube material means potential tube lengths of up to 20 metres are possible.



## For open ceiling

The Solatube 330DS-O Daylighting System brings high performance daylighting to areas without a ceiling such as warehouses, factories, sports facilities, etc. The 99.7% reflective Spectralight Infinity tube brings the diffuser through any light-absorbing roof-supporting structures to deliver the highest levels of natural light.





## Benefits

- BBA Certification
- Thermally efficient
- Unrivalled quality and performance
- Easily installed into existing buildings or new build
- No maintenance required
- More secure than traditional skylights
- Truest and most vivid colour rendition
- Reduced energy costs / carbon footprint
- Full range of Solatube accessories, including Daylight Dimmer™, security bars, ceiling dress ring
- Bespoke solutions for specialist applications include fire collars, anti-ligature ceiling fittings, tamper-proof fixings



# Solatube SolaMaster® Series

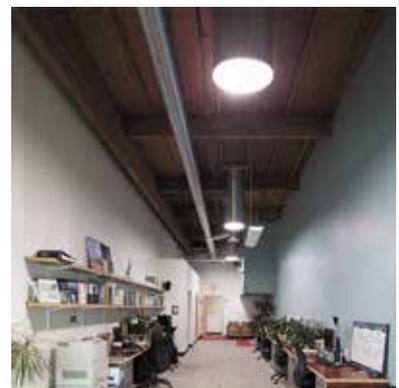


## Specification:

Solatube 330DS-C Daylighting System (530 mm Ø) into suspended ceiling, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire rated polycarbonate roof dome, roof flashing, tube length and tube angles to suit application

## Specification:

Solatube 330DS-O Daylighting System (530 mm Ø) into open ceiling, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire-rated polycarbonate roof dome, roof flashing, tube length to suit application



# Solatube SolaMaster case study – office / animal welfare

## North Downs Specialist Referrals, Bletchingley

NDSR is an internationally acknowledged centre of excellence for Specialist Veterinary Care, offering access to one of the largest groups of recognised Veterinary Specialists in the UK and Europe.

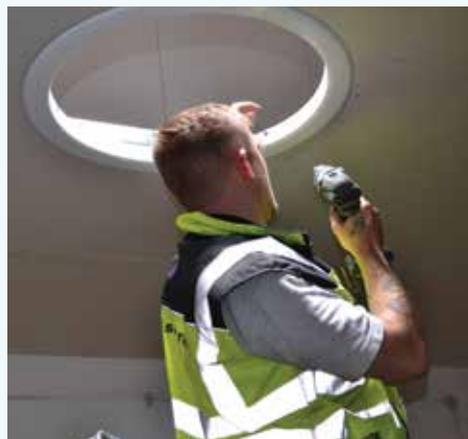


### The objective

To bring daylight into the windowless building to improve the working environment for staff and clients.

### The solution

Installation of 10 SolaMaster 330DS Daylighting Systems in the canine recovery rooms and main corridor.



### Key points

#### Solatube Daylighting Systems

- provide enhanced working and recovery environments
- Contribute to reduced energy costs
- Hold BBA Certification to confirm compliance with UK Building Regulations

“We have specified Solatube Daylighting Systems on several projects because their light harvesting technology appears more efficient than other products of this type. At NDSR, planning restrictions precluded the installation of windows, so Solatubes were the natural choice.

Bringing in daylight here vastly improves the working environment for the staff. It has also been shown that it has a positive effect on the animals’ response to their clinical treatment, which is obviously good for them, their owners and the veterinary practice.”

Chris Stone, MD, Quadra (Built Environment Consultancy)

# Solatube Brighten Up® Series

Ideal for use in the home and smaller commercial spaces, the Solatube Brighten Up Series comes in two sizes — 250mm and 350mm diameter. Both are compact enough to fit between standard UK joists and rafters, yet provide amazing levels of light, transforming rooms into light, bright and airy spaces.



## Solatube 160DS (250mm diameter)

The Solatube 160 DS is ideal for introducing daylight to areas up to 10 square metres such as bathrooms, dressing rooms, hallways, corridors and landings. Optional accessories include electric light-kit, electric daylight dimmer, bathroom ventilation and the widest range of ceiling fittings — including glass.

## Solatube 290DS (350mm diameter)

The Solatube 290 DS delivers around twice the light output of the Solatube 160 DS and is ideal for larger areas up to 18 square metres. Optional accessories for this system include electric light-kit and daylight dimmer system, as well as a full range of ceiling fittings.

“Excellent service and very impressed by product. Our hallway was always dark as we own a bungalow and no natural light came into hallway, now it is like we have left the lights on. Brilliant!”

Mr & Mrs B, Rochester, Kent





## Benefits

- Ideal for smaller rooms in the home and commercial spaces
- Fits between standard residential roof joists and rafters
- May be fitted where traditional roof lights and windows are impossible
- More cost effective and less disruptive to fit than traditional options
- Can bring daylight deeper into buildings where natural light has previously not been an option
- Widest range of ceiling diffusers & glass ceiling fixtures



# Solatube Brighten Up® Series



#### Specification:

Solatube 160DS Daylighting System (250mm Ø) into ceiling structure, 1.3 W/m<sup>2</sup>K U value, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire rated polycarbonate roof dome, Solatube roof flashing and tube length to suit application

#### Specification:

Solatube 290DS Daylighting System (350mm Ø) into ceiling structure 1.3 W/m<sup>2</sup>K U value, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire rated polycarbonate roof dome, Solatube roof flashing and tube length to suit application



Energy Care Optima® is an optional enhancement available for the Solatube Brighten Up Series to enhance its thermal and acoustic properties to Passive House standards.

#### Specification:

Solatube 160DS Daylighting System (250mm Ø) into ceiling structure, 0.5 W/m<sup>2</sup>K U value Energy Care Optima kit, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire rated polycarbonate roof dome, Solatube roof flashing and tube length to suit application

#### Specification:

Solatube 290DS Daylighting System (350mm Ø) into ceiling structure, 0.7 W/m<sup>2</sup>K U value Energy Care Optima kit, 99.7% reflective tube material, impact resistant UV stabilised Tp(a) fire rated polycarbonate roof dome, Solatube roof flashing and tube length to suit application

# Solatube Brighten Up case study - office

Arup office, Edinburgh

Arup first came to the world's attention with the structural design of the Sydney Opera House, followed by its work on the Centre Pompidou in Paris and has since grown into a truly multidisciplinary organisation. When it was decided to refurbish Arup's own office in Edinburgh, a chief requirement was to maintain its reputation for delivering innovative and sustainable designs and make the building as energy efficient as possible.



## The objectives

- To produce the most sustainable office that had been built up to that point.
- To achieve high quality lighting.
- To reduce electricity usage and costs.

## The solution

84 no. Solatube Brighten Up series 290DS Daylighting Systems light the entire general office, giving the blend of energy saving and quality of light required. The office has since won several major awards for sustainability.

## Key points

- Electrical lighting is only used for about 10% of the day
- Won several major awards for sustainability
- Significant cost savings from reducing energy usage
- Payback period of 7 years

“It’s a no-brainer, why would you not want something that improves the quality of light, saves you money and is good for the environment?”

Patrick Elsdale, Senior Lighting Consultant, Arup

# Solatube SkyVault® Series

The SkyVault Series is a range of modular, high output tubular daylighting systems that deliver massive amounts of daylight to large volume spaces with high, open ceilings.



## SkyVault Series - 740mm diameter for open ceiling applications

Whether you want to enhance light capture, focus light over greater distances, or spread light evenly throughout a space, the patented technologies built into the SkyVault Series delivers powerful performance for any application.

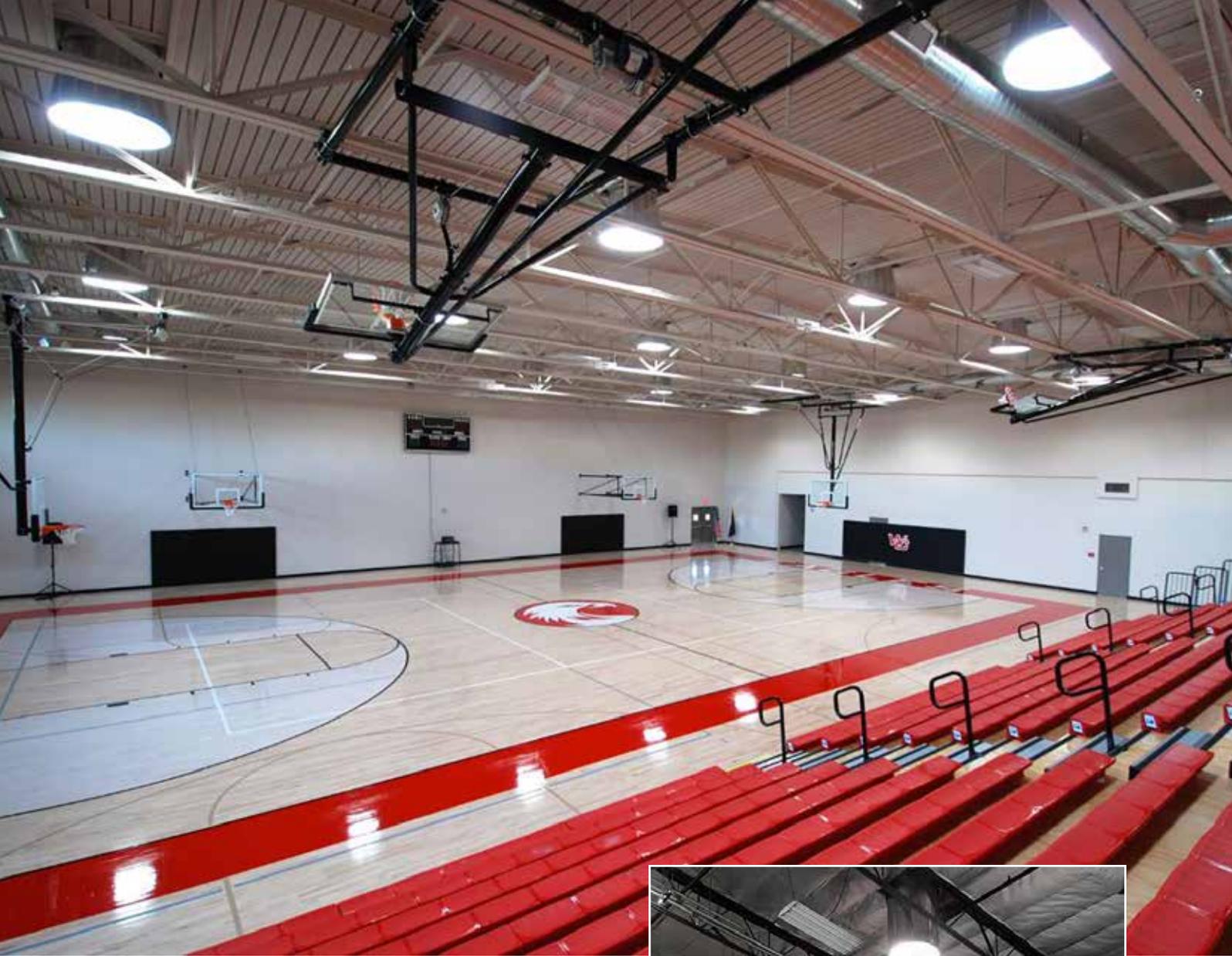
## Typical applications

- Warehouse & industrial
- Airports
- Convention centres
- Leisure centres
- Retail
- Military

## Specification:

Solatube M74 Daylight System (740 mm Ø) into open void, impact resistant, UV stabilised Tp(a) fire rated polycarbonate roof dome, 99.7% reflective tube material, Solatube curb cap roof flashing, tube length to suit application





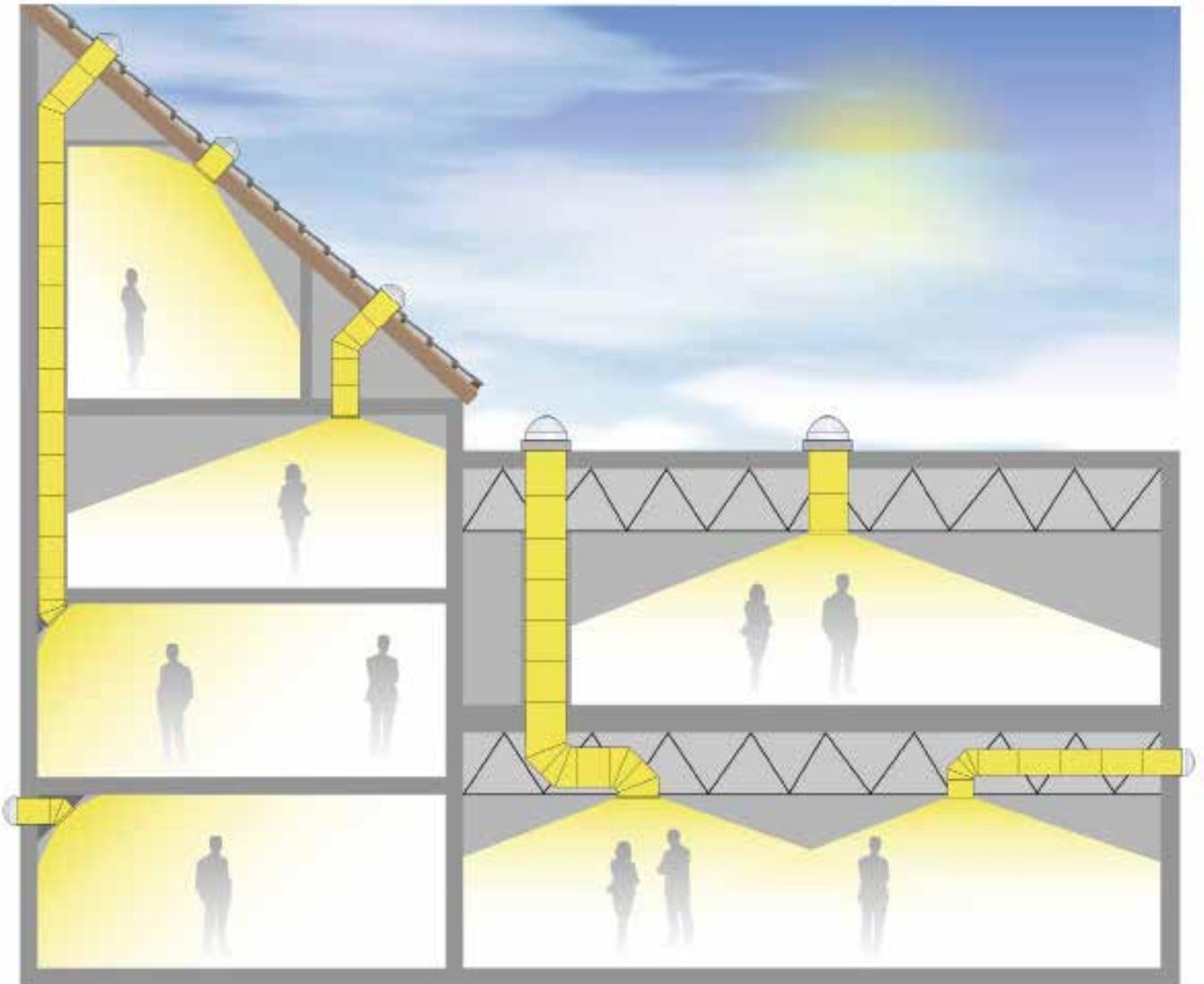
### Benefits

- Delivers more light to meet illumination requirements
- Maximum output with minimum building impact
- Thermally efficient
- Ideal for diffuser heights 5m+ with optional amplifier
- Modular functions for flexibility
- Can be tailored for specific project needs



# SOLATUBE.

Innovation in Daylighting~



## Technical resources

Contact us or visit our website at [www.solatubescotland.co.uk](http://www.solatubescotland.co.uk) for further technical information and resources, including BIM files, CAD drawings, case studies, data sheets, performance specifications and test results.

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