ENERGY-EFFICIENT BUILDINGS

OPTIMISATION OF THE ROOF: BALANCING DAYLIGHT, VENTILATON AND ENERGY PERFORMANCE

TABLE OF CONTENTS

This updated June 2026 version replaces the September 2025 version.

Publisher:

EUROLUX

Rue Washington 40

B - 1050 Bruxelles

1. INTRODUCTION

With the implementation of the new Energy Performance of Buildings Directive (EU) 2024/1275 (EPBD 2024) in May 2024, the European Union continued advancing in its endeavour to reduce the energy consumption of the buildings.

In June 2025, the European Commission provided Guidance on the EPBD 2024, (see Annex 12 - clause 5), including the calculation of the energy performance of the transparent buildings elements (EPBD 2024 Article 4).

In May 2026, as the Member States finalise their national implementation of the EPBD 2024, they shall take the necessary measures to ensure that **minimum energy performance requirements are set for building elements** that form part of the building envelope (EPBD 2024 Article 5). The EPBD 2024 considers **the whole building envelope** (EPBD 2024 Article 2.15), including the **roof design**.

EUROLUX believes this is a good opportunity to consider how to optimise roof designs integrating the **thermal performance of transparent and translucent elements**, like **roof-integrated solutions** such as rooflights, roof hatches, NSHEVs:

- **Natural Smoke and Heat Exhaust Ventilators** (NSHEVs) are installed on the roof and integrated in the **fire safety systems of buildings**, releasing smoke and heat in the event of a fire accident.
- **Rooflights, roof hatches and NSHEVs** provide **daylight** and contribute to **natural ventilation (ventilative cooling, night cooling, free cooling)** and are a cost-effective strategy to improve the **visual** and **thermal comfort** of the occupants and **indoor environmental quality** of the building.

In modern building design, **roof-integrated solutions** (such as rooflights, roof hatches and NSHEVs), **enhance the overall energy performance of buildings in a cost-efficient way**, **reducing reliance on electric lighting and mechanical ventilation systems**, and positively contributing to the energy efficiency of the building.

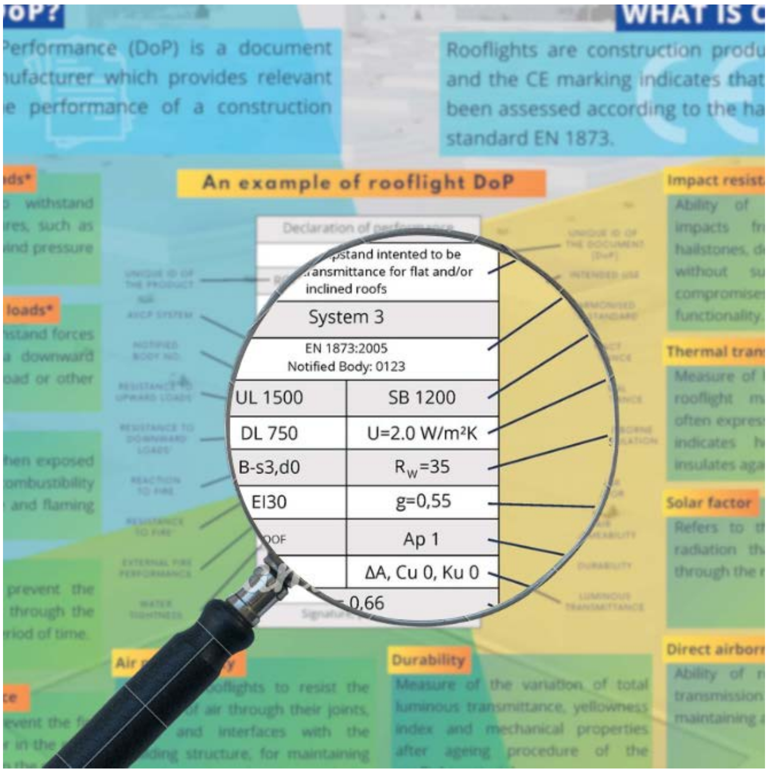
This **EUROLUX** paper highlights the importance of **balancing out daylight, ventilation and energy savings**, and how to **quantify the thermal performance of roof-integrated solutions** (such as rooflights, roof hatches and NSHEVs) in the building envelope.

2. SCOPE

In 2011 EUROLUX published the [*EUROLUX Guide 01: Determination Of Thermal Transmittance Of Rooflights In Accordance With EN 1873 And EN 14963*] providing the calculation method to determine the **thermal transmittance of rooflights**.

This EUROLUX paper aims to support the implementation of the Energy Performance of Buildings Directive (EU) 2024/1275 (EPBD 2024), especially for the calculation methodology of the **energy performance of transparent and translucent building elements,** and to ensure that:

- **Rooflights** are **included in the calculation of energy performance of the building envelope** in accordance with the EPBD 2024, the June 2025 Commission Guidance on the EPBD 2024.
- **The U-value[1] of rooflights**, included in the Declaration of Performance[2] (DoP) of the Construction Products Regulation (CPR), is used in the EPBD calculations.



Source: EUROLUX

[1] U-value determined using European harmonised standards EN 1873 and EN 14963.
[2] See DoP details in the Eurolux Quickguide 01: EN 1873 DoP and Eurolux Quickguide 02: EN 14963 DoP

3. EPBD REQUIREMENTS FOR TRANSPARENT BUILDING ELEMENTS

The EPBD 2024, aims to continue improving energy efficiency of buildings across the EU, as it considers **the whole building envelope**, including the **roof design**.

> ***EPBD 2024, ARTICLE 2 (15)***
>
> ***(15)*** *'**building envelope'** means the integrated elements of a building which separate its interior from the outdoor environment.*

As announced in the EPBD 2024 **Article 4,** in June 2025 the European Commission provided Guidance on the EPBD 2024 for Member States to develop a national methodology for the calculation of the energy performance of the transparent buildings elements, in accordance with the common general framework outlined in **Annex I,** which highlights the importance of considering **natural ventilation** and the positive influence of **natural lighting** in building design.

> ***ANNEX I - COMMON GENERAL FRAMEWORK FOR THE CALCULATION OF THE ENERGY PERFORMANCE OF BUILDINGS***
>
> **...**
>
> **4.** The methodology shall be laid down taking into consideration at least the following aspects:
>
> ...
>
> (e) **natural** and mechanical **ventilation** which may include air-tightness[3] and heat recovery
>
> ...
>
> **5**. The positive influence of the following aspects shall be taken into account:
>
> ...
>
> (d) **natural lighting**;
>
> ...

[3] Commission Delegated Regulation (EU) 2019/1342 establishes classes of performance in relation to air permeability for rooflights of plastics and glass and roof hatches

In its Article 5, EPBD 2024 also requires Member States to set **minimum energy performance requirements** for building elements, **including transparent components**, by adopting a cost-optimal methodology.

Nowadays, EU Member States employ different metrics and indicators primarily based on the **U-value** (thermal transmittance) and, to a lesser extent, the **g-value** (solar factor) to assess and regulate the **effect of transparent building elements** (such as windows, glazed exterior walls, skylights[4] and rooflights) **on the energy performance of buildings.**

In its [Guidance on the EPBD 2024](), the Commission recommended that **Member States allow for exceptions to the minimum requirements** (for individual building elements) if designers and developers can use an energy balance approach to demonstrate that the building would have a better energy performance.

According to EPBD 2024 **Article 19**, Member States are mandated to introduce Energy Performance Certificates (EPCs), which serve as a key measure for assessing a building's energy efficiency, according to the template in **Annex V**.

Source: Kingspan Light + Air

[4] "Skylight" is the term typically used in US English, whereas "rooflight" is the preferred UK English term. In this document, the term rooflight is used, except where quoting source documents that use the alternative.

4. UNDERSTANDING U-VALUE

The **thermal transmittance**, usually known as **U-value**, measures the rate of heat transfer through a building element, such as the roof itself and roof-integrated solutions, like rooflights, roof hatches and NSHEVs.

Source: Mercor Light & Vent

The U-value is used to define the thermal insulation properties for building material, and express as the rate of heat transfer through a building element per unit area per degree of temperature difference between the inside and outside, is expressed in watts per square metre per degree Kelvin (W/m^{2}K).

REMEMBER: A **lower U-value** means **better insulation** and **reduced heat loss**, improving **energy efficiency**.

Light transmittance should be balanced with thermal performance (g-value) to avoid excessive heat gain or loss.

5. ROLE OF ROOFLIGHTS, ROOF HATCHES AND NSHEVS IN ENERGY EFFICIENCY

5.1. A BALANCING ACT: DAYLIGHTING, NATURAL VENTILATION AND ENERGY SAVINGS

Rooflights, roof hatches and NSHEVs, which can be transparent or translucent:

- provide **daylight**, reducing the need for electric lighting during the day, and
- enable **natural ventilation**, which plays a key role in adequate **indoor environmental quality**,

and lead to significant **energy savings**, which is particularly important in non-residential buildings where electricity and **heating and cooling**[5] account for a substantial portion of energy consumption (e.g. industrial buildings, educational and health facilities, commercial buildings, exhibition centres).

During the building design a balancing act between the benefits that rooflights provide in terms of **daylighting**[6] and **natural ventilation**[7], and the energy consumption has to be made.

Increased rooflight area can dramatically **reduce the energy consumption** of the electric lighting, resulting in:

- an **increase** in energy consumption of the **heating system in winter** (as the loss in U-value and air permeability[8] is only partly compensated by solar gains), and
- a **reduction** in cooling demand during summer, as **consistent use of controlled night-time ventilation** — especially when combined with façade shading — can dramatically **reduce the need for air conditioning**, depending on the building and its use.

[5] In the 2025 Guidance on the EPBD 2024 clause 4.4, the Commission states that in Member States where mechanical air cooling is necessary, effective passive heat protection should be prioritised to minimise the energy required for cooling as far as possible.
[6] EUROLUX Paper: Exploring Daylighting
[7] EUROLUX Paper: Exploring Natural Ventilation (coming soon)
[8] Commission Delegated Regulation (EU) 2019/1342 establishes classes of performance in relation to air permeability for rooflights of plastics and glass and roof hatches

In 2005, the Institute of Energy & Sustainable Development at Leicester's De Montfort University (DMU) investigated[9] the effect that rooflights have on the total energy needed to operate a building, and the annual CO2 emissions which result from this.

This research proved that installing an appropriate level of rooflights (typically 15% - 20% of the roof area) will usually reduce overall energy consumption and the associated CO_2 emissions, in addition to providing the widely recognised benefits of daylight and natural ventilation within a building environment.

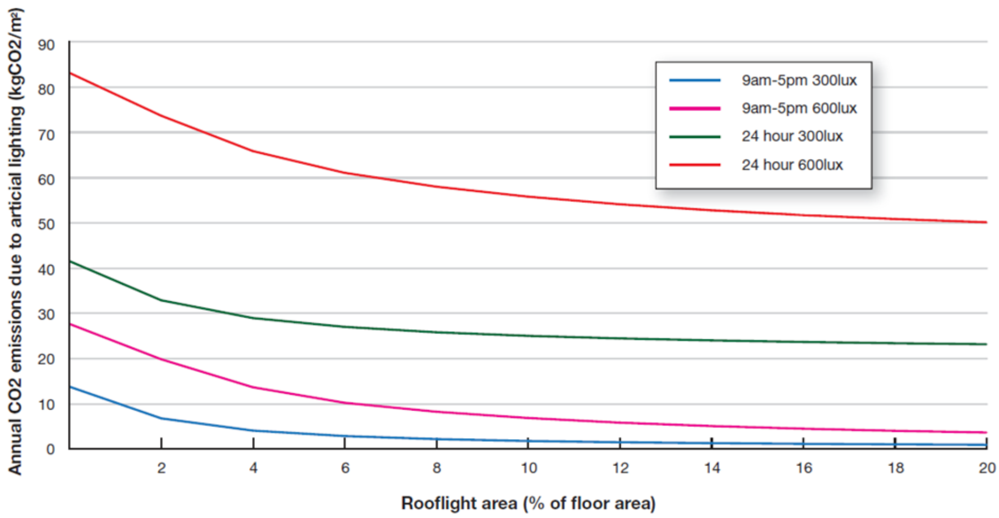


Figure 1: Effect of rooflight area on CO_2 emissions due to artificial lighting system

Source: The Rooflight Association: Designing with Rooflights

Optimisation of the roof, including a proper selection, placement, and integration of rooflights are key to optimising their benefits without compromising the thermal performance of the building envelope.

REMEMBER:

Rooflights with **lower U-values reduce heat loss in winter**, helping to maintain indoor temperatures and lower heating costs.

A **lower U-value** (better insulation) may result in lower light transmission, which can **affect illumination levels**.

Different glazing materials in rooflights **may offer different balance** between U-value and light transmittance.

[9] NARM & De Montfort University Research (2005)

5.2. U-VALUE AND THERMAL PERFORMANCE OF ROOFLIGHTS

The calculation of the U-value of a building element is straightforward for flat products (such as in-plane rooflights or roof hatches). However, most rooflights are **out-of-plane** as they are mounted on the upstands.

As a consequence, the calculation of their thermal performance includes the **area of the opening in the roof, the minimum daylight area, the surface area of the glazing**, and **the surface area of a rooflight-and-upstand assembly**.

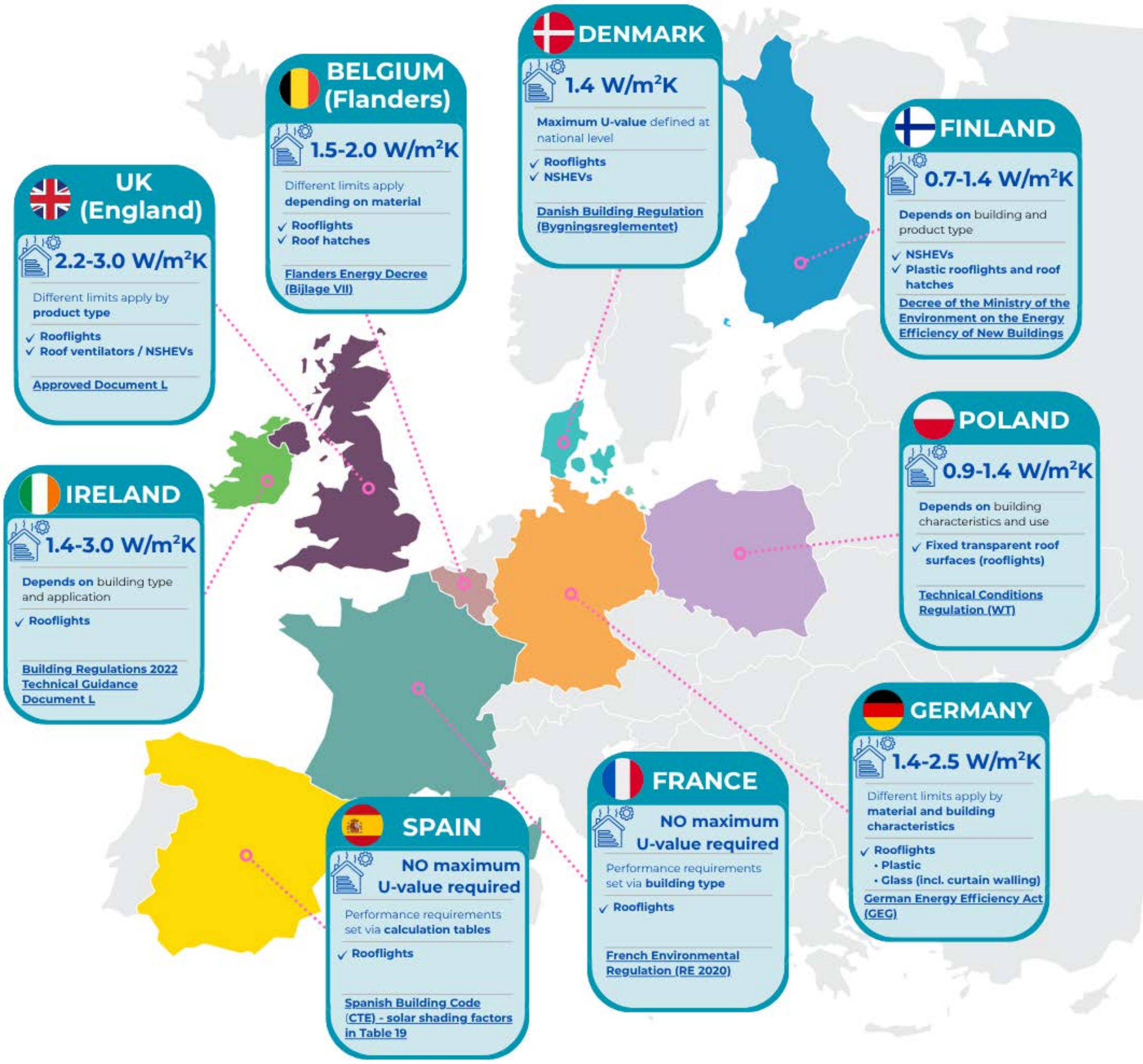
In the evaluation of the contribution of rooflights, two values should be checked against limiting values in relevant regulations – the **Ur-value** for the rooflight only or **Urc-value** where the rooflight is supplied with an upstand.

Source: Lamilux

In 2011, **EUROLUX** published the *Eurolux Guide 01: Determination of thermal transmittance of rooflights in accordance with EN 1873 and EN 14963* to introduce all relevant issues in determination of the thermal transmittance of rooflights.
See the details for the calculation methods in the **Annex I** to this EUROLUX paper[10].

[10] Currently, the CEN/TC 128 is developing a European standard containing the revised assessment methods to calculate the energy efficiency of rooflights and roof hatches (WI=00128208) Rooflights and roof hatches – Performance characteristics for energy efficiency and resistance to selected environmental conditions – Assessment methods and specification of results.

5.3. NATIONAL REQUIREMENTS FOR ROOFLIGHTS, ROOF HATCHES AND NSHEVs



Source: EUROLUX

A few Member States have already set **maximum U-value requirements for rooflights and NSHEVs in their national regulations:**

BELGIUM (Flanders)

In Belgium, the Flanders Energy Decree (*Bijlage VII*) sets requirements for the thermal transmittance of rooflights and roof hatches, ranging from 1.5 W/m^2K to 2.0 W/m^2K depending on the material.

DENMARK

The Danish Building Regulation (*Bygningsreglementet*) sets requirements for the thermal transmittance of 1.4 W/m^2K.

FINLAND

In Finland, the Decree of the Ministry of the Environment on the Energy Efficiency of New Buildings (*Ympäristöministeriön asetus uuden rakennuksen energiatehokkuudesta*) sets requirements for the thermal transmittance of NSHEVs, as well as for plastic rooflights and roof hatches, ranging from 0.7 W/m^2K to 1.4 W/m^2K depending on the building characteristics.

GERMANY

The German Law on Energy Conservation and the Use of Renewable Energies for Heating and Cooling in Buildings (Gesetz zur Einsparung von Energie und zur Nutzung erneuerbarer Energien zur Wärme- und Kälteerzeugung in Gebäuden – GEG) contains specifications for design and planning, including U-value requirements for rooflights, ranging from 1.4 W/m^2K to 2.5 W/m^2K, depending on the type of rooflight, material and building characteristics.

IRELAND

The Irish Building Regulations 2022 Technical Guidance Document L contains specifications for design and planning, including U-value requirements for rooflights, ranging from 1.4 W/m^2K to 3.0 W/m^2K, depending on the building characteristics.

POLAND

In Poland, the Technical Conditions Regulation (*Rozporządzenie MSWiA w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie*) sets requirements for thermal transmittance of fixed transparent surfaces (rooflights), ranging from 0.9 W/m^2K to 1.4 W/m^2K depending on the building characteristics.

Other countries outside of the European Union, such as the UK, also set U-value limits: 2.2 W/m^2 for rooflights and 3.0 W/m^{2}K for NSHEVs.

UK (England), the Approved Document L

Table 4.1 Limiting U-values for new or replacement elements in new and existing buildings and air permeability in new buildings

Element type	Maximum U-value[1] W/(m^2·K) or air permeability
Roof (flat roof)[2]	0.18
Roof (pitched roof)[2]	0.16
Wall[2][3]	0.26
Floor[4][5]	0.18
Swimming pool basin[6]	0.25
Windows in buildings similar to dwellings[7][8]	1.6 or Window Energy Rating[9] Band B
All other windows,[8][10][11] roof windows, curtain walling	1.6
Rooflights[12][13]	2.2
Pedestrian doors (including glazed doors)[14]	1.6
Vehicle access and similar large doors	1.3
High-usage entrance doors	3.0
Roof ventilators (including smoke vents)	3.0
Air permeability (for new buildings)	8.0m^3/(h·m^2) @ 50Pa

Similar requirements for maximum U-value exist in Scotland, Wales and Northern Ireland.

Some Member States have global objectives for the energy efficiency of the building and no specific minimum limits for the transparent buildings elements (e.g. France)

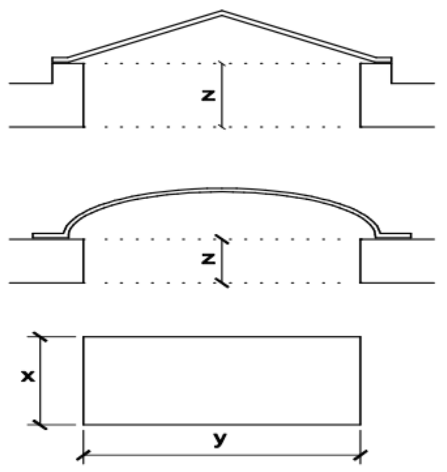
FRANCE

The French Environmental Regulation (RE 2020) does not set a maximum U-value for rooflights. Instead, performance requirements are defined at building level, with energy performance assessed through a calculation depending on building type and use.

Other Member States have mandatory requirements for rooflights, albeit not concerning their maximum U-value (e.g. Spain).

SPAIN

The Spanish Building Code (Código Técnico de la Edificación) includes requirements for rooflights in Table 19.



X / Z	Y / Z: 0,1	0,5	1,0	2,0	5,0	10,0
0,1	0,42	0,43	0,43	0,43	0,44	0,44
0,5	0,43	0,46	0,48	0,50	0,51	0,52
1,0	0,43	0,48	0,52	0,55	0,58	0,59
2,0	0,43	0,50	0,55	0,60	0,66	0,68
5,0	0,44	0,51	0,58	0,66	0,75	0,79
10,0	0,44	0,52	0,59	0,68	0,79	0,85

Table 19: Solar shading factor for rooflights

Source: ADEXSI

6. INTEGRATION OF ROOFLIGHTS, ROOF HATCHES AND NSHEVS IN BUILDING DESIGN

Effective integration of rooflights, roof hatches and NSHEVs requires a careful balance between maximising daylight and natural ventilation (ventilative cooling, night cooling, free cooling) while maintaining insulation and minimising heat loss.

REMEMBER

An optimal building design, using roof-integrated solutions such as rooflights, roof hatches and NSHEVs , is a balancing act between daylight, natural ventilation, smoke ventilation and energy savings.

Several considerations should be taken into account to optimise the energy efficiency of the roof:

- **Compliance**: Choose rooflights and roof hatches which meet the national building regulations requirements of maximum U-value, and for plastic products also meet **air permeability** requirements.
- **Light transmittance**: Rooflights with an optimal light transmittance level ensure sufficient daylight penetration, reducing the need for electric lighting. Light transmittance should be balanced with thermal performance (g-value) to avoid excessive heat gain or loss.
- **Comfort Ventilation**: Rooflights enhance indoor air quality[11] by allowing fresh air to circulate, cooling the building in summer[12], while in winter, maintaining a careful balance that helps remove excessive moisture, avoiding humidity build-up inside.
- **Placement**: Strategic placement can maximise daylighting while minimising heat loss.
- **Size**: The size of rooflights should be balanced to provide adequate daylighting without compromising thermal performance.
- **Type of glazing**: Rooflights, roof hatches and NSHEVs with low U-values enhance thermal performance.
- **Shading Solutions**: Moveable shading systems reduce solar gain in summer and increase solar gain in winter improving the overall energy performance.

[11] EUROLUX Paper: Healthy Buildings – Best Practices
[12] During the day or, even more effectively, at night when possible (night cooling).

7. CONCLUSION

Roof-integrated solutions (such as rooflights, roof hatches and NSHEVs) in the building design, **enhance the overall energy performance of buildings in a cost-efficient way**, **reducing reliance on electric lighting and mechanical ventilation systems**, and positively contributing to the energy efficiency of the building.

During the building design a **balancing act** has to be made between the benefits that roof-integrated solutions, such as rooflights, roof hatches and NSHEVS, provide in terms of natural lighting, natural ventilation, smoke ventilation, and the energy savings.

In practice, light transmittance should be balanced with thermal performance:

- Rooflights with **lower U-values reduce heat loss in winter**, helping to maintain indoor temperatures and lower heating costs.
- Rooflights with an **optimal light transmittance level** ensure sufficient daylight penetration, **reducing the need for electric lighting**.

The calculation of the U-values of rooflights, roof hatches and NSHEVs is being made according to the **European Standards EN 1873 and EN 14963**.

Innovations both in materials and design continue to enhance the thermal performance of buildings integrating rooflights, roof hatches and NSHEVs, making them cost-efficient elements in modern building design.

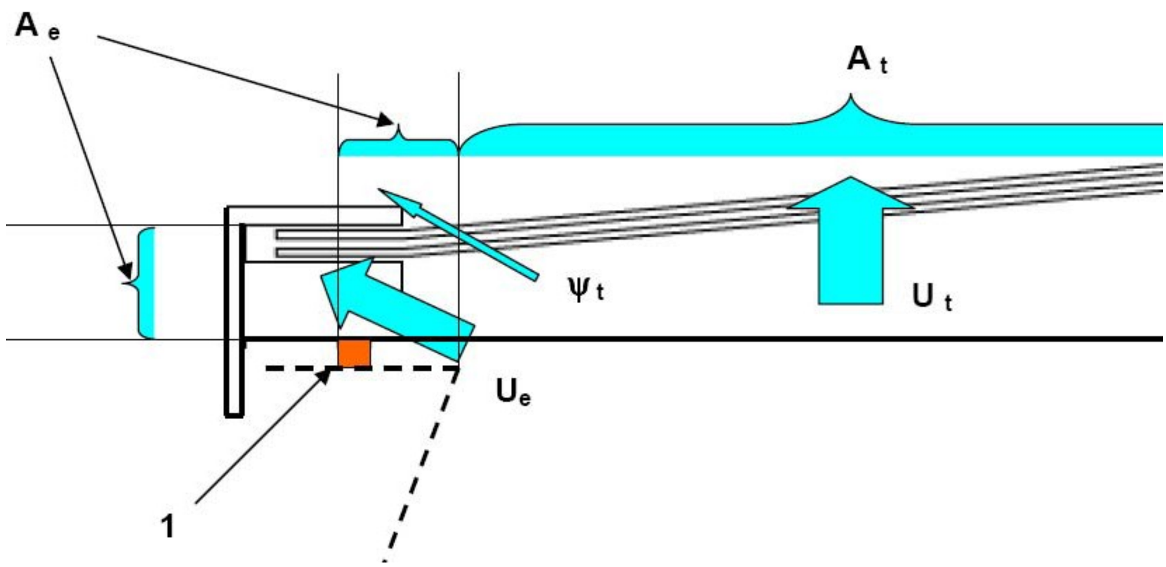
EUROLUX represents the interests of the European manufacturers of individual rooflights, continuous rooflights and natural ventilation and smoke/heat exhaust systems.

EUROLUX promotes the Europe-wide usage of these products for the illumination of interiors with natural daylight and for natural venting and smoke & heat exhaust via rooflights.

ANNEX I – U VALUE OF INDIVIDUAL ROOFLIGHTS: CALCULATION DETAILS

In the evaluation of the contribution of rooflights and roof hatches, two values should be checked against limiting values in relevant regulations – the **Ur**-value for the rooflight only or **Urc**–value where the rooflight is supplied with an upstand.

1. Ur-value of individual rooflights including the edge profile



Key:
1 starting point of calculation
A_e the outer exposed surface of the edge profiles
A_t the outer exposed surface of the translucent part
U_e the thermal transmittance of the edge profiles
U_t the thermal transmittance of the translucent part
Ψ_t the linear heat transfer coefficient in the transition zone of the translucent part and the edge profile

Figure 2: Calculation formula for U_r-value

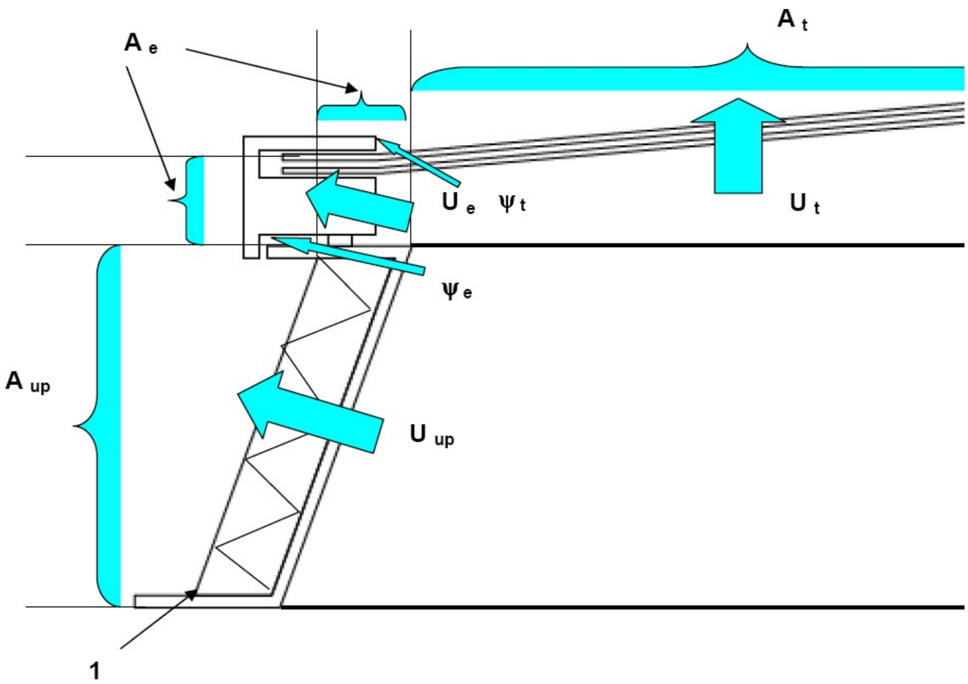
The U-value of the rooflight **Ur** including the edge profile is calculated as followed:

$$U_r = \frac{A_e \times U_e + A_t \times U_t + l_t \times \psi_t}{A_e + A_t} \qquad [\mathrm{W/(m^2 \cdot K)}]$$

Where

A_e the outer exposed surface of the edge profiles, in m²
A_t the outer exposed surface of the translucent part, in m²
l_t length of the transition zone between translucent part and edge profiles (= P_t), in m
U_e the thermal transmittance of the edge profiles, in W/(m²·K)
U_t the thermal transmittance of the translucent part, in W/(m²·K)
Ψ_t the linear heat transfer coefficient in the transition zone of the translucent part and the edge profile, in W/(m·K)

2. Urc-value of individual rooflights including the edge profile and upstand



Key:
1 starting point of calculation
A_e the outer exposed surface of the edge profiles
A_t the outer exposed surface of the translucent part
A_{up} the outer exposed surface of the upstand
U_e the thermal transmittance of the edge profiles
U_t the thermal transmittance of the translucent part
U_{up} the thermal transmittance of the upstand
Ψ_e the linear heat transfer coefficient in the transition zone of the edge profile and upstand
Ψ_t the linear heat transfer coefficient in the transition zone of the translucent part and the edge profile

Figure 3: Calculation formula for U_{rc}-value

The U-value of the rooflight **Urc** including the edge profile and upstand is calculated as followed:

$$U_r = \frac{A_{up} \times U_{up} + A_e \times U_e + A_t \times U_t + l_e \times \psi_e + l_t \times \psi_t}{A_{up} + A_e + A_t} \qquad [\mathrm{W/(m^2{\cdot}K)}]$$

Where

A_e the outer exposed surface of the edge profiles, in m^2
A_t the outer exposed surface of the translucent part, in m^2
A_{up} the outer exposed surface of the upstand, in m^2
l_e length of the sealing of the edge profile, in m
l_t length of the transition zone between translucent part and edge profiles (= P_t), in m
U_e the thermal transmittance of the edge profiles, in $W/(m^2{\cdot}K)$
U_t the thermal transmittance of the translucent part, in $W/(m^2{\cdot}K)$
U_t the thermal transmittance of the upstand, in $W/(m^2{\cdot}K)$
Ψ_e the linear heat transfer coefficient in the transition zone of the edge profile and upstand, in $W/(m{\cdot}K)$
Ψ_t the linear heat transfer coefficient in the transition zone of the translucent part and the edge profile, in $W/(m{\cdot}K)$

ANNEX II – LEGAL REFERENCES

The EPBD 2024 considers **the whole building envelope**, including the **roof design**.

> ***EPBD 2024, ARTICLE 2 (15)***
>
> ***(15)*** *'**building envelope'** means the integrated elements of a building which separate its interior from the outdoor environment.*

As announced in EPBD 2024 **Article 4,** in June 2025 the European Commission provided Guidance on the EPBD 2024 for Member States to develop a national methodology for the calculation of the energy performance of the transparent buildings elements, in accordance with the common general framework outlined in **Annex I,** which highlights the importance of considering **natural ventilation** and the positive influence of **natural lighting** in building design.

> ***ARTICLE 4 - ADOPTION OF A METHODOLOGY FOR CALCULATING THE ENERGY PERFORMANCE OF BUILDINGS***
>
> Member States shall apply a methodology for calculating the energy performance of buildings in accordance with the common general framework set out in Annex I. That methodology shall be adopted at national or regional level.
>
> The Commission shall issue guidance for the **calculation of the energy performance of transparent building elements that form part of the building envelope** and the consideration of ambient energy.

> ***ANNEX I - COMMON GENERAL FRAMEWORK FOR THE CALCULATION OF THE ENERGY PERFORMANCE OF BUILDINGS***
>
> **...**
>
> **4.** The methodology shall be laid down taking into consideration at least the following aspects:
>
> ...

(e) **natural** and mechanical **ventilation** which may include air-tightness[13] and heat recovery

...

5. The positive influence of the following aspects shall be taken into account:

...

(d) **natural lighting**;

...

EPBD 2024 requires Member States to set minimum energy performance requirements for building elements, **including transparent components**, by adopting a cost-optimal methodology.

ARTICLE 5 - SETTING OF MINIMUM ENERGY PERFORMANCE REQUIREMENTS

...

Member States shall take the necessary measures to ensure that minimum energy performance requirements are set for building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are replaced or retrofitted, with a view to achieving at least cost-optimal levels. Member States may set the requirements for building elements at a level that would facilitate the effective installation of low temperature heating systems in renovated buildings.

...

In its June 2025 Guidance on the EPBD 2024, the Commission recommends that **Member States allow for exceptions to the minimum requirements** (for individual building elements) if designers and developers can use an energy balance approach to demonstrate that the building would have a better energy performance.

According to **Article 19**, Member States are mandated to introduce Energy Performance Certificates (EPCs), which serve as a key measure for assessing a building's energy efficiency:

[13] Commission Delegated Regulation (EU) 2019/1342 establishes classes of performance in relation to air permeability for rooflights of plastics and glass and roof hatches

ARTICLE 19 - ENERGY PERFORMANCE CERTIFICATES

19.1. Member States shall lay down the necessary measures to establish a system of certification of the energy performance of buildings. The **energy performance certificate** shall include the energy performance of a building expressed by a numeric indicator of primary energy use in kWh/(m2) a year, and reference values such as minimum energy performance requirements, minimum energy performance standards, nearly zero-energy building requirements and zero-emission building requirements, in order to make it possible for owners or tenants of the building or building unit to compare and assess its energy performance.

19.2. By **29 May 2026**, the energy performance certificate shall comply with the template in Annex V. It shall specify the energy performance class of the building, on a closed scale using only letters from A to G.

According to the template in **Annex V**:

Annex V Template for energy performance certificates

2. In addition, the energy performance certificate may include the following indicators:

...

(e) the average **U-value for the opaque elements** of the building envelope;

(f) the average **U-value for the transparent elements** of the building envelope;

(g) type of **most common transparent element** (e.g. double-glazed window);

(h) results of the analysis on **overheating risk** (if available);

(i) the presence of **fixed sensors that monitor the indoor environmental quality**;

(j) the presence of **fixed controls that respond to the levels of indoor environmental quality**;

...

EUROLUX

Contact Us

www.eurolux-eu.com

eurolux-aisbl

@EUROLUX_AISBL