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Prefabricated accessories for roofing - Individual rooflights of plastics - Product specification and test methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Vorgefertigte Zubehörteile für Dachdeckungen - Lichtkuppeln aus Kunststoff - Produktspezifikation und Prüfverfahren

Accessoires préfabriqués pour couverture - Lanterneaux ponctuels en matière plastique - Spécifications des produits et méthodes d'essais

Vorgefertigte Zubehörteile für Dacheindeckungen - Lichtkuppeln aus Kunststoff - Produktfestlegungen und Prüfverfahren

This European Standard was approved by CEN on 23 February 2014.

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Foreword

This document (EN 1873:2014) has been prepared by Technical Committee CEN/TC 128 “Roof covering products for discontinuous laying and products for wall cladding”, the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2014, and conflicting national standards shall be withdrawn at the latest by October 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1873:2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with the EU Regulation concerning the CPR, see informative Annex ZA, which is an integral part of this document.

In comparison to the previous edition, the following clauses have been changed: Clause 1, 2, 3, 4, 5, 6, 7, 8, Annex C, Annex D, Annex E and Annex ZA.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies requirements for rooflights made of plastic materials (e.g. GF-UP, PC, PMMA, PVC) and rooflights with upstands made of e.g. GF-UP, PVC, steel, aluminium or wood for installation in roofs. These rooflights serve the purpose of introducing daylight.

This European Standard applies to rooflights with a rectangular or circular ground plan (see Figures 1 and 2), with an opening span (width) or diameter not larger than 2,5 m and an opening length not larger than 3,0 m in roof pitches up to 25°. This document does not cover rooflights which contribute to the load-bearing or stiffness of the roof itself.

This European Standard applies to rooflights and rooflights with upstand, where a single manufacturer provides all components of the rooflight with upstand, which are bought in a single purchase.

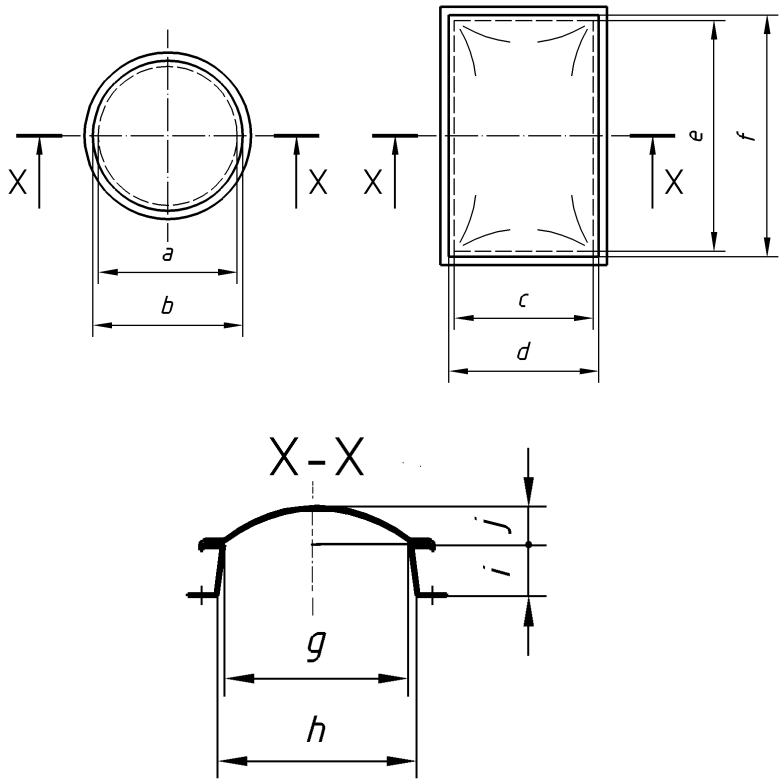
This European Standard applies to rooflights with one or several translucent parts.

Rooflights may be opened by means of opening devices in one or more parts for ventilation.

The possible additional functions of day to day ventilation, smoke and heat ventilation e.g. in case of fire in accordance with EN 12101-2, roof access, and/ or slinging point e.g. in accordance with EN 795 are outside the scope of this document.

This European Standard does not include calculations with regard to construction, design requirements and installation techniques.

NOTE Guidelines for safety, application, use and maintenance of individual rooflights are presented in Annex A.

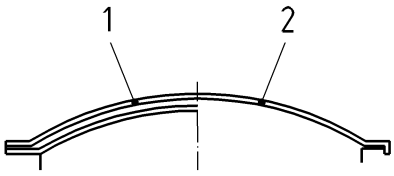


Section X –X without and with additional horizontal skin

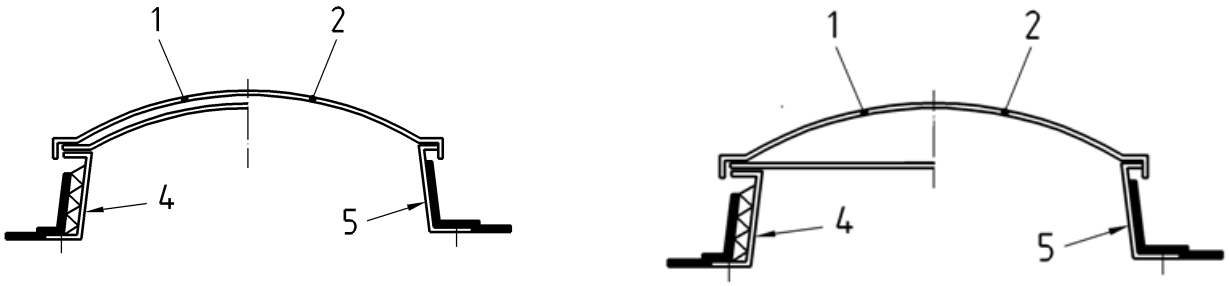
Key

a	daylight diameter	f	roof opening length
b	roof opening diameter	g	daylight size
c	daylight width	h	roof opening size
d	roof opening width	i	upstand height
e	daylight length	j	rooflight height

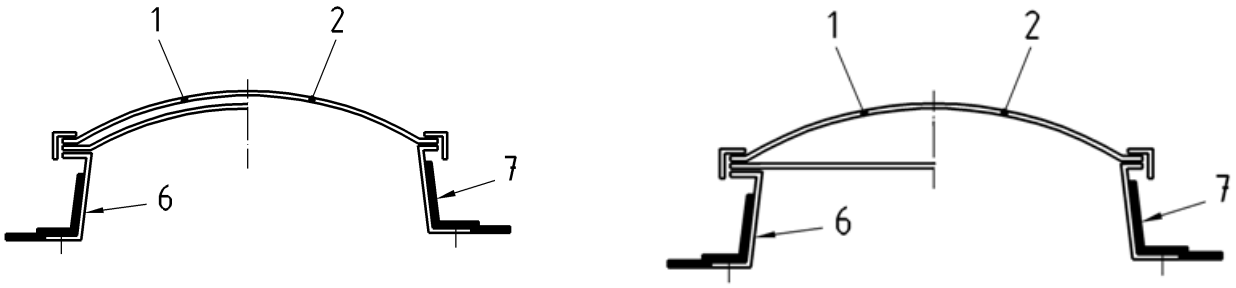
Figure 1 — Typical individual rooflights



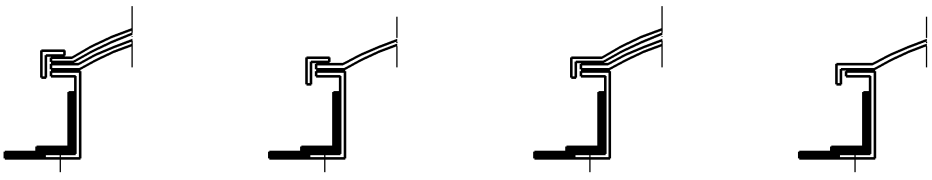
2a) Individual rooflight



2b) Individual rooflight with upstand



2c) Individual rooflight with upstand and edge profile



with edge profile without edge profile

2d) Vertical upstands

Key

1	multi skin	4	insulated upstand	7	roof finish
2	single skin	5	non insulated upstand		
3	edge profile	6	splayed upstand		

Figure 2 — Cross sections of typical individual rooflights and upstands

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 410:2011, *Glass in building - Determination of luminous and solar characteristics of glazing*

EN 596, *Timber structures - Test methods - Soft body impact test of timber framed walls*

EN 673, *Glass in building - Determination of thermal transmittance (U value) - Calculation method*

EN 674, *Glass in building - Determination of thermal transmittance (U value) - Guarded hot plate method*

EN 675, *Glass in building - Determination of thermal transmittance (U value) - Heat flow meter method*

EN 1013, *Light transmitting single skin profiled plastics sheets for internal and external roofs, walls and ceilings - Requirements and test methods*

CEN/TS 1187, *Test methods for external fire exposure to roofs*

EN 12412-2, *Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2: Frames*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13501-5, *Fire classification of construction products and building elements — Part 5: Classification using data from external fire exposure to roof tests*

EN 14351-1, *Windows and doors — Product standard, performance characteristics — Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*

EN 13823, *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 16153, *Light transmitting flat multiwall polycarbonate (PC) sheets for internal and external use in roofs, walls and ceilings - Requirements and test methods*

EN ISO 178, *Plastics - Determination of flexural properties (ISO 178)*

EN ISO 527-1, *Plastics - Determination of tensile properties - Part 1: General principles (ISO 527-1)*

EN ISO 527-2, *Plastics - Determination of tensile properties - Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2)*

EN ISO 4892-1, *Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1)*

EN ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2)*

EN ISO 6946, *Building components and building elements - Thermal resistance and thermal transmittance - Calculation method (ISO 6946)*

EN ISO 10077-2, *Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2: Numerical method for frames (ISO 10077-2)*

EN ISO 10140-1, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products (ISO 10140-1)*

EN ISO 10140-2, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation (ISO 10140-2)*

EN ISO 10140-4, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 4: Measurement procedures and requirements (ISO 10140-4)*

EN ISO 10140-5, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 5: Requirements for test facilities and equipment (ISO 10140-5)*

EN ISO 10211, *Thermal bridges in building construction - Heat flows and surface temperatures - Detailed calculations (ISO 10211)*

EN ISO 11664-1, *Colorimetry - Part 1: CIE standard colorimetric observers (ISO 11664-1)*

EN ISO 11664-2, *Colorimetry - Part 2: CIE standard illuminants (ISO 11664-2)*

EN ISO 12017:1996, *Plastics - Poly(methyl methacrylate) double- and triple-skin sheets - Test methods (ISO 12017)*

EN ISO 12567-2, *Thermal performance of windows and doors - Determination of thermal transmittance by hot box method - Part 2: Roof windows and other projecting windows (ISO 12567-2)*

EN ISO 13468-1, *Plastics - Determination of total luminous transmittance of transparent materials - Part 1: Single-beam instrument (ISO 13468-1)*

EN ISO 13468-2, *Plastics - Determination of the total luminous transmittance of transparent materials - Part 2: Double-beam instrument (ISO 13468-2)*

EN ISO 14125, *Fibre-reinforced plastic composites - Determination of flexural properties (ISO 14125)*

EN ISO 11925-2:2010, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2:2010)*