
**Energetska učinkovitost stavb - Energijske zahteve za razsvetljavo - 1. del:
Specifikacije, modul M9**

Energy performance of buildings - Energy requirements for lighting - Part 1:
Specifications, Module M9

Energetische Bewertung von Gebäuden - Energetische Anforderungen an die
Beleuchtung - Teil 1: Spezifikationen, Modul M9

Performance énergétique des bâtiments - Exigences énergétiques pour l'éclairage -
Partie 1 : Spécifications, module M9

[SIST EN 15193-1:2017/oprA1:2020](https://standards.iteh.ai/catalog/standards/sist/585b788-b961-4e81-a459-51e0db8411c6/sist-en-15193-1:2017/oprA1:2020)

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Ta slovenski standard je istoveten z: EN 15193-1:2017/prA1

ICS:

27.015	Energijska učinkovitost. Ohranjanje energije na splošno	Energy efficiency. Energy conservation in general
91.120.10	Toplotna izolacija stavb	Thermal insulation of buildings
91.160.10	Notranja razsvetljava	Interior lighting

SIST EN 15193-1:2017/oprA1:2020 **en,fr,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 15193-1:2017
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November 2019

ICS 91.120.10; 91.140.99; 91.160.01

English Version

Energy performance of buildings - Energy requirements for lighting - Part 1: Specifications, Module M9

Performance énergétique des bâtiments - Exigences
énergétiques pour l'éclairage - Partie 1 : Spécifications,
module M9

Energetische Bewertung von Gebäuden - Energetische
Anforderungen an die Beleuchtung - Teil 1:
Spezifikationen, Modul M9

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 169.

This draft amendment A1, if approved, will modify the European Standard EN 15193-1:2017. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 15193-1:2017/prA1:2019) has been prepared by Technical Committee CEN/TC 169 “Light and lighting”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This amendment 1 is processed to provide a method for estimating the daylight supply for sloped roofs. This method was still under development during the drafting of EN 15193-1:2017.

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EN 15193-1:2017/prA1:2019 (E)

1 Modifications to Annex F, Daylight availability

Replace the bulleted list in F.1 with the following: “

- F.2 contains a scheme of how to subdivide the zone to be evaluated into area sections which receive daylight and those which do not;
- F.3 specifies a procedure of how to determine the daylight supply factor $F_{D,S,n,j}$ for spaces lit by vertical façades;
- F.4 specifies a procedure of how to determine the daylight supply factor $F_{D,S,n,j}$ for spaces lit by roof lights;
- F.5 specifies a procedure of how to adapt rooms with windows in sloping roofs into the equivalent room with either vertical facade windows or roof lights;
- F.6 specifies a procedure of how to rate daylight responsive control systems described by the parameter $F_{D,C,n,j}$;
- F.7 describes how to convert annual values into monthly values of $F_{D,n,j}$;
- F.8 provides a procedure to determine day and night time hours;
- F.9 describes requirements for the comprehensive calculation of daylight supply.”.

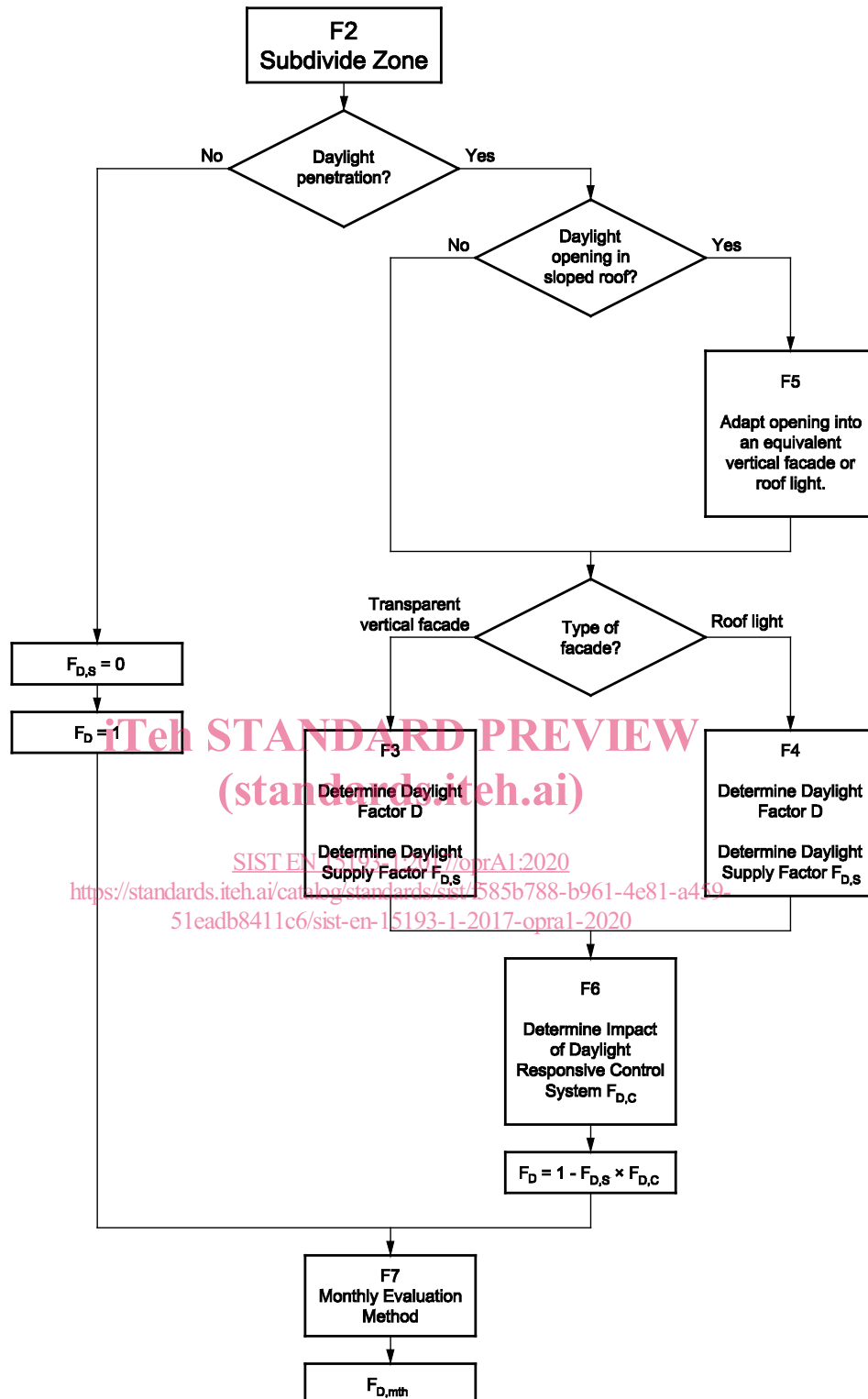
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Replace Figure F.1 in F.1 with the following: “

[SIST EN 15193-1:2017/oprA1:2020](https://standards.iteh.ai/catalog/standards/sist/585b788-b961-4e81-a459-51eadb8411c6/sist-en-15193-1-2017-opra1-2020)

<https://standards.iteh.ai/catalog/standards/sist/585b788-b961-4e81-a459-51eadb8411c6/sist-en-15193-1-2017-opra1-2020>



Replace the first sentence under Formula (F.1) in F.2 with the following: “For windows in a sloped roof the method is described in F.5 but where the roof angle is below 15 degrees they should be treated as a roof light system.”.

EN 15193-1:2017/prA1:2019 (E)

Replace the text of the Note in F.2 under Depth of the daylight area lit by roof lights with the following: "For windows in a sloped roof where the roof angle is between 75 degrees and 15 degrees the method described in F.5 should be used."

Replace the word "Formlae" with the correct spelling "Formulae" in the first sentence of F.4.2.

Add a new Subclause F.5: "

F.5 Daylight supply factor for windows in sloped roofs

In the case of rooms with windows in sloping roofs, the rooms being considered have to be adapted to equivalent rooms with either vertical façade windows or roof lights. The deciding factor for this is the roof slope angle. The roof slope angle is measured with respect to the horizontal.

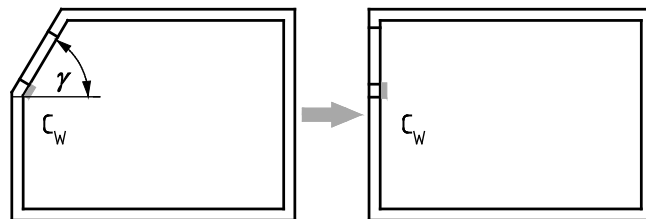
The following rules should be applied:

- For roof slope angles larger or equal to 75 degrees the EN 15193-1 model for vertical façade windows shall be used.
- For slope angles smaller than 75 degrees the EN 15193-1 model for roof lights shall be used after a geometric adaptation of the room height and the window size in the equivalent room.

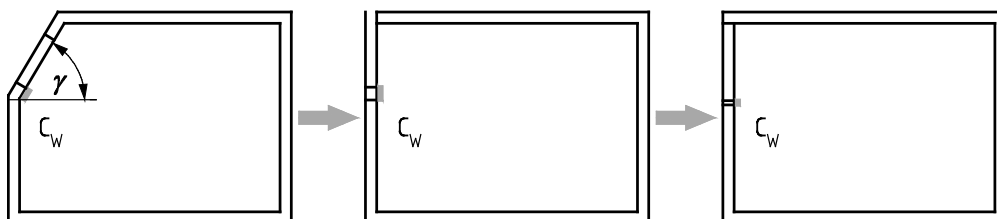
The diagrams in Figure F.10 and Figure F.11 show the process for the adaption of the room height and the window size for these two possibilities.

All further steps for the calculation of the daylight supply factor shall be according to the chosen model described in EN 15193-1:2017, where details for:

- vertical façade windows are in F.3; [SIST EN 15193-1:2017/oprA1:2020](https://standards.iteh.ai/catalog/standards/sist/585b788-b961-4e81-a459-51eadb8411c6/sist-en-15193-1-2017-opra1-2020)
- roof lights are in F.4. <https://standards.iteh.ai/catalog/standards/sist/585b788-b961-4e81-a459-51eadb8411c6/sist-en-15193-1-2017-opra1-2020>



a) The window is rotated to the vertical and fits without further adjustment



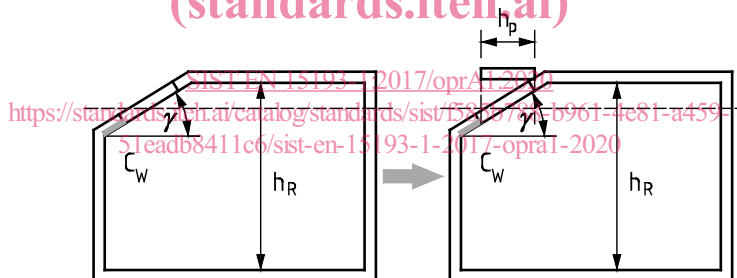
b) The window is rotated to the vertical but then protrudes above the ceiling of the room. C_w is reduced until the window fits within the room

Key

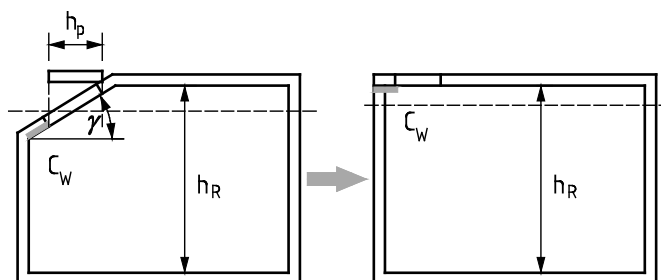
C_w is the distance between the beginning of the sloped roof and the window (m)

γ is the slope angle of the roof ($^\circ$)

Figure F.10 — Adaptation to vertical facade
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a) The window height is adjusted to h_p , the projected height of the window in the horizontal plane



b) The resized window is rotated to the horizontal