
Changes to legislation: There are outstanding changes not yet made to Commission Regulation (EC) No 245/2009. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

ANNEX VI

Indicative benchmarks for products meant to be installed as office lighting (for information)

At the time of adoption of this Regulation, the best available technology on the market for the products concerned was identified as follows.

1. LAMP BENCHMARKS

1.1. Lamp performance

Lamps have an efficacy according to Annex V.

These lamps have the lamp lumen maintenance factors (LLMF) and lamp survival factors (LSF) in Table 22:

TABLE 22

Indicative LLMF and LSF for office lighting lamps (benchmark level)

Burning hours	2 000	4 000	8 000	16 000
LLMF	0,97	0,93	0,9	0,9
LSF	0,99	0,99	0,98	0,93

In addition, these lamps are dimmable to 10 % or less of their light output.

1.2. Product information for lamps

The following information is provided on free-access websites and in other forms the manufacturers deem appropriate for lamps:

The information required by Annex III.1.3, as applicable.

2. LIGHT SOURCE CONTROL GEAR BENCHMARKS

2.1. Light source control gear performance

Fluorescent lamp ballasts have an energy efficiency index of at least A1 (BAT) according to Annex III.2.2 and are dimmable.

High intensity discharge lamp ballasts have an efficiency of 88 % (\leq 100 W lamp power) and else 90 % and are dimmable if the sum of lamp powers operated on the same ballast is above 50 W.

Any other types of light source control gear have an efficiency of 88 % (\leq 100 W input power) and else 90 % when measured according to the applicable measurement standards and are dimmable for lamps above total input power 55 W.

2.2. Product information for light source control gear

The following information is provided on free-access websites and in other forms the manufacturers deem appropriate for light source control gear:

Information on the efficiency of the ballast or the applicable type of light source control gear.

3. LUMINAIRE BENCHMARKS

3.1. Luminaire performance

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Luminaires have a luminaire maintenance factor $LMF > 0,95$ in normal office pollution degrees with a cleaning cycle of 4 years.

If they are fluorescent or HID lamp luminaires, they are compatible with at least one lamp type complying with the benchmarks of Annex V.

In addition, these luminaires are compatible with lighting control systems offering the following features:

- presence detection,
- light responsive dimming (for daylight and/or room reflectance variations),
- dimming to accompany changes in illumination requirements (during the working day, over a longer period or due to changes in functionality),
- dimming to compensate for: luminaire pollution, changes in lamp lumen output over its life time and changes in lamp efficacy when the lamp is replaced.

The compatibility can also be ensured by incorporating the appropriate components in the luminaires themselves.

The compatibility or the features offered by the incorporated components is indicated in the luminaire's product documentation.

3.2. Product information on luminaires

The following information is provided on free-access websites and in other forms the manufacturers deem appropriate for each of the luminaire models:

The information required by Annex III.3.2 and Annex V, as applicable.

In addition, for all luminaires, excluding luminaires with bare lamps and no optics, applicable luminaire maintenance factor (LMF) value data is provided with cleaning instructions if needed up to 4 years, using a similar table:

TABLE 23

Indicative luminaire maintenance factor values (benchmark level)

LMF values	Cleaning intervals in years						
	1,0	1,5	2,0	2,5	3,0	3,5	4,0
Very Clean							
Clean							
Normal (optional)							
Dirty (optional)							

The table is accompanied by a disclaimer that it contains only indicative values that may not reflect the achievable maintenance values in a particular installation.

For luminaires for directional light sources such as reflector lamps or LEDs, only the applicable information is provided, e.g. $LLMF \times LMF$ instead of simply the LMF.

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Changes and effects yet to be applied to :

- Regulation revoked by [S.I. 2021/1095 reg. 19\(b\)](#)

Changes and effects yet to be applied to the whole legislation item and associated provisions

- Annex 1 para. 2(b) substituted by [S.I. 2019/539 Sch. 2 para. 4\(6\)\(b\)](#)
- Annex 1 para. 2(c) substituted by [S.I. 2019/539 Sch. 2 para. 4\(6\)\(c\)](#)
- Annex 1 para. 2(e)(f) substituted for Annex 1 para. 2(e) by [S.I. 2019/539 Sch. 2 para. 4\(6\)\(d\)](#)
- Annex 1 para. 1 words substituted by [S.I. 2019/539 Sch. 2 para. 4\(6\)\(a\)](#)
- Annex 1 para. 2(b) words substituted in earlier amending provision [S.I. 2019/539, Sch. 2 para. 4\(6\)\(b\)](#) by [S.I. 2020/1528 reg. 4](#)
- Annex 1 para. 2(c) words substituted in earlier amending provision [S.I. 2019/539, Sch. 2 para. 4\(6\)\(c\)](#) by [S.I. 2020/1528 reg. 4](#)
- Annex 1 para. 2(e) words substituted in earlier amending provision [S.I. 2019/539, Sch. 2 para. 4\(6\)\(d\)](#) by [S.I. 2020/1528 reg. 4](#)
- Annex 1 para. 2(f) words substituted in earlier amending provision [S.I. 2019/539, Sch. 2 para. 4\(6\)\(d\)](#) by [S.I. 2020/1528 reg. 4](#)
- Annex 3 para. 1.3 words substituted by [S.I. 2019/539 Sch. 2 para. 4\(7\)\(a\)](#)
- Annex 3 para. 2.2 words substituted by [S.I. 2019/539 Sch. 2 para. 4\(7\)\(b\)](#)
- Annex 3 para. 3.2 words substituted by [S.I. 2019/539 Sch. 2 para. 4\(7\)\(c\)](#)