

The regulatory framework of light pollution in France

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Regulation before 2018

- « Grenelle » laws, 2009-2010
 - Prevent and limit disturbance for people and for the environment because of artificial light and limit power consumption
- Energy transition law, 2015
 - Climate-air-energy transition plans : actions to control of energy consumption and light pollution
- Biodiversity law, 2016
 - Nocturnal landscapes : common national heritage
 - Nocturnal environment must be protected
 - « green and blue infrastructure » : take artificial light at night into account
- Decree (décret) n° 2011-831 of 12/07/2011 : prevention and limitation of light pollution
- Order (arrêté) of 25/01/2013 : non residential buildings

New order of December, 27th 2018

- The 2013 order did not fulfill all the application scope of the 2011 decree
- A new order was signed in December, 27th 2018
- Modified in May and in December 2019

Scope of the 2018 order (1)

- All light types defined in the 2011 decree
 - a) Exterior lighting for travel security and user comfort (excluding lighting and vehicle signals)
 - b) Heritage enhancement, gardens
 - c) Outdoor sports equipment
 - d) Illumination of building facades and interior lighting emitted to the exterior
 - e) Uncovered or semi-covered car parks
 - f) Outdoor events
 - g) Outdoor sites

Scope of the 2018 order (2)

- Inside agglomeration / outside agglomerations / astronomical site / protected natural areas
- Public and private lighting



The decree has two kinds of measures

- Lighting time
 - Between dusk and dawn
 - Depends on the activity
 - No obligation to turn the light off for public lighting
- Technical prescriptions
 - Do not light the sky
 - Color temperature
 - Flow code n°3: limit glare
 - Luminous flux density

→sobriety of lighting

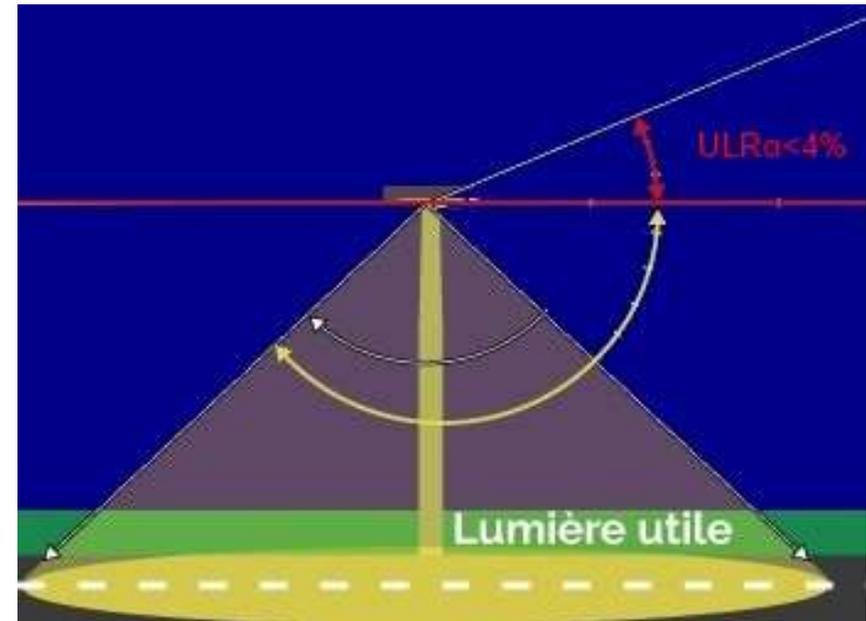
Examples of prescriptions

➤ Proportion of upward lighting

- For types a) and e) lightings
- $ULR_{\alpha} < 1\%$ for nominal value (except for style lantern)
- $ULR_{\alpha} < 4\%$ in real

➤ Intrusive light

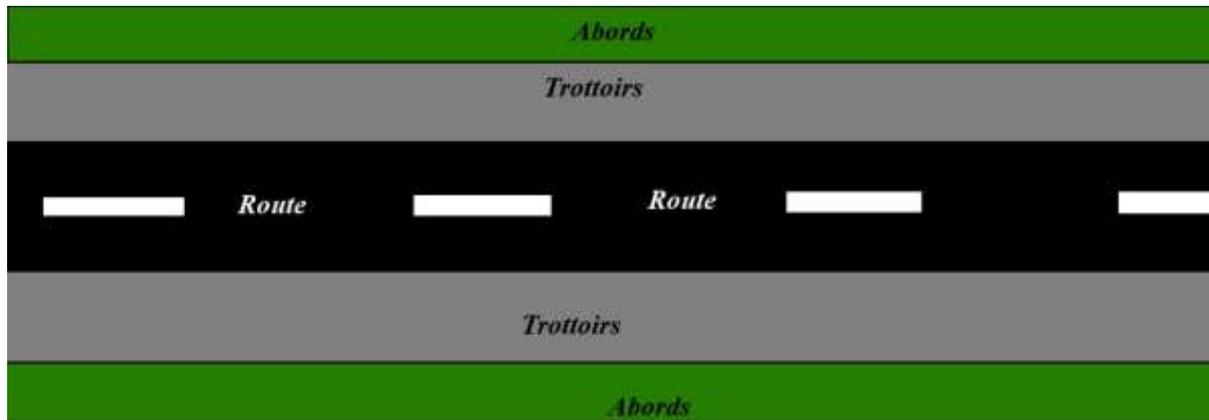
- No excessive light in housings



Examples of prescriptions

- Surface density of luminous flux

The surface to be lighted is the only surface taken into account



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Specific rules for protected natural areas

- Some of prescriptions are more restrictive, depending on the type of protected natural area
- The prefect can enforce more restrictive prescriptions, once local authorities have issued their opinions
- Prohibition of light cannons (> 100,000 lumens) and laser beams
- No aquatic environment watercourse lighting (except security) → not restricted to protected areas

Entry into force (1)

- 29/12/18 : cannons ban > 100,000 lm in protected natural areas and the perimeter of certain astronomical sites
- 01/01/20 : for new installations



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Entry into force 2)

- Installations prior to 01/01/20
 - Provisions of the 2013 decree are maintained
 - 01/01/20 : if possible : no light above the horizontal
 - 01/01/20 : prefects can sign decrees
 - 01/01/20 : no aquatic environment lighting (except for safe movements)
 - 01/01/21 : time prescriptions
 - 01/01/25 : ban on luminaires lighting 50% above horizontal (for luminaires whose ULR α is limited in the decree)

Conclusion

- Order = step in the regulation of light pollution
- Appropriation by professionals, managers, owners ... crucial
- Light up what is needed, when it is needed
- Gradual renewal of lighting installations
- For each new light or renewal: is the light appropriate?
For what purpose? At what level ? How long?

**THANK YOU FOR YOUR
ATTENTION**



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