


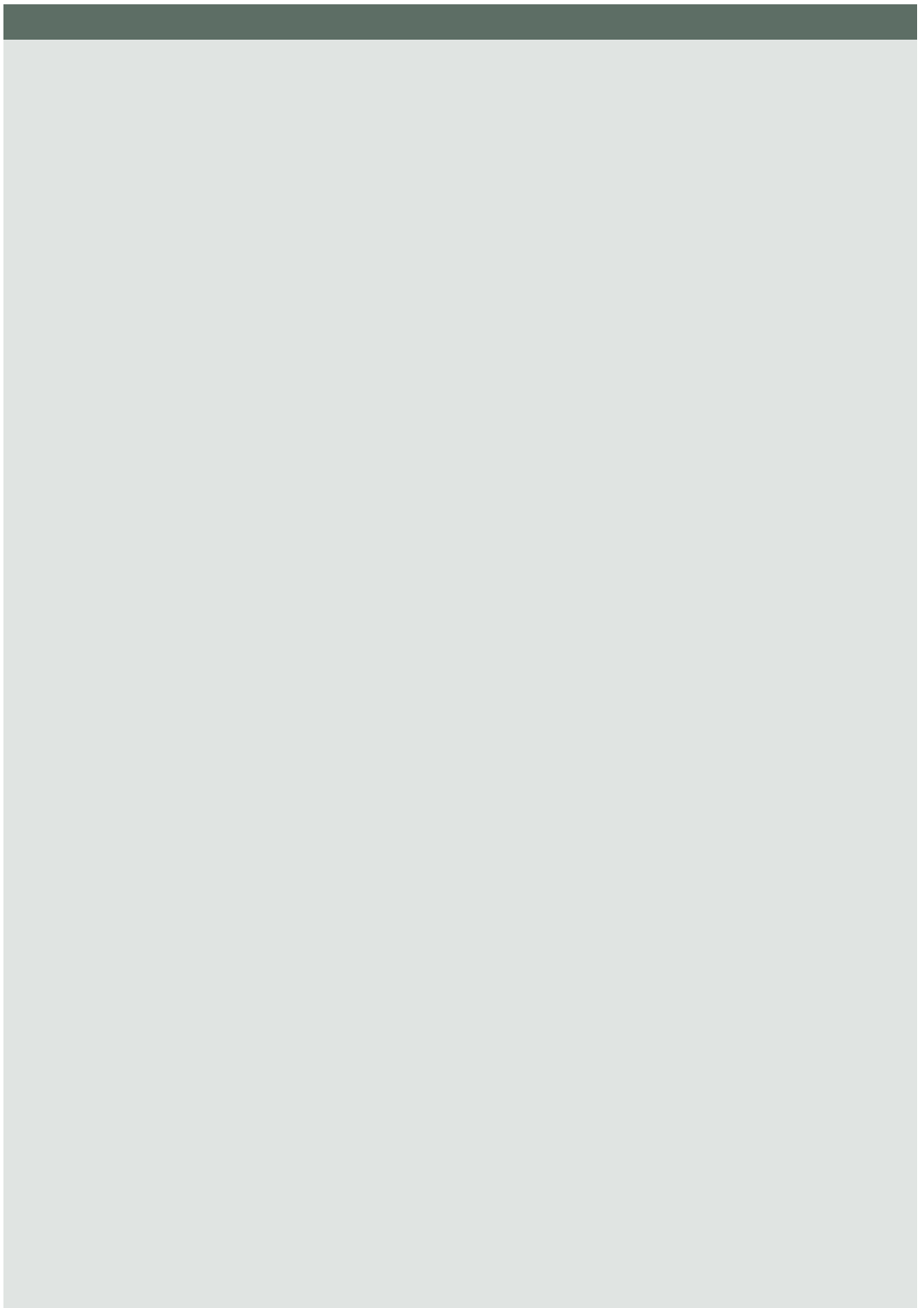
PROTECTION OF THE NIGHT SKY

**DECREE 357/2010, AUGUST 3RD,
WHICH APPROVES THE REGULATIONS
FOR THE PROTECTION OF THE NIGHT
SKY QUALITY AGAINST LIGHT
POLLUTION AND
THE ESTABLISHMENT OF MEASURE-
MENTS FOR ENERGY SAVING
AND EFFICIENCY**


Andalucía
se mueve con Europa

PROTECTION OF THE NIGHT SKY

DECREE 357/2010, AUGUST 3RD,
WHICH APPROVES THE REGULATIONS FOR THE PROTECTION OF THE NIGHT SKY
QUALITY AGAINST LIGHT POLLUTION AND THE ESTABLISHMENT OF MEASUREMENTS
FOR ENERGY SAVING AND EFFICIENCY.



INTRODUCTION



The night sky of our Autonomous Region has historically enjoyed an exemplary quality, being a worldwide benchmark for astronomical observations. Proof of this, is the situation of two important astronomical observatories within our boundaries; Observatorio Astronómico Hispano-Alemán de Calar Alto and Observatorio de Sierra Nevada. However, the darkness of our sky is threatened by the indiscriminate growth of outdoor lighting fixtures. This growth is directly related to the economic development and the resulting expansion of towns and cities during the last decades.

The human being usually realizes the value of the surrounding environment when it is already threatened, and this is also the case regarding our sky. The alarm rose only when a deep change was perceived.

Nowadays, by looking up to the sky at night we can only see a bright light veil.

Light pollution is a problem that not only affects astronomical observations, but also the natural development of ecosystems and even people's health. Moreover, we are depriving future generations of a common good. If we do not take action, future generations will grow up without being able to observe the marvelous starry sky. Therefore, a change towards a sustainable model of outdoor lighting is totally necessary to avoid the aforementioned negative consequences. A sustainable model of outdoor lighting will also prevent energy wastage, which is directly related to the emission of greenhouse gases and an unnecessary economic expenditure.

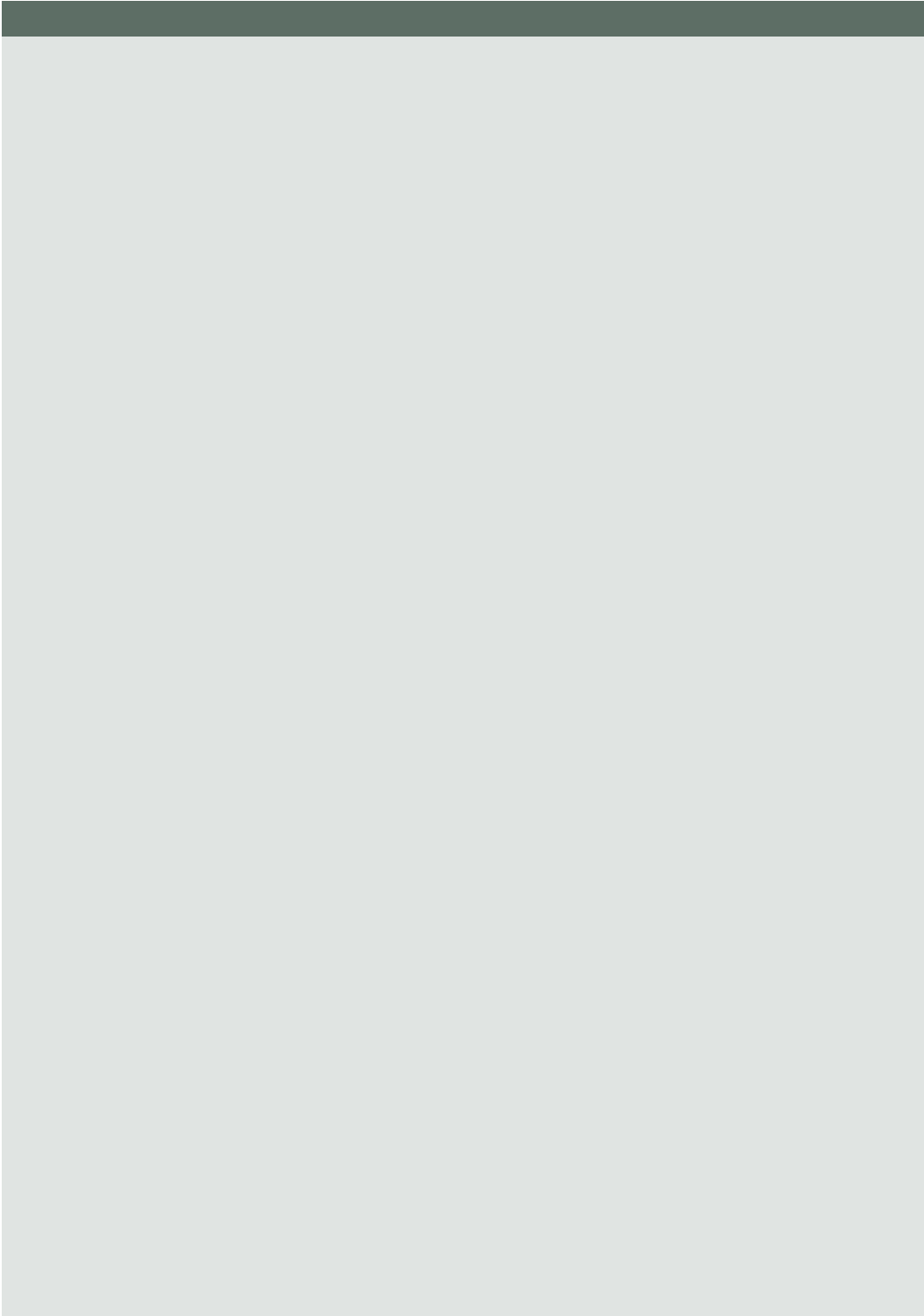
The Government of Andalusia is committed to meet the necessities of the Andalusian society while not causing an ecological or economic imbalance. In view of the above, since 2004, the Ministry of the Environment is working to solve this problem. The result of this effort was reflected by the addition of the regulation of light pollution to the Andalusia's rules through the Section 7/2007 of the Integrated Management of the Environmental Quality Law of July 9th. Posteriorly, the Decree 357/2010, August 3rd, approved the Regulations for the protection of the night sky quality against light pollution and the establishment of measurements for energy saving and efficiency.

Changing the habits of a society that associates lighting with economic prosperity is a difficult and slow process. Although, the perseverance, political will and social participation will undoubtedly help to reach the objectives. Regarding this challenge, Local Corporations have a key role and the Regional Administration will therefore provide them with all the possible support. It is my wish that the publication of the Regulations for the protection of the night sky against light pollution will be a useful document to all the agents involved in the application of the rules, as well as a consultation document for all the citizens. Let us continue to work together on the protection of our environment; let us preserve the natural darkness of our night sky.

Don José Juan Díaz Trillo
HEAD OF REGIONAL MINISTRY OF
THE ENVIRONMENT

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1. DECREE 357/2010, AUGUST 3rd, WHICH APPROVES DE REGULATIONS FOR THE PROTECTION OF THE NIGHT SKY QUALITY AGAINST LIGHT POLLUTION AND THE ESTABLISHMENT OF MEASURES FOR ENERGY SAVING AND EFFICIENCY.

I

Inadequate artificial lighting has negative consequences on the environment. The main effect is the increase of the night sky bright, making astronomical observations very difficult. It can also be harmful to ecosystems, altering vital cycles and behaviors of nocturnal animals and plants. Moreover, energy consumption is unnecessarily increased therefore originating a growth of the economic expenditure and production of atmospheric pollutants. Other negative impacts also affect the environmental quality of the inhabited areas. The luminous intrusion is raised in the people's private environment generating problems such as visual fatigue, anxiety and sleep disturbances. It also makes it difficult for the population to observe the night sky.

Andalusia has two optical astronomical observatories of high scientific quality: the observatory of Sierra Nevada (Granada) and the observatory of Calar Alto (Almeria). In addition, there are other professional observatories which also perform relevant scientific research as well as some observatories with informative and amateur purposes. All the previous observatories are more or less affected by the outdoor lighting emissions to the night sky, thus diminishing its observation capacities.

II

The growing concern about light pollution of astronomical observatories, society in general and Regional Government of Andalusia resulted in two Legislative Proposals approved by the Andalusian Parliament urging the Autonomous Region Government to:

- To approve regulations regarding the following: outdoor lighting levels, gradual removal of spherical luminaires, recommendations for energy efficient design, outdoor lighting hours, etc.
- To ensure an optimal of energy efficiency in every project implemented or subsidized by the Regional Government of Andalusia. To use low polluting lights and to avoid light emission above the horizontal plane.
- To promote the approval of municipal regulations ensuring energy saving and controlling the outdoor lighting pollution.

- To conduct a study assessing the magnitude of the problem in the two aforementioned observatories.
- To approve a regulation of protection in this matter.

Similarly, the Andalusian Ombudsman has recommended the Regional Ministry of the Environment to establish a regulation for the protection of the night sky, taking into account the zoning of the region according to the luminous intensity permitted.

III

Without prejudice to article 149.1.23ª of the Spanish Constitution, the article 57.3 of the Statute of Autonomy for Andalusia, gives the Autonomous Region the competence to regulate the atmospheric environment and the different types of contamination.

Within this framework of powers, the Law 7/2007, July 9th, of Integrated Management of Environmental Quality is approved. The law regulates light pollution for the first time in Andalusia. Therefore, in Section 3 of Chapter II of Title IV, the Law coordinates the matter from the point of view of prevention, minimization and correction of the adverse effects of the artificial light scattering towards the night sky. Among other aspects, the Law establishes the foundations for the zoning of the territory and the lighting levels permitted in each zone. The Law takes into account the compatibility of municipal and business interests with the scientific, ecological and energy saving ones.

Furthermore, the state Law 34/2007, November 15th, of Air quality and protection of the atmosphere, Additional Provision Four, urges public Administrations, to the extent of their competence, to promote the prevention and reduction of light pollution.

The Decree 1890/2008, November 14th, which approves the Regulations for energy efficiency in outdoor lighting fixtures and its Complementary technical instructions EA-01 to EA-07, lay down the technical conditions of design, implementation and maintenance required for outdoor lighting installations. The objectives are to improve the energy saving and efficiency, to reduce the emissions of greenhouse gases, to limit the nocturnal glare or luminous pollution and to decrease the intrusive or disturbing light.

IV

The Decree defines Section 3 of Chapter II of Title IV of the Law 7/2007, July 9th, within the basic regulatory framework of the Law 34/2007, November 15th, regarding

light pollution and the Decree 1890/2008, November 14th. The Decree declares the optical astronomical observatories of Sierra Nevada and Calar Alto as reference points and approves the Regulations for the protection of the night sky quality against light pollution and the establishment of measures for energy saving and efficiency. By virtue of and in accordance with Article 27.9 of the Law 6/2006, October 24th, of the Autonomous Region Government, and in agreement with the authorization conferred by the second final provision of the Law 7/2007, July 9th, of Integrated Management of the Environmental Quality, as proposed by the head of the Regional Ministry of the Environment, in accordance with the Advisory Council of Andalusia and with the previous deliberation of the Governing Council on the August 3rd 2010 session,

I HEREBY ORDER THAT

Sole Article. Approval of the Regulations.

By means of this Decree the Regulations for the protection of the night sky quality against light pollution and the establishment of measurements for energy saving and efficiency is approved, developing Section 3 of Chapter II of Title IV of the Law 7/207, July 9th, of Integrated Management of Environment Quality and in compliance with the fourth additional provision of the Law 34/2007, November 15th, of Air quality and protection of the atmosphere.

First additional provision. Designation of the astronomical observatories of Sierra Nevada and Calar Alto as reference points.

1. The optical astronomical observatories of Sierra Nevada (Granada) and Calar Alto (Almeria) are designated as reference points.
2. The Regional Ministry responsible for environmental issues shall approve the influence and adjoining influence zones. For that purpose, the observatories are requested to submit to the Regional Ministry the documents required in the article 24 of the Regulations approved by this Decree. The deadline for the submission of the documents is established in the first transitory provision.

Second additional provision. Modification or expansion of existing outdoor lighting installations.

The modification or expansion of existing outdoor lighting installations implying an increase over 50% of the power, or a growth over 50% in the number of installed luminaries shall be considered as a new installation for the purposes of the Regulations.

Third additional provision. Map of illuminated areas of Andalusia.

The Regional Ministry responsible for environmental issues shall prepare and publish the map of the illuminated areas of Andalusia, in a maximum period of four years from the date of entry into force of this Decree.

First transitory provision. Deadline to request the declaration of E1 zones and reference points.

The requests for the designation of E1 zones and reference points shall be submitted in a period of six months from the date of entry into force of this Decree. After the deadline, the Regional Ministry responsible for environmental issues shall have a period of six months to determine the E1 zones and reference points within the boundaries of the Autonomous Region of Andalusia.

Second transitory provision. Existing outdoor lighting.

The outdoor lighting installations authorized and functioning on the date of entry into force of this Regulation shall be considered as existent, as well as those that already requested the relevant authorizations required by the applicable regulations, provided they are authorized and functioning, at the latest, twelve months after the aforementioned date.

1. The outdoor lighting installations existing on the date of entry into force of this Decree are allowed to maintain their technical characteristics, unless they incur in any of the prohibitions established in the article 11. In that case, the restrictions included in the aforementioned article shall be immediately applicable, except with regard to the article 11.c, for which a maximum period of two years, from the approval of the influence zones and adjoining influence zones to the declared reference points, is set.

2. In a maximum period of three years from the entry into force of this Decree, the licensees of every outdoor lighting installation shall remove the luminaires emitting hemisphere flux above 25% of the total flux emitted by the luminaire.

Third transitory provision. System of application of the obligations and limitations related to zoning.

Regardless the second transitory provision, the provisions of the Regulation approved by this Decree regarding the obligations and limitations related to zoning, shall be mandatory from the date of approval of the zoning, to the following:

- a) Outdoor lighting installations not authorized and functioning after the date of approval of the corresponding zoning, or installations that previously requested the relevant authorizations required by the applicable regulations, but are not functioning twelve months after the approval of the zoning.
- b) The modification or expansion of outdoor lighting installations affecting or increasing the power over 50% or luminaires installed after the approval of the corresponding zoning.

Fourth transitory provision. Municipal Regulations.

1. Municipalities shall approve or adapt the Municipal Regulations of protection against light pollution in agreement with the provisions of the Regulation approved by this Decree in a period of one year from the authorization of the corresponding zoning, according to articles 29 and 30 of the Regulation.
2. Without prejudice to the competences of other Public Administrations, the Regional Ministry responsible for environmental issues shall provide the necessary technical, legal and administrative support for the drafting or amendment of the Municipal Regulations upon request of City Councils.

Furthermore, the Regional Ministry shall prepare in a maximum period of one year from the entry into force of this Decree, a model of Municipal Regulations.

Fifth transitory provision. Establishment of the Advisory Committee for the protection of the night sky against light pollution.

The Advisory Committee for the protection of the night sky against light pollution created in the article 33 of the Regulations shall be established in a maximum period of

one year from the entry into force of this Decree.

Sole repeal provision. Repeal of legislation.

Any provisions of equal or inferior level that oppose to the terms established in this Decree are hereby repealed.

First final provision. Establishment of formats and technical instructions.

The licensee of the General Directorate responsible of light pollution issues is allowed to establish the formats of the documents listed in the articles 24 and 29 of the Regulations, as well as to approve the technical instructions required to its implementation.

Second final provision. Development and implementation.

The head of the Regional Ministry of the Environment is allowed to issue any provisions necessary for the development of this Decree.

Third final provision. Entry into force.

This Decree shall entry into force the day following its publication in the Official Gazette of the Regional Government of Andalusia.

Seville, August 3rd 2010

José Antonio Griñán Martínez
CHAIR OF THE REGIONAL
GOVERNMENT OF ANDALUSIA

José Juan Díaz Trillo
HEAD OF THE REGIONAL
MINISTRY OF THE ENVIRONMENT

2. REGULATIONS FOR THE PROTECTION OF THE NIGHT SKY QUALITY AGAINST LIGHT POLLUTION AND ESTABLISHMENT OF MEASUREMENTS FOR ENERGY SAVING AND EFFICIENCY.

CHAPTER I

GENERAL PROVISIONS

Article 1. Objective.

The objective of this Regulation is to regulate the requirements that outdoor lighting installations and technical lighting devices of public and private outdoor lighting shall meet, and in general, the development of the Section 3 of Chapter II of Title IV of the Law 7/2007, July 9th, of Integrated Management of Environmental Quality.

Article 2. Purpose.

In agreement with the article 62 of the Law 7/2007, July 9th, the purpose of this Regulation is the development of measures for the protection of the night sky quality against light pollution, in order to:

- a) To prevent, minimize and correct the effects of the artificial light scattering towards the night sky.
- b) To preserve the natural darkness conditions for the benefit of nocturnal ecosystems in general.
- c) To promote the efficient use of lighting without prejudice to the safety of users.
- d) To reduce the luminous intrusion in areas other than those intended to be illuminated, mainly in natural environments and inside residential buildings.
- e) To safeguard the quality of the night sky and to make its observation easier in general, and especially in the surroundings of the astronomical observatories.

Article 3. Scope.

1. In accordance with the article 60 of the Law 7/2007, July 9th, the provisions of this Regulation shall apply to the public and private outdoor lighting installations, technical lighting devices and lighting auxiliary equipment, in the territorial scope of the Autonomous Region of Andalusia.

2. Lighting of port, airport and rail activities that occur in those installations, lighting of cableway installations, military installations, vehicles, lighting of coasts and maritime signaling, and in general, the lighting of installations and infrastructures under specific regulations that require special lighting measures for safety reasons, are excluded from the scope of this Regulation.

3. Light produced by combustion in the framework of an activity subject to administrative authorization or to other forms of administrative control, when not intended for illumination, is also excluded from the scope of this Regulation.

Article 4. Definitions.

The concepts listed in the International Electrotechnical Vocabulary of the International Electrotechnical Commission, in the section regarding Lighting Technology, shall apply for the purposes of this Regulation, without prejudice to the following definitions:

1. Light, light pollution and energy efficacy:

a) Light pollution: emission of luminous flux due to artificial night lighting installations with inadequate intensities, directions or spectral ranges for the development of the activities foreseen for the illuminated area.

b) Lighting efficacy: quotient of the total luminous flux emitted (product of the illuminated surface and the average illuminance) divided by the total lamp power input.

$$\varepsilon = \frac{S * E_m}{P} \left(\frac{m^2 \cdot lux}{W} \right)$$

ϵ = Energy efficacy of the outdoor lighting (lm/100W).

P = total lamp power input (lamps and auxiliary equipment) (W).

S = illuminated area (m²)

E_m = average illuminance of the installation considering the foreseen maintenance (lux).

c) Artificial light scattering: phenomenon caused by direct emissions and reflections, refractions and transmissions of artificial light into materials of the Earth's surface or atmospheric elements.

d) Visible spectrum: range of the electromagnetic radiation spectrum to which the human eye is sensible.

e) Luminous intrusion: invasion of the luminous flux towards areas that are not intended to be illuminated.

f) Reference point: specific locality that in addition to the protection level specified for the zone where it is included needs to be surrounded by specially protected influence zones.

g) Reflection of light: physical phenomenon produced when light encounters an interface between two media of different nature and aggregation state and as a consequence, changes its direction and returns into the medium from which it originated.

h) Refraction of light: physical phenomenon produced when light changes its direction when it crosses an interface between two media with different nature and aggregation state and as a consequence, it no longer propagates in the medium from which it originated and continues propagating into the new medium.

i) Transmission of light: physical phenomenon produced when light suffers a first refraction when crossing an interface, it continues propagating and it suffers a second refraction when crossing again to the original medium.

2. Technical lighting parameters.

a) Performance of a luminaire: ratio between the total luminous flux of the

luminaire, measured in practical conditions specified with its own equipment and lamps, and the sum of the luminous flux of the same lamps outside the luminaire and functioning with the same equipment under the specified conditions.

b) Luminous flux (Φ): power emitted as visible radiation and evaluated in accordance with its effect on a CIE standard photometric observer. The lumen (lm) is its unit of measurement.

c) Installed upper hemisphere flux or upward light output ratio installed (ULORinst): proportion of the total luminous flux, expressed as a percentage, emitted above the horizontal plane by an outdoor lighting fixture, installed in its normal position of design (dimensionless magnitude).

d) Illuminance (E): relation between the luminous flux emitted by a source and the surface where it falls (the lux is its unit of measurement).

e) Average horizontal illuminance (E_m): value of the average horizontal illuminance of the specified surface (the lux is its unit of measurement).

f) Luminous flux intensity (I): luminous flux emitted per unit of solid angle (its unit of measurement is the candela).

g) Luminance (L): luminous intensity per unit area (viewed by the human eye) of light travelling in a given direction (its unit of measurement is the candela/m²).

h) Average luminance (L_m): value of the average luminance of the specified surface (its unit of measurement is the candela/m²).

3. Lighting equipment:

a) Outdoor lighting fixture: device that produces, distributes, filters or transforms artificial light intended to outdoor lighting.

b) Auxiliary equipment: elements that make possible the switching on, correction and regulation of the luminous level of the light sources (ballasts, condensers, starters, astronomical clocks, regulators, etc.).

c) Lamp: lighting device that produces electromagnetic radiation which is generally visible.

d) Laser: lighting device that emits light through a process of amplification by stimulated emission of radiation.

e) Led: Light emitting diode.

f) Luminaire: lighting device that distributes, filters or transforms the light transmitted by one or more lamps. It includes all the necessary parts (except the lamps) to fix and protect the lamps and when necessary, the auxiliary equipment and electrical connectors to connect it to the power source.

g) Louvre: reflector or surface located in the interior of a luminaire that models the shape and direction of the lamp luminous flux.

h) Projector: lighting device that concentrates the light from a lamp in a limited solid angle through an optical system (mirrors or lenses) to produce high luminous intensity towards a given direction.

i) Automatic systems of switching on and off, regulation and control: devices that permit the functioning of the lighting installation in a variable regimen.

Article 5. Collaboration agreements

Agreements between the Administration of the Regional Government of Andalusia and the Local Authorities, as well as between the latter and the international professional astronomical observatories, shall be promoted according to the criteria established in the article 8.1, with the objective of reducing and controlling light pollution.

CHAPTER II REGULATING SYSTEM OF OUTDOOR LIGHTING

SECTION 1. Zoning and Lighting Types

Article 6. Zoning.

1. According to the provision of the article 63 of the Law 7/20017, July 9th, to establish the appropriate levels of lighting for the specific uses and necessities, the following types of lighting areas shall be established:

a) E1. Dark areas. Comprises the following zones:

1st Zones located in land classified as non-developable by the urban planning, included in natural sites of the Autonomous Region, with a special protection regimen under the regional, state or community regulations, or under international conventions and standards, where certain habitats and species are found, which due to its great ecological value or singularity need to be protected from the disturbing effect of artificial light.

2nd Zones of special interest for scientific research through the astronomical observation within the range of the visible spectrum.

b) E2. Areas that tolerate reduced luminous flux: land classified as developable and non-developable and not included in zone E1.

c) E3. Areas that tolerate medium luminous flux. Comprises the following zones:

1st Residential zones inside the urban area and the periphery, with medium-low building density.

2nd Industrial zones

3rd Facility areas available for use during the night time.

4th General system of open spaces.

d) E4. Areas that tolerate high luminous flux. Comprises the following zones:

1st Zones included in the urban area with high building density.

2nd Zones where commercial, touristic or recreational activities take

place during the night time.

2. To determine if the building density is high, medium or low, the following ratios apply:

- a) High: more than 100 housings/hectare or more than 1.3 m²roof/m²floor.
- b) Medium: between 75 and 100 housings/hectare or between 1 and 1.3 m²roof/m²floor.
- c) Low: less than 75 housings/hectare or less than 1 m²roof/m²floor.

Article 7. E1 Zones.

1. In accordance with the provisions of the article 64 of the Law 7/2007, July 9th, the Regional Ministry responsible for environmental issues, acknowledged the affected city councils, shall establish the areas corresponding to E1 Zone, following the procedure described in Section 1 of Chapter III.

2. In order to protect dark areas, the zoning of the territories adjoining to an E1 zone must have E2 classification.

Article 8. Reference points.

1. The following can be considered as reference points:

- a) The professional observatories with international category.
 - b) Other observatories focused on scientific, academic or postgraduate studies as well as those considered as relevant observatories of amateur associations.
- The following criteria shall be taken into account for the establishment of reference points:

1st Generation of relevant scientific data.

2nd Development of information and training activities.

2. For each reference point, its influence zone (Z1) is defined as the surface between the perimeter of the reference point and an equidistant line, one kilometer away from it. The extension of this surface can be modified according to the particular conditions of the reference point or its surroundings.

3. To avoid high protection areas from being adjacent to areas that tolerate high luminous flux, an influence zone (Z1) and an adjoining influence zone (Z2) shall be defined around the reference point.

The definition of Z2 zones, shall take into account the specific characteristics of the astronomical locality and its surroundings regarding orography and orientation. In that sense, the necessity of higher protection in the areas with direct vision from the reference point shall be considered, as well as in areas from which light emissions are emitted to the atmosphere without orography acting as a natural barrier.

4. Influence zones (Z1) shall receive the following minimum classification regarding the type of reference point to which they correspond:

a) E1 classification: influence zones of observatories considered of international category according to the criteria established in section 1 of article 8.

b) E2 classification: influence zones of other observatories focused on scientific, academic or postgraduate studies as well as relevant observatories of amateur associations, which have this consideration according to the criteria established in section 1 of article 8.

5. The classification of the adjoining influence zone (Z2) shall be the same or one degree lower than that of the influence zone (Z1).

Article 9. Outdoor lighting classification.

In accordance with the provisions of the Complementary Technical Instruction EA-02 of the Decree 1890/2008, November 14th, which approves the Regulations of energy efficiency in outdoor lighting installations and the Complementary Technical Instructions EA-01 to EA-07, the following outdoor lighting types are considered:

- a) Vial lighting.
- b) Specific lighting.
- c) Ornamental lighting.
- d) Lighting for nocturnal surveillance and security.
- e) Lighting of luminous signs and advertisements.
- f) Festival and Christmas lighting.

SECTION 2.

Restrictions and Lighting features

Article 10. Restrictions to lighting parameters.

1. The design, implementation and placing into service of the outdoor lighting installations must follow the indications established in this Regulation and other applicable regulations.
2. The requirements and illumination levels for the different types of lighting are specified in the Complementary Technical Instructions 02 and 03 of the Decree 1890/2008, November 14th, and in the following articles.
3. The City Councils are able to modify the lighting parameters established in this Regulation according to the concrete necessities of its territory, provided that the modifications imply a higher protection of the natural darkness of the night sky. Similarly, City Councils are able to establish a lower protection level due to duly justified security reasons, having to report the Administration of the Regional Government of Andalusia in each case, for the information of the Regional Ministry responsible for environmental issues. The report shall be regulated by the article 56 of the Law 7/1985, April 2nd, Regulator of the Local Regimen Bases and by the Decree 41/2008, February 12th, which regulates the referral of implementations and agreements of the Local Authorities to the Administration of the Regional Ministry of Andalusia.
4. Therefore, according to the characteristics of each reference point and its influence zone and adjacent influence zone, the Regional Ministry responsible for environmental issues is able to establish more restrictive illumination levels and outdoor lighting requirements, after consultation with the interested parties.

Article 11. Restrictions of use.

In accordance with the provisions of the article 66 of the Law 7/2007, July 9th, in the framework of this Regulation and with general character, it is prohibited:

- a) The use of conventional leds, lasers and projectors emitting above the horizontal plane, with advertising, recreational or cultural purposes.
- b) Lighting of beaches and costs, except those included physically and functionally in population centers.
- c) Use of non-monochromatic lamps in the influence zone and adjacent influence zone of a reference point.
- d) Use of illuminated aerostats for advertising, recreational or cultural purposes during the night time.
- e) Use or installation of luminous signs in E1 zones.

Article 12. Exceptions to the restrictions of use.

1. According to the provisions of the article 66.2 of the Law 7/2007, July 9th, the restrictions established in the anterior article shall be omitted in the following cases:

- a) Duly justified cases of citizenship security.
- b) Rescue operations and other emergency situations. This exception will only be applicable during the extent of the rescue operation or the emergency situation.
- c) Temporary events of special social interest, among which events of touristic and economic as well as cultural or sporting interest are included. This exception will only be applicable during the extent of the event.
- d) Lighting of monuments or areas of special heritage and cultural interest.
- e) For other duly justified lighting uses of special interest.

2. The agreement of the City Council authorizing the exception to the restrictions in the foreseen cases in paragraphs c), d) and e) of the anterior section, is required.

Article 13. Lamps and luminaires features.

Without prejudice of the provisions of the Decree 1890/2008, November 14th, the lamps and luminaires must have the following characteristics:

a) Regarding the type of lamp, those with higher energy efficiency and compatible with the requirements of this Regulation shall be used.

In E1 and E2 zones adjacent to E1 zones, the emission in the short wavelength band of the visible spectrum should be avoided, concentrating the light mostly in wavelengths above 525nm. Lamps or filters to ensure that light under wavelengths of 440nm is not being emitted shall be installed. When there is not a need of high color rendition in the illuminated zone and when the technical characteristics of the installation allow it, monochromatic or almost monochromatic lamps shall be used.

b) Luminaires with a design that projects light below the horizontal plane shall be used, without prejudice of the provisions of article 14.

c) With general character, luminaires that do not project light outside the object or area to be illuminated and that prevent light from introducing directly into adjoining properties or from directing towards the night sky, shall be used. For this purpose, parameters, slats, louvers or any other adequate elements shall be interposed.

Article 14. Ornamental lighting.

1. In the particular case of ornamental lighting, the aim is to dispose the luminaires in a way that allows them to emit the luminous flux downwards. In case it is not possible, louvers shall be used, provided it is technically viable.

2. This lighting must be turned off in the night time period specified by the article 18.1.

3. City Councils are allowed to establish exceptions to the lighting of buildings or sites of special historic and cultural interest, according to their singular heritage and cultural values, during the night time.

For those municipalities having properties listed in the General Catalogue of the Andalusian Historical Heritage, the provisions of this article are applicable without prejudice of the measurements established by the historical heritage legislation to prevent its visual or perceptive pollution.

4. The ornamental lighting shall not exceed the limit values established in the Complementary Technical Instruction EA-02 of the Decree 1890/2008, November 14th.

Article 15. Electrical signs and advertisements lighting.

1. During the night time established in the article 18.1, only those advertising posters, billboards and signs that inform about the localization and existence of places where services are provided while these are operational, will remain lit.

2. Without prejudice to the provisions of the anterior section, the signs and advertisements lighting shall be implemented through luminaires emitting the luminous flux downwards.

3. The lighting of signs and advertisements shall not exceed the limit values established in the Complementary Technical Instruction EA-02 of the Decree 1890/2008, November 14th.

Article 16. Festival and Christmas lighting.

1. Festival and Christmas lighting shall be regulated by the City Councils through its own lighting system which shall minimize light pollution and optimize energy consumption.

2. In any event, the maximum values of installed power established in the Complementary Technical Instruction EA-02 of the Decree 1890/2008, November 14th, shall be satisfied.

Article 17. Luminous intrusion.

New outdoor lighting installations, understood as those that are not considered existent under the criteria listed in the second transitory provision, except festival and Christmas lighting, shall meet the maximum values established in the Complementary Technical Instruction EA-03 of the Decree 1890/2008, November 14th, with the aim of minimizing the effects of intrusive or disturbing light on resident persons and citizenship in general.

Article 18. Lighting regimen and hours of use.

1. With general character, the night time is established as that within the following time slot:

- a) From 0:00 hours to 6:00 hours, during winter time.
- b) From 1:00 hours to 6:00 hours, during summer time.

2. City Councils are allowed to establish in their municipal regulations justifiably extensions of the night time.

3. All outdoor lighting installations, new or existent, shall have automatic systems of regulation or switching on and off, necessary to fulfill the provisions of this Regulation and those of the Decree 1890/2008, November 14th.

4. In E1 and E2 zones, the outdoor lighting that is not necessary for security reasons shall remain switched off during the night time.

5. The outdoor lighting installations in zones E3 and E4 shall reduce as much as possible the luminous flux during the night time with regard to the applicable limits while maintaining the uniformity of the lighting.

6. City Councils are allowed to make exceptions to the provisions of sections 4 and 5 for duly justified cases, for the development of recreational nature activities as well as cultural, sporting, touristic, commercial, industrial or agricultural activities during night time, provided they are authorized by the competent Administration.

Article 19. Maintenance operations.

During maintenance operations of all outdoor lighting installations, public as well as

private, the provisions of this Regulation as well as those of the Decree 1890/2008, November 14th, shall be taken into account.

Article 20. Outdoor lighting installations subject to authorization or licensing.

1. The licensees of the outdoor lighting installations related to activities subject to integrated environmental authorization, unified environmental authorization, environmental qualification, building permit or other municipal intervention actions through the relevant authorizations or administrative licenses, shall include in the project presented with the corresponding authorization or license request, according to the provisions of this Regulation, at least, the following information:

- a) The justification of the lighting parameters levels in the foreseen outdoor lighting installations.
- b) The installed upper hemisphere flux (ULORinst).
- c) The technical features of the luminaires, lamps and auxiliary equipment.
- d) The foreseen control systems.
- e) The energy efficiency and saving criteria.
- f) The installation plans.

2. In these projects the ULORinst shall be inferior or equal to 1%. When this is not possible, it must be justified in the project and under no circumstances the values established in Annex I shall be exceeded.

3. The projects of public installations shall necessarily comply with the light pollution prevention and correction criteria defined in this Regulation.

CHAPTER III

PROCEDURE FOR THE DECLARATION OF LIGHTING AREAS AND REFERENCE POINTS

SECTION 1.

Procedure for the Declaration of E1 Zones and Reference Points

Article 21. Competent body.

1. The licensee of the corresponding Provincial Delegation of the Regional Ministry responsible for environmental issues has the competence to initiate, deal with, resolve and revise the declaration of E1 zones and reference points.

2. If the E1 zone involves more than one province, the procedure shall be processed and resolved by the General Directorate responsible for light pollution issues.

Article 22. Initiation.

The declaration of E1 zones and reference points shall be initiated, through resolution of the competent body or upon request of the interested persons.

Article 23. Application.

1. The application shall conform to the model in Annex II and shall be addressed to the competent body.

The applications made by non-electronic means shall be submitted along with the required documentation in any of the offices or registers stated in the article 38.4 of the Law 30/1992, November 26th, of the Legal Regimen of Public Administrations and the Common Administrative Procedure, as well as in the article 82 of the Law 9/2007, October 22nd, of the Administration of the Regional Ministry of Andalusia.

2. The submission of applications can also be made by telematic means through the Internet, under the terms of the articles 6 and 13 of the Decree 183/2003, June 24th, which regulates the citizen's advice and information service and the processing of administrative procedures by electronic means (Internet) and other applicable regulations, as well as the articles 83 and 113 of the Law 9/2007, October 22nd. The applications, which shall comply with the requirements established in the article 12.3 of the Decree 183/2003, June 24th, in the framework of the requirements established in the article 7.4 of the Law 9/2007, October 22nd, shall be submitted to the Telematic Register of the Administration of the Regional Government of Andalusia. The application can be found in the citizen's website "andaluciajunta.es", as well as in the website www.juntadeandalucia.es/medioambiente.

3. The provisions of the articles 9 and 16 of the Decree 183/2003, June 24th, are applicable to the submission of electronic documents. Under these circumstances, the interested persons shall have a recognized electronic signature, regulated by the article 3 of the Law 59/2003, December 19th, of electronic signature, or by the electronic signature system included to the National Identity Document according to the articles 14 and 15 of the Law 11/2007, June 22nd, of electronic access of the citizens to the Public Services. In the case of lacking the aforementioned tools, the provisions of the article 22 of this Decree shall apply.

4. The applications that include a recognized electronic signature and that are submitted according to the provisions of the Decree 183/2003, June 24th, shall have, with regard to the electronic data and documents, the same legal effects than the applications submitted in accordance with the article 70.1 of the Law 30/1992, November 26th.

5. The interested person shall opt, at any point of the procedure, for a telematic processing method or an on-site one.

Article 24. Documentation.

1. The applications, without regard to the submission form, shall be accompanied by the following documents, which can be submitted to the Telematic Register of the Administration of the Regional Government of Andalusia, provided its authenticity, integrity, conservation and other guarantees and requirements listed in the article 12 of the Decree 183/2003, June 24th, are guaranteed:

a) Limits of the zone or localization of the area for which the classification of E1 zone or reference point is requested. The geographic information shall be digitally submitted in shapefile (shp) format or compatible format and defined in the European Datum 150 (ED50) reference system or in the European Terrestrial Reference System 89 (ETRS89), in UTM Zone 30 projection.

b) Mapping of the area in the format specified in the previous paragraph.

c) Sworn declaration stating that the area is affected by some environmental protection level.

d) Description of the zone and habitats or species to be protected within it, as well as other values that justify the application.

e) Classification and qualification of the land according to the urban planning.

f) Sworn declaration stating the ownership of the land property.

g) Sworn declaration stating the land uses and exploitations in the area proposed as E1 zone or reference point and in the suggested influence zones.

h) Explanatory report of the problems caused by light pollution in the moment of the submission of the application, as well as the potential risks.

In the case of reference points, the report shall include representative measurements of the night sky glow reported from the observatory. Moreover, supporting documents stating that relevant scientific data is produced in the observatory, such as complete references to papers and publications where data obtained in the observatory have been used, shall be included. Where appropriate, a list of the educational and training activities carried out in the observatory in the past five years shall be included.

i) In the case of reference points, the limits of the influence zone and adjacent influence zone proposed by the applicant shall be submitted, accompanied by the cartography of the area.

j) Description, as detailed as possible, of the outdoor lighting installations existent in the E1 zone or reference point, as well as those located in the proposed influence and adjacent influence zones.

k) Other relevant data.

2. Notwithstanding the provisions of the previous paragraph, in accordance with the article 84.3 of the Law 9/2007, October 22nd, the interested persons shall not present the documents that are already in the possession of the Administration of the Regional Government of Andalusia, providing the date and procedure of submission are indicated.

3. The Public Administration may request the collation of the content of the provided documentation. In the case that the collation is impossible and with exceptional character, the Public Administration may request the display of the document or the original information. The submission of these documents shall imply the applicant's consent to the use of the personal information included in the documents by the Public Administration, according to the provisions of the article 6.2 of the Organic Law 15/1999, December 13th, of Personal Data Protection.

4. According to the provisions of article 111.4 of the Law 9/2007, October 22nd, the interested persons shall submit the documents from third parties by telematic means, provided the guarantees and requirements established in the article 12 of the Decree 183/2003, June 24th are met.

Article 25. Procedure.

1. After the deadline for submission of applications established in the First transitory provision of the Decree by which this Regulation is approved, the applications shall be examined by the competent body that will assess their suitability and adequacy to the E1 zone or reference point classification. The competent body will inform the interested persons about the maximum period of time for issuing and notifying the resolution terminating the procedure and where appropriate, about the administrative silence implications according to article 42.4 of the Law 30/1992, November 26th.

In the cases where an application is not needed to initiate the procedure for the declaration of E1 zones and reference points, in the notification or publication of the agreement of initiation, the following shall be included: the maximum period of time for issuing and notifying the resolution terminating the procedure, the administrative silence implications, where appropriate, and the date of the submission of the application to the register of the competent body.

2. If the application requirements are not met or the required documents are not included, the interested persons shall be requested to complete the application within a period of ten days and shall be warned that if they fail to do so, they shall be deemed to have withdrawn the application, following the resolution which shall be issued according to the provisions of the article 42 of the Law 30/1992,

November 26th. In accordance with article 15 of the Decree 183/2003, June 24th, this requirement may be made by telematic means, provided the interested persons have expressed their consent to it in the application.

3. Following the initiation of the declaration procedure, the competent body shall request to the affected City Councils a report on the existent outdoor lighting installations in the E1 zone or reference point and proposed influence zones (Z1 and Z2) that includes, at least: power of the outdoor lighting installations, number and type of lamps and its power, types of luminaires, types of switching on and off systems, operating hours, types of systems of luminous flux regulation where they exist, and age of the outdoor lighting installations. This report shall be issued by the City Council in the maximum period of one month.

4. The competent body shall establish a period of public information, publishing in the Official Gazette of the Regional Government of Andalusia, in the notice boards of the affected City Councils and in the website of the Regional Ministry responsible for environmental issues, that the dossier is available during a one month period from the announcement to be examined by any natural or legal person and to make the representations they deem appropriate. The regulations established in the article 86 of the Law 30/1992, November 26th are applicable to this procedure.

5. In view of the above, the competent body shall inform the natural persons or entities that may be affected by the declaration of zones and, in any case, those City Councils in whose municipal area are the zones included about the procedure, to make the representations they deem appropriate in a maximum period of fifteen days.

Article 26. Resolution.

1. Following the hearing process, the competent body shall issue the resolution about the declaration of the corresponding E1 zones and reference points. The resolution shall be published in the Official Gazette of the Regional Government of Andalusia and in the website of the Regional Ministry responsible for environmental issues.

2. In the cases of ex-officio initiation of the procedure, the maximum period to

notify and publish the resolution shall be of six months from the date of the initiation agreement to which article 25.1 refers. The failure to notify or publish the corresponding resolution within the established period shall have the effects foreseen in the article 44 of the Law 30/1992, November 26th.

3. In the cases of initiation of the procedure upon request of the interested persons, the maximum period to notify and publish the resolution shall be of six months from the date of entry of the application in the register of the competent body. The failure to notify or publish the corresponding resolution within the established period shall have the effects foreseen in the article 43 of the Law 30/1992, November 26th.

Article 27. Catalogue of E1 zones and reference points.

1. The Catalogue of the E1 zones and reference points is created, which shall be attached to the Regional Ministry of the Environment and managed by the General Directorate responsible for light pollution issues.

2. The catalogue shall include the E1 zones and reference points declared by the competent body.

3. The Regional Ministry responsible for environmental issues shall review and update the Catalogue of E1 zones and reference points at least every five years.

SECTION 2.

Procedure for the Determination of E2, E3 and E4 Zones.

Article 28. Determination of E2, E3 and E4 zones.

1. In accordance with the article 64.2 of the Law 7/2007, July 9th, the City Councils shall determine the light zones E2, E3 and E4 within their municipal boundaries, attending to the main land use, without excluding the possible presence of land uses different from those indicated as majoritarian in each case.

2. In addition, City Councils shall define their own territory classification, provided that the characteristics and restrictions established by this regulation for the light areas are respected

Article 29. Proposal of zoning.

The City Councils shall inform the relevant Provincial Delegation of the Regional Ministry responsible for environmental issues about their proposal of zoning, in a period of one year from the approval of the E1 zoning or its revision. To that effect, they shall submit a report to the Provincial Delegation, with the following minimum information:

- a) Classification and qualification of the land of each zone.
- b) Development potential of the different zones.
- c) Limits of each zone in shapefile (shp) format or compatible format and defined in the European Datum 150 (ED50) reference system or in the European Terrestrial Reference System 89 (ETRS89), in UTM Zone 30 projection.
- d) Mapping of the area in the format specified in the previous paragraph.
- e) Descriptive report including the justification of the zoning.
- f) Program for the adaptation of the existent outdoor lighting installations to the requirements of this Regulation. The program shall include, at least: analysis of the adequacy of the existent outdoor lighting installations to the light zone where they are located, description of the necessary measures to adapt these outdoor lighting installations, implementation schedule and assessment of their cost.

Article 30. Report of the Provincial Delegation.

1. The head of the Provincial Delegation responsible for environmental matters shall issue in a period of two months from the reception of the zoning proposal foreseen in the article 29, a perceptive and binding report.
2. Following expiry of the given period without issuing the report, it shall be deemed favorable according to the provisions of the article 83.4 of the Law 30/1992, November 26th, and the City Council shall proceed to the approval of the zoning.

3. In the case that the report was unfavorable, the City Council shall have a period of two months to submit the relevant information or to modify its zoning, when appropriate. Under these circumstances, the Provincial Delegation shall issue a new report under the terms laid down in section 1.

4. For the issuing of the report account shall be taken of:

a) Compliance with the criteria for luminous zoning established in the article 6.

b) Adjustment of the zoning proposal to the requirements of article 29.

c) Compatibility of the zoning proposal with the determination of E1 zones, reference points and their influence zones established by the Regional Ministry responsible for environmental issues.

d) Compliance with the light pollution regulations.

5. Following the approval of the zoning by the City Council, it shall be reported to the Administration of the Regional Government of Andalusia according to the referral regimen of acts and agreements of the Local Authorities regulated by the article 56 of the Law 7/1985, April 2nd, and by the Decree 41/2008, February 12th. The report shall be made in a maximum period of two months from the approval of the corresponding zoning.

SECTION 3.

Revision and Discontinuation of Zoning

Article 31. Revision of the zoning of the territory.

1. The procedure for the revision of the zoning shall initiate after the agreement of the head of the General Directorate responsible of light pollution issues and shall be published in the Official Gazette of the Regional Government of Andalusia.

2. The applications for the declaration of E1 zones and reference points shall be submitted by the interested persons in a maximum period of six months from the publication of the agreement for the initiation of the revision of the catalogue of E1 zones and reference points. The revision shall be dealt with following the procedure

established in Section 1 of this Chapter. The new declaration shall be published in the Official Gazette of the Regional Government of Andalusia and shall take effect from the date of its publication.

3. Following the approval of E2, E3 and E4 zones in its territory, City Councils shall update this zoning in the following periods and under the following circumstances:

a) When the Regional Ministry responsible for environmental issues establishes a new E1 zone or reference point, the affected City Councils shall adapt their zoning in a maximum period of one year from the publication of the corresponding declaration in the Official Gazette of the Regional Government of Andalusia.

b) Within six months following the final approval of the general urban planning or its revision.

c) Within three months after the final approval of any modification of the general urban planning that implies the alteration of the planning conditions of the land uses.

4. City Councils shall request the report regulated by the article 30 for the approval of the revision of the zoning. Following the approval of the zoning by the City Councils, they shall inform the relevant Provincial Delegation in a period of two months from the date of approval.

Article 32. Discontinuation of the zoning.

1. The discontinuation of E1 zones and reference points shall apply if the circumstances that led to their previous declaration have disappeared.

2. The discontinuation procedure shall be initiated upon request or by agreement of the competent body, which shall issue a reasoned proposal. This proposal shall be brought to the knowledge of the interested persons to make the representations they deem appropriate in accordance with the provisions of the article 84 of the Law 30/1992, November 26th.

3. Following the hearing process, the corresponding resolution shall be issued and published in a maximum period of three months from the date of entry of the application in the competent body or from the date of the initiation agreement. Following expiry

of the given period without issuing the corresponding resolution, it shall be deemed favorable. The discontinuation resolution shall be published in the Official Gazette of the Regional Government of Andalusia and in the website of the Regional Ministry responsible of environmental issues.

4. The discontinued zones shall be considered as E2 zones until the City Councils establish a new classification for them according to the procedure laid down in the article 31.

CHAPTER IV TECHNICAL ADVISING FOR THE PROTECTION OF THE NIGHT SKY AGAINST LIGHT POLLUTION

Article 33. Advisory Committee for the protection of the night sky against light pollution.

1. Attached to the Regional Ministry responsible of environmental issues, the Advisory Committee for the protection of the night sky against light pollution is created, to be referred to henceforth as the Advisory Committee, of interdepartmental nature, which shall have advising and proposal functions.

2. The functioning of the Advisory Committee shall follow the regulations laid down in the Chapter II of Title II of the Law 30/1992, November 26th, as well as the provisions of the Title IV, Chapter II, Section 1 of the Law 9/2007, October 22nd.

3. The Advisory Committee shall be integrated by the following members:

a) The head of the General Directorate responsible for light pollution issues, who shall hold The Presidency.

b) The head of the General Directorate responsible for nature protection areas issues of the Regional Ministry responsible for environmental matters.

c) The head of the General Directorate responsible for issues regarding the management of the environment of the Regional Ministry responsible for environmental matters.

d) The head of the General Directorate responsible for energy efficiency matters of the Regional Ministry responsible for energy issues.

e) The head of the General Directorate responsible for housing and architecture matters of the Regional Ministry responsible for housing issues.

f) The head of the General Directorate responsible for historical heritage matters of the Regional Ministry responsible for cultural issues.

g) Two representatives of the municipalities of Andalusia, designated by the most widely established association of municipalities and autonomous provinces.

h) One representative of the Spanish Lighting Committee.

i) One representative of the public Andalusian Universities, that shall be designated by the head of the General Directorate responsible for university matters of the Regional Ministry responsible for university issues.

j) Two representatives of business organizations within the regional scope of Andalusia.

k) Two representatives of the most characteristic trade union organizations of Andalusia.

l) One representative of the National Astronomy Committee.

m) One representative of the Astrophysics Institute of Andalusia.

n) One representative of the German-Spanish Astronomical Center.

The Committee shall be assisted by persons of recognized technical and scientific competence regarding lighting and energy saving and efficiency issues, designated upon request of the corresponding body. They shall take part in the meetings of the Committee in an advisory capacity, without voting rights.

4. The Committee members addressed in letters g), h), j), k), l), m), and n) of the previous section shall be designated according to the provisions of their own regulations.

5. The following shall be functions of the Advisory Committee:

- a) To advise the Regional Ministry responsible for environmental issues about the regulation proposals regarding light pollution matters in Andalusia.
- b) To advise the Regional Ministry responsible for environmental issues about the zoning proposals, the measurements and the programs implemented in compliance with this Regulation.
- c) To propose to the Regional Ministry responsible for environmental issues those implementations deemed appropriate and that contribute to the better development of the objectives foreseen in this Regulation, issuing reports when it shall be required.
- d) To propose to the Regional Ministry responsible for environmental issues the outreach, promotion and advisory tasks derived from the implementation of this Regulation.
- e) To advise the Regional Ministry responsible for environmental matters about Research and Development issues regarding light pollution.
- f) To advise the City Councils and other local authorities of the Autonomous Region of Andalusia about light pollution issues.
- g) To be informed about the evaluation and monitoring reports issued with regard to the zoning agreements referred by the City Councils.

CHAPTER V COMPETENCES

Article 34. Competences of the Regional Ministry responsible for environmental issues.

The Regional Ministry responsible for environmental issues has the following competences to prevent and to combat light pollution:

- a) The surveillance, inspection and control of light pollution issues with regard to public and private actions subject to integrated environmental authorization or unified environmental authorization, without prejudice of the competences of other bodies of the Regional Government of Andalusia and other Administrations in their respective scopes of competences.
- b) The sanctioning power with regard to light pollution issues, without prejudice of the competences of other bodies of the Regional Government of Andalusia and other Administrations in their respective scopes of competences.
- c) The definition of E1 zones and the determination of references points according to the provisions of articles 6, 7 and 8.
- d) The promotion of outreach and citizen awareness campaigns about the benefits of an adequate night lighting.
- e) According to the principle of collaboration, the promotion of collaboration agreements between the Administration of the Regional Government of Andalusia and the municipalities and other local authorities of the Autonomous Region, to foster the application of the measurements foreseen in this Regulation.
- f) The promotion of collaboration agreements with institutions responsible for outdoor lighting installations that are excluded from the scope of application of this Regulation according to the articles 3.2 and 3.
- g) The establishment of measures to promote compliance with the provisions of this Regulation.
- h) The development of any other functions attributed in this Regulation.

Article 35. Duty of cooperation.

The Regional Ministry responsible for environmental issues and the Local Authorities shall cooperate, within their respective scopes of competences, to ensure compliance with the provisions of this Regulation.

CHAPTER VI INSPECTION, CONTROL AND SANCTIONING SYSTEM

Article 36. Power of inspection and control.

1. The Regional Ministry responsible for environmental issues shall perform the duties of surveillance, inspection and control of the actions related to prevention and control of light pollution, according to the provisions of the article 34. These duties shall be carried out by staff of the relevant Administration and shall count on the support of technical staff specialized in the field. The development of functions that imply, directly or indirectly, the exercise of public powers, shall be carried out by government officials. In addition, the municipalities shall perform these duties within the scope of their competences.

2. The facts uncovered by the inspection report issued by the staff recognized as authority according to the provisions of the articles 137.3 of the Law 30/1992, November 26th, and 130.1 of the Law 7/2007, July 9th, shall be presumed to be truthful, without prejudice of the evidence to the contrary that the inspected persons or institutions shall present.

3. According to the provisions of the article 130 of the Law 7/2007, July 9th, the persons responsible for the activities, actions and installations shall provide the necessary assistance and collaboration, and allow the entry to the installations to those persons that carry out the duties of surveillance, inspection and control.

Article 37. Infringements and sanctions.

1. According to the provisions of the article 138.1.g) of the Law 7/2007, July 9th, the following shall be considered as serious infringements and shall be sanctioned with fines from 30,001 to 60,000 euros:

a) To exceed the limits established in the articles 10, 14, 15, 16 and 17.

b) To maintain the ornamental lighting switched on during the night time, without prejudice to the provisions of article 14.3.

c) To maintain the signs and advertisements lighting switched on during the night time, without prejudice to the provisions of the article 15.1.

d) To fail to comply with the obligation of illuminating billboards, signs and advertisements with luminaires that emit luminous flux downwards under the provisions of article 15.2.

e) To maintain the outdoor lighting of E1 and E2 zones switched on when it is not necessary due to security reasons according to the provisions of the article 18.4.

f) To use conventional leds, lasers and projectors emitting above the horizontal plane, with advertising, recreational or cultural purposes according to the provisions of the article 11.a).

2. The following shall be considered as minor infringements and shall be sanctioned with fines up to 30,000 euros:

a) To fail to comply with the restrictions established in the article 10, which are not listed in section 1 of this article.

b) To fail to comply with the restrictions of use established in sections b), c), d) and e) of the article 11, except in the cases listed in the article 12.

c) To use lamps and luminaires that fail to comply with the characteristics established in the article 13.

d) To fail to comply with the lighting regimen and hours of use established in the article 18, which are not listed in section 1 of this article.

e) To fail to comply with the maintenance operations established in the article 19.

3. The imposition of the sanctions established in this article shall be competence of the head of the Provincial Delegation of the Regional Ministry responsible for environmental issues.

ANNEX I

RESTRICTIONS TO THE INSTALLED UPPER HEMISPHERE FLUX (ULORinst) ACCORDING TO ZONING

Limit values of ULORinst according to zoning

E1	≤ 1 %
E2	≤ 5 %
E3	≤ 15 %
E4	≤ 15%
Vial lighting in general	≤ 5 %

ANNEX II

E1 ZONES AND REFERENCE POINTS APPLICATION FORM

ANEXO II

JUNTA DE ANDALUCÍA
CONSEJERÍA DE MEDIO AMBIENTE

ANEXO II

SOLICITUD

DECLARACIÓN DE ZONAS E1 O PUNTOS DE REFERENCIA

Decreto / / de fecha (BOJA nº / de fecha /)

1 DATOS RELATIVOS AL SOLICITANTE

INDIVIDUAL / EMPRESA / ENTIDAD PÚBLICA

DOMICILIO CALLE, PUNTO O AVENIDA Y NÚMERO

LOCALIDAD: PROVINCIA: C. POSTAL:

TELÉFONO: FAX: CORREO ELECTRÓNICO:

ORGANISMO O ENTIDAD A LA QUE REPRESENTA: NIF:

DOMICILIO A EFECTOS DE NOTIFICACIÓN (E1 - no es obligatorio)

LOCALIDAD: PROVINCIA: C. POSTAL:

TELÉFONO: FAX: CORREO ELECTRÓNICO:

2 DATOS RELATIVOS A LA PETICIÓN

SE SOLICITA LA DECLARACIÓN DE: ZONA E1 PUNTO DE REFERENCIA

LOCALIZACIÓN: SUPERFICIE:

MUNICIPIOS EN LOS QUE SE UBICA:

BREVE DESCRIPCIÓN DE LOS MOTIVOS DE LA SOLICITUD:

3 DOCUMENTACIÓN QUE SE ADJUNTA

LÍMITES DE LA ZONA O UBICACIÓN DEL ENLACE (COORDENADAS EN PROYECCIÓN UTM)

CARTOGRAFÍA DE LA ZONA EN EL FORMATO ESTABLECIDO POR LA DIRECCIÓN GENERAL COMPETENTE EN MATERIA DE CONTAMINACIÓN LUMÍNICA.

IDENTIFICACIÓN POR ALGUNAS FOLIAS DE PROTECCIÓN AMBIENTAL.

DESCRIPCIÓN DE LA ZONA O ENLACE Y HABERES O PROTECCIÓN CONTENIDA EN LA MISMA, ASÍ COMO EL RESTO DE VALORES QUE JUSTIFICAN LA PROPUESTA.

CLASIFICACIÓN Y CALIFICACIÓN DEL SUELO SEGÚN EL PLANEAMIENTO URBANÍSTICO GENERAL VIGENTE O EN LA NORMATIVA MUNICIPAL.

TITULARIDAD DE LA PROPIEDAD DEL SUELO.

DIBUJO DEL SUELO Y ESPECIFICACIONES DE LA ZONA E1 O DEL PUNTO DE REFERENCIA Y LAS ZONAS DE INFLUENCIA PROPUESTAS.

MEMORIA JUSTIFICATIVA DE LOS TRABAJOS CÁDASTROS CIVIL, INVENTARIO DE LA PERSECUCIÓN DE LA SOLISTUD POR LA CONTAMINACIÓN LUMÍNICA Y MEDIDA POTENCIAL.

EN CASO DE TRÁMITE DE UN PUNTO DE REFERENCIA, SE INDIQUEN LOS LÍMITES DE LA ZONA DE INFLUENCIA Y DE LA ZONA DE INFLUENCIA ADYACENTE PROPUESTA POR EL SOLICITANTE, ACORDEANDOSE A LA CONFIGURACIÓN DE LA ZONA.

DESCRIPCIÓN, LO MÁS DETALLADA POSIBLE, DE LAS INSTALACIONES DE ALUMBRADO EXISTENTES EN LA ZONA E1 O EL PUNTO DE REFERENCIA, ASÍ COMO LAS UBICACIONES DE LA ZONA DE INFLUENCIA Y EN LA ZONA DE INFLUENCIA ADYACENTE PROPUESTA.

OTROS DATOS DE INTERÉS.

LOS DOCUMENTOS RELACIONADOS EN EL CAPÍTULO III, SECCIÓN 1, ARTÍCULO 22, PÁRRAFO 1 LETRAS SE CONSTAN EN PODER DE LA ADMINISTRACIÓN DE LA JUNTA DE ANDALUCÍA, LOS CUALES PUEDEN PRESENTARSE CON FOLIOS PARA EL PROCEDIMIENTO.

REVERSO ANEXO II

4 SOLICITUD, LUGAR, FECHA Y FIRMA

La persona abajo firmante **DECLARA**, bajo su expresa responsabilidad, que son ciertos cuantos datos figuran en la presente solicitud, así como en la documentación adjunta, y **SOLICITA** la declaración de las zonas E1 / los puntos de referencia que en la misma se contienen.

En _____ a _____ de _____ de _____

EL/ LA SOLICITANTE O REPRESENTANTE LEGAL.

Fdo: _____

ILMO/A. SR/A. DIRECTOR/A GENERAL DE CAMBIO CLIMÁTICO Y MEDIO AMBIENTE URBANO

ILMO/A. SR/A. DELEGADO/A PROVINCIAL DE LA CONSEJERÍA DE MEDIO AMBIENTE

001880

3. AMENDMENTS TO THE DECREE 357/2010, AUGUST 3rd

First final provision. Amendments to the Decree 357/2010, August 3rd, which approves the Regulations for the protection of the night sky quality against light pollution and the establishment of measures for energy saving and efficiency.

The Decree 357/2010, August 3rd, which approves the Regulations for the protection of the night sky quality against light pollution and the establishment of measures for energy saving and efficiency, is amended as follows:

One. The article 11.c) should read as follows:

c) The use of non-monochromatic lamps in the influence zone (Z1) of the observatory.

Two. The article 13.a) would now read:

a) Regarding the type of lamp, those with higher energy efficiency and compatible with the requirements of this Regulation shall be used.

In E1 and E2 zones adjacent to E1 zones, the emission in the short wavelength band of the visible spectrum should be avoided, concentrating the light mostly in wavelengths above 525nm. The spectral distribution of the light emitted by the lamps shall be such as the sum of the spectral radiances of all the wavelengths inferior to 440 nm is less than 15% of its total radiance. In the case that leds are used, the sum of the spectral radiances of all the wavelengths inferior to 500nm shall be less than 15% of its total radiance. Lamps or filters to ensure the compliance with the previous limits shall be installed. When there is not a need of high color rendition in the illuminated zone and when the technical characteristics of the installation allow it, monochromatic or almost monochromatic lamps shall be used.

Three. The article 18.3 should read as follows:

3. All new outdoor lighting installations shall have automatic systems of regulation or switching on and off, necessary to fulfill the provisions of this Regulation and those of the Decree 1890/2008, November 14th.

Four. The article 18.5 would now read as follows:

The outdoor lighting installations shall reduce as much as possible the luminous flux during the night time with regard to the applicable limits while maintaining the uniformity of the lighting.

Five. The article 20.1 should read as follows:

The licensees of the outdoor lighting installations related to activities subject to integrated environmental authorization, unified environmental authorization, environmental qualification, building permit or other municipal intervention actions through the relevant authorizations or administrative licenses, shall include with the corresponding authorization or license request in implementation of the corresponding sectorial legislation, according to the provisions of this Regulation, at least, the following information:

- a) The justification of the lighting parameters levels in the foreseen outdoor lighting installations.
- b) The installed upper hemisphere flux (ULORinst).
- c) The technical features of the luminaires, lamps and auxiliary equipment.
- d) The foreseen control systems.
- e) The energy efficiency and saving criteria.
- f) The installation plans.

Six. The article 20.2 is amended as follows:

In these installations the ULORinst shall be inferior or equal to 1%. When this is not possible, it must be justified in the information accompanying the application and under no circumstances the values established in Annex I shall be exceeded.

Second final provision. Development and implementation.

The head of the Regional Ministry of the Environment is allowed to issue any provisions necessary for the development and implementation of this Decree and, specifically to amend the Technical Instructions listed in the Regulation approved by this Decree.

Third final provision. Entry into force.

This Decree shall entry into force in a period of one month from its publication in the Official Gazette of the Regional Government of Andalusia.