

**ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS  
AND LABELLING) (PUBLIC LIGHTING) REGULATIONS, 2022**

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**ENERGY COMMISSION (ENERGY EFFICIENCY STANDARDS AND LABELLING) (PUBLIC LIGHTING) REGULATIONS, 2022**

IN exercise of the power conferred on the Minister responsible for Energy by subparagraph (i) of paragraph (a) of subsection (1) of section 56 of the Energy Commission Act, 1997 (Act 541) and on the advice of the Board, these Regulations are made this 28<sup>th</sup> day of June, 2022.

*Preliminary Provisions***Purpose of Regulations**

1. The purpose of these Regulations is to promote the efficient use and conservation of energy in the country and mitigate related climate change by

(a) providing for

- (i) the enforcement of Standards set out in the First Schedule and the minimum energy performance standards set out in Part One of the Second Schedule;
- (ii) the labelling of electric mains-operated lamps and luminaires;
- (iii) supplementary product information on electric mains-operated lamps and luminaires;
- (iv) the registration of models of lamps and luminaires in the Appliance Energy Efficiency Register; and

(b) prohibiting the manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of a lamp or luminaire that does not meet the minimum energy performance standards set out in Part One of the Second Schedule.

**Application of Regulations**

2. (1) These Regulations apply to a lamp or luminaire manufactured in the country or imported into the country for the purpose of public lighting services, for display, sale or use in the country.

(2) These Regulations do not apply to a lamp or luminaire other than an electric mains-operated lamp or luminaire.

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*Duties and Requirements*

**Duty to comply with requirements**

3. (1) A person who manufactures, imports, offers for sale, sells, stores, supplies, distributes, donates or otherwise disposes of a lamp or luminaire for use in the country shall ensure that each model of the lamp or luminaire

(a) is registered with the Commission; and

(b) meets the

- (i) Standards set out in the First Schedule;
- (ii) initial luminous efficacy of not less than the values indicated in Table 1 under Part One of the Second Schedule;
- (iii) minimum energy efficiency star rating for non-directional and directional lamps specified in Table 2 under Part One of the Second Schedule and measured in accordance with the Standards;
- (iv) labelling requirements set out in the Third and Fourth Schedules; and
- (v) information requirements set out in the Fifth Schedule.

(2) A person who advertises a lamp or luminaire shall comply with the provisions of Part Five of the Fifth Schedule.

**Prohibition of manufacture, importation, offer for sale, sale, storage, donation, disposal, installation or use of lamp or luminaire**

4. (1) A person shall not manufacture, import, offer for sale, sell, store, donate or otherwise dispose of, install or use a lamp or luminaire in the country, unless the lamp or luminaire meets the minimum energy performance standards set out in Part One of the Second Schedule.

(2) An enforcement authority shall

- (a) detain, cause to be re-exported or seize and destroy a lamp or luminaire imported for use in the country contrary to subregulation (1); or

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(b) seize and destroy a lamp or luminaire manufactured for use in the country contrary to subregulation (1).

**Category of lamp or luminaire**

5. The category of a lamp or luminaire shall be determined in accordance with the categories as set out in Part One of the Fifth Schedule.

**Energy efficiency star rating of lamp or luminaire**

6. The energy efficiency star rating of a lamp or luminaire shall be determined in accordance with the ratings set out in Part One of the Second Schedule.

**Voltage, input power or wattage of lamp or luminaire**

7. The manufacturer of a lamp or luminaire shall ensure that the rated voltage, input power or wattage of the lamp or luminaire is printed conspicuously and displayed on the base of the lamp or luminaire.

**Measurement methods**

8. The information to be provided pursuant to regulations 10 and 11 shall be obtained by

(a) a reliable, accurate and reproducible measurement which takes into account recognised state-of-the-art measurements; and

(b) calculation methods

in accordance with the Standards.

**Use of circumvention device**

9. (1) A manufacturer, an importer or an authorised representative of the manufacturer shall not use a circumvention device during the conduct of a test of a lamp or luminaire.

(2) A person shall not manufacture, import, offer for sale, sell, store, donate, or otherwise dispose of, install or use a lamp or luminaire which is designed to

(a) detect that the lamp or luminaire is being tested by recognising the test conditions or test cycle; or

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(b) react specifically by automatically altering the performance of the lamp or luminaire during the test with the aim of reaching a more favourable level for any of the parameters declared by the manufacturer, importer or authorised representative of the manufacturer, in the technical documentation or included in any other documentation provided.

(3) The energy consumption of a lamp or luminaire and any of the other declared parameters shall not deteriorate after a

(a) software; or

(b) firmware

update, when measured with the same test standard originally used for the declaration of conformity, except with the consent of the Commission and the Standards Authority, before the update.

(4) A manufacturer, an importer or an authorised representative of the manufacturer shall inform the Commission and the Standards Authority in writing, with reasons, prior to an update of the software or firmware.

**Technical documentation**

**10.** (1) A person shall not manufacture, import, offer for sale, sell, store, distribute, donate or otherwise dispose of a lamp or luminaire for use in the country, unless that person has provided the Commission with sufficient technical documentation to enable the Commission

(a) ascertain the accuracy of the information contained

(i) in the Product Information Sheet; or

(ii) on the label; and

(b) register each model of the lamp or luminaire in the Appliance Energy Efficiency Register.

(2) The technical documentation referred to in subregulation (1) shall

(a) be in the English language;

(b) include the Product Information Sheet set out in Part One of the Fifth Schedule; and

(c) contain the information set out in Part Three of the Fifth Schedule marked "Technical Documentation".

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- (3) The technical documentation shall
- (a) be prepared for each model of a lamp or luminaire placed on the market; and
  - (b) include
    - (i) the name and address of the supplier;
    - (ii) the description of the lamp or luminaire, for purposes of identification;
    - (iii) the model identifier of the manufacturer;
    - (iv) the relevant drawings on the main design features of the model and parameters of the lamp or luminaire that affect the energy consumption of the lamp or luminaire;
    - (v) reports of relevant measurement tests carried out in compliance with the Standards;
    - (vi) details of calculations, extrapolations and tests carried out to verify the accuracy of the calculations;
    - (vii) the installation and operating instructions; and
    - (viii) the period within which the model of the lamp or luminaire was manufactured.

**Labelling and information requirements**

11. (1) A person shall not manufacture, import, offer for sale, sell, store, supply, distribute, donate or otherwise dispose of a lamp or luminaire for use in the country, unless the lamp or luminaire and the packaging of the lamp or luminaire meet the following requirements:

- (a) the lamp or luminaire shall bear a label
  - (i) in the form set out in the Third and Fourth Schedules respectively; and
  - (ii) placed on the base of the lamp or luminaire;
- (b) the information in respect of the lamp or luminaire indicated on the packaging of the lamp or luminaire shall be in the English language;
- (c) the Product Information Sheet in respect of the lamp or luminaire shall be as set out in Part One of the Fifth Schedule;



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- (d) the label on the packaging containing a lamp or luminaire shall
- (i) contain the information set out in the Third and Fourth Schedules; and
  - (ii) be printed in colour;
- (e) the label on the lamp or luminaire and on the packaging of the lamp or luminaire shall include the following information:
- (i) the Quick Response Code;
  - (ii) the name or trade mark of the manufacturer;
  - (iii) the model identifier of the manufacturer;
  - (iv) the energy efficiency star rating of the lamp or luminaire, determined in accordance with the test procedures specified in the Standards;
  - (v) the luminous flux of the lamp in lumens, measured in accordance with the test procedures set out in the Standards;
  - (vi) the efficacy performance of the lamp or luminaire measured in lumens per watt and in accordance with the Standards;
  - (vii) the input voltage, input power or wattage of the lamp or luminaire, measured in accordance with test procedures set out in the Standards;
  - (viii) the average rated life of the lamp or luminaire in hours measured in accordance with the test procedures set out in the Standards; and
  - (ix) the country of origin or manufacture;
- (f) the labels on the lamp or luminaire shall be printed in colour on a waterproof material and pasted conspicuously on the lamp or luminaire;
- (g) the background of a label printed or pasted on the lamp or luminaire shall be gold in colour;
- (h) all the stars on the label of the lamp or luminaire shall be shaded in black; and
- (i) the text on the label of the lamp or luminaire shall be black in colour.

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(2) Despite regulation 21, an update to the Standards shall take precedence over the requirements specified in paragraph (e) of subregulation (1) and Part One of the Second Schedule.

(3) Where

(a) a side of the packaging is not large enough to contain a label and the blank border; or

(b) a label would cover more than fifty per cent of the surface area of the largest side of a packaging,

the label and the blank border shall be reduced to not less than forty per cent of the largest side of the packaging and pasted on the largest side of the packaging.

(4) A person shall not remove the label on a lamp or luminaire or the packaging containing a lamp or luminaire before the first retail purchase of the lamp or luminaire.

(5) For the purposes of this regulation, “first retail purchase” means the purchase of a lamp or luminaire by an end user.

*Registration of Lamps and Luminaires*

**Appliance Energy Efficiency Register**

12. (1) The Commission shall establish, keep and maintain an Appliance Energy Efficiency Register.

(2) The Appliance Energy Efficiency Register shall contain the information specified in subregulation (5) of regulation 13.

**Application for registration**

13. (1) A person who

(a) manufactures a lamp or luminaire in the country; or

(b) imports a lamp or luminaire into the country

for use in the country shall, prior to the manufacture or importation, ensure that each model of the lamp or luminaire is registered with the Commission.

(2) A person who

(a) manufactures a lamp or luminaire in the country; or

(b) imports a lamp or luminaire into the country

for use in the country, shall apply to the Commission for registration of the lamp or luminaire.

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(3) An application for registration under subregulation (2) shall be made in writing or electronically on the website of the Commission and accompanied with the prescribed fee.

(4) An application for registration shall be accompanied with a test report from an accredited test laboratory that demonstrates that

- (a) the lamp or luminaire meets the minimum energy performance standards set out in the Second Schedule; and
- (b) the test report corresponds to the energy consumption that is provided on the energy efficiency label of the lamp or luminaire.

(5) The following information shall be provided for each registration of a model of a lamp or luminaire:

- (a) the brand or trademark, if any, used in connection with a supply of the model;
- (b) the model identifier issued by the manufacturer for each model covered by the registration;
- (c) the Product Information Sheet of the model;
- (d) the date the registration takes effect;
- (e) a unique identifier for the registration issued by the Commission;
- (f) the names and contact details of the applicant and contact person in relation to the registration;
- (g) if the model is to be registered as a replacement model of an earlier registered model, that fact and details to identify the replaced model, including the date the replacement was made;
- (h) if a model to be registered is affected by a replacement, that fact and details to identify the replaced model and replacement model, including the date the replacement was made;
- (i) any information specified in these Regulations in relation to that model of lamp or luminaire; and
- (j) any other information the Commission may consider appropriate.

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**Consideration of application**

14. (1) The Commission shall, on receipt of an application for registration of a lamp or luminaire, consider the application.

(2) The Commission shall, in considering the application, have regard to the requirements specified in subregulation (5) of regulation 13.

**Grant of application**

15. (1) The Commission may, within fourteen days after receipt of an application, grant or refuse the application.

(2) Where the Commission decides to grant an application, the Commission shall

(a) within three days after the date of the decision, inform the applicant, in writing or electronically as the case may be, of the decision; and

(b) enter the information specified in subregulation (5) of regulation 13 in the Appliance Energy Efficiency Register.

(3) Where the Commission refuses to grant an application, the Commission shall within three days after the date of the decision communicate to the applicant, in writing or electronically as the case may be,

(a) the reason for the refusal; and

(b) the applicable Standards the model of the lamp or luminaire is required to meet.

*Duties of Dealers and Suppliers of Lamps and luminaires*

**Duty of dealer to keep, maintain and provide technical documentation**

16. (1) A dealer shall keep and maintain technical documentation in respect of a lamp or luminaire for a period of not less than two years after the date of manufacture or importation.

(2) A dealer shall, within two days after a request by an enforcement authority, provide the enforcement authority with technical documentation in respect of a lamp or luminaire for inspection.

(3) Where a dealer fails to provide technical documentation in respect of a lamp or luminaire within two days after the request, the enforcement authority shall detain the lamp or luminaire.

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- (4) A dealer shall ensure that
- (a) each lamp or luminaire, at the point of sale, including at trade fairs, bears the label provided by a supplier in accordance with regulation 3, with the label being displayed conspicuously;
  - (b) in the event of distance selling, the label and Product Information Sheet are provided in accordance with the Third, Fourth and Fifth Schedules;
  - (c) an audio advertisement, including radio and local information broadcast network, on a specific model of a lamp or luminaire, where the brand, capacity, size, category or price is mentioned, contains information on the energy efficiency class and the range of efficiency classes available in accordance with Part Five of the Fifth Schedule;
  - (d) a visual advertisement for a specific model of lamp or luminaires, including an advertisement on the internet contains the energy efficiency class and the range of energy efficiency classes available on the label, in accordance with Part Five of the Fifth Schedule; and
  - (e) a technical promotional material concerning a specific model of lamp or luminaire, including technical promotional material on the internet, which describes the specific technical parameters of the lamp or luminaire includes
    - (i) the energy efficiency class of that model; and
    - (ii) the range of energy efficiency classes available on the labelin accordance with Part Five of the Fifth Schedule.

**Duty of supplier to keep, maintain and provide technical documentation**

17. (1) A supplier shall keep and maintain technical documentation in respect of each model of a lamp or luminaire for a period of not less than two years after the date of manufacture or importation.

(2) A supplier shall, on request by an enforcement authority, provide the enforcement authority with the technical documentation of the lamp or luminaire for inspection.

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(3) Where a supplier fails to provide technical documentation in respect of a lamp or luminaire within two days after the request, the enforcement authority shall detain the lamp or luminaire.

**Duty of supplier to keep, maintain and provide Product Information Sheet**

**18.** (1) A supplier shall keep and maintain in the possession of the supplier a Product Information Sheet in respect of each lamp or luminaire in the form set out in Part One of the Fifth Schedule.

(2) A supplier shall, on request by an enforcement authority, provide that enforcement authority with a Product Information Sheet which shall be in the

- (a) English language; and
- (b) form set out in Part One of the Fifth Schedule.

**Duty of supplier to provide information for statistical purposes**

**19.** (1) A person who manufactures in the country, imports into the country or exports out of the country a lamp or luminaire or an assembly of components that incorporates a lamp or luminaire shall provide the Commission with the following information not later than four months after the end of each year:

- (a) the number of lamps or luminaires of each model that the person manufactured, exported or imported into the country in the relevant year;
- (b) the number of lamps or luminaires of each model that the person sold in the country in the relevant year;
- (c) the number of lamps or luminaires of each model that the person exported from the country in the relevant year; and
- (d) the name of each model that the person discontinued
  - (i) manufacturing in the relevant year;
  - (ii) exporting in the relevant year; or
  - (iii) importing in the relevant year; and
- (e) a copy of any existing test report, or other energy performance data specified by the Commission, for each model specified under paragraph (d).

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(2) Upon a written request by the Commission, a person who manufactures a lamp or luminaire for use in the country or imports a lamp or luminaire into the country shall provide the following information to the Commission not later than forty days after receiving the request:

- (a) the number of lamps or luminaires in each product class specified by the Commission that the person sold to a purchaser in the country in each of the preceding three years; and
- (b) the energy performance characteristics of the lamps or luminaires as specified in the request.

**Duty of supplier to ensure accuracy of information**

20. (1) A supplier shall ensure that the information indicated on a
- (a) Product Information Sheet; or
  - (b) label

in respect of a lamp or luminaire is accurate.

(2) The duty imposed on a supplier under subregulation (1) does not affect any other right of action which a person may have by law against a person with respect to the inaccuracy of information on a Product Information Sheet or on a label.

**Access to information on technical documentation and Product Information Sheet**

21. (1) The information required under regulations 10, 11, 16, 17 and 18 shall be obtained in accordance with the test procedures required by the Standards.

(2) Information obtained in a manner other than in accordance with subregulation (1), shall, for the purposes of these Regulations, be invalid.

**Product brochure in respect of lamp or luminaire**

22. Where a supplier provides a product brochure in respect of a lamp or luminaire, the brochure shall contain a Product Information Sheet which shall be in the

- (a) English language; and
- (b) form set out in Part One of the Fifth Schedule.

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*Information*

**Public information**

23. (1) The information provided by a supplier on the Product Information Sheet or on a label of a lamp or luminaire is deemed public information.

(2) A supplier is deemed to have consented to the publication of the information indicated on a Product Information Sheet or label in respect of a lamp or luminaire.

**Information in respect of mail order and other distance selling**

24. (1) Where a person offers a lamp or luminaire for sale to another person in the country through a medium of communication including a mail order or any other distance selling medium, that person shall provide information in respect of the lamp or luminaire.

(2) The information referred to in subregulation (1) shall

- (a) be in the English language;
- (b) include the product registration number assigned by the Commission upon registration in the Appliance Energy Efficiency Register;
- (c) include the information set out in Part Four of the Fifth Schedule; and
- (d) be written in a manner that is legible.

**Obligations of audio or audio-visual broadcasting service provider**

25. Where an audio or audio-visual broadcasting service provider advertises a lamp or luminaire, and the information in the advertisement includes the brand, model, size, price and any other information that is specific to a particular model, that service provider shall ensure that

- (a) the advertisement has been vetted and approved by the Commission; and
- (b) the advertisement includes
  - (i) information on the energy efficiency star rating of the lamp or luminaire;
  - (ii) a statement that the advertisement has been vetted and approved by the Commission; and



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- (iii) any other information required under Part Five of the Fifth Schedule.

**Obligations of e-commerce platform**

26. (1) A person shall not offer for sale, sell, supply, distribute or otherwise dispose of a lamp or luminaire through a promotion on the internet unless

- (a) the energy efficiency rating of the lamp or luminaire is posted next to the price of the lamp or luminaire; and  
(b) the label of the lamp or luminaire is made available to consumers in the same medium of communication.

(2) Where an e-commerce service provider allows the direct sale of a lamp or luminaire through the website of the service provider, the service provider shall

- (a) enable the display of the  
(i) electronic label; and  
(ii) electronic Product Information Sheet provided by the dealer on the display mechanism in accordance with Part Six of the Fifth Schedule; and  
(b) inform the dealer of the obligation to display the electronic label and electronic Product Information Sheet.

**Misleading information**

27. (1) A person shall not display a label, mark, symbol or inscription which relates to the energy consumption of a lamp or luminaire, if the display is likely to be

- (a) deceptive;  
(b) misleading; or  
(c) false.

(2) A person shall not broadcast an advertisement relating to the energy performance of a lamp or luminaire if the information in the advertisement is likely to be

- (a) deceptive;  
(b) misleading; or  
(c) false.

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- (3) Subregulations (1) and (2) do not apply to
- (a) a label;
  - (b) a mark;
  - (c) a symbol; or
  - (d) an inscription

displayed under an environmental labelling scheme or endorsement labelling scheme.

**Restriction on disclosure of information**

**28.** (1) An enforcement authority shall not disclose information which consists of a

- (a) secret manufacturing process; or
- (b) trade secret

that was obtained by that enforcement authority in the course of the exercise of a power or duty conferred on the enforcement authority by these Regulations.

(2) Despite subregulation (1), an enforcement authority may disclose information if

- (a) the information is public information; or
- (b) the disclosure is made

- (i) for the purpose of facilitating the exercise of power by an enforcement authority under these Regulations or any other enactment;
- (ii) in connection with the investigation of an offence; or
- (iii) for the purpose of a civil or criminal proceeding.

*Powers of Enforcement*

**Power of enforcement authority to require technical documentation**

**29.** Where an enforcement authority suspects that the information given

- (a) in a Product Information Sheet; or
- (b) on a label,

in respect of a lamp or luminaire is incorrect, that enforcement authority may, by notice served on the supplier or importer of the lamp or luminaire, require the supplier or importer to furnish the enforcement authority with

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the technical documentation referred to in regulation 10 within the period stipulated in the notice.

**Power of enforcement authority to inspect lamp or luminaire**

**30.** An enforcement authority may, at any reasonable time, enter any premises to inspect a lamp or luminaire if the enforcement authority has reason to believe that the premises are being used for a purpose in contravention of these Regulations.

**Power of enforcement authority to detain or seize record, lamp or luminaire**

**31. (1)** Subject to these Regulations, where an enforcement authority has reasonable cause to suspect that an offence has been committed or is being committed, that enforcement authority may

- (a) at any reasonable time enter premises other than a dwelling place, and conduct an inspection in accordance with subsection (3) of section 52 of the Act;
- (b) require a person engaged in a business or employed in connection with a business to produce a record in respect of a lamp or luminaire;
- (c) detain or seize a lamp or luminaire that is
  - (i) not labelled;
  - (ii) not properly labelled; or
  - (iii) labelled in a deceptive or misleading manner;
- (d) detain or seize a lamp or luminaire that is imported without technical documentation which justifies the label affixed on the lamp or luminaire;
- (e) detain or seize a lamp or luminaire to enable a test to be carried out;
- (f) detain or seize a record to be used as evidence in proceedings in respect of an offence under these Regulations;
- (g) cause a container to be opened for the purpose of inspection;
- (h) break open a container, where implementation of paragraph (g) is not practicable; or
- (i) detain or seize a lamp or luminaire if the model is not registered in the Appliance Energy Efficiency Register.

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(2) For the purposes of paragraphs (b) and (f) of subregulation (1), the enforcement authority may request for information stored electronically to be made available to the enforcement authority in printed form.

**Power of enforcement authority to test lamp or luminaire**

32. (1) An enforcement authority may

- (a) obtain, remove and test a lamp or luminaire; or
- (b) order the testing of a lamp or luminaire

to ascertain whether a provision of these Regulations has been contravened.

(2) A person who suspects that a lamp or luminaire offered for sale does not comply with the provisions of these Regulations may lodge a complaint with an enforcement authority.

(3) The enforcement authority may, upon receipt of a complaint under subregulation (2), detain and test the lamp or luminaire.

(4) The test to be conducted in respect of a lamp or luminaire purchased, obtained or detained under regulation 31 shall be carried out in accordance with the test procedures required by the Standards.

*Detention, Re-Exportation and Seizure*

**Procedure for market surveillance and verification**

33. (1) Despite regulation 32, the Commission and the Standards Authority shall conduct market surveillance to ascertain whether a lamp or luminaire on the market conforms to these Regulations.

(2) The Commission and the Standards Authority shall apply the verification procedure specified in the Sixth Schedule to conduct the market surveillance.

**Order to access premises to inspect, detain or seize lamp, luminaire or record**

34. Where

- (a) an enforcement authority is refused entry to premises;
- (b) a notification to enter premises would defeat the purpose of the entry;
- (c) the premises to be entered are unoccupied; or

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(d) the occupier of premises to be entered is temporarily absent the enforcement authority may apply to a court for an order to enter the premises to inspect, detain or seize a lamp, luminaire or record, if the enforcement authority has reasonable grounds to believe that a lamp, luminaire or record on the premises may assist in the disclosure of evidence of the commission of an offence under these Regulations.

**Procedure for detention of lamp or luminaire**

35. (1) An enforcement authority that exercises a power of detention under these Regulations shall immediately give a written notice to the person against whom the power has been exercised.

(2) The written notice under subregulation (1) shall state

- (a) the lamp or luminaire that has been detained; and
- (b) the reason for the detention.

(3) Where an enforcement authority detains a lamp or luminaire, that lamp or luminaire may be kept in a warehouse or other secure location reserved for the purpose.

**Procedure for re-labelling of detained lamp or luminaire**

36. (1) Subject to these Regulations, where an enforcement authority detains a lamp or luminaire under paragraph (e) of subregulation (1) of regulation 31, the enforcement authority shall

- (a) within two days after the detention, submit a sample of the lamp or luminaire for testing; and
- (b) within two days after receipt of the test results, give a notice in writing to the supplier of the lamp or luminaire to properly label the lamp or luminaire, if the minimum energy performance standards have been complied with.

(2) The notice under paragraph (b) of subregulation (1) shall require a lamp or luminaire to be re-labelled in the required manner or exported out of the country within twenty-eight days.

(3) Where a supplier is required under subregulation (2), to re-label a lamp or luminaire, the supplier shall re-label the lamp or luminaire under the supervision of an officer authorised for the purpose by the Commission or the Standards Authority.

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- (4) Where a supplier fails to
- (a) re-label the lamp or luminaire; or
  - (b) export the lamp or luminaire

within twenty-eight days after the notice given under paragraph (b) of subregulation (1), the Commission shall, in consultation with the Standards Authority, destroy the lamp or luminaire in a manner that the Commission may determine.

**Procedure for re-exportation of imported lamp or luminaire**

37. (1) An enforcement authority that exercises a power of detention or seizure under these Regulations shall, within seven days after the detention or seizure, give an order in writing to the person against whom the power has been exercised to re-export the lamp or luminaire.

- (2) The order referred to in subregulation (1) shall state
- (a) the lamp or luminaire to be re-exported;
  - (b) the reason for the order;
  - (c) the period within which the lamp or luminaire is to be re-exported; and
  - (d) the fact that the supplier shall be responsible for the cost associated with the re-export.

(3) Where a lamp or luminaire is kept within premises that are under the control of the owner of the lamp or luminaire, the owner shall pay a security deposit against any breach of the re-exportation order.

(4) A security deposit under subregulation (3) shall be forfeited in the event of a breach of the re-exportation order, including the sale or destruction of a lamp or luminaire which has been ordered to be re-exported.

(5) Where a person fails to pay a security deposit imposed under subregulation (3), the Commission may recover the amount imposed as a civil debt.

**Procedure for seizure of lamp or luminaire**

38. (1) An enforcement authority that exercises a power of seizure under these Regulations shall, within seven days after the seizure, give a written notice to the person against whom the power has been exercised.

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- (2) The written notice under subregulation (1) shall state
- (a) the lamp or luminaire that has been seized;
  - (b) the reason for the seizure; and
  - (c) the venue and the period within which a petition against the seizure may be brought under regulation 39.

(3) Where an enforcement authority seizes a lamp or luminaire, that lamp or luminaire may be kept in a warehouse or other secure location reserved for the purpose.

(4) The owner of the lamp or luminaire may be required to pay a deposit to cover the cost of destruction if the lamp or luminaire does not meet the minimum energy performance standards.

(5) Where a lamp or luminaire is kept within premises that are under the control of the owner of the lamp or luminaire, the owner shall pay a security deposit against any breach of the seizure order.

(6) A security deposit under subregulation (5) shall be forfeited in the event of a breach of the seizure order, including the sale or destruction of a lamp or luminaire which has been seized.

(7) Where a person fails to pay a security deposit imposed under subregulation (5), the Commission may recover the amount imposed as a civil debt.

*Petition and Compensation*

**Petition against seizure**

39. (1) Subject to these Regulations, a person whose lamp or luminaire is seized may, within seven days after receipt of the written notice specified in subregulation (1) of regulation 38, petition the Executive Secretary for the release of the seized lamp or luminaire.

(2) The Executive Secretary shall, within seven days after receipt of a petition under subregulation (1),

- (a) confirm the seizure; or
- (b) order the release of the seized lamp or luminaire to the petitioner on a specific day.

(3) A person who is dissatisfied with a decision of the Executive Secretary under subregulation (2) may appeal to the Board within seven days after the receipt of the decision.

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(4) The Board shall within thirty days of the receipt of an appeal under subregulation (3),

- (a) consult the Standards Authority; and
- (b) take a decision on the appeal.

(5) The Board may release the seized lamp or luminaire to the petitioner only if the Commission and the Standards Authority fail to prove that an offence under these Regulations has been committed.

(6) A person who is dissatisfied with

- (a) a decision of the Board under subregulation (4) may, within fourteen days after the decision, or
- (b) the failure of the Board to make a decision within thirty days after receipt of the appeal may, within fourteen days after the failure

apply to the court.

**Forfeiture and destruction of seized lamp or luminaire**

40. (1) Where an appeal to the Board under subregulation (3) of regulation 39 is not successful, the enforcement authority shall, within twenty-eight days after the decision of the Board, notify the owner of the lamp or luminaire of the forfeiture and date of destruction of the seized lamp or luminaire.

(2) The Commission may, in consultation with the Standards Authority, destroy a forfeited lamp or luminaire in a manner that the Commission may determine.

(3) Where under subregulation (6) of regulation 39, the court upholds or affirms the decision of the Board to forfeit and destroy the lamp or luminaire, the Commission shall destroy the lamp or luminaire within the period given by the court.

**Compensation for loss of lamp, luminaire or record seized**

41. (1) Where an enforcement authority exercises power under these Regulations to seize a lamp, luminaire or record, that enforcement authority is liable to pay compensation to the owner of the lamp, luminaire or record for a loss or damage caused by the exercise of the power, if

- (a) these Regulations have not been contravened in relation to the lamp, luminaire or record; and



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(b) the loss or damage is not attributable to the neglect or the fault of the owner but an official of the Commission.

(2) Paragraph (b) of subregulation (1) does not apply in a case of *force majeure*.

(3) The compensation payable under subregulation (1) for a loss or damage shall not exceed the value of the lamp, luminaire or record.

(4) A dispute as to the

(a) right to compensation, or

(b) amount of compensation payable to a person under subregulation (1),

shall be determined in the first instance by arbitration in accordance with the Alternative Dispute Resolution Act, 2010 (Act 798).

**Recovery of expenses by enforcement authority**

42. (1) Where an enforcement authority

(a) seizes;

(b) tests; or

(c) supervises the re-labelling or destruction of

a lamp or luminaire, that enforcement authority may surcharge the dealer or supplier of the lamp or luminaire for the expenses incurred for the seizure, testing or supervision.

(2) Despite subregulation (1), where a court convicts a person of an offence in respect of the contravention of a provision of these Regulations, the court may, in addition to any order that the court may make as to costs and expenses, order the person convicted to reimburse the enforcement authority for expenditure incurred by the enforcement authority in connection with the seizure.

*Miscellaneous Provisions*

**Offences and penalties**

43. (1) A person who

(a) manufactures, imports, stores, offers for sale, sells, advertises, distributes or otherwise disposes of a lamp or luminaire that

(i) does not meet a requirement in respect of the minimum energy performance standards contrary to regulation 3;

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- (ii) is not accompanied by the required technical documentation contrary to regulation 10;
  - (iii) is not labelled or properly labelled contrary to regulation 11; or
  - (iv) is labelled in a deceptive or misleading manner contrary to regulation 27;
- (b) uses a circumvention device contrary to regulation 9;
  - (c) fails to comply with a labelling requirement contrary to regulations 11;
  - (d) fails to provide technical documentation contrary to regulation 10, 16 or 17;
  - (e) fails to register a model of lamp or luminaire contrary to regulation 13;
  - (f) fails to provide a Product Information Sheet contrary to regulation 18;
  - (g) fails to provide information on a lamp or luminaire contrary to regulation 19;
  - (h) provides inaccurate information contrary to regulation 20;
  - (i) advertises a lamp or luminaire without providing accurate information on the energy efficiency star rating of the lamp or luminaire contrary to regulation 25;
  - (j) offers for sale or sells a lamp or luminaire over the internet or other distance selling medium without providing the information required contrary to regulation 24 or 26;
  - (k) provides misleading information contrary to regulation 27;
  - (l) obstructs or interferes with an enforcement authority in the exercise of the powers of that enforcement authority contrary to regulation 31;
  - (m) fails to comply with the requirements for re-labelling contrary to regulation 36; or
  - (n) violates a seizure order or notice contrary to regulation 38
- commits an offence and is liable on summary conviction to a fine of not less than one hundred and twenty-five penalty units and not more than two hundred and fifty penalty units or to a term of imprisonment of not less than six months and not more than twelve months or to both.

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(2) A person who commits a second or subsequent offence under subregulation (1) after an earlier conviction under subregulation (1) is liable on summary conviction to a fine of not less than two hundred and fifty penalty units and not more than five hundred penalty units or to a term of imprisonment of not less than twelve months and not more than twenty-four months or to both.

(3) Where an offence under these Regulations is committed by a body corporate or by a member of a partnership or other firm, every director or officer of the body corporate or any member of the partnership or any other person concerned with the management of the firm shall be deemed to have committed that offence and is liable, on summary conviction, to a fine of not less than five hundred penalty units and not more than one thousand penalty units, and is in addition liable to the payment of compensation for the damage resulting from the breach.

(4) A person shall not be convicted of an offence under subregulation (3), if it is proved that

(a) the person exercised due diligence to secure compliance with the provisions of these Regulations; and

(b) the offence was committed without the knowledge, consent or connivance of the person.

**Interpretation**

44. In these Regulations, unless the context otherwise requires,

“accredited test laboratory” means a test laboratory that is recognised by the Standards Authority for laboratory testing and product certification;

“appliance” means a device or machine for performing a specific task;

“Appliance Energy Efficiency Register” means an official record, kept and maintained by the Commission on energy efficiency information in respect of models of electrical appliances that have been certified by the Commission and Standards Authority for use in Ghana;

“audio or audio-visual broadcasting service provider” means a person who provides a service which delivers radio programmes or programmes with hearing and sight

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- components to persons having equipment appropriate for receiving that service, whether the delivery is effected by means of or uses the radio frequency spectrum, cable, optical fibre, satellite, internet radio via streaming media on the internet, or any other means or a combination of those means intended to reach a wide audience;
- “circumvention device” means any control, control device, software, component or part that alters the operating characteristics of a lamp or luminaire during any test procedure, resulting in measurements that are unrepresentative of the true characteristics of the lamp or luminaire that may occur during normal use under comparable conditions;
- “Colour Rendering Index” means the quantitative measure of the ability of a light source to reveal the colours of various objects accurately in comparison with an ideal or natural light source;
- “container” means a receptacle or enclosure for holding a product for storage, packaging and shipping;
- “Correlated Colour Temperature” means the temperature of the Planckian radiator the perceived colour of which most closely resembles that of a given stimulus at the same brightness and under specified viewing conditions;
- “court” means a court of competent jurisdiction;
- “dealer” means a retailer or other person who displays, offers for sale or sells a lamp or luminaire to an end user;
- “dwelling place” means place of residence;
- “electric mains-operated lamp or luminaire” means a lamp or luminaire that operates on electricity supply from the grid of 230 ( $\pm 10\%$ ) volts of alternating current at 50 Hz;
- “electronic Product Information Sheet” means a document containing the following information in electronic format:
- (a) basic product information;
  - (b) energy label information; and
  - (c) special features and characteristics;

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- “end user” means the first user of a lamp or luminaire;
- “endorsement labelling scheme” includes a voluntary labelling scheme that guarantees appliance performance standards, that are equal to or exceed the minimum threshold established by a recognised advisory body;
- “energy efficiency rating” means the ratio of the lighting service time to the effective power input for a set of rating conditions specified in the Standards;
- “enforcement authority” means
- (a) an authorised officer of the Energy Commission;
  - (b) an authorised officer of the Standards Authority;
  - (c) an authorised officer of the Customs Division of the Ghana Revenue Authority;
  - (d) an authorised officer of the Police Service; or
  - (e) any other authorised person designated by the Customs Division of the Ghana Revenue Authority, the Energy Commission or the Standards Authority to carry out inspections for the purposes of these Regulations;
- “environmental labelling scheme” means a voluntary labelling scheme that provides detailed information on the environment in respect of the performance characteristics of a lamp or luminaire;
- “GS” means Ghana Standards;
- “importer” means a person who places a lamp or luminaire from a foreign country on the Ghanaian market and supplies that lamp or luminaire for use;
- “label” means a material attached to a lamp or luminaire the inscription of which contains information on the energy consumption of the lamp or luminaire;
- “lamp” means a self-ballasted fluorescent lamp or light emitting diode lamp;
- “lamp life” means the number of hours when fifty per cent of any large group of lamps have failed;
- “light emitting diode” means a semi-conductor device that emits visible light when electric current passes through the device;

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“luminaire” means a complete lighting unit consisting of a lamp together with the parts designed to

(a) distribute the light, position and protect the lamp and ballast, where applicable; and

(b) connect the lamp to the power supply;

“luminous efficacy” means the ratio of the initial luminous flux of a lamp to the actual measured power, in lumens per watt;

“luminous flux” means lumens generated by a lamp or luminaire in a rated voltage and stable operation, in lumens;

“minimum energy performance standards” mean a set of procedures and regulations that prescribe the minimum allowable values of energy efficiency or energy performance of manufactured products;

“model identifier” means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trademark or the same name of the manufacturer, importer or authorised representative;

“premises” means land and any building, store, shop, apartment, or other structure on the land used for the storage of a lamp or luminaire;

“product brochure” includes a pamphlet or booklet that contains introductory information about a product;

“Product Information Sheet” means a standard table of information related to a lamp or luminaire;

“Quick Response Code” means a matrix barcode included on the energy label of a product model that links to the information of the model in the public part of the product database;

“rated voltage” means the voltage marked on a lamp or luminaire in volts;

“rating plate” means a name plate that indicates the measurable performance capability of a lamp or luminaire;

“record” includes a book, document, label, mark, symbol, inscription or information in electronic form;

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“sale” means the exchange of the product for consideration including hire purchase, credit sale and purchase by instalment;

“Standards” means quality specifications for lamps or luminaires as stipulated in the First Schedule;

“Standards Authority” means the Standards Authority established under the Standards Authority Act, 1973 (N.R.C.D. 173);

“supplier” means a person or organisation that provides a product including

(a) a manufacturer or the authorised representative of a manufacturer resident in the country; and

(b) an importer or the person who introduces a lamp or luminaire on the Ghanaian market;

“supply” includes an offer to supply, contract to supply and advertisement for supply of a lamp or luminaire but excludes the exhibition at a trade fair of a lamp or luminaire that is prohibited by these Regulations;

“wattage” means the power marked on a lamp or luminaire, in watts (W); and

“year” means the period from 1<sup>st</sup> January to 31<sup>st</sup> December.

**Transitional provision**

45. A person who, before the coming into force of these Regulations, has

(a) manufactured in the country; or

(b) imported into the country

a lamp or luminaire that does not comply with these Regulations, shall, within one year after the coming into force of these Regulations, sell, distribute, donate or otherwise dispose of that lamp or luminaire.

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*SCHEDULES*

**FIRST SCHEDULE**

*(regulations 1(a)(i), 3(1)(b)(i) and 44)*

**STANDARDS**

1. GS IEC 62717: 2014 + AMD1:2015 - Light Emitting Diode Modules for General Lighting – Performance requirements
2. GS IEC 62722: 2014: Luminaire performance – Part 1: General requirements
3. GS IEC 62722: 2014: Luminaire performance – Part 2-1: Particular requirements for LED luminaires
4. GS IEC 61167: 2015 – Metal Halide Lamps – Performance specification
5. GS IEC 61347 series: Lamp control gear requirements
6. GS IEC 62471: Photobiological safety of lamps and lamp systems
7. GS IEC 62442: 3: 2004
8. GS 1198 Parts 1 and Part 2: 2018 – Public Lighting
9. GS 1199 Parts 1 and Part 2: 2018 – Exterior Lighting
10. GS IEC 60598: 2013 series – Electrical Engineering - Luminaires (for various applications)
11. CIE 121: (referenced by IEC60598 for LOR & TTL verification measurements) - The Photometry and Goniophotometry of Luminaires



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**SECOND SCHEDULE**

**MINIMUM ENERGY PERFORMANCE STANDARDS**

*(regulations 1(a)(i), 1(b), 3(1)(b)(ii) and (iii), 4(1), 6, 11(2) and 13(4)(a))*

**PART ONE**

*(regulations 1(a)(i), 1(b), 3(1)(b)(ii) and (iii), 4(1), 6, and 11(2))*

**1. EFFICIENCY SPECIFICATIONS**

Luminaire Efficacy Rating (LER) is an indicator used to measure the overall energy performance of a luminaire, which incorporates both the lamp technology and luminaire design. The Luminaire Efficacy Rating (LER) metric is a measure of total luminaire light output divided by the total luminaire power input.

Luminaire wattage shall be classified based on the rated wattage, but the test wattage shall be within  $\pm 15\%$  of rated wattage.

Initial luminous efficacy of the luminaire is derived from the performance characteristics of the lamps fitted in the luminaire. Therefore, initial luminous efficacy of the lamps shall be calculated from initial luminous flux and input power for the lamps and measured at  $25\pm 1^\circ\text{C}$  and at rated voltage.

Where the rated voltage is a range, then the test voltage shall be the nominal voltage of Ghana.

The value of initial luminous efficacy (Lm/W) of the lamps fitted in the luminaire shall not be less than the values indicated in Table 1.

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**Table 1: Initial Luminous Efficacy of Luminaires for Commercial/ Outdoor Application**

Input Power of Lamp (W)		Initial Luminous Efficacy of Lamp (Lm/W)							
		Correlated Colour Temperature (CCT) – Kelvin							
P <sub>min</sub>	P <sub>max</sub>	6500	5000	4500	4000	3500	3000	2700	2500
61	101	80		72			55		
102	155	110		99			78		
156	208	140		126			97		
209	261	160		144			120		
262	314	180		162			135		
315	382	210		180			155		
383	450	250		225			185		

The Energy Efficiency Star Rating of the lamp that meets the Initial Luminous Efficacy values in Table 1 shall be determined in accordance with the energy efficiency star ratings in Table 2.

Lamps that fail to meet the requirements of Table 1 shall not be

- (a) rated in accordance with Table 2;
- (b) eligible for sale in the country; and
- (c) eligible for use in a luminaire that is manufactured or imported for sale in Ghana.

The Energy Efficiency Star Rating of the luminaire shall be determined in accordance with Table 3.

## 2. ENERGY EFFICIENCY STAR RATING OF LAMPS

The energy efficiency class for lamps that meet the requirements of Table 1 is determined on the basis of a 7-Star rating of their Energy Efficiency Ratio (EER) as set out in Table 2 for the qualified non-directional and directional lamps respectively.

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**Table 2: Energy Efficiency Star Rating of Lamps**

Energy Efficiency class	Energy efficiency Index (EEI) for <u>non-directional</u> lamps and Self-ballasted/LED Fluorescent Lamps	Energy efficiency Index (EEI) for <u>directional</u> lamps and Self-ballasted/LED Fluorescent Lamps
7-star	$EEI \leq 0.11$	$EEI \leq 0.13$
6-star	$0.11 < EEI \leq 0.17$	$0.13 < EEI \leq 0.20$
5-star	$0.17 < EEI \leq 0.24$	$0.20 < EEI \leq 0.30$
4-star	$0.24 < EEI \leq 0.40$	$0.30 < EEI \leq 0.35$
3-star	$0.40 < EEI \leq 0.60$	$0.35 < EEI \leq 0.45$
2-star	$0.60 < EEI \leq 0.80$	$0.45 < EEI \leq 0.55$
1-star	$0.80 < EEI \leq 0.95$	$0.55 < EEI \leq 0.60$

- 3. ENERGY EFFICIENCY STAR RATING OF LUMINAIRES**  
 The energy efficiency class for luminaires is determined on the basis of a 7-Star rating of the Luminaire Efficacy Rating (LER) as set out in Table 3.

**Table 3: Energy Efficiency Star Rating of Luminaires**

Energy Efficiency class	Luminaire Efficacy Rating (LER)
7-star	$160 \leq LER$
6-star	$140 \leq LER < 160$
5-star	$120 \leq LER < 140$
4-star	$100 \leq LER < 120$
3-star	$80 \leq LER < 100$
2-star	$60 \leq LER < 80$
1-star	$40 \leq LER < 60$

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**PART TWO**

**1. CALCULATION OF ENERGY EFFICIENCY STAR RATING (EEI) FOR LED LAMPS**

The energy efficiency requirement for directional LED lamps and modules is determined by the Energy Efficiency Index EEI.

The Energy Efficiency Index (EEI) of the lamp is calculated as follows and rounded to two decimal places:

$$P_{cor} = P_{rated} \times f$$

Where:

$P_{cor}$  is the rated power measured at nominal input voltage and corrected where appropriate in watts.

$P_{rated}$  is the rated power measured at nominal input voltage

$f$  is the correction factor

$f$  is :

1.0 for LED lamps operating by the direct mains

1.10 for Lamps operating on external LED lamp control gear

1.10 for Lamps operating on external high intensity discharge lamp control gear

$P_{ref}$  is the reference power obtained from the useful luminous flux of the lamp ( $\Phi_{use}$ ) by the following formula:

$$P_{ref} = 0.88\sqrt{\Phi_{use}} + 0.049\Phi_{use}, \quad \text{For models with } \Phi_{use} < 1300 \text{ lumen}$$

$$P_{ref} = 0.07341\Phi_{use}, \quad \text{For models with } \Phi_{use} \geq 1300 \text{ lumen}$$

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Where:

$\Phi_{\text{use}}$  is the luminous flux of the lamp

An Energy Efficiency Index (EEI) is then set as

$$\text{EEI} = \frac{P_{\text{cor}}}{P_{\text{ref}}}$$

## 2. CALCULATION OF LUMINAIRE EFFICACY RATING (LER)

The Luminaire Efficacy Rating (LER) metric is a measure of total luminaire light output divided by the total luminaire power input calculated using the formula:

$$\text{LER} = [\text{LOR} \times \text{TIL} \times \text{BF}] / P_{\text{inp}}$$

where

LOR = Light output ratio (or energy effectiveness factor), is a factor that provides the measure of the effectiveness of the luminaire to emit the total flux generated within the luminaire for illumination outside. The value of LOR for a luminaire is to be provided by the manufacturer or estimated from the photometric report supplied with the luminaire based on type test results for the product.

TIL = Total Initial Lumens (or luminous flux) produced by the light source (the lamps) fitted in the luminaire measured in Lumens (Lm). This is determined from the type, rating and number of lamps fitted in the luminaire;

BF = Ballast Factor is the correction factor for control gear power losses associated with the luminaire and shall be

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provided by the manufacturer based on the types of ballasts used fitted in the luminaire; and

$P_{inp}$  = Luminaire rated power input (W) measured at the luminaire terminal at standard test conditions prescribed by the Standards and provided by the luminaire manufacturer.

**PART THREE**

**CALCULATION OF THE ANNUAL ENERGY CONSUMPTION (AEC) OF THE LUMINAIRE**

The weighted energy consumption, **AEC**, is calculated in **kWh/year** based on commercial or outdoor lighting period of **12hrs/day** as follows:

$$\mathbf{AEC = P_{inp} \times 12 \times 365/1000 \text{ kWh/year}}$$

where

$P_{inp}$  = Luminaire rated power input (W) as defined in Part Two.

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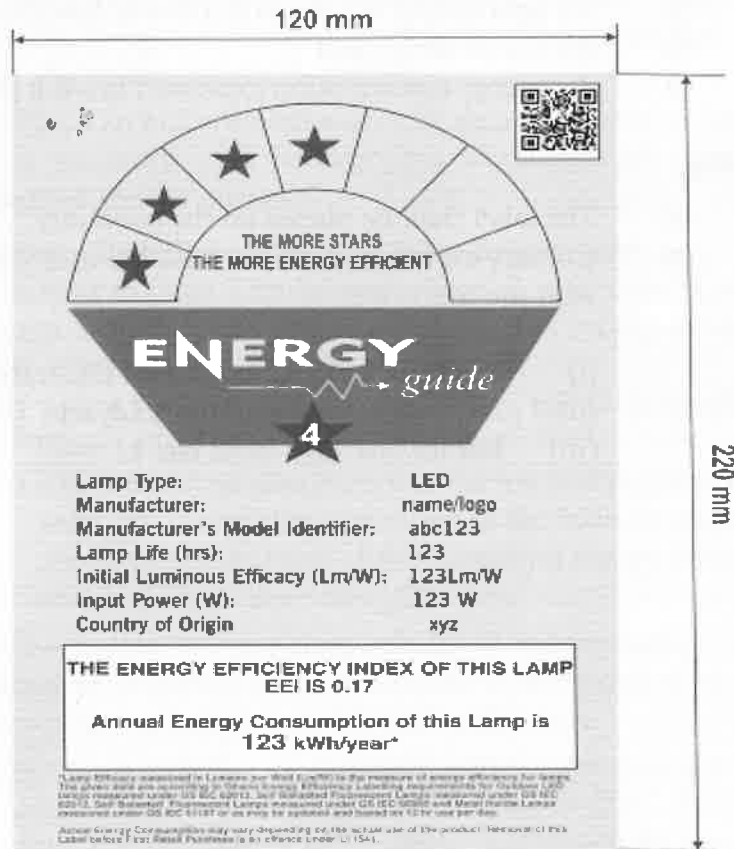
**THIRD SCHEDULE**

*(regulations 3(1)(b)(iv), 11(1)(a)(i), 11(1)(d)(i) and 16(4)(b))*

**LABELLING REQUIREMENTS FOR LAMPS**

**1. Label design**

The design of the label for lamps shall be in accordance with Figure 1 and shall include the information required by the notes.



**Figure 1: Label for Lamp**

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**2. Notes to Figure 1**

The following notes define the information to be included:

- (a) the Quick Response Code;
- (b) the type of lamp;
- (c) the name or trademark of the supplier;
- (d) the country of origin;
- (e) the energy efficiency star rating of a lamp;
- (f) the rated power in watts (marked “W” or “watts”);
- (g) the rated voltage or voltage range (marked “V” or “volts”);
- (h) the light output in lumens (luminous flux) (Lm/W);
- (i) the life of lamp; and
- (j) the energy consumption expressed in kWh per year.

**3. Printing**

- (a) The label shall be placed on the container.
- (b) Colours are to be used on the label in accordance with the following:
  - (i) all text is in black or gold as illustrated;
  - (ii) the background shall be gold; and
  - (iii) border line shall be in black.



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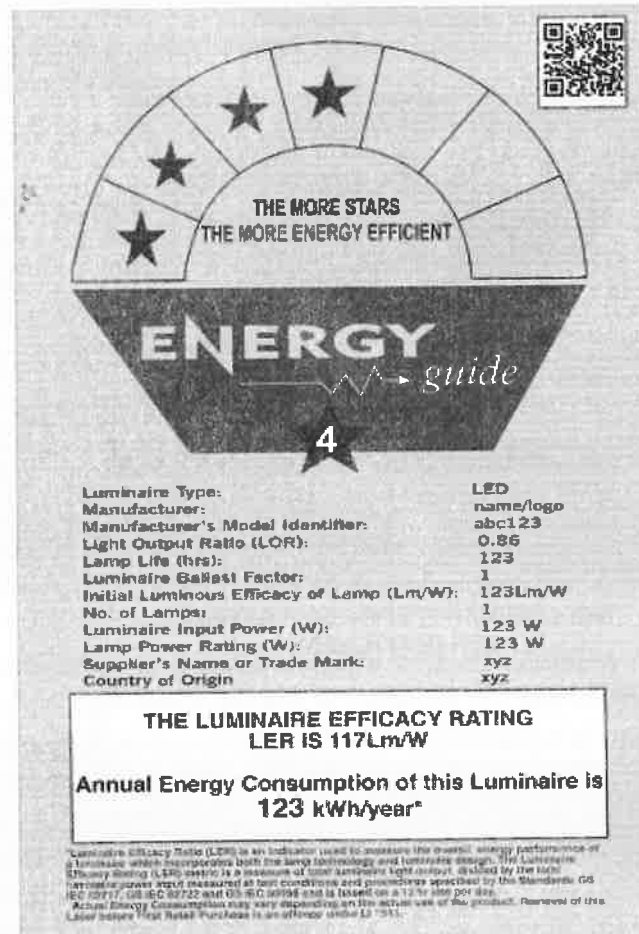
**FOURTH SCHEDULE**

*(regulations 3(1)(b)(iv), 11(1)(a)(i), 11(1)(d)(i) and 16(4)(b))*

**LABELLING REQUIREMENTS FOR LUMINAIRES**

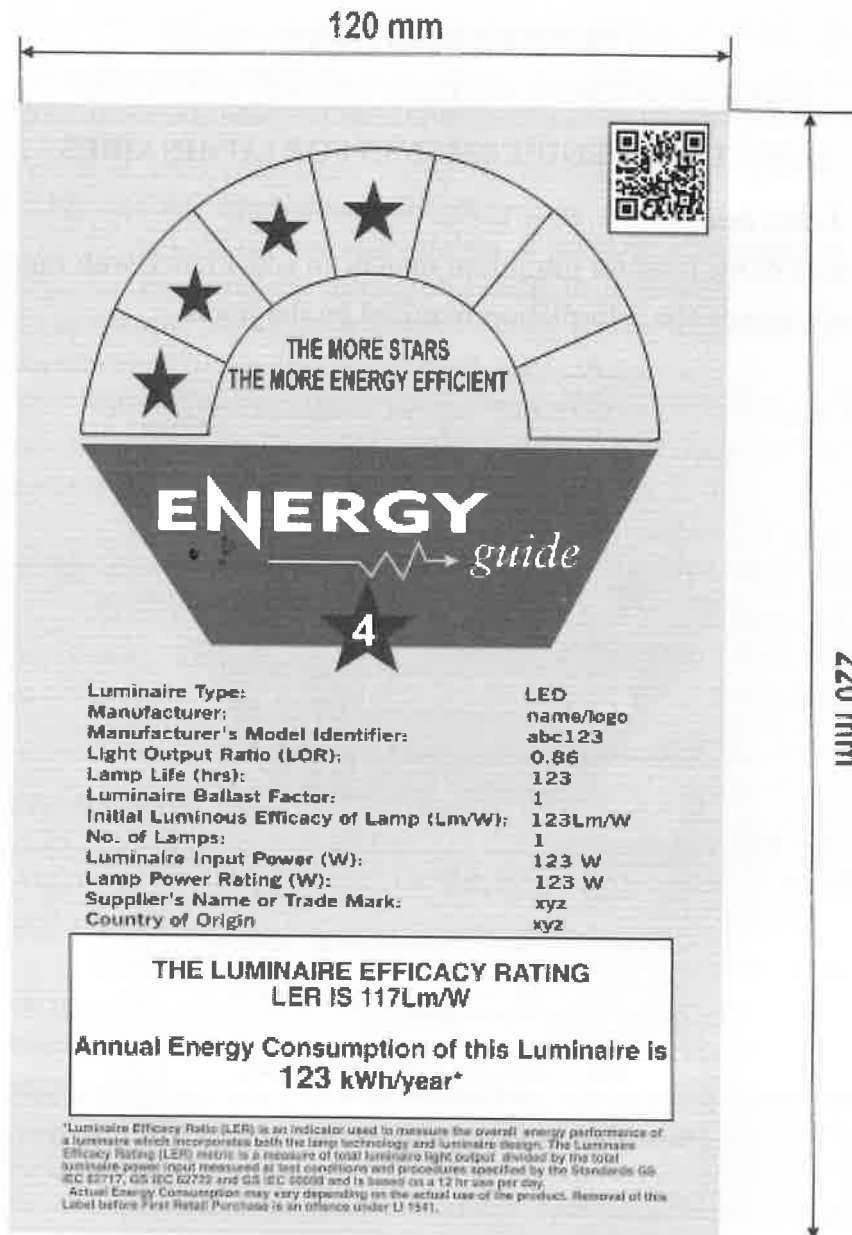
**1. Label design**

The design of the label for luminaire shall be in accordance with Figure 2 and shall include the information required by the notes.



**Figure 2: Label for Luminaire**

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**2. Notes to Figure 2**

The following notes define the information to be included:

- (a) the Quick Response Code;
- (b) the type of luminaire;
- (c) the name or trademark of the supplier;
- (d) the country of origin;
- (e) the energy efficiency star rating of a luminaire;
- (f) the Luminaire Efficacy Rating (LER) (marked "Lm/W");
- (g) the rated power input of luminaire in watts (marked "W" or "watts");
- (h) the rated voltage or voltage range (marked "V" or "volts");
- (i) the type of lamp source and total number of lamps;
- (j) the rated total initial luminous flux (Lm);
- (k) the Luminaire Light output ratio;
- (l) the Rated Ballast factor;
- (m) the rated useful life of luminaire; and
- (n) the energy consumption expressed in kWh per year.

**3. Printing**

- (1) The label shall be placed on the container.
- (2) Colours are to be used on the label in accordance with the following:
  - (a) all text is in black or gold as illustrated;
  - (b) the background shall be gold; and
  - (c) border line shall be in black.

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**FIFTH SCHEDULE**

*(regulations 3(1)(b)(v), 3(2), 5, 10(2)(b) and (c), 11(1)(c), 16(4)(b), 16(4)(c), 16(4)(d) and 16(4)(e), 18(1), 18(2)(b), 22(b), 24(2)(c), 25(b)(iii) and 26(2)(a))*

**PART ONE**

*(regulations 5, 10(2)(b), 11(1)(c), 18(1), 18(2)(b), and 22(b))*

**PRODUCT INFORMATION SHEET**

**Lamp or Luminaire**

The Product Information Sheet shall contain the technical and other information specified below. The information may be given in the form of a table covering the luminaire and the lamps including the type of luminaires and fitted lamps supplied by the same supplier, in which case it shall be given in the order specified, or given in the description of the luminaire.

- (a) Name of trademark of supplier;
- (b) Model identifier of supplier; and
- (c) Description of the type of lamp or luminaire as follows:

**Table 1: Sample table for provision of information**

Category of Information	Description of information as appropriate	
	Lamps	Luminaire
Type	LED, CFL or Metal Halide (specify)	Outdoor or Indoor, Recessed etc.
Category		Directional/ Non-directional
Typical application		Street, tunnel, area lighting etc.
Efficacy & star rating		

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- (d) The references to the harmonised standards and other technical specifications applied, where appropriate including:
  - (i) Lumen maintenance code;
  - (ii) Rated median useful life (in hrs) and associated rated lumen maintenance factor;
  - (iii) Rated chromaticity coordinate values both initial and maintained;
  - (iv) Rated correlated colour temperature (CCT in Kelvin);
  - (v) Rated colour rendering index (CRI);
  - (vi) Rated ambient temperature related to performance for the luminaire (°C); and
  - (vii) Ageing time if different from 0hrs;
- (e) The technical parameters used for determining energy consumption and luminaire efficacy and the compatibility of the lamps used in the luminaire;
- (f) User instructions including disposal if necessary; and
- (g) Annual energy consumption of the luminaire determined in accordance with the Standards but expressed in kWh per year (that is, per 12hours x 365), described as: “energy consumption XYZ kWh per year, based on standard test results for twelve hours.” Actual energy consumption will depend on how the appliance is used and where it is located.

## **PART TWO**

### **Product Information Requirements for Lamps and Luminaires**

The supplier shall provide the product information as detailed in Table 1. If a certain feature is not present, the related parameters and values shall be as follows:

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**Table 1: Sample Product Information Sheet**

<b>Supplier's name or trade mark</b>			
<b>Supplier's address</b>			
<b>Model identifier</b>			
<b>Type of light source</b>			
Lighting Technology used	HID/LED/OLED/mixed / other	Non-directional or directional:	[NDLS/DLS]
Mains or non-mains	[MLS/NMLS]	Connected light source (CLS)	[yes/no]
Colour-tuneable light source:	[yes/no]	Envelope:	[no/second/non-clear]
High luminance light source	[yes/no]		
Anti-glare shield	[yes/no]	Dimmable:	[yes/only with specific dimmers/no]
<b>Product parameters</b>			
Parameter	Value	Parameter	Value
<i>General Product parameters:</i>			
Energy Consumption in on-mode (kWh/1,000 h)	x	Energy Efficiency class	[One-star/Two-star/Three-star/Four-star/Five-star/Six-star/Seven-star]
Useful luminous flux (Phi use), indicating if it refers to the flux in a sphere (360 deg. wide), in a wide cone (120 deg) or in a	x in [sphere/wide cone/narrow cone]	Correlated colour temperature, rounded to the nearest 100K, or the range of correlated colour	[x/x ...x]

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narrow cone (90 deg)			temperatures, rounded to the nearest 100K, that can be set	
On-mode power ( $P_{on}$ ), expressed in W	x,x		Standby power ( $P_{sb}$ ), expressed in W and rounded to the second decimal	x,xx
Network standby power ( $P_{net}$ ) for CLS expressed in W and rounded to the second decimal	x,xx		Colour rendering index, rounded to the nearest integer, on the range of CRI-values that can be set	[x/x...x]
Outer dimensions without separate control gear, lighting control parts and non-lighting control parts, if any (millimetre)	Height	x	Spectral power distribution in the range 250nm to 800 nm, at full load	[graphic]
	Width	x		
	Depth	x		
Claim of equivalent power		[yes/-]	If yes, equivalent power (W) Chromaticity coordinates (x and y)	x 0,xxx 0,xxx
<b><i>Parameters for directional light sources:</i></b>				
Peak luminous intensity (cd)	x		Beam angle in degrees, or the range of beam angles that can be set	[x/x...x]

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<b>Parameters for LED and OLED light sources:</b>			
R9 colour rendering index value	x	Survival factor	x, xx
the lumen maintenance factor	x,xx		
<b>Parameters for LED and OLED mains light sources:</b>			
displacement factor (cosØ1)	x, xx	Colour constituency in McAdam ellipses	x
Claims that an LED light source replaces a fluorescent light source without integrated ballast of a particular wattage	[yes/not applicable]	[if yes then replacement claim (W)]	X
Flicker metric (Pst LM)	x,x	Stroboscopic effect metric (SVM)	x,x

**PART THREE**

*(regulation 10(2)(c))*

**Technical documentation**

The technical documentation referred to in regulation 10 shall include the following elements:

- (a) the information as set out in Part One; and
- (b) the information as set out in Part Two. If a parameter is not applicable, the values of that parameter shall be '-'.



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**PART FOUR**  
*(regulation 24(2)(c))*

**Mail Order and Other Distance Selling**

1. Mail order catalogues and other communication shall contain at least, the following information, given in the order specified below:
  - (1) the label of the lamp or luminaire as indicated in the Third Schedule and Fourth Schedule respectively; and
  - (2) energy consumption determined in accordance with the Standards.
2. The size and font, in which all the information referred to in paragraph 1 is printed, shall be legible.

**PART FIVE**

*(regulations 3(2), 16(4)(c), (d) and (e), 25(b)(iii))*

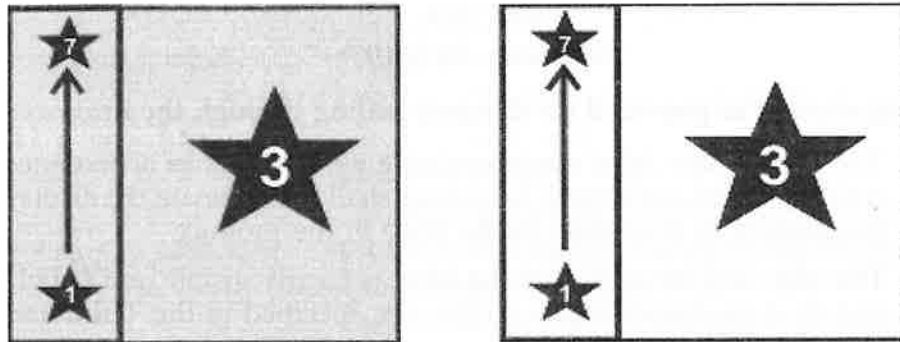
**Information to be provided in audio advertisements, visual advertisements, in technical promotional material, in distance selling, except distance selling on the internet**

1. In audio advertisements, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3, the energy efficiency class of the model or models of appliance being advertised and the range of energy efficiency classes available on the market shall be stated in the advertisement.
2. In visual advertisements, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3, the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in paragraph 5 of this Part.

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3. In technical promotional material, for the purposes of ensuring conformity with the requirements laid down in subregulation (2) of regulation 3 the energy efficiency class and the range of energy efficiency classes available on the label shall be shown as set out in paragraph 5 of this Part.
4. Any paper-based distance selling must show the energy efficiency class and the range of energy efficiency classes available on the label as set out in paragraph 5 of this Part.
5. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:
  - (a) an arrow, containing the letter of the energy efficiency class in 100% white, Calibri Bold and in a font size at least equivalent to that of the price, when the price is shown;
  - (b) the colour of the box shall be gold;
  - (c) the range of available energy efficiency classes in 100 % black; and
  - (d) the size shall be such that the box is clearly visible and legible.
6. The number embedded in the black star corresponding with the energy efficiency class of the appliance star shall be in 100% white and positioned in the center of the black star in the box, with a border of 0.5 pt in 100% black placed around the box and the star showing the energy efficiency star rating class.
7. By way of derogation, if the visual advertisement, technical promotional material or paper-based distance selling is printed in monochrome, the box can be in monochrome in that visual advertisement, technical promotional material or paper-based distance selling.

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**Figure 1: Coloured/monochrome Star rating label with range of energy efficiency classes indicated.**

8. Telemarketing-based distance selling shall specifically inform the customer of the energy efficiency class of the product and of the range of energy efficiency classes available on the label, and that the customer can access the full label and the Product Information Sheet through a free access website, the public part of Appliance Energy Efficiency Register of the Commission or by requesting a printed copy.
9. For all the situations mentioned in paragraphs 2 to 4 and 8, it shall be possible for the customer to obtain, on request, a printed copy of the label and the Product Information Sheet.

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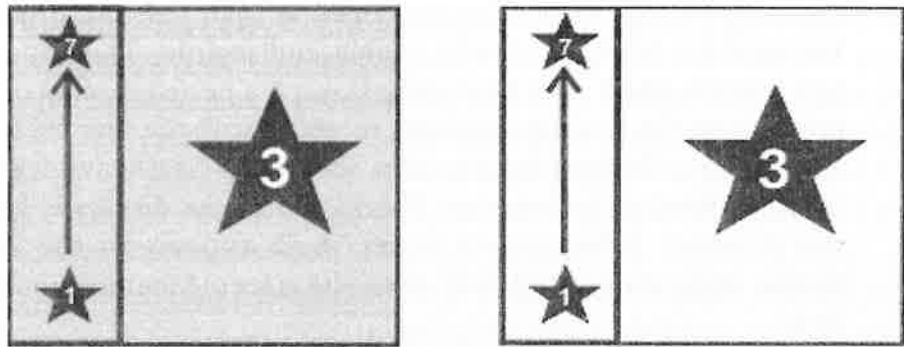
**PART SIX**

*(regulation 26(2)(a))*

**Information to be provided for distance selling through the internet**

1. The appropriate label made available by suppliers in accordance with the Third and Fourth Schedules shall be shown on the display mechanism in proximity to the price of the product.
2. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in the Third and Fourth Schedules.
3. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in paragraph 5 of this Part.
4. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.
5. The image used for accessing the label in the case of nested display, as indicated in Figure 2, shall
  - (a) be a box in gold colour with a black star and an embedded number corresponding to the energy efficiency star rating of the product on the label;
  - (b) indicate the energy efficiency star rating of the product in the box in 100% black, Calibri Bold and in a font size equivalent to that of the price;
  - (c) have the range of available energy efficiency classes in 100% black; and
  - (d) have one of the following two formats, and its size shall be such that the box is clearly visible and legible. The number showing the energy efficiency star rating shall be positioned in the centre of the box, with a visible border in 100% black placed around the box and the number of the energy efficiency star rating.

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**Figure 2: Monochrome/Coloured Star rating label with range of energy efficiency classes indicated**

6. In the case of a nested display, the sequence of display of the label shall be as follows:
- (a) the image referred to in paragraph 5 of this Part shall be shown on the display mechanism in proximity to the price of the product;
  - (b) the image shall link to the label set out in the Third and Fourth Schedules;
  - (c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;
  - (d) the label shall be displayed by pop up, new tab, new page or inset screen display;
  - (e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;
  - (f) the label shall cease to be displayed by means of a close option or other standard closing mechanism; and
  - (g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency class of the product in a font size equivalent to that of the price.
7. The electronic Product Information Sheet made available by a supplier in accordance with subregulation (2) of regulation 26 shall be shown on the display mechanism in proximity to the price of

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the lamp or luminaire. The size shall be such that the Product Information Sheet is clearly visible and legible. The Product Information Sheet may be displayed using a nested display or by referring to the product database, in which case the link used for accessing the Product Information Sheet shall clearly and legibly indicate 'Product information Sheet'. If a nested display is used, the Product Information Sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

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**SIXTH SCHEDULE**  
(regulation 33(2))

**VERIFICATION PROCEDURE FOR MARKET SURVEILLANCE**

**Table: Measured parameters verification tolerances**

PARAMETERS	VERIFICATION TOLERANCES
Initial Luminous Efficacy of lamp	The determined value (*), shall not be more than 3% lower - - than the declared value.
Luminous Efficacy of fixture	The determined value (*), shall not be more than 10% lower than the declared value.
Power rating of lamp (Wattage), $W$	The determined value (*), shall not be more than 10% higher than the declared value.
Lamp life	The determined value (*), shall not be more than 10% lower than the declared value.
Annual Energy Consumption	The determined value (*), shall not be more than 10% higher than the declared value.

1. For the purposes of checking conformity with the requirements laid down in these Regulations, the Commission and the Standards Authority shall test a single lamp or luminaire. If the measured parameters do not meet the values declared by the supplier within the tolerance ranges set out in the Table, the measurements shall be carried out on three more lamps or luminaire. The arithmetic mean of the measured values of these three lamps or luminaire shall meet the values declared by the supplier within the range defined in the Table.
2. Otherwise, the model and all other equivalent lamp or luminaire models shall be considered not to comply with the requirements laid down in these Regulations.

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3. The designated surveillance authorities shall use reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state-of-the-art measurement methods, as set out in the Standards set out in the First Schedule.

In the case of three additional units tested as prescribed in paragraph 4, the determined value means the arithmetic mean of the values determined for these three additional units.



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**HON. DR. MATTHEW OPOKU PREMPEH (MP)**  
*Minister responsible for Energy*

•  Date of *Gazette* notification: 5th July, 2022.

Entry into force: 2nd November, 2022.