



# Product Environmental Profile (PEP)

As per the ISO 14025, ISO 14040 and ISO 14044 standards

## ZELDA S2 – X2 5BLS12





## OUR CSR COMMITMENTS

**A different commitment** Our CSR approach is at the centre of our global strategy. We firmly believe that economic performance cannot be dissociated from a responsible social, societal and environmental commitment. Our CSR approach is therefore a strategic lever for inclusive and balanced **sustainable development**. It embodies our will to act ethically, **transparently and benevolently**, placing the expectations of our stakeholders at the centre of our thought processes and actions. To give structure to our commitment, we have defined a CSR policy based on **7 major challenges**, the cornerstones of our corporate responsibility. They guide our strategic choices, fuel our long-term vision and provide a material illustration of our commitment to tackling today's major challenges.

## PRODUCT DESCRIPTION

|                              |                            |
|------------------------------|----------------------------|
| Product reference            | ZELDA S2 – X2              |
| Source                       | 5BLS12                     |
| Average colour temperature   | 3000 K (others on request) |
| Rated operating voltage      | 230 V                      |
| Maximum current              | 700 mA                     |
| Maximum electrical power     | 123 W                      |
| Output flux at maximum power | 19099 lm                   |
| Lighting efficiency          | 178 lm/W                   |
| Electrical rating            | Class I or II              |
| Waterproof protection rating | IP66                       |
| Impact protection rating     | IK10                       |
| Rated service life           | 25 years - 100,000 h       |
| Functional unit              | 1,000 Lumens - 35,000 h    |
| Dimensions                   | 718 mm x 430 mm x 126 mm   |
| Weight                       | 9.5 kg                     |
| Product recyclability rate   | >90%                       |



## CONSTITUENT MATERIALS

We use environmentally-friendly materials and sustainable manufacturing processes. Our solutions are designed to blend harmoniously into their environment, thereby favouring biodiversity and protecting ecosystems.

The product does not contain any substances prohibited by the regulations in force at the time it was placed on the market. It complies with the restrictions on the use of hazardous substances set out in the RoHS Directive 2011/65/EU as amended by Delegated Directive (EU) 2015/863, and its amendment.

| Product only          |              |                     |              |                     |              |
|-----------------------|--------------|---------------------|--------------|---------------------|--------------|
| Plastics as % of mass |              | Metals as % of mass |              | Others as % of mass |              |
| PC                    | 3,5%         | Aluminum            | 59,3%        | Glass / Glass fiber | 10,1%        |
| PA                    | 1,7%         | Steel               | 4,0%         | Various             | 11,4%        |
| PMMA                  | 0,4%         | Copper              | 0,9%         |                     |              |
| ABS                   | 0,9%         | Various metals      | 1,2%         |                     |              |
| Rubber                | 1,3%         |                     |              |                     |              |
| Various plastics      | 5,1%         |                     |              |                     |              |
| <b>Total plastics</b> | <b>13,0%</b> | <b>Total metals</b> | <b>65,5%</b> | <b>Total others</b> | <b>21,5%</b> |

| Packaging only (2.4 kg) |             |                     |             |                     |              |
|-------------------------|-------------|---------------------|-------------|---------------------|--------------|
| Plastics as % of mass   |             | Metals as % of mass |             | Others as % of mass |              |
| PU                      | 8,3%        |                     |             | Cardboard           | 91,7%        |
| <b>Total plastics</b>   | <b>8,3%</b> | <b>Total metals</b> | <b>0,0%</b> | <b>Total others</b> | <b>91,7%</b> |

## DESIGN

ECLATEC has implemented a structured eco-design policy intended to optimise its products' environmental performance. The policy involves reducing the impact of the products throughout their life cycle, from cradle to grave, while guaranteeing quality and durability.

Every product is the subject of a detailed environmental profile drawn up in accordance with the ISO 14025, ISO 14040 and ISO 14044 standards using the CODDE software. The profile describes the environmental characteristics and their impact on the environment. Based on that, we continuously implement improvement actions to limit our impact and make an active contribution to the ecological transition.





## **PRODUCTION**

The product is from ISO 9001, ISO 14001 and ISO 50001 certified sites in Eastern France.

ECLATEC carries out a full carbon footprint of its activities covering scopes 1, 2 and 3. The footprint is updated every year to accurately track changes in our greenhouse gas emissions. That data is used to define our decarbonisation roadmap, which sets measurable and progressive emission reduction targets. That policy allows us to implement concrete actions, assess their effectiveness and steer our low-carbon strategy over the long term.

## **DISTRIBUTION**

Distribution is provided by responsible partners committed to the environment. They implement ongoing measures to reduce their carbon footprint and limit greenhouse gas emissions to guarantee more sustainable logistics.

## **USE**

Ecological responsibility is the focus of our mission. Our commitment to a greener future can be seen in every one of our technical solutions. Lighting is essential to modern life, but it must also respect our planet. Which is why we have developed a range of innovating products and services designed to minimise our impact on the environment while maximising lighting efficiency. Our LED luminaires house cutting-edge technology such as smart sensors that automatically adjust light intensity to real needs. It not only reduces electricity consumption, it also contributes to preserving the natural beauty of our nights by limiting light pollution in particular.

## **INSTALLATION**

The products are supplied with the power supply, fixing and assembly components, fittings and other electrical connectors required for installation. Installation of the product requires the use of an elevating work platform.



## RECYCLING AND END OF LIFE

ECLATEC complies with the RoHS and WEEE directives, and is a founding member of the ECOSYSTEM programme.



Our clients therefore have a free and simple local service to dispose of their light fixtures at the end of their service life in conditions that protect and respect the environment.

This commitment allows us to meet our clients' increasing WEEE processing needs and to make sure that waste is processed in compliance with regulations by operators who guarantee its decontamination and full recycling.

## ENVIRONMENTAL IMPACTS

The environmental impact assessment covers all stages of the product life cycle: manufacture, distribution, installation, use and end of life. It is representative of a product marketed in accordance with the local standards in force. For each phase, the following modelling elements have been taken into account:

**Unless otherwise indicated, the energy models are those built into the modules used from the EIMEv6 database.**

|                            |  |
|----------------------------|--|
| <b>Production (A1-A3)</b>  | The product materials and components, the processes and transport required to produce it, its packaging and the waste inherent in its manufacture. |
| <b>Distribution (A4)</b>   | Flat-rate product transport from the factory to its place of use.  |
| <b>Installation (A5)</b>   | Installation of the product in its place of use. Hardware required for installation, and packaging waste.  |
| <b>Use (B1-B7)</b>         | Use of the product, and maintenance required to guarantee fitness for purpose.   |
| <b>End of life (C1-C4)</b> | Removal, dismantling and transport of end-of-life products to a processing centre or landfill, and end-of-life processing.                         |

## CALCULATION ASSUMPTIONS

|                         |  |
|-------------------------|--|
| <b>Software version</b> | <b>EIMEv6 Database CODDE 2025-04</b>   |
| <b>Energy mix</b>       | Electricity Mix; Consumption mix; Low voltage; FR ( <b>0.108 kg CO2 eq. /kWh</b> )   |
| <b>Distribution</b>     | Flat rate: 1 km (multiply the <b>Distribution</b> line values by the actual number of km - Maxéville 54320 to delivery location) |





## RESULTS

Environmental impact at the scale of the declared unit: 19099 lumens for 100,000 hours.

|   |             | Total of Life Cycle |                    | Manufacturing<br>A1-A3 | Distribution<br>A4 | Installation<br>A5 | Use<br>B1-B7 | End of life<br>C1-C4 |
|---|-------------|---------------------|--------------------|------------------------|--------------------|--------------------|--------------|----------------------|
| Acidification                                     | PEF-AP      | 7,16E+00            | mol H+ eq.         | 8,69E-01               | 7,09E-07           | 1,79E-04           | 6,29E+00     | 2,27E-03             |
| Climate change                                    | PEF-GWP     | 1,44E+03            | kg CO2 eq.         | 1,05E+02               | 4,52E-04           | 5,35E-02           | 1,33E+03     | 4,35E-01             |
| Climate change - biogenic                         | PEF-GWPb    | 7,11E+01            | kg CO2 eq.         | 9,93E-01               | 2,17E-09           | 0,00E+00           | 7,01E+01     | 1,56E-05             |
| Climate change - fossil                           | PEF-GWPf    | 1,37E+03            | kg CO2 eq.         | 1,04E+02               | 4,52E-04           | 5,35E-02           | 1,26E+03     | 4,35E-01             |
| Climate change - land use and land use change     | PEF-GWPlu   | 5,14E-04            | kg CO2 eq.         | 5,14E-04               | 6,57E-10           | 0,00E+00           | 0,00E+00     | 6,57E-08             |
| Ecotoxicity, freshwater                           | PEF-CTUe    | 1,60E+04            | CTUe               | 9,26E+03               | 7,13E-03           | 2,19E-02           | 6,74E+03     | 8,79E+00             |
| Particulate matter                                | PEF-PM      | 1,74E-04            | Disease occurrence | 7,05E-06               | 6,28E-12           | 8,65E-10           | 1,67E-04     | 1,19E-08             |
| Eutrophication, freshwater                        | PEF-Epf     | 3,29E-02            | kg P eq.           | 5,68E-04               | 1,66E-09           | 9,09E-09           | 3,23E-02     | 1,62E-07             |
| Eutrophication, marine                            | PEF-Epm     | 9,13E-01            | kg N eq.           | 7,50E-02               | 1,34E-07           | 3,02E-05           | 8,38E-01     | 3,23E-04             |
| Eutrophication, terrestrial                       | PEF-Ept     | 1,52E+01            | mol N eq.          | 8,22E-01               | 1,47E-06           | 3,30E-04           | 1,44E+01     | 3,52E-03             |
| Human toxicity, cancer                            | PEF-CTUh-c  | 3,56E-07            | CTUh               | 1,48E-07               | 8,34E-14           | 5,37E-12           | 2,08E-07     | 1,47E-10             |
| Human toxicity, non-cancer                        | PEF-CTUh-nc | 7,35E-06            | CTUh               | 1,06E-06               | 2,06E-12           | 1,23E-09           | 6,28E-06     | 1,38E-08             |
| Ionising radiation, human health                  | PEF-IR      | 1,78E+04            | kBq U235 eq.       | 1,40E+02               | 1,51E-05           | 0,00E+00           | 1,76E+04     | 1,58E-01             |
| Land use  | PEF-LU      | 6,56E+01            | -                  | 4,77E+00               | 1,86E-06           | 0,00E+00           | 6,08E+01     | 7,76E-03             |
| Ozone depletion                                   | PEF-ODP     | 3,24E-05            | kg CFC-11 eq.      | 1,97E-05               | 5,19E-12           | 0,00E+00           | 1,26E-05     | 6,83E-08             |
| Photochemical ozone formation - human health      | PEF-POCP    | 2,76E+00            | kg NMVOC eq.       | 2,73E-01               | 4,73E-07           | 1,25E-04           | 2,48E+00     | 1,34E-03             |
| Resource use, fossils                             | PEF-ADPf    | 1,42E+05            | MJ                 | 1,98E+03               | 7,89E-03           | 4,18E+00           | 1,40E+05     | 8,80E+00             |
| Resource use, minerals and metals                 | PEF-ADPe    | 1,64E-02            | kg SB eq.          | 1,51E-02               | 1,45E-10           | 2,13E-09           | 1,29E-03     | 2,04E-08             |
| Water use   | PEF-WU      | 2,43E+02            | m3 eq.             | 2,60E+01               | 1,61E-05           | 2,16E-02           | 2,16E+02     | 2,82E-01             |
| Net use of fresh water                            | NUFW-A2     | 5,67E+00            | m3                 | 6,05E-01               | 3,75E-07           | 5,04E-04           | 5,06E+00     | 1,11E-02             |
| Total primary energy                              | TPE         | 1,60E+05            | MJ                 | 2,10E+03               | 7,92E-03           | 4,18E+00           | 1,58E+05     | 8,81E+00             |
| Total non-renewable primary energy                | ENR         | 1,42E+05            | MJ                 | 1,98E+03               | 7,89E-03           | 4,18E+00           | 1,40E+05     | 1,00E-04             |
| Total renewable primary energy                    | ER          | 1,80E+04            | MJ                 | 1,21E+02               | 2,44E-05           | 0,00E+00           | 1,79E+04     | 1,00E-04             |
| Non renewable primary energy used as energy       | ENRP        | 1,42E+05            | MJ                 | 1,94E+03               | 7,89E-03           | 4,18E+00           | 1,40E+05     | 0,00E+00             |
| Non renewable primary energy used as raw material | ENRM        | 4,27E+01            | MJ                 | 4,27E+01               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Use of non renewable secondary fuels              | UNRSF       | 0,00E+00            | MJ                 | 0,00E+00               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Renewable primary energy used as energy           | ERP         | 1,80E+04            | MJ                 | 1,20E+02               | 2,44E-05           | 0,00E+00           | 1,79E+04     | 1,01E-02             |
| Renewable primary energy used as raw material     | ERM         | 7,20E-01            | MJ                 | 7,20E-01               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Use of renewable secondary fuels                  | URSF        | 0,00E+00            | MJ                 | 0,00E+00               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Use of secondary material                         | USM         | 1,37E+00            | kg                 | 1,36E+00               | 0,00E+00           | 7,00E-03           | 0,00E+00     | 0,00E+00             |
| Hazardous waste disposed                          | HWD         | 7,88E+01            | kg                 | 1,59E+01               | 1,82E-06           | 0,00E+00           | 5,33E+01     | 9,54E+00             |
| Non-hazardous waste disposed                      | NHWD        | 4,74E+02            | kg                 | 2,36E+02               | 4,03E-05           | 0,00E+00           | 2,38E+02     | 2,80E-02             |
| Radioactive waste disposed                        | RWD         | 2,44E-01            | kg                 | 1,85E-01               | 3,19E-08           | 0,00E+00           | 5,87E-02     | 5,47E-05             |
| Components for reuse                              | CRU         | 0,00E+00            | kg                 | 0,00E+00               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Exported energy                                   | EE          | 0,00E+00            | MJ                 | 0,00E+00               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Materials for energy recovery                     | MER         | 0,00E+00            | kg                 | 0,00E+00               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |
| Materials for recycling                           | MRE         | 1,62E-05            | kg                 | 1,62E-05               | 0,00E+00           | 0,00E+00           | 0,00E+00     | 0,00E+00             |



## Environmental impact at the scale of the functional unit: 1,000 lumens for 35,000 hours.

|   |             | Total of Life Cycle |                    | Manufacturing | Distribution | Installation | Use      | End of life |
|---|-------------|---------------------|--------------------|---------------|--------------|--------------|----------|-------------|
|   |             |                     |                    | A1-A3         | A4           | A5           | B1-B7    | C1-C4       |
| Acidification                                     | PEF-AP      | 1,31E-01            | mol H+ eq.         | 1,59E-02      | 1,30E-08     | 3,28E-06     | 1,15E-01 | 4,16E-05    |
| Climate change                                    | PEF-GWP     | 2,64E+01            | kg CO2 eq.         | 1,92E+00      | 8,28E-06     | 9,80E-04     | 2,44E+01 | 7,97E-03    |
| Climate change - biogenic                         | PEF-GWPb    | 1,30E+00            | kg CO2 eq.         | 1,82E-02      | 3,98E-11     | 0,00E+00     | 1,28E+00 | 2,86E-07    |
| Climate change - fossil                           | PEF-GWPF    | 2,51E+01            | kg CO2 eq.         | 1,91E+00      | 8,28E-06     | 9,80E-04     | 2,31E+01 | 7,97E-03    |
| Climate change - land use and land use change     | PEF-GWPlu   | 9,42E-06            | kg CO2 eq.         | 9,42E-06      | 1,20E-11     | 0,00E+00     | 0,00E+00 | 1,20E-09    |
| Ecotoxicity, freshwater                           | PEF-CTUe    | 2,93E+02            | CTUe               | 1,70E+02      | 1,31E-04     | 4,01E-04     | 1,24E+02 | 1,61E-01    |
| Particulate matter                                | PEF-PM      | 3,19E-06            | Disease occurrence | 1,29E-07      | 1,15E-13     | 1,59E-11     | 3,06E-06 | 2,18E-10    |
| Eutrophication, freshwater                        | PEF-Epf     | 6,03E-04            | kg P eq.           | 1,04E-05      | 3,04E-11     | 1,67E-10     | 5,92E-04 | 2,97E-09    |
| Eutrophication, marine                            | PEF-Epm     | 1,67E-02            | kg N eq.           | 1,37E-03      | 2,46E-09     | 5,53E-07     | 1,54E-02 | 5,92E-06    |
| Eutrophication, terrestrial                       | PEF-Ept     | 2,79E-01            | mol N eq.          | 1,51E-02      | 2,69E-08     | 6,05E-06     | 2,64E-01 | 6,45E-05    |
| Human toxicity, cancer                            | PEF-CTUh-c  | 6,52E-09            | CTUh               | 2,71E-09      | 1,53E-15     | 9,84E-14     | 3,81E-09 | 2,69E-12    |
| Human toxicity, non-cancer                        | PEF-CTUh-nc | 1,35E-07            | CTUh               | 1,94E-08      | 3,78E-14     | 2,25E-11     | 1,15E-07 | 2,53E-10    |
| Ionising radiation, human health                  | PEF-IR      | 3,26E+02            | kBq U235 eq.       | 2,57E+00      | 2,77E-07     | 0,00E+00     | 3,23E+02 | 2,90E-03    |
| Land use  | PEF-LU      | 1,20E+00            | -                  | 8,74E-02      | 3,41E-08     | 0,00E+00     | 1,11E+00 | 1,42E-04    |
| Ozone depletion                                   | PEF-ODP     | 5,94E-07            | kg CFC-11 eq.      | 3,61E-07      | 9,51E-14     | 0,00E+00     | 2,31E-07 | 1,25E-09    |
| Photochemical ozone formation - human health      | PEF-POCP    | 5,06E-02            | kg NMVOC eq.       | 5,00E-03      | 8,67E-09     | 2,29E-06     | 4,54E-02 | 2,46E-05    |
| Resource use, fossils                             | PEF-ADPF    | 2,60E+03            | MJ                 | 3,63E+01      | 1,45E-04     | 7,66E-02     | 2,57E+03 | 1,61E-01    |
| Resource use, minerals and metals                 | PEF-ADPe    | 3,01E-04            | kg SB eq.          | 2,77E-04      | 2,66E-12     | 3,90E-11     | 2,36E-05 | 3,74E-10    |
| Water use   | PEF-WU      | 4,45E+00            | m3 eq.             | 4,76E-01      | 2,95E-07     | 3,96E-04     | 3,96E+00 | 5,17E-03    |
| Net use of fresh water                            | NUFW-A2     | 1,04E-01            | m3                 | 1,11E-02      | 6,87E-09     | 9,24E-06     | 9,27E-02 | 2,03E-04    |
| Total primary energy                              | TPE         | 2,93E+03            | MJ                 | 3,85E+01      | 1,45E-04     | 7,66E-02     | 2,90E+03 | 1,61E-01    |
| Total non-renewable primary energy                | ENR         | 2,60E+03            | MJ                 | 3,63E+01      | 1,45E-04     | 7,66E-02     | 2,57E+03 | 1,83E-06    |
| Total renewable primary energy                    | ER          | 3,30E+02            | MJ                 | 2,22E+00      | 4,47E-07     | 0,00E+00     | 3,28E+02 | 1,83E-06    |
| Non renewable primary energy used as energy       | ENRP        | 2,60E+03            | MJ                 | 3,56E+01      | 1,45E-04     | 7,66E-02     | 2,57E+03 | 0,00E+00    |
| Non renewable primary energy used as raw material | ENRM        | 7,83E-01            | MJ                 | 7,83E-01      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Use of non renewable secondary fuels              | UNRSF       | 0,00E+00            | MJ                 | 0,00E+00      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Renewable primary energy used as energy           | ERP         | 3,30E+02            | MJ                 | 2,20E+00      | 4,47E-07     | 0,00E+00     | 3,28E+02 | 1,85E-04    |
| Renewable primary energy used as raw material     | ERM         | 1,32E-02            | MJ                 | 1,32E-02      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Use of renewable secondary fuels                  | URSF        | 0,00E+00            | MJ                 | 0,00E+00      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Use of secondary material                         | USM         | 2,51E-02            | kg                 | 2,49E-02      | 0,00E+00     | 1,28E-04     | 0,00E+00 | 0,00E+00    |
| Hazardous waste disposed                          | HWD         | 1,44E+00            | kg                 | 2,91E-01      | 3,34E-08     | 0,00E+00     | 9,77E-01 | 1,75E-01    |
| Non-hazardous waste disposed                      | NHWD        | 8,69E+00            | kg                 | 4,32E+00      | 7,39E-07     | 0,00E+00     | 4,36E+00 | 5,13E-04    |
| Radioactive waste disposed                        | RWD         | 4,47E-03            | kg                 | 3,39E-03      | 5,85E-10     | 0,00E+00     | 1,08E-03 | 1,00E-06    |
| Components for reuse                              | CRU         | 0,00E+00            | kg                 | 0,00E+00      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Exported energy                                   | EE          | 0,00E+00            | MJ                 | 0,00E+00      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Materials for energy recovery                     | MER         | 0,00E+00            | kg                 | 0,00E+00      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |
| Materials for recycling                           | MRE         | 2,97E-07            | kg                 | 2,97E-07      | 0,00E+00     | 0,00E+00     | 0,00E+00 | 0,00E+00    |

**The total GWP impact at the scale of the functional unit is 26.4 kg CO2 eq.**



## REFERENCES

**PSR-0014-ed2.0-FR-2023 07 13.** Specific rules for luminaires in the PEP ecopassport® programme.  
Website: <http://www.pep-ecopassport.org>

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**ISO 14044: 2006** "Environmental management - Life cycle assessment - Requirements and guidelines".  
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**ISO 14025: 2006** "Environmental labels and declarations - Type III environmental declarations - Principles and procedures".  
International Standardization Organization.