

ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021



MIRA M

from

Sonepar Sverige AB



CARDI

Version date: 2026-03-04

Validity date: 2031-03-03

GENERAL INFORMATION

Type of EPD: EPD of multiple products, based on a representative product.

Third-party Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via EPD verification by individual verifier:

Third-party verifier: prof. Ing. Silvia Vilčeková, PhD., Silcert, s.r.o.

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Sonepar Sverige AB

Address: 191 83 Sollentuna

Contact: Fredrik Lindeberg fredrik.lindeberg@cardi.se

Address and contact information of the LCA practitioner commissioned by the EPD owner:

Mg.sc.ing. Evita Kairiša, Lightholm

“Ezisi”, Marupe Rural Territory, Marupe Municipality, Latvia

Contact information: evita.kairisa@lightholm.com

Description of the organisation: **Sonepar Sverige** is part of the Sonepar Group. Sonepar Sverige offers electrical materials and systems to customers operating within electrical installation, industry, infrastructure, security, and lighting. The company provides a wide assortment from the world's leading suppliers and stocks over 40,000 items. Logistics is the driving force behind all operations, and the logistics services simplify everyday work for customers. With solid expertise, Sonepar Sverige strives to contribute to increased efficiency and profitability in customers' purchasing and sales organizations. Cardi Belysning is a nationwide sales organization within Sonepar, specializing in lighting solutions. Lighting sales professionals and designers provide expert support throughout the entire project – from concept to completion.

The Cardi brand offers a comprehensive range of both functional and design-oriented luminaires, suitable for all types of indoor and outdoor environments.

Product-related or management system-related certifications: Manufacturing unit has ISO 9001 and ISO 14001 certificate. LED luminaires are manufactured to fulfil the requirements of IEC 60598-1, IEC 60598-2-3

PRODUCT INFORMATION

Product name: MIRA M

Included products: The Mira M product family covers power levels from 10 W to 70 W and offers a wide variety of optics designed for different lighting applications. The products are available with multiple colour temperature (CCT) and colour rendering index (CRI) options. Additional customization includes various dimming options, and socket types (Zhaga Top, Zhaga Bottom, or Zhaga Top + Bottom).

Product identification: Standard products are identified by E-number (see in Additional Information) Customized products are identified MIRA + [optics indicator] + M + [Luminous flux indicator] + [CCT and/or CRI indicator] + [dimming indicator]

UN CPC code: 4653 Lighting equipment

Product description: MIRA M is a new standard in sustainable LED street lighting, blending Swedish engineering excellence with modern, eco-efficient design. Developed for both urban and rural environments, it provides reliable, energy-saving illumination for streets, parks, pathways, and public spaces. MIRA M adapts seamlessly to different installation needs and lighting requirements.

Built for long-term performance, the MIRA M features a toolless access mechanism for quick servicing and modular, replaceable components that extend the product's lifecycle while minimizing environmental impact.

For MIRA M, technical parameters are as follows:

| | |
|----------------------|---|
| Product | Road and street luminaire with LED module |
| Rated voltage | 220 – 240 Vac |
| Rated frequency | 50/60 Hz |
| Rated power | 10 - 70 W |
| Classification | Class I, Class II |
| Degree of protection | IP66, IK09 |

MIRA AREA M 6000 4K - is declared as a representative product, based on production volumes.

Name and location of production site(s): "Ezisi", Marupe Rural Territory, Marupe Municipality, Latvia

In case of EPDs owned by a trader, the location of the final process in direct control of the trader: Örebro

Name of manufacturer(s) (if EPD of goods), if different from the EPD owner: Pedrobeat AS

References to any relevant websites for more information or explanatory materials, if applicable:
www.cardi.se

CONTENT DECLARATION

| Product content | Mass, kg | Post-consumer recycled material, mass-% of product | Biogenic material, mass-% of product | Biogenic material, kg C/product or declared unit |
|-------------------------|----------|--|--------------------------------------|--|
| Aluminum | 5,1400 | 0 | 0 | 0 |
| Glass | 1,1200 | 0 | 0 | 0 |
| Silicon | 0,0660 | 0 | 0 | 0 |
| Steel | 0,2310 | 0 | 0 | 0 |
| Stainless steel | 0,3260 | 0 | 0 | 0 |
| Polycarbonate | 0,0970 | 0 | 0 | 0 |
| PCB | 0,0600 | 0 | 0 | 0 |
| LED Driver | 0,2000 | 0 | 0 | 0 |
| Polymethyl methacrylate | 0,0320 | 0 | 0 | 0 |
| Cable | 0,9000 | 0 | 0 | 0 |
| Polyamide | 0,0100 | 0 | 0 | 0 |
| TOTAL | 8,1860 | 0 | 0 | 0 |

| Packaging materials | Mass, kg | Mass-% (versus the product) | Biogenic material, kg C/product or declared unit |
|-------------------------|----------|-----------------------------|--|
| Cardboard box (kg) | 0,580 | 7,08 | 0,2668 |
| Paper packaging (kg) | 0,010 | 0,12 | 0,0046 |
| Plastics packaging (kg) | 0,010 | 0,12 | 0 |
| Wood pallets (kg) | 0,625 | 7,63 | 0,2750 |
| TOTAL | 1,225 | 14,96 | 0,5464 |

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO₂.

| Hazardous substances from the candidate list of SVHC | EC No. | CAS No. | Mass-% per product or declared unit |
|--|--------|---------|-------------------------------------|
|--|--------|---------|-------------------------------------|

No substances included in the Candidate List of Substances of Very High Concern for authorization under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0,1% weight.

LCA INFORMATION

Declared unit: 1 piece of the luminaire, equals to 8,186 kg.

Conversion factor: The conversion factor to mass of 1 kg is 0,122. To convert the results per 1 kg, the values must be multiplied by this factor.

Reference service life: 100 000 h

Time representativeness: Site specific data from producer is based on 1 year average for process data (reference year 2024). Time scope less than 10-years was applied for background data. Time scope less than 2 years was applied for specific data.

Geographical scope: Global, Europe, Latvia

Database(s) and LCA software used: Software LCA for Experts (version 10.9.1.19). Ecoinvent database (version 3.11.), EPD of LED driver.

Description of system boundaries:

The system boundary is cradle to grave and module D (A+B+C+D) according to EN 15804 + A2/AC:2021. It covers the production of raw materials, all relevant transport down to the factory gate, manufacturing of luminaire MIRA M by Pedrobeat AS, transport from the Pedrobeat AS plant to the site (836 km truck, 500 km ship), installation of luminaire including product unpacking, operational energy of use of luminaire (considered European residual electricity grid mix), deconstruction of the luminaire, transport of deconstructed materials, waste processing and recycling of used luminaire.

System diagram:

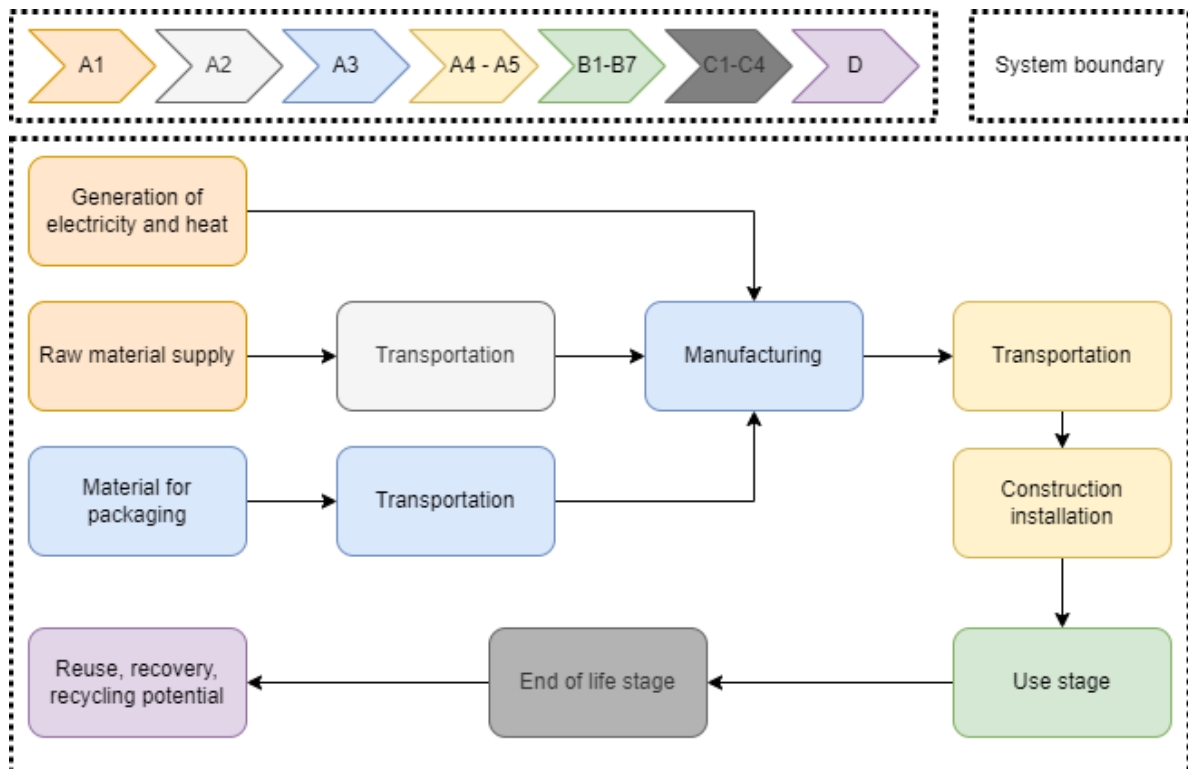


Figure 1 System boundary of the LCA study conducted on production of MIRA M

More information:

Cut off rules: More than 99% of flows were included.

Allocations: As a general allocation rule the production of 1 piece of product was chosen. Common inputs (electricity, thermal energy, water), material inputs, transport and common outputs (waste generated) are allocated to this product, i.e. to declared unit of this product.

97% of aluminium scrap in aluminium ingot production is used in production of a luminaire. No secondary fuels are used in production.

Information about declared modules:

Module A1 covers the production of materials and components for producer and includes fuels and energy carriers (electricity, natural gas). This consists of the production of input materials.

Module A2 covers the transport of material into the site of production. Generic DB processes with site-specific parameters for distance were used.

Module A3 covers on-site operated processes dealing with MIRA M production and packaging. These processes are under the operational control of Pedrobeat AS and these are specific processes modelled based on data collection.

Module A4 covers the transport of product from the site of production Pedrobeat AS to the site of installation (considered weighted average 836 km by truck and 500 km by ship). Generic DB processes with site-specific parameters for distance were used. According to the assumption a weighted average of transportation modes and distances, based on transportation to several customers or markets, representing the geographical scope of the EPD was used in module A4.

Module A5 covers the phase of treatment and disposal of waste generated from the unpacking and installation of MIRA M. Default processes were used for recycling of packaging materials. It is assumed energy recovery from plastic and material recycling of wood and paper.

Module B6 covers operational energy use during the use phase of luminaires (considered European residual electricity grid mix).

It is assumed, that product is to 100% sent to recycling.

Module C1 covers estimated energy for deconstruction related to the mass of deconstructed material. Assumption of 1,1 kWh/t of energy carrier Diesel was used for deconstruction of luminaire.

Module C2 covers the transport of material into recycling facility. Generic DB processes with estimated general distances were used. Distance for the transport of material for recycling was set at 80 km.

Module C3 covers the processing for loading and unloading at sorting facility, sorting, treatment of materials before recycling and recycling of aluminium, steel, stainless steel and copper of used luminaire according to the assumption.

Module C4 covers the process for disposal/landfilling for steel, stainless steel, copper and aluminium.

Module D covers declared benefits and loads regarding recycling potential of steel, stainless steel, aluminium, copper and energy recovery from incineration of other materials from used luminaire and used packaging.

Electricity mix: DB process of Latvian residual grid mix is used for consumed electricity in production process in Pedrobeat AS The used dataset has impact of 0,43 kg CO₂ eq./kWh for GWP-GHG indicator.

Characterisation factors: Characterisation factors are based on Environmental Footprint 3.1. (EF 3.1).

Data quality of processes contributing with more than 10% to the GWP-GHG results of modules A1-A3:

| Process | Source Type | Source | Reference year | Data category |
|--------------------------|-------------|----------------|----------------|---------------|
| Production of LED driver | EPD | Supplier EPD | <5 years old | Primary |
| Production of PCB | Database | Ecoinvent 3.11 | 2024 | Secondary |
| Production of aluminium | Database | Ecoinvent 3.11 | 2024 | Secondary |

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

| | Product stage | | | Construction process stage | | Use stage | | | | | | | End of life stage | | | | Resource recovery stage | |
|----------------------|---------------------|-----------|---------------|----------------------------|---------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|------------------------------------|----|
| | Raw material supply | Transport | Manufacturing | Transport | Construction installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential | |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D | |
| Modules declared | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Geography | GLO | GLO | LV | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU | EU |
| Specific data used | 5,70% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – products | -5,3%;+25,9% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Variation – sites | 0% | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

The variations above 10% are declared for relevant impact categories as below:

| LCA result of one declared unit product (A-C) | Min | Max | Explanation of the variation |
|---|---------|---------|--|
| EP-freshwater | -15,86% | +38,36% | Different weight of PCB and Zhaga components |
| ADP-minerals and metals | -16,90% | +52,30% | Different weight of PCB, cables, LED driver and Zhaga components |
| PENRM | - | +61,24% | Different weight of LED driver component |
| HWD | -6,13% | +13,09% | Different weight of PCB and Zhaga components |
| NHWD | -7,07% | +11,92% | Different weight of PCB, cables, LED driver and Zhaga components |

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

Mandatory impact category indicators according to EN 15804

| Results per 1 piece of luminaire MIRA M | | | | | | | | | | |
|---|---|-----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B6 | C1 | C2 | C3 | C4 | D |
| GWP-fossil | kg CO ₂ eq. | 5,90E+01 | 8,64E-01 | 5,28E-03 | 1,05E+03 | 2,19E-03 | 6,91E-02 | 1,45E-02 | 3,01E-03 | -9,04E+00 |
| GWP-biogenic | kg CO ₂ eq. | -3,12E-01 | 5,01E-04 | 3,11E-01 | 3,42E+01 | 7,12E-05 | 4,22E-05 | 1,94E-04 | 1,41E-05 | 3,36E+00 |
| GWP-luluc | kg CO ₂ eq. | 9,97E-02 | 3,20E-04 | 9,22E-06 | 3,10E+00 | 6,47E-06 | 2,48E-05 | 1,81E-05 | 7,80E-07 | -3,48E-02 |
| GWP-total | kg CO ₂ eq. | 5,88E+01 | 8,64E-01 | 3,16E-01 | 1,09E+03 | 2,27E-03 | 6,92E-02 | 1,47E-02 | 3,03E-03 | -5,72E+00 |
| ODP | kg CFC 11 eq. | 5,38E-06 | 1,86E-08 | 9,03E-11 | 1,96E-05 | 4,08E-11 | 1,51E-09 | 2,38E-10 | 1,01E-10 | -1,41E-07 |
| AP | mol H ⁺ eq. | 8,45E-01 | 3,62E-03 | 4,52E-05 | 6,06E+00 | 1,26E-05 | 2,29E-04 | 1,40E-04 | 3,36E-05 | -1,29E-01 |
| EP-freshwater | kg P eq. | 4,31E-02 | 6,00E-05 | 2,99E-06 | 1,01E+00 | 2,11E-06 | 4,88E-06 | 5,82E-06 | 5,07E-06 | -7,15E-02 |
| EP-marine | kg N eq. | 8,42E-02 | 1,14E-03 | 1,56E-05 | 9,75E-01 | 2,03E-06 | 7,82E-05 | 5,48E-05 | 8,50E-06 | -3,40E-02 |
| EP-terrestrial | mol N eq. | 9,22E-01 | 1,24E-02 | 1,64E-04 | 8,55E+00 | 1,78E-05 | 8,45E-04 | 5,88E-04 | 9,11E-05 | -4,67E-01 |
| POCP | kg NMVOC eq. | 2,90E-01 | 4,97E-03 | 4,71E-05 | 2,74E+00 | 5,71E-06 | 3,62E-04 | 1,67E-04 | 3,30E-05 | -1,00E-01 |
| ADP-minerals&metals* | kg Sb eq. | 7,44E-03 | 2,37E-06 | 4,25E-08 | 1,42E-02 | 2,96E-08 | 1,94E-07 | 8,38E-08 | 5,06E-09 | -1,31E-03 |
| ADP-fossil* | MJ | 8,18E+02 | 1,26E+01 | 1,05E-01 | 2,63E+04 | 5,48E-02 | 1,01E+00 | 2,56E-01 | 7,10E-02 | -1,28E+02 |
| WDP* | m ³ | 2,00E+01 | 7,41E-02 | 2,04E-03 | 6,81E+02 | 1,42E-03 | 6,05E-03 | 4,05E-03 | -3,56E-02 | -5,34E+00 |
| Acronyms | GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption | | | | | | | | | |

* Disclaimer: The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Additional mandatory and voluntary impact category indicators

| Results per 1 piece of luminaire MIRA M | | | | | | | | | | |
|---|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B6 | C1 | C2 | C3 | C4 | D |
| GWP-GHG ¹ | kg CO ₂ eq. | 5,92E+01 | 8,64E-01 | 5,30E-03 | 1,05E+03 | 2,20E-03 | 6,91E-02 | 1,45E-02 | 3,01E-03 | -9,08E+00 |

Resource use indicators

| Results per 1 piece of luminaire MIRA M | | | | | | | | | | |
|---|--|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B6 | C1 | C2 | C3 | C4 | D |
| PERE | MJ | 1,33E+02 | 1,92E-01 | 1,93E-02 | 6,55E+03 | 1,37E-02 | 1,56E-02 | 3,73E-02 | 1,36E-03 | -3,57E+01 |
| PERM | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PERT | MJ | 1,33E+02 | 1,92E-01 | 1,93E-02 | 6,55E+03 | 1,37E-02 | 1,56E-02 | 3,73E-02 | 1,36E-03 | -3,57E+01 |
| PENRE | MJ | 8,16E+02 | 1,26E+01 | 1,05E-01 | 2,63E+04 | 5,48E-02 | 1,01E+00 | 2,56E-01 | 7,10E-02 | -1,28E+02 |
| PENRM | MJ. | 2,24E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| PENRT | MJ | 8,18E+02 | 1,26E+01 | 1,05E-01 | 2,63E+04 | 5,48E-02 | 1,01E+00 | 2,56E-01 | 7,10E-02 | -1,28E+02 |
| SM | kg | 4,99E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| RSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| NRSF | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| FW | m ³ | 4,87E-01 | 1,73E-03 | 4,76E-05 | 1,58E+01 | 3,30E-05 | 1,41E-04 | 9,42E-05 | -8,29E-04 | -1,24E-01 |
| Acronyms | PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water | | | | | | | | | |

Waste indicators

| Results per 1 piece of luminaire MIRA M | | | | | | | | | | |
|---|------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B6 | C1 | C2 | C3 | C4 | D |
| Hazardous waste disposed | kg | 6,85E+00 | 1,31E-02 | 9,25E-05 | 2,85E+01 | 5,94E-05 | 1,04E-03 | 1,96E-04 | 8,29E-05 | -2,84E+00 |
| Non-hazardous waste disposed | kg | 6,71E+01 | 1,21E-01 | 7,46E-04 | 2,33E+02 | 4,86E-04 | 9,74E-03 | 1,56E-03 | 9,80E-01 | -9,46E+00 |

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.

| | | | | | | | | | | |
|----------------------------|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Radioactive waste disposed | kg | 7,23E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
|----------------------------|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|

Output flow indicators

| Results per 1 piece of luminaire MIRA M | | | | | | | | | | |
|---|------|-----------|----------|-----------|----------|----------|----------|-----------|----------|----------|
| Indicator | Unit | A1-A3 | A4 | A5 | B6 | C1 | C2 | C3 | C4 | D |
| Components for re-use | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Material for recycling | kg | 1,43E+00 | 0,00E+00 | 1,21E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 8,19E+00 | 0,00E+00 | 0,00E+00 |
| Materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Exported energy, electricity | MJ | -2,63E-04 | 0,00E+00 | -1,80E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -5,23E-02 | 0,00E+00 | 0,00E+00 |
| Exported energy, thermal | MJ | -4,53E-04 | 0,00E+00 | -3,10E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -9,01E-02 | 0,00E+00 | 0,00E+00 |

ADDITIONAL ENVIRONMENTAL INFORMATION

Conversion factors B6

For the conversion of B6 results for a products with a different power consumption use a conversion factor from the table below.

| | B6 conversion factor |
|-----------|----------------------|
| ≤10W | 0,2500 |
| 11W - 20W | 0,5000 |
| 21W - 30W | 0,7500 |
| 31W - 40W | 1,0000 |
| 41W - 50W | 1,2500 |
| 51W-60W | 1,5000 |
| 61W-70W | 1,7500 |

Additional information

Standard products identified by E-numbers

| Product name | E-number |
|------------------------------|----------|
| MIRA STREET M 2000 3K | E7728968 |
| MIRA STREET M 2000 4K | E7728969 |
| MIRA STREET M 2000 3K ZD4I-U | E7728970 |
| MIRA STREET M 2000 4K ZD4I-U | E7728971 |
| MIRA STREET M 2000 3K ZD4I-N | E7728973 |
| MIRA STREET M 2000 4K ZD4I-N | E7728974 |
| MIRA STREET M 2000 3K ZD4I-D | E7728976 |
| MIRA STREET M 2000 4K ZD4I-D | E7728977 |
| MIRA STREET M 3500 3K | E7728979 |
| MIRA STREET M 3500 4K | E7728980 |
| MIRA STREET M 3500 3K ZD4I-U | E7728981 |



| | |
|-------------------------------|----------|
| MIRA STREET M 3500 4K ZD4I-U | E7728982 |
| MIRA STREET M 3500 3K ZD4I-N | E7728984 |
| MIRA STREET M 3500 4K ZD4I-N | E7728985 |
| MIRA STREET M 3500 3K ZD4I-D | E7728987 |
| MIRA STREET M 3500 4K ZD4I-D | E7728988 |
| MIRA STREET M 4500 3K | E7728990 |
| MIRA STREET M 4500 4K | E7728991 |
| MIRA STREET M 4500 3K ZD4I-U | E7728992 |
| MIRA STREET M 4500 4K ZD4I-U | E7728993 |
| MIRA STREET M 4500 3K ZD4I-N | E7728995 |
| MIRA STREET M 4500 4K ZD4I-N | E7728996 |
| MIRA STREET M 4500 3K ZD4I-D | E7728998 |
| MIRA STREET M 4500 4K ZD4I-D | E7728999 |
| MIRA STREET M 5500 3K | E7729001 |
| MIRA STREET M 5500 4K | E7729002 |
| MIRA STREET M 5500 3K ZD4I-U | E7729003 |
| MIRA STREET M 5500 4K ZD4I-U | E7729004 |
| MIRA STREET M 5500 3K ZD4I-N | E7729006 |
| MIRA STREET M 5500 4K ZD4I-N | E7729007 |
| MIRA STREET M 5500 3K ZD4I-D | E7729009 |
| MIRA STREET M 5500 4K ZD4I-D | E7729010 |
| MIRA STREET M 6500 3K | E7729012 |
| MIRA STREET M 6500 4K | E7729013 |
| MIRA STREET M 6500 3K ZD4I-U | E7729014 |
| MIRA STREET M 6500 4K ZD4I-U | E7729015 |
| MIRA STREET M 6500 3K ZD4I-N | E7729017 |
| MIRA STREET M 6500 4K ZD4I-N | E7729018 |
| MIRA STREET M 6500 3K ZD4I-D | E7729020 |
| MIRA STREET M 6500 4K ZD4I-D | E7729021 |
| MIRA STREET M 7500 3K | E7729023 |
| MIRA STREET M 7500 4K | E7729024 |
| MIRA STREET M 7500 3K ZD4I-U | E7729025 |
| MIRA STREET M 7500 4K ZD4I-U | E7729026 |
| MIRA STREET M 7500 3K ZD4I-N | E7729028 |
| MIRA STREET M 7500 4K ZD4I-N | E7729029 |
| MIRA STREET M 7500 3K ZD4I-D | E7729031 |
| MIRA STREET M 7500 4K ZD4I-D | E7729032 |
| MIRA STREET M 10000 3K | E7729034 |
| MIRA STREET M 10000 4K | E7729035 |
| MIRA STREET M 10000 3K ZD4I-U | E7729036 |
| MIRA STREET M 10000 4K ZD4I-U | E7729037 |
| MIRA STREET M 10000 3K ZD4I-N | E7729039 |
| MIRA STREET M 10000 4K ZD4I-N | E7729040 |



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| MIRA STREET M 10000 3K ZD4I-D | E7729042 |
| MIRA STREET M 10000 4K ZD4I-D | E7729043 |
| MIRA STREET C M 2000 3K | E7729060 |
| MIRA STREET C M 2000 4K | E7729061 |
| MIRA STREET C M 2000 3K ZD4I-U | E7729062 |
| MIRA STREET C M 2000 4K ZD4I-U | E7729063 |
| MIRA STREET C M 3500 3K | E7729065 |
| MIRA STREET C M 3500 4K | E7729066 |
| MIRA STREET C M 3500 3K ZD4I-U | E7729067 |
| MIRA STREET C M 3500 4K ZD4I-U | E7729068 |
| MIRA STREET C M 4500 3K | E7729070 |
| MIRA STREET C M 4500 4K | E7729071 |
| MIRA STREET C M 4500 3K ZD4I-U | E7729072 |
| MIRA STREET C M 4500 4K ZD4I-U | E7729073 |
| MIRA STREET C M 5500 3K | E7729075 |
| MIRA STREET C M 5500 4K | E7729076 |
| MIRA STREET C M 5500 3K ZD4I-U | E7729077 |
| MIRA STREET C M 5500 4K ZD4I-U | E7729078 |
| MIRA GCM M 1500 3K | E7729088 |
| MIRA GCM M 1500 4K | E7729089 |
| MIRA GCM M 1500 3K ZD4I-U | E7729092 |
| MIRA GCM M 1500 4K ZD4I-U | E7729093 |
| MIRA GCM M 2500 3K | E7729094 |
| MIRA GCM M 2500 4K | E7729095 |
| MIRA GCM M 2500 3K ZD4I-U | E7729096 |
| MIRA GCM M 2500 4K ZD4I-U | E7729097 |
| MIRA GCM M 2500 3K ZD4I-N | E7729099 |
| MIRA GCM M 2500 4K ZD4I-N | E7729100 |
| MIRA GCM M 2500 3K ZD4I-D | E7729102 |
| MIRA GCM M 2500 4K ZD4I-D | E7729103 |
| MIRA GCM M 4500 3K | E7729105 |
| MIRA GCM M 4500 4K | E7729106 |
| MIRA GCM M 4500 3K ZD4I-U | E7729107 |
| MIRA GCM M 4500 4K ZD4I-U | E7729108 |
| MIRA GCM M 4500 3K ZD4I-N | E7729110 |
| MIRA GCM M 4500 4K ZD4I-N | E7729111 |
| MIRA GCM M 4500 3K ZD4I-D | E7729113 |
| MIRA GCM M 4500 4K ZD4I-D | E7729114 |
| MIRA AREA M 2700 3K | E7729118 |
| MIRA AREA M 2700 4K | E7729119 |
| MIRA AREA M 2700 3K ZD4I-U | E7729120 |
| MIRA AREA M 2700 4K ZD4I-U | E7729121 |
| MIRA AREA M 2700 3K ZD4I-N | E7729122 |

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| MIRA AREA M 2700 4K ZD4I-N | E7729123 |
| MIRA AREA M 2700 3K ZD4I-D | E7729124 |
| MIRA AREA M 2700 4K ZD4I-D | E7729125 |
| MIRA AREA M 4500 3K | E7729126 |
| MIRA AREA M 4500 4K | E7729127 |
| MIRA AREA M 4500 3K ZD4I-U | E7729128 |
| MIRA AREA M 4500 4K ZD4I-U | E7729129 |
| MIRA AREA M 4500 3K ZD4I-N | E7729130 |
| MIRA AREA M 4500 4K ZD4I-N | E7729131 |
| MIRA AREA M 4500 3K ZD4I-D | E7729132 |
| MIRA AREA M 4500 4K ZD4I-D | E7729133 |
| MIRA AREA M 6000 3K | E7729134 |
| MIRA AREA M 6000 4K | E7729135 |
| MIRA AREA M 6000 3K ZD4I-U | E7729136 |
| MIRA AREA M 6000 4K ZD4I-U | E7729137 |
| MIRA AREA M 6000 3K ZD4I-N | E7729138 |
| MIRA AREA M 6000 4K ZD4I-N | E7729139 |
| MIRA AREA M 6000 3K ZD4I-D | E7729140 |
| MIRA AREA M 6000 4K ZD4I-D | E7729141 |
| MIRA AREA M 9000 3K | E7729142 |
| MIRA AREA M 9000 4K | E7729143 |
| MIRA AREA M 9000 3K ZD4I-U | E7729144 |
| MIRA AREA M 9000 4K ZD4I-U | E7729145 |
| MIRA AREA M 9000 3K ZD4I-N | E7729146 |
| MIRA AREA M 9000 4K ZD4I-N | E7729147 |
| MIRA AREA M 9000 3K ZD4I-D | E7729148 |
| MIRA AREA M 9000 4K ZD4I-D | E7729149 |

ABBREVIATIONS

| Abbreviation | Definition |
|---|---|
| General Abbreviations | |
| EN | European Norm (Standard) |
| EPD | Environmental Product Declaration |
| EF | Environmental Footprint |
| GPI | General Programme Instructions |
| ISO | International Organization for Standardization |
| LCA | Life Cycle Assessment |
| CEN | European Committee for Standardization |
| CLC | Co-location centre |
| CPC | Central product classification |
| GHS | Globally harmonized system of classification and labelling of chemicals |
| GRI | Global Reporting Initiative |
| Environmental Impact Indicators (EN 15804) | |
| GHG | Greenhouse gas |
| GWP | Global Warming Potential (kg CO ₂ eq.) |
| GWP-fossil | Global Warming Potential from fossil sources (kg CO ₂ eq.) |

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|-----------------------------------|---|
| GWP-biogenic | Global Warming Potential from biogenic sources (kg CO ₂ eq.) |
| GWP-luluc | Global Warming Potential from land use and land use change (kg CO ₂ eq.) |
| GWP-total | Total Global Warming Potential (kg CO ₂ eq.) |
| GWP-GHG | Global Warming Potential for greenhouse gases (kg CO ₂ eq.) |
| ODP | Ozone Depletion Potential (kg CFC-11 eq.) |
| AP | Acidification Potential (mol H ⁺ eq.) |
| EP | Eutrophication Potential |
| EP-freshwater | Freshwater eutrophication potential (kg P eq.) |
| EP-marine | Marine eutrophication potential (kg N eq.) |
| EP-terrestrial | Terrestrial eutrophication potential (mol N eq.) |
| POCP | Photochemical Ozone Creation Potential (kg NMVOC eq.) |
| ADP | Abiotic Depletion Potential |
| ADP-minerals&metals | Abiotic depletion potential for non-fossil resources (kg Sb eq.) |
| ADP-fossil | Abiotic depletion potential for fossil resources (MJ) |
| WDP | Water Deprivation Potential (m ³) |
| Resource Use Indicators | |
| PERE | Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ) |
| PERM | Use of renewable primary energy resources used as raw materials (MJ) |
| PERT | Total use of renewable primary energy resources (MJ) |
| PENRE | Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ) |
| PENRM | Use of non-renewable primary energy resources used as raw materials (MJ) |
| PENRT | Total use of non-renewable primary energy resources (MJ) |
| SM | Use of secondary material (kg) |
| RSF | Use of renewable secondary fuels (MJ) |
| NRSF | Use of non-renewable secondary fuels (MJ) |
| FW | Use of net fresh water (m ³) |
| Waste Indicators | |
| HW | Hazardous Waste (disposed) (kg) |
| NHW | Non-Hazardous Waste (disposed) (kg) |
| RW | Radioactive Waste (disposed) (kg) |
| Output Flow Indicators | |
| CFR | Components for Reuse (kg) |
| MR | Material for Recycling (kg) |
| MER | Materials for Energy Recovery (kg) |
| EEE | Exported Energy, Electricity (MJ) |
| EET | Exported Energy, Thermal (MJ) |
| Lifecycle Stages / Modules | |
| A1 | Raw material supply |
| A2 | Transport |
| A3 | Manufacturing |
| A4 | Transport to site |
| A5 | Construction/Installation |
| B1 | Use |
| B2 | Maintenance |
| B3 | Repair |
| B4 | Replacement |
| B5 | Refurbishment |
| B6 | Operational energy use |
| B7 | Operational water use |
| C1 | Deconstruction/Demolition |
| C2 | Transport to waste processing |
| C3 | Waste processing |
| C4 | Disposal |
| D | Reuse-Recovery-Recycling potential |

| Other Relevant Terms | |
|-----------------------------|--|
| SVHC | Substances of Very High Concern |
| EC No. | European Community Number |
| CAS No. | Chemical Abstracts Service Number |
| MJ | Megajoule |
| kg | Kilogram |
| m ³ | Cubic Meter |
| NMVOG | Non-Methane Volatile Organic Compounds |
| Sb eq. | Antimony Equivalents |
| P eq. | Phosphorus Equivalents |
| N eq. | Nitrogen Equivalents |
| CFC-11 eq. | Chlorofluorocarbon-11 Equivalents |
| CO ₂ eq. | Carbon Dioxide Equivalents |
| kg C | Kilograms of Carbon |
| kg CO ₂ eq. | Kilograms of Carbon Dioxide Equivalent |
| ND | Not Declared |

REFERENCES

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