

ENVIRONMENTAL PRODUCT DECLARATION



In accordance with ISO 14025:2006 and EN 15804:2012:2019/AC:2021 for:

REPRESENTATIVE TECHNICAL SURFACE- MOUNTED LUMINAIRE

from

OSMONT, s.r.o.



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on a representative product
EPD registration number:	EPD-IES-0027181:001
Version date:	2026-03-19
Validity date:	2031-03-18

*An EPD may be updated or depublished if conditions change.
To find the latest version of the EPD and to confirm its validity, see www.environdec.com*



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): EPD International Product Category Rules (PCR) for construction products (PCR 2019:14 v2.0.1). The product group classification for the assessed products is UN CPC 46539
PCR review panel: The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com . The review panel may be contacted via support@environdec.com . Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest, they were excused from the review.
Chair of the PCR review: Rob Rouwette (chair), Noa Meron (co-chair)
Review dates: 2025-01-28 until 2025-03-12

Third-party Verification
EPD process certification without a pre-verified LCA/EPD tool Third-party verifier: Elektrotechnický zkušební ústav, s. p. Pod lisem 129/2, Troja, 182 00 Prague 8 Czech Republic Accredited by: Český institut pro akreditaci, o.p.s. , under number 3018
The procedure for monitoring data during the validity of the EPD involves third-party verifiers: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: OSMONT, s.r.o.

Address: 586 01, Hybrálec 129, Czech Republic

Contact: Michal Šťastný, stastny@osmont.cz

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

Marie Tichá, MT Konzult, Červený vrch 264/18, 405 02 Děčín IV

e-mail: marie.ticha@lca-cz.cz

www.lca-cz.cz



Description of the organisation

OSMONT is a Czech manufacturer and exporter of lighting equipment and indoor and outdoor luminaires, founded in 1991. The company has been operating on the market for more than 30 years. It specializes in luminaires with hand-crafted three-layer opal glass (TRIPLEX) as well as opal plastic (PC, PMMA) diffusers, designed for both traditional light sources and modern LED technology. OSMONT operates its own production facilities, including metalworking, a paint shop, and LED assembly lines. The company cooperates with business partners in more than 35 countries worldwide.

Product-related or management system-related certifications

The organisation is not certified according to any standard for management system.

PRODUCT INFORMATION

Product name: Representative technical surface-mounted luminaire.

Product identification:

The product is classified under UN CPC 46531 (Electric ceiling or wall lighting fittings). It is a representative model from the DELIA series, type LED-1L16EMP700KN83/PC23 NK3H HF 4K (code DEL69983). The product complies with Directives 2014/35/EU (LVD) and 2011/65/EU (RoHS, including 2015/863/EU). The CE marking is based on compliance with EN 60598-1, EN 60598-2-1, EN 60598-2-22 (Emergency lighting), and EN 62471.

More information is available on the website www.osmont.eu.

Visual representation of the product



UN CPC code: 46539 Lighting equipment.

Product description

A representative technical surface-mounted luminaire for interior and industrial applications is a structurally, optically, and electrically designed lighting device intended for direct mounting on a wall or ceiling. It is used to illuminate specific visual tasks, spaces, or objects to the required level of illumination. Depending on the intended application, it is classified as a technical surface-mounted luminaire for interior or industrial use. In both categories, the base (mount) can be made of metal or plastic, and the diffuser can be made of three-layer opal glass (TRIPLEX) or opal plastic (PC, PMMA). Luminaires equipped as emergency lighting contain a Li-ion battery.

More information is available on the website www.osmont.eu.

Name and location of production site

OSMONT, s.r.o.

586 01, Hybralec 129, Czech Republic

Comp. ID: CZ26298856

www.osmont.eu

CONTENT DECLARATION

The mass of one unit of a product per functional unit: 1,8912 kg

Material composition of the technically assigned luminaire per functional unit

Luminaire composition	Content	Unit
Shade - 20522 PC23 (polycarbonate)	0,3580	kg
Base (sheet metal – steel grade 11)	0,8735	kg
LED chip board	0,2420	kg
LED driver	0,1260	kg
Tridonic emergency unit	0,0500	kg
Sensor Hytronik	0,0380	kg
Test button with holder	0,0116	kg
LED diode Kingbright	0,0002	kg
Labels (paper/plastic)	0,0013	kg
Screws M3x16 DIN 7985	0,0153	kg
Holder of LED module 28,5 mm (Formira)	0,0064	kg
Cables	0,0100	kg
Accumulator 3,6V/1,5Ah LiFePO ₄	0,1400	kg
Connectors	0,0020	kg
Folding two-step clamp holders	0,0121	kg
Fan washer M4 (external toothing)	0,0018	kg
Grommet	0,0026	kg
Zip tape	0,0004	kg
TOTAL	1,8912	kg

Total mass of packaging per functional unit: 0,31034 kg

Packaging composition	Content	Unit
Paper bag	0,015	kg
Plastic bag	0,0001	kg
Cardboard box	0,278	kg
Stretch foil	0,00673	kg
Wood EURO pallet	0,01051	kg

The product does not contain any environmental and hazardous/toxic substances.

Biogenic content in product

The declared share of biogenic/recycled materials is 0,0 kg

Biogenic content in packaging

Material/Packaging	Biogenic content	Unit
Cardboard box	0,278	kg

Paper bag (0,015 kg) and Wood EURO pallet (0,01051 kg) have biogenic content below 5 % and are therefore not included in the table.

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product or declared unit
Cardboard box	0,2780	14,7000	0,122

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

Post-consumer recycled content

Information on post-consumer recycled content in the packaging is not available at the time of declaration.

Information on the environmental and hazardous/toxic properties of substances contained in the product:

The product does not contain any substances listed on the Candidate List of Substances of Very High Concern (SVHC) according to REACH Regulation (EC) No 1907/2006 above 0.1% weight by weight.

LCA INFORMATION

Functional unit: The provision of 1000 lumens of luminous flux from the luminaire over a reference service life of 100,000 hours.

Conversion factor to mass: The functional unit of 1000 lm luminous flux over the reference service life corresponds to one luminaire with a mass of 1.8912 kg.

Reference service life: 100,000 hours (manufacturer-declared service life).

Time representativeness: The LCA calculation is based on data from the reference year 2024.

Geographical scope: Modules A1–A5 are modelled to represent production under Czech and European conditions, using global datasets for selected upstream processes where local data were not available. Modules B and C are modelled to reflect average European (EU) scenarios. The geographical scope of the declared results is European (EU), with global datasets used for selected upstream processes as needed.

Database(s) and LCA software used: The LCA model was developed using **SimaPro 10.2.0.0 Analyst**. Background data were taken from the **Ecoinvent 3.8** database. The impact assessment was performed in accordance with **EN 15804 + A2**.

EPD/LCA Tool used: SimaPro 10.2.0.0 Analyst (PRé Sustainability)

Description of system boundaries

The system boundaries cover the life cycle of the technical assigned luminaire (TAL) in accordance with the “cradle to grave” approach, including modules A1–A5, B1–B7, C1–C4 and module D.

The product stage (A1–A3) includes raw material extraction and processing, production of components, and manufacturing of the TAL, including energy use and auxiliary materials. The construction process stage (A4–A5) includes transport to the installation site and installation of the luminaire.

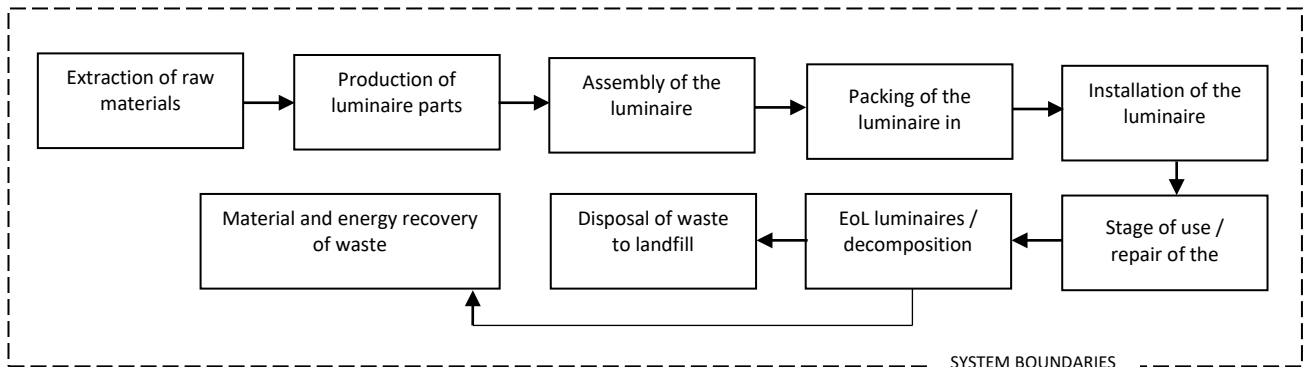
The use stage (B) includes operation, maintenance, and associated energy consumption during the service life of the TAL.

The end-of-life stage (C) includes deconstruction, transport of waste, recycling or energy recovery, and final disposal of residues.

Module D includes benefits and loads beyond the system boundary resulting from recycling and energy recovery.

The product does not contain recycled materials as a main input.

Flow chart of luminaire life cycle (TAL)



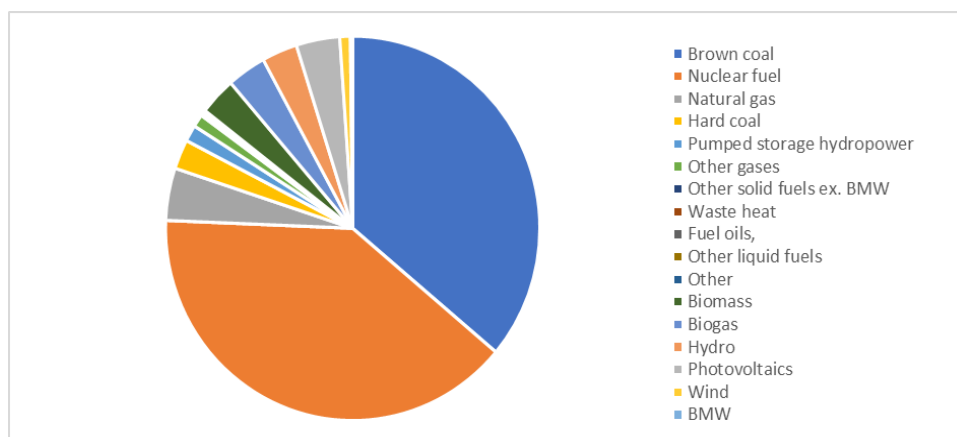
Climate Impact of Purchased Energy in Module A3

The climate impact of purchased electricity from the Czech national grid mix used in the manufacturing process (A3) is 0.42 kg CO₂ eq./kWh (GWP-GHG).

No biogas is used in the manufacturing process.

Electricity consumption: The electricity consumed within the production processes of OSMONT, s.r.o. is based on the Czech national electricity mix (location-based approach).

Non-renewable sources		Renewable sources	
Brown coal	36.13 %	Biomass	3.17 %
Nuclear fuel	39.53 %	Biogas	3.38 %
Natural gas	4.41 %	Hydro	3.07 %
Hard coal	2.49 %	Photovoltaics	3.76 %
Pumped storage hydropower	1.38 %	Wind	0.91 %
Other gases	1.06 %	BMW	0.20 %
Other solid fuels ex. BMW	0.15 %		
Waste heat	0.08 %		
Fuel oils,	0.03 %		
Other liquid fuels	0.02 %		
Other	0.22 %		



Declaration of data sources, reference years, and share of primary data:

The LCA results are based on a combination of primary (foreground) and secondary (background) data. Primary data were collected from the manufacturer and include in-house production processes such as plastic forming (diffuser), metal processing (housing), surface treatment, and product assembly, as well as product composition, energy consumption, and packaging materials. The reference year for primary data is 2024. The contribution of these foreground processes to the total GWP in modules A1–A3 is approximately 4 %. The majority of environmental impacts (approximately 96%) is associated with upstream supply chain processes, particularly electronic components (e.g. LED driver, emergency module, sensor). These processes are modelled using secondary data from the ecoinvent database (version 3.8, reference year 2019), with datasets representative of European or Czech conditions where available.

The main contributors to GWP in modules A1–A3 are electronic components, in particular:

- LED driver (52,6 %)
- Emergency module (20,9 %)
- Sensor (15,8 %)

These components together represent more than 89% of total GWP in A1–A3

Temporal, technological, and geographical representativeness are considered appropriate for the declared functional unit. Uncertainties in the data are minimized by using up-to-date datasets and validated modelling procedures.

Stages of luminaire life cycle

<p>Modul A1-A3</p> <ul style="list-style-type: none"> - Modul A1 - Modul A2 - Modul A3 	<p>Product Stage</p> <p>Extraction and processing of raw materials used in the production of the luminaire, including steel, plastics, copper and other metals. Upstream energy production and auxiliary materials are included.</p> <p>Transport of raw materials and components to the manufacturing facility by road. Transport distances range between 5 and 275 km.</p> <p>Manufacturing and assembly of luminaire components, including electricity and natural gas consumption, auxiliary materials and treatment of manufacturing waste.</p>
<p>Module A4-A5</p> <ul style="list-style-type: none"> - Modul A4 - Modul A5 	<p>Construction Stage</p> <p>Road transport of the packaged luminaire to the point of installation. An average transport distance of 300 km is assumed.</p> <p>Installation of the luminaire in the building. No significant material or energy inputs are required. No additional impacts related to installation occur during the reference service life.</p>
<p>Module B1-B7</p> <ul style="list-style-type: none"> - Modul B1 - Modul B2 - Modul B3 - Modul B4 - Modul B5 - Modul B6 - Modul B7 	<p>Use Stage</p> <p>Normal operation of the luminaire without additional material inputs.</p> <p>Not applicable. No regular maintenance is required.</p> <p>Replacement of minor spare parts corresponding to 2% of the total luminaire mass over the reference service life.</p> <p>Not applicable. Replacement of the entire luminaire is not considered within the reference service life.</p> <p>Not applicable.</p> <p>Electricity consumption during operation over the declared reference service life. This module represents the most significant environmental impact during the use stage.</p> <p>Not applicable.</p>
<p>Module C1-C4</p> <ul style="list-style-type: none"> - Modul C1 - Modul C2 - Modul C3 - Modul C4 	<p>End-of-Life Stage</p> <p>Dismantling of the luminaire at the end of service life. Energy demand is considered negligible.</p> <p>Transport of dismantled materials:</p> <ul style="list-style-type: none"> • 80 km to material recycling, • 50 km to energy recovery, • 30 km to landfill. <p>Sorting and processing of waste for recycling or energy recovery, including associated energy use.</p> <p>Final disposal of non-recyclable waste in landfill. The non-recoverable fraction represents 20% of the total mass.</p>
<p>Module D</p>	<p>Benefits and Loads Beyond the System Boundary</p> <p>Module D reports potential environmental benefits and loads resulting from:</p> <ul style="list-style-type: none"> • recycling of metal and plastic components, • energy recovery of non-recyclable fractions. <p>Benefits are calculated using the substitution approach in accordance with EN 15804 and are reported separately from the core life cycle results.</p>

Lifecycle stages covered TAL and modules

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	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	ND	X	ND	X	ND	ND	X	ND	X	X	X	X	X
Geography	GLO	CZ/EU	CZ	CZ/EU	ND	EU	ND	EU	ND	ND	EU	ND	EU	EU	EU	EU	CZ/EU
Share of primary data	<4%		<4%	<4%	<4%	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	NR		NR	NR	NR	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	O		O	O	O	-	-	-	-	-	-	-	-	-	-	-	-

Explanatory notes: X included in assessment
 ND not declared

To calculate the results of the inventory analysis. For the purposes of this study, the computer model SimaPro 10.2.0.0, the database ECOINVENT 3.8 were used.

ENVIRONMENTAL PERFORMANCE

LCA results of the Representative technical surface-mounted luminaire - main environmental performance results

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	3,00E+02	3,40E-01	ND	5,73E-06	ND	1,69E+01	ND	ND	3,78E+02	ND	0,00E+00	7,01E-01	0,00E+00	1,42E-03	-3,02E+00
GWP-fossil	kg CO ₂ eq.	2,96E+02	3,38E-01	ND	5,84E-06	ND	1,66E+01	ND	ND	3,85E+02	ND	0,00E+00	6,97E-01	0,00E+00	1,42E-03	-3,02E+00
GWP-biogenic	kg CO ₂ eq.	3,27E+00	1,55E-03	ND	-1,09E-07	ND	1,99E-01	ND	ND	-7,21E+00	ND	0,00E+00	3,20E-03	0,00E+00	-3,63E-08	-1,73E-03
GWP-luluc	kg CO ₂ eq.	5,54E-01	1,96E-04	ND	1,36E-09	ND	3,14E-02	ND	ND	8,98E-02	ND	0,00E+00	4,05E-04	0,00E+00	9,29E-09	-3,05E-04
ODP	kg CFC 11 eq.	1,85E-05	7,38E-08	ND	1,90E-13	ND	1,12E-06	ND	ND	1,25E-05	ND	0,00E+00	1,52E-07	0,00E+00	3,10E-10	-4,41E-08
AP	mol H ⁺ eq.	1,82E+00	1,31E-03	ND	2,04E-08	ND	1,01E-01	ND	ND	1,35E+00	ND	0,00E+00	2,71E-03	0,00E+00	1,35E-05	-8,06E-03
EP-freshwater	kg P eq.	3,64E-01	3,09E-05	ND	8,75E-09	ND	2,17E-02	ND	ND	5,77E-01	ND	0,00E+00	6,37E-05	0,00E+00	8,04E-08	-2,64E-04
EP-marine	kg N eq.	3,86E-01	3,61E-04	ND	5,37E-09	ND	2,22E-02	ND	ND	3,54E-01	ND	0,00E+00	7,45E-04	0,00E+00	5,70E-06	-1,57E-03
EP-terrestrial	mol N eq.	4,06E+00	3,94E-03	ND	3,97E-08	ND	2,34E-01	ND	ND	2,62E+00	ND	0,00E+00	8,13E-03	0,00E+00	6,24E-05	-1,78E-02
POCP	kg NMVOC eq.	1,16E+00	1,22E-03	ND	2,36E-08	ND	6,58E-02	ND	ND	1,55E+00	ND	0,00E+00	2,52E-03	0,00E+00	1,75E-05	-7,76E-03
ADP-minerals&metals*	kg Sb eq.	9,06E-02	1,89E-06	ND	6,05E-12	ND	5,57E-03	ND	ND	3,99E-04	ND	0,00E+00	3,90E-06	0,00E+00	6,07E-10	-1,23E-06
ADP-fossil*	MJ	2,50E+03	5,01E+00	ND	9,81E-05	ND	1,35E+02	ND	ND	6,47E+03	ND	0,00E+00	1,03E+01	0,00E+00	2,46E-02	-3,72E+01
WDP*	m ³	7,09E+02	2,10E-02	ND	7,42E-04	ND	1,51E+01	ND	ND	4,89E+04	ND	0,00E+00	4,33E-02	0,00E+00	3,66E-02	4,66E+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 results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	2,96E+02	3,38E-01	ND	5,84E-06	ND	1,67E+01	ND	ND	3,85E+02	ND	0,00E+00	6,98E-01	0,00E+00	1,42E-03	-3,02E+00
Particulate matter	Disease incidence	1,55E-05	1,80E-08	ND	5,83E-14	ND	8,74E-07	ND	ND	3,84E-06	ND	0,00E+00	3,72E-08	0,00E+00	3,20E-10	-1,38E-07
Ionising radiation, human health	kBq U235 eq.	3,69E+01	2,82E-02	ND	4,95E-06	ND	2,00E+00	ND	ND	3,26E+02	ND	0,00E+00	5,82E-02	0,00E+00	7,10E-05	-4,94E-03
Ecotoxicity fresh water	CTUe	5,96E+03	4,40E+00	ND	2,73E-05	ND	3,11E+02	ND	ND	1,80E+03	ND	0,00E+00	9,07E+00	0,00E+00	1,12E-02	-3,10E+01
Human toxicity, cancer	CTUh	1,78E-07	1,67E-10	ND	1,58E-15	ND	8,47E-09	ND	ND	1,04E-07	ND	0,00E+00	3,45E-10	0,00E+00	3,11E-13	-5,09E-09
Human toxicity, non-cancer	CTUh	9,94E-06	4,22E-09	ND	2,87E-14	ND	5,45E-07	ND	ND	1,89E-06	ND	0,00E+00	8,69E-09	0,00E+00	1,10E-11	-2,53E-08
Land Use	Pt	1,15E+03	2,46E+00	ND	1,44E-05	ND	6,64E+01	ND	ND	9,52E+02	ND	0,00E+00	5,07E+00	0,00E+00	3,43E-02	-2,21E+00

Disclaimer 1) – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure, nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Disclaimer 2) – The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3,84E+00	0,00E+00	ND	4,46E-06	ND	0,00E+00	ND	ND	2,94E+02	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	MJ	4,42E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,26E+00	0,00E+00	ND	4,46E-06	ND	0,00E+00	ND	ND	2,94E+02	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	MJ	2,70E+01	0,00E+00	ND	3,08E-05	ND	0,00E+00	ND	ND	2,03E+03	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,72E+00
PENRM	MJ	2,08E-01	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,72E+01	0,00E+00	ND	3,08E-05	ND	0,00E+00	ND	ND	2,03E+03	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,72E+00
SM	kg	3,04E-01	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+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.

FW	m ³	7,51E-04	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00
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 functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste disposed	kg	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	5,76E-02	0,00E+00	3,78E-01	0,00E+00
Radioactive waste disposed	kg	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Output flow indicators

Results per functional or declared unit																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	6,24E-01	1,99E-01	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,21E+00
Materials for energy recovery	kg	0,00E+00	1,65E-01	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,05E-01
Exported energy, electricity	MJ	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	ND	0,00E+00	ND	0,00E+00	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,72E+00

Declaration according to EN 15804: The LCIA results are relative and do not predict the ultimate impacts of each category, threshold exceedances, safety margins or risks.

Comparability of EPDs of construction products

Given that the scope of the assessed system ranges from the extraction of raw materials to the disposal of unusable residues in the ground after the end of the technical life of the associated luminaire, the EPDs of luminaires calculated for the same functional unit may be comparable.

Mandatory declaration

Environmental declarations for products of the same product category but from different programmes may not be comparable.

Further information and explanatory materials

Further information and explanatory material will be provided by the LCA compiler and individual manufacturers.

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
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
SVHC	Substances of Very High Concern
ND	Not Declared
TAL	Technical Assigned Luminaire

REFERENCES

1. Tichá, M. (2025), *Luminaire life cycle assessment*
2. ISO 14025:2006. *Environmental labels and declarations – Type III environmental declarations – Principles and procedures*. Geneva: International Organization for Standardization.
3. EN 15804:2012+A2:2019. *Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products*. Brussels: CEN.
4. ISO 14040:2006. *Environmental management – Life cycle assessment – Principles and framework*. Geneva: International Organization for Standardization.
5. ISO 14044:2006. *Environmental management – Life cycle assessment – Requirements and guidelines*. Geneva: International Organization for Standardization.
6. The International EPD® System. *General Programme Instructions for the International EPD® System*. Version 4.1. Stockholm: EPD International AB, 2021.
7. PCR 2024:06. *Construction products – Luminaires (PCR 002)*. Version 1.0.0. The International EPD® System, 2024.

VERSION HISTORY

Original Version of the EPD, 2026-03-19

Revision 1, 2026-04-14

Differences versus the previously published version:

1. removed on cover page the sentence "If changes have been made that result in changes in environmental impacts that are greater than 5%, the EPD should be revised"
2. added the logo of EPD International on cover page and deleted the licensee row
3. added PCR info, PCR review info
4. the originally reported primary data share (99%) was revised. Only -house manufacturing processes are considered primary data. After recalculation based on GWP contribution, the primary data share is approx. 4%, which reflects the dominance of electronic components modelled using secondary datasets.
5. revise
6. data is from the Czech Energy Mix
7. added "Version history" section in EPD
8. added PCR information and date in verification report

Revision 2, 2026-04-27

Differences versus the previously published version:

1. changed module C1 and C3 from ND to 0
2. changed to kg CO₂ eq / kWh
3. revise