ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Moon Slim 255

Elektro Elco Aktiebolag

EPD HUB, HUB-2506

Published on 20.12.2024, last updated on 28.02.2025, valid until 20.12.2029

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Elektro Elco Aktiebolag
Address	Tallvägen5, 56435 Bankeryd, Sweden
Contact details	info@elco.se
Website	www.hidealite.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Electrical product
Category of EPD	Third party verified EPD
Parent EPD number	EPD-1805
Scope of the EPD	Cradle to grave,A1-C4 and D
EPD author	Emma Cunow
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. 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.

PRODUCT

Product name	Moon Slim 255
Additional labels	-
Product reference	7507456/4143693/3216739
Place of production	Shenzhen, China
Period for data	2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	0 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of Moon Slim 255
Declared unit mass	0.45109 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	5.02
GWP-total, A1-A3 ($kgCO_2e$)	4.64
Secondary material, inputs (%)	104
Secondary material, outputs (%)	46.5
Total energy use, A1-A3 (kWh)	20.3
Net freshwater use, A1-A3 (m^3)	0.06

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

With the brand Hide-a-lite, we create efficient lighting solutions for both private and public environments. In our range, you will find high-quality luminaires that are easy to install, perfect for illuminating everything from industries and residences to hotels, restaurants, offices, and shops. Over the years, we have built extensive experience and knowledge in lighting, knowledge that we gladly share with our customers. Our focus lies on technology, design, and functionality, with a commitment to sustainable development and energy efficiency adapted for the Nordic market.

PRODUCT DESCRIPTION

Low-build LED Plafond in slim design with a pleasant uplight that evens out contrasts towards the ceiling or wall. Selectable colour temperature via DIP-Switch ColourTemp 3000K or 4000K. Easily installed IP44 luminaire with long lifetime and high lumen output.

With sustainability in mind this product is made of recycled ocean plastic. You can also choose between different built-in driver for a more energy efficiency alternative; S, SC, Bluetooth, DALI.

They can also be equipped with emergency lights.

Moon Slim is available in three different sizes, 255, 255 and 380

Comes with screw holes that fit over a ceiling box, two entrances at the bottom, one of which is centred. Cable bushings for surface-mounted cable routing from two sides.

Further information can be found at www.hidealite.com.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	11.32%	Global
Minerals	-	-
Fossil materials	88.68%	Global
Bio-based materials	-	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.108

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of Moon Slim 255
Mass per declared unit	0.45109 kg
Functional unit	1 unit; 2500 hours per year consuming 12 Watts for 40 years
Reference service life	40

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	MND	MND	MND	x	MND	x	MND	MNR	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

In this first stage of the product's life cycle the environmental impact considered by the materials used in manufacturing, packaging materials and production. This step also includes fuel, energy, ancillary and waste from production.

The product contains raw materials such as recycled plastic, metal and electrical components. Raw materials are transported to the factory where the production of our product then takes place. In the production, fuel, energy, and ancillary materials have been used, which, together with the waste from the production, are counted in the climate impact at this stage.

The finished product is then packaged in a corrugated cardboard box and transported to the end customer on a wooden pallet.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Transport of finished product is calculated from manufactory to our warehouse in Bankeryd, Sweden and then out to installation (A4). The impact is calculated based on distance, the type of transport used, and the volume transported.

The calculation of our product is based on boat, train and road freights and it's distributed by sales per market. The transport impact that comes from the delivery of the product includes direct emissions from fuel, environmental impact from fuel production and related emissions from infrastructure.

Vehicle capacity utilization volume factor may vary in reality, but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. Empty returns are not taken into account as it is assumed that return trip is used by the transportation company to serve the needs of other clients.

Environmental impacts from installation include waste packaging materials (A5) from wood pallets and cardboard. The impacts of energy consumption and the used ancillary materials during installation are considered negligible.

PRODUCT USE AND MAINTENANCE (B1-B7)

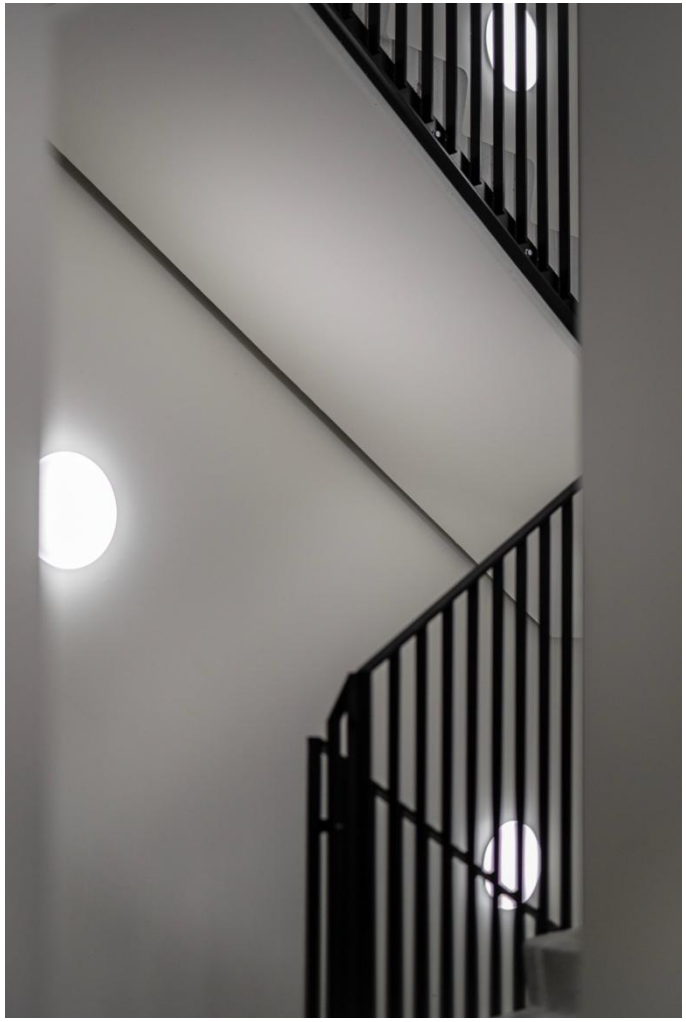
Lifetime of the product is assumed to be 40 years and 2,500 hours a year and all used control factor values ,based on EN 15193-1:2017 .,At this point in time, LED output >80% of initial output (L82@100K Hours).Module B4 includes replacement of certain components occurring in set intervals to ensure functionality of the product over its lifetime of 40 years (B4). Manufacturing energy and packaging materials for production of replacement components are also included.During the use phase, the product consumes electricity from Swedish electricity grid mix(B6). Impacts due to electricity production include direct emissions to air, transformation and transmission losses.

Air, soil, and water impacts during the use phase have not been studied.

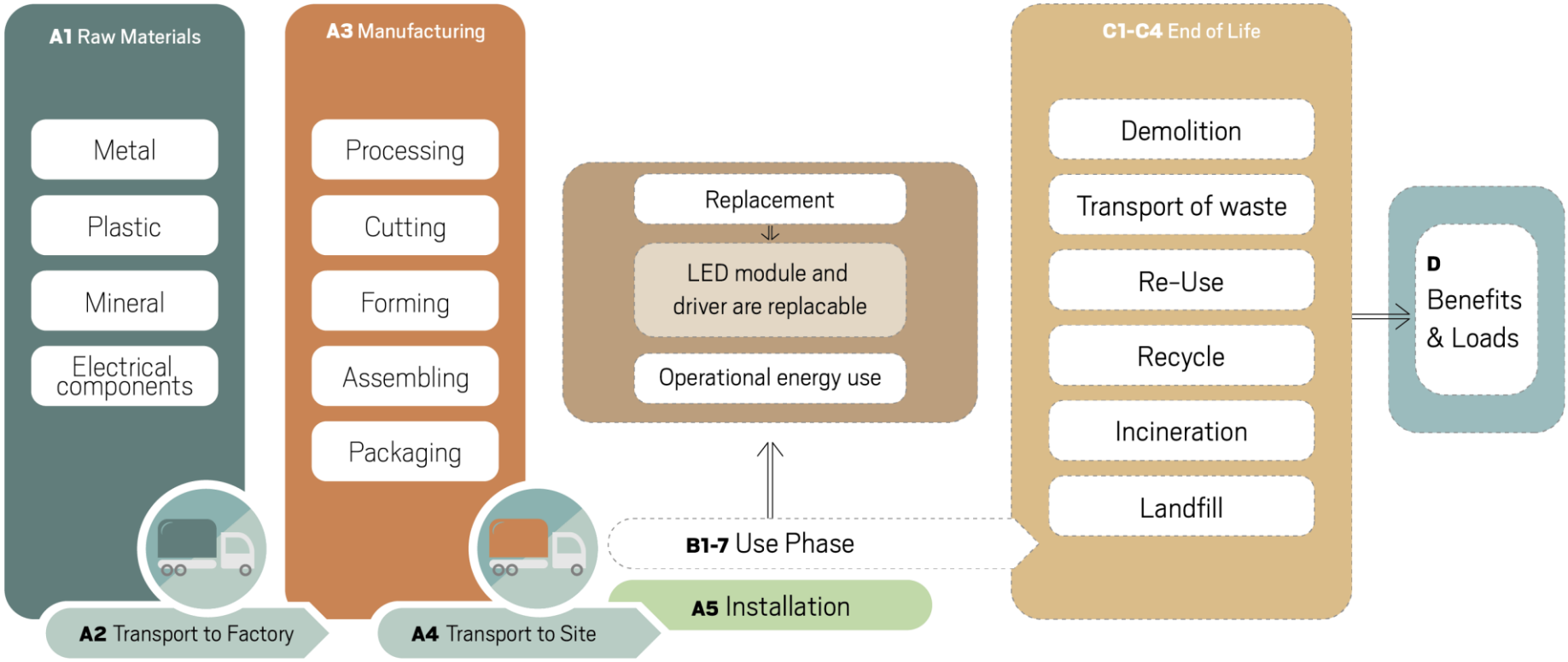
PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy in End of Life are considered, but consumption of natural resources is assumed to be negligible. It is assumed that the waste is collected separately and transported to the waste treatment center. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2). According to EN 50693:2019, the sequence of treatment operations occurring to the product shall include de-pollution, fractions separation and preparation (dismantling, crushing, shredding, sorting), recycling, other material recovery, energy recovery and disposal.

In this study, the default values from table G.4 of EN 50693 is used for sorting and treating materials in different waste treatments for recycling, incineration with energy recovery or landfill. Due to the material and energy recovery potential of parts in the lighting system, the end-of-life product is converted into recycled raw materials, while the energy recovered from incineration displaces electricity and heat production (D). The wooden pallet and other plastic packaging used during transportation is also incinerated for energy recovery. The benefits and loads of incineration and recycling are included in Module D.



MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	0 %

This EPD is product and factory specific and does not contain average calculations.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	4,65E+00	3,86E-03	-2,02E-02	4,64E+00	1,99E-01	4,03E-01	MND	MND	MND	2,23E-01	MND	3,52E+01	MND	0,00E+00	2,04E-03	3,39E-01	1,99E-01	-6,39E-01
GWP – fossil	kg CO_2e	4,64E+00	3,86E-03	3,73E-01	5,02E+00	1,99E-01	8,49E-03	MND	MND	MND	2,23E-01	MND	3,51E+01	MND	0,00E+00	2,04E-03	3,39E-01	1,99E-01	-3,15E-01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-3,95E-01	-3,95E-01	0,00E+00	3,95E-01	MND	MND	MND	0,00E+00	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-3,26E-01
GWP – LULUC	kg CO_2e	9,20E-03	1,54E-06	1,87E-03	1,11E-02	1,44E-04	5,16E-06	MND	MND	MND	2,07E-04	MND	2,03E-02	MND	0,00E+00	7,90E-07	3,62E-06	2,28E-06	1,36E-03
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	3,48E-07	9,02E-10	2,31E-08	3,72E-07	3,82E-08	6,04E-10	MND	MND	MND	1,55E-08	MND	2,30E-06	MND	0,00E+00	4,79E-10	4,29E-10	5,22E-10	-2,09E-08
Acidification potential	mol H^+e	4,66E-02	2,09E-05	1,72E-03	4,83E-02	4,51E-03	3,73E-05	MND	MND	MND	2,74E-03	MND	6,20E-01	MND	0,00E+00	6,68E-06	7,17E-05	5,45E-04	-6,54E-03
EP-freshwater[2)]	kg Pe	7,84E-04	2,90E-08	2,03E-05	8,05E-04	1,29E-06	2,17E-07	MND	MND	MND	1,34E-05	MND	9,84E-03	MND	0,00E+00	1,72E-08	9,97E-08	3,12E-08	-2,56E-05
EP-marine	kg Ne	5,38E-03	7,34E-06	7,29E-04	6,11E-03	1,13E-03	6,59E-05	MND	MND	MND	2,62E-04	MND	5,66E-02	MND	0,00E+00	1,48E-06	3,72E-05	2,98E-04	-7,93E-04
EP-terrestrial	mol Ne	6,18E-02	8,08E-05	4,57E-03	6,65E-02	1,25E-02	1,08E-04	MND	MND	MND	3,14E-03	MND	2,07E+00	MND	0,00E+00	1,65E-05	3,61E-04	3,07E-03	-7,11E-03
POCP ("smog")[3)]	kg NMVOCe	1,90E-02	2,34E-05	1,01E-03	2,00E-02	3,29E-03	3,99E-05	MND	MND	MND	9,80E-04	MND	1,49E-01	MND	0,00E+00	6,33E-06	8,85E-05	1,05E-03	-1,76E-03
ADP-minerals & metals[4)]	kg Sbe	9,42E-04	1,25E-08	1,85E-06	9,44E-04	4,44E-07	8,53E-08	MND	MND	MND	4,62E-05	MND	1,04E-03	MND	0,00E+00	4,95E-09	3,24E-08	6,13E-09	-1,12E-04
ADP-fossil resources	MJ	5,92E+01	5,83E-02	4,25E+00	6,35E+01	2,60E+00	7,20E-02	MND	MND	MND	2,74E+00	MND	6,60E+03	MND	0,00E+00	3,19E-02	5,52E-02	4,05E-02	-2,81E+00
Water use[5)]	m^3e depr.	1,88E+00	2,77E-04	1,56E-01	2,04E+00	1,11E-02	3,06E-03	MND	MND	MND	8,15E-02	MND	1,38E+03	MND	0,00E+00	1,42E-04	1,12E-02	2,47E-03	1,18E-01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,46E-07	4,30E-10	2,65E-08	2,73E-07	1,07E-08	5,38E-10	MND	MND	MND	1,58E-08	MND	4,37E-06	MND	0,00E+00	2,32E-10	4,63E-10	1,34E-08	-3,90E-08
Ionizing radiation[6)]	kBq U235e	5,29E-01	3,01E-04	2,35E-02	5,53E-01	1,26E-02	7,16E-04	MND	MND	MND	1,33E-02	MND	3,20E+02	MND	0,00E+00	1,53E-04	1,31E-04	1,97E-04	1,31E-03
Ecotoxicity (freshwater)	CTUe	3,96E+02	4,97E-02	1,41E+01	4,11E+02	1,95E+00	4,56E-01	MND	MND	MND	2,25E+01	MND	2,05E+03	MND	0,00E+00	2,84E-02	1,64E-01	5,14E+00	-4,82E+01
Human toxicity, cancer	CTUh	8,94E-09	1,77E-12	2,10E-10	9,16E-09	1,15E-10	1,57E-11	MND	MND	MND	2,00E-09	MND	5,01E-08	MND	0,00E+00	6,94E-13	1,80E-11	1,36E-09	-1,00E-09
Human tox. non-cancer	CTUh	4,12E-07	5,42E-11	4,60E-09	4,16E-07	1,51E-09	3,30E-10	MND	MND	MND	3,51E-08	MND	1,03E-06	MND	0,00E+00	2,73E-11	9,96E-10	2,42E-08	-6,34E-08
SQP[7)]	-	2,69E+01	5,35E-02	1,08E+01	3,78E+01	9,06E-01	6,65E-02	MND	MND	MND	1,15E+00	MND	1,21E+02	MND	0,00E+00	3,67E-02	3,01E-02	9,74E-02	1,62E+00

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	7,41E+00	8,18E-04	2,30E+00	9,72E+00	3,18E-02	5,64E-03	MND	MND	MND	2,55E-01	MND	3,12E+03	MND	0,00E+00	3,59E-04	1,88E-03	8,10E-04	1,59E-01
Renew. PER as material	MJ	1,74E-01	0,00E+00	3,48E+00	3,65E+00	0,00E+00	-3,48E+00	MND	MND	MND	0,00E+00	MND	0,00E+00	MND	0,00E+00	0,00E+00	-8,68E-02	-8,68E-02	2,81E+00
Total use of renew. PER	MJ	7,59E+00	8,18E-04	5,78E+00	1,34E+01	3,18E-02	-3,47E+00	MND	MND	MND	2,55E-01	MND	3,12E+03	MND	0,00E+00	3,59E-04	-8,49E-02	-8,60E-02	2,97E+00
Non-re. PER as energy	MJ	5,90E+01	5,83E-02	4,21E+00	6,32E+01	2,60E+00	7,19E-02	MND	MND	MND	2,74E+00	MND	6,60E+03	MND	0,00E+00	3,19E-02	5,52E-02	4,05E-02	-2,83E+00
Non-re. PER as material	MJ	8,11E+00	0,00E+00	-3,42E-01	7,77E+00	0,00E+00	-3,43E-02	MND	MND	MND	4,73E-01	MND	0,00E+00	MND	0,00E+00	0,00E+00	-4,42E+00	-3,79E+00	0,00E+00
Total use of non-re. PER	MJ	6,71E+01	5,83E-02	3,87E+00	7,10E+01	2,60E+00	3,76E-02	MND	MND	MND	3,21E+00	MND	6,60E+03	MND	0,00E+00	3,19E-02	-4,36E+00	-3,75E+00	-2,83E+00
Secondary materials	kg	4,67E-01	1,90E-05	2,66E-01	7,34E-01	1,32E-03	1,32E-04	MND	MND	MND	2,93E-02	MND	0,00E+00	MND	0,00E+00	8,83E-06	1,28E-04	4,59E-05	-5,59E-02
Renew. secondary fuels	MJ	4,19E-03	1,97E-07	1,89E-02	2,31E-02	6,46E-06	6,64E-07	MND	MND	MND	2,24E-04	MND	0,00E+00	MND	0,00E+00	8,92E-08	7,55E-07	5,80E-07	-1,55E-02
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	0,00E+00	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	5,12E-02	7,73E-06	3,94E-03	5,52E-02	2,63E-04	4,93E-05	MND	MND	MND	2,21E-03	MND	7,72E+00	MND	0,00E+00	4,11E-06	1,13E-05	3,75E-05	1,11E-03

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	6,35E-01	6,91E-05	2,11E-02	6,56E-01	4,38E-03	1,50E-03	MND	MND	MND	4,26E-02	MND	3,41E+00	MND	0,00E+00	4,20E-05	1,86E-04	1,22E-02	-1,79E-02
Non-hazardous waste	kg	1,51E+01	1,21E-03	4,92E-01	1,56E+01	5,19E-02	1,58E-02	MND	MND	MND	7,78E-01	MND	7,33E+01	MND	0,00E+00	6,89E-04	1,66E-01	1,49E-01	-1,76E+00
Radioactive waste	kg	1,71E-04	3,98E-07	8,87E-06	1,80E-04	1,80E-05	3,67E-07	MND	MND	MND	5,11E-06	MND	1,22E-01	MND	0,00E+00	2,15E-07	3,40E-08	0,00E+00	-3,11E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	0,00E+00	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	2,30E-02	2,30E-02	0,00E+00	2,20E-01	MND	MND	MND	1,33E-02	MND	0,00E+00	MND	0,00E+00	0,00E+00	4,66E-02	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,50E-02	MND	MND	MND	8,20E-03	MND	0,00E+00	MND	0,00E+00	0,00E+00	1,63E-01	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,58E-01	MND	MND	MND	7,90E-04	MND	0,00E+00	MND	0,00E+00	0,00E+00	3,66E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	4,59E+00	3,82E-03	3,85E-01	4,98E+00	1,97E-01	3,62E-02	MND	MND	MND	2,18E-01	MND	4,13E+01	MND	0,00E+00	2,02E-03	3,39E-01	1,87E-01	-3,17E-01
Ozone depletion Pot.	kg CFC_{-11}e	3,38E-07	7,15E-10	1,93E-08	3,58E-07	3,03E-08	4,98E-10	MND	MND	MND	1,41E-08	MND	2,00E-06	MND	0,00E+00	3,79E-10	3,71E-10	4,14E-10	-1,69E-08
Acidification	kg SO_2e	3,96E-02	1,57E-05	1,28E-03	4,09E-02	3,60E-03	2,91E-05	MND	MND	MND	2,36E-03	MND	4,06E-01	MND	0,00E+00	5,41E-06	5,03E-05	3,71E-04	-5,55E-03
Eutrophication	kg PO_4^3e	1,83E-02	3,67E-06	8,88E-04	1,92E-02	4,35E-04	2,47E-04	MND	MND	MND	1,06E-03	MND	1,06E-01	MND	0,00E+00	1,18E-06	4,60E-05	9,32E-04	-1,55E-03
POCP (“smog”)	kg C_2H_4e	1,77E-03	5,27E-07	7,50E-05	1,84E-03	9,66E-05	8,14E-06	MND	MND	MND	1,28E-04	MND	1,93E-02	MND	0,00E+00	2,48E-07	1,29E-06	1,94E-04	-2,30E-04
ADP-elements	kg Sbe	9,36E-04	1,22E-08	1,59E-06	9,38E-04	4,35E-07	8,41E-08	MND	MND	MND	4,60E-05	MND	1,04E-03	MND	0,00E+00	4,81E-09	3,07E-08	5,93E-09	-1,12E-04
ADP-fossil	MJ	5,92E+01	5,83E-02	4,21E+00	6,34E+01	2,60E+00	7,19E-02	MND	MND	MND	2,74E+00	MND	6,60E+03	MND	0,00E+00	3,19E-02	5,52E-02	4,05E-02	-2,74E+00

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited
20.12.2024

APPENDIX

This section represents the scaling method for the B6 module, following the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a reference variant of a product family, based on various light management scenarios and power inputs of the luminaires within the same product family.

To calculate the Scaled Impact (SI), we have followed the below methods:

1. Calculate the power scaling factor (PSF), which is the ratio of the power input of the variant in questions Pin and the power input of the base variant Pbase.

2. Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system). The presented controls factors values in Table A1 are based on BS EN 15193-1:2017. Please refer to this publication or contact Signify directly for more information.

Table A1 Light management functions

Scenario	CSF
No control	**1**
Daylight dependency factor	**0.75**
Presence sensing	**0.75**
Daylight dependency and presence sensing	**0.55**

3. Lastly, the GWP of the base variant is then scaled by the TSF

Table A2 Scaled GWP per scaling factor

Product name	E-number	Wattage	CCT	CRI	Lumen	Variety	PSF=(P in/P base)	CSF	Total Scaling Factor(TSF)	GWP B6-total kg CO2e
Moon Slim 255	7507456	12	3000k-4000k DIP	>80	1200LM-3000K	Traic dimmable	1.00	0.75	0.75	35.2
Moon Slim PIR 255	7507460	12.5	3000k-4000k DIP	>80	1200LM-3000K	With PIR sensor	1.03	0.75	0.77	36.13
Moon Slim S 255	7507458	13	3000k-4000k DIP	>80	1200LM-3000K	With Microwave sensor	1.06	0.55	0.58	25.81