

Product Environmental Profile

Independent verification of the declaration and data in compliance with ISO 14025: 2006



Sylvania Granit family

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PEP prepared by	Feilo Sylvania International Group Kft.	Validity period	5 years
Independent verification of the declaration and data in compliance with ISO 14025: 2006			
Internal		External	X
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500:2022			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14025 : 2006 «Environmental labels and declarations. Type III environmental declarations»			



1 General information

1.1 Product information

The Sylvania Granit family is the new high-efficiency and long-lasting Lifespan of 92,000hrs (made by L80B20) and comes with a 5-year warranty LED highbay.

The Sylvania Granit family is available in:

- Constant current (0-10V dimmable)
- DALI (DA)
- SSA
- Microwave (MW)

The luminaire is protected, according to IP65/IK08, and therefore is ideal for the tough environmental conditions of industry applications.

Versatile mounting options make all of the Sylvania Granit versions to a Highbay luminaire, that can be used in a wide range of applications. In addition to the standard suspension chain version, rotating ceiling installation offers added flexibility.

With the updated centre module for microwave occupancy sensing (MW), the Sylvania Granit Microwave can save further energy.

Additional – not standard – accessories are a shade and mounting brackets for usage in different applications.

Applicable product standards:

- EN 60598-1
- EN 61347-1, 2-13
- EN 62717

The function of Sylvania Granit family with its different series are described below:

- Constant current (0-10V dimmable) series: Work with 0-10V manual dimming system.
- DALI series: Work with DALI lighting management system.
- SSA series: Work with IR (Infra-red) sensor which can be connected to Sylvania wireless lighting management system Sylsmart Connect.
- Microwave (MW) series: Work with presence and luminous detecting sensor.

The Sylvania Granit reference product “0039740* Granit IP65 0-10V 32000lm 840 WB MW” 0039740* is defined by 0039740 Granit IP65 0-10V 32000lm 840 WB in combination with 0039745 Granit Module MW, forms the Microwave (MW) series. Which can control the luminous output automatically according to human presence and ambient brightness.

0039745 Granit Module MW: Microwave based, presence and luminous detecting sensor. with plug and play function.

Its technological key data are listed below:

Table 1: Key technological data for reference product

Information	Unit	
Product code	-	0039740*
Light source	-	LED
Power supply	-	External
Colour temperature	K	4000
Protection index for water and dust (IP)	-	65
Impact resistance index (IK)	-	08
Nominal operating voltage	V	220-240V
Declared lifetime of the luminaire (L80B20)	h	92,000
Declaration lifetime of the light source	h	92,000
Useful output flux	lm	32,000
Total power consumption	W	200
Luminous efficiency	lm/W	160
Length	mm	370
Width/Diameter	mm	370
Height	mm	163
Reference use scenario	-	Industry indoor applications

In the reference scenario, the product has 4,000 annual operating hours, resulting in a lifetime of 23 years.

1.2 Overview

The general information used for the PEP are listed below:

Table 2: Basic PEP information

Information	
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 35,000 hours
Reference flow / declared unit*	0.0119 pieces of product
Life cycle stages cover (according to EN15804+A2)	Cradle-to-grave and Module D
Product category according to PSR	Luminaires
Product family name (if family EPD)	Granit
All products of the product family (if family EPD)	Table 16 - Table 19
Extrapolation rules (if family EPD)	Table 20 – Table 23

* The reference flow is calculated as: $(1,000/\text{outgoing luminous flux of the analyzed product in lumens}) \times (35,000/\text{declared product lifetime of the analyzed product in hours})$

Consequently, the reference flow of the following product corresponds to:

$$(1,000/32,000) \times (35,000/92,000) = 0.0119$$

2 Constituent materials

2.1 Overview

Table 3: Product composition

Information	Weight/product [kg]	Weight/functional unit [kg]	Share [%]
Total weight	4.564	5.43E-02	100
Product	3.494	4.16E-02	76.5
Packaging	1.071	1.27E-02	23.5
Additional equipment	0.000	0.00E+00	0.0

2.2 Product

Table 4: Material composition - product

Information	Weight/product [kg]	Weight/functional unit [kg]	Share [%]
Total weight	3.494	4.16E-02	100
Metals	2.012	2.39E-02	57.6
- Aluminium	1.476	1.76E-02	42.0
- Steel	0.545	6.49E-03	15.6
Plastics	0.339	4.03E-03	9.7
- Polycarbonate (PC)	0.298	3.55E-03	8.5
- Silica	0.026	3.09E-04	0.7
- NYLON	0.015	1.79E-04	0.4
Electronics (incl. wires)	1.143	1.36E-02	32.7
Other	0.000	0.00E+00	0.0

Note: The total weight in this table differs slightly from the total weight of the product due to rounding inaccuracies.

2.3 Packaging

Table 5: Material composition - packaging

Information	Weight/product [kg]	Weight/functional unit [kg]	Share [%]
Total weight	1.071	1.27E-02	100
Paper/cardboard	1.049	1.25E-02	98
Plastics	0.014	1.67E-04	1.3
Wood	0.008	9.52E-05	0.7

3 Information on life cycle stages

3.1 Manufacturing (A1-A3)

For the manufacturer sources all parts come from international/Chinese suppliers. The final products are assembled and tested in Chinese factory, under the quality control of Feilo Sylvania International Group Kft.. The manufacturer is certified to ISO 9001:2015 / 14001:2015.

Metal scrap, plastic, waste carton/paper of the production side are mostly recycled, whereas electronic scraps are 100% incineration with energy recovery and the waste wood is mostly considered as landfilling.

The energy model used in manufacturing is based on Sphera's Managed LCA Content V.10:

CN: Electricity grid mix Sphera.

3.2 Distribution (A4)

The main market of the product is Europe. For this reason, an intercontinental and intracontinental transport, following PEP-PCR-ed4-EN-2021 09 06, is considered in the following model:

- 18000km by ship (heavy fuel oil driven, container ship, 5,000 to 200,000 dwt payload capacity, deep sea)
- 1400 km by truck (diesel driven, EURO 0-6, >27t payload).

The background assumptions for the transportation are listed below.

Table 6: Background information distribution

Information	Unit	Truck	Ship
Fuel type	-	Diesel	Heavy fuel oil
Fuel consumption	l/(kg*km)	1.99E-05	3.24E-06
Total distance	km	1400	18000
Capacity utilisation (including empty runs)	%	85	70

3.3 Installation (A5)

The product can easily be installed with hooks or poles and tool free. No energy or material input is required. Packaging waste is treated refer to chapter 3.5.3.1 of PSR-0014-ed 2.0-2023 07 13.

3.4 Use stage (B1-B7)

During the use stage of the product, the product only consumes electricity (B6). The main market of the product is Europe. Consequently, an average European electricity grid mix (database from Sphera) has been used for the calculations.

All other modules of the life cycle stage have no environmental impact, since the product has no direct emissions (B1), no maintenance (B2), and no replacement (B4), repair (B3), or refurbishment activities (B5). The luminaire does not consume water during its use (B7).

3.5 End of life (C1-C4)

The product falls under the Waste from Electrical and Electronic Equipment (WEEE) directive 2012/19/EU subcategory 4. EOL model is created referring to chapter 2.5.6 End of life treatment scenarios of PCR-ed4-EN-2021 09 06.

The share of the different end of life pathways are shown below. For the energy consumed in material separation, an average European grid mix has been used.

- Incineration with energy recovery: 12.3%
- Landfilling: 37.1%
- Recycling: 50.7%

3.6 Benefits and loads beyond the system boundaries stage (D)

Incineration with energy recovery and recycling of the product, packaging, and manufacturing scrap generate environmental benefits by avoiding the production of primary materials or energy. The amount and type of waste streams are listed in Table 7.

Table 7: Material flows for Benefits and loads beyond the system boundaries.

Information	Unit	Value
Total weight going into re-use	kg/functional unit	0.000
Total weight going into recycling	kg/functional unit	0.037
- Share from product	%	56.3
- Share from packaging	%	27.7
- Share from upstream packaging & manufacturing scrap	%	16.0
Total weight going into incineration with energy recovery	kg/functional unit	0.007
- Share from product	%	71.9
- Share from packaging	%	17.1
- Share from upstream packaging & manufacturing scrap	%	11.0

4 Environmental impacts

4.1 Introduction

The following table summarizes the key information for the calculation of the environmental impacts:

Table 8: Basic information LCA model

Information	Value
Used LCA software	LCA for Experts 10
Used LCI database	LCA Managed Content Professional 2024.1 + Extension 2024.1
PCR version	PEP-PCR-ED4-EN-2021 09 06
PSR version	PEP-PSR-0014-ED2.0-EN-2023 07 13
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 35,000 hours

4.2 Results per functional unit

The following results of the environmental declaration have been developed by considering an outgoing artificial luminous flux of 1,000 lumens over a reference lifetime of 35,000 hours. The results refer to the core environmental impact indicators and indicators describing resource use, waste categories, and output flows according to EN 15804:2012+A2:2019.

Table 9: Results core environmental impact indicators per functional unit (0.054 kg product incl. packaging)

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2		A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
GWP - total [kg CO2 eq.]	3.99 E+01	6.38 E-01	4.47 E-04	1.68 E-02	1.56 E-02	1.01 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.92 E+01	0.00 E+00	0.00 E+00	2.63 E-03	1.81 E-02	5.90 E-04	-1.29 E-01
GWP - fossil [kg CO2 eq.]	3.95 E+01	6.65 E-01	4.23 E-04	1.41 E-02	1.55 E-02	5.77 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.88 E+01	0.00 E+00	0.00 E+00	2.49 E-03	1.40 E-02	5.99 E-04	-1.47 E-01
GWP - biogenic [kg CO2 eq.]	3.21 E-01	-2.76 E-02	1.99 E-05	2.68 E-03	8.68 E-05	4.28 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.37 E-01	0.00 E+00	0.00 E+00	1.17 E-04	4.09 E-03	0.00 E+00	1.79 E-02
GWP - luluc [kg CO2 eq.]	4.61 E-03	2.83 E-04	3.90 E-06	1.17 E-05	4.44 E-05	1.80 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.22 E-03	0.00 E+00	0.00 E+00	2.30 E-05	7.15 E-06	7.47 E-07	-3.98 E-05
ODP [kg CFC-11 eq.]	7.18 E-10	1.30 E-12	5.48 E-17	5.93 E-14	3.19 E-15	1.09 E-14	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.16 E-10	0.00 E+00	0.00 E+00	3.23 E-16	4.43 E-14	1.07 E-15	-1.97 E-13
AP [Mole of H+ eq.]	8.70 E-02	3.80 E-03	4.91 E-07	4.63 E-05	2.07 E-04	1.04 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.29 E-02	0.00 E+00	0.00 E+00	2.90 E-06	3.08 E-05	2.20 E-06	-5.03 E-04
EP - freshwater [kg P eq.]	1.47 E-04	2.07 E-06	1.54 E-09	4.68 E-08	2.10 E-08	1.69 E-07	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.45 E-04	0.00 E+00	0.00 E+00	9.08 E-09	1.58 E-08	2.89 E-08	-2.83 E-07
EP - marine [kg N eq.]	2.06 E-02	6.03 E-04	1.65 E-07	1.06 E-05	8.68 E-05	4.79 E-06	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.98 E-02	0.00 E+00	0.00 E+00	9.70 E-07	1.19 E-05	5.47 E-07	-1.02 E-04
EP - terrestrial [Mole of N eq.]	2.15 E-01	6.49 E-03	1.94 E-06	1.14 E-04	9.52 E-04	4.37 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.07 E-01	0.00 E+00	0.00 E+00	1.14 E-05	1.33 E-04	6.01 E-06	-1.09 E-03
POCP [kg NMVOC eq.]	5.51 E-02	1.83 E-03	4.28 E-07	3.07 E-05	2.37 E-04	1.01 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.29 E-02	0.00 E+00	0.00 E+00	2.52 E-06	3.44 E-05	1.70 E-06	-3.00 E-04
ADPE [kg Sb eq.]	4.11 E-05	3.51 E-05	2.79 E-11	1.09 E-09	4.32 E-10	2.46 E-09	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.00 E-06	0.00 E+00	0.00 E+00	1.65 E-10	1.09 E-09	1.78 E-11	-7.40 E-09
ADPF [MJ]	8.25 E+02	7.29 E+00	5.74 E-03	1.50 E-01	2.03 E-01	7.91 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.17 E+02	0.00 E+00	0.00 E+00	3.38 E-02	1.34 E-01	8.84 E-03	-1.97 E+00
WDP [m³ world equiv.]	8.79 E+00	1.32 E-01	5.09 E-06	4.08 E-03	1.37 E-04	3.71 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.65 E+00	0.00 E+00	0.00 E+00	3.00 E-05	1.31 E-03	1.51 E-06	-8.89 E-03

Table 10: Results indicators describing resource use, waste categories, and output flows per functional unit (0.054 kg product incl. packaging)

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE [MJ]	4.90 E+02	1.60 E+00	4.18 E-04	-1.85 E-01	8.03 E-03	2.11 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.88 E+02	0.00 E+00	0.00 E+00	2.46 E-03	2.94 E-02	8.72 E-04	-9.45 E-01
PERM [MJ]	2.26 E-01	0.00 E+00	0.00 E+00	2.26 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
PERT [MJ]	4.90 E+02	1.60 E+00	4.18 E-04	4.09 E-02	8.03 E-03	2.11 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.88 E+02	0.00 E+00	0.00 E+00	2.46 E-03	2.94 E-02	8.72 E-04	-9.45 E-01
PENRE [MJ]	8.25 E+02	7.31 E+00	5.76 E-03	-1.50 E-01	2.03 E-01	7.92 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.17 E+02	0.00 E+00	0.00 E+00	3.40 E-02	1.34 E-01	8.85 E-03	-1.87 E+00
PENRM [MJ]	3.00 E-01	0.00 E+00	0.00 E+00	3.00 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-1.01 E-01
PENRT [MJ]	8.25 E+02	7.31 E+00	5.76 E-03	1.50 E-01	2.03 E-01	7.92 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	8.17 E+02	0.00 E+00	0.00 E+00	3.40 E-02	1.34 E-01	8.85 E-03	-1.97 E+00
SM [kg]	-7.46 E-04	-7.46 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-1.98 E-02
RSF [MJ]	5.66 E-03	0.00 E+00	3.08 E-04	0.00 E+00	3.48 E-03	5.57 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.82 E-03	0.00 E+00	0.00 E+00	0.00 E+00
NRSF [MJ]	2.04 E-01	0.00 E+00	4.84 E-03	0.00 E+00	1.69 E-01	8.74 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.85 E-02	0.00 E+00	0.00 E+00	0.00 E+00
FW [m3]	3.98 E-01	3.88 E-03	4.57 E-07	1.15 E-04	8.19 E-06	8.81 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.94 E-01	0.00 E+00	0.00 E+00	2.70 E-06	4.54 E-05	3.50 E-07	-1.19 E-03
HWD [kg]	-3.63 E-08	2.39 E-08	1.78 E-14	6.23 E-10	1.20 E-12	2.79 E-09	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-6.39 E-08	0.00 E+00	0.00 E+00	1.05 E-13	2.59 E-10	6.70 E-13	-2.68 E-09
NHWD [kg]	7.09 E-01	9.02 E-02	8.78 E-07	7.70 E-04	2.93 E-05	1.21 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.98 E-01	0.00 E+00	0.00 E+00	5.18 E-06	3.30 E-03	1.54 E-02	-3.05 E-02
RWD [kg]	1.30 E-01	1.15 E-04	1.08 E-08	3.66 E-06	4.75 E-07	1.85 E-06	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.30 E-01	0.00 E+00	0.00 E+00	6.36 E-08	5.65 E-06	1.03 E-07	-1.34 E-04
CRU [kg]	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
MFR [kg]	3.74 E-02	2.80 E-03	0.00 E+00	3.20 E-03	0.00 E+00	1.04 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.10 E-02	0.00 E+00	0.00 E+00
MER [kg]	7.08 E-03	0.00 E+00	0.00 E+00	7.75 E-04	0.00 E+00	1.21 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.09 E-03	0.00 E+00	0.00 E+00
EEE [MJ]	1.98 E-02	-4.22 E-04	0.00 E+00	2.39 E-03	1.10 E-05	3.19 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.46 E-02	0.00 E+00	0.00 E+00
EET [MJ]	3.88 E-02	-9.78 E-04	0.00 E+00	4.07 E-03	2.55 E-05	5.02 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.06 E-02	0.00 E+00	0.00 E+00
Biog. C in product [kg]	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Biog. C in packaging [kg]	0.00 E+00	0.00 E+00	0.00 E+00	-5.40 E-03	0.00 E+00	5.40 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

Table 11: Additional environmental impact indicators per functional unit (0.054 kg product incl. packaging)

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2				B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
PM [Disease incidences]	7.93 E-07	8.81 E-08	3.58 E-12	6.22 E-10	5.37 E-09	8.79 E-11	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.98 E-07	0.00 E+00	0.00 E+00	2.11 E-11	2.74 E-10	2.41 E-11	-5.47 E-09
IRP [kBq. U235 eq.]	2.16 E+01	1.25 E-02	1.61 E-06	2.87 E-04	6.99 E-05	3.06 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.16 E+01	0.00 E+00	0.00 E+00	9.49 E-06	7.80 E-04	1.49 E-05	-2.89 E-02
ETP-fw [CTUh]	2.30 E+02	2.88 E+00	4.11 E-03	2.11 E-02	1.41 E-01	1.10 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.27 E+02	0.00 E+00	0.00 E+00	2.43 E-02	2.19 E-02	4.11 E-03	-5.16 E-01
HTP-c [CTUh]	1.28 E-08	7.99 E-10	8.35 E-14	2.80 E-12	3.05 E-12	1.15 E-12	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.20 E-08	0.00 E+00	0.00 E+00	4.92 E-13	1.66 E-12	3.82 E-13	-7.09 E-11
HTP-nc [CTUh]	2.09 E-07	1.72 E-08	3.71 E-12	5.84 E-11	1.38 E-10	5.79 E-11	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.92 E-07	0.00 E+00	0.00 E+00	2.19 E-11	7.71 E-11	3.58 E-11	-1.16 E-09
SQP [dimensionsless]	3.26 E+02	5.10 E+00	2.40 E-03	4.22 E-02	6.06 E-02	1.13 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.21 E+02	0.00 E+00	0.00 E+00	1.42 E-02	2.60 E-02	9.69 E-04	-2.45 E+00

4.3 Results per unit of product

The following results of the environmental declaration have been developed by considering the entire life cycle of one product with the technical properties described in Table 1. The results refer to the core environmental impact indicators and indicators describing resource use, waste categories, and output flows according to EN 15804:2012+A2:2019.

Table 12: Results core environmental impact indicators per unit of product

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP - total [kg CO2 eq.]	3.35 E+03	5.37 E+01	3.76 E-02	1.41 E+00	1.31 E+00	8.46 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.29 E+03	0.00 E+00	0.00 E+00	2.22 E-01	1.52 E+00	4.97 E-02	-1.09 E+01
GWP - fossil [kg CO2 eq.]	3.33 E+03	5.60 E+01	3.56 E-02	1.19 E+00	1.30 E+00	4.85 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.26 E+03	0.00 E+00	0.00 E+00	2.10 E-01	1.18 E+00	5.04 E-02	-1.24 E+01
GWP - biogenic [kg CO2 eq.]	2.70 E+01	-2.32 E+00	1.67 E-03	2.26 E-01	7.30 E-03	3.60 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.84 E+01	0.00 E+00	0.00 E+00	9.86 E-03	3.44 E-01	0.00 E+00	1.51 E+00
GWP - luluc [kg CO2 eq.]	3.88 E-01	2.38 E-02	3.28 E-04	9.80 E-04	3.73 E-03	1.51 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.55 E-01	0.00 E+00	0.00 E+00	1.93 E-03	6.01 E-04	6.28 E-05	-3.35 E-03
ODP [kg CFC-11 eq.]	6.04 E-08	1.09 E-10	4.61 E-15	4.98 E-12	2.68 E-13	9.18 E-13	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.02 E-08	0.00 E+00	0.00 E+00	2.72 E-14	3.72 E-12	8.96 E-14	-1.66 E-11
AP [Mole of H+ eq.]	7.32 E+00	3.20 E-01	4.13 E-05	3.90 E-03	1.74 E-02	8.75 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.97 E+00	0.00 E+00	0.00 E+00	2.44 E-04	2.59 E-03	1.85 E-04	-4.23 E-02
EP - freshwater [kg P eq.]	1.24 E-02	1.75 E-04	1.30 E-07	3.93 E-06	1.77 E-06	1.43 E-05	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.22 E-02	0.00 E+00	0.00 E+00	7.64 E-07	1.33 E-06	2.43 E-06	-2.38 E-05
EP - marine [kg N eq.]	1.73 E+00	5.07 E-02	1.38 E-05	8.93 E-04	7.30 E-03	4.03 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.67 E+00	0.00 E+00	0.00 E+00	8.16 E-05	1.00 E-03	4.60 E-05	-8.55 E-03
EP - terrestrial [Mole of N eq.]	1.81 E+01	5.45 E-01	1.63 E-04	9.56 E-03	8.01 E-02	3.67 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.74 E+01	0.00 E+00	0.00 E+00	9.62 E-04	1.12 E-02	5.06 E-04	-9.17 E-02
POCP [kg NMVOC eq.]	4.63 E+00	1.54 E-01	3.60 E-05	2.58 E-03	2.00 E-02	8.46 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.45 E+00	0.00 E+00	0.00 E+00	2.12 E-04	2.90 E-03	1.43 E-04	-2.52 E-02
ADPE [kg Sb eq.]	3.45 E-03	2.95 E-03	2.35 E-09	9.19 E-08	3.63 E-08	2.07 E-07	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.05 E-04	0.00 E+00	0.00 E+00	1.39 E-08	9.15 E-08	1.50 E-09	-6.22 E-07
ADPF [MJ]	6.94 E+04	6.13 E+02	4.83 E-01	1.26 E+01	1.71 E+01	6.65 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.87 E+04	0.00 E+00	0.00 E+00	2.85 E+00	1.13 E+01	7.44 E-01	-1.66 E+02
WDP [m³ world equiv.]	7.39 E+02	1.11 E+01	4.28 E-04	3.44 E-01	1.16 E-02	3.12 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.28 E+02	0.00 E+00	0.00 E+00	2.52 E-03	1.10 E-01	1.27 E-04	-7.48 E-01

Table 13: Results indicators describing resource use, waste categories, and output flows per unit of product.

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2				B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
PERE [MJ]	4.12 E+04	1.35 E+02	3.51 E-02	-1.56 E+01	6.75 E-01	1.77 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.11 E+04	0.00 E+00	0.00 E+00	2.07 E-01	2.48 E+00	7.33 E-02	-7.95 E+01
PERM [MJ]	1.90 E+01	0.00 E+00	0.00 E+00	1.90 E+01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
PERT [MJ]	4.12 E+04	1.35 E+02	3.51 E-02	3.44 E+00	6.75 E-01	1.77 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.11 E+04	0.00 E+00	0.00 E+00	2.07 E-01	2.48 E+00	7.33 E-02	-7.95 E+01
PENRE [MJ]	6.94 E+04	6.15 E+02	4.85 E-01	-1.26 E+01	1.71 E+01	6.66 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.87 E+04	0.00 E+00	0.00 E+00	2.86 E+00	1.13 E+01	7.44 E-01	-1.57 E+02
PENRM [MJ]	2.52 E+01	0.00 E+00	0.00 E+00	2.52 E+01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-8.53 E+00
PENRT [MJ]	6.94 E+04	6.15 E+02	4.85 E-01	1.26 E+01	1.71 E+01	6.66 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	6.87 E+04	0.00 E+00	0.00 E+00	2.86 E+00	1.13 E+01	7.44 E-01	-1.66 E+02
SM [kg]	-6.27 E-02	-6.27 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-1.67 E+00
RSF [MJ]	4.76 E-01	0.00 E+00	2.59 E-02	0.00 E+00	2.93 E-01	4.68 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.53 E-01	0.00 E+00	0.00 E+00	0.00 E+00
NRSF [MJ]	1.71 E+01	0.00 E+00	4.07 E-01	0.00 E+00	1.42 E+01	7.35 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.40 E+00	0.00 E+00	0.00 E+00	0.00 E+00
FW [m3]	3.35 E+01	3.27 E-01	3.85 E-05	9.70 E-03	6.89 E-04	7.41 E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.32 E+01	0.00 E+00	0.00 E+00	2.27 E-04	3.82 E-03	2.95 E-05	-9.97 E-02
HWD [kg]	-3.06 E-06	2.01 E-06	1.50 E-12	5.24 E-08	1.01 E-10	2.34 E-07	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	-5.38 E-06	0.00 E+00	0.00 E+00	8.85 E-12	2.18 E-08	5.63 E-11	-2.25 E-07
NHWD [kg]	5.97 E+01	7.59 E+00	7.39 E-05	6.47 E-02	2.47 E-03	1.01 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.03 E+01	0.00 E+00	0.00 E+00	4.36 E-04	2.78 E-01	1.30 E+00	-2.57 E+00
RWD [kg]	1.09 E+01	9.66 E-03	9.07 E-07	3.08 E-04	3.99 E-05	1.56 E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.09 E+01	0.00 E+00	0.00 E+00	5.35 E-06	4.75 E-04	8.67 E-06	-1.13 E-02
CRU [kg]	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
MFR [kg]	3.15 E+00	2.35 E-01	0.00 E+00	2.69 E-01	0.00 E+00	8.71 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.77 E+00	0.00 E+00	0.00 E+00
MER [kg]	5.95 E-01	0.00 E+00	0.00 E+00	6.52 E-02	0.00 E+00	1.02 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	4.28 E-01	0.00 E+00	0.00 E+00
EEE [MJ]	1.66 E+00	-3.55 E-02	0.00 E+00	2.01 E-01	9.26 E-04	2.68 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.23 E+00	0.00 E+00	0.00 E+00
EET [MJ]	3.26 E+00	-8.22 E-02	0.00 E+00	3.43 E-01	2.15 E-03	4.22 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.58 E+00	0.00 E+00	0.00 E+00
Biog. C in product [kg]	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Biog. C in packaging [kg]	0.00 E+00	0.00 E+00	0.00 E+00	-4.55 E-01	0.00 E+00	4.55 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

Table 14: Additional environmental impact indicators per unit of product

	Total (Excl.D)	Raw materials & parts		Manufacturing	Distribution	Installation	Use							End of life				Benefits and loads beyond the system boundaries
		A1	A2				B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
PM [Disease incidences]	6.66 E-05	7.40 E-06	3.01 E-10	5.23 E-08	4.51 E-07	7.38 E-09	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	5.87 E-05	0.00 E+00	0.00 E+00	1.77 E-09	2.30 E-08	2.03 E-09	-4.59 E-07
IRP [kBq. U235 eq.]	1.82 E+03	1.05 E+00	1.35 E-04	2.41 E-02	5.87 E-03	2.57 E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.82 E+03	0.00 E+00	0.00 E+00	7.97 E-04	6.55 E-02	1.25 E-03	-2.43 E+00
ETP-fw [CTUh]	1.94 E+04	2.42 E+02	3.46 E-01	1.77 E+00	1.18 E+01	9.26 E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.91 E+04	0.00 E+00	0.00 E+00	2.04 E+00	1.84 E+00	3.46 E-01	-4.34 E+01
HTP-c [CTUh]	1.08 E-06	6.71 E-08	7.02 E-12	2.35 E-10	2.56 E-10	9.63 E-11	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.01 E-06	0.00 E+00	0.00 E+00	4.14 E-11	1.39 E-10	3.21 E-11	-5.96 E-09
HTP-nc [CTUh]	1.76 E-05	1.44 E-06	3.12 E-10	4.91 E-09	1.16 E-08	4.87 E-09	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.61 E-05	0.00 E+00	0.00 E+00	1.84 E-09	6.48 E-09	3.01 E-09	-9.78 E-08
SQP [dimensionless]	2.74 E+04	4.29 E+02	2.02 E-01	3.54 E+00	5.09 E+00	9.49 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.70 E+04	0.00 E+00	0.00 E+00	1.19 E+00	2.19 E+00	8.14 E-02	-2.06 E+02

4.4 Data quality

The underlying LCA model has been developed in Sphera's LCA software LCA for Experts V.10 and with datasets from Sphera's Managed LCA Content. The overall DQR for the representativeness has been calculated as average of the individual ratings according to the PCR respectively the Product Environmental Footprint Guide, version 6.3. Consequently, the overall representativeness is assessed as good (DQR = 2.03).

The individual rating for technological, time and geographical representativeness is assessed as good (DQR = 2.39, 1.57 and 2.13).

5 Extrapolation Rules

The extrapolation coefficients included in the PEP Eco-passport have been developed according to the valid PCR & PSR. Table 15 shows the key properties of the reference product, function as extrapolation basis.

Table 15: Reference values for the extrapolations.

Parameter	Unit	Reference value
Weight of structural/ mechanical parts	kg	2.358
Weight of power equipment	kg	0.917
Weight of light source	kg	0.170
Weight of light management system	kg	0.048
Weight of product (excl. packaging)	kg	3.494
Weight of packaging	kg	1.071
Weight of product (incl. packaging)	kg	4.564
Typical power consumption	W	200
Lumen output	lm	32,000
Energy saving	-	0.55

The extrapolation at the level of the functional unit needs to be done according to the following formula:

$$\text{Extrapolation coefficient at the product level} \times \frac{\text{Lighting output of reference product(lumen)}}{\text{Lighting output of product concerned(lumen)}}$$

Lumen output of each product variant and other important properties are listed in the tables below.

Table 16: Information for product family: Constant current (0-10V dimmable)

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Control gear weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)
0039730	Granit IP65 0-10V 13000lm 840 MB	80	13000	1.736	0.835	0.906	0.090	0.000	3.567
0039731	Granit IP65 0-10V 19500lm 840 MB	120	19500	1.736	0.835	0.906	0.090	0.000	3.567
0039732	Granit IP65 0-10V 26400lm 840 MB	165	26400	2.358	1.071	0.917	0.170	0.000	4.516
0039733	Granit IP65 0-10V 13000lm 840 WB	80	13000	1.736	0.835	0.906	0.090	0.000	3.567
0039734	Granit IP65 0-10V 19500lm 840 WB	120	19500	1.736	0.835	0.906	0.090	0.000	3.567
0039735	Granit IP65 0-10V 26400lm 840 WB	165	26400	2.358	1.071	0.917	0.170	0.000	4.516
0039736	Granit IP65 0-10V 13000lm 865 WB	80	13000	1.736	0.835	0.906	0.090	0.000	3.567
0039737	Granit IP65 0-10V 19500lm 865 WB	120	19500	1.736	0.835	0.906	0.090	0.000	3.567
0039738	Granit IP65 0-10V 26400lm 865 WB	165	26400	2.358	1.071	0.917	0.170	0.000	4.516
0039739	Granit IP65 0-10V 32000lm 840 MB	200	32000	2.358	1.071	0.917	0.170	0.000	4.516
0039740	Granit IP65 0-10V 32000lm 840 WB	200	32000	2.358	1.071	0.917	0.170	0.000	4.516
0039741	Granit IP65 0-10V 32000lm 865 WB	200	32000	2.358	1.071	0.917	0.170	0.000	4.516

Table 17: Information for product family: Dali (DA)

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Control gear weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)
0039749	Granit IP65 DALI 13000lm 840 MB	80	13000	1.736	0.835	0.868	0.090	0.000	3.529
0039750	Granit IP65 DALI 19500lm 840 MB	120	19500	1.736	0.835	0.868	0.090	0.000	3.529
0039751	Granit IP65 DALI 26400lm 840 MB	165	26400	2.358	1.071	1.021	0.170	0.000	4.620
0039752	Granit IP65 DALI 13000lm 840 WB	80	13000	1.736	0.835	0.868	0.090	0.000	3.529
0039753	Granit IP65 DALI 19500lm 840 WB	120	19500	1.736	0.835	0.868	0.090	0.000	3.529
0039754	Granit IP65 DALI 26400lm 840 WB	165	26400	2.358	1.071	1.021	0.170	0.000	4.620
0039755	Granit IP65 DALI 13000lm 865 WB	80	13000	1.736	0.835	0.868	0.090	0.000	3.529
0039756	Granit IP65 DALI 19500lm 865 WB	120	19500	1.736	0.835	0.868	0.090	0.000	3.529
0039757	Granit IP65 DALI 26400lm 865 WB	165	26400	2.358	1.071	1.021	0.170	0.000	4.620
0039758	Granit IP65 DALI 32000lm 840 MB	200	32000	2.358	1.071	1.021	0.170	0.000	4.620
0039759	Granit IP65 DALI 32000lm 840 WB	200	32000	2.358	1.071	1.021	0.170	0.000	4.620
0039760	Granit IP65 DALI 32000lm 865 WB	200	32000	2.358	1.071	1.021	0.170	0.000	4.620

Table 18: Information for product family: SSA

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Control gear weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)
0038766	Granit IP65 13000LM 840 MB SSA	80	13000	2.064	0.803	0.805	0.090	0.084	3.846
0038767	Granit IP65 19500LM 840 MB SSA	120	19500	2.064	0.803	0.890	0.090	0.084	3.931
0038768	Granit IP65 26400LM 840 MB SSA	165	26400	2.317	0.988	0.944	0.175	0.084	4.508
0038769	Granit IP65 13000LM 840 WB SSA	80	13000	2.064	0.803	0.805	0.090	0.084	3.846
0038770	Granit IP65 19500LM 840 WB SSA	120	19500	2.064	0.803	0.890	0.090	0.084	3.931
0038771	Granit IP65 26400LM 840 WB SSA	165	26400	2.317	0.988	0.944	0.175	0.084	4.508
0038772	Granit IP65 32000LM 840 WB SSA	200	32000	2.317	0.988	0.944	0.175	0.084	4.508
0039766	Granit IP54 13000LM 840 MB SSA	80	13000	2.064	0.803	0.805	0.090	0.084	3.846
0039767	Granit IP54 19500LM 840 MB SSA	120	19500	2.064	0.803	0.890	0.090	0.084	3.931
0039768	Granit IP54 26400LM 840 MB SSA	165	26400	2.317	0.988	0.944	0.175	0.084	4.508
0039769	Granit IP54 13000LM 840 WB SSA	80	13000	2.064	0.803	0.805	0.090	0.084	3.846
0039770	Granit IP54 19500LM 840 WB SSA	120	19500	2.064	0.803	0.890	0.090	0.084	3.931
0039771	Granit IP54 26400LM 840 WB SSA	165	26400	2.317	0.988	0.944	0.175	0.084	4.508
0039772	Granit IP54 32000LM 840 WB SSA	200	32000	2.317	0.988	0.944	0.175	0.084	4.508

Table 19: Information for product family: Microwave (MW)

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Control gear weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)
0039730*	Granit IP65 0-10V 13000lm 840 MB MW	80	13000	1.736	0.835	0.906	0.090	0.048	3.615
0039731*	Granit IP65 0-10V 19500lm 840 MB MW	120	19500	1.736	0.835	0.906	0.090	0.048	3.615
0039732*	Granit IP65 0-10V 26400lm 840 MB MW	165	26400	2.358	1.071	0.917	0.170	0.048	4.564
0039733*	Granit IP65 0-10V 13000lm 840 WB MW	80	13000	1.736	0.835	0.906	0.090	0.048	3.615
0039734*	Granit IP65 0-10V 19500lm 840 WB MW	120	19500	1.736	0.835	0.906	0.090	0.048	3.615
0039735*	Granit IP65 0-10V 26400lm 840 WB MW	165	26400	2.358	1.071	0.917	0.170	0.048	4.564
0039736*	Granit IP65 0-10V 13000lm 865 WB MW	80	13000	1.736	0.835	0.906	0.090	0.048	3.615
0039737*	Granit IP65 0-10V 19500lm 865 WB MW	120	19500	1.736	0.835	0.906	0.090	0.048	3.615
0039738*	Granit IP65 0-10V 26400lm 865 WB MW	165	26400	2.358	1.071	0.917	0.170	0.048	4.564
0039739*	Granit IP65 0-10V 32000lm 840 MB MW	200	32000	2.358	1.071	0.917	0.170	0.048	4.564
0039740*	Granit IP65 0-10V 32000lm 840 WB MW	200	32000	2.358	1.071	0.917	0.170	0.048	4.564
0039741*	Granit IP65 0-10V 32000lm 865 WB MW	200	32000	2.358	1.071	0.917	0.170	0.048	4.564

* Microwave (MW) model = Constant current (0-10V dimmable) model in combination with plug in microwave sensor (item code 0039745).

The required extrapolation coefficients at the product level are listed in the following tables.

Table 20: Extrapolation coefficients at product level for Constant current (0-10V dimmable)

Product code	Product name	Power (W)	Manufacturing stage (A1-A3)	distribution stage (A4)	Installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0039730	Granit IP65 0-10V 13000lm 840 MB	80	0.81	0.78	0.78	0.55	0.78	0.81
0039731	Granit IP65 0-10V 19500lm 840 MB	120	0.81	0.78	0.78	0.82	0.78	0.81
0039732	Granit IP65 0-10V 26400lm 840 MB	165	1.00	0.99	1.00	1.13	0.99	1.00
0039733	Granit IP65 0-10V 13000lm 840 WB	80	0.81	0.78	0.78	0.55	0.78	0.81
0039734	Granit IP65 0-10V 19500lm 840 WB	120	0.81	0.78	0.78	0.82	0.78	0.81
0039735	Granit IP65 0-10V 26400lm 840 WB	165	1.00	0.99	1.00	1.13	0.99	1.00
0039736	Granit IP65 0-10V 13000lm 865 WB	80	0.81	0.78	0.78	0.55	0.78	0.81
0039737	Granit IP65 0-10V 19500lm 865 WB	120	0.81	0.78	0.78	0.82	0.78	0.81
0039738	Granit IP65 0-10V 26400lm 865 WB	165	1.00	0.99	1.00	1.13	0.99	1.00
0039739	Granit IP65 0-10V 32000lm 840 MB	200	1.00	0.99	1.00	1.36	0.99	1.00
0039740	Granit IP65 0-10V 32000lm 840 WB	200	1.00	0.99	1.00	1.36	0.99	1.00
0039741	Granit IP65 0-10V 32000lm 865 WB	200	1.00	0.99	1.00	1.36	0.99	1.00

Table 21: Extrapolation coefficients at product level for Dali (DA)

Product code	Product name	Power (W)	Manufacturing stage (A1-A3)	distribution stage (A4)	Installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0039749	Granit IP65 DALI 13000lm 840 MB	80	0.79	0.77	0.78	0.36	0.77	0.79
0039750	Granit IP65 DALI 19500lm 840 MB	120	0.79	0.77	0.78	0.55	0.77	0.79
0039751	Granit IP65 DALI 26400lm 840 MB	165	1.03	1.01	1.00	0.75	1.02	1.03
0039752	Granit IP65 DALI 13000lm 840 WB	80	0.79	0.77	0.78	0.36	0.77	0.79
0039753	Granit IP65 DALI 19500lm 840 WB	120	0.79	0.77	0.78	0.55	0.77	0.79
0039754	Granit IP65 DALI 26400lm 840 WB	165	1.03	1.01	1.00	0.75	1.02	1.03
0039755	Granit IP65 DALI 13000lm 865 WB	80	0.79	0.77	0.78	0.36	0.77	0.79
0039756	Granit IP65 DALI 19500lm 865 WB	120	0.79	0.77	0.78	0.55	0.77	0.79
0039757	Granit IP65 DALI 26400lm 865 WB	165	1.03	1.01	1.00	0.75	1.02	1.03
0039758	Granit IP65 DALI 32000lm 840 MB	200	1.03	1.01	1.00	0.91	1.02	1.03
0039759	Granit IP65 DALI 32000lm 840 WB	200	1.03	1.01	1.00	0.91	1.02	1.03
0039760	Granit IP65 DALI 32000lm 865 WB	200	1.03	1.01	1.00	0.91	1.02	1.03

Table 22: Extrapolation coefficients at product level for SSA

Product code	Product name	Power (W)	Manufacturing stage (A1-A3)	distribution stage (A4)	Installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0038766	Granit IP65 13000LM 840 MB SSA	80	0.86	0.84	0.75	0.36	0.87	0.86
0038767	Granit IP65 19500LM 840 MB SSA	120	0.88	0.86	0.75	0.55	0.90	0.88
0038768	Granit IP65 26400LM 840 MB SSA	165	1.00	0.99	0.92	0.75	1.01	1.00
0038769	Granit IP65 13000LM 840 WB SSA	80	0.86	0.84	0.75	0.36	0.87	0.86
0038770	Granit IP65 19500LM 840 WB SSA	120	0.88	0.86	0.75	0.55	0.90	0.88
0038771	Granit IP65 26400LM 840 WB SSA	165	1.00	0.99	0.92	0.75	1.01	1.00
0038772	Granit IP65 32000LM 840 WB SSA	200	1.00	0.99	0.92	0.91	1.01	1.00
0039766	Granit IP54 13000LM 840 MB SSA	80	0.86	0.84	0.75	0.36	0.87	0.86
0039767	Granit IP54 19500LM 840 MB SSA	120	0.88	0.86	0.75	0.55	0.90	0.88
0039768	Granit IP54 26400LM 840 MB SSA	165	1.00	0.99	0.92	0.75	1.01	1.00
0039769	Granit IP54 13000LM 840 WB SSA	80	0.86	0.84	0.75	0.36	0.87	0.86
0039770	Granit IP54 19500LM 840 WB SSA	120	0.88	0.86	0.75	0.55	0.90	0.88
0039771	Granit IP54 26400LM 840 WB SSA	165	1.00	0.99	0.92	0.75	1.01	1.00
0039772	Granit IP54 32000LM 840 WB SSA	200	1.00	0.99	0.92	0.91	1.01	1.00

Table 23: Extrapolation coefficients at product level for Microwave (MW)

Product code	Product name	Power (W)	Manufacturing stage (A1-A3)	distribution stage (A4)	Installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0039730*	Granit IP65 0-10V 13000lm 840 MB MW	80	0.81	0.79	0.78	0.40	0.80	0.81
0039731*	Granit IP65 0-10V 19500lm 840 MB MW	120	0.81	0.79	0.78	0.60	0.80	0.81
0039732*	Granit IP65 0-10V 26400lm 840 MB MW	165	1.00	1.00	1.00	0.83	1.00	1.00
0039733*	Granit IP65 0-10V 13000lm 840 WB MW	80	0.81	0.79	0.78	0.40	0.80	0.81
0039734*	Granit IP65 0-10V 19500lm 840 WB MW	120	0.81	0.79	0.78	0.60	0.80	0.81
0039735*	Granit IP65 0-10V 26400lm 840 WB MW	165	1.00	1.00	1.00	0.83	1.00	1.00
0039736*	Granit IP65 0-10V 13000lm 865 WB MW	80	0.81	0.79	0.78	0.40	0.80	0.81
0039737*	Granit IP65 0-10V 19500lm 865 WB MW	120	0.81	0.79	0.78	0.60	0.80	0.81
0039738*	Granit IP65 0-10V 26400lm 865 WB MW	165	1.00	1.00	1.00	0.83	1.00	1.00
0039739*	Granit IP65 0-10V 32000lm 840 MB MW	200	1.00	1.00	1.00	1.00	1.00	1.00
0039740*	Granit IP65 0-10V 32000lm 840 WB MW	200	1.00	1.00	1.00	1.00	1.00	1.00
0039741*	Granit IP65 0-10V 32000lm 865 WB MW	200	1.00	1.00	1.00	1.00	1.00	1.00

* Microwave (MW) model = Constant current (0-10V dimmable) model in combination with plug in microwave sensor (item code 0039745).

DA / DALI Digital Addressable Lighting Interface

MW MicroWave (MW) model = Constant current (0-10V dimmable) model in combination with plug in microwave sensor (item code 0039745).

SSA SylSmart connected systems (Silvair)