


Product Environmental Profile

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



SYLVANIA Otao family

Registration number	SYLV-00026-V01.01-EN	Drafting rules	PCR-ed4-EN-2021 09 06
Verifier accreditation number	VH44	Supplemented by	PSR-0014-ed2.0-EN-2023 07 13
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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

Sylvania Otao is modular and highly efficient linear range for office and retail applications with several optical and mounting options. The design combines 50mm narrow extruded aluminium profile with several different optical choices to provide the maximum light comfort and efficacy to the customer. Depending on the application this highly adaptable solution can be mounted either standalone or as a continuous, uniform line of light. The modularity of the product is almost endless, only the user's imagination can set the limits. All versions are finished in elegant white, ensuring a clean, modern aestheti that complements any interior design.

Applicable product standards:

- EN 60598-1
- EN 61347-1, 2-13
- EN 62717
- EN 55015
- EN 61547
- EN 61000-3-2

The function of SYLVANIA Otao family with its different series are described below:

- Non dimmable: Without dimming function, only power on and off.
- DALI: Work with DALI lighting management system.
- SSA: Work with Sylsmart connected sensors, the product can be connected to Sylvania wireless lighting management system Sylsmart Connected (Silvair).

The SYLVANIA Otao reference product:

0041805c OTA0 LINEAR 1.2 REF WHT 830/840 DALI WH IND SSA

belongs to SSA series, which can be connected to Sylvania wireless lighting management system Sylsmart Connect (Silvair).

Its key technological data are listed below:

Table 1: Key technological data for reference product

Information	Unit	
Product code	-	0041805c
Light source	-	LED
Power supply	-	External
Colour temperature	K	3000/4000
Protection index for water and dust (IP)	-	20
Impact resistance index (IK)	-	03
Nominal operating voltage	V	220-240V
Declared lifetime of the luminaire (L70B50)	h	100,000
Declaration lifetime of the light source	h	100,000
Useful output flux	lm	5,050
Total power consumption	W	36
Luminous efficiency	lm/W	140
Length	mm	1317
Width/Diameter	mm	50
Height	mm	73
Reference use scenario	-	Retail, Education, Office

SYLVANIA Otao family are declared with below lifetime:

- L70B50 100,000hrs
- L80B50 100,000hrs

L70B50 100,000hrs is used for LCA analysis.

For retail use scenario, 5,000 annual operating hours, resulting in a lifetime of 20 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*	0.0693 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	Sylvania Otao
All products of the product family	Table 19 - Table 22
Extrapolation rules	Table 23 - Table 26

* 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:

$$(1,000/5,050) \times (35,000/100,000) = 0.0693$$

2 Constituent materials

2.1 Overview

Table 3: Product composition

Information	Weight/product [kg]	Weight/functional unit [kg]	Share [%]
Total weight	3.233	2.24E-01	100.0%
Product	2.587	1.79E-01	80.0%
Packaging	0.646	4.48E-02	20.0%

2.2 Product

Table 4: Material composition - product

Information	Weight/product [kg]	Weight/functional unit [kg]	Share [%]
Total weight	2.587	1.79E-01	100.0%
Metals	1.371	9.50E-02	53.0%
- Aluminium	1.238	8.58E-02	47.8%
- Steel	0.134	9.28E-03	5.17%
Plastics	0.180	1.25E-02	7.0%
- Polycarbonate (PC)	0.142	9.86E-03	5.5%
- Polymethyl methacrylate (PMMA)	0.031	2.16E-03	1.2%
- Polyethylene (PE)	0.007	4.85E-04	0.3%
Electronics	1.035	7.18E-02	40.0%

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	0.646	4.48E-02	100.0%
Paper/cardboard	0.626	4.34E-02	97.0%
Plastics	0.011	7.76E-04	1.7%
Wood	0.008	5.79E-04	1.3%

3 Information on life cycle stages

3.1 Manufacturing (A1-A3)

For the manufacturer sources all parts come from international and Chinese suppliers. The products are assembled in Chinese factory, under the quality control of Feilo Sylvania International Group Kft..

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

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 for 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:

- 19,000km by ship (heavy fuel oil driven, container ship, 5,000 to 200,000 dwt payload capacity, deep sea)
- 1,500 km by truck (diesel driven, EURO 0-6, >27t payload).

The background assumptions for transportation are listed below.

Table 6: Background information distribution

Information	Unit	Truck	Ship
Fuel type	-	Diesel	Heavy fuel oil
Fuel consumption	l/(kg*km)	2.00E-05	3.24E-06
Total distance	km	1,500	19,000
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 with reference 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 for the product is Europe. Consequently, an average European electricity grid mix (database from Sphera) has been used for the calculations.

According to [PSR-0014-ED2.0-EN- 2023 07 13](#), the theoretical energy saving coefficients for the 3 series of SYLVANIA Otao family are:

- Non dimmable : 1
- DALI: 0.5
- SSA : 0.5

The SYLVANIA Otao reference product 0041805c is grouped under SSA series, which can be connected to Sylvania wireless lighting management system Sylsmart Connect (Silvair). Therefore, the theoretical energy saving coefficient of the reference product is 0.5.

The declared power consumption of the reference product is 36 Watts, and its declared lifetime is 100,000 hours (L70B50).

Combining all these information leads to a total power consumption of 1,800 kWh.

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 is shown below. For the energy consumed in material separation, an average European grid mix has been used.

- Incineration with energy recovery: 26.0%
- Landfilling: 24.8%
- Recycling: 49.2%

3.6 Benefits and loads beyond the system boundaries (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 reuse	kg/functional unit	0.000
Total weight going into recycling	kg/functional unit	0.130
- Share from product	%	68.0
- Share from packaging	%	28.0
- Share from upstream packaging & manufacturing scrap	%	4.0
Total weight going into incineration with energy recovery	kg/functional unit	0.0532
- Share from product	%	87.8
- Share from packaging	%	8.2
- Share from upstream packaging & manufacturing scrap	%	4.0

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 Content 2026.1
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 (0.224 kg product incl. packaging)

	Total (Excl.D)	Manufacturing				Distribution	Installation	Use				End of life					Benefits and loads beyond the system boundaries
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2	C3	
GWP - total [kg CO2 eq.]	4.57E+01	3.34E+00	6.75E-03	5.75E-02	3.40E+00	7.27E-02	3.68E-02	0.00E+00	4.21E+01	0.00E+00	4.21E+01	0.00E+00	1.21E-02	8.55E-02	9.98E-04	9.86E-02	-6.64E-01
GWP - fossil [kg CO2 eq.]	4.52E+01	3.40E+00	6.46E-03	5.39E-02	3.46E+00	7.16E-02	2.22E-02	0.00E+00	4.15E+01	0.00E+00	4.15E+01	0.00E+00	1.16E-02	8.54E-02	9.92E-04	9.80E-02	-7.11E-01
GWP - biogenic [kg CO2 eq.]	3.79E-01	-6.61E-02	2.66E-04	3.57E-03	-6.23E-02	9.98E-04	1.46E-02	0.00E+00	4.25E-01	0.00E+00	4.25E-01	0.00E+00	4.76E-04	5.41E-05	4.28E-06	5.34E-04	4.85E-02
GWP - luluc [kg CO2 eq.]	1.25E-01	1.84E-03	2.72E-05	1.63E-05	1.88E-03	9.92E-05	6.43E-05	0.00E+00	1.23E-01	0.00E+00	1.23E-01	0.00E+00	4.87E-05	4.01E-05	1.43E-06	9.03E-05	-1.66E-03
ODP [kg CFC-11 eq.]	1.97E-09	1.54E-10	3.01E-15	1.01E-11	1.64E-10	1.97E-14	1.17E-13	0.00E+00	1.81E-09	0.00E+00	1.81E-09	0.00E+00	5.38E-15	2.13E-13	6.04E-15	2.25E-13	-1.32E-11
AP [Mole of H+ eq.]	1.18E-01	1.82E-02	8.74E-06	1.98E-04	1.84E-02	9.27E-04	5.11E-05	0.00E+00	9.85E-02	0.00E+00	9.85E-02	0.00E+00	1.56E-05	1.53E-04	6.27E-06	1.75E-04	-2.80E-03
EP - freshwater [kg P eq.]	5.68E-05	1.23E-05	1.62E-08	7.68E-08	1.24E-05	6.87E-08	4.84E-07	0.00E+00	4.36E-05	0.00E+00	4.36E-05	0.00E+00	2.89E-08	4.02E-08	1.50E-07	2.19E-07	-8.89E-07
EP - marine [kg N eq.]	2.76E-02	2.93E-03	3.38E-06	4.39E-05	2.98E-03	3.90E-04	2.62E-05	0.00E+00	2.42E-02	0.00E+00	2.42E-02	0.00E+00	6.04E-06	6.28E-05	1.49E-06	7.03E-05	-6.62E-04
EP - terrestrial [Mole of N eq.]	3.22E-01	3.18E-02	3.62E-05	4.87E-04	3.23E-02	4.27E-03	2.20E-04	0.00E+00	2.85E-01	0.00E+00	2.85E-01	0.00E+00	6.48E-05	7.02E-04	1.63E-05	7.83E-04	-7.30E-03
POCP [kg NMVOC eq.]	6.68E-02	8.79E-03	7.97E-06	1.25E-04	8.92E-03	1.07E-03	4.08E-05	0.00E+00	5.66E-02	0.00E+00	5.66E-02	0.00E+00	1.43E-05	1.73E-04	4.60E-06	1.92E-04	-1.86E-03
ADPE [kg Sb eq.]	2.26E-04	2.16E-04	4.61E-10	4.19E-09	2.16E-04	3.22E-09	1.69E-08	0.00E+00	1.03E-05	0.00E+00	1.03E-05	0.00E+00	8.25E-10	4.64E-09	7.91E-11	5.54E-09	-1.18E-07
ADPF [MJ]	8.16E+02	3.63E+01	8.32E-02	5.78E-01	3.70E+01	8.86E-01	2.89E-01	0.00E+00	7.77E+02	0.00E+00	7.77E+02	0.00E+00	1.49E-01	5.95E-01	1.61E-02	7.60E-01	-8.78E+00
WDP [m³ world equiv.]	8.76E+00	6.91E-01	2.59E-05	1.64E-02	7.07E-01	1.68E-04	2.85E-03	0.00E+00	8.04E+00	0.00E+00	8.04E+00	0.00E+00	4.63E-05	9.61E-03	1.19E-04	9.77E-03	-6.69E-02

Table 10: Results indicators describing resource use, waste categories, and output flows per functional unit (0.224 kg product incl. packaging)

	Total (Excl.D)	Manufacturing				Distribution	Installation	Use				End of life					Benefits and loads beyond the system boundaries	
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2	C3		C4
PERE [MJ]	6.03E+02	9.18E+00	5.92E-03	2.09E-01	9.40E+00	2.42E-02	8.95E-02	0.00E+00	5.94E+02	0.00E+00	5.94E+02	0.00E+00	1.06E-02	9.44E-02	2.86E-03	1.08E-01	-6.39E+00	
PERM [MJ]	7.92E-01	7.92E-01	0.00E+00	0.00E+00	7.92E-01	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	0.00E+00	0.00E+00	0.00E+00	
PERT [MJ]	6.04E+02	9.97E+00	5.92E-03	2.09E-01	1.02E+01	2.42E-02	8.95E-02	0.00E+00	5.94E+02	0.00E+00	5.94E+02	0.00E+00	1.06E-02	9.44E-02	2.86E-03	1.08E-01	-6.39E+00	
PENRE [MJ]	8.15E+02	3.52E+01	8.32E-02	5.78E-01	3.58E+01	8.86E-01	2.89E-01	0.00E+00	7.77E+02	0.00E+00	7.77E+02	0.00E+00	1.49E-01	5.95E-01	1.61E-02	7.60E-01	-8.09E+00	
PENRM [MJ]	1.19E+00	1.19E+00	0.00E+00	0.00E+00	1.19E+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	0.00E+00	0.00E+00	0.00E+00	-6.82E-01	
PENRT [MJ]	8.16E+02	3.63E+01	8.32E-02	5.78E-01	3.70E+01	8.86E-01	2.89E-01	0.00E+00	7.77E+02	0.00E+00	7.77E+02	0.00E+00	1.49E-01	5.95E-01	1.61E-02	7.60E-01	-8.78E+00	
SM [kg]	1.45E-02	1.45E-02	0.00E+00	0.00E+00	1.45E-02	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	0.00E+00	0.00E+00	-8.19E-02	
RSF [MJ]	2.81E-02	0.00E+00	4.38E-03	0.00E+00	4.38E-03	1.57E-02	1.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-03	0.00E+00	0.00E+00	7.84E-03	0.00E+00	
NRSF [MJ]	9.53E-01	0.00E+00	6.88E-02	0.00E+00	6.88E-02	7.58E-01	3.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-01	0.00E+00	0.00E+00	1.23E-01	0.00E+00	
FW [m3]	3.95E-01	2.03E-02	1.85E-06	4.03E-04	2.07E-02	9.71E-06	1.92E-04	0.00E+00	3.74E-01	0.00E+00	3.74E-01	0.00E+00	3.31E-06	2.67E-04	3.45E-06	2.74E-04	-3.21E-03	
HWD [kg]	1.20E-06	2.59E-08	3.84E-12	5.14E-10	2.64E-08	3.83E-11	4.87E-09	0.00E+00	1.17E-06	0.00E+00	1.17E-06	0.00E+00	6.88E-12	1.42E-09	4.01E-12	1.43E-09	-1.35E-08	
NHWD [kg]	1.24E+00	4.93E-01	1.60E-05	1.86E-03	4.95E-01	9.90E-05	4.27E-03	0.00E+00	6.74E-01	0.00E+00	6.74E-01	0.00E+00	2.87E-05	2.49E-02	4.45E-02	6.94E-02	-2.06E-01	
RWD [kg]	1.08E-01	5.52E-04	1.31E-07	1.48E-05	5.67E-04	1.06E-06	6.64E-06	0.00E+00	1.07E-01	0.00E+00	1.07E-01	0.00E+00	2.34E-07	2.02E-05	1.69E-07	2.06E-05	-3.97E-04	
CRU [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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
MFR [kg]	1.30E-01	3.27E-04	0.00E+00	4.88E-03	5.21E-03	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-02	0.00E+00	8.82E-02	0.00E+00
MER [kg]	5.32E-02	0.00E+00	0.00E+00	2.12E-03	2.12E-03	0.00E+00	4.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E-02	0.00E+00	4.67E-02	0.00E+00
EEE [MJ]	1.03E-01	7.11E-05	0.00E+00	0.00E+00	7.11E-05	0.00E+00	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-02	0.00E+00	9.09E-02	-1.63E-03
EET [MJ]	2.05E-01	1.65E-04	0.00E+00	0.00E+00	1.65E-04	0.00E+00	1.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	0.00E+00	1.86E-01	-3.78E-03
Biog. C in product [kg C]	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Biog. C in packaging [kg C]	0.00E+00	-1.89E-02	0.00E+00	0.00E+00	-1.89E-02	0.00E+00	1.89E-02	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	0.00E+00	

Table 11: Additional environmental impact indicators per functional unit (0.224 kg product incl. packaging)

	Total (Exc.D)	Manufacturing				Distribution	Installation	Use				End of life					Benefits and loads beyond the system boundaries
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2	C3	
PM [Disease incidences]	1.06E-06	2.25E-07	8.67E-11	2.68E-09	2.28E-07	2.41E-08	3.81E-10	0.00E+00	8.07E-07	0.00E+00	8.07E-07	0.00E+00	1.55E-10	1.35E-09	7.09E-11	1.58E-09	-4.32E-08
IRP [kBq, U235 eq.]	1.64E+01	5.64E-02	1.71E-05	9.29E-04	5.74E-02	1.36E-04	1.01E-03	0.00E+00	1.64E+01	0.00E+00	1.64E+01	0.00E+00	3.06E-05	3.03E-03	2.19E-05	3.08E-03	-3.96E-02
ETP-fw [CTUe]	1.98E+02	1.48E+01	7.15E-02	1.05E-01	1.49E+01	6.87E-01	8.19E-02	0.00E+00	1.82E+02	0.00E+00	1.82E+02	0.00E+00	1.28E-01	9.91E-02	1.78E-02	2.45E-01	-2.85E+00
HTP-c [CTUh]	1.43E-08	1.93E-09	1.42E-12	1.17E-11	1.95E-09	1.17E-11	4.06E-12	0.00E+00	1.23E-08	0.00E+00	1.23E-08	0.00E+00	2.54E-12	7.02E-12	2.89E-13	9.85E-12	-4.21E-10
HTP-nc [CTUh]	4.14E-07	2.82E-08	7.36E-11	2.95E-10	2.86E-08	3.73E-10	3.50E-10	0.00E+00	3.84E-07	0.00E+00	3.84E-07	0.00E+00	1.32E-10	3.35E-10	7.24E-12	4.74E-10	-5.02E-09
SQP [dimensionless]	3.54E+02	2.99E+01	2.23E-02	1.13E-01	3.01E+01	8.17E-02	3.24E-01	0.00E+00	3.24E+02	0.00E+00	3.24E+02	0.00E+00	3.99E-02	7.81E-02	3.69E-03	1.22E-01	-7.01E+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)	Manufacturing				Distribution	Installation	Use				End of life					Benefits and loads beyond the system boundaries
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2	C3	
GWP - total [kg CO2 eq.]	6.59E+02	4.82E+01	9.74E-02	8.29E-01	4.91E+01	1.05E+00	5.32E-01	0.00E+00	6.07E+02	0.00E+00	6.07E+02	0.00E+00	1.74E-01	1.23E+00	1.44E-02	1.42E+00	-9.58E+00
GWP - fossil [kg CO2 eq.]	6.52E+02	4.91E+01	9.32E-02	7.77E-01	5.00E+01	1.03E+00	3.20E-01	0.00E+00	5.99E+02	0.00E+00	5.99E+02	0.00E+00	1.67E-01	1.23E+00	1.43E-02	1.41E+00	-1.03E+01
GWP - biogenic [kg CO2 eq.]	5.47E+00	-9.54E-01	3.84E-03	5.15E-02	-8.98E-01	1.44E-02	2.10E-01	0.00E+00	6.13E+00	0.00E+00	6.13E+00	0.00E+00	6.87E-03	7.80E-04	6.17E-05	7.71E-03	7.00E-01
GWP - luluc [kg CO2 eq.]	1.81E+00	2.65E-02	3.93E-04	2.35E-04	2.71E-02	1.43E-03	9.27E-04	0.00E+00	1.78E+00	0.00E+00	1.78E+00	0.00E+00	7.03E-04	5.78E-04	2.07E-05	1.30E-03	-2.40E-02
ODP [kg CFC-11 eq.]	2.84E-08	2.22E-09	4.34E-14	1.46E-10	2.37E-09	2.84E-13	1.68E-12	0.00E+00	2.61E-08	0.00E+00	2.61E-08	0.00E+00	7.77E-14	3.08E-12	8.72E-14	3.24E-12	-1.91E-10
AP [Mole of H+ eq.]	1.70E+00	2.62E-01	1.26E-04	2.86E-03	2.65E-01	1.34E-02	7.37E-04	0.00E+00	1.42E+00	0.00E+00	1.42E+00	0.00E+00	2.26E-04	2.21E-03	9.05E-05	2.52E-03	-4.03E-02
EP - freshwater [kg P eq.]	8.20E-04	1.78E-04	2.33E-07	1.11E-06	1.79E-04	9.91E-07	6.99E-06	0.00E+00	6.29E-04	0.00E+00	6.29E-04	0.00E+00	4.17E-07	5.80E-07	2.16E-06	3.16E-06	-1.28E-05
EP - marine [kg N eq.]	3.98E-01	4.23E-02	4.87E-05	6.33E-04	4.30E-02	5.63E-03	3.79E-04	0.00E+00	3.48E-01	0.00E+00	3.48E-01	0.00E+00	8.72E-05	9.06E-04	2.15E-05	1.01E-03	-9.55E-03
EP - terrestrial [Mole of N eq.]	4.65E+00	4.59E-01	5.22E-04	7.03E-03	4.67E-01	6.16E-02	3.18E-03	0.00E+00	4.11E+00	0.00E+00	4.11E+00	0.00E+00	9.34E-04	1.01E-02	2.35E-04	1.13E-02	-1.05E-01
POCP [kg NMVOC eq.]	9.64E-01	1.27E-01	1.15E-04	1.80E-03	1.29E-01	1.54E-02	5.89E-04	0.00E+00	8.16E-01	0.00E+00	8.16E-01	0.00E+00	2.06E-04	2.50E-03	6.64E-05	2.77E-03	-2.68E-02
ADPE [kg Sb eq.]	3.26E-03	3.11E-03	6.65E-09	6.04E-08	3.11E-03	4.65E-08	2.44E-07	0.00E+00	1.49E-04	0.00E+00	1.49E-04	0.00E+00	1.19E-08	6.69E-08	1.14E-09	8.00E-08	-1.71E-06
ADPF [MJ]	1.18E+04	5.24E+02	1.20E+00	8.34E+00	5.34E+02	1.28E+01	4.16E+00	0.00E+00	1.12E+04	0.00E+00	1.12E+04	0.00E+00	2.15E+00	8.59E+00	2.33E-01	1.10E+01	-1.27E+02
WDP [m³ world equiv.]	1.26E+02	9.97E+00	3.73E-04	2.37E-01	1.02E+01	2.43E-03	4.11E-02	0.00E+00	1.16E+02	0.00E+00	1.16E+02	0.00E+00	6.68E-04	1.39E-01	1.72E-03	1.41E-01	-9.65E-01

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

	Total (Excl.D)	Manufacturing				Distribution	Installation	Use				End of life				Benefits and loads beyond the system boundaries	
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2		C3
PERE [MJ]	8.71E+03	1.32E+02	8.54E-02	3.02E+00	1.36E+02	3.49E-01	1.29E+00	0.00E+00	8.57E+03	0.00E+00	8.57E+03	0.00E+00	1.53E-01	1.36E+00	4.13E-02	1.56E+00	-9.21E+01
PERM [MJ]	1.14E+01	1.14E+01	0.00E+00	0.00E+00	1.14E+01	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	0.00E+00	0.00E+00	0.00E+00
PERT [MJ]	8.72E+03	1.44E+02	8.54E-02	3.02E+00	1.47E+02	3.49E-01	1.29E+00	0.00E+00	8.57E+03	0.00E+00	8.57E+03	0.00E+00	1.53E-01	1.36E+00	4.13E-02	1.56E+00	-9.21E+01
PENRE [MJ]	1.18E+04	5.07E+02	1.20E+00	8.34E+00	5.17E+02	1.28E+01	4.16E+00	0.00E+00	1.12E+04	0.00E+00	1.12E+04	0.00E+00	2.15E+00	8.59E+00	2.33E-01	1.10E+01	-1.17E+02
PENRM [MJ]	1.71E+01	1.71E+01	0.00E+00	0.00E+00	1.71E+01	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	0.00E+00	0.00E+00	-9.84E+00
PENRT [MJ]	1.18E+04	5.24E+02	1.20E+00	8.34E+00	5.34E+02	1.28E+01	4.16E+00	0.00E+00	1.12E+04	0.00E+00	1.12E+04	0.00E+00	2.15E+00	8.59E+00	2.33E-01	1.10E+01	-1.27E+02
SM [kg]	2.09E-01	2.09E-01	0.00E+00	0.00E+00	2.09E-01	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	0.00E+00	0.00E+00	-1.18E+00
RSF [MJ]	4.06E-01	0.00E+00	6.32E-02	0.00E+00	6.32E-02	2.27E-01	2.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-01	0.00E+00	0.00E+00	1.13E-01	0.00E+00
NRSF [MJ]	1.37E+01	0.00E+00	9.92E-01	0.00E+00	9.92E-01	1.09E+01	4.43E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E+00	0.00E+00	0.00E+00	1.78E+00	0.00E+00
FW [m3]	5.70E+00	2.93E-01	2.67E-05	5.82E-03	2.99E-01	1.40E-04	2.78E-03	0.00E+00	5.40E+00	0.00E+00	5.40E+00	0.00E+00	4.77E-05	3.86E-03	4.97E-05	3.96E-03	-4.63E-02
HWD [kg]	1.73E-05	3.73E-07	5.55E-11	7.42E-09	3.81E-07	5.52E-10	7.02E-08	0.00E+00	1.68E-05	0.00E+00	1.68E-05	0.00E+00	9.92E-11	2.05E-08	5.78E-11	2.06E-08	-1.95E-07
NHWD [kg]	1.79E+01	7.12E+00	2.31E-04	2.68E-02	7.15E+00	1.43E-03	6.16E-02	0.00E+00	9.73E+00	0.00E+00	9.73E+00	0.00E+00	4.14E-04	3.60E-01	6.42E-01	1.00E+00	-2.97E+00
RWD [kg]	1.55E+00	7.96E-03	1.89E-06	2.13E-04	8.18E-03	1.54E-05	9.58E-05	0.00E+00	1.55E+00	0.00E+00	1.55E+00	0.00E+00	3.38E-06	2.91E-04	2.44E-06	2.97E-04	-5.73E-03
CRU [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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR [kg]	1.87E+00	4.72E-03	0.00E+00	7.04E-02	7.52E-02	0.00E+00	5.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+00	0.00E+00	1.27E+00	0.00E+00
MER [kg]	7.67E-01	0.00E+00	0.00E+00	3.06E-02	3.06E-02	0.00E+00	6.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-01	0.00E+00	6.73E-01	0.00E+00
EEE [MJ]	1.48E+00	1.03E-03	0.00E+00	0.00E+00	1.03E-03	0.00E+00	1.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E+00	0.00E+00	1.31E+00	-2.36E-02
EET [MJ]	2.96E+00	2.38E-03	0.00E+00	0.00E+00	2.38E-03	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E+00	0.00E+00	2.69E+00	-5.46E-02
Biog. C in product [kg C]	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Biog. C in packaging [kg C]	0.00E+00	-2.73E-01	0.00E+00	0.00E+00	-2.73E-01	0.00E+00	2.73E-01	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	0.00E+00

Table 14: Additional environmental impact indicators per unit of product

	Total (Excl.D)	Manufacturing				Distribution	Installation	Use				End of life				Benefits and loads beyond the system boundaries D	
		A1	A2	A3	Tot. A1-A3			A4	A5	B1-B5	B6	B7	Tot. B1-B7	C1	C2		C3
PM [Disease incidences]	1.53E-05	3.25E-06	1.25E-09	3.87E-08	3.29E-06	3.47E-07	5.50E-09	0.00E+00	1.16E-05	0.00E+00	1.16E-05	0.00E+00	2.24E-09	1.95E-08	1.02E-09	2.28E-08	-6.23E-07
IRP [kBq. U235 eq.]	2.37E+02	8.14E-01	2.46E-04	1.34E-02	8.28E-01	1.96E-03	1.45E-02	0.00E+00	2.36E+02	0.00E+00	2.36E+02	0.00E+00	4.41E-04	4.37E-02	3.17E-04	4.44E-02	-5.72E-01
ETP-fw [CTUe]	2.85E+03	2.13E+02	1.03E+00	1.51E+00	2.16E+02	9.91E+00	1.18E+00	0.00E+00	2.62E+03	0.00E+00	2.62E+03	0.00E+00	1.85E+00	1.43E+00	2.57E-01	3.53E+00	-4.11E+01
HTP-c [CTUh]	2.06E-07	2.79E-08	2.05E-11	1.68E-10	2.81E-08	1.68E-10	5.87E-11	0.00E+00	1.77E-07	0.00E+00	1.77E-07	0.00E+00	3.66E-11	1.01E-10	4.18E-12	1.42E-10	-6.07E-09
HTP-nc [CTUh]	5.97E-06	4.08E-07	1.06E-09	4.25E-09	4.13E-07	5.38E-09	5.05E-09	0.00E+00	5.54E-06	0.00E+00	5.54E-06	0.00E+00	1.90E-09	4.83E-09	1.04E-10	6.83E-09	-7.25E-08
SQP [dimensionless]	5.11E+03	4.32E+02	3.22E-01	1.63E+00	4.34E+02	1.18E+00	4.68E+00	0.00E+00	4.67E+03	0.00E+00	4.67E+03	0.00E+00	5.76E-01	1.13E+00	5.32E-02	1.76E+00	-1.01E+02

4.4 Data comparison

The environmental profile especially for use stage B6 is very sensitive to the region of input electricity which relies on in which country the luminaires are used. Table 16 (per FU) and Table 17 (per product unit) give a comparison for Global Warming Potential GWP total [kg CO₂ eq.] of reference product for use stage B6 with electricity used from different countries of Europe. Table 15 shows the scaling factor for GWP total of energy grid mixes for different countries.

For example:

For the reference model 0041805c, Multiple GWP total B6 for EU (4.21E+01/functional unit) with Scaling factor for B6 for Belgium (0.562), The GWP total result for B6 for Belgium (2.37E+01) per functional unit can be worked out.

For other concerned models, first step, need to work out the GWP total of B6 for EU per functional unit or unit of product, based on the extrapolation rules provided in Chapter 5 of this report, then by the same way provided above, the GWP total of B6 for different countries can be worked out.

Table 15: Scaling factor of use stage for GWP total of energy grid mixes for different countries

Electricity grid	Scaling Factor for use stage
EU	1.000
AUSTRIA	0.773
BELGIUM	0.562
DENMARK	0.505
FINLAND	0.373
FRANCE	0.343
GERMANY	1.408
HUNGARY	0.992
IRELAND	1.071
ITALY	1.257
NETHERLANDS	1.032
NORWAY	0.154
POLAND	2.384
PORTUGUAL	0.788
ROMANIA	1.175
SPAN	0.792
SWEDEN	0.129
SWITZERLAND	0.455
UK	0.776

Table 16: GWP total [kg CO2 eq.] results for B6 for different country per functional unit (0.224kg product incl. packaging)

Electricity grid	GWP - total [kg CO2 eq.] B6
EU	4.21E+01
AUSTRIA	3.25E+01
BELGIUM	2.37E+01
DENMARK	2.13E+01
FINLAND	1.57E+01
FRANCE	1.44E+01
GERMANY	5.93E+01
HUNGARY	4.17E+01
IRELAND	4.51E+01
ITALY	5.29E+01
NETHERLANDS	4.34E+01
NORWAY	6.46E+00
POLAND	1.00E+02
POTUGAL	3.32E+01
ROMANIA	4.94E+01
SPAIN	3.33E+01
SWEDEN	5.42E+00
SWITZERLAND	1.92E+01
UK	3.27E+01

Note: The result in this table would be slightly different due to rounding inaccuracies.

Table 17: GWP total [kg CO2 eq.] results for B6 for different country per unit of product

Electricity grid	GWP - total [kg CO2 eq.] B6
EU	6.07E+02
AUSTRIA	4.69E+02
BELGIUM	3.41E+02
DENMARK	3.07E+02
FINLAND	2.27E+02
FRANCE	2.08E+02
GERMANY	8.55E+02
HUNGARY	6.02E+02
IRELAND	6.50E+02
ITALY	7.63E+02
NETHERLANDS	6.27E+02
NORWAY	9.32E+01
POLAND	1.45E+03
POTUGAL	4.79E+02
ROMANIA	7.13E+02
SPAIN	4.81E+02
SWEDEN	7.82E+01
SWITZERLAND	2.76E+02
UK	4.71E+02

Note: The result in this table would be slightly different due to rounding inaccuracies.

4.5 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 2026.1. 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 very good (DQR = 1.69).

The individual rating for technological, time and geographical representativeness is assessed as good, excellent and very good (DQR = 1.99, 1.00 and 2.08).

5 Extrapolation Rules

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

Table 18: Reference values for the extrapolations.

Parameter	Unit	Reference value
Weight of structural/ mechanical parts	kg	1.717
Weight of control gear	kg	0.192
Weight of light source	kg	0.246
Weight of light management system	kg	0.432
Weight of product (excl. packaging)	kg	2.587
Weight of packaging	kg	0.646
Weight of product (incl. packaging)	kg	3.233
Typical power consumption	W	36
Lumen output	lm	5,050
Energy saving	-	0.5

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 19: Information for product family: Non dimmable

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040800	OTAO LINEAR 1.2 OPAL 830/840 MP BK	26	2900	1.566	0.474	0.150	0.065	0.000	2.255	1
0040802	OTAO LIN-EAR 1.2 PRIS 830/840 MP BK	24	3350	1.555	0.474	0.150	0.127	0.000	2.306	1
0040804	OTAO LIN-EAR 1.2 REF WHT 830/840 MP BK	24	3500	1.617	0.474	0.150	0.150	0.000	2.391	1
0040823	OTAO LIN-EAR 1.2 REF BLK 830/840 MP BK	24	3350	1.617	0.474	0.150	0.150	0.000	2.391	1
0040825	OTAO LIN-EAR 1.2 REF SIL 830/840 MP BK	24	3500	1.617	0.474	0.150	0.150	0.000	2.391	1
0041800	OTAO LINEAR 1.2 OPAL 830/840 MP WH	26	3250	1.566	0.474	0.15	0.065	0.000	2.255	1
0041802	OTAO LINEAR 1.2 PRIS 830/840 MP WH	24	3350	1.555	0.474	0.150	0.127	0.000	2.306	1
0041804	OTAO LINEAR 1.2 REF WHT 830/840 MP WH	24	3500	1.617	0.474	0.150	0.150	0.000	2.391	1
0041823	OTAO LINEAR 1.2 REF BLK 830/840 MP WH	24	3350	1.617	0.474	0.150	0.150	0.000	2.391	1
0041825	OTAO LINEAR 1.2 REF SIL 830/840 MP WH	24	3500	1.617	0.474	0.150	0.150	0.000	2.391	1
0040800a	OTAO LINEAR 1.2 OPAL 830/840 MP BK IND	39	4600	1.666	0.488	0.150	0.161	0.000	2.465	1
0040802a	OTAO LIN-EAR 1.2 PRIS 830/840 MP BK IND	36	4850	1.655	0.488	0.150	0.223	0.000	2.516	1
0040804a	OTAO LIN-EAR 1.2 REF WHT 830/840 MP BK IND	36	5050	1.717	0.488	0.150	0.246	0.000	2.601	1
0040823a	OTAO LIN-EAR 1.2 REF BLK 830/840 MP BK IND	36	4900	1.717	0.488	0.15	0.246	0.000	2.601	1
0040825a	OTAO LIN-EAR 1.2 REF SIL 830/840 MP BK IND	36	5050	1.717	0.488	0.150	0.246	0.000	2.601	1
0041800a	OTAO LINEAR 1.2 OPAL 830/840 MP WH IND	39	4850	1.666	0.488	0.150	0.161	0.000	2.465	1
0041802a	OTAO LINEAR 1.2 PRIS 830/840 MP WH IND	36	4850	1.655	0.488	0.150	0.223	0.000	2.516	1
0041804a	OTAO LINEAR 1.2 REF WHT 830/840 MP WH IND	36	5050	1.717	0.488	0.150	0.246	0.000	2.601	1
0041823a	OTAO LINEAR 1.2 REF BLK 830/840 MP WH IND	36	4900	1.717	0.488	0.150	0.246	0.000	2.601	1
0041825a	OTAO LINEAR 1.2 REF SIL 830/840 MP WH IND	36	5050	1.717	0.488	0.150	0.246	0.000	2.601	1

Table 20: Information for product family: DALI

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040801	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK	26	2900	1.566	0.474	0.192	0.065	0.000	2.297	0.5
0040803	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK	24	3350	1.555	0.474	0.192	0.127	0.000	2.348	0.5
0040805	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK	24	3500	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0040824	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK	24	3350	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0040826	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK	24	3500	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0041801	OTAO LINEAR 1.2 OPAL 830/840 DALI WH	26	3250	1.566	0.474	0.192	0.065	0.000	2.297	0.5

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0041803	OTAO LINEAR 1.2 PRIS 830/840 DALI WH	24	3350	1.555	0.474	0.192	0.127	0.000	2.348	0.5
0041805	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH	24	3500	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0041824	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH	24	3350	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0041826	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH	24	3500	1.617	0.474	0.192	0.150	0.000	2.433	0.5
0040832	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK	28	3300	2.033	0.634	0.192	0.082	0.000	2.941	0.5
0040833	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK	27	3900	2.023	0.634	0.192	0.160	0.000	3.009	0.5
0040834	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK	27	4100	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0040835	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK	27	3900	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0040836	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK	27	4100	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0041832	OTAO LINEAR 1.5 OPAL 830/840 DALI WH	28	3600	2.033	0.634	0.192	0.082	0.000	2.941	0.5
0041833	OTAO LINEAR 1.5 PRIS 830/840 DALI WH	27	3900	2.023	0.634	0.192	0.160	0.000	3.009	0.5
0041834	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH	27	4100	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0041835	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH	27	3900	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0041836	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH	27	4100	2.113	0.634	0.192	0.193	0.000	3.132	0.5
0040801a	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK IND	39	4600	1.666	0.488	0.192	0.161	0.000	2.507	0.5
0040803a	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK IND	36	4850	1.655	0.488	0.192	0.223	0.000	2.558	0.5
0040805a	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK IND	36	5050	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0040824a	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK IND	36	4900	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0040826a	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK IND	36	5050	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0041801a	OTAO LINEAR 1.2 OPAL 830/840 DALI WH IND	39	4850	1.666	0.488	0.192	0.161	0.000	2.507	0.5
0041803a	OTAO LINEAR 1.2 PRIS 830/840 DALI WH IND	36	4850	1.655	0.488	0.192	0.223	0.000	2.558	0.5
0041805a	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH IND	36	5050	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0041824a	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH IND	36	4900	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0041826a	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH IND	36	5050	1.717	0.488	0.192	0.246	0.000	2.643	0.5
0040832a	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK IND	39	4500	2.133	0.792	0.192	0.178	0.000	3.294	0.5
0040833a	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK IND	39	5350	2.123	0.792	0.192	0.256	0.000	3.362	0.5
0040834a	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK IND	39	5700	2.213	0.792	0.192	0.289	0.000	3.486	0.5
0040835a	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK IND	39	5400	2.213	0.792	0.192	0.289	0.000	3.486	0.5
0040836a	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK IND	39	5700	2.213	0.792	0.192	0.289	0.000	3.486	0.5
0041832a	OTAO LINEAR 1.5 OPAL 830/840 DALI WH IND	39	4900	2.133	0.792	0.192	0.178	0.000	3.294	0.5
0041833a	OTAO LINEAR 1.5 PRIS 830/840 DALI WH IND	39	5350	2.123	0.792	0.192	0.256	0.000	3.362	0.5
0041834a	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH IND	39	5700	2.213	0.792	0.192	0.289	0.000	3.486	0.5

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0041835a	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH IND	39	5400	2.213	0.792	0.192	0.289	0.000	3.486	0.5
0041836a	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH IND	39	5700	2.213	0.792	0.192	0.289	0.000	3.486	0.5

Table 21: Information for product family: SSA

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040801b	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK SSA	26	2900	1.566	0.632	0.192	0.065	0.432	2.887	0.5
0040803b	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK SSA	24	3350	1.555	0.632	0.192	0.127	0.432	2.938	0.5
0040805b	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK SSA	24	3500	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0040824b	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK SSA	24	3350	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0040826b	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK SSA	24	3500	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0041801b	OTAO LINEAR 1.2 OPAL 830/840 DALI WH SSA	26	3250	1.566	0.632	0.192	0.065	0.432	2.887	0.5
0041803b	OTAO LINEAR 1.2 PRIS 830/840 DALI WH SSA	24	3350	1.555	0.632	0.192	0.127	0.432	2.938	0.5
0041805b	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH SSA	24	3500	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0041824b	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH SSA	24	3350	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0041826b	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH SSA	24	3500	1.617	0.632	0.192	0.150	0.432	3.023	0.5
0040832b	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK SSA	28	3300	2.033	0.792	0.192	0.082	0.432	3.530	0.5
0040833b	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK SSA	27	3900	2.023	0.792	0.192	0.160	0.432	3.598	0.5
0040834b	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK SSA	27	4100	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0040835b	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK SSA	27	3900	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0040836b	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK SSA	27	4100	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0041832b	OTAO LINEAR 1.5 OPAL 830/840 DALI WH SSA	28	3600	2.033	0.792	0.192	0.082	0.432	3.530	0.5
0041833b	OTAO LINEAR 1.5 PRIS 830/840 DALI WH SSA	27	3900	2.023	0.792	0.192	0.160	0.432	3.598	0.5
0041834b	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH SSA	27	4100	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0041835b	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH SSA	27	3900	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0041836b	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH SSA	27	4100	2.113	0.792	0.192	0.193	0.432	3.722	0.5
0040801c	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK IND SSA	39	4600	1.666	0.646	0.192	0.161	0.432	3.097	0.5
0040803c	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK IND SSA	36	4850	1.655	0.646	0.192	0.223	0.432	3.148	0.5
0040805c	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK IND SSA	36	5050	1.717	0.646	0.192	0.246	0.432	3.233	0.5
0040824c	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK IND SSA	36	4900	1.717	0.646	0.192	0.246	0.432	3.233	0.5

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040826c	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK IND SSA	36	5050	1.717	0.646	0.192	0.246	0.432	3.233	0.5
0041801c	OTAO LINEAR 1.2 OPAL 830/840 DALI WH IND SSA	39	4850	1.666	0.646	0.192	0.161	0.432	3.097	0.5
0041803c	OTAO LINEAR 1.2 PRIS 830/840 DALI WH IND SSA	36	4850	1.655	0.646	0.192	0.223	0.432	3.148	0.5
0041805c	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH IND SSA	36	5050	1.717	0.646	0.192	0.246	0.432	3.233	0.5
0041824c	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH IND SSA	36	4900	1.717	0.646	0.192	0.246	0.432	3.233	0.5
0041826c	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH IND SSA	36	5050	1.717	0.646	0.192	0.246	0.432	3.233	0.5
0040832c	OTAO LINEAR 1.5 OPAL 830/840 DALI BK IND SSA	39	4500	2.133	0.806	0.192	0.178	0.432	3.741	0.5
0040833c	OTAO LINEAR 1.5 PRIS 830/840 DALI BK IND SSA	39	5350	2.123	0.806	0.192	0.256	0.432	3.809	0.5
0040834c	OTAO LINEAR 1.5 REF WHT 830/840 DALI BK IND SSA	39	5700	2.213	0.806	0.192	0.289	0.432	3.932	0.5
0040835c	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK IND SSA	39	5400	2.213	0.806	0.192	0.289	0.432	3.932	0.5
0040836c	OTAO LINEAR 1.5 REF SIL 830/840 DALI BK IND SSA	39	5700	2.213	0.806	0.192	0.289	0.432	3.932	0.5
0041832c	OTAO LINEAR 1.5 OPAL 830/840 DALI WH IND SSA	39	4900	2.133	0.806	0.192	0.178	0.432	3.741	0.5
0041833c	OTAO LINEAR 1.5 PRIS 830/840 DALI WH IND SSA	39	5350	2.123	0.806	0.192	0.256	0.432	3.809	0.5
0041834c	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH IND SSA	39	5700	2.213	0.806	0.192	0.289	0.432	3.932	0.5
0041835c	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH IND SSA	39	5400	2.213	0.806	0.192	0.289	0.432	3.932	0.5
0041836c	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH IND SSA	39	5700	2.213	0.806	0.192	0.289	0.432	3.932	0.5

Table 22: Information for Accessories

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040790	OTAO LINEAR CORN-L PRIS 830/840 BK	4.9	600	0.733	0.144	0.000	0.017	0.000	0.894	NA
0040791	OTAO LINEAR CORN-T PRIS 830/840 BK	7.5	950	1.077	0.275	0.000	0.023	0.000	1.375	NA
0040792	OTAO LINEAR CORN-X PRIS 830/840 BK	9.8	1250	1.421	0.304	0.000	0.029	0.000	1.754	NA
0040793	OTAO LINEAR CORN-L DUMMY BK	NA	NA	0.733	0.144	0.000	0.000	0.000	0.877	NA
0040794	OTAO LINEAR CORN-T DUMMY BK	NA	NA	1.077	0.275	0.000	0.000	0.000	1.352	NA
0040795	OTAO LINEAR CORN-X DUMMY BK	NA	NA	1.421	0.304	0.000	0.000	0.000	1.725	NA
0040809	OTAO LINEAR CORN-L OPAL 830/840 BK	4.9	600	0.733	0.144	0.000	0.017	0.000	0.894	NA
0040810	OTAO LINEAR CORN-T OPAL 830/840 BK	7.5	950	1.077	0.275	0.000	0.023	0.000	1.375	NA
0040811	OTAO LINEAR CORN-X OPAL 830/840 BK	9.8	1250	1.421	0.304	0.000	0.029	0.000	1.754	NA
0040818	OTAO LINEAR CEILING ROSE BK 5-PIN	NA	NA	0.300	0.118	0.000	0.000	0.000	0.418	NA
0040828	OTAO LINEAR CEILING ROSE BK 6-PIN	NA	NA	0.310	0.118	0.000	0.000	0.000	0.428	NA
0040829	OTAO LINEAR RECESSED FRAME BK	NA	NA	1.700	0.461	0.000	0.000	0.000	2.161	NA
0040830	OTAO LINEAR 1.2 DUMMY + TW BK	NA	NA	1.400	0.481	0.000	0.000	0.000	1.881	NA

Product code	Product name	Power (W)	Lighting output (lm)	Luminaire structure weight (kg)	Product packaging weight (kg)	Power equipment weight (kg)	Light source weight (kg)	Light management weight (kg)	Total weight (kg)	Energy saving coefficient
0040831	OTAO LINEAR 0.170 DUMMY BK	NA	NA	0.300	0.158	0.000	0.000	0.000	0.458	NA
0041790	OTAO LINEAR CORN-L PRIS 830/840 WH	4.9	600	0.733	0.144	0.000	0.017	0.000	0.894	NA
0041791	OTAO LINEAR CORN-T PRIS 830/840 WH	7.5	950	1.077	0.275	0.000	0.023	0.000	1.375	NA
0041792	OTAO LINEAR CORN-X PRIS 830/840 WH	9.8	1250	1.421	0.304	0.000	0.029	0.000	1.754	NA
0041793	OTAO LINEAR CORN-L DUMMY WH	NA	NA	0.733	0.144	0.000	0.000	0.000	0.877	NA
0041794	OTAO LINEAR CORN-T DUMMY WH	NA	NA	1.077	0.275	0.000	0.000	0.000	1.352	NA
0041795	OTAO LINEAR CORN-X DUMMY WH	NA	NA	1.421	0.304	0.000	0.000	0.000	1.725	NA
0041809	OTAO LINEAR CORN-L OPAL 830/840 WH	4.9	660	0.733	0.144	0.000	0.017	0.000	0.894	NA
0041810	OTAO LINEAR CORN-T OPAL 830/840 WH	7.5	1050	1.077	0.275	0.000	0.023	0.000	1.375	NA
0041811	OTAO LINEAR CORN-X OPAL 830/840 WH	9.8	1400	1.421	0.304	0.000	0.029	0.000	1.754	NA
0041818	OTAO LINEAR CEILING ROSE WH 5-PIN	NA	NA	0.300	0.118	0.000	0.000	0.000	0.418	NA
0041820	OTAO LINEAR FAST CONNECTOR	NA	NA	0.200	0.208	0.000	0.000	0.000	0.408	NA
0041828	OTAO LINEAR CEILING ROSE WH 6-PIN	NA	NA	0.310	0.118	0.000	0.000	0.000	0.428	NA
0041829	OTAO LINEAR RECESSED FRAME WH	NA	NA	1.700	0.461	0.000	0.000	0.000	2.161	NA
0041830	OTAO LINEAR 1.2 DUMMY + TW WH	NA	NA	1.400	0.481	0.000	0.000	0.000	1.881	NA
0041831	OTAO LINEAR 0.170 DUMMY WH	NA	NA	0.300	0.158	0.000	0.000	0.000	0.458	NA

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

Table 23: Extrapolation coefficients at product level for Non dimmable

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0040800	OTAO LINEAR 1.2 OPAL 830/840 MP BK	26	2900	0.85	0.70	0.73	1.44	0.69	0.85
0040802	OTAO LIN-EAR 1.2 PRIS 830/840 MP BK	24	3350	0.84	0.71	0.73	1.33	0.71	0.84
0040804	OTAO LIN-EAR 1.2 REF WHT 830/840 MP BK	24	3500	0.87	0.74	0.73	1.33	0.74	0.87
0040823	OTAO LIN-EAR 1.2 REF BLK 830/840 MP BK	24	3350	0.87	0.74	0.73	1.33	0.74	0.87
0040825	OTAO LIN-EAR 1.2 REF SIL 830/840 MP BK	24	3500	0.87	0.74	0.73	1.33	0.74	0.87
0041800	OTAO LINEAR 1.2 OPAL 830/840 MP WH	26	3250	0.85	0.70	0.73	1.44	0.69	0.85
0041802	OTAO LINEAR 1.2 PRIS 830/840 MP WH	24	3350	0.84	0.71	0.73	1.33	0.71	0.84
0041804	OTAO LINEAR 1.2 REF WHT 830/840 MP WH	24	3500	0.87	0.74	0.73	1.33	0.74	0.87
0041823	OTAO LINEAR 1.2 REF BLK 830/840 MP WH	24	3350	0.87	0.74	0.73	1.33	0.74	0.87
0041825	OTAO LINEAR 1.2 REF SIL 830/840 MP WH	24	3500	0.87	0.74	0.73	1.33	0.74	0.87
0040800a	OTAO LINEAR 1.2 OPAL 830/840 MP BK IND	39	4600	0.90	0.76	0.76	2.17	0.76	0.90
0040802a	OTAO LIN-EAR 1.2 PRIS 830/840 MP BK IND	36	4850	0.91	0.78	0.76	2.00	0.78	0.91
0040804a	OTAO LINEAR 1.2 REF WHT 830/840 MP BK IND	36	5050	0.94	0.80	0.76	2.00	0.82	0.94
0040823a	OTAO LINEAR 1.2 REF BLK 830/840 MP BK IND	36	4900	0.94	0.80	0.76	2.00	0.82	0.94
0040825a	OTAO LIN-EAR 1.2 REF SIL 830/840 MP BK IND	36	5050	0.94	0.80	0.76	2.00	0.82	0.94
0041800a	OTAO LINEAR 1.2 OPAL 830/840 MP WH IND	39	4850	0.90	0.76	0.76	2.17	0.76	0.90
0041802a	OTAO LINEAR 1.2 PRIS 830/840 MP WH IND	36	4850	0.91	0.78	0.76	2.00	0.78	0.91
0041804a	OTAO LINEAR 1.2 REF WHT 830/840 MP WH IND	36	5050	0.94	0.80	0.76	2.00	0.82	0.94
0041823a	OTAO LINEAR 1.2 REF BLK 830/840 MP WH IND	36	4900	0.94	0.80	0.76	2.00	0.82	0.94
0041825a	OTAO LINEAR 1.2 REF SIL 830/840 MP WH IND	36	5050	0.94	0.80	0.76	2.00	0.82	0.94

Table 24: Extrapolation coefficients at product level for DALI

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0040801	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK	26	2900	0.86	0.71	0.73	0.72	0.70	0.86
0040803	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK	24	3350	0.86	0.73	0.73	0.67	0.72	0.86
0040805	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK	24	3500	0.89	0.75	0.73	0.67	0.76	0.89
0040824	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK	24	3350	0.89	0.75	0.73	0.67	0.76	0.89
0040826	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK	24	3500	0.89	0.75	0.73	0.67	0.76	0.89
0041801	OTAO LINEAR 1.2 OPAL 830/840 DALI WH	26	3250	0.86	0.71	0.73	0.72	0.70	0.86
0041803	OTAO LINEAR 1.2 PRIS 830/840 DALI WH	24	3350	0.86	0.73	0.73	0.67	0.72	0.86
0041805	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH	24	3500	0.89	0.75	0.73	0.67	0.76	0.89

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0041824	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH	24	3350	0.89	0.75	0.73	0.67	0.76	0.89
0041826	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH	24	3500	0.89	0.75	0.73	0.67	0.76	0.89
0040832	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK	28	3300	1.10	0.91	0.98	0.78	0.89	1.10
0040833	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK	27	3900	1.10	0.93	0.98	0.75	0.92	1.10
0040834	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK	27	4100	1.14	0.97	0.98	0.75	0.97	1.14
0040835	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK	27	3900	1.14	0.97	0.98	0.75	0.97	1.14
0040836	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK	27	4100	1.14	0.97	0.98	0.75	0.97	1.14
0041832	OTAO LINEAR 1.5 OPAL 830/840 DALI WH	28	3600	1.10	0.91	0.98	0.78	0.89	1.10
0041833	OTAO LINEAR 1.5 PRIS 830/840 DALI WH	27	3900	1.10	0.93	0.98	0.75	0.92	1.10
0041834	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH	27	4100	1.14	0.97	0.98	0.75	0.97	1.14
0041835	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH	27	3900	1.14	0.97	0.98	0.75	0.97	1.14
0041836	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH	27	4100	1.14	0.97	0.98	0.75	0.97	1.14
0040801a	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK IND	39	4600	0.91	0.78	0.76	1.08	0.78	0.91
0040803a	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK IND	36	4850	0.92	0.79	0.76	1.00	0.80	0.92
0040805a	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK IND	36	5050	0.95	0.82	0.76	1.00	0.83	0.95
0040824a	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK IND	36	4900	0.95	0.82	0.76	1.00	0.83	0.95
0040826a	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK IND	36	5050	0.95	0.82	0.76	1.00	0.83	0.95
0041801a	OTAO LINEAR 1.2 OPAL 830/840 DALI WH IND	39	4850	0.91	0.78	0.76	1.08	0.78	0.91
0041803a	OTAO LINEAR 1.2 PRIS 830/840 DALI WH IND	36	4850	0.92	0.79	0.76	1.00	0.80	0.92
0041805a	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH IND	36	5050	0.95	0.82	0.76	1.00	0.83	0.95
0041824a	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH IND	36	4900	0.95	0.82	0.76	1.00	0.83	0.95
0041826a	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH IND	36	5050	0.95	0.82	0.76	1.00	0.83	0.95
0040832a	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK IND	39	4500	1.20	1.02	1.23	1.08	0.97	1.20
0040833a	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK IND	39	5350	1.21	1.04	1.23	1.08	0.99	1.21
0040834a	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK IND	39	5700	1.25	1.08	1.23	1.08	1.04	1.25
0040835a	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK IND	39	5400	1.25	1.08	1.23	1.08	1.04	1.25
0040836a	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK IND	39	5700	1.25	1.08	1.23	1.08	1.04	1.25
0041832a	OTAO LINEAR 1.5 OPAL 830/840 DALI WH IND	39	4900	1.20	1.02	1.23	1.08	0.97	1.20
0041833a	OTAO LINEAR 1.5 PRIS 830/840 DALI WH IND	39	5350	1.21	1.04	1.23	1.08	0.99	1.21
0041834a	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH IND	39	5700	1.25	1.08	1.23	1.08	1.04	1.25
0041835a	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH IND	39	5400	1.25	1.08	1.23	1.08	1.04	1.25
0041836a	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH IND	39	5700	1.25	1.08	1.23	1.08	1.04	1.25

Table 25: Extrapolation coefficients at product level for SSA

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0040801b	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK SSA	26	2900	0.93	0.89	0.98	0.72	0.87	0.93
0040803b	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK SSA	24	3350	0.92	0.91	0.98	0.67	0.89	0.92
0040805b	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK SSA	24	3500	0.94	0.93	0.98	0.67	0.92	0.94
0040824b	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK SSA	24	3350	0.94	0.93	0.98	0.67	0.92	0.94
0040826b	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK SSA	24	3500	0.94	0.93	0.98	0.67	0.92	0.94
0041801b	OTAO LINEAR 1.2 OPAL 830/840 DALI WH SSA	26	3250	0.93	0.89	0.98	0.72	0.87	0.93
0041803b	OTAO LINEAR 1.2 PRIS 830/840 DALI WH SSA	24	3350	0.92	0.91	0.98	0.67	0.89	0.92
0041805b	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH SSA	24	3500	0.94	0.93	0.98	0.67	0.92	0.94
0041824b	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH SSA	24	3350	0.94	0.93	0.98	0.67	0.92	0.94
0041826b	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH SSA	24	3500	0.94	0.93	0.98	0.67	0.92	0.94
0040832b	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK SSA	28	3300	1.14	1.09	1.23	0.78	1.06	1.14
0040833b	OTAO LIN-EAR 1.5 PRIS 830/840 DALI BK SSA	27	3900	1.13	1.11	1.23	0.75	1.08	1.13
0040834b	OTAO LIN-EAR 1.5 REF WHT 830/840 DALI BK SSA	27	4100	1.17	1.15	1.23	0.75	1.13	1.17
0040835b	OTAO LIN-EAR 1.5 REF BLK 830/840 DALI BK SSA	27	3900	1.17	1.15	1.23	0.75	1.13	1.17
0040836b	OTAO LIN-EAR 1.5 REF SIL 830/840 DALI BK SSA	27	4100	1.17	1.15	1.23	0.75	1.13	1.17
0041832b	OTAO LINEAR 1.5 OPAL 830/840 DALI WH SSA	28	3600	1.14	1.09	1.23	0.78	1.06	1.14
0041833b	OTAO LINEAR 1.5 PRIS 830/840 DALI WH SSA	27	3900	1.13	1.11	1.23	0.75	1.08	1.13
0041834b	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH SSA	27	4100	1.17	1.15	1.23	0.75	1.13	1.17
0041835b	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH SSA	27	3900	1.17	1.15	1.23	0.75	1.13	1.17
0041836b	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH SSA	27	4100	1.17	1.15	1.23	0.75	1.13	1.17
0040801c	OTAO LIN-EAR 1.2 OPAL 830/840 DALI BK IND SSA	39	4600	0.97	0.96	1.00	1.08	0.95	0.97
0040803c	OTAO LIN-EAR 1.2 PRIS 830/840 DALI BK IND SSA	36	4850	0.97	0.97	1.00	1.00	0.97	0.97
0040805c	OTAO LIN-EAR 1.2 REF WHT 830/840 DALI BK IND SSA	36	5050	1.00	1.00	1.00	1.00	1.00	1.00
0040824c	OTAO LIN-EAR 1.2 REF BLK 830/840 DALI BK IND SSA	36	4900	1.00	1.00	1.00	1.00	1.00	1.00
0040826c	OTAO LIN-EAR 1.2 REF SIL 830/840 DALI BK IND SSA	36	5050	1.00	1.00	1.00	1.00	1.00	1.00
0041801c	OTAO LINEAR 1.2 OPAL 830/840 DALI WH IND SSA	39	4850	0.97	0.96	1.00	1.08	0.95	0.97
0041803c	OTAO LINEAR 1.2 PRIS 830/840 DALI WH IND SSA	36	4850	0.97	0.97	1.00	1.00	0.97	0.97
0041805c	OTAO LINEAR 1.2 REF WHT 830/840 DALI WH IND SSA	36	5050	1.00	1.00	1.00	1.00	1.00	1.00
0041824c	OTAO LINEAR 1.2 REF BLK 830/840 DALI WH IND SSA	36	4900	1.00	1.00	1.00	1.00	1.00	1.00
0041826c	OTAO LINEAR 1.2 REF SIL 830/840 DALI WH IND SSA	36	5050	1.00	1.00	1.00	1.00	1.00	1.00
0040832c	OTAO LIN-EAR 1.5 OPAL 830/840 DALI BK IND SSA	39	4500	1.18	1.16	1.25	1.08	1.13	1.18

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0040833c	OTAO LIN- EAR 1.5 PRIS 830/840 DALI BK IND SSA	39	5350	1.19	1.18	1.25	1.08	1.16	1.19
0040834c	OTAO LIN- EAR 1.5 REF WHT 830/840 DALI BK IND SSA	39	5700	1.23	1.22	1.25	1.08	1.21	1.23
0040835c	OTAO LIN- EAR 1.5 REF BLK 830/840 DALI BK IND SSA	39	5400	1.23	1.22	1.25	1.08	1.21	1.23
0040836c	OTAO LIN- EAR 1.5 REF SIL 830/840 DALI BK IND SSA	39	5700	1.23	1.22	1.25	1.08	1.21	1.23
0041832c	OTAO LINEAR 1.5 OPAL 830/840 DALI WH IND SSA	39	4900	1.18	1.16	1.25	1.08	1.13	1.18
0041833c	OTAO LINEAR 1.5 PRIS 830/840 DALI WH IND SSA	39	5350	1.19	1.18	1.25	1.08	1.16	1.19
0041834c	OTAO LINEAR 1.5 REF WHT 830/840 DALI WH IND SSA	39	5700	1.23	1.22	1.25	1.08	1.21	1.23
0041835c	OTAO LINEAR 1.5 REF BLK 830/840 DALI WH IND SSA	39	5400	1.23	1.22	1.25	1.08	1.21	1.23
0041836c	OTAO LINEAR 1.5 REF SIL 830/840 DALI WH IND SSA	39	5700	1.23	1.22	1.25	1.08	1.21	1.23

Table 26: Extrapolation coefficients at product level for Accessories

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0040790	OTAO LINEAR CORN- L PRIS 830/840 BK	4.9	600	0.39	0.28	0.22	0.00	0.29	0.39
0040791	OTAO LINEAR CORN- T PRIS 830/840 BK	7.5	950	0.58	0.43	0.43	0.00	0.43	0.58
0040792	OTAO LINEAR CORN- X PRIS 830/840 BK	9.8	1250	0.75	0.54	0.47	0.00	0.56	0.75
0040793	OTAO LINEAR CORN- L DUMMY BK	NA	NA	0.39	0.27	0.22	0.00	0.28	0.39
0040794	OTAO LINEAR CORN- T DUMMY BK	NA	NA	0.59	0.42	0.43	0.00	0.42	0.59
0040795	OTAO LINEAR CORN- X DUMMY BK	NA	NA	0.76	0.53	0.47	0.00	0.55	0.76
0040809	OTAO LINEAR CORN-L OPAL 830/840 BK	4.9	600	0.39	0.28	0.22	0.00	0.29	0.39
0040810	OTAO LINEAR CORN-T OPAL 830/840 BK	7.5	950	0.58	0.43	0.43	0.00	0.43	0.58
0040811	OTAO LINEAR CORN-X OPAL 830/840 BK	9.8	1250	0.75	0.54	0.47	0.00	0.56	0.75
0040818	OTAO LINEAR CEILING ROSE BK 5-PIN	NA	NA	0.18	0.13	0.18	0.00	0.12	0.18
0040828	OTAO LINEAR CEILING ROSE BK 6-PIN	NA	NA	0.18	0.13	0.18	0.00	0.12	0.18
0040829	OTAO LINEAR RECESSED FRAME BK	NA	NA	0.93	0.67	0.71	0.00	0.66	0.93
0040830	OTAO LINEAR 1.2 DUMMY + TW BK	NA	NA	0.80	0.58	0.74	0.00	0.54	0.80
0040831	OTAO LINEAR 0.170 DUMMY BK	NA	NA	0.20	0.14	0.24	0.00	0.12	0.20
0041790	OTAO LINEAR CORN- L PRIS 830/840 WH	4.9	600	0.39	0.28	0.22	0.00	0.29	0.39
0041791	OTAO LINEAR CORN- T PRIS 830/840 WH	7.5	950	0.58	0.43	0.43	0.00	0.43	0.58
0041792	OTAO LINEAR CORN- X PRIS 830/840 WH	9.8	1250	0.75	0.54	0.47	0.00	0.56	0.75
0041793	OTAO LINEAR CORN- L DUMMY WH	NA	NA	0.39	0.27	0.22	0.00	0.28	0.39
0041794	OTAO LINEAR CORN- T DUMMY WH	NA	NA	0.59	0.42	0.43	0.00	0.42	0.59
0041795	OTAO LINEAR CORN- X DUMMY WH	NA	NA	0.76	0.53	0.47	0.00	0.55	0.76
0041809	OTAO LINEAR CORN-L OPAL 830/840 WH	4.9	660	0.39	0.28	0.22	0.00	0.29	0.39

Product code	Product name	Power (W)	Lighting output (lm)	Manufacturing stage (A1-A3)	distribution stage (A4)	installation stage (A5)	use stage (B6)	EOL stage (C1 to C4)	Benefits stage (D)
0041810	OTAO LINEAR CORN-T OPAL 830/840 WH	7.5	1050	0.58	0.43	0.43	0.00	0.43	0.58
0041811	OTAO LINEAR CORN-X OPAL 830/840 WH	9.8	1400	0.75	0.54	0.47	0.00	0.56	0.75
0041818	OTAO LINEAR CEILING ROSE WH 5-PIN	NA	NA	0.18	0.13	0.18	0.00	0.12	0.18
0041820	OTAO LINEAR FAST CONNECTOR	NA	NA	0.22	0.13	0.32	0.00	0.08	0.22
0041828	OTAO LINEAR CEILING ROSE WH 6-PIN	NA	NA	0.18	0.13	0.18	0.00	0.12	0.18
0041829	OTAO LINEAR RECESSED FRAME WH	NA	NA	0.93	0.67	0.71	0.00	0.66	0.93
0041830	OTAO LINEAR 1.2 DUMMY + TW WH	NA	NA	0.80	0.58	0.74	0.00	0.54	0.80
0041831	OTAO LINEAR 0.170 DUMMY WH	NA	NA	0.20	0.14	0.24	0.00	0.12	0.20

Table 27: Application matrix for IND LED module and SSA module

Product code		0041813/0041814/0041815	0040812/0040817/0040872 0041812/0041817/0041872
	Words in product name	OTAO LINEAR INDIRECT MOD	OTAO LINEAR SSA MODULE
*****	OTAO LINEAR MP	Not applied	Not applied
*****a	OTAO LINEAR MP IND	Applied	Not applied
*****	OTAO LINEAR DALI	Not applied	Not applied
*****a	OTAO LINEAR DALI IND	Applied	Not applied
*****b	OTAO LINEAR DALI SSA	Not applied	Applied
*****c	OTAO LINEAR DALI IND SSA	Applied	Applied

DA /DALI Digital Addressable Lighting Interface

SSA SylSmart connected systems (Silvair)