ENVIRONMENTAL PRODUCT DECLARATION

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

Philips Luma gen2 Mini
BGP703
Signify N.V.

EPD HUB
Publishing 2024-05-29

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Signify N.V.
Address	High Tech Campus 48, 5656 AE Eindhoven, The Netherlands
Contact details	sustainability@signify.com
Website	https://www.signify.com/global

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Electrical product
Category of EPD	Pre-verified EPD
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Sustainability Signify
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☑ Internal certification ☐External verification

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of lighting products may not be comparable if they do not comply with EN 15804 and if they are not compared in a lighting context.

PRODUCT

Product name	Philips LUMA GEN2 MINI
Additional labels	BGP703
Product reference	910925867229
Place of production	Poland
Period for data	2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	Not Applicable

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit
Declared unit mass	10.0876 kg
GWP-fossil, A1-A3 (kgCO2e)	8.80E+01
GWP-total, A1-A3 (kgCO2e)	8.63E+01
Secondary material, inputs (%)	51.9
Secondary material, outputs (%)	60.3
Total energy use, A1-A3 (kWh)	298
Net fresh water use, A1-A3 (m3)	0.5

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Signify is the world leader in lighting for professionals, consumers and lighting for the Internet of Things. Our energy efficient lighting products, systems and services enable our customers to enjoy a superior quality of light, and make people's lives safer and more comfortable, businesses more productive and cities more liveable.
For more information, please visit: https://www.signify.com/global

PRODUCT DESCRIPTION

Luma gen2 is the next generation of the Luma LED luminaire family, fully optimized to become your long-term lighting and innovation partner. While keeping the distinctive design characteristics of the first generation, Luma gen2 gives you the benefits of the latest technologies thanks to its future-proof System Ready architecture, use of optimized Ledgine LED and optical platform ensuring best in class lighting performance in a broad range of applications. It also offers improved serviceability. Installation has also become easier and faster, and thanks to the Service tag, you have access to all relevant documentations onsite. Also, the cable feed-through has been redesigned and access to the gear components is easy thanks to top down tool-less access. Luma gen2 also offers all connectivity and dimming options available today and thanks to being System Ready, it can also to be paired with lighting management systems such as Interact City or existing and upcoming sensor innovations. The Luma gen2 has been developed to optimize and simplify spare part repair and maintenance work using a new plug & play GearFlex module containing all electrical components in an easy to handle and accessible box inside the housing. As a company conscious about the impact of light on the environment and biodiversity, we also equipped the Luma gen2 with dedicated light recipes that help with maintaining the optimal ecosystems for bats or preserve a dark night sky.

Philips Luma gen2

For more information, please visit
https://www.lighting.philips.com/link/BBP333/fam/aa/en

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	71.25	EU , APAC
Minerals	11.94	EU , APAC
Fossil materials	16.81	EU , APAC
Bio-based materials	0	Not applicable

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.319

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit
Mass per declared unit	10.0876 kg
Functional unit	10800 Lumens over 100000 hours
Reference service life	100000

SUBSTANCES, REACH - VERY HIGH CONCERN

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

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

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

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

Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, electricity, and waste formed in the production processes at Signify's manufacturing facilities are included in this stage.

The product is made of metals, plastics, and electronic components. All components are transported to Signify's production facility, where the main manufacturing processes primarily are associated with assembly. The finished product is packaged with polyethylene, cardboard, and/or paper as packaging material before being sent to customers. Manufacturing loss, ancillaries and wastes are calculated according to the data that each manufacturing site is sharing with Signify. The total annual amount of waste in kg is allocated to the total annual production in kg at the specific manufacturing site responsible for the production of the studied luminaire. Thus, it is possible to allocate it according to the weight of the product analysed in this study. Some of the wastes are due to ancillary materials used during manufacturing while the rest is due to material losses.

TRANSPORT AND INSTALLATION (A4-A5)

Transport distances were calculated on the base of the supplier location and manufacturing location and then made a cumulative group choosing the conservative scenario. Environmental impacts from installation include waste packaging materials (A5). The impacts of energy consumption and the used ancillary materials during installation are considered negligible.

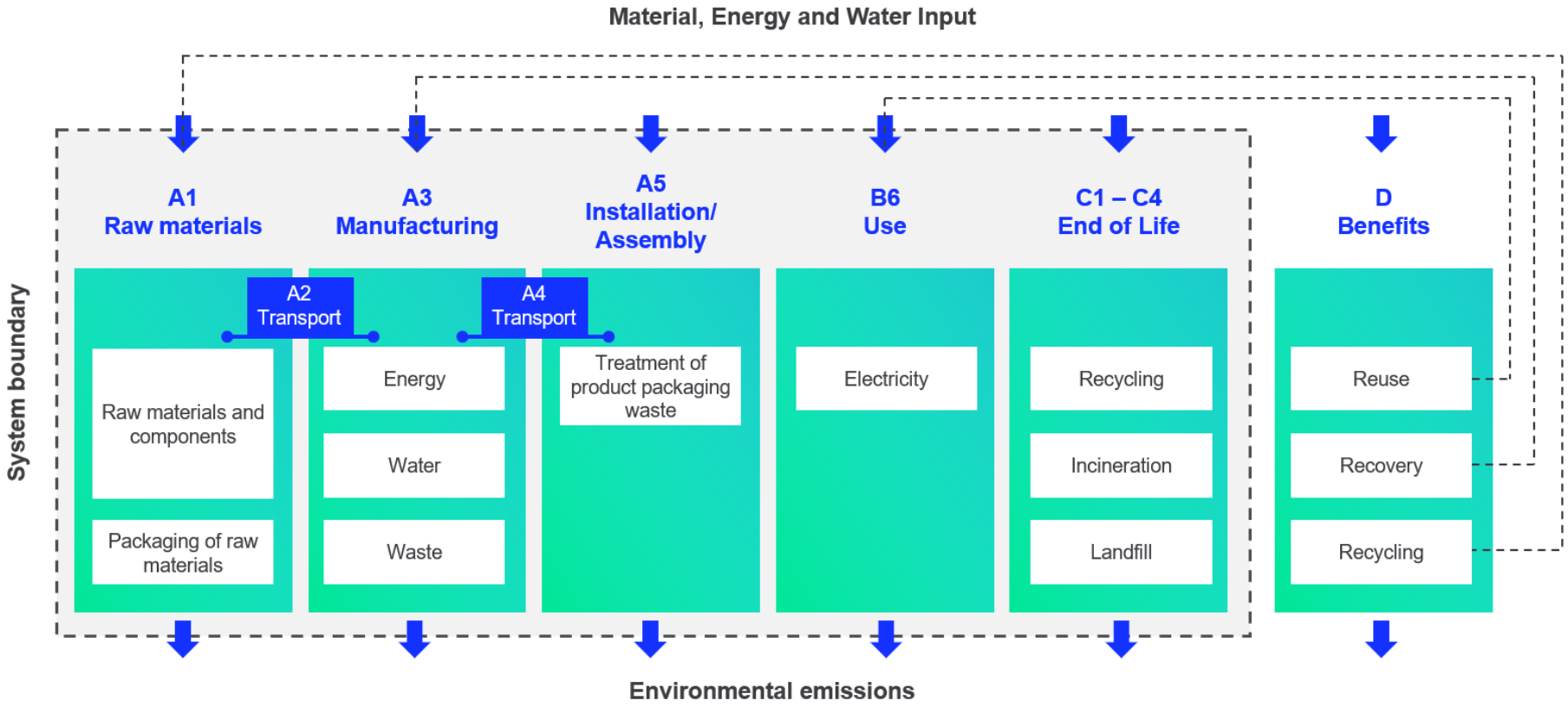
PRODUCT USE AND MAINTENANCE (B1-B7)

During the use phase, the product consumes electricity from Europe's electricity grid mix (B6). The total power consumption of the reference product is calculated as follows: Wattage x Reference lifetime = kWh consumed throughout the entire use phase B6.

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. It is assumed that the waste is collected separately and transported to the waste treatment centre. Transportation distance to treatment is assumed as 150 km and the transportation method is assumed to be lorry (C2). According to EN 50693:2019, the sequence of treatment operations occurring to the product shall include de-pollution, fractions separation and preparation (dismantling, crushing, shredding, sorting), recycling, other material recovery, energy recovery and disposal. In this study, the default values from table G.4 of EN 50693 is used for treating materials in different waste treatment methods. Due to the material and energy recovery potential of parts in the lighting system, the end-of-life product is converted into recycled raw materials, while the energy recovered from incineration displaces electricity and heat production (D). The benefits and loads of incineration and recycling are included in Module D.

SYSTEM BOUNDARY



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

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

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, ancillary materials, energy & water consumption, material loss and waste generation at the manufacturing site are attributed to the bill of materials of the products, therefore, they are allocated by partitioning the quantities on the base of the total production in kg throughout the year. Thus, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
No allocation	No allocation
No allocation	Allocated by mass or volume
Allocated by mass or volume	Allocated by mass or volume

This EPD is created with a most conservative scenario in A1-A3 in terms of material composition.

AVERAGES AND VARIABILITY

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

This EPD is product and factory specific and does not contain average calculations. It is created with a most conservative scenario in A1-A3 in terms of material composition.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. EcoInvent 3.8 database was used as the source of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	8,41E+01	2,05E+00	2,04E-01	8,63E+01	2,05E+00	1,20E+00	MNR	MNR	MNR	MNR	MNR	2,93E+03	MNR	MNR	1,42E-01	1,57E+00	1,08E+00	-1,54E+01
GWP – fossil	kg CO_2e	8,46E+01	2,05E+00	1,34E+00	8,80E+01	2,04E+00	5,20E-02	MNR	MNR	MNR	MNR	MNR	2,92E+03	MNR	MNR	1,42E-01	1,57E+00	1,08E+00	-1,54E+01
GWP – biogenic	kg CO_2e	-7,05E-01	0,00E+00	-1,15E+00	-1,85E+00	7,90E-04	1,15E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	0,00E+00	0,00E+00	-3,71E-03
GWP – LULUC	kg CO_2e	1,45E-01	1,16E-03	6,66E-03	1,52E-01	7,54E-04	1,06E-05	MNR	MNR	MNR	MNR	MNR	6,84E+00	MNR	MNR	5,24E-05	1,92E-04	1,33E-04	-1,85E-03
Ozone depletion pot.	kg CFC_{-11}e	5,60E-06	4,35E-07	1,59E-07	6,19E-06	4,70E-07	3,05E-09	MNR	MNR	MNR	MNR	MNR	1,49E-04	MNR	MNR	3,27E-08	1,73E-08	1,48E-08	-4,16E-07
Acidification potential	mol H^+e	5,60E-01	4,05E-02	5,76E-03	6,06E-01	8,65E-03	2,43E-04	MNR	MNR	MNR	MNR	MNR	1,67E+01	MNR	MNR	6,01E-04	1,82E-03	7,55E-04	-1,70E-01
EP-freshwater[2)]	kg Pe	4,72E-03	1,16E-05	5,96E-05	4,79E-03	1,67E-05	3,21E-07	MNR	MNR	MNR	MNR	MNR	3,10E-01	MNR	MNR	1,16E-06	6,15E-06	6,20E-06	-9,94E-04
EP-marine	kg Ne	8,93E-02	1,02E-02	2,45E-03	1,02E-01	2,57E-03	1,04E-04	MNR	MNR	MNR	MNR	MNR	2,22E+00	MNR	MNR	1,79E-04	4,71E-04	1,28E-03	-1,75E-02
EP-terrestrial	mol Ne	9,42E-01	1,13E-01	1,61E-02	1,07E+00	2,84E-02	1,07E-03	MNR	MNR	MNR	MNR	MNR	2,52E+01	MNR	MNR	1,97E-03	5,23E-03	2,57E-03	-2,04E-01
POCP ("smog")[3)]	kg NMVOCe	2,90E-01	3,00E-02	4,79E-03	3,24E-01	9,08E-03	2,68E-04	MNR	MNR	MNR	MNR	MNR	6,90E+00	MNR	MNR	6,31E-04	1,38E-03	8,95E-04	-5,89E-02
ADP-minerals & metals[4)]	kg Sbe	3,14E-03	3,72E-06	7,61E-06	3,15E-03	4,79E-06	1,00E-07	MNR	MNR	MNR	MNR	MNR	2,73E-02	MNR	MNR	3,33E-07	1,46E-05	3,10E-07	-6,37E-04
ADP-fossil resources	MJ	9,79E+02	2,80E+01	1,76E+01	1,02E+03	3,07E+01	2,40E-01	MNR	MNR	MNR	MNR	MNR	6,22E+04	MNR	MNR	2,13E+00	1,87E+00	1,44E+00	-1,51E+02
Water use[5)]	m^3e depr.	2,87E+01	1,04E-01	5,85E-01	2,94E+01	1,37E-01	5,62E-02	MNR	MNR	MNR	MNR	MNR	1,70E+03	MNR	MNR	9,54E-03	8,41E-02	9,11E-02	-1,15E+00

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	6,23E-06	1,41E-07	1,08E-07	6,48E-06	2,36E-07	2,24E-09	MNR	MNR	MNR	MNR	MNR	5,49E-05	MNR	MNR	1,64E-08	2,18E-08	1,17E-08	-9,12E-07
Ionizing radiation[6)]	kBq U235e	4,62E+00	1,31E-01	5,09E-02	4,80E+00	1,46E-01	8,56E-04	MNR	MNR	MNR	MNR	MNR	1,68E+03	MNR	MNR	1,02E-02	1,07E-02	7,53E-03	-8,99E-01
Ecotoxicity (freshwater)	CTUe	3,64E+03	2,14E+01	5,25E+01	3,72E+03	2,76E+01	1,61E+00	MNR	MNR	MNR	MNR	MNR	4,23E+04	MNR	MNR	1,92E+00	1,03E+01	6,43E+02	-4,29E+02
Human toxicity, cancer	CTUh	2,40E-07	9,81E-10	1,29E-09	2,42E-07	6,78E-10	7,58E-11	MNR	MNR	MNR	MNR	MNR	1,39E-06	MNR	MNR	4,71E-11	3,43E-10	7,17E-10	-3,10E-09
Human tox. non-cancer	CTUh	3,32E-06	1,81E-08	1,72E-08	3,35E-06	2,73E-08	3,17E-09	MNR	MNR	MNR	MNR	MNR	4,56E-05	MNR	MNR	1,90E-09	1,42E-08	2,47E-08	-6,04E-07
SQP[7)]	-	3,61E+02	1,79E+01	3,93E+01	4,18E+02	3,54E+01	1,31E-01	MNR	MNR	MNR	MNR	MNR	1,13E+04	MNR	MNR	2,46E+00	3,18E+00	2,08E+00	-3,70E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	8,54E+01	2,53E-01	1,42E+01	9,98E+01	3,46E-01	7,75E-03	MNR	MNR	MNR	MNR	MNR	1,27E+04	MNR	MNR	2,40E-02	2,52E-01	6,33E-02	-3,29E+00
Renew. PER as material	MJ	7,16E+00	0,00E+00	1,02E+01	1,73E+01	0,00E+00	-1,02E+01	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	-2,28E-01	-4,24E-01	0,00E+00
Total use of renew. PER	MJ	9,25E+01	2,53E-01	2,44E+01	1,17E+02	3,46E-01	-1,02E+01	MNR	MNR	MNR	MNR	MNR	1,27E+04	MNR	MNR	2,40E-02	2,35E-02	-3,60E-01	-3,29E+00
Non-re. PER as energy	MJ	9,29E+02	2,80E+01	1,72E+01	9,74E+02	3,07E+01	2,40E-01	MNR	MNR	MNR	MNR	MNR	6,21E+04	MNR	MNR	2,13E+00	1,87E+00	1,44E+00	-1,51E+02
Non-re. PER as material	MJ	4,52E+01	0,00E+00	9,53E-02	4,53E+01	0,00E+00	-9,53E-02	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	-1,74E+01	-1,78E+01	0,00E+00
Total use of non-re. PER	MJ	9,74E+02	2,80E+01	1,73E+01	1,02E+03	3,07E+01	1,44E-01	MNR	MNR	MNR	MNR	MNR	6,21E+04	MNR	MNR	2,13E+00	-1,56E+01	-1,64E+01	-1,51E+02
Secondary materials	kg	5,24E+00	1,03E-02	7,52E-01	6,00E+00	8,52E-03	2,85E-04	MNR	MNR	MNR	MNR	MNR	6,41E+00	MNR	MNR	5,92E-04	1,88E-03	3,50E-03	6,11E-01
Renew. secondary fuels	MJ	1,23E-01	5,61E-05	5,28E-02	1,76E-01	8,60E-05	4,55E-06	MNR	MNR	MNR	MNR	MNR	5,20E-02	MNR	MNR	5,97E-06	9,31E-05	2,77E-05	-8,30E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,83E-01	2,69E-03	1,37E-02	4,99E-01	3,98E-03	9,39E-04	MNR	MNR	MNR	MNR	MNR	5,36E+01	MNR	MNR	2,76E-04	2,91E-03	1,66E-03	-5,26E-02

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,39E+01	3,76E-02	8,96E-02	1,40E+01	4,07E-02	1,92E-03	MNR	MNR	MNR	MNR	MNR	2,23E+02	MNR	MNR	2,83E-03	1,21E-02	1,21E-02	-2,39E+00
Non-hazardous waste	kg	1,35E+02	4,58E-01	1,28E+00	1,37E+02	6,69E-01	7,58E-01	MNR	MNR	MNR	MNR	MNR	1,41E+04	MNR	MNR	4,65E-02	9,86E-01	3,99E+00	-4,87E+01
Radioactive waste	kg	1,99E-03	1,93E-04	3,07E-05	2,21E-03	2,05E-04	4,06E-07	MNR	MNR	MNR	MNR	MNR	4,53E-01	MNR	MNR	1,43E-05	7,03E-06	0,00E+00	-3,31E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	5,48E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	6,04E-01	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	3,46E-01	3,46E-01	0,00E+00	0,00E+00	MNR	MNR	MNR	MNR	MNR	0,00E+00	MNR	MNR	0,00E+00	1,33E+01	0,00E+00	0,00E+00

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	8,26E+01	2,03E+00	1,38E+00	8,60E+01	2,02E+00	5,06E-02	MNR	MNR	MNR	MNR	MNR	2,90E+03	MNR	MNR	1,41E-01	1,57E+00	1,53E+00	-1,51E+01
Ozone depletion Pot.	kg CFC_{-11}e	4,80E-06	3,45E-07	1,35E-07	5,28E-06	3,72E-07	2,66E-09	MNR	MNR	MNR	MNR	MNR	1,29E-04	MNR	MNR	2,59E-08	1,42E-08	1,20E-08	-3,53E-07
Acidification	kg SO_2e	4,70E-01	3,23E-02	4,29E-03	5,06E-01	6,72E-03	1,77E-04	MNR	MNR	MNR	MNR	MNR	1,42E+01	MNR	MNR	4,67E-04	1,43E-03	5,81E-04	-1,47E-01
Eutrophication	kg PO_4^3e	1,68E-01	3,95E-03	2,97E-03	1,75E-01	1,53E-03	1,33E-04	MNR	MNR	MNR	MNR	MNR	1,09E+01	MNR	MNR	1,06E-04	5,47E-04	4,60E-03	-3,99E-02
POCP (“smog”)	kg C_2H_4e	3,04E-02	8,70E-04	3,55E-04	3,16E-02	2,62E-04	5,45E-06	MNR	MNR	MNR	MNR	MNR	5,80E-01	MNR	MNR	1,82E-05	5,08E-05	1,39E-04	-7,08E-03
ADP-elements	kg Sbe	3,12E-03	3,62E-06	6,84E-06	3,13E-03	4,64E-06	7,87E-08	MNR	MNR	MNR	MNR	MNR	2,72E-02	MNR	MNR	3,22E-07	1,46E-05	2,83E-07	-6,35E-04
ADP-fossil	MJ	9,74E+02	2,80E+01	1,76E+01	1,02E+03	3,07E+01	2,40E-01	MNR	MNR	MNR	MNR	MNR	6,21E+04	MNR	MNR	2,13E+00	1,87E+00	1,44E+00	-1,51E+02

APPENDIX (EPD HUB ALIGNED)

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

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

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

$$PSF = \frac{P_{in}}{P_{base}}$$

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

$$TSF = PSF * CSF$$

Table A1: Light management function (PEP EcoPassport aligned)

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

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

$$Scaled\ Impact = GWP_{case} * TSF$$

Table A2 Scaled GWP per scaling factor (EPD Hub aligned)

Configuration	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
					NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
BGP703 LED8-4S/740	736.000	5.6	131.4	0.076	0.076	0.057	0.057	0.042	221.7	166.3	166.3	122.0
BGP703 LED8-4S/730	728.000	5.9	123.4	0.080	0.080	0.060	0.060	0.044	233.6	175.2	175.2	128.5
BGP703 LED8-4S/727	728.000	6.5	112.0	0.088	0.088	0.066	0.066	0.048	257.4	193.0	193.0	141.6
BGP703 LED8-4S/830	728.000	6.5	112.0	0.088	0.088	0.066	0.066	0.048	257.4	193.0	193.0	141.6
BGP703 LED8-4S/722	728.000	7.2	101.1	0.097	0.097	0.073	0.073	0.054	285.1	213.8	213.8	156.8
BGP703 LED10-4S/740	910.000	6.8	133.8	0.092	0.092	0.069	0.069	0.051	269.2	201.9	201.9	148.1
BGP703 LED10-4S/730	910.000	7.2	126.4	0.097	0.097	0.073	0.073	0.054	285.1	213.8	213.8	156.8
BGP703 LED10-4S/727	910.000	7.9	115.2	0.107	0.107	0.080	0.080	0.059	312.8	234.6	234.6	172.0
BGP703 LED10-4S/830	910.000	7.7	118.2	0.104	0.104	0.078	0.078	0.057	304.9	228.7	228.7	167.7
BGP703 LED10-4S/722	910.000	8.6	105.8	0.116	0.116	0.087	0.087	0.064	340.5	255.4	255.4	187.3
BGP703 LED12-4S/740	1092.000	7.8	140.0	0.105	0.105	0.079	0.079	0.058	308.8	231.6	231.6	169.9

BGP703 LED12-4S/730	1092.000	8.2	133.2	0.111	0.111	0.083	0.083	0.061	324.7	243.5	243.5	178.6
BGP703 LED12-4S/727	1092.000	9.1	120.0	0.123	0.123	0.092	0.092	0.068	360.3	270.2	270.2	198.2
BGP703 LED12-4S/830	1092.000	9.1	120.0	0.123	0.123	0.092	0.092	0.068	360.3	270.2	270.2	198.2
BGP703 LED12-4S/722	1092.000	10.2	107.1	0.138	0.138	0.103	0.103	0.076	403.9	302.9	302.9	222.1
BGP703 LED14-4S/740	1274.000	9.0	141.6	0.122	0.122	0.091	0.091	0.067	356.4	267.3	267.3	196.0
BGP703 LED14-4S/730	1274.000	9.5	134.1	0.128	0.128	0.096	0.096	0.071	376.1	282.1	282.1	206.9
BGP703 LED14-4S/727	1274.000	10.6	120.2	0.143	0.143	0.107	0.107	0.079	419.7	314.8	314.8	230.8
BGP703 LED14-4S/830	1274.000	10.6	120.2	0.143	0.143	0.107	0.107	0.079	419.7	314.8	314.8	230.8
BGP703 LED14-4S/722	1274.000	11.6	109.8	0.157	0.157	0.118	0.118	0.086	459.3	344.5	344.5	252.6
BGP703 LED16-4S/740	1456.000	10.2	142.7	0.138	0.138	0.103	0.103	0.076	403.9	302.9	302.9	222.1
BGP703 LED16-4S/730	1456.000	10.8	134.8	0.146	0.146	0.109	0.109	0.080	427.6	320.7	320.7	235.2
BGP703 LED16-4S/727	1456.000	11.8	123.4	0.159	0.159	0.120	0.120	0.088	467.2	350.4	350.4	257.0
BGP703 LED16-4S/830	1456.000	11.8	123.4	0.159	0.159	0.120	0.120	0.088	467.2	350.4	350.4	257.0
BGP703 LED16-4S/722	1456.000	13.4	108.7	0.181	0.181	0.136	0.136	0.100	530.6	397.9	397.9	291.8
BGP703 LED18-4S/740	1638.000	11.4	143.7	0.154	0.154	0.116	0.116	0.085	451.4	338.5	338.5	248.3
BGP703 LED18-4S/730	1638.000	12.0	136.5	0.162	0.162	0.122	0.122	0.089	475.1	356.4	356.4	261.3
BGP703 LED18-4S/727	1638.000	13.4	122.2	0.181	0.181	0.136	0.136	0.100	530.6	397.9	397.9	291.8
BGP703 LED18-4S/830	1638.000	13.4	122.2	0.181	0.181	0.136	0.136	0.100	530.6	397.9	397.9	291.8
BGP703 LED18-4S/722	1638.000	15.0	109.2	0.203	0.203	0.152	0.152	0.111	593.9	445.4	445.4	326.7
BGP703 LED20-4S/740	1820.000	12.6	144.4	0.170	0.170	0.128	0.128	0.094	498.9	374.2	374.2	274.4

BGP703 LED20-4S/730	1820.000	13.4	135.8	0.181	0.181	0.136	0.136	0.100	530.6	397.9	397.9	291.8
BGP703 LED20-4S/727	1820.000	15.0	121.3	0.203	0.203	0.152	0.152	0.111	593.9	445.4	445.4	326.7
BGP703 LED20-4S/830	1820.000	14.2	128.2	0.192	0.192	0.144	0.144	0.106	562.2	421.7	421.7	309.2
BGP703 LED20-4S/722	1820.000	15.8	115.2	0.214	0.214	0.160	0.160	0.117	625.6	469.2	469.2	344.1
BGP703 LED22-4S/740	2002.000	13.8	145.1	0.186	0.186	0.140	0.140	0.103	546.4	409.8	409.8	300.5
BGP703 LED22-4S/730	2002.000	14.0	143.0	0.189	0.189	0.142	0.142	0.104	554.3	415.7	415.7	304.9
BGP703 LED22-4S/727	2002.000	15.6	128.3	0.211	0.211	0.158	0.158	0.116	617.7	463.3	463.3	339.7
BGP703 LED22-4S/830	2002.000	15.6	128.3	0.211	0.211	0.158	0.158	0.116	617.7	463.3	463.3	339.7
BGP703 LED22-4S/722	2002.000	17.4	115.1	0.235	0.235	0.176	0.176	0.129	688.9	516.7	516.7	378.9
BGP703 LED24-4S/740	2184.000	14.4	151.7	0.195	0.195	0.146	0.146	0.107	570.2	427.6	427.6	313.6
BGP703 LED24-4S/730	2184.000	15.2	143.7	0.205	0.205	0.154	0.154	0.113	601.8	451.4	451.4	331.0
BGP703 LED24-4S/727	2184.000	17.0	128.5	0.230	0.230	0.172	0.172	0.126	673.1	504.8	504.8	370.2
BGP703 LED24-4S/830	2184.000	17.0	128.5	0.230	0.230	0.172	0.172	0.126	673.1	504.8	504.8	370.2
BGP703 LED24-4S/722	2184.000	19.0	114.9	0.257	0.257	0.193	0.193	0.141	752.3	564.2	564.2	413.8
BGP703 LED27-4S/740	2457.000	16.2	151.7	0.219	0.219	0.164	0.164	0.120	641.4	481.1	481.1	352.8
BGP703 LED27-4S/730	2457.000	17.0	144.5	0.230	0.230	0.172	0.172	0.126	673.1	504.8	504.8	370.2
BGP703 LED27-4S/727	2457.000	19.0	129.3	0.257	0.257	0.193	0.193	0.141	752.3	564.2	564.2	413.8
BGP703 LED27-4S/830	2457.000	19.0	129.3	0.257	0.257	0.193	0.193	0.141	752.3	564.2	564.2	413.8
BGP703 LED27-4S/722	2457.000	21.0	117.0	0.284	0.284	0.213	0.213	0.156	831.5	623.6	623.6	457.3
BGP703 LED30-4S/740	2730.000	17.8	153.4	0.241	0.241	0.180	0.180	0.132	704.8	528.6	528.6	387.6

BGP703 LED30-4S/730	2730.000	19.0	143.7	0.257	0.257	0.193	0.193	0.141	752.3	564.2	564.2	413.8
BGP703 LED30-4S/727	2730.000	21.0	130.0	0.284	0.284	0.213	0.213	0.156	831.5	623.6	623.6	457.3
BGP703 LED30-4S/830	2730.000	21.0	130.0	0.284	0.284	0.213	0.213	0.156	831.5	623.6	623.6	457.3
BGP703 LED30-4S/722	2730.000	23.5	116.2	0.318	0.318	0.238	0.238	0.175	930.5	697.9	697.9	511.8
BGP703 LED35-4S/740	3185.000	21.0	151.7	0.284	0.284	0.213	0.213	0.156	831.5	623.6	623.6	457.3
BGP703 LED35-4S/730	3185.000	22.0	144.8	0.297	0.297	0.223	0.223	0.164	871.1	653.3	653.3	479.1
BGP703 LED35-4S/727	3185.000	24.5	130.0	0.331	0.331	0.248	0.248	0.182	970.1	727.6	727.6	533.5
BGP703 LED35-4S/830	3185.000	25.0	127.4	0.338	0.338	0.253	0.253	0.186	989.9	742.4	742.4	544.4
BGP703 LED35-4S/722	3185.000	28.0	113.8	0.378	0.378	0.284	0.284	0.208	1108.6	831.5	831.5	609.8
BGP703 LED40-4S/740	3640.000	24.0	151.7	0.324	0.324	0.243	0.243	0.178	950.3	712.7	712.7	522.6
BGP703 LED40-4S/730	3640.000	25.5	142.7	0.345	0.345	0.258	0.258	0.190	1009.7	757.2	757.2	555.3
BGP703 LED40-4S/727	3640.000	28.5	127.7	0.385	0.385	0.289	0.289	0.212	1128.4	846.3	846.3	620.6
BGP703 LED40-4S/830	3640.000	28.5	127.7	0.385	0.385	0.289	0.289	0.212	1128.4	846.3	846.3	620.6
BGP703 LED40-4S/722	3640.000	32.0	113.8	0.432	0.432	0.324	0.324	0.238	1267.0	950.3	950.3	696.9
BGP703 LED45-4S/740	4095.000	27.0	151.7	0.365	0.365	0.274	0.274	0.201	1069.1	801.8	801.8	588.0
BGP703 LED45-4S/730	4095.000	28.5	143.7	0.385	0.385	0.289	0.289	0.212	1128.4	846.3	846.3	620.6
BGP703 LED45-4S/727	4095.000	32.5	126.0	0.439	0.439	0.329	0.329	0.242	1286.8	965.1	965.1	707.8
BGP703 LED45-4S/830	4095.000	32.5	126.0	0.439	0.439	0.329	0.329	0.242	1286.8	965.1	965.1	707.8
BGP703 LED45-4S/722	4095.000	36.5	112.2	0.493	0.493	0.370	0.370	0.271	1445.2	1083.9	1083.9	794.9
BGP703 LED50-4S/740	4550.000	30.0	151.7	0.405	0.405	0.304	0.304	0.223	1187.8	890.9	890.9	653.3

BGP703 LED50-4S/730	4550.000	32.0	142.2	0.432	0.432	0.324	0.324	0.238	1267.0	950.3	950.3	696.9
BGP703 LED50-4S/727	4550.000	36.5	124.7	0.493	0.493	0.370	0.370	0.271	1445.2	1083.9	1083.9	794.9
BGP703 LED50-4S/830	4550.000	36.5	124.7	0.493	0.493	0.370	0.370	0.271	1445.2	1083.9	1083.9	794.9
BGP703 LED50-4S/722	4550.000	38.5	118.2	0.520	0.520	0.390	0.390	0.286	1524.4	1143.3	1143.3	838.4
BGP703 LED55-4S/740	5096.000	33.5	152.1	0.453	0.453	0.340	0.340	0.249	1326.4	994.8	994.8	729.5
BGP703 LED55-4S/730	5096.000	36.0	141.6	0.486	0.486	0.365	0.365	0.268	1425.4	1069.1	1069.1	784.0
BGP703 LED55-4S/727	5096.000	40.5	125.8	0.547	0.547	0.410	0.410	0.301	1603.6	1202.7	1202.7	882.0
BGP703 LED55-4S/830	5096.000	38.0	134.1	0.514	0.514	0.385	0.385	0.282	1504.6	1128.4	1128.4	827.5
BGP703 LED55-4S/722	5096.000	43.0	118.5	0.581	0.581	0.436	0.436	0.320	1702.6	1276.9	1276.9	936.4
BGP703 LED60-4S/740	5460.000	37.0	147.6	0.500	0.500	0.375	0.375	0.275	1465.0	1098.8	1098.8	805.8
BGP703 LED60-4S/730	5460.000	39.5	138.2	0.534	0.534	0.400	0.400	0.294	1564.0	1173.0	1173.0	860.2
BGP703 LED60-4S/727	5460.000	41.5	131.6	0.561	0.561	0.421	0.421	0.308	1643.2	1232.4	1232.4	903.7
BGP703 LED60-4S/830	5460.000	41.5	131.6	0.561	0.561	0.421	0.421	0.308	1643.2	1232.4	1232.4	903.7
BGP703 LED60-4S/722	5400.000	47.0	114.9	0.635	0.635	0.476	0.476	0.349	1860.9	1395.7	1395.7	1023.5
BGP703 LED6-4S/830	552.000	5.1	108.2	0.069	0.069	0.052	0.052	0.038	201.9	151.4	151.4	111.1
BGP703 LED6-4S/722	546.000	5.6	97.5	0.076	0.076	0.057	0.057	0.042	221.7	166.3	166.3	122.0
BGP703 LED65-4S/740	6006.000	37.5	160.2	0.507	0.507	0.380	0.380	0.279	1484.8	1113.6	1113.6	816.6
BGP703 LED65-4S/730	6006.000	40.0	150.2	0.541	0.541	0.405	0.405	0.297	1583.8	1187.8	1187.8	871.1
BGP703 LED65-4S/727	6006.000	45.5	132.0	0.615	0.615	0.461	0.461	0.338	1801.6	1351.2	1351.2	990.9
BGP703 LED65-4S/830	6006.000	45.5	132.0	0.615	0.615	0.461	0.461	0.338	1801.6	1351.2	1351.2	990.9

BGP703 LED65-4S/722	5940.000	51.0	116.5	0.689	0.689	0.517	0.517	0.379	2019.3	1514.5	1514.5	1110.6
BGP703 LED70-4S/740	6370.000	41.0	155.4	0.554	0.554	0.416	0.416	0.305	1623.4	1217.5	1217.5	892.9
BGP703 LED70-4S/730	6370.000	43.5	146.4	0.588	0.588	0.441	0.441	0.323	1722.4	1291.8	1291.8	947.3
BGP703 LED70-4S/727	6300.000	49.5	127.3	0.669	0.669	0.502	0.502	0.368	1959.9	1469.9	1469.9	1078.0
BGP703 LED70-4S/830	6300.000	49.5	127.3	0.669	0.669	0.502	0.502	0.368	1959.9	1469.9	1469.9	1078.0
BGP703 LED70-4S/722	6300.000	56.0	112.5	0.757	0.757	0.568	0.568	0.416	2217.3	1663.0	1663.0	1219.5
BGP703 LED75-4S/740	6916.000	44.0	157.2	0.595	0.595	0.446	0.446	0.327	1742.2	1306.6	1306.6	958.2
BGP703 LED75-4S/730	6916.000	47.0	147.1	0.635	0.635	0.476	0.476	0.349	1860.9	1395.7	1395.7	1023.5
BGP703 LED75-4S/727	6840.000	53.0	129.1	0.716	0.716	0.537	0.537	0.394	2098.5	1573.9	1573.9	1154.2
BGP703 LED75-4S/830	6840.000	53.0	129.1	0.716	0.716	0.537	0.537	0.394	2098.5	1573.9	1573.9	1154.2
BGP703 LED75-4S/722	6840.000	61.0	112.1	0.824	0.824	0.618	0.618	0.453	2415.3	1811.5	1811.5	1328.4
BGP703 LED80-4S/740	7280.000	47.5	153.3	0.642	0.642	0.481	0.481	0.353	1880.7	1410.6	1410.6	1034.4
BGP703 LED80-4S/730	7200.000	51.0	141.2	0.689	0.689	0.517	0.517	0.379	2019.3	1514.5	1514.5	1110.6
BGP703 LED80-4S/727	7200.000	58.0	124.1	0.784	0.784	0.588	0.588	0.431	2296.5	1722.4	1722.4	1263.1
BGP703 LED80-4S/830	7200.000	58.0	124.1	0.784	0.784	0.588	0.588	0.431	2296.5	1722.4	1722.4	1263.1
BGP703 LED80-4S/722	7200.000	62.0	116.1	0.838	0.838	0.628	0.628	0.461	2454.9	1841.1	1841.1	1350.2
BGP703 LED85-4S/740	7826.000	48.5	161.4	0.655	0.655	0.492	0.492	0.360	1920.3	1440.3	1440.3	1056.2
BGP703 LED85-4S/730	7740.000	52.0	148.8	0.703	0.703	0.527	0.527	0.386	2058.9	1544.2	1544.2	1132.4
BGP703 LED85-4S/727	7740.000	59.0	131.2	0.797	0.797	0.598	0.598	0.439	2336.1	1752.1	1752.1	1284.8
BGP703 LED85-4S/830	7740.000	59.0	131.2	0.797	0.797	0.598	0.598	0.439	2336.1	1752.1	1752.1	1284.8

BGP703 LED85-4S/722	7740.000	66.0	117.3	0.892	0.892	0.669	0.669	0.491	2613.2	1959.9	1959.9	1437.3
BGP703 LED90-4S/740	8100.000	52.0	155.8	0.703	0.703	0.527	0.527	0.386	2058.9	1544.2	1544.2	1132.4
BGP703 LED90-4S/730	8100.000	55.0	147.3	0.743	0.743	0.557	0.557	0.409	2177.7	1633.3	1633.3	1197.7
BGP703 LED90-4S/727	8100.000	62.0	130.6	0.838	0.838	0.628	0.628	0.461	2454.9	1841.1	1841.1	1350.2
BGP703 LED90-4S/830	8100.000	62.0	130.6	0.838	0.838	0.628	0.628	0.461	2454.9	1841.1	1841.1	1350.2
BGP703 LED90-4S/722	8100.000	71.0	114.1	0.959	0.959	0.720	0.720	0.528	2811.2	2108.4	2108.4	1546.2
BGP703 LED95-4S/740	8640.000	55.0	157.1	0.743	0.743	0.557	0.557	0.409	2177.7	1633.3	1633.3	1197.7
BGP703 LED95-4S/730	8640.000	58.0	149.0	0.784	0.784	0.588	0.588	0.431	2296.5	1722.4	1722.4	1263.1
BGP703 LED95-4S/727	8640.000	66.0	130.9	0.892	0.892	0.669	0.669	0.491	2613.2	1959.9	1959.9	1437.3
BGP703 LED95-4S/830	8640.000	66.0	130.9	0.892	0.892	0.669	0.669	0.491	2613.2	1959.9	1959.9	1437.3
BGP703 LED95-4S/722	8640.000	75.0	115.2	1.014	1.014	0.760	0.760	0.557	2969.6	2227.2	2227.2	1633.3
BGP703 LED100-4S/740	9000.000	58.0	155.2	0.784	0.784	0.588	0.588	0.431	2296.5	1722.4	1722.4	1263.1
BGP703 LED100-4S/730	9000.000	62.0	145.2	0.838	0.838	0.628	0.628	0.461	2454.9	1841.1	1841.1	1350.2
BGP703 LED100-4S/727	9000.000	70.0	128.6	0.946	0.946	0.709	0.709	0.520	2771.6	2078.7	2078.7	1524.4
BGP703 LED100-4S/830	9000.000	70.0	128.6	0.946	0.946	0.709	0.709	0.520	2771.6	2078.7	2078.7	1524.4
BGP703 LED100-4S/722	8900.000	80.0	111.3	1.081	1.081	0.811	0.811	0.595	3167.6	2375.7	2375.7	1742.2
BGP703 LED110-4S/740	9900.000	64.0	154.7	0.865	0.865	0.649	0.649	0.476	2534.1	1900.5	1900.5	1393.7
BGP703 LED110-4S/730	9900.000	69.0	143.5	0.932	0.932	0.699	0.699	0.513	2732.0	2049.0	2049.0	1502.6
BGP703 LED110-4S/727	9900.000	79.0	125.3	1.068	1.068	0.801	0.801	0.587	3128.0	2346.0	2346.0	1720.4
BGP703 LED110-4S/830	9900.000	79.0	125.3	1.068	1.068	0.801	0.801	0.587	3128.0	2346.0	2346.0	1720.4

BGP703 LED110-4S/722	9790.000	90.0	108.8	1.216	1.216	0.912	0.912	0.669	3563.5	2672.6	2672.6	1959.9
BGP703 LED120-4S/740	10800.000	71.0	152.1	0.959	0.959	0.720	0.720	0.528	2811.2	2108.4	2108.4	1546.2
BGP703 LED120-4S/730	10800.000	76.0	142.1	1.027	1.027	0.770	0.770	0.565	3009.2	2256.9	2256.9	1655.1
BGP703 LED120-4S/727	10680.000	87.0	122.8	1.176	1.176	0.882	0.882	0.647	3444.7	2583.5	2583.5	1894.6
BGP703 LED120-4S/830	10680.000	87.0	122.8	1.176	1.176	0.882	0.882	0.647	3444.7	2583.5	2583.5	1894.6
BGP703 LED120-4S/722	10680.000	99.0	107.9	1.338	1.338	1.003	1.003	0.736	3919.9	2939.9	2939.9	2155.9
BGP703 LED130-4S/740	11700.000	78.0	150.0	1.054	1.054	0.791	0.791	0.580	3088.4	2316.3	2316.3	1698.6
BGP703 LED130-4S/730	11570.000	84.0	137.7	1.135	1.135	0.851	0.851	0.624	3325.9	2494.5	2494.5	1829.3
BGP703 LED130-4S/727	11570.000	96.0	120.5	1.297	1.297	0.973	0.973	0.714	3801.1	2850.8	2850.8	2090.6
BGP703 LED130-4S/830	11570.000	96.0	120.5	1.297	1.297	0.973	0.973	0.714	3801.1	2850.8	2850.8	2090.6
BGP703 LED130-4S/722	11440.000	116.0	98.6	1.568	1.568	1.176	1.176	0.862	4593.0	3444.7	3444.7	2526.1
BGP703 LED140-4S/740	12460.000	85.0	146.6	1.149	1.149	0.861	0.861	0.632	3365.5	2524.2	2524.2	1851.0
BGP703 LED140-4S/730	12460.000	92.0	135.4	1.243	1.243	0.932	0.932	0.684	3642.7	2732.0	2732.0	2003.5
BGP703 LED140-4S/727	12460.000	104.0	119.8	1.405	1.405	1.054	1.054	0.773	4117.8	3088.4	3088.4	2264.8
BGP703 LED140-4S/830	12460.000	104.0	119.8	1.405	1.405	1.054	1.054	0.773	4117.8	3088.4	3088.4	2264.8
BGP703 LED150-4S/740	13350.000	93.0	143.5	1.257	1.257	0.943	0.943	0.691	3682.3	2761.7	2761.7	2025.3
BGP703 LED150-4S/730	13350.000	99.0	134.8	1.338	1.338	1.003	1.003	0.736	3919.9	2939.9	2939.9	2155.9
BGP703 LED150-4S/727	13200.000	114.0	115.8	1.541	1.541	1.155	1.155	0.847	4513.8	3385.3	3385.3	2482.6
BGP703 LED150-4S/830	13200.000	114.0	115.8	1.541	1.541	1.155	1.155	0.847	4513.8	3385.3	3385.3	2482.6
BGP703 LED160-4S/740	14240.000	100.0	142.4	1.351	1.351	1.014	1.014	0.743	3959.5	2969.6	2969.6	2177.7

BGP703 LED160-4S/730	14080.000	108.0	130.4	1.459	1.459	1.095	1.095	0.803	4276.2	3207.2	3207.2	2351.9
BGP703 LED169-4S/740	15130.000	106.0	142.7	1.432	1.432	1.074	1.074	0.788	4197.0	3147.8	3147.8	2308.4
BGP703 LED169-4S/730	14960.000	118.0	126.8	1.595	1.595	1.196	1.196	0.877	4672.2	3504.1	3504.1	2569.7

** Note that if the product is non-dimmable, only the values for "NC (No Control)" are valid; if the driver type is PSU, only the values for "NC (No Control)"and "PS (presence sensing)" for are valid.*

APPENDIX (PEP ECOPASSPORT ALIGNED)

This section represents the scaling method for the **B6 module**, following the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a refernce variant of a product family, based on various light management functions, the lumen output (O_{lum}) and reference service life (*RSL*) of each product within the same product familiy.

To calculate the Scaled Impact (SI_{pep}), we have followed the below methods:

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

$$PSF = \frac{P_{in}}{P_{base}}$$

2. Using this scaled GWP, we then can apply the PEP Ecopassport method for calculating the environmental impact of the functional unit for a luminary (1000 lumens over 35000 hours), applied to B6, where the Functional Unit application considers the lumen output (Olum) and reference service lifetime (RSL) of the product to estimate the final environmental impact. The scaled impact (SIpep) is presented in Table A4.

$$GSF = \frac{FU_{pep}}{FU_p} = \frac{1{,}000}{O_{lum}} * \frac{35{,}000}{RSL}$$

3. Calculate the GWP scaling factor (P*GSF*), by multiplying the PSF by the GSF.

$$PGSF = PSF * GSF$$

4. Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system), as presented in Table A1.

$$TSF = PGSF * CSF$$

Table A3: Light management functions (PEP EcoPassport aligned)

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

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

$$Scaled\ GWP = GWP_{case} * TSF$$

As described in the EPD, calculations are made based on dataset describing electricity available on the low voltage level in Europe for year 2022 (source Ecoinvent 3.8 database). This value should be adjusted depending on specific project requirements. Presented controls factors and functional unit conversion values are based on the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). Please refer to this publication or contact Signify directly for more information.

Table A4 Scale impact per scaling factor (PEP EcoPassport aligned)

Configuration	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
					NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
BGP703 LED8-4S/740	736	5.6	131.4	0.076	0.036	0.027	0.027	0.020	105.4	79.1	79.1	58.0
BGP703 LED8-4S/730	728	5.9	123.4	0.080	0.038	0.029	0.029	0.021	112.3	84.2	84.2	61.8

BGP703 LED8-4S/727	728	6.5	112.0	0.088	0.042	0.032	0.032	0.023	123.7	92.8	92.8	68.1
BGP703 LED8-4S/830	728	6.5	112.0	0.088	0.042	0.032	0.032	0.023	123.7	92.8	92.8	68.1
BGP703 LED8-4S/722	728	7.2	101.1	0.097	0.047	0.035	0.035	0.026	137.1	102.8	102.8	75.4
BGP703 LED10-4S/740	910	6.8	133.8	0.092	0.035	0.027	0.027	0.019	103.6	77.7	77.7	57.0
BGP703 LED10-4S/730	910	7.2	126.4	0.097	0.037	0.028	0.028	0.021	109.6	82.2	82.2	60.3
BGP703 LED10-4S/727	910	7.9	115.2	0.107	0.041	0.031	0.031	0.023	120.3	90.2	90.2	66.2
BGP703 LED10-4S/830	910	7.7	118.2	0.104	0.040	0.030	0.030	0.022	117.3	87.9	87.9	64.5
BGP703 LED10-4S/722	910	8.6	105.8	0.116	0.045	0.034	0.034	0.025	131.0	98.2	98.2	72.0
BGP703 LED12-4S/740	1092	7.8	140.0	0.105	0.034	0.025	0.025	0.019	99.0	74.2	74.2	54.4
BGP703 LED12-4S/730	1092	8.2	133.2	0.111	0.036	0.027	0.027	0.020	104.1	78.0	78.0	57.2
BGP703 LED12-4S/727	1092	9.1	120.0	0.123	0.039	0.030	0.030	0.022	115.5	86.6	86.6	63.5
BGP703 LED12-4S/830	1092	9.1	120.0	0.123	0.039	0.030	0.030	0.022	115.5	86.6	86.6	63.5
BGP703 LED12-4S/722	1092	10.2	107.1	0.138	0.044	0.033	0.033	0.024	129.4	97.1	97.1	71.2
BGP703 LED14-4S/740	1274	9	141.6	0.122	0.033	0.025	0.025	0.018	97.9	73.4	73.4	53.8
BGP703 LED14-4S/730	1274	9.5	134.1	0.128	0.035	0.026	0.026	0.019	103.3	77.5	77.5	56.8
BGP703 LED14-4S/727	1274	10.6	120.2	0.143	0.039	0.030	0.030	0.022	115.3	86.5	86.5	63.4
BGP703 LED14-4S/830	1274	10.6	120.2	0.143	0.039	0.030	0.030	0.022	115.3	86.5	86.5	63.4
BGP703 LED14-4S/722	1274	11.6	109.8	0.157	0.043	0.032	0.032	0.024	126.2	94.6	94.6	69.4
BGP703 LED16-4S/740	1456	10.2	142.7	0.138	0.033	0.025	0.025	0.018	97.1	72.8	72.8	53.4
BGP703 LED16-4S/730	1456	10.8	134.8	0.146	0.035	0.026	0.026	0.019	102.8	77.1	77.1	56.5

BGP703 LED16-4S/727	1456	11.8	123.4	0.159	0.038	0.029	0.029	0.021	112.3	84.2	84.2	61.8
BGP703 LED16-4S/830	1456	11.8	123.4	0.159	0.038	0.029	0.029	0.021	112.3	84.2	84.2	61.8
BGP703 LED16-4S/722	1456	13.4	108.7	0.181	0.044	0.033	0.033	0.024	127.5	95.7	95.7	70.1
BGP703 LED18-4S/740	1638	11.4	143.7	0.154	0.033	0.025	0.025	0.018	96.4	72.3	72.3	53.0
BGP703 LED18-4S/730	1638	12	136.5	0.162	0.035	0.026	0.026	0.019	101.5	76.1	76.1	55.8
BGP703 LED18-4S/727	1638	13.4	122.2	0.181	0.039	0.029	0.029	0.021	113.4	85.0	85.0	62.4
BGP703 LED18-4S/830	1638	13.4	122.2	0.181	0.039	0.029	0.029	0.021	113.4	85.0	85.0	62.4
BGP703 LED18-4S/722	1638	15	109.2	0.203	0.043	0.032	0.032	0.024	126.9	95.2	95.2	69.8
BGP703 LED20-4S/740	1820	12.6	144.4	0.170	0.033	0.025	0.025	0.018	95.9	72.0	72.0	52.8
BGP703 LED20-4S/730	1820	13.4	135.8	0.181	0.035	0.026	0.026	0.019	102.0	76.5	76.5	56.1
BGP703 LED20-4S/727	1820	15	121.3	0.203	0.039	0.029	0.029	0.021	114.2	85.7	85.7	62.8
BGP703 LED20-4S/830	1820	14.2	128.2	0.192	0.037	0.028	0.028	0.020	108.1	81.1	81.1	59.5
BGP703 LED20-4S/722	1820	15.8	115.2	0.214	0.041	0.031	0.031	0.023	120.3	90.2	90.2	66.2
BGP703 LED22-4S/740	2002	13.8	145.1	0.186	0.033	0.024	0.024	0.018	95.5	71.6	71.6	52.5
BGP703 LED22-4S/730	2002	14	143.0	0.189	0.033	0.025	0.025	0.018	96.9	72.7	72.7	53.3
BGP703 LED22-4S/727	2002	15.6	128.3	0.211	0.037	0.028	0.028	0.020	108.0	81.0	81.0	59.4
BGP703 LED22-4S/830	2002	15.6	128.3	0.211	0.037	0.028	0.028	0.020	108.0	81.0	81.0	59.4
BGP703 LED22-4S/722	2002	17.4	115.1	0.235	0.041	0.031	0.031	0.023	120.4	90.3	90.3	66.2
BGP703 LED24-4S/740	2184	14.4	151.7	0.195	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED24-4S/730	2184	15.2	143.7	0.205	0.033	0.025	0.025	0.018	96.4	72.3	72.3	53.0

BGP703 LED24-4S/727	2184	17	128.5	0.230	0.037	0.028	0.028	0.020	107.9	80.9	80.9	59.3
BGP703 LED24-4S/830	2184	17	128.5	0.230	0.037	0.028	0.028	0.020	107.9	80.9	80.9	59.3
BGP703 LED24-4S/722	2184	19	114.9	0.257	0.041	0.031	0.031	0.023	120.6	90.4	90.4	66.3
BGP703 LED27-4S/740	2457	16.2	151.7	0.219	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED27-4S/730	2457	17	144.5	0.230	0.033	0.025	0.025	0.018	95.9	71.9	71.9	52.7
BGP703 LED27-4S/727	2457	19	129.3	0.257	0.037	0.027	0.027	0.020	107.2	80.4	80.4	58.9
BGP703 LED27-4S/830	2457	19	129.3	0.257	0.037	0.027	0.027	0.020	107.2	80.4	80.4	58.9
BGP703 LED27-4S/722	2457	21	117.0	0.284	0.040	0.030	0.030	0.022	118.4	88.8	88.8	65.1
BGP703 LED30-4S/740	2730	17.8	153.4	0.241	0.031	0.023	0.023	0.017	90.4	67.8	67.8	49.7
BGP703 LED30-4S/730	2730	19	143.7	0.257	0.033	0.025	0.025	0.018	96.4	72.3	72.3	53.0
BGP703 LED30-4S/727	2730	21	130.0	0.284	0.036	0.027	0.027	0.020	106.6	80.0	80.0	58.6
BGP703 LED30-4S/830	2730	21	130.0	0.284	0.036	0.027	0.027	0.020	106.6	80.0	80.0	58.6
BGP703 LED30-4S/722	2730	23.5	116.2	0.318	0.041	0.031	0.031	0.022	119.3	89.5	89.5	65.6
BGP703 LED35-4S/740	3185	21	151.7	0.284	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED35-4S/730	3185	22	144.8	0.297	0.033	0.025	0.025	0.018	95.7	71.8	71.8	52.6
BGP703 LED35-4S/727	3185	24.5	130.0	0.331	0.036	0.027	0.027	0.020	106.6	80.0	80.0	58.6
BGP703 LED35-4S/830	3185	25	127.4	0.338	0.037	0.028	0.028	0.020	108.8	81.6	81.6	59.8
BGP703 LED35-4S/722	3185	28	113.8	0.378	0.042	0.031	0.031	0.023	121.8	91.4	91.4	67.0
BGP703 LED40-4S/740	3640	24	151.7	0.324	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED40-4S/730	3640	25.5	142.7	0.345	0.033	0.025	0.025	0.018	97.1	72.8	72.8	53.4

BGP703 LED40-4S/727	3640	28.5	127.7	0.385	0.037	0.028	0.028	0.020	108.5	81.4	81.4	59.7
BGP703 LED40-4S/830	3640	28.5	127.7	0.385	0.037	0.028	0.028	0.020	108.5	81.4	81.4	59.7
BGP703 LED40-4S/722	3640	32	113.8	0.432	0.042	0.031	0.031	0.023	121.8	91.4	91.4	67.0
BGP703 LED45-4S/740	4095	27	151.7	0.365	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED45-4S/730	4095	28.5	143.7	0.385	0.033	0.025	0.025	0.018	96.4	72.3	72.3	53.0
BGP703 LED45-4S/727	4095	32.5	126.0	0.439	0.038	0.028	0.028	0.021	110.0	82.5	82.5	60.5
BGP703 LED45-4S/830	4095	32.5	126.0	0.439	0.038	0.028	0.028	0.021	110.0	82.5	82.5	60.5
BGP703 LED45-4S/722	4095	36.5	112.2	0.493	0.042	0.032	0.032	0.023	123.5	92.6	92.6	67.9
BGP703 LED50-4S/740	4550	30	151.7	0.405	0.031	0.023	0.023	0.017	91.4	68.5	68.5	50.3
BGP703 LED50-4S/730	4550	32	142.2	0.432	0.033	0.025	0.025	0.018	97.5	73.1	73.1	53.6
BGP703 LED50-4S/727	4550	36.5	124.7	0.493	0.038	0.028	0.028	0.021	111.2	83.4	83.4	61.1
BGP703 LED50-4S/830	4550	36.5	124.7	0.493	0.038	0.028	0.028	0.021	111.2	83.4	83.4	61.1
BGP703 LED50-4S/722	4550	38.5	118.2	0.520	0.040	0.030	0.030	0.022	117.3	87.9	87.9	64.5
BGP703 LED55-4S/740	5096	33.5	152.1	0.453	0.031	0.023	0.023	0.017	91.1	68.3	68.3	50.1
BGP703 LED55-4S/730	5096	36	141.6	0.486	0.033	0.025	0.025	0.018	97.9	73.4	73.4	53.8
BGP703 LED55-4S/727	5096	40.5	125.8	0.547	0.038	0.028	0.028	0.021	110.1	82.6	82.6	60.6
BGP703 LED55-4S/830	5096	38	134.1	0.514	0.035	0.026	0.026	0.019	103.3	77.5	77.5	56.8
BGP703 LED55-4S/722	5096	43	118.5	0.581	0.040	0.030	0.030	0.022	116.9	87.7	87.7	64.3
BGP703 LED60-4S/740	5460	37	147.6	0.500	0.032	0.024	0.024	0.018	93.9	70.4	70.4	51.7
BGP703 LED60-4S/730	5460	39.5	138.2	0.534	0.034	0.026	0.026	0.019	100.3	75.2	75.2	55.1

BGP703 LED60-4S/727	5460	41.5	131.6	0.561	0.036	0.027	0.027	0.020	105.3	79.0	79.0	57.9
BGP703 LED60-4S/830	5460	41.5	131.6	0.561	0.036	0.027	0.027	0.020	105.3	79.0	79.0	57.9
BGP703 LED60-4S/722	5400	47	114.9	0.635	0.041	0.031	0.031	0.023	120.6	90.5	90.5	66.3
BGP703 LED6-4S/830	552	5.1	108.2	0.069	0.044	0.033	0.033	0.024	128.0	96.0	96.0	70.4
BGP703 LED6-4S/722	546	5.6	97.5	0.076	0.049	0.036	0.036	0.027	142.1	106.6	106.6	78.2
BGP703 LED65-4S/740	6006	37.5	160.2	0.507	0.030	0.022	0.022	0.016	86.5	64.9	64.9	47.6
BGP703 LED65-4S/730	6006	40	150.2	0.541	0.032	0.024	0.024	0.017	92.3	69.2	69.2	50.8
BGP703 LED65-4S/727	6006	45.5	132.0	0.615	0.036	0.027	0.027	0.020	105.0	78.7	78.7	57.7
BGP703 LED65-4S/830	6006	45.5	132.0	0.615	0.036	0.027	0.027	0.020	105.0	78.7	78.7	57.7
BGP703 LED65-4S/722	5940	51	116.5	0.689	0.041	0.030	0.030	0.022	119.0	89.2	89.2	65.4
BGP703 LED70-4S/740	6370	41	155.4	0.554	0.030	0.023	0.023	0.017	89.2	66.9	66.9	49.1
BGP703 LED70-4S/730	6370	43.5	146.4	0.588	0.032	0.024	0.024	0.018	94.6	71.0	71.0	52.0
BGP703 LED70-4S/727	6300	49.5	127.3	0.669	0.037	0.028	0.028	0.020	108.9	81.7	81.7	59.9
BGP703 LED70-4S/830	6300	49.5	127.3	0.669	0.037	0.028	0.028	0.020	108.9	81.7	81.7	59.9
BGP703 LED70-4S/722	6300	56	112.5	0.757	0.042	0.032	0.032	0.023	123.2	92.4	92.4	67.8
BGP703 LED75-4S/740	6916	44	157.2	0.595	0.030	0.023	0.023	0.017	88.2	66.1	66.1	48.5
BGP703 LED75-4S/730	6916	47	147.1	0.635	0.032	0.024	0.024	0.018	94.2	70.6	70.6	51.8
BGP703 LED75-4S/727	6840	53	129.1	0.716	0.037	0.027	0.027	0.020	107.4	80.5	80.5	59.1
BGP703 LED75-4S/830	6840	53	129.1	0.716	0.037	0.027	0.027	0.020	107.4	80.5	80.5	59.1
BGP703 LED75-4S/722	6840	61	112.1	0.824	0.042	0.032	0.032	0.023	123.6	92.7	92.7	68.0

BGP703 LED80-4S/740	7280	47.5	153.3	0.642	0.031	0.023	0.023	0.017	90.4	67.8	67.8	49.7
BGP703 LED80-4S/730	7200	51	141.2	0.689	0.034	0.025	0.025	0.018	98.2	73.6	73.6	54.0
BGP703 LED80-4S/727	7200	58	124.1	0.784	0.038	0.029	0.029	0.021	111.6	83.7	83.7	61.4
BGP703 LED80-4S/830	7200	58	124.1	0.784	0.038	0.029	0.029	0.021	111.6	83.7	83.7	61.4
BGP703 LED80-4S/722	7200	62	116.1	0.838	0.041	0.031	0.031	0.022	119.3	89.5	89.5	65.6
BGP703 LED85-4S/740	7826	48.5	161.4	0.655	0.029	0.022	0.022	0.016	85.9	64.4	64.4	47.2
BGP703 LED85-4S/730	7740	52	148.8	0.703	0.032	0.024	0.024	0.017	93.1	69.8	69.8	51.2
BGP703 LED85-4S/727	7740	59	131.2	0.797	0.036	0.027	0.027	0.020	105.6	79.2	79.2	58.1
BGP703 LED85-4S/830	7740	59	131.2	0.797	0.036	0.027	0.027	0.020	105.6	79.2	79.2	58.1
BGP703 LED85-4S/722	7740	66	117.3	0.892	0.040	0.030	0.030	0.022	118.2	88.6	88.6	65.0
BGP703 LED90-4S/740	8100	52	155.8	0.703	0.030	0.023	0.023	0.017	89.0	66.7	66.7	48.9
BGP703 LED90-4S/730	8100	55	147.3	0.743	0.032	0.024	0.024	0.018	94.1	70.6	70.6	51.8
BGP703 LED90-4S/727	8100	62	130.6	0.838	0.036	0.027	0.027	0.020	106.1	79.6	79.6	58.3
BGP703 LED90-4S/830	8100	62	130.6	0.838	0.036	0.027	0.027	0.020	106.1	79.6	79.6	58.3
BGP703 LED90-4S/722	8100	71	114.1	0.959	0.041	0.031	0.031	0.023	121.5	91.1	91.1	66.8
BGP703 LED95-4S/740	8640	55	157.1	0.743	0.030	0.023	0.023	0.017	88.2	66.2	66.2	48.5
BGP703 LED95-4S/730	8640	58	149.0	0.784	0.032	0.024	0.024	0.017	93.0	69.8	69.8	51.2
BGP703 LED95-4S/727	8640	66	130.9	0.892	0.036	0.027	0.027	0.020	105.9	79.4	79.4	58.2
BGP703 LED95-4S/830	8640	66	130.9	0.892	0.036	0.027	0.027	0.020	105.9	79.4	79.4	58.2
BGP703 LED95-4S/722	8640	75	115.2	1.014	0.041	0.031	0.031	0.023	120.3	90.2	90.2	66.2

BGP703 LED100-4S/740	9000	58	155.2	0.784	0.030	0.023	0.023	0.017	89.3	67.0	67.0	49.1
BGP703 LED100-4S/730	9000	62	145.2	0.838	0.033	0.024	0.024	0.018	95.5	71.6	71.6	52.5
BGP703 LED100-4S/727	9000	70	128.6	0.946	0.037	0.028	0.028	0.020	107.8	80.8	80.8	59.3
BGP703 LED100-4S/830	9000	70	128.6	0.946	0.037	0.028	0.028	0.020	107.8	80.8	80.8	59.3
BGP703 LED100-4S/722	8900	80	111.3	1.081	0.043	0.032	0.032	0.023	124.6	93.4	93.4	68.5
BGP703 LED110-4S/740	9900	64	154.7	0.865	0.031	0.023	0.023	0.017	89.6	67.2	67.2	49.3
BGP703 LED110-4S/730	9900	69	143.5	0.932	0.033	0.025	0.025	0.018	96.6	72.4	72.4	53.1
BGP703 LED110-4S/727	9900	79	125.3	1.068	0.038	0.028	0.028	0.021	110.6	82.9	82.9	60.8
BGP703 LED110-4S/830	9900	79	125.3	1.068	0.038	0.028	0.028	0.021	110.6	82.9	82.9	60.8
BGP703 LED110-4S/722	9790	90	108.8	1.216	0.043	0.033	0.033	0.024	127.4	95.5	95.5	70.1
BGP703 LED120-4S/740	10800	71	152.1	0.959	0.031	0.023	0.023	0.017	91.1	68.3	68.3	50.1
BGP703 LED120-4S/730	10800	76	142.1	1.027	0.033	0.025	0.025	0.018	97.5	73.1	73.1	53.6
BGP703 LED120-4S/727	10680	87	122.8	1.176	0.039	0.029	0.029	0.021	112.9	84.7	84.7	62.1
BGP703 LED120-4S/830	10680	87	122.8	1.176	0.039	0.029	0.029	0.021	112.9	84.7	84.7	62.1
BGP703 LED120-4S/722	10680	99	107.9	1.338	0.044	0.033	0.033	0.024	128.5	96.3	96.3	70.7
BGP703 LED130-4S/740	11700	78	150.0	1.054	0.032	0.024	0.024	0.017	92.4	69.3	69.3	50.8
BGP703 LED130-4S/730	11570	84	137.7	1.135	0.034	0.026	0.026	0.019	100.6	75.5	75.5	55.3
BGP703 LED130-4S/727	11570	96	120.5	1.297	0.039	0.029	0.029	0.022	115.0	86.2	86.2	63.2
BGP703 LED130-4S/830	11570	96	120.5	1.297	0.039	0.029	0.029	0.022	115.0	86.2	86.2	63.2
BGP703 LED130-4S/722	11440	116	98.6	1.568	0.048	0.036	0.036	0.026	140.5	105.4	105.4	77.3

BGP703 LED140-4S/740	12460	85	146.6	1.149	0.032	0.024	0.024	0.018	94.5	70.9	70.9	52.0
BGP703 LED140-4S/730	12460	92	135.4	1.243	0.035	0.026	0.026	0.019	102.3	76.7	76.7	56.3
BGP703 LED140-4S/727	12460	104	119.8	1.405	0.039	0.030	0.030	0.022	115.7	86.8	86.8	63.6
BGP703 LED140-4S/830	12460	104	119.8	1.405	0.039	0.030	0.030	0.022	115.7	86.8	86.8	63.6
BGP703 LED150-4S/740	13350	93	143.5	1.257	0.033	0.025	0.025	0.018	96.5	72.4	72.4	53.1
BGP703 LED150-4S/730	13350	99	134.8	1.338	0.035	0.026	0.026	0.019	102.8	77.1	77.1	56.5
BGP703 LED150-4S/727	13200	114	115.8	1.541	0.041	0.031	0.031	0.022	119.7	89.8	89.8	65.8
BGP703 LED150-4S/830	13200	114	115.8	1.541	0.041	0.031	0.031	0.022	119.7	89.8	89.8	65.8
BGP703 LED160-4S/740	14240	100	142.4	1.351	0.033	0.025	0.025	0.018	97.3	73.0	73.0	53.5
BGP703 LED160-4S/730	14080	108	130.4	1.459	0.036	0.027	0.027	0.020	106.3	79.7	79.7	58.5
BGP703 LED169-4S/740	15130	106	142.7	1.432	0.033	0.025	0.025	0.018	97.1	72.8	72.8	53.4
BGP703 LED169-4S/730	14960	118	126.8	1.595	0.037	0.028	0.028	0.021	109.3	82.0	82.0	60.1

** Note that if the product is non-dimmable, only the values for "NC (No Control)" are valid; if the driver type is PSU, only the values for "NC (No Control)"and "PS (presence sensing)" for are valid.*

ANNEX

USE PHASE (B6) VALUES FOR DIFFERENT COUNTRY MIX

The table in this annex is useful for conversion and comparison of B6 values with other energy country mix. The Global Warming Potential Total (GWP tot) value is illustrated for each country. The value refers to 1 kwh.

Example on how to use the table:

This EPD was done according to a specific customer use location that can be read in the paragraph **PRODUCT USE AND MAINTENANCE (B1-B7).**

If for example the EPD was done according to EU energy mix and you want to see how the GWP total changes according to a Finland country energy mix, you can take the original value in the results table here highlighed in yellow:

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	5,88E+00	2,61E-01	-1,25E-01	6,02E+00	3,02E-01	5,41E-01	MND	MND	MND	MND	MND	4,06E+02	MND	MNR	1,77E-02	2,62E-01	1,88E-01	-1,09E+01

Divide that value according to the EU value from the following table (EU = 3,96E-01) and then multilplying for the Finland value from the same table (FINLAND = 2,70E-01).

Thus, the calculation of this example would be:

New B6 GWP tot for Finland = (4,06E+02 / 3,96E-01) x 2,70E-01 = 2,76 E+02

Country	GWP tot (kg CO2 eq. per kwh)
AUSTRALIA	9,59E-01
AUSTRIA	3,37E-01
BELGIUM	2,63E-01
CHINA	1,14E+00
DENMARK	2,91E-01
EU	3,96E-01
FINLAND	2,70E-01
FRANCE	8,77E-02
GERMANY	5,32E-01
HUNGARY	4,67E-01
IRELAND	4,26E-01
ITALY	3,94E-01
LATAM	3,50E-01
NAM	4,83E-01
NETHERLANDS	5,88E-01
NORWAY	2,59E-02
POLAND	1,05E+00

PORTUGAL	4,22E-01
ROW	7,32E-01
SPAIN	3,34E-01
SWEDEN	4,95E-02
SWITZERLAND	5,38E-02
UK	3,17E-01

Source Ecoinvent 3.8