ENVIRONMENTAL PRODUCT DECLARATION

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

Philips Luma gen2 micro

BGP702
Signify N.V.

EPD HUB
Publishing date 2024-02-14

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 Micro
Additional labels	BGP702 LED60-4S/740 I DM11 GR PSU 62
Product reference	910925867227
Place of production	Poland
Period for data	2022
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of 5400 lumens over 100000 hours
Declared unit mass	8.534 kg
GWP-fossil, A1-A3 (kgCO2e)	1.55E+02
GWP-total, A1-A3 (kgCO2e)	1.53E+02
Secondary material, inputs (%)	6.47
Secondary material, outputs (%)	49.9
Total energy use, A1-A3 (kWh)	483.0
Total water use, A1-A3 (m3e)	7.22E-01

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.

Footer_input

For more information, please visit
https://www.lighting.philips.com/link/BGP701/fam/aa/en

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	64.56	EU , APAC
Minerals	8.44	EU
Fossil materials	27.01	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	0.285

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Product
Mass per declared unit	8.534 kg

Functional unit	1 unit of 5400 lumens over 100000 hours
Reference service life	100000 hours

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)

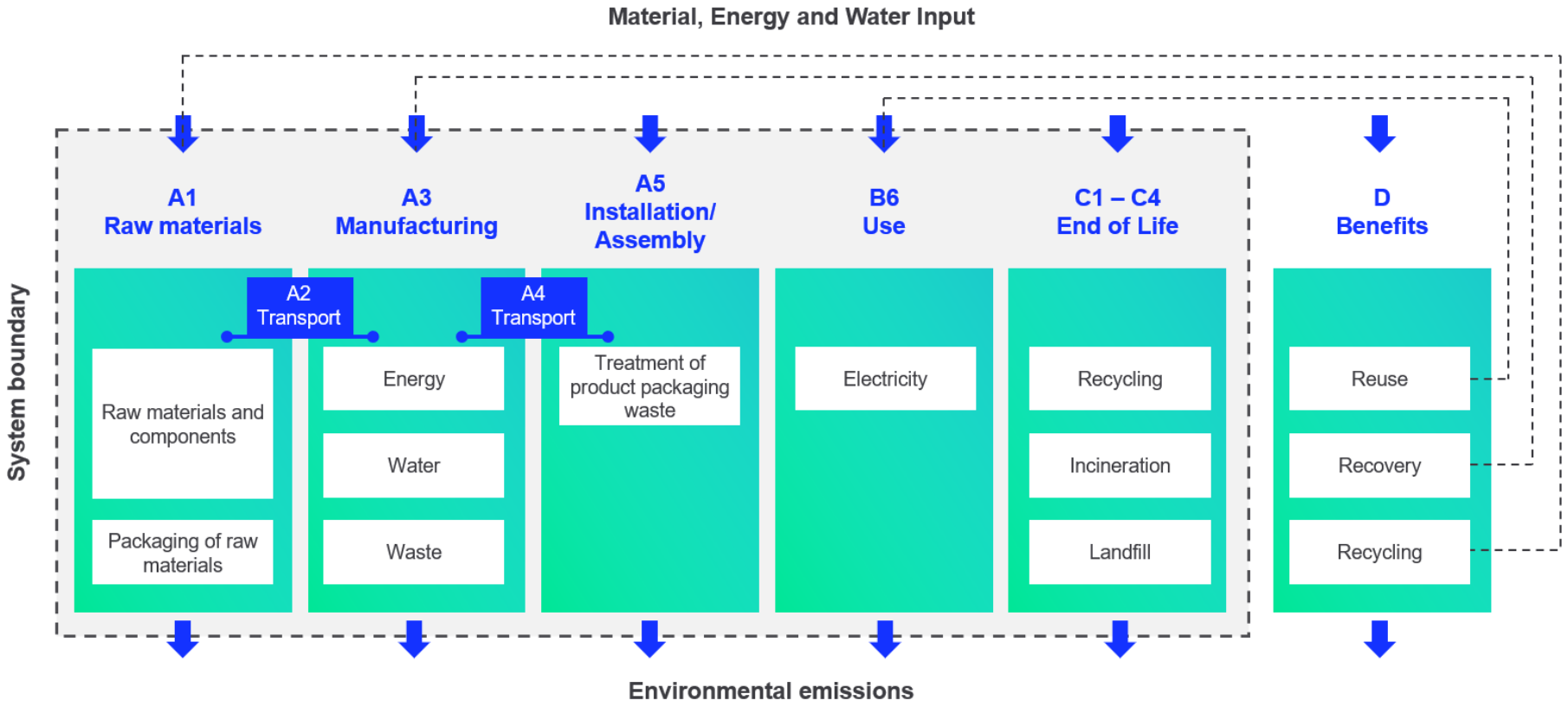
During the use phase, the product consumes electricity from Europe's electricity grid mix (B6). The total power consumption of the reference product is calculated as follows: Wattage x Reference lifetime = kWh consumed throughout the entire use phase B6.

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
Packaging materials	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	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	1.51E+02	1.74E+00	1.33E-01	1.53E+02	1.74E+00	1.08E+00	MNR	MNR	MNR	MNR	MNR	1.51E+03	MNR	MNR	1.23E-01	2.47E+00	1.31E+00	-7.13E+01
GWP – fossil	kg CO_2e	1.52E+02	1.74E+00	1.16E+00	1.55E+02	1.74E+00	4.88E-02	MNR	MNR	MNR	MNR	MNR	1.50E+03	MNR	MNR	1.23E-01	2.47E+00	1.31E+00	-7.13E+01
GWP – biogenic	kg CO_2e	-5.95E-01	0.00E+00	-1.03E+00	-1.62E+00	6.72E-04	1.03E+00	MNR	MNR	MNR	MNR	MNR	-1.78E-15	MNR	MNR	0.00E+00	0.00E+00	0.00E+00	-1.31E-02
GWP – LULUC	kg CO_2e	1.01E-01	7.33E-04	6.08E-03	1.07E-01	6.41E-04	9.50E-06	MNR	MNR	MNR	MNR	MNR	3.51E+00	MNR	MNR	4.53E-05	1.76E-04	1.02E-04	-7.35E-03
Ozone depletion pot.	kg CFC_{-11}e	2.10E-05	3.92E-07	1.37E-07	2.15E-05	3.99E-07	2.74E-09	MNR	MNR	MNR	MNR	MNR	7.63E-05	MNR	MNR	2.83E-08	1.65E-08	1.25E-08	-1.94E-06
Acidification potential	mol H^+e	1.39E+00	1.46E-02	5.01E-03	1.41E+00	7.35E-03	2.18E-04	MNR	MNR	MNR	MNR	MNR	8.58E+00	MNR	MNR	5.20E-04	1.75E-03	6.71E-04	-7.72E-01
EP-freshwater[2)]	kg Pe	1.02E-02	1.30E-05	5.16E-05	1.02E-02	1.42E-05	2.88E-07	MNR	MNR	MNR	MNR	MNR	1.59E-01	MNR	MNR	1.01E-06	5.60E-06	2.72E-06	-4.65E-03
EP-marine	kg Ne	1.69E-01	3.91E-03	2.15E-03	1.75E-01	2.19E-03	9.31E-05	MNR	MNR	MNR	MNR	MNR	1.14E+00	MNR	MNR	1.55E-04	5.08E-04	5.57E-04	-8.11E-02
EP-terrestrial	mol Ne	1.89E+00	4.33E-02	1.40E-02	1.94E+00	2.41E-02	9.64E-04	MNR	MNR	MNR	MNR	MNR	1.29E+01	MNR	MNR	1.71E-03	5.54E-03	2.53E-03	-9.43E-01
POCP ("smog")[3)]	kg NMVOCe	5.66E-01	1.25E-02	4.23E-03	5.83E-01	7.71E-03	2.41E-04	MNR	MNR	MNR	MNR	MNR	3.54E+00	MNR	MNR	5.45E-04	1.44E-03	7.39E-04	-2.72E-01
ADP-minerals & metals[4)]	kg Sbe	4.58E-03	3.83E-06	6.29E-06	4.59E-03	4.07E-06	8.97E-08	MNR	MNR	MNR	MNR	MNR	1.40E-02	MNR	MNR	2.88E-07	1.17E-05	2.73E-07	-2.11E-03
ADP-fossil resources	MJ	1.67E+03	2.55E+01	1.58E+01	1.71E+03	2.61E+01	2.16E-01	MNR	MNR	MNR	MNR	MNR	3.20E+04	MNR	MNR	1.84E+00	1.80E+00	1.17E+00	-6.98E+02
Water use[5)]	m^3e depr.	3.02E+01	1.09E-01	5.33E-01	3.09E+01	1.17E-01	5.03E-02	MNR	MNR	MNR	MNR	MNR	8.73E+02	MNR	MNR	8.25E-03	1.17E-01	9.10E-02	-5.20E+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	9.07E-06	1.79E-07	9.23E-08	9.35E-06	2.00E-07	2.01E-09	MNR	MNR	MNR	MNR	MNR	2.82E-05	MNR	MNR	1.42E-08	1.88E-08	9.36E-09	-4.01E-06
Ionizing radiation[6)]	kBq U235e	9.78E+00	1.21E-01	4.50E-02	9.95E+00	1.24E-01	7.70E-04	MNR	MNR	MNR	MNR	MNR	8.65E+02	MNR	MNR	8.78E-03	1.04E-02	5.69E-03	-4.20E+00

Ecotoxicity (freshwater)	CTUe	4.89E+03	2.20E+01	4.14E+01	4.95E+03	2.35E+01	1.43E+00	MNR	MNR	MNR	MNR	MNR	2.17E+04	MNR	MNR	1.66E+00	1.09E+01	4.78E+02	-1.87E+03
Human toxicity, cancer	CTUh	1.91E-07	6.45E-10	8.29E-10	1.92E-07	5.76E-10	6.81E-11	MNR	MNR	MNR	MNR	MNR	7.12E-07	MNR	MNR	4.08E-11	3.84E-10	1.67E-09	-7.73E-09
Human tox. non-cancer	CTUh	5.12E-06	2.11E-08	1.41E-08	5.15E-06	2.32E-08	2.85E-09	MNR	MNR	MNR	MNR	MNR	2.34E-05	MNR	MNR	1.64E-09	1.56E-08	1.08E-07	-2.30E-06
SQP[7)]	-	4.64E+02	2.61E+01	3.55E+01	5.25E+02	3.00E+01	1.19E-01	MNR	MNR	MNR	MNR	MNR	5.78E+03	MNR	MNR	2.13E+00	2.60E+00	1.65E+00	-1.54E+02

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

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	7.88E+01	2.73E-01	1.25E+01	9.16E+01	2.94E-01	6.93E-03	MNR	MNR	MNR	MNR	MNR	6.51E+03	MNR	MNR	2.08E-02	2.21E-01	4.77E-02	-1.27E+01
Renew. PER as material	MJ	5.50E+00	0.00E+00	9.09E+00	1.46E+01	0.00E+00	-9.09E+00	MNR	MNR	MNR	MNR	MNR	0.00E+00	MNR	MNR	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renew. PER	MJ	8.43E+01	2.73E-01	2.16E+01	1.06E+02	2.94E-01	-9.08E+00	MNR	MNR	MNR	MNR	MNR	6.51E+03	MNR	MNR	2.08E-02	2.21E-01	4.77E-02	-1.27E+01
Non-re. PER as energy	MJ	1.61E+03	2.55E+01	1.50E+01	1.65E+03	2.61E+01	2.16E-01	MNR	MNR	MNR	MNR	MNR	3.19E+04	MNR	MNR	1.84E+00	1.80E+00	1.17E+00	-6.98E+02
Non-re. PER as material	MJ	5.54E+01	0.00E+00	5.27E-01	5.59E+01	0.00E+00	-5.27E-01	MNR	MNR	MNR	MNR	MNR	0.00E+00	MNR	MNR	0.00E+00	-2.39E+01	-2.39E+01	0.00E+00
Total use of non-re. PER	MJ	1.66E+03	2.55E+01	1.55E+01	1.70E+03	2.61E+01	-3.11E-01	MNR	MNR	MNR	MNR	MNR	3.19E+04	MNR	MNR	1.84E+00	-2.21E+01	-2.27E+01	-6.98E+02
Secondary materials	kg	5.53E-01	7.65E-03	6.61E-01	1.22E+00	7.24E-03	2.55E-04	MNR	MNR	MNR	MNR	MNR	3.29E+00	MNR	MNR	5.12E-04	1.70E-03	2.83E-03	2.94E+00
Renew. secondary fuels	MJ	9.83E-02	6.63E-05	4.71E-02	1.45E-01	7.31E-05	4.06E-06	MNR	MNR	MNR	MNR	MNR	2.67E-02	MNR	MNR	5.17E-06	8.51E-05	2.46E-05	-2.08E-03
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	7.06E-01	3.09E-03	1.26E-02	7.22E-01	3.38E-03	8.34E-04	MNR	MNR	MNR	MNR	MNR	2.75E+01	MNR	MNR	2.39E-04	4.17E-03	2.16E-03	-2.40E-01

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	2.37E+01	3.39E-02	6.20E-02	2.38E+01	3.46E-02	1.91E-03	MNR	MNR	MNR	MNR	MNR	1.15E+02	MNR	MNR	2.45E-03	1.02E-02	6.53E-02	-1.13E+01
Non-hazardous waste	kg	3.88E+02	5.20E-01	1.09E+00	3.90E+02	5.68E-01	6.73E-01	MNR	MNR	MNR	MNR	MNR	7.26E+03	MNR	MNR	4.02E-02	1.30E+00	3.22E+00	-2.20E+02
Radioactive waste	kg	3.67E-03	1.72E-04	2.69E-05	3.87E-03	1.74E-04	3.72E-07	MNR	MNR	MNR	MNR	MNR	2.33E-01	MNR	MNR	1.23E-05	5.88E-06	0.00E+00	-1.54E-03

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	4.26E+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	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	2.92E-01	2.92E-01	0.00E+00	0.00E+00	MNR	MNR	MNR	MNR	MNR	0.00E+00	MNR	MNR	0.00E+00	2.18E+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	1.49E+02	1.72E+00	1.19E+00	1.52E+02	1.72E+00	4.75E-02	MNR	MNR	MNR	MNR	MNR	1.49E+03	MNR	MNR	1.22E-01	2.46E+00	1.41E+00	-6.99E+01
Ozone depletion Pot.	kg CFC_{-11}e	1.53E-05	3.10E-07	1.16E-07	1.57E-05	3.16E-07	2.39E-09	MNR	MNR	MNR	MNR	MNR	6.61E-05	MNR	MNR	2.24E-08	1.38E-08	1.03E-08	-1.65E-06
Acidification	kg SO_2e	1.19E+00	1.15E-02	3.72E-03	1.21E+00	5.71E-03	1.59E-04	MNR	MNR	MNR	MNR	MNR	7.28E+00	MNR	MNR	4.04E-04	1.36E-03	5.07E-04	-6.67E-01
Eutrophication	kg PO_4^3e	3.75E-01	1.85E-03	2.54E-03	3.80E-01	1.30E-03	1.19E-04	MNR	MNR	MNR	MNR	MNR	5.60E+00	MNR	MNR	9.20E-05	5.92E-04	4.83E-03	-1.86E-01

POCP (“smog”)	kg C_2H_4e	6.33E-02	3.61E-04	3.14E-04	6.39E-02	2.23E-04	4.88E-06	MNR	MNR	MNR	MNR	MNR	2.98E-01	MNR	MNR	1.58E-05	4.57E-05	5.89E-05	-3.23E-02
ADP-elements	kg Sbe	4.55E-03	3.71E-06	5.62E-06	4.56E-03	3.94E-06	7.05E-08	MNR	MNR	MNR	MNR	MNR	1.40E-02	MNR	MNR	2.79E-07	1.16E-05	2.41E-07	-2.10E-03
ADP-fossil	MJ	1.66E+03	2.55E+01	1.57E+01	1.70E+03	2.61E+01	2.16E-01	MNR	MNR	MNR	MNR	MNR	3.19E+04	MNR	MNR	1.84E+00	1.80E+00	1.17E+00	-6.98E+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
BGP702 LED8-4S/740	728.0	5.6	130.0	0.151	0.151	0.113	0.113	0.083	228.0	170.6	170.6	125.3
BGP702 LED8-4S/730	728.0	5.9	123.4	0.159	0.159	0.119	0.119	0.087	240.1	179.7	179.7	131.4
BGP702 LED8-4S/727	728.0	6.5	112.0	0.176	0.176	0.132	0.132	0.097	265.8	199.3	199.3	146.5
BGP702 LED8-4S/830	728.0	6.5	112.0	0.176	0.176	0.132	0.132	0.097	265.8	199.3	199.3	146.5
BGP702 LED8-4S/722	728.0	7.1	102.5	0.192	0.192	0.144	0.144	0.106	289.9	217.4	217.4	160.1
BGP702 LED6-4S/830	546.0	5.1	107.1	0.138	0.138	0.104	0.104	0.076	208.4	157.0	157.0	114.8
BGP702 LED6-4S/722	546.0	5.6	97.5	0.151	0.151	0.113	0.113	0.083	228.0	170.6	170.6	125.3
BGP702 LED10-4S/740	910.0	6.8	133.8	0.184	0.184	0.138	0.138	0.101	277.8	208.4	208.4	152.5
BGP702 LED10-4S/730	910.0	7.1	128.2	0.192	0.192	0.144	0.144	0.106	289.9	217.4	217.4	160.1
BGP702 LED10-4S/727	910.0	7.9	115.2	0.214	0.214	0.161	0.161	0.118	323.1	243.1	243.1	178.2
BGP702 LED10-4S/830	910.0	7.7	118.2	0.208	0.208	0.156	0.156	0.114	314.1	235.6	235.6	172.1
BGP702 LED10-4S/722	910.0	8.5	107.1	0.23	0.23	0.173	0.173	0.127	347.3	261.2	261.2	191.8

BGP702 LED12-4S/740	1092.0	7.8	140.0	0.211	0.211	0.158	0.158	0.116	318.6	238.6	238.6	175.2
BGP702 LED12-4S/730	1092.0	8.2	133.2	0.222	0.222	0.167	0.167	0.122	335.2	252.2	252.2	184.2
BGP702 LED12-4S/727	1092.0	9.1	120.0	0.246	0.246	0.184	0.184	0.135	371.5	277.8	277.8	203.9
BGP702 LED12-4S/830	1092.0	9.1	120.0	0.246	0.246	0.184	0.184	0.135	371.5	277.8	277.8	203.9
BGP702 LED12-4S/722	1092.0	10.2	107.1	0.276	0.276	0.207	0.207	0.152	416.8	312.6	312.6	229.5
BGP702 LED14-4S/740	1274.0	9.0	141.6	0.243	0.243	0.182	0.182	0.134	366.9	274.8	274.8	202.3
BGP702 LED14-4S/730	1274.0	9.5	134.1	0.257	0.257	0.193	0.193	0.141	388.1	291.4	291.4	212.9
BGP702 LED14-4S/727	1274.0	10.6	120.2	0.286	0.286	0.214	0.214	0.157	431.9	323.1	323.1	237.1
BGP702 LED14-4S/830	1274.0	10.6	120.2	0.286	0.286	0.214	0.214	0.157	431.9	323.1	323.1	237.1
BGP702 LED14-4S/722	1274.0	11.6	109.8	0.314	0.314	0.235	0.235	0.173	474.1	354.8	354.8	261.2
BGP702 LED16-4S/740	1456.0	10.2	142.7	0.276	0.276	0.207	0.207	0.152	416.8	312.6	312.6	229.5
BGP702 LED16-4S/730	1456.0	10.8	134.8	0.292	0.292	0.219	0.219	0.161	440.9	330.7	330.7	243.1
BGP702 LED16-4S/727	1456.0	11.8	123.4	0.319	0.319	0.239	0.239	0.175	481.7	360.9	360.9	264.2
BGP702 LED16-4S/830	1456.0	11.8	123.4	0.319	0.319	0.239	0.239	0.175	481.7	360.9	360.9	264.2
BGP702 LED16-4S/722	1456.0	13.4	108.7	0.362	0.362	0.271	0.271	0.199	546.6	409.2	409.2	300.5
BGP702 LED18-4S/740	1638.0	11.4	143.7	0.308	0.308	0.231	0.231	0.169	465.1	348.8	348.8	255.2
BGP702 LED18-4S/730	1638.0	12.0	136.5	0.324	0.324	0.243	0.243	0.178	489.2	366.9	366.9	268.8
BGP702 LED18-4S/727	1638.0	13.4	122.2	0.362	0.362	0.271	0.271	0.199	546.6	409.2	409.2	300.5
BGP702 LED18-4S/830	1638.0	13.4	122.2	0.362	0.362	0.271	0.271	0.199	546.6	409.2	409.2	300.5
BGP702 LED18-4S/722	1638.0	15.0	109.2	0.405	0.405	0.304	0.304	0.223	611.6	459.0	459.0	336.7
BGP702 LED20-4S/740	1820.0	12.6	144.4	0.341	0.341	0.256	0.256	0.188	514.9	386.6	386.6	283.9
BGP702 LED20-4S/730	1820.0	13.4	135.8	0.362	0.362	0.271	0.271	0.199	546.6	409.2	409.2	300.5
BGP702 LED20-4S/727	1820.0	15.0	121.3	0.405	0.405	0.304	0.304	0.223	611.6	459.0	459.0	336.7
BGP702 LED20-4S/830	1820.0	14.2	128.2	0.384	0.384	0.288	0.288	0.211	579.8	434.9	434.9	318.6

BGP702 LED20-4S/722	1820.0	15.8	115.2	0.427	0.427	0.32	0.32	0.235	644.8	483.2	483.2	354.8
BGP702 LED22-4S/740	2002.0	13.8	145.1	0.373	0.373	0.28	0.28	0.205	563.2	422.8	422.8	309.5
BGP702 LED22-4S/730	2002.0	14.0	143.0	0.378	0.378	0.283	0.283	0.208	570.8	427.3	427.3	314.1
BGP702 LED22-4S/727	2002.0	15.6	128.3	0.422	0.422	0.317	0.317	0.232	637.2	478.7	478.7	350.3
BGP702 LED22-4S/830	2002.0	15.6	128.3	0.422	0.422	0.317	0.317	0.232	637.2	478.7	478.7	350.3
BGP702 LED22-4S/722	2002.0	17.4	115.1	0.47	0.47	0.352	0.352	0.259	709.7	531.5	531.5	391.1
BGP702 LED24-4S/740	2184.0	14.4	151.7	0.389	0.389	0.292	0.292	0.214	587.4	440.9	440.9	323.1
BGP702 LED24-4S/730	2184.0	15.2	143.7	0.411	0.411	0.308	0.308	0.226	620.6	465.1	465.1	341.3
BGP702 LED24-4S/727	2184.0	17.0	128.5	0.459	0.459	0.344	0.344	0.252	693.1	519.4	519.4	380.5
BGP702 LED24-4S/830	2184.0	17.0	128.5	0.459	0.459	0.344	0.344	0.252	693.1	519.4	519.4	380.5
BGP702 LED24-4S/722	2184.0	19.0	114.9	0.514	0.514	0.386	0.386	0.283	776.1	582.9	582.9	427.3
BGP702 LED27-4S/740	2457.0	16.2	151.7	0.438	0.438	0.329	0.329	0.241	661.4	496.8	496.8	363.9
BGP702 LED27-4S/730	2457.0	17.0	144.5	0.459	0.459	0.344	0.344	0.252	693.1	519.4	519.4	380.5
BGP702 LED27-4S/727	2457.0	19.0	129.3	0.514	0.514	0.386	0.386	0.283	776.1	582.9	582.9	427.3
BGP702 LED27-4S/830	2457.0	19.0	129.3	0.514	0.514	0.386	0.386	0.283	776.1	582.9	582.9	427.3
BGP702 LED27-4S/722	2457.0	21.0	117.0	0.568	0.568	0.426	0.426	0.312	857.7	643.3	643.3	471.1
BGP702 LED30-4S/740	2730.0	17.8	153.4	0.481	0.481	0.361	0.361	0.265	726.3	545.1	545.1	400.2
BGP702 LED30-4S/730	2730.0	19.0	143.7	0.514	0.514	0.386	0.386	0.283	776.1	582.9	582.9	427.3
BGP702 LED30-4S/727	2730.0	21.0	130.0	0.568	0.568	0.426	0.426	0.312	857.7	643.3	643.3	471.1
BGP702 LED30-4S/830	2730.0	21.0	130.0	0.568	0.568	0.426	0.426	0.312	857.7	643.3	643.3	471.1
BGP702 LED30-4S/722	2730.0	23.5	116.2	0.635	0.635	0.476	0.476	0.349	958.9	718.8	718.8	527.0
BGP702 LED35-4S/740	3185.0	21.0	151.7	0.568	0.568	0.426	0.426	0.312	857.7	643.3	643.3	471.1
BGP702 LED35-4S/730	3185.0	22.0	144.8	0.595	0.595	0.446	0.446	0.327	898.4	673.5	673.5	493.8
BGP702 LED35-4S/727	3185.0	24.5	130.0	0.662	0.662	0.497	0.497	0.364	999.6	750.5	750.5	549.6

BGP702 LED35-4S/830	3185.0	24.5	130.0	0.662	0.662	0.497	0.497	0.364	999.6	750.5	750.5	549.6
BGP702 LED35-4S/722	3185.0	28.0	113.8	0.757	0.757	0.568	0.568	0.416	1143.1	857.7	857.7	628.2
BGP702 LED40-4S/740	3640.0	24.0	151.7	0.649	0.649	0.487	0.487	0.357	980.0	735.4	735.4	539.1
BGP702 LED40-4S/730	3640.0	25.5	142.7	0.689	0.689	0.517	0.517	0.379	1040.4	780.7	780.7	572.3
BGP702 LED40-4S/727	3640.0	28.5	127.7	0.77	0.77	0.578	0.578	0.424	1162.7	872.8	872.8	640.2
BGP702 LED40-4S/830	3640.0	28.5	127.7	0.77	0.77	0.578	0.578	0.424	1162.7	872.8	872.8	640.2
BGP702 LED40-4S/722	3600.0	32.0	112.5	0.865	0.865	0.649	0.649	0.476	1306.2	980.0	980.0	718.8
BGP702 LED45-4S/740	4095.0	27.0	151.7	0.73	0.73	0.547	0.547	0.402	1102.3	826.0	826.0	607.0
BGP702 LED45-4S/730	4095.0	28.5	143.7	0.77	0.77	0.578	0.578	0.424	1162.7	872.8	872.8	640.2
BGP702 LED45-4S/727	4050.0	32.5	124.6	0.878	0.878	0.658	0.658	0.483	1325.8	993.6	993.6	729.3
BGP702 LED45-4S/830	4050.0	32.5	124.6	0.878	0.878	0.658	0.658	0.483	1325.8	993.6	993.6	729.3
BGP702 LED45-4S/722	4050.0	36.5	111.0	0.986	0.986	0.74	0.74	0.542	1488.9	1117.4	1117.4	818.4
BGP702 LED50-4S/740	4500.0	30.0	150.0	0.811	0.811	0.608	0.608	0.446	1224.6	918.1	918.1	673.5
BGP702 LED50-4S/730	4500.0	32.0	140.6	0.865	0.865	0.649	0.649	0.476	1306.2	980.0	980.0	718.8
BGP702 LED50-4S/727	4500.0	36.5	123.3	0.986	0.986	0.74	0.74	0.542	1488.9	1117.4	1117.4	818.4
BGP702 LED50-4S/830	4500.0	36.5	123.3	0.986	0.986	0.74	0.74	0.542	1488.9	1117.4	1117.4	818.4
BGP702 LED50-4S/722	4500.0	41.0	109.8	1.108	1.108	0.831	0.831	0.609	1673.1	1254.8	1254.8	919.6
BGP702 LED55-4S/740	5040.0	33.5	150.4	0.905	0.905	0.679	0.679	0.498	1366.5	1025.3	1025.3	752.0
BGP702 LED55-4S/730	5040.0	35.5	142.0	0.959	0.959	0.719	0.719	0.527	1448.1	1085.7	1085.7	795.8
BGP702 LED55-4S/727	5040.0	40.5	124.4	1.095	1.095	0.821	0.821	0.602	1653.5	1239.7	1239.7	909.0
BGP702 LED55-4S/830	5040.0	40.5	124.4	1.095	1.095	0.821	0.821	0.602	1653.5	1239.7	1239.7	909.0
BGP702 LED55-4S/722	5040.0	45.5	110.8	1.23	1.23	0.922	0.922	0.676	1857.3	1392.2	1392.2	1020.8
BGP702 LED60-4S/740 I DM11 GR PSU 62	5400.0	37.0	145.9	1.0	1.0	0.75	0.75	0.55	1510.0	1132.5	1132.5	830.5
BGP702 LED60-4S/730	5400.0	39.5	136.7	1.068	1.068	0.801	0.801	0.587	1612.7	1209.5	1209.5	886.4

BGP702 LED60-4S/727	5400.0	44.5	121.3	1.203	1.203	0.902	0.902	0.662	1816.5	1362.0	1362.0	999.6
BGP702 LED60-4S/830	5400.0	44.5	121.3	1.203	1.203	0.902	0.902	0.662	1816.5	1362.0	1362.0	999.6
BGP702 LED60-4S/722	5340.0	51.0	104.7	1.378	1.378	1.033	1.033	0.758	2080.8	1559.8	1559.8	1144.6
BGP702 LED65-4S/740	5940.0	40.5	146.7	1.095	1.095	0.821	0.821	0.602	1653.5	1239.7	1239.7	909.0
BGP702 LED65-4S/730	5940.0	43.0	138.1	1.162	1.162	0.871	0.871	0.639	1754.6	1315.2	1315.2	964.9
BGP702 LED65-4S/727	5874.0	49.0	119.9	1.324	1.324	0.993	0.993	0.728	1999.2	1499.4	1499.4	1099.3
BGP702 LED65-4S/830	5874.0	49.0	119.9	1.324	1.324	0.993	0.993	0.728	1999.2	1499.4	1499.4	1099.3
BGP702 LED65-4S/722	5874.0	56.0	104.9	1.514	1.514	1.135	1.135	0.833	2286.1	1713.8	1713.8	1257.8
BGP702 LED70-4S/740	6300.0	43.5	144.8	1.176	1.176	0.882	0.882	0.647	1775.8	1331.8	1331.8	977.0
BGP702 LED70-4S/730	6300.0	46.5	135.5	1.257	1.257	0.943	0.943	0.691	1898.1	1423.9	1423.9	1043.4
BGP702 LED70-4S/727	6230.0	53.0	117.5	1.432	1.432	1.074	1.074	0.788	2162.3	1621.7	1621.7	1189.9
BGP702 LED70-4S/830	6230.0	53.0	117.5	1.432	1.432	1.074	1.074	0.788	2162.3	1621.7	1621.7	1189.9
BGP702 LED75-4S/740	6840.0	47.0	145.5	1.27	1.27	0.953	0.953	0.699	1917.7	1439.0	1439.0	1055.5
BGP702 LED75-4S/730	6764.0	51.0	132.6	1.378	1.378	1.033	1.033	0.758	2080.8	1559.8	1559.8	1144.6
BGP702 LED75-4S/727	6764.0	58.0	116.6	1.568	1.568	1.176	1.176	0.862	2367.7	1775.8	1775.8	1301.6
BGP702 LED75-4S/830	6764.0	58.0	116.6	1.568	1.568	1.176	1.176	0.862	2367.7	1775.8	1775.8	1301.6
BGP702 LED80-4S/740	7120.0	51.0	139.6	1.378	1.378	1.033	1.033	0.758	2080.8	1559.8	1559.8	1144.6
BGP702 LED80-4S/730	7120.0	55.0	129.5	1.486	1.486	1.115	1.115	0.817	2243.9	1683.7	1683.7	1233.7
BGP702 LED85-4S/740	7654.0	55.0	139.2	1.486	1.486	1.115	1.115	0.817	2243.9	1683.7	1683.7	1233.7
BGP702 LED85-4S/730	7654.0	59.0	129.7	1.595	1.595	1.196	1.196	0.877	2408.4	1806.0	1806.0	1324.3
BGP702 LED90-4S/740	8010.0	59.0	135.8	1.595	1.595	1.196	1.196	0.877	2408.4	1806.0	1806.0	1324.3

** 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
BGP702 LED8-4S/740	728.0	5.6	130.0	0.151	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED8-4S/730	728.0	5.9	123.4	0.159	0.076	0.057	0.057	0.042	114.8	86.1	86.1	63.4
BGP702 LED8-4S/727	728.0	6.5	112.0	0.176	0.085	0.064	0.064	0.047	128.4	96.6	96.6	71.0
BGP702 LED8-4S/830	728.0	6.5	112.0	0.176	0.085	0.064	0.064	0.047	128.4	96.6	96.6	71.0
BGP702 LED8-4S/722	728.0	7.1	102.5	0.192	0.092	0.069	0.069	0.051	138.9	104.2	104.2	77.0
BGP702 LED6-4S/830	546.0	5.1	107.1	0.138	0.088	0.066	0.066	0.048	132.9	99.7	99.7	72.5
BGP702 LED6-4S/722	546.0	5.6	97.5	0.151	0.097	0.073	0.073	0.053	146.5	110.2	110.2	80.0
BGP702 LED10-4S/740	910.0	6.8	133.8	0.184	0.071	0.053	0.053	0.039	107.2	80.0	80.0	58.9
BGP702 LED10-4S/730	910.0	7.1	128.2	0.192	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED10-4S/727	910.0	7.9	115.2	0.214	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED10-4S/830	910.0	7.7	118.2	0.208	0.08	0.06	0.06	0.044	120.8	90.6	90.6	66.4
BGP702 LED10-4S/722	910.0	8.5	107.1	0.23	0.089	0.067	0.067	0.049	134.4	101.2	101.2	74.0
BGP702 LED12-4S/740	1092.0	7.8	140.0	0.211	0.068	0.051	0.051	0.037	102.7	77.0	77.0	55.9
BGP702 LED12-4S/730	1092.0	8.2	133.2	0.222	0.071	0.053	0.053	0.039	107.2	80.0	80.0	58.9
BGP702 LED12-4S/727	1092.0	9.1	120.0	0.246	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9
BGP702 LED12-4S/830	1092.0	9.1	120.0	0.246	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9
BGP702 LED12-4S/722	1092.0	10.2	107.1	0.276	0.089	0.067	0.067	0.049	134.4	101.2	101.2	74.0
BGP702 LED14-4S/740	1274.0	9.0	141.6	0.243	0.067	0.05	0.05	0.037	101.2	75.5	75.5	55.9
BGP702 LED14-4S/730	1274.0	9.5	134.1	0.257	0.071	0.053	0.053	0.039	107.2	80.0	80.0	58.9
BGP702 LED14-4S/727	1274.0	10.6	120.2	0.286	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9

BGP702 LED14-4S/830	1274.0	10.6	120.2	0.286	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9
BGP702 LED14-4S/722	1274.0	11.6	109.8	0.314	0.086	0.065	0.065	0.047	129.9	98.2	98.2	71.0
BGP702 LED16-4S/740	1456.0	10.2	142.7	0.276	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED16-4S/730	1456.0	10.8	134.8	0.292	0.07	0.053	0.053	0.039	105.7	80.0	80.0	58.9
BGP702 LED16-4S/727	1456.0	11.8	123.4	0.319	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED16-4S/830	1456.0	11.8	123.4	0.319	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED16-4S/722	1456.0	13.4	108.7	0.362	0.087	0.065	0.065	0.048	131.4	98.2	98.2	72.5
BGP702 LED18-4S/740	1638.0	11.4	143.7	0.308	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED18-4S/730	1638.0	12.0	136.5	0.324	0.069	0.052	0.052	0.038	104.2	78.5	78.5	57.4
BGP702 LED18-4S/727	1638.0	13.4	122.2	0.362	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED18-4S/830	1638.0	13.4	122.2	0.362	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED18-4S/722	1638.0	15.0	109.2	0.405	0.087	0.065	0.065	0.048	131.4	98.2	98.2	72.5
BGP702 LED20-4S/740	1820.0	12.6	144.4	0.341	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED20-4S/730	1820.0	13.4	135.8	0.362	0.07	0.053	0.053	0.039	105.7	80.0	80.0	58.9
BGP702 LED20-4S/727	1820.0	15.0	121.3	0.405	0.078	0.058	0.058	0.043	117.8	87.6	87.6	64.9
BGP702 LED20-4S/830	1820.0	14.2	128.2	0.384	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED20-4S/722	1820.0	15.8	115.2	0.427	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED22-4S/740	2002.0	13.8	145.1	0.373	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED22-4S/730	2002.0	14.0	143.0	0.378	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED22-4S/727	2002.0	15.6	128.3	0.422	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED22-4S/830	2002.0	15.6	128.3	0.422	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED22-4S/722	2002.0	17.4	115.1	0.47	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED24-4S/740	2184.0	14.4	151.7	0.389	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED24-4S/730	2184.0	15.2	143.7	0.411	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4

BGP702 LED24-4S/727	2184.0	17.0	128.5	0.459	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED24-4S/830	2184.0	17.0	128.5	0.459	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED24-4S/722	2184.0	19.0	114.9	0.514	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED27-4S/740	2457.0	16.2	151.7	0.438	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED27-4S/730	2457.0	17.0	144.5	0.459	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED27-4S/727	2457.0	19.0	129.3	0.514	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED27-4S/830	2457.0	19.0	129.3	0.514	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED27-4S/722	2457.0	21.0	117.0	0.568	0.081	0.061	0.061	0.045	122.3	92.1	92.1	68.0
BGP702 LED30-4S/740	2730.0	17.8	153.4	0.481	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED30-4S/730	2730.0	19.0	143.7	0.514	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED30-4S/727	2730.0	21.0	130.0	0.568	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED30-4S/830	2730.0	21.0	130.0	0.568	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED30-4S/722	2730.0	23.5	116.2	0.635	0.081	0.061	0.061	0.045	122.3	92.1	92.1	68.0
BGP702 LED35-4S/740	3185.0	21.0	151.7	0.568	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED35-4S/730	3185.0	22.0	144.8	0.595	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED35-4S/727	3185.0	24.5	130.0	0.662	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED35-4S/830	3185.0	24.5	130.0	0.662	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED35-4S/722	3185.0	28.0	113.8	0.757	0.083	0.062	0.062	0.046	125.3	93.6	93.6	69.5
BGP702 LED40-4S/740	3640.0	24.0	151.7	0.649	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED40-4S/730	3640.0	25.5	142.7	0.689	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED40-4S/727	3640.0	28.5	127.7	0.77	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED40-4S/830	3640.0	28.5	127.7	0.77	0.074	0.055	0.055	0.041	111.7	83.0	83.0	61.9
BGP702 LED40-4S/722	3600.0	32.0	112.5	0.865	0.084	0.063	0.063	0.046	126.8	95.1	95.1	69.5
BGP702 LED45-4S/740	4095.0	27.0	151.7	0.73	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3

BGP702 LED45-4S/730	4095.0	28.5	143.7	0.77	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED45-4S/727	4050.0	32.5	124.6	0.878	0.076	0.057	0.057	0.042	114.8	86.1	86.1	63.4
BGP702 LED45-4S/830	4050.0	32.5	124.6	0.878	0.076	0.057	0.057	0.042	114.8	86.1	86.1	63.4
BGP702 LED45-4S/722	4050.0	36.5	111.0	0.986	0.085	0.064	0.064	0.047	128.4	96.6	96.6	71.0
BGP702 LED50-4S/740	4500.0	30.0	150.0	0.811	0.063	0.047	0.047	0.035	95.1	71.0	71.0	52.9
BGP702 LED50-4S/730	4500.0	32.0	140.6	0.865	0.067	0.05	0.05	0.037	101.2	75.5	75.5	55.9
BGP702 LED50-4S/727	4500.0	36.5	123.3	0.986	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED50-4S/830	4500.0	36.5	123.3	0.986	0.077	0.058	0.058	0.042	116.3	87.6	87.6	63.4
BGP702 LED50-4S/722	4500.0	41.0	109.8	1.108	0.086	0.065	0.065	0.047	129.9	98.2	98.2	71.0
BGP702 LED55-4S/740	5040.0	33.5	150.4	0.905	0.062	0.046	0.046	0.034	93.6	69.5	69.5	51.3
BGP702 LED55-4S/730	5040.0	35.5	142.0	0.959	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED55-4S/727	5040.0	40.5	124.4	1.095	0.076	0.057	0.057	0.042	114.8	86.1	86.1	63.4
BGP702 LED55-4S/830	5040.0	40.5	124.4	1.095	0.076	0.057	0.057	0.042	114.8	86.1	86.1	63.4
BGP702 LED55-4S/722	5040.0	45.5	110.8	1.23	0.085	0.064	0.064	0.047	128.4	96.6	96.6	71.0
BGP702 LED60-4S/740 I DM11 GR PSU 62	5400.0	37.0	145.9	1.0	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED60-4S/730	5400.0	39.5	136.7	1.068	0.069	0.052	0.052	0.038	104.2	78.5	78.5	57.4
BGP702 LED60-4S/727	5400.0	44.5	121.3	1.203	0.078	0.058	0.058	0.043	117.8	87.6	87.6	64.9
BGP702 LED60-4S/830	5400.0	44.5	121.3	1.203	0.078	0.058	0.058	0.043	117.8	87.6	87.6	64.9
BGP702 LED60-4S/722	5340.0	51.0	104.7	1.378	0.091	0.068	0.068	0.05	137.4	102.7	102.7	75.5
BGP702 LED65-4S/740	5940.0	40.5	146.7	1.095	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED65-4S/730	5940.0	43.0	138.1	1.162	0.069	0.052	0.052	0.038	104.2	78.5	78.5	57.4
BGP702 LED65-4S/727	5874.0	49.0	119.9	1.324	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9
BGP702 LED65-4S/830	5874.0	49.0	119.9	1.324	0.079	0.059	0.059	0.043	119.3	89.1	89.1	64.9
BGP702 LED65-4S/722	5874.0	56.0	104.9	1.514	0.091	0.068	0.068	0.05	137.4	102.7	102.7	75.5

BGP702 LED70-4S/740	6300.0	43.5	144.8	1.176	0.066	0.05	0.05	0.036	99.7	75.5	75.5	54.4
BGP702 LED70-4S/730	6300.0	46.5	135.5	1.257	0.07	0.053	0.053	0.039	105.7	80.0	80.0	58.9
BGP702 LED70-4S/727	6230.0	53.0	117.5	1.432	0.08	0.06	0.06	0.044	120.8	90.6	90.6	66.4
BGP702 LED70-4S/830	6230.0	53.0	117.5	1.432	0.08	0.06	0.06	0.044	120.8	90.6	90.6	66.4
BGP702 LED75-4S/740	6840.0	47.0	145.5	1.27	0.065	0.049	0.049	0.036	98.2	74.0	74.0	54.4
BGP702 LED75-4S/730	6764.0	51.0	132.6	1.378	0.072	0.054	0.054	0.04	108.7	81.5	81.5	60.4
BGP702 LED75-4S/727	6764.0	58.0	116.6	1.568	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED75-4S/830	6764.0	58.0	116.6	1.568	0.082	0.061	0.061	0.045	123.8	92.1	92.1	68.0
BGP702 LED80-4S/740	7120.0	51.0	139.6	1.378	0.068	0.051	0.051	0.037	102.7	77.0	77.0	55.9
BGP702 LED80-4S/730	7120.0	55.0	129.5	1.486	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED85-4S/740	7654.0	55.0	139.2	1.486	0.068	0.051	0.051	0.037	102.7	77.0	77.0	55.9
BGP702 LED85-4S/730	7654.0	59.0	129.7	1.595	0.073	0.055	0.055	0.04	110.2	83.0	83.0	60.4
BGP702 LED90-4S/740	8010.0	59.0	135.8	1.595	0.07	0.053	0.053	0.039	105.7	80.0	80.0	58.9

** 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.*