SHORT VERSION – ENVIRONMENTAL PRODUCT DECLARATION ACC. TO EN 15804

LAMILUX Continuous Rooflight B | Smoke Lift Continuous Rooflight B
Continuous Rooflight S | Smoke Lift Continuous Rooflight S

Programme operator and publisher
ift Rosenheim GmbH

Created in cooperation with
brands & values

Environmental Product Declaration (EPD)

Short version

Declaration code: EPD-LB-GB-11.4

LAMILUX Heinrich Strunz GmbH

Continuous Rooflights

Continuous Rooflight B, Smoke Lift Continuous Rooflight B, Continuous Rooflight S, Smoke Lift Continuous Rooflight S

Basis:

DIN EN ISO 14025
EN15804

Company-EPD
Environmental
Product **D**eclaration

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Practitioner of the LCA	brands & values GmbH Vagtstr. 48/49 28203 Bremen
Declaration holder	LAMILUX Heinrich Strunz GmbH Zehstraße 2 95111 Rehau
Declaration code	EPD-LB-GB-11.4
Designation of the declared product	LAMILUX Continuous Rooflight B, Smoke Lift Continuous Rooflight B, Continuous Rooflight S, Smoke Lift Continuous Rooflight S
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction.
Basis	This company EPD was prepared on the basis of EN ISO 14025:2011 and EN 15804:2012+A1:2013. In addition, the “Allgemeiner Leitfaden zur Erstellung von Typ II Umweltproduktdeklarationen” (General guideline for elaboration of Type III Environmental Product Declarations) applies. The Declaration is based on the PCR Documents PCR-A-0.1:2018 und „Fenster, Flachdachfenster, Lichtkuppeln und Lichtbänder“ (windows, flat roof windows, light domes and continuous rooflights) PCR-FE-2.1:2018.
Validity	Publication date: 17.05.2019 / Last revision: 17.05.2019 / Next revision: 17.05.2024 This verified company Environmental Product Declaration applies solely to the specified products and is valid for a period of 5 years from the date of publication in accordance with DIN EN 15804.
LCA basis	The LCA was prepared in accordance with EN ISO 14040 and DIN EN ISO 14044. The base data include both data collected the LAMILUX Heinrich Strunz GmbH production sithe and the generic data derived from the "GaBi 8.6 ts" database. LCA calculations were based on the "cradle to gate with options" life cycle including all upstream processes (e.g. raw materials extraction, etc.).
Notes on publication	The "Conditions and Guidance on the Use of ift Test Documents" apply. The declaration holder assumes full liability for the underlying data, certificates and verifications.

Prof. Ulrich Sieberath Director of institute	Dr.-Ing. Carolin Roth External Verifier

Note: Use the extended version of the EPD for further information.

Results per m² Continuous Rooflight B (Part 1 of 4)										
Environmental impacts	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2-equiv.	55,10	1,11	6,66	5,31E-02	16,10	4,54E-02	10,20	4,43E-02	-40,20
Depletion potential of stratospheric ozone layer	kg R11-equiv.	3,58E-08	2,34E-14	6,85E-14	2,06E-12	7,68E-08	1,13E-15	2,30E-08	1,02E-12	-1,39E-07
Acidification potential of soil and water	kg SO_2-equiv.	0,22	4,66E-03	8,37E-04	1,15E-04	7,33E-02	2,35E-04	9,78E-03	1,15E-04	-0,16
Eutrophication potential	kg PO_4^{3-}equiv.	1,83E-02	1,19E-03	2,22E-04	1,98E-05	4,94E-03	6,02E-05	1,57E-03	1,02E-04	-9,78E-03
Formation potential of tropospheric ozone	kg C_2H_4-equiv.	1,56E-02	-1,79E-03	1,99E-04	1,49E-05	4,65E-03	-1,00E-04	3,45E-04	1,32E-05	-9,12E-03
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	5,02E-04	1,15E-07	8,63E-08	1,10E-08	1,49E-03	4,20E-09	6,81E-06	9,01E-09	-3,26E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	847,00	14,90	1,64	2,20	182,00	0,62	15,90	0,59	-453,00
Use of ressources	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Renewable primary energy as energy source	MJ	148,00	1,01	109,00	3,34E-02	41,70	3,76E-02	3,70	4,52E-02	-157,00
Renewable primary energy for material use	MJ	109,00	0,00	-109,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	257,00	1,01	0,28	3,34E-02	41,70	3,76E-02	3,70	4,52E-02	-157,00
Non-renewable primary energy as energy source	MJ	842,00	14,90	1,79	2,22	216,00	0,62	155,00	0,61	-569,00
Non-renewable primary energy for material use	MJ	135,00	0,00	0,00	0,00	0,00	0,00	-135,00	0,00	0,00
Total use of non-renewable primary energy	MJ	977,00	14,90	1,79	2,22	216,00	0,62	20,00	0,61	-569,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-2,85
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m^3	0,40	1,17E-03	1,46E-02	9,74E-05	0,11	5,68E-05	2,55	-3,16E-05	-0,35
Waste categories and output material flows	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Disposed hazardous waste	kg	1,35E-04	9,58E-07	2,78E-09	6,86E-04	3,61E-05	3,77E-08	9,85E-08	2,59E-09	-4,04E-07
Disposed non-hazardous waste	kg	8,25	1,11E-03	0,24	1,39E-03	3,06	4,96E-05	3,85	0,67	-8,19
Radioactive waste	kg	5,14E-02	1,80E-05	5,93E-05	8,39E-06	1,32E-02	8,07E-07	6,59E-04	8,67E-06	-4,54E-02
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	88,20	0,00	0,00	0,00	10,20	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	207,00	0,00	0,00	0,00	23,90	0,00	0,00

Results per m² Continuous Rooflight S (Part 2 of 4)										
Environmental impacts	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2-equiv.	82,30	1,39	6,96	7,21E-02	16,10	5,37E-02	12,70	5,01E-02	-65,00
Depletion potential of stratospheric ozone layer	kg R11-equiv.	5,51E-08	2,95E-14	7,15E-14	2,80E-12	7,68E-08	1,31E-15	3,12E-08	1,38E-12	-1,39E-07
Acidification potential of soil and water	kg SO_2-equiv.	0,33	5,87E-03	8,74E-04	1,56E-04	7,33E-02	2,71E-04	5,20E-03	1,29E-04	-0,24
Eutrophication potential	kg PO_4^{3-}equiv.	2,55E-02	1,49E-03	2,32E-04	2,69E-05	4,94E-03	6,93E-05	1,82E-03	1,04E-04	-1,57E-02
Formation potential of tropospheric ozone	kg C_2H_4-equiv.	1,98E-02	-2,25E-03	2,08E-04	2,02E-05	4,65E-03	-1,14E-04	2,76E-04	1,49E-05	-1,42E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	1,09E-03	1,45E-07	9,01E-08	1,49E-08	1,49E-03	5,05E-09	3,24E-06	1,01E-08	-3,30E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	1210,00	18,80	1,72	2,98	182,00	0,73	10,10	0,65	-730,00
Use of ressources	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Renewable primary energy as energy source	MJ	275,00	1,27	84,00	4,53E-02	41,70	4,50E-02	1,64	5,02E-02	-258,00
Renewable primary energy for material use	MJ	83,70	0,00	-83,70	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	359,00	1,27	0,30	4,53E-02	41,70	4,50E-02	1,64	5,02E-02	-258,00
Non-renewable primary energy as energy source	MJ	1230,00	18,80	1,87	3,01	216,00	0,74	190,00	0,68	-918,00
Non-renewable primary energy for material use	MJ	176,00	0,00	0,00	0,00	0,00	0,00	-176,00	0,00	0,00
Total use of non-renewable primary energy	MJ	1410,00	18,80	1,87	3,01	216,00	0,74	14,00	0,68	-918,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	5,38
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m^3	0,61	1,47E-03	1,53E-02	1,32E-04	0,11	6,60E-05	3,47	-4,25E-05	-0,56
Waste categories and output material flows	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Disposed hazardous waste	kg	2,14E-04	1,21E-06	2,91E-09	9,32E-04	3,61E-05	4,48E-08	1,20E-06	2,92E-09	-5,47E-07
Disposed non-hazardous waste	kg	13,70	1,40E-03	0,25	1,89E-0,3	3,06	5,82E-05	1,05	0,78	-13,60
Radioactive waste	kg	7,93E-02	2,27E-05	6,20E-05	1,14E-05	1,31E-02	9,46E-07	2,49E-04	9,63E-06	-7,38E-02
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	92,10	0,00	0,00	0,00	18,70	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	216,00	0,00	0,00	0,00	44,60	0,00	0,00

Results per m^2 Smoke Lift Continuous Rooflight B (Part 3 of 4)										
Environmental impacts	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2-equiv.	81,90	0,86	0,00	5,95E-02	16,10	2,25E-02	3,89	3,00E-02	-72,40
Depletion potential of stratospheric ozone layer	kg R11-equiv.	1,74E-07	1,81E-14	0,00	2,31E-12	7,68E-08	4,76E-16	2,57E-08	1,14E-12	-2,31E-07
Acidification potential of soil and water	kg SO_2-equiv.	0,35	3,60E-03	0,00	1,28E-04	7,33E-02	9,09E-05	6,05E-03	7,57E-05	-0,33
Eutrophication potential	kg PO_4^{3-}equiv.	2,56E-02	9,16E-04	0,00	2,22E-05	4,94E-03	2,31E-05	1,46E-03	3,45E-05	-1,92E-02
Formation potential of tropospheric ozone	kg C_2H_4-equiv.	2,23E-02	-1,38E-03	0,00	1,67E-05	4,65E-03	-3,46E-05	1,39E-04	8,47E-06	-1,83E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	2,91E-03	8,92E-08	0,00	1,23E-08	1,49E-03	2,35E-09	4,35E-06	5,77E-09	-2,75E-03
Depletion of abiotic resources (ADP fossil fuels)	MJ	947,00	11,50	0,00	2,46	182,00	0,30	10,60	0,37	-795,00
Use of ressources	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Renewable primary energy as energy source	MJ	271,00	0,78	0,00	3,74E-02	41,70	2,05E-02	2,20	2,86E-02	-270,00
Renewable primary energy for material use	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	271,00	0,78	0,00	3,74E-02	41,70	2,05E-02	2,20	2,86E-02	-270,00
Non-renewable primary energy as energy source	MJ	1110,00	11,50	0,00	2,49	216,00	0,31	40,90	0,39	-981,00
Non-renewable primary energy for material use	MJ	26,70	0	0,00	0,00	0,00	0,00	-26,70	0,00	0,00
Total use of non-renewable primary energy	MJ	1140,00	11,50	0,00	2,49	216,00	0,31	14,20	0,39	-981,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,39
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m^3	0,59	9,01E-04	0,00	1,09E-04	0,11	2,38E-05	2,85	-3,44E-05	-0,63
Waste categories and output material flows	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Disposed hazardous waste	kg	2,24E-04	7,40E-07	0,00	7,69E-04	3,61E-05	1,95E-08	1,39E-07	1,80E-09	-2,47E-05
Disposed non-hazardous waste	kg	14,30	8,61E-04	0,00	1,56E-03	3,06	2,27E-05	2,05	0,53	-19,40
Radioactive waste	kg	7,66E-02	1,39E-05	0,00	9,41E-06	1,31E-02	3,68E-07	3,42E-04	5,48E-06	-7,31E-02
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	0,00	0,00	0,00	0,00	3,21	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	0,00	0,00	0,00	0,00	7,62	0,00	0,00

Results per m² Smoke Lift Continuous Rooflight S (Part 4 of 4)										
Environmental impacts	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Global warming potential	kg CO_2-equiv.	84,70	1,06	0,00	7,39E-02	16,1	2,79E-02	10,60	4,95E-02	-68,60
Depletion potential of stratospheric ozone layer	kg R11-equiv.	9,24E-08	2,24E-14	0,00	2,87E-12	7,68E-08	5,91E-16	3,20E-08	1,42E-12	-1,39E-07
Acidification potential of soil and water	kg SO_2-equiv.	0,32	4,47E-03	0,00	1,59E-04	7,33E-02	1,13E-04	5,02E-03	1,27E-04	-0,27
Eutrophication potential	kg PO_4^{3-}equiv.	2,35E-02	1,14E-03	0,00	2,75E-05	4,94E-03	2,86E-05	1,83E-03	9,31E-05	-1,70E-02
Formation potential of tropospheric ozone	kg C_2H_4-equiv.	2,30E-02	-1,71E-03	0,00	2,07E-05	4,65E-03	-4,30E-05	2,79E-04	1,45E-05	-1,58E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	8,07E-04	1,11E-07	0,00	1,53E-08	1,49E-03	2,92E-09	3,17E-06	9,87E-09	-8,14E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	1190,00	14,3	0,00	3,06	182,00	0,38	9,83	0,64	-761,00
Use of ressources	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Renewable primary energy as energy source	MJ	246,00	0,97	0,00	4,64E-02	41,70	2,55E-02	1,38	4,93E-02	-263,00
Renewable primary energy for material use	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	246,00	0,97	0,00	4,64E-02	41,70	2,55E-02	1,38	4,93E-02	-263,00
Non-renewable primary energy as energy source	MJ	1210,00	14,30	0,00	3,09	216,00	0,38	174,00	0,66	-949,00
Non-renewable primary energy for material use	MJ	160,00	0,00	0,00	0,00	0,00	0,00	-160,00	0,00	0,00
Total use of non-renewable primary energy	MJ	1370,00	14,30	0,00	3,09	216,00	0,38	13,80	0,66	-949,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	6,61
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m^3	0,60	1,12E-03	0,00	1,35E-04	0,11	2,95E-05	3,55	-4,33E-05	-0,58
Waste categories and output material flows	**unit**	**A1-A3**	**A4**	**A5**	**B2**	**B3**	**C2**	**C3**	**C4**	**D**
Disposed hazardous waste	kg	2,02E-04	9,19E-07	0,00	9,54E-04	3,61E-05	2,42E-08	2,65E-06	2,92E-09	-6,64E-06
Disposed non-hazardous waste	kg	13,00	1,07E-03	0,00	1,93E-03	3,06	2,82E-05	1,02	0,79	-15,30
Radioactive waste	kg	7,17E-02	1,73E-05	0,00	1,17E-05	1,31E-02	4,56E-07	2,49E-04	9,45E-06	-7,38E-02
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	0,00	0,00	0,00	0,00	19,20	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	0,00	0,00	0,00	0,00	46,90	0,00	0,00

Imprint

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Notes
This EPD is mainly based on the work and findings of the Institut für Fenstertechnik e.V., Rosenheim (ift Rosenheim) and specifically on the ift-Richtlinie NA-01/3 Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen. (Guideline NA-01/3 - Guidance on preparing Type III Environmental Product Declarations).

Layout
ift Rosenheim GmbH - 2018

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