

	Product Environmental Profile	
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	CrystalWay 20m - Centrally Power System
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Eaton product	40071354592
Description of the product	CrystalWay centrally supplied exit sign is the standard in high quality, aesthetic emergency exit sign luminares. The clear frame and low profile allow seamless integration into the surrounding architecture and is perfect for any size of project. It is equipped with LED light guide which ensures the pictogram is uniformly illuminated without hot spots and gives the luminaire a flawless finish. Product comes with CG-S technology which allows different switching modes to be implemented on the same circuit, and the switching mode of each luminaire to be re-programmed at any time. It also gives planners the confidence and flexibility of knowing that the system can respond and adapt at any time to any changes that are made to a building and its use.
Functional unit	To Facilitate the evacuation of the people to the outside by providing high luminance (>500 cd/m ²) lighting, at 20 meters of viewing distance in the event of absence of the power supply. This function powered by a Central source is designed for 10 years.
Company information	Cooper Industries Romania S.R.L. West Industrial Area, 12 IIIrd str. 310510 Arad, Romania Email: productstewardship-es@eaton.com

Constituent Materials			
Reference product mass	6.55E-01 kg (with packaging)		
Category PEP Material	Materials	Masse (kg)	Percentage (%)
Plastic	Polycarbonate (PC)	3.41E-01	52.20%
Others	Cardboard	1.30E-01	19.9%
Plastic	Polymethyl methacrylate (PMMA)	6.40E-02	9.8%
Others	Wood	4.17E-02	6.4%
Plastic	Polyethylene terephthalate (PET)	1.15E-02	1.8%
Others	Glass fibre	7.99E-03	1.2%
Others	Paper	9.24E-03	1.4%
Metal	Copper	7.24E-03	1.1%
Metal	Ferrite	6.32E-03	1.0%
Plastic	Epoxy Resin	6.10E-03	0.9%
Metal	Aluminium	4.88E-03	0.7%
Metal	Brass	4.24E-03	0.6%
Plastic	Low density polyethylene film	4.00E-03	0.6%
Plastic	styrene butadiene rubber	3.57E-03	0.5%
Others	Miscellaneous	1.24E-02	1.9%
Total		6.55E-01	100%

Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) without any exemptions and the product do not contains Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

Additional Environmental Information

Manufacturing	The reference product is assembled at Eaton plant holding management system certifications according to ISO9001 & 14001 standards.
Distribution	Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.
Installation	Product installation need standard tools which do not require any additional energy source and no waste other than the obsolete product packaging is generated during this step.
Use	Product do not require spare part replacement during operation.
End of life	Recyclability of product is equal to 13.7% as per EIME calculated based on the method described in IEC/TR 62635, Edition 1.0/2012-10 "Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment".

Environmental Impacts

The calculation of environmental impacts is the result of a Product Life Cycle Analysis in accordance with ISO 14040/44, covering the entire product lifecycle, i.e. "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life.

System modelling was carried out using the commercial LCA software EIME v5.9.3 with database version CODDE-2022-01.

Manufacturing Phase	The product is manufactured at Cooper Industries Romania S.R.L., Arad, Romania plant. Energy modelled used: Romania
Distribution Phase	Distribution of the product in its packaging from the manufacturer's last logistics platform to the installation place is considered as per PCR rules.
Installation Phase	Product installed in Europe. Only treatment of packaging waste is considered in this phase. <u>Energy model used:</u> Europe
Use Phase	<u>Reference lifetime:</u> 10 Years <u>Energy model used:</u> Europe <u>Usage profile:</u> The product is active for 100% of the time and consume 1.6 W consumption. Total energy losses are 140.16 kWh over the 10 years.
End of life Phase	Product disposed with WEEE guidelines. <u>Energy model used:</u> Europe

Environmental Impact Indicators: Mandatory

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use*(B6 Only)	End of life
Global warming (GWP100)	kg CO ₂ eq.	7.29E+01	1.69E+01	1.61E-01	2.42E-01	5.54E+01	2.24E-01
Ozone layer depletion	kg CFC-11 eq.	2.21E-06	1.98E-06	3.27E-10	5.80E-10	2.20E-07	4.30E-09
Acidification potential	kg SO ₂ eq.	1.18E-01	2.06E-02	7.25E-04	9.91E-05	9.69E-02	1.22E-04
Eutrophication	kg PO ₄ ³⁻ eq.	2.54E-02	6.85E-03	1.67E-04	4.26E-04	1.79E-02	6.69E-05
Photochemical oxidation	kg ethylene eq.	1.01E-02	2.36E-03	5.15E-05	5.85E-05	7.62E-03	1.25E-05
Abiotic depletion (elements)	kg antimony eq.	3.46E-04	3.40E-04	6.46E-09	9.45E-10	5.70E-06	1.10E-09
Abiotic depletion (fossil fuels)	MJ	1.03E+03	1.59E+02	2.27E+00	2.68E-01	8.63E+02	4.38E-01
Water Pollution	m ³	5.24E+03	3.24E+03	2.65E+01	1.17E+01	1.96E+03	9.34E+00
Air pollution	m ³	5.07E+03	1.22E+03	6.62E+00	2.62E+00	3.83E+03	5.43E+00

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5,B7) are equal to zero. So, it is not listed in the table.

Environmental Impact Indicators: Optional

Impact Indicators	Unit	Total	Manufacturing	Distribution	Installation	Use*(B6 Only)	End of life
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials	MJ	2.86E+02	4.71E+00	3.04E-03	1.77E-03	2.81E+02	5.88E-04
Use of renewable primary energy resources used as raw materials	MJ	2.95E+00	2.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	2.89E+02	7.67E+00	3.04E-03	1.77E-03	2.81E+02	5.88E-04
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials	MJ	1.65E+03	1.81E+02	2.28E+00	2.83E-01	1.46E+03	5.86E-01
Use of non-renewable primary energy resources used as raw materials	MJ	1.39E+01	1.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	MJ	1.66E+03	1.95E+02	2.28E+00	2.83E-01	1.46E+03	5.86E-01
Use of secondary materials	kg	7.61E-03	7.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	m3	4.44E+00	1.95E+00	1.44E-05	2.23E-05	2.49E+00	1.22E-04
Hazardous waste disposed of	kg	4.78E+00	2.77E+00	0.00E+00	1.50E-04	1.07E+00	9.28E-01
Non-hazardous waste disposed of	kg	1.45E+01	6.09E+00	5.74E-03	1.72E-01	8.27E+00	1.87E-03
Radioactive waste disposed of	kg	5.94E-03	4.20E-03	4.08E-06	2.30E-06	1.73E-03	3.51E-06
Materials for recycling	kg	6.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-02
Exported energy	MJ by energy vector	3.69E-02	0.00E+00	0.00E+00	3.69E-02	0.00E+00	0.00E+00
Total use of primary energy during the life cycle	MJ	1.95E+03	2.03E+02	2.28E+00	2.85E-01	1.74E+03	5.87E-01

*B6 is energy requirements during the use stage. Other sub modules in the use stage (B1-B5, B7) are equal to zero. So, it is not listed in the table.

Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

Registration N°	EATO-00043-V01.01-EN	Drafting rules	PEP-PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH32	Supplemented by	PSR-0007-ed1.1-EN-2015 10 16
Date of issue	7-2022	Information and reference documents	www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025: 2010			
Internal		External	X
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025: 2010 « Environmental labels and declarations. Type III environmental declarations »			