

# Self-declared environmental claim

*is developed in accordance with ISO 14021*

***Rundo87 - diameter 1150mm***

***Microprism / Opal diffuser - Direct - Indirect***

from

***Halla, a.s.***

*Environmental claim for multiple products based on worst case*



## Company information

Owner of the environmental claim: **Halla, a.s.**

Contact: Martin Čapek, Production Director (capekm@halla.cz)

Description of the organisation: Halla, a.s., is a Czech manufacturer specializing in interior lighting fixtures. For over 30 years, we have collaborated with our partners to deliver tailor-made solutions for world-class projects. We are committed to ensuring the highest precision and quality in our luminaires. By measuring lighting conditions in our laboratory, we ensure that our products meet the technical requirements and certifications for modern, healthy living.

Product-related or management system-related certifications: ISO 9001, ISO 14001

Name and location of production site(s): Halla, a.s. Litvínovská 288/11, 190 00 Praha 9, Czech Republic

## Product information

Product name: Rundo87 – diameter 1150mm microprism / opal diffuser – Direct – Indirect

Product identification: **Rundo87**



Product description: Rundo87 is a circular luminaire with a 87 mm aluminium profile, offering excellent efficacy of up to 145 lm/W. These suspended or surface-mounted luminaires are available with either direct or direct-indirect light distribution. The Rundo87 model comes with an opal diffuser or a microprismatic optical system and offers various colour temperature options: 3000 K, 4000 K, or a Tunable White range of 2700–6500 K. Available in both ON/OFF and DALI versions, the luminaires can be enhanced with optional features like motion sensors, daylight sensors, and Bluetooth technology for seamless control via smart devices. The Colour Rendering Index (CRI) is available in 80 or 90, and the LED sources maintain 90 % of their original output even after 50,000 operating hours. The reference service life of the luminaire is 72,000 hours.

The certified version of this luminaire is suspended, with dimensions **Ø1150 x 87 mm**, and features a microprismatic optical system. This Environmental claim applies to variants with luminous flux values of **12008 lm, 15994 lm, and 19778 lm**.

UN CPC code: 4653 Lighting equipment

Geographical scope: Global, Czech Republic

Based on the LCA study conducted, the following environmental claims are declared:

| 1. Environmental impact indicators   | A1-A3     | A4        | A5       | B6       | C1       | C2        | C3       | C4       | D         |
|--|-----------|-----------|----------|----------|----------|-----------|----------|----------|-----------|
| Climate Change - total [kg CO <sub>2</sub> eq.]                                  | 1,78E+02  | 8,06E+00  | 1,23E+01 | 6,45E+03 | 2,51E-03 | 8,75E-01  | 1,82E+01 | 1,23E-02 | -4,30E+01 |
| Climate Change, fossil [kg CO <sub>2</sub> eq.]                                  | 1,88E+02  | 7,84E+00  | 4,85E-02 | 6,45E+03 | 2,51E-03 | 8,50E-01  | 1,82E+01 | 1,22E-02 | -4,29E+01 |
| Climate Change, biogenic [kg CO <sub>2</sub> eq.]                                | -1,04E+01 | 9,46E-02  | 1,23E+01 | 1,46E+00 | 5,66E-07 | 1,03E-02  | 5,72E-04 | 0,00E+00 | -6,56E-02 |
| Climate Change, land use and land use change [kg CO <sub>2</sub> eq.]            | 1,37E-01  | 1,30E-01  | 3,09E-05 | 9,65E-01 | 3,75E-07 | 1,41E-02  | 4,68E-04 | 7,35E-05 | -8,58E-03 |
| Ozone depletion [kg CFC-11 eq.]  | 1,10E-06  | 7,80E-13  | 2,97E-13 | 7,08E-08 | 2,75E-14 | 8,46E-14  | 5,16E-12 | 3,33E-14 | -2,20E-10 |
| Acidification [Mole of H <sup>+</sup> eq.]                                       | 1,02E+00  | 9,27E-03  | 5,56E-04 | 1,51E+01 | 5,86E-06 | 1,01E-03  | 3,89E-03 | 8,69E-05 | -1,34E-01 |
| Eutrophication, freshwater [kg P eq.]  | 2,08E-02  | 3,30E-05  | 7,82E-08 | 3,37E-03 | 1,31E-09 | 3,58E-06  | 8,15E-07 | 2,79E-08 | -4,02E-05 |
| Eutrophication, marine [kg N eq.]  | 1,48E-01  | 3,13E-03  | 2,03E-04 | 2,52E+00 | 9,81E-07 | 3,40E-04  | 1,07E-03 | 2,24E-05 | -3,12E-02 |
| Eutrophication, terrestrial [Mole of N eq.]                                      | 1,49E+00  | 3,82E-02  | 2,53E-03 | 2,71E+01 | 1,05E-05 | 4,14E-03  | 1,62E-02 | 2,46E-04 | -3,39E-01 |
| Photochemical ozone formation, human health [kg NMVOC eq.]                       | 3,76E-01  | -1,40E-01 | 5,39E-04 | 7,53E+00 | 2,93E-06 | -1,52E-02 | 2,98E-03 | 6,85E-05 | -9,09E-02 |
| Resource use, mineral and metals [kg Sb eq.]                                     | 7,81E-03  | 6,59E-07  | 2,97E-09 | 3,05E-04 | 1,19E-10 | 7,14E-08  | 3,98E-08 | 7,95E-10 | -3,09E-06 |
| Resource use, fossils [MJ]   | 2,55E+03  | 1,01E+02  | 6,54E-01 | 1,20E+05 | 4,65E-02 | 1,10E+01  | 1,13E+01 | 1,61E-01 | -5,38E+02 |
| Water use [m <sup>3</sup> world equiv.]  | 5,03E+01  | 1,15E-01  | 2,45E-01 | 3,68E+02 | 1,43E-04 | 1,25E-02  | 1,81E+00 | 1,40E-03 | -4,72E+00 |
| 2. Resource use indicators   | A1-A3     | A4        | A5       | B6       | C1       | C2        | C3       | C4       | D         |
| Use of renewable primary energy (PERE) [MJ]                                      | 4,93E+02  | 8,54E+00  | 1,73E-01 | 1,70E+04 | 6,62E-03 | 9,26E-01  | 2,02E+00 | 2,83E-02 | -2,04E+02 |
| Use of renewable primary energy resources used as raw materials (PERM) [MJ]      | 2,14E-01  | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Total use of renewable primary energy resources (PERT) [MJ]                      | 4,93E+02  | 8,54E+00  | 1,73E-01 | 1,70E+04 | 6,62E-03 | 9,26E-01  | 2,02E+00 | 2,83E-02 | -2,04E+02 |
| Use of non-renewable primary energy (PENRE) [MJ]                                 | 2,39E+03  | 1,01E+02  | 6,54E-01 | 1,20E+05 | 4,65E-02 | 1,10E+01  | 1,13E+01 | 1,61E-01 | -5,38E+02 |
| Use of non-renewable primary energy resources used as raw materials (PENRM) [MJ] | 1,86E+02  | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Total use of non-renewable primary energy resources (PENRT) [MJ]                 | 2,58E+03  | 1,01E+02  | 6,54E-01 | 1,20E+05 | 4,65E-02 | 1,10E+01  | 1,13E+01 | 1,61E-01 | -5,38E+02 |
| Use of secondary material (SM) [kg]  | 3,08E+00  | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Use of renewable secondary fuels (RSF) [MJ]                                      | 9,28E-23  | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Use of non-renewable secondary fuels (NRSF) [MJ]                                 | 1,09E-21  | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Use of net fresh water (FW) [m <sup>3</sup> ]                                    | 1,65E+00  | 9,59E-03  | 5,77E-03 | 2,40E+01 | 9,34E-06 | 1,04E-03  | 4,34E-02 | 4,27E-05 | -1,55E-01 |

| 3. Output flows and waste indicators     | A1-A3    | A4       | A5       | B6       | C1       | C2       | C3       | C4       | D         |
|--|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| Hazardous waste disposed (HWD) [kg]      | 1,13E-05 | 3,27E-09 | 3,53E-10 | 1,69E-05 | 6,58E-12 | 3,54E-10 | 3,48E-09 | 4,05E-11 | -2,10E-07 |
| Non-hazardous waste disposed (NHWD) [kg] | 1,89E+01 | 1,57E-02 | 6,21E-02 | 2,96E+01 | 1,15E-05 | 1,70E-03 | 7,74E-01 | 8,19E-01 | -1,21E+01 |
| Radioactive waste disposed (RWD) [kg]    | 6,91E-02 | 1,31E-04 | 3,66E-05 | 1,55E+01 | 6,01E-06 | 1,42E-05 | 8,26E-04 | 1,68E-06 | -3,01E-02 |
| Components for re-use (CRU) [kg]         | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00  |
| Material for recycling (MFR) [kg]        | 4,22E+00 | 0,00E+00 | 5,57E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,64E+01 | 0,00E+00 | 0,00E+00  |
| Materials for energy recovery (MFR) [kg] | 0,00E+00 | 0,00E+00 | 1,39E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 8,01E+00 | 0,00E+00 | 0,00E+00  |
| Exported energy, electricity (EEE) [MJ]  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -3,20E+01 |
| Exported energy, thermal (EET) [MJ]      | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -7,07E+01 |

This self-declared environmental claim is developed in accordance with ISO 14021 and based on the lifecycle-based evaluation of the assessed product. The assessment was performed using the LCA method conducted in accordance with ISO 14040, 14044 for Life Cycle Assessment. The environmental indicators are determined according to 15804+A2 (based on EF 3.1). As a functional unit, the production of 1 circular luminaire was chosen. The environmental indicators are calculated under a “cradle-to-grave” system in accordance with PCR for Construction Products (PCR 2019:14 Version 1.3.1 2023- 07-08, The International EPD System). It covers the production of raw materials, all relevant transport down to the factory gate, manufacturing by Halla, a.s., transport from the Halla, a.s. plant to the site, installation of circular luminaire including product unpacking, operational energy of use of circular luminaire (considered European residual electricity grid mix), deconstruction of the circular luminaire, transport of deconstructed materials, waste processing, recovery, and disposal of used circular luminaire.

The environmental impact of infrastructure for general management, office, and headquarters operations is not included. Czech residual grid mix is used for production process in Halla, a.s.

The assessment was performed by professional LCA software LCA for Experts, Sphera solutions. Specific product data was provided by Halla, a.s. All general process data sets used in the model were chosen from the LCA for Experts Professional database (Sphera) and the ecoinvent database. The evaluation was made by LCA Studio, Prague, Czech Republic. LCA Studio did not check the correctness of the data provided by Halla, a.s.