

EVOLUME

Technical lighting without frills



FAGERHULT



Technical perfection for streets and roads

Evolume combines excellent lighting properties and visual comfort with a modern cost-effective design. Thanks to its flat appearance, the post top luminaire blends well into numerous different environments. The Evolume family has now expanded to include a more powerful option with high luminous flux.

Thanks to the Evolume 2 post top luminaire, we are now able to offer complete, energy-efficient lighting solutions for the entire urban environment. Evolume 1 has met the needs of urban streets, footpaths, bicycle paths and smaller car parks. Evolume 2 is a larger luminaire with advanced optics offering a luminous flux up to 18,300 lumens – a more powerful version intended for illuminating wider main streets, motorways and large car parks.

A road lighting system may include hundreds of posts, and here every watt is important. This is why Fagerhult's

development team has focused on obtaining as much light as possible from the luminaire. The Evolume family is simply good light without frills – technically advanced luminaires at a low investment cost.

Knowledge, development and manufacturing in Sweden

In order to ensure a high degree of quality, the Evolume family is tested thoroughly in Fagerhult's own, third-party certified laboratory with cutting-edge expertise. The post top luminaires are manufactured in Sweden and the LED cards are manufactured in our factory in Habo, which means we are able to ensure sustainable production and can guarantee spare parts availability for a long time to come.

Visual comfort

Here at Fagerhult, visual comfort means that light should be a positive experience – both for those seeing the light from a distance and those in the light. Using Fagerhult's specially developed AGC (Advanced Glare Control) lenses, we have succeeded in minimising glare and ensuring good uniformity.

The lenses are extra-large and are tightly placed in a single luminous cluster – a design which optimises visual comfort. Furthermore, the lenses are recessed into the luminaire to minimise glare. The vertical surfaces have a well-balanced brightness that creates spatial awareness and creates an increased sense of security. This means that the eye can comfortably adapt to the road ahead approaching the luminaire and there is less risk of glare.





Optimised optics

In lighting technology terms, Evolume is optimised in line with the latest lighting standard requirements, and you can choose from several different lenses with various light distribution. They are adapted for different areas of application – from roads, streets, parking lots, footpaths and bicycle paths.

With visual comfort and uniformity as the basis, our AGC (Advanced Glare Control) lenses are optimised for maximum post spacing, maximum light within a work area, maximum luminosity, and maximum glare reduction – for given road conditions



The light is distributed through large lenses that are protected by screen printed safety glass (IK08).



Evolume can be tilted for good positioning above the road surface

Energy-saving lighting control

The need for fully lit streets and other environments is reduced during the late evening and night. But switching the lights off completely may result in us feeling unsafe. With the help of advanced lighting control, it is possible to satisfy the needs of residents while also saving energy.

Evolume has various lighting control options for ensuring a sustainable lighting system. There are also DALI versions available on request so that you can implement the lighting control system that you want.

Read more on page 10.



Tailored to your project

Different projects have different requirements. Therefore, the various Evolume post top luminaires can easily be customised with regards to luminous flux, colour temperature, cables and other factors that could have a significant effect on the functionality of an installation.

Fagerhult's extensive knowledge of lighting means we can make project customisations suited to your needs – with delivery assurance of the highest degree.





Product information

Connection

Delivered with cable for easy installation. DALI version available on request, delivered with a 5-pin cable. See each luminaire for more information.

Utförande

Body and post bracket in cast aluminium. aluminium-zinc coated screws. Ballast is built into the luminaire. Flanges for optimum cooling. Screen printed safety glass.

CLO (Constant Light Output) as standard

CLO maintains the correct light from the luminaire for the duration of its service life. The installation does not need to be over installed to compensate for future light depreciation from the diodes. The operating costs and total installation costs are reduced.

See page 10 or our website for more information.

Light distribution

Asymmetrical. Available with different light distributions, see page 8. The E-lens are designed to focus on illuminance. L-lenses are ideal if the luminance from the ground is the main priority.

Optics

AGC-lenses (Advanced Glare Control) for both illuminance and luminance classifications.

Lighting control

Available with different lighting control options.

Night-time dimming 1, dims down for six hours.

Night-time dimming 2, dims down for eight hours.

Other versions of Night-time dimming and DALI version on request. See page 10 or our website for more information.

Standard colour

Alu-grey (RAL 9006, semi-gloss).

Colour temperature and colour quality

See each luminaire for more information.

Other versions on request.

LED information

Driver life-time: up to 100.000 h/10 % (max failure).

$L_{100B_{50}}$ 100.000 h. Driver with integrated surge protection (6 kV, DM). Extra surge protection (10 kV, DM and CM) available on request.

Accessories

Double post-top bracket for Ø 60 mm post top. Alu-grey.	303597
Double post-top bracket for Ø 76 mm post top. Alu-grey.	303598
Single bracket for Ø 60 mm post top. Alu-grey.	303595
Single bracket for Ø 76 mm post top. Alu-grey.	303596





Evolume 1

Installation

Post top luminaire which in its standard design can be mounted on a \varnothing 48-60 mm post top or post arm bracket. Tilting function $\pm 5^\circ$, $\pm 10^\circ$ och $\pm 15^\circ$.

Accessories

Double post-top bracket for \varnothing 60 or 76 mm post top or single bracket for \varnothing 76 mm post top.

Light flux

1600–10 300 lm. Up to 118 lm/W.

Connection

Connection cable $3 \times 1,5$ mm² type H07RN-F.

4- and 6-LED version is delivered with 6 m cable.

8-LED version is delivered with 8 m cable.

10- and 12-LED versions are delivered with 10 m cable.

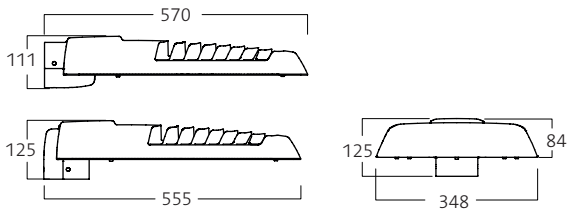
Colour temperature and colour quality

730=3000 K, Ra 70. MacAdam 5.

740=4000 K, Ra 70. MacAdam 5.

Miscellaneous

Post height 3–8 m.



Evolume 2

Installation

Post top luminaire which in its standard design can be mounted on a \varnothing 60 mm post top or post arm bracket. Tilting function $+10^\circ$, -15° .

Accessories

Single bracket for \varnothing 76 mm post top.

Light flux

7300–18 300 lm. Up to 125 lm/W.

Connection

Halogen free connection cable $3 \times 1,5$ mm² type FQQ.

Delivered with 12 m cable.

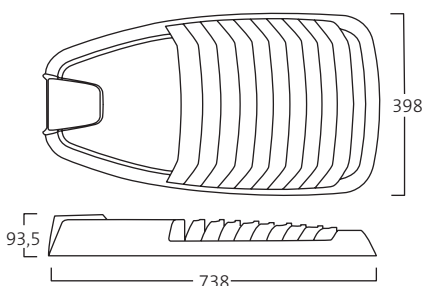
Colour temperature and colour quality

730=3000 K, Ra 70. MacAdam 5.

740=4000 K, Ra 70. MacAdam 5.

Miscellaneous

Post height 8–18 m.

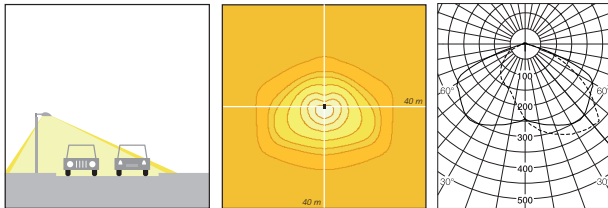


Optimised optics for a variety of projects

During the development of our own AGC (Advanced Glare Control) lenses, the aim was to produce optics with perfect light distribution suitable for most wall geometries while also minimising glare to increase the visual comfort.

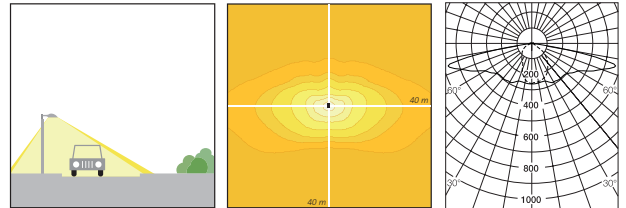
Choose from a variety of lenses that are developed in line with the latest lighting standard – as well as providing a high level of visual comfort. The E-lens are designed to focus on illuminance. L-lenses are ideal if the luminance from the ground is the main priority.

E1 lens



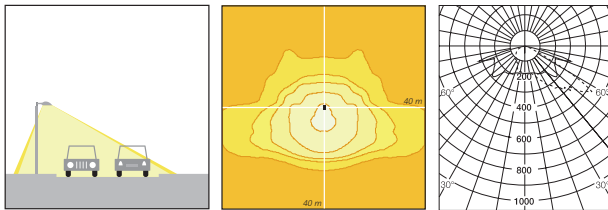
Potential application areas: streets and car parks.
Luminous intensity class G6.

E2 lens



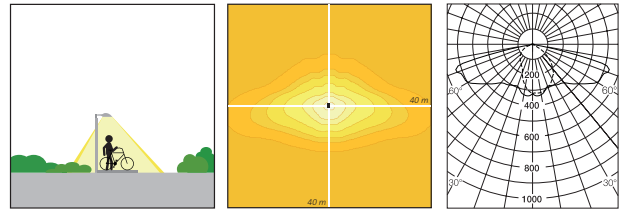
Potential application areas: streets, car parks, footpaths and cycle paths.

E3 lens



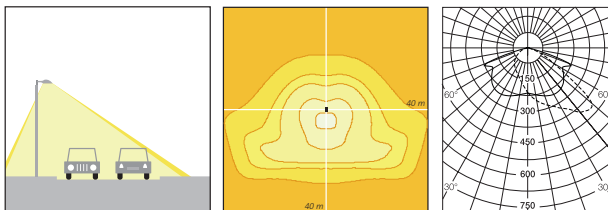
Potential application areas: streets, car parks, footpaths and cycle paths.

E5 lens



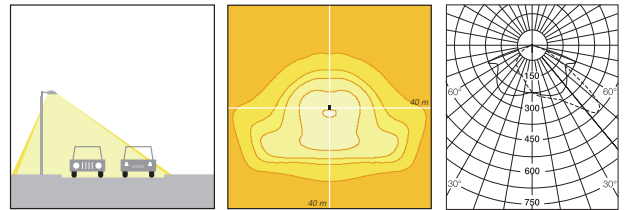
Potential application areas: footpaths, cycle paths and illuminated jogging trails.

L2 lens



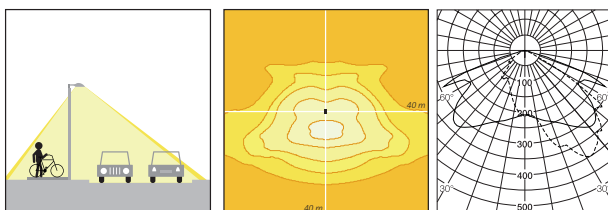
Luminance optics optimised for wet roads.
Luminous intensity class G6.

L4 lens



Luminance optics optimised for wet roads.
Luminous intensity class G6.

L7 lens



Luminance optics optimised for wet roads.

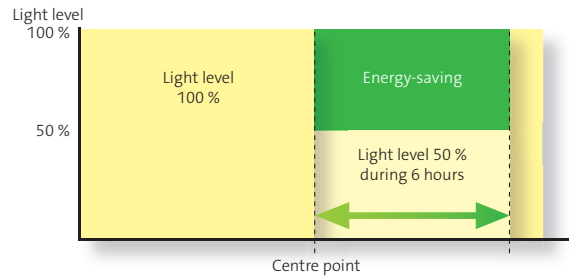


Night-time dimming

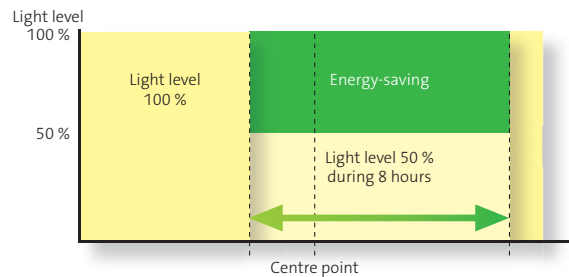
With the aid of lighting control, major energy savings can be made without the need to switch off lights completely and create a sense of insecurity. Choose between Night-time dimming 1 or 2 as a standard. Other Night-time dimming options are available on request.

The various systems we use for lighting control outdoors are integrated into each luminaire's electrical ballast and take care of themselves. Nor is there any need for external accessories to make the lighting control work. The control units are pre-programmed and maintenance-free. Luminaires with Night-time dimming also require no additional investments in or modifications to infrastructure.

Visit our website for more information.



With Night-time dimming 1 the installation is adjusted down from the light cycle's centre point and six hours ahead. When six hours have passed, the installation is adjusted up to full level.



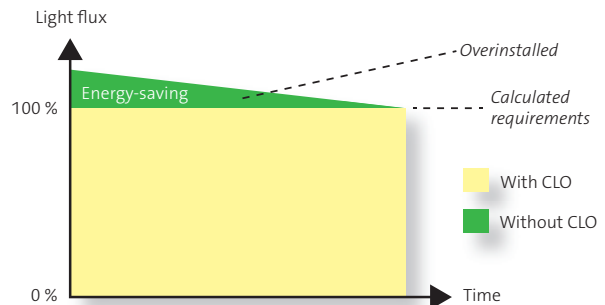
The Night-time dimming 2 system adjusts the output down from two hours before the light cycle's centre point and a total of eight hours ahead. When eight hours have passed, the installation is justed up to full level.

CLO – Constant Light Output

The light flux of LEDs reduces over time as the diode ages, just as with many other light sources. This light depreciation is more or less linear across the diode's service life. The luminaire itself can compensate for the light depreciation. This is called Constant Light Output (CLO).

The luminaire starts its service life at a lower operational current. The current gradually increases over its service life to compensate for the LED's light depreciation. This compensation is automatic, requiring no maintenance resource.

The advantage of CLO is that the installation does not need to be over installed to compensate for future light depreciation from the diodes. Using CLO, you get the correct light from the luminaire for the duration of its service life. CLO also decreases the installation's environmental impact. The operating costs and total installation costs are therefore also lower.



The requirement for light flux is 100 per cent according to the calculation. You do not need to overinstall when using CLO. The luminaire will be constantly illuminated for the duration of its service life. You then avoid luminaire light depreciation.

Fagerhult develops, manufactures and markets professional lighting systems for public environments. Our operations are run with a constant focus on design, function, flexibility and energy saving solutions.

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Fagerhult is part of the Fagerhult Group, one of Europe's leading lighting groups with operations in more than 20 different countries. AB Fagerhult is listed on the NASDAQ OMX Nordic Exchange in Stockholm.



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