

SUNPIPE: Cora Alexandriei

Natural Lighting

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- **Building Name:** Cora Alexandriei Hypermarket
- **Building Location**
 - » City: Bucharest
 - » Country: Romania
- **Building Type:** Hypermarket
- **Market Sector:** Retail
- **Architects:** Atelier Pierre Schall and Zelphis
- **Consulting Engineers:** Cora Technical Department and Naturalight
- **Installation Date:** Completed November 2012



The new 15,000 m² Cora Alexandriei hypermarket boasts some impressive statistics including an additional 7,700 m² shopping centre, 29,000 m² of underground parking and costing 29 million Euro. Although the initial design brief had not set out targets to achieve BREEAM ratings, continual improvements to reduce energy use and carbon footprint helped the building become the first shopping centre in Romania to undergo and obtain a BREEAM Certificate.

The use of natural daylight within the store was paramount. The systems were designed to provide 100% of the required light levels for the mezzanine office areas and the storage area. In addition the systems also had to deliver 50% of required light levels within the retail sales areas of the store. The in-store lighting strategy developed by the Cora Technical Department in conjunction with Naturalight was built around the 'daylight-based' control of the electric lighting to maximise energy savings and CO₂ reductions.

Over 150 SUNPIPE® were installed with the majority being 750 mm. Double glazed ceiling diffusers were specified within the sales areas for low heat gains. To control the daylight in the offices on the mezzanine floor, light shut off dampers were also included within the specification.

In addition to the use of natural daylight, carbon and energy costs were reduced through an improved building envelope, rainwater harvesting, solar hot water panels, a highly efficient heat recovery system and LED decorative lighting. Other environmental factors include an internal recycling policy and creation of a special compost area for local green spaces.

Key benefits

- BREEAM Certificate
- Energy performance certificate Class A
- Reduced energy footprint within initial project budget
- Low U-Values & G-Values
- Low maintenance, long life span
- Integrated natural daylight and electrical lighting strategy

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