



Light Guide for Office Lighting

The power to increase productivity and happiness at the office.





Lighting influences how productive and error-free our work is and how happy we feel at work.

How we work and how offices look like as a result, has changed tremendously. From cubicles to open-spaces, modular and flexible arrangements – work spaces have started to reflect the needs of a more mobile, flat, collaborative workforce that demands comfort, sometimes privacy, sometimes openness and sometimes serendipitous encounters.

Lighting for offices has to support all these functions and more.

- It can help build the environmental part of your brand. Through light you can almost physically separate areas, create energy and alertness, or showcase exclusivity.
- It can help reduce your energy consumption and contribute to your sustainability objectives, by making the most of daylight harvesting and smart lighting controls.
- Light can increase productivity and wellbeing in the office, by mimicking the natural daylight and respecting our circadian rhythm.

What does quality of light mean for office spaces?

Work is where we spend more than one third of our life, thus the type of environment we work in has serious impact on our health and safety. Recent studies* showed that the quality of light deeply influences how happy and productive we are at work.

EU directive EN 12464-1 "Light and lighting - Lighting of work places - Part 1: Indoor work" establishes rules and regulations for how to illuminate working spaces. Illuminance, uniformity and glare control are key photometric parameters to ensure visual performance.

Application	Em (lx)	UGR	Uo	CRI
Team Office	500	19	0.6	80
Executive Office	500	19	0.6	80
Meeting Room	500	19	0.6	80
Reception	300	22	0.6	80
Corridors	150 - 300	28	0.4	40

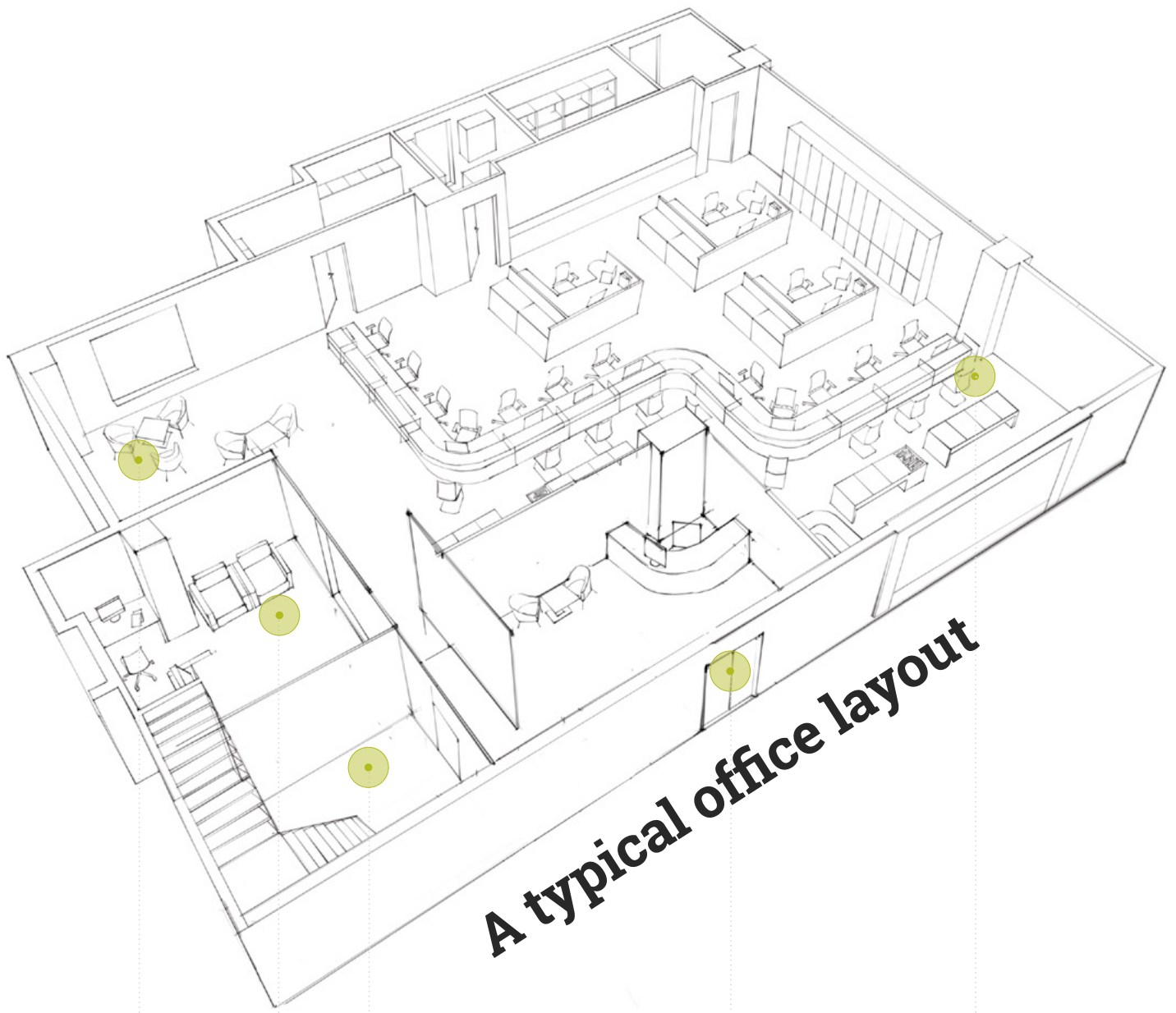
Em is the medium illuminance in lux

UGR is maximum limit for Unified Glare Rating

Uo is the uniformity of lighting (Emin / Eaverage)

CRI is the minimum color rendering index

* https://www.researchgate.net/publication/258132633_Linking_Lighting_Appraisals_to_Work_Behaviors



A typical office layout

- Meeting room
- Executive office
- Corridors and stairways
- Entrance and reception
- Open plan office

Office lighting helps enhance:

- Productivity
- Employee safety
- Employee well-being
- Environmental sustainability

The smart science of office lighting

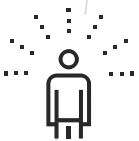


DAYLIGHT HARVESTING

Natural light is a powerful ally. Certain wave lengths within the light influence cognitive processes (concentration and performance), physical and emotional wellbeing (hormone levels), circadian rhythm (wake – sleep patterns) and as a result, deeply affect our health.

Greentek LED lighting system is designed to make the most of natural daylight. Our ambient light sensors measure the natural light throughout the day, adjusting the intensity of the LED luminaires lighting system.

Daylight harvesting relies on sensors and software to control the behavior of the LED system. The light intensity remains constant, but you save an additional 20% of the energy, counting towards your carbon footprint quotas and BREEAM or LEED certification standards.



CORRIDOR FUNCTION

This is a simple solution for lower-traffic areas. Embedded sensors perceive movement and automatically dim up or down the light level, according to preset parameters. This solution enables better safety (people aren't suddenly left out in the dark on a stairway), energy efficiency and visual comfort.

Its applications range from corridors and stairways, to elevators, bathrooms, parking lots, storage rooms and basically to every space where you have occasional traffic or movement.

The Corridor Function is built into the control gear and is enabled automatically (no extra gear, no additional commissioning effort required).





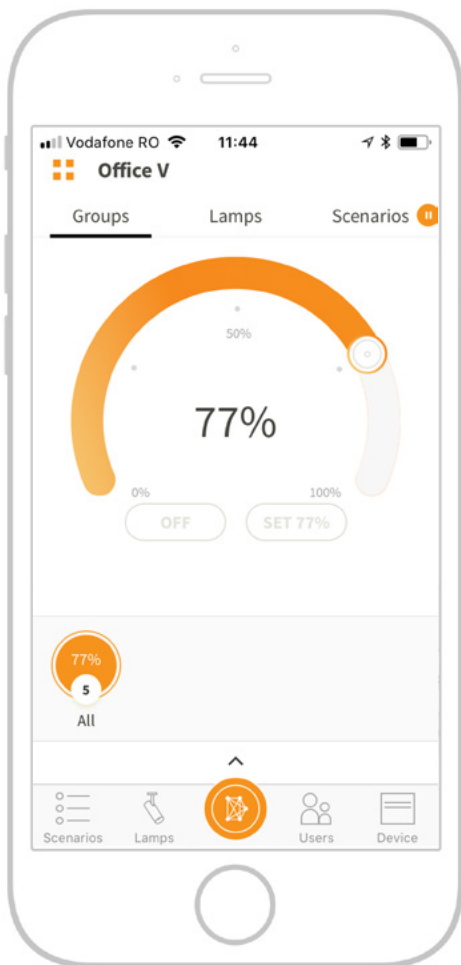
SOUND-ABSORBING LUMINAIRES

Open working spaces are noisy. Everything from phone calls, footsteps or printing machines – contribute to the ambient noise level. This noise level is extremely tiring, lowering employee productivity.

Modern offices call for smart sound-proofing solutions – including luminaires. Greentek developed a special line of luminaires – Kaypro – that absorbs and redirects sounds, thus contributing to lower levels of noise, higher comfort and improved productivity.

DARA

LIGHTING



Dara Lighting is the easiest way to control your lights and reduce energy bills. The solution is highly flexible, suitable for any type of business – from office spaces, manufacturing, industrial and logistic applications all the way to the largest of retailers.

With just a few taps you can control luminaires one by one or as a group. For example you can set up a group for the office space and another one for a meeting room or a kitchenette and dim lights up or down in each of these spaces.

You can also create scenarios depending on the day of the week, time of the day or other relevant events. Set the lights at a higher dim level for the office space and a lower dim level for the corridors and save all these settings in a scenario. Or set all lights to dim down once office hours or retail open hours are over.

Share your network with other users and let them adjust the lighting. **Dara Lighting** has several levels of users (network owner, administrator or simple user), each with their own corresponding lights.

Dara Lighting has mesh capabilities, thus the functionality is dependable, redundant and resilient over hundreds of square meters. Due to its dual control – both BLE (Bluetooth Low Energy) for DALI communication and Wi-Fi, – a user can individually control an unlimited number of luminaires.

With this solution any business has the power to tailor its lighting preferences and, at the same time, greatly reduce its energy expenses by making sure light is present only when needed.



Entrance area and reception

Impressions are formed at first glance. Visitors, either consciously or not, will form an immediate opinion about your brand and about how you do business from the way the reception area looks. Furniture and design accents matter but if they are not showcased under the right light – their effect will be less than perfect.

Whether you are aiming for a dramatic and energetic environment or for one that is soft and soothing, we have the right luminaire for it.



SEDONA: Round recessed LED downlight for general lighting and accent lighting with perfect glare control. Highly reflective aluminum finish for zero iridescence.



ARTUS N: Clean, elegant luminaire creates a professional and welcoming atmosphere over the info desk.



SOLA: Sleek pendant luminaire, available in various width sizes. Can be used as a single, discreet downlight or as groups of 2 or 3 luminaires.

Corridors and stairways

Stairways and corridors are challenging to illuminate because they are often narrow, lacking natural light. And they are often low-traffic areas. So if you use too much light on the stairways – you waste energy. If the illuminance is too low, people may not feel safe or even risk accidents.

All these challenges can be solved with an intelligent light management system benefiting from the Corridor function (light goes up only when movement is noticed) and dimming solutions. Sparkling accent lights add the finishing touches to corridors, highlighting architectural pieces, flower displays or even artwork.

We recommend an illuminance level of about 150-300 lux depending on corridor type. For “virtual” corridors within open-plan offices, the illuminance level is higher – 300 lux – in order to avoid a high contrast between desk area and traffic area.



JUNIPER: Recessed spotlight, with either round or square housing, providing a high level, uniform illuminance.



KAYPRO PA: Office grade luminaires with low UGR (19). Sound absorbent in order to minimize background noise and enhance focus.



AMYAS: Amyas provides the perfect combination of efficiency, light comfort and design, without compromising performance. It can also be mounted to walls.



Executive offices

An executive's office is often the most elegant room of all, serving a dual function – as a workspace and as a meeting room. High, homogenous illumination is required as well as accent lighting that can focus attention on special areas such as the meeting table, a special painting or art fixture.

Smart lighting controls can be easily set up with the help of a touch panel. Each person can define up to eight personalized scenarios – depending on the day of the week, the type of work involved or the quantity of daylight available.



TULIP: Tulip is a track mounted, adjustable accent lighting luminaire. It narrowly focuses the beam on certain displays that you want to stand out.



ARTUS N TRK: If you opt for a track system, our clean, elegant, typically suspended luminaire can also be track-mounted.



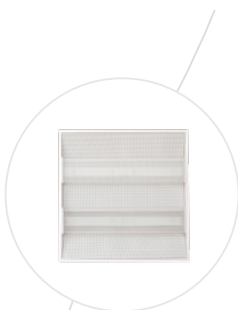
DYAD TRACK: Dyad Track is a versatile suspended track that emits light both upward and downward. The underside can be equipped with any type of track-mounted luminaire from spotlights to linear luminaires. It is suitable for spaces with large horizontal, reflective surfaces. By emitting light upward, toward the ceiling, Dyad Track can create a glare-free general illumination, enhancing comfort.

Open plan office

Open plan offices require a high illuminance level in order to create a positive and motivating ambiance which keeps performance at optimum levels during the entire day. Here, daylight harvesting technology plays a major role, as most offices have large windows.

Additionally, sound absorbing luminaires help dampen the background noise, allowing all employees to have a virtual individual space.

LED luminaires with reduced reflective or direct glare (UGR < 19) and beautiful but unobtrusive design are frequently recommended.



KAYPRO: Office grade luminaires with low UGR (19). Sound absorbent in order to minimize background noise and enhance focus.



EMPIRE: Recessed downlights and spotlights blend seamlessly into the ceiling, concentrating light either as a downward floodlight or narrow spotlight. Provides the perfect combination of efficiency, light comfort and design.



RAYLAN: This luminaire combines modern minimalist design with the finest components and the latest technology in contemporary profile lighting.

Meeting rooms

Meeting rooms can be so much more than enclosed spaces. They are presentation spaces, creative workshop spaces or even relaxation spaces.

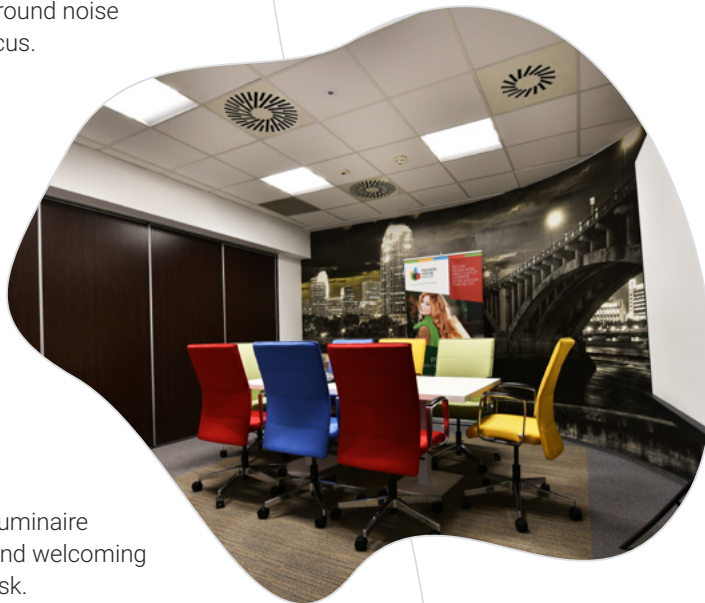
This is why meeting room light design must provide for flexibility as well as visual comfort. Our LED luminaires can create crisp, bright white light – at 4000 K for a formal meeting where people need to concentrate. Or, they can be tailored to a warmer light at around 3000 K for a for a relaxed, brainstorming get-together.

Additionally, if you have design elements such as art displays or colorful plants, we can provide special color temperature lights that make objects stand out, in saturated hues.

Whatever you choose, just don't do it boring!



KAYPRO: Office grade luminaires with low UGR (19). Sound absorbent in order to minimize background noise and enhance focus.



ARTUS: Clean, elegant luminaire creates a professional and welcoming atmosphere over the desk.



DYAD TRACK: Versatile suspended track that emits light both upward and downward.



TULIP: Tulip is a track mounted, adjustable accent lighting luminaire. It narrowly focuses the beam on certain displays that you want to stand out.



ZETT: Recessed directional spotlight, powerful yet glare-free. Comes in several special color temperatures.



Kitchens and sanitary areas

Sanitary areas are either too brightly illuminated, creating glare or too dark, obstructing the mirror view. LED luminaires can help solve all these problems, delivering uniform, flattering light. The corridor function also allows for further energy savings – by adjusting the illuminance to various parameters (time of day, work schedule, movement).



JUNIPER: Recessed luminaire, comes in 3 diameter options to fit any design requirements. Powerful, efficient yet unobtrusive. Also available with an IP54 for damp spaces such as bathrooms and showers.



Outdoor and parking

Outdoor office building surroundings as well as parking spaces need to be brightly lit in order to provide the feeling of safety at any hour of the night. Here, cost-effectiveness is paramount given the large surfaces that need to be lit, as well as the varying, extreme weather conditions.

For these purposes we recommend luminaires designed for long life, durability and an unobtrusive architectural blending, no matter the configuration.

Lights can be programmed to switch on, off or dim at certain hours of the day, thus helping your office with your green credentials.



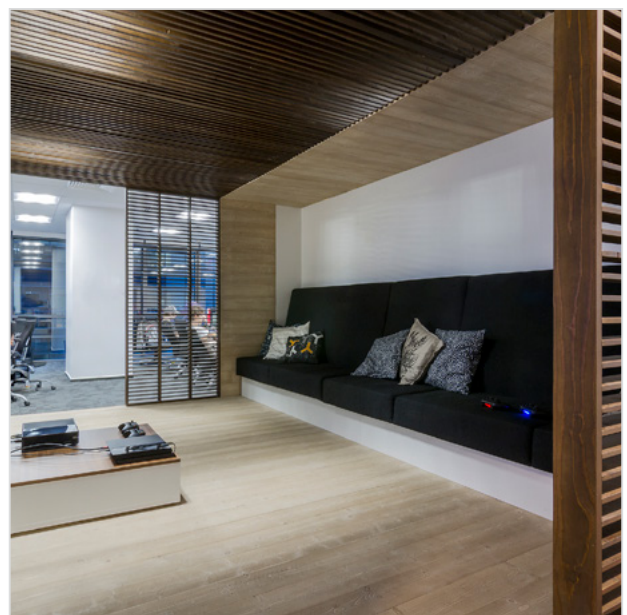
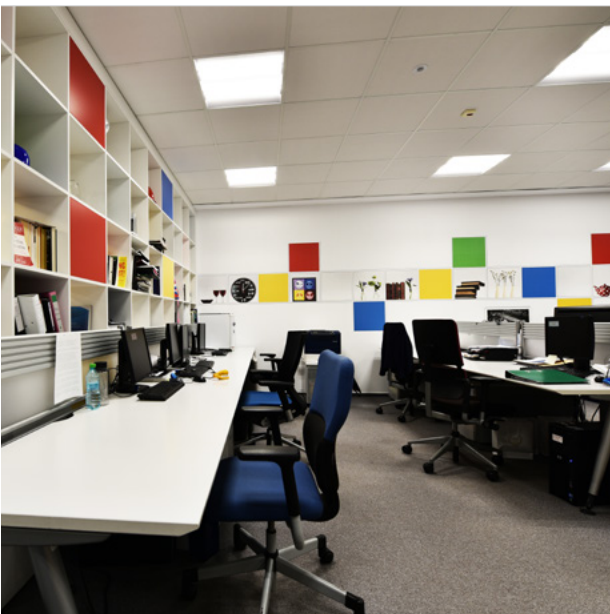
MYRIAKY: Uniform, powerful light for outdoor areas and industrial facilities.

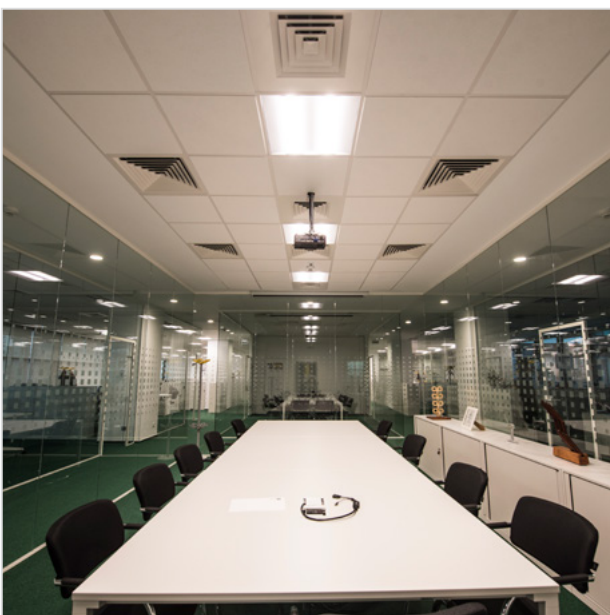


STARKLY: Outdoor luminaire with high-power LED. Instant start (without warmup time) and flicker-free. Delivers a uniform and bright light, adjustable according to application requirements.



CASEY: Casey is an IP65 luminaire. Very efficient and unobtrusive, is ideal for stairways. Either foggy or clear housing.





Why Greentek?

TRUST: We have 8+ years' experience developing innovative led lighting solutions.

SPECIAL COLORS: Greentek is a pioneer in developing special tonal effects for retail and DIY industries, proven to enhance purchase intent.

FLEXIBILITY AND CUSTOMISATION: For us, business is personal. Greentek can develop or adjust luminaires according to your needs in order to create savings and value.

INCREDIBLE CUSTOMER CARE: We are in the business of customer care and we happen to create led luminaires. We take a 360° client view from technical consultancy, Intelligent Light Solutions, Project Management and site survey, to on-site implementation, product development and lab testing.

LIGHT CONCEPT & DESIGN: Our lighting experts analyze your lighting infrastructure and provide you with the best plan to implement it, based on the latest industry requirements and trends.

MADE IN EU: In order to keep high quality, Greentek luminaires are designed and manufactured in the European Union using European components.

DIVERSITY: We cover all ranges of ceiling mounted and light distribution systems, special colors and other niche products.

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