

ETAP AND LEED

Lighting solutions for sustainable buildings



LEED



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LEED (Leadership in Energy and Environmental Design) is one of the most common sustainability certification for building projects. A building is assigned a sustainability score based on carefully established parameters. In this brochure we show you how ETAP can help you to achieve an optimal score in accordance with LEED New Construction v.4, the latest scheme.



LEED
Leadership in Energy and Environmental Design

°1998, USA
> 80,000 certified buildings in 2015
Possible levels: Certified > Silver > Gold > Platinum
Certification takes place through USGBC (US Green Building Council)
Distribution: international

LEED was created in 2000 on the initiative of the US Green Building Council (USGBC). The certification would rapidly become a standard in the area of sustainability: in 2015 more than 80,000 buildings had secured certification. In an increasing number of construction projects, LEED certification has become the obvious choice, if not actually a requirement.

PROCESS

LEED factors in some 50 parameters within nine categories: Integrative Process, Sustainable Sites, Location and Transportation, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation and Regional Priority. Each parameter imposes several sustainability requirements on the building, which results in one or more points. This results in an overall sustainability score of 'Certified' to 'Platinum'.

The process runs as follows: the client registers with the USGBC, who collects and verifies the necessary evidence during the course of the build. After the design stage, this documentation leads to a provisional rating. After completion of the building, USGBC checks whether reality corresponds with the design. Only then will the final rating be assigned.



ADVANTAGES

LEED certification does not come free of charge, but on the other hand it has a number of distinct advantages:

- Contributes to a sustainable society
- Positive impact on wellbeing and health
- Reinforces a business's sustainable image
- Objective instrument to compare buildings with each other
- Lowers energy costs
- Increases a building's market value
- Potential financial incentives from the government

LEED AND LIGHTING

LEED takes into account all aspects of a construction project. Lighting is but one, albeit important component. Well-chosen lighting can lead to points in seven out of the nine LEED categories. Light control also plays an important role.

ETAP: SUSTAINABILITY IN THE GENES

Sustainability has always been an important point of special interest within ETAP's product development. Our luminaires belong to the most energy-efficient on the market. Light control systems, which dim or switch off the light, have been part of our range for a long time. During the production processes and in the choice of materials, sustainability plays an important and sometimes decisive role (*).

ETAP is therefore also your logical partner during the LEED certification process. ETAP will advise and assist you with the lighting component. With the help of an external consultancy we carried out a product analysis on our full lighting and light control range (see also the following pages).

The correct documentation is of critical importance for a smooth process. Incorrect, irrelevant or needless information may lead to delays or even loss of points. ETAP has the expertise to provide you with the correct information for all relevant LEED parameters.

(* For further information, consult ETAP's sustainability report at www.etaplighting.com



Product analysis



From development over production up to services: each aspect of ETAP's product flow has been examined for this product analysis.



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LEED assesses the sustainability of a complete building, but it goes without saying that the materials, products and technologies used play a decisive role in this context. We took a close look at our lighting products and light control systems to determine which lighting solutions are most suitable to score points in the various LEED New Construction v. 4 categories.

Depending on the category, various aspects of our range were analysed: energy-efficiency, specific power, raw materials, etc., including the installation of the luminaires or light control systems. To do so we split our range into nine series: recessed luminaires; surface-mounted and suspended luminaires; downlights; spots; wall luminaires; light line systems; luminaires with high protection factor; modular lighting and light control systems.

In each LEED category we determined which series could contribute points. Furthermore we also checked the suitability for each series: some lighting solutions happen to be more suitable than others.

| | |
|--|--|
| | Recessed luminaires |
| | Surface-mounted and suspended luminaires |
| | Downlights |
| | Spots |
| | Wall luminaires |
| | Light line systems |
| | Luminaires with high protection factor |
| | Modular lighting |
| | Light control systems |

CHARACTERISTICS

| | |
|-----|--|
| - | <ul style="list-style-type: none"> Not suitable for this credit Product specifications are not in line with LEED requirements Point will probably not be earned |
| + | <ul style="list-style-type: none"> Not fully suitable for this credit Product specifications are not fully in line with LEED requirements Unsure whether point will be earned |
| ++ | <ul style="list-style-type: none"> Suitable for this credit Product specifications are in line with LEED requirements Point will probably be earned |
| +++ | <ul style="list-style-type: none"> Pre-eminently suitable for this credit Product specifications fully in line with LEED requirements Point will be earned in all probability |
| N/A | <ul style="list-style-type: none"> Not applicable to this credit |

LEED categories

The nine LEED categories each have a maximum number of points. Adding up the earned points results in a score that may lead to LEED certification. Depending on the total score the project secures 'Certified', 'Silver', 'Gold' or 'Platinum' certification.



● Maximum number of points ● Points to be earned with ETAP

Possible levels:

Certified: 40-49 points / Silver: 50-59 points / Gold: 60-79 points / Platinum: ≥ 80 points



Simulation software tests reveal that ETAP's U25 recessed luminaires can earn 7 points.

EA Optimize energy performance

GOAL

Promoting the lowest possible power consumption in a building.

RELEVANT CRITERIA

- Calculating the building's energy-efficiency compared to a reference building. The greater the savings, the more points. The performance of the reference building may vary depending on national and local regulations.

NUMBER OF POINTS

- Maximum number of points: 18
 - Points to be earned with ETAP: from 4 to 7 with lighting and up to 5 points with light control. You can therefore earn a total of up to 12 points with an ETAP solution, which always requires a product-specific analysis.

ETAP SOLUTIONS

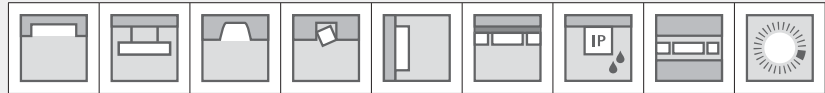
- Energy savings are calculated on the basis of the specific power ($W/m^2/100$ lux) for lighting. The most suitable ETAP lighting solution therefore also depends on the type of building. On this basis ETAP lighting can provide up to 7 points for LEED certification.

For example: an external consultancy conducted the test for a lighting solution in a 7-floor reference office building. Our lighting solution with U25 recessed luminaires delivered 18% savings, earning 7 points.

- The use of a light control system also earns points.

| | | | | | | | | | |
|-------------|-----|-----|-----|----|----|-----|-----|-----|----|
| | | | | | | | | | |
| Points | 7 | 7 | 6 | 4 | 4 | 6 | 6 | 6 | 5 |
| Suitability | +++ | +++ | +++ | ++ | ++ | +++ | +++ | +++ | ++ |

Survey



INTEGRATIVE PROCESS

| | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|
| IP Integrative process | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|------------------------|---|---|---|---|---|---|---|---|---|

SUSTAINABLE SITES

| | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|
| SS Light pollution reduction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|------------------------------|---|---|---|---|---|---|---|---|---|

ENERGY AND ATMOSPHERE

| | | | | | | | | | |
|--------------------------------|---|---|---|---|---|---|---|---|---|
| EA Enhanced commissioning | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| EA Optimize energy performance | 7 | 7 | 6 | 4 | 4 | 6 | 6 | 6 | 5 |
| EA Advanced energy metering | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

INDOOR ENVIRONMENTAL QUALITY

| | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|
| EQ Interior lighting | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|----------------------|---|---|---|---|---|---|---|---|---|

INNOVATION

| | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|
| IN Innovation | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|---------------|---|---|---|---|---|---|---|---|---|

REGIONAL PRIORITY

| | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|
| RP Regional priority | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|----------------------|---|---|---|---|---|---|---|---|---|

Reference projects

ETAP has many years of experience in the certification of building projects. Your ETAP adviser will be happy to assist you with the right solutions for BREEAM or LEED certification, the two most popular systems (*). ETAP has many years' experience in building certification. Below are some examples of reference projects.



**Chamber of Commerce,
Dubai, United Arab Emirates**
LEED Certified / Completion 2011
*ETAP solution with bespoke fluorescent lighting,
D42 LED downlights and Flare LED spots*



**Regional head office Naturgas Energía,
Bilbao, Spain**
LEED Platinum / Completion 2013
*ETAP solution with Kardó modular light lines and
D42 LED downlights*



**Headquarters Majid Al Futaim,
Dubai, United Arab Emirates**
LEED Gold / Completion 2014
*ETAP solution with Flare spots, D42 downlights,
R7 suspended luminaires with occupancy detection
and U7 recessed luminaires (all LED)*



**Head office PriceWaterhouseCoopers,
Gasperich, Luxemburg**
BREEAM Very Good / Completion 2014
*ETAP solution with UT1 recessed luminaires, R8 and
R4 mounted luminaires and E6 industrial luminaires.*

Transavia, Schiphol, the Netherlands
LEED Platinum / Completion 2010
*ETAP solution with R4 suspended luminaires with
daylight harvesting and D1 downlights*

Education Centre, Utrecht, the Netherlands
*ETAP solution with D42 LED downlights, Flare LED
spots, U1, U5, D1 and D2 downlights, Kardó and R6*

Coca-Cola offices, Madrid, Spain
LEED Gold / Completion 2009
ETAP solution with UT recessed luminaires

Lightline, Zoetermeer, the Netherlands
BREEAM Very Good / Completion 2015
*ETAP solution with downlights D1 and recessed
luminaires UT1*

Laboratory Red Cross, Mechelen, Belgium
BREEAM Outstanding / Completion 2015
*ETAP solution with D2 LED, R8, E6, Flare spot, U5,
Kardo, E1 LED, E5, US*

(*) You can download the brochure 'ETAP and BREEAM' from our website. The printed version is available upon request.



ETAP AND LEED

Lighting solutions for sustainable buildings

- Maximise the number of credits for your building with ETAP solutions
- Seek assistance from your ETAP advisor
- Choose your lighting and light control in accordance with the LEED v.4 guidelines

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