WORKPLACE LIGHTING

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LIGHT FOR WORKPLACE

Enhancing wellbeing through the lit environment

Light can significantly contribute to the quality of a space, supporting well-being and effective communication.

Workplace lighting must meet multiple requirements that fulfil quantitative criteria, such as illuminance, uniformity, glare evaluation, and energy efficiency. It is also of utmost importance to implement lighting that is careful not to ignore the qualitative elements required for a modern workspace.

Effective lighting design enables designers to respond to a high diversity of office situations and architectural methods within an increasingly dynamic world of work. Placing the user with their specific tasks and individual needs as the primary requirement is the basis of qualitative, perceptionorientated lighting design.

Dividing spaces into zones aligned specifically to individual sets of tasks helps support sustainable lighting solutions. Through differentiated methods of lighting that create a visual hierarchy, human-centric lighting can be delivered. A work environment with good visual comfort is key to bringing out the best in every employee.

CIRCADIAN LIGHTING

An evidence based design approach

Evidence-based design is a philosophy that began in healthcare and has extended to other uses. The evidence-based design approach uses the latest scientific research to guide the design process with the goal of improving outcomes for people. This opposes a standardsbased approach, which can be years or decades behind. We need to ask ourselves, do we want to be industry-leading? Or following?

The scientific evidence is now overwhelming that circadian disruption leads to short-term cognitive issues and increases the risk of long-term chronic disease. Circadian disruption is proven to affect up to 90% of the population due to the indoor lifestyle we lead in the modern age. Therefore, our lighting environments play a part in this disruption, especially in the workplace.

Circadian lighting design recommendations now exist to combat this problem, through consultation and education we can lead the design and construction industry through this necessary change.





Engineer: Eleccom Architect: MAP Architecture Featuring: Energylight Revalo

BASE BUILD

Designing to code with flexibility and sustainability

When targeted with a base build project, there are two approaches: flexible lighting and core and shell solutions. To achieve great lighting in both of these contexts, there is a need to focus on quality, flexibility, Greenstar capability, and designing future-proof spaces for the workplace. Practical tips; design for future flexibility, balance natural and artificial light, and implement Circadian Light for well-being with the right spectrum, timing, and placement.

Flexible Lighting Solutions:

- Ambient Lighting: Indirect, diffuse lighting for a comfortable atmosphere.
- Track Lighting: ERCO track systems allow easy repositioning and adaptability.
- Modular Fixtures: NZ-made VIFO, Viline, and EVALA systems reconfigure to meet changing needs.
- Smart Systems: DALI or Casambi controls for optimised energy use, efficiency and controls.
- Dimmable Options: Adjustable lighting for various tasks and moods, creating scenes in the space.
- Smart Technology: Smart lighting controls for energy efficiency and management.

Core and Shell:

- Uniform Illumination: Consistent lighting for lobbies, hallways, and stairwells using downlights, wallwashers, and track lighting.
- Durability: Energy-efficient LED luminaires reduce costs and offer long-lasting, recyclable solutions.
- Compliance: Fixtures meet local codes and RCM regulatory standards.
- Architectural Integration: Discreet luminaires blend seamlessly with architectural elements.
- Custom Solutions: Bespoke lighting to meet specific design goals.
- Scalable Systems: Easy upgrades and expansions.

The Warehouse Group Auckland Support Engineer: ECS Featuring: Energylight VIFO Photography by Mark Scowen

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WSP Australia Featuring: Energyline Louvre with curved end caps

FITOUT

Individual nature of the client needs

It is important to recognise that lighting solutions can assist in reflecting the tenant's style, whether the workplace is corporate, industrial, or government.

Key Considerations:

1. Ambient Light:

Provide general illumination of the surroundings, ensuring that the surrounding space, its objects and the people in it are visible.

2. Accent Lighting:

Information can be highlighted and communicated by lighting at a high contrast to emphasise objects and areas in the space.

3. Workstation Lighting:

Ensure adequate lighting for tasks like reading or computer work.

Use Melanopic Enhanced Spectrum for circadian health.

Adjustable task lighting can reduce eye strain and improve focus.

4. Colour Temperatures:

Cooler temps (3500K-4000K) for productivity; warmer temps (2700K-3000K) for social spaces.

5. Sustainability:

Consider products that encompass social, economic, and environmental sustainability through long life, reuse, and recycling.

6. Dimmable Options:

Control via DALI, Casambi, or hybrid systems for flexibility, mood creation, and task adjustment. Use smart systems that adjust based on occupancy and natural light for energy efficiency.

7. Compliance and Standards:

Follow local lighting standards (e.g., AS/ NZS 1680) and meet recommended lux levels for various work areas.

Spark Square Office Fitout Engineer: TMCO Featuring: ERCO Track and Jilly -

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SUSTAINABILITY

The most sustainable product is the one you don't use

Sustainability starts with considered use of technical luminaires to minimise the number of products required. However, if this cannot be avoided, products should be selected which are designed to last a 10 - if not 20-year – design life. This should be the accepted practice for workplace lighting.

Maximising the energy efficiency of the lighting solution and lighting control will reduce energy waste and, therefore, energy bills. Following the initial design life, consideration must be given to how the product can be reused or easily recycled at the end of its life.

Sustainability also extends beyond environmental, to social and economic sustainability for New Zealand. Considering the foundation of New Zealand society, your decisions in the design process can, intentionally or accidentally, influence the capability and economic sustainability of New Zealand Inc.

Tools now exist to help quantify sustainability, including the assessment of LED lifetimes, product ratings, or CIBSE assessment guidelines.



NZ MADE

Choosing local to support NZ

The image in our mind of "Made in New Zealand" goes far beyond just the assembly of imported components. It reflects a sense of identity, a depth of capability, and a world-beating innovation born from a culture of resilience through isolation.

Therefore, claiming to be 'Made in New Zealand' brings a responsibility. Responsibility to a local supply chain, local component manufacturers, local businesses, local employees, innovation, and an export mindset. A culture of innovation drives our New Zealand manufacturing forward, bringing new value for clients through products that last, speed up installation, can be reused or refitted at the factory, or recycled at the end of use.

These are values for clients which, when chosen, support the growth of New Zealand Inc.

Precinct Properties Architect: Warren and Mahoney Engineer: NDY Featuring: ERCO Iku & Energyline Linear

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GREEN STAR

What is Green Star?

Created by Green Building Council Australia in 2003 and adapted for Aotearoa, New Zealand, Green Star provides a rating of up to six stars based on a building's key sustainability credentials. One star indicates minimum practice, with six stars achieving world leadership.

Green Star is an internationally recognised certification available for every commercial building type, from schools and hospitals to office buildings, shopping centres, industrial warehouses and large-scale community developments.

Certification works toward:

- Reducing the impact of climate change
- Enhancing our health and quality of life
- Restoring and protecting our planet's biodiversity and ecosystems
- Driving resiliency in buildings, fit-outs and communities
- Contributing to market transformation and a sustainable economy



Green Star is composed of four distinct sustainability rating tools, each relevant to distinct phases of the built environment; Communities, Design & As Built, Interiors and Performance.

Applicable Green Star Credits for Workplace Lighting:

	WHAT	QUALIFICATION	ADDITIONAL POINTS		
Credit 11	Lighting Comfort	11.1 Minimum lighting comfort	Glare Reduction (1 pt)	Surface Illumination (1 pt)	Localised Control (1 pt)
Credit 26	Light Pollution	26.1 Minimal light pollution to neighbouring bodies	Minimising light pollution to Night Sky (1 pt)		

Find out more about Green Star here: https://www.nzgbc.org.nz/greenstar



WELL BUILDING STANDARDTM

The WELL Light concept promotes visual, mental, and biological health.

The WELL Building Standard[™] is a vehicle for buildings and organisations to deliver more thoughtful and intentional spaces that enhance human health and wellbeing.

The role buildings can play in human health and wellbeing has never been more evident or more important. Through evidence-based design, we can create spaces that enhance – rather than hinder – health and wellbeing by promoting visual, mental and biological health.

The WELL Light concept aims to provide exposure to light and aims to create lighting environments that reduce circadian phase disruption, improve sleep quality, and positively impacts mood and productivity.

Light is the primary driver of visual and circadian systems. Integrating daylight and electric light to create lighting strategies focused on human health, along with traditional requirements for visual acuity and comfort, can lead to healthier and more productive environments.



NEW ZEALAND LIGHTING STANDARDS

Criteria for optimal, comfortable interior lighting

The Australian/New Zealand Lighting Standard (AS/NZS 1680) sets out general principles and recommendations for lighting the interiors of buildings for performance and comfort. These recommendations aim to produce an environment where essential tasks can be easily performed without adverse factors that may cause visual discomfort.

This standard intends to facilitate the creation of visual environments that exclude or control visual fatigue, thereby promoting efficiency and wellbeing in the illuminated space. Recommendations within the Standards are careful to consider the diversity of tasks within an interior space, adequate task visibility, the need for flexibility in an office lighting system and, importantly, a comfortable visual environment.







CONTROLS

Creating flexible environments

Lighting controls are essential for creating versatile and dynamic environments in a modern workplace. Advanced systems like DALI and Casambi enable precise control over luminaires, allowing for seamless adjustments in brightness, colour temperature, and lighting scenes. This flexibility is crucial for supporting a wide range of workplace activities, from bright, energising light for focused work to softer, warmer tones for relaxation and reflection.

These controls also allow for the transformation of spaces within the office. A working environment can easily shift to an evening hosting space or a creative brainstorming area with just a few adjustments to the lighting. This adaptability makes the workplace more versatile, catering to the changing needs of employees and the business throughout the day.

By empowering employees to customise their lighting and create different scenes, these systems enhance comfort, reduce eye strain, and support circadian rhythms. The result is a workplace that not only improves wellbeing and productivity but also fosters a dynamic and engaging environment where employees can thrive.

AON Lobby Architect: Warren and Mahoney Engineer: NDY Featuring: ERCO Track & Parscans and Energyline Linear to cafe

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Spark Square Office Fitout Engineer: TMCO Featuring: ERCO Iku Work Downlight and Parscan Wall Wash

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NAVIGATING LIGHTING IN THE WORKPLACE





BOARDROOMS

Effective boardroom lighting combines horizontal and vertical components to create a balanced and productive environment. Horizontal general lighting with wide light distributions ensures documents on the meeting table are highly legible. Vertical lighting creates uniform illumination from all sides, avoiding disruptive shadows on participants' faces and enhancing direct, personal discussions. High cylindrical illuminances reduce facial contrasts, contributing to a harmonious distribution of brightness. This low-glare lighting fosters an open and generous atmosphere, essential for efficient communication and decisionmaking during meetings and video conferences.

Consider circadian lighting in boardrooms where conferences are held all day.



A cost cost and an iteration

ERCO Compar

Wall Wash



ERCO Parscan Wall Wash



ERCO Iku For Track



For Track







Fluxwerx

Energyline Fluxwerx Louvre With Fold Curved End Caps Energyline Curvilinear XAL Acoustic





MEETING ROOMS

Smaller meeting rooms require fostering a productive atmosphere. Vertical lighting creates soft, diffuse light through uniformly illuminated walls, ensuring balanced contrasts and a welldefined background. This setup is ideal for meetings and video conferences, preventing the stark contrast of brightly lit faces against dark backgrounds. Horizontal general lighting with wide distributions ensures documents on the table are easily readable. Preprogrammed light scenes, where wallwashers along the presentation surface are switched off and horizontal lighting is dimmed, offer flexibility. This combination promotes a comfortable and efficient environment for collaboration.





ERCO Parscan Wall Wash

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ERCO Compar

Wall Wash



ERCO Iku For Track



ERCO Jilly For Track







Energyline Direct/Indirect Microprism

Energyline Louvre With Curved End Caps

Fluxwerx Fold

XAL Acoustic



Energyline Curvilinear



WORK STATIONS

The office setting presents a unique lighting challenge of task illumination. Uniform horizontal lighting aids everyday tasks such as handwriting notes or sorting through documents, complementing the use of backlit computer monitors. Glare-reduced luminaires and well-placed lighting on both sides of the desk enhance visual comfort. High visual comfort from vertical lighting in the background, combined with horizontal general lighting and task lights at individual workstations, supports sustained concentration and productivity.

Energylight *Viline*

energyline Direct/Indirect Lourve

ERCO Iku for track

ERCO Jilly

ERCO lku Work

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High contrast - low cylindrical illuminance on the face.

Low contrast - high cylindrical illuminance on the face.

The good illumination of faces is important for communication purposes.

Low contrast on the face with effective cylindrical illuminance can be achieved through correct optics and intentional lighting design.

LIGHTING WORKSTATIONS TO END CIRCADIAN DISRUPTION

Using an Evidence-Based Design approach, engineers can design circadian lighting for workstations to end circadian disruption. Based on independent expert recommendation, the use of electric light with a melanopic enriched spectrum, peaking at 480-490nm, throughout the daytime, placed in the vertical plane at eye level of a workstation user, will improve the person's circadian rhythm and ultimately improve their health outcomes. Different lighting tools can be applied in several ways to achieve an effective circadian lighting outcome.

Energylight VIFO

Energyline Linear

Energylight Viline

OSIN

Loop

Check out the Loop!

Shape Office Fitout Featuring: Energyline Linear with Curved End Caps

FOCUS ROOMS

Lighting is crucial in maintaining concentration and comfort. Uniform wall-washing reduces brightness contrast between screens and the environment, creating visually calm surroundings essential for focused work. Vertical illuminance enhances the overall impression of brightness in the space, making it feel open and inviting while minimising visual distractions. This balanced lighting approach ensures that the room supports sustained focus and productivity, providing an ideal environment for concentrated tasks.

ERCO Iku

Wall Wash

Sasso 60

Energyline Direct/Indirect Wall Mount ERCO Iku Double Wall Wash

XAL Acou

XAL Acoustic

Waldmann Task Light

XAL Sasso Surface

DLA Piper Commercial Ba Engineer: Bec Featuring: Lumenppulse Lumen Cove Nano 2.

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LOBBY

Including facades and entrances, the lobby area is the first opportunity for companies to present their corporate identity through office architecture. Light sculpts the architecture, subtly communicating attributes like openness, vibrancy and transparency. Combining vertical and accent lighting creates a prestigious, inviting atmosphere. The lobby acts as the "business card of the business," making a lasting impression on visitors. Thoughtful lighting enhances this effect, ensuring the space reflects the company's values and professionalism.

Compar

Lumenpulse Lumencove Nano ERCO Iku Energyline Systems Energyline Curvilinear XAL Pendant ERCO Parscan

RECEPTION

People interpret the brightest area of a room as the most important, so accent lighting highlights key elements like reception desks and logos, guiding visitors in large, unfamiliar spaces. This directed light enhances the brilliance of material surfaces. Additionally, accent lighting can be used outdoors to create visual connections between interior and exterior spaces in the dark, indicating the route to the entrance. This thoughtful approach ensures that visitors feel oriented and welcomed from the moment they arrive.

Consider circadian lighting here. Receptionists often get missed for circadian entrainment.

ERCO Compar

ERCO Parscan

Energyline Systems

Energyline Curvilinear

ERCO Jilly Pendant

XAL

Sasso

BREAKOUT AREAS

The aim of this part of the office space is to create stimulating environments. Contrasts in lighting provide a refreshing change from the uniform brightness of workstations, which then fosters inspiration and creativity. Accent lighting highlights interior details and helps define private zones for reflection or intensive discussions. Vertical lighting on wall panels ensures pleasant lighting levels and legibility for discussions or creative meetings. Spotlights, especially with oval light distribution, can be used to create attractive, glare-free focal points. These vertical accents also give a sense of spaciousness and enhance the overall brightness of the area. These accents provide sufficient lighting for reading and high contrast on the interior, adding brilliance to surfaces. This strategic use of lighting supports concentrated work and enhances the aesthetic appeal of breakout areas.

Energyline Systems

Exenia Spot Revo

ERCO Parscan

ER(Par

ERCO Pantrac

XAL Unico

RZB Basic Ball Glass

The Warehouse Group Auckland Support Office by ECS, using Energylight VIFO Photography by Mark Scowen Featuring: ERCO Parscan Oval Flood

ERCO

Parscan

Lightgap

ERCO Compar

PWC Fitout Architect: Warren and Mahoney Christchurch Engineer: Cosgroves Featuring: ECRO Light Gap

CIRCULATION

Enhancing navigation and user experience throughout the office space is often forgotten. Differentiated lighting creates clear perception hierarchies: linear lighting guides individuals through open areas, while wallwashing defines room borders and illuminates peripheral surfaces like staircases. Vertical lighting contributes to a bright and spacious atmosphere, making narrow corridors feel more open and welcoming. Well-lit circulation areas not only aid in orientation but also encourage spontaneous, informal interactions among colleagues, improving overall workplace dynamics and user acceptance.

ERCO Skim

Architect: RM Designs Engineer: TMCO Featuring: Energyline 55

Energyline Product Hollyford

Systems

Lumenpulse Lumencore IP Rated

BATHROOMS

General lighting should not only focus on the floor but also include vertical lighting to expand the spatial ambience and enhance the overall brightness. Bright, friendly, illuminated bathrooms with balanced contrasts in brightness and great cylindrical illumination convey a feeling of security. Wallwashing combined with accent lighting creates optimal visual conditions, making the space more accessible and user-friendly. Contrasts in brightness help define and structure the bathroom, supporting quick and dependable orientation for both new visitors and regular users. This thoughtful lighting design ensures the bathroom feels welcoming and safe for everyone.

Project: Kiwirail Engineer: WSP Featuring: Energyline, ERCO Iku Work Downlight in Custom Pendant.

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OUR BROCHURES

LARGE AREA & INDUSTRY WELLBEING THROUGH LIGHT

energylight

HEALTH & CARE WELLBEING THROUGH LIGHT

energylight

PUBLIC & LANDSCAPE WELLBEING THROUGH LIGHT

James Duder Sales Director National

Caleb King Technical Director National

Mark Jansen Creative Director National

Donna Julian Lighting Specialist Team Lead - AKL

Allan Davies Lighting Specialist Auckland

Lighting Specialist Auckland

Mike Geddis Lighting Specialist Outdoor - National

Rochelle Wong Lighting Specialist Christchurch

Derek Colley Lighting Specialist Christchurch

PWC Commercial Bay Architect: Jasmax Engineer: Beca Featuring: Energyline

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Front Cover Photo:

QBE Fitout Queen Street Engineer: Agile Auckland Featuring: Energyline