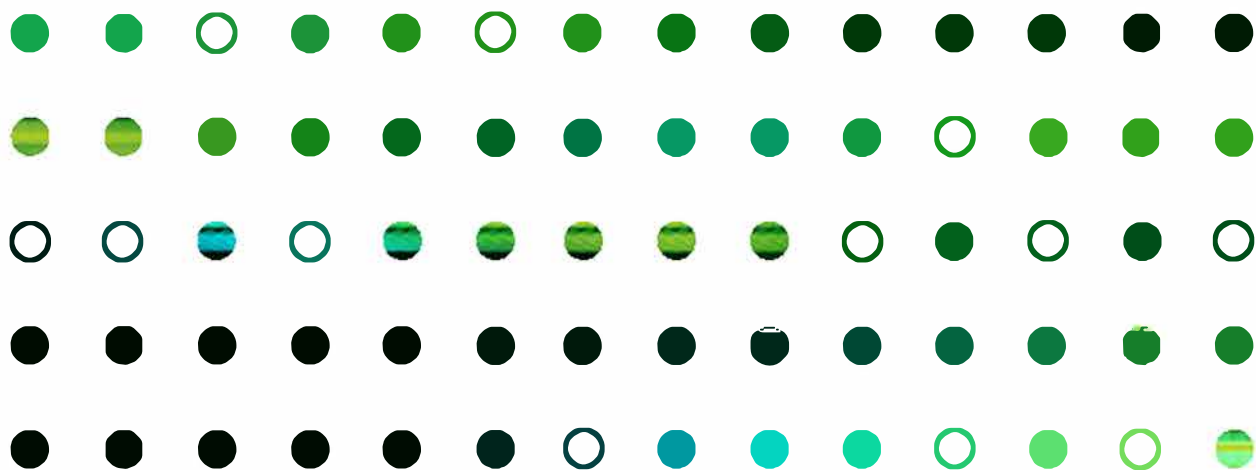
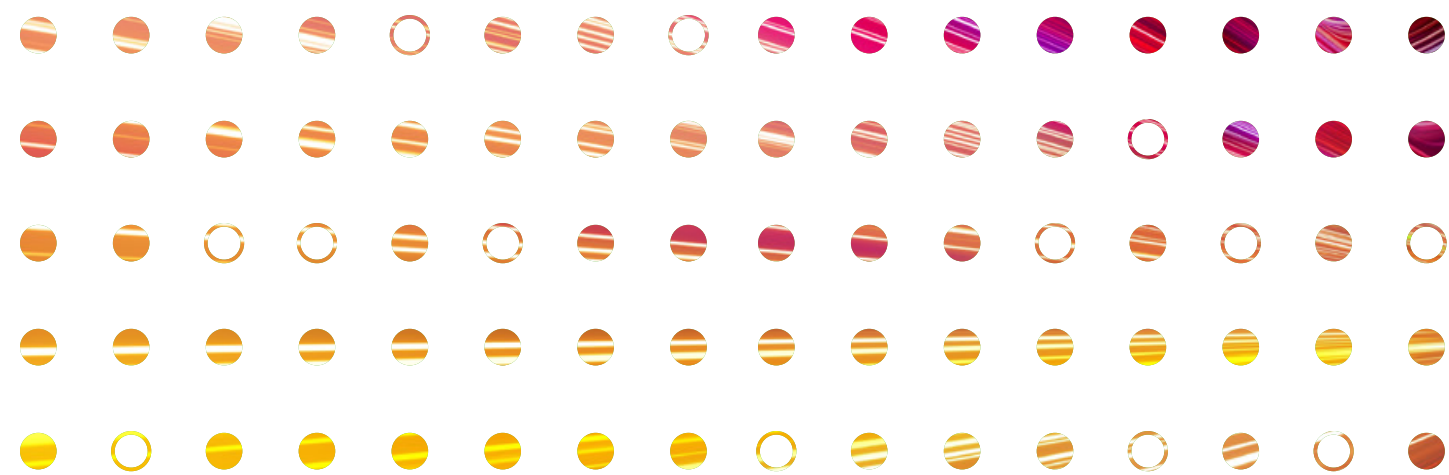




where light leads

nu **lumentek**®

PROFILE
RETROFIT EDITION 2025



where light leads

We exist to illuminate spaces, enhance well-being, and inspire excellence by seamlessly blending sustainability, functionality and creativity.

ABOUT OUR COMPANY	06
MISSION / VISION	07
OUR HISTORY TIMELINE	08
COMPANY ACCREDITATIONS	09
CORE VALUES & VALUE PROPOSITION	10
WE MAKE LIGHTNING SIMPLE	11
LIGHTNING APPLICATIONS	12 - 13
SERVICE PROVIDED FOR RETROFIT	14 - 15
LIGHTING CONTROL	16 - 17
TYPES OF LIGHTING CONTROLS	
BENEFITS OF LIGHTING CONTROL	
CIRCULAR LIGHTING	18 - 21
THE CIRCULAR VALUE OF RETROFITTING	
nulumentek's CIRCULAR RETROFIT EXPERTISE	
CASE STUDIES	22 - 31
ALMARAI PHASE 1 & 2	
DUBLIN AIRPORT	
MEDITE SMARTPLY MANUFACTURING	
SANMINA MEDICAL MANUFACTURING	
POINT SQUARE SHOPPING CENTER	
TESTING LAB	32 - 33
SELECTED CLIENTS	34 - 35
CONTACT US	36



WHO WE ARE

Established in 2012, nu**lumentek** is now, an internationally renowned specialist lighting solutions provider. Our core strength lies in delivering professional support to our valued clients and partners. Our proficiency spans a range of areas, encompassing standard commercial lighting, premium architectural lighting, facade lighting, urban and landscape lighting, as well as specialised retrofitting.

Operating from offices in Ireland, the UK, and across the Middle East, our team is composed of dedicated professionals, including engineers, project managers, architects, designers, and creatives. Our collective commitment is directed towards reducing the energy footprint associated with lighting. We take pride in our devotion to providing sustainable solutions that seamlessly integrate with their surroundings, offering purposeful and well-suited lighting solutions for every project.

We travel the world to source from renowned, global and niche lighting brands, curating a product assortment that features iconic designs as well as the latest in contemporary lighting to bring one-of-a-kind lighting experience to our projects.

MISSION

To deliver sustainable lighting solutions shaped out of creative thinking, bespoke approach, cutting-edge technology, intelligent engineering and future focused innovation.

VISION

To lead the industry by transforming spaces through sustainable lighting solutions that enhance human experiences through innovation and aesthetic excellence.

OUR HISTORY TIMELINE.

2012

Established in Cork
Ireland

2013

Office opened in
Masdar City,
Abu Dhabi, UAE
Office opened in
Jeddah - KSA

2019

Office opened in
Riyadh - KSA
Moved to new larger
premises in Cork -
Ireland

2020

Office opened in
Dubai, UAE
QA Certification
ISO 45001:2018
ISO 9001:2015
ISO 14001:2015

2021

Office opened in
United Kingdom

2023

Office opened in
Egypt

COMPANY ACCREDITATIONS.

We are ISO accredited and operate a strict quality control system across all our processes.

Our policies are structured in a manner that aligns with our clients' objectives and allows us to develop our proposals which are commercially viable based on delivering fit for purpose solutions that are best in class for energy consumption and deliver the most economical whole life cost.

Each project follows a strategy which focuses on providing the most effective solution for our clients where sustainability delivers excellent IRRs and improves the

company's bottom line through delivering solutions which meets our criteria for avoidable costs

All projects are developed in line with our sustainability goals which applies across our whole supply chain.

We continue to adapt our systems each year to ensure we continuously improve; we always aim to stay ahead of the curve with regards to the integration of new technologies and processes.



At our core, we embrace innovation, craftsmanship, quality, and sustainability. Our commitment extends beyond the present to nurture emerging design talent, drive scientific exploration, and cultivate pioneering collaborations - all to protect and evolve iconic design legacies for the future.

WE MAKE LIGHTING SIMPLE.



ARCHITECTURAL LIGHTING SOLUTIONS.

We provide architectural lighting solutions based on collaboration with specialist lighting designers, architects and end users.



FLEXIBILITY.

We focus on bringing the most suitable products for each application and ensure we provide the flexibility to modify products as required including complete bespoke product development.



INTEGRATED SOLUTIONS.

We work on unique form factors and integrated solutions for built in applications.



LIGHTING APPLICATIONS.

We support solutions for every lighting application from class A high end lighting to specialist retail and urban & rural landscape solutions.



SMART LIGHTING CONTROLS.

We provide wired and wireless lighting control systems for all applications including built-in smart sensors



LIGHTING APPLICATIONS.

The key to a successful lighting retrofit is to understand the facility and ensure the correct colour temperature, light levels , uniformity and control are achieved for the lowest possible energy. This requires experienced professional's to survey and design the most suitable solution including form factor and aesthetics as well as compliance for life safety systems such as emergency lighting. We ensure we recycle older generation lighting and also focus on re-using existing mechanical body's by developing bespoke retrofits to fit in the existing light structures. We have solutions for every possible lighting application!



Airports



Hospitality



Data Centers



Parks & Urban Spaces



Outdoor



Industrial
Manufacturing



Offices



Retail



Fashion Retail



Pharmaceutical



Logistics



Road & Transport

SERVICES PROVIDED FOR RETROFIT.

We provide lighting engineering for retrofit purposes to support companies transition to sustainable energy-efficient lighting solutions.

We ensure our designs incorporate the most efficient lighting technology.

We provide investment grade information so that decision makers have all the information required to proceed, Lighting retrofit is a simple decision as the return of investment

is always excellent and provides much more than just a commercial return when carbon emissions and sustainability is calculated.

ANALYSIS

- o Project survey including detailed analysis of existing systems.
- o Spreadsheet development to determine existing light energy usage.
- o Life cycle analysis.
- o Comparative analyses and demonstration of energy savings.
- o Carbon savings calculations.

SCOPE DEVELOPMENT

- o Specification development where required.
- o Installation scope development.
- o Programming / Planning.
- o Monitoring.
- o Smart controls options.
- o Measurement & Verification.

DESIGN

- o Lighting & Lighting controls design.
- o Lighting drawings and schedules.
- o Wiring and control diagrams.
- o Design & supply of bespoke lighting, including solar-powered systems.
- o Product selection and supply.

FINANCIAL

- o Financial solutions available using energy savings.
- o Total cost of ownership.
- o IRR, ROI, and NPV calculations.
- o Energy credit applications where applicable.

LIGHTING CONTROL

Lighting controls are systems and devices used to manage the operation of lighting fixtures in both residential and commercial settings. They can help optimize energy, increase efficiency, improve user comfort, enhance building automation, and reduce operational costs.

Integrating lighting controls in existing buildings when retrofitting lighting provides an excellent opportunity to the building owners and users to take advantage of the latest technology to maximise user comfort & control and increase energy efficiency.

In general, we recommend wireless lighting control solutions in older buildings to reduce the impact of running new cables.

TYPES OF LIGHTING CONTROLS

MANUAL CONTROLS

Traditional switches and dimmers are simple user-operated systems for on/off or brightness adjustment. They offer limited flexibility

SIMPLE WIRED OCCUPANCY/VACANCY SENSORS

Typically, infrared or microwave sensors that detect motion and turn lights on when a room is occupied and off when vacant, helping to save energy. Ideal as a simple solution for public restrooms, offices, corridors and storage rooms

DAYLIGHT HARVESTING SENSORS

Sensors that can adjust lighting levels based on the amount of natural light available. They can Reduce energy use in areas with good daylight exposure

TIME-BASED CONTROLS

Use of timers or scheduling software to switch lights on or off at preset times. ideal for security, outdoor lighting or predictable usage patterns.

NETWORKED/ SMART LIGHTING SYSTEMS

Systems that can be controlled via apps, voice assistants, or automation rules. They provide high levels of customization and integration with other smart home or building systems.

Often integrated into Building Management Systems (BMS) or IoT platforms. Trough te various digital or analogue lighting protocols like DALI, DMX, 0-10V.

WIRELESS CONTROLS

Lighting solutions that use wireless communication protocols to control lighting fixtures. Used as standalone solution or extension of larger wired smart lighting systems.

They eliminate the need for direct wired connections between the switch or controller and the lights themselves. These systems offer convenience, flexibility for retrofits without extensive rewiring, using wireless protocols like Casambi, Zigbee, Bluetooth, or Wi-Fi.

BENEFITS OF LIGHTING CONTROL

- The advantages of implementing lighting control systems are extensive:
- Energy Efficiency: Controlled lighting reduces energy use by ensuring lights are only on when needed.
- Cost Savings: Lower energy consumption leads to reduced utility bills.
- Increased Lifespan of Lighting Fixtures: Lights that are dimmed or used less frequently last longer.
- Enhanced Comfort and Productivity: Proper lighting can reduce eye strain and improve mood and efficiency.
- Security and Safety: Automated lights can deter intruders and provide illumination in emergencies.

CONCLUSION

Lighting control systems have evolved from simple switches to sophisticated, intelligent systems that play a crucial role in energy management, comfort, and modern design. As technology continues to advance, lighting control will become even more integrated into our daily lives, contributing to smarter buildings and a more sustainable future. Whether through manual dimmers or automated smart networks, effective lighting control is a cornerstone of efficient and user-centred environments.





nulumentek's **RETROFIT LIGHTING:** **A STEP TOWARD CIRCULAR ECONOMY**

At nulumentek, we specialise in delivering seamless Circular Retrofit lighting solutions that enhance performance, reduce energy consumption, reduce embodied carbon, and extending lifespans through modular, repairable designs, all without compromising design integrity and safety.

In an era where sustainability and cost-effectiveness are essential, retrofitting existing light fixtures presents an effective opportunity for businesses and property owners. Rather than replacing entire luminaires, retrofitting existing fixtures isn't just about efficiency, it's

a commitment to responsible resource use. By integrating advanced LED technology into existing structures, we deliver energy savings and closed-loop lifecycle solutions while maintaining the original aesthetic appeal.

THE CIRCULAR VALUE OF RETROFITTING

Recognising the inherent sustainability of reusing existing structures, retrofitting exemplifies circular design principles by combining resourcefulness with future innovation. nulumentek's solutions extend beyond energy efficiency, fully integrating the pillars of circularity and product life cycle.

PRESERVING AESTHETICS, REDUCING WASTE

- Maintain original fixture designs while upgrading internals with modular, replaceable components (LEDs, drivers, optics).
- Divert housing materials from landfills—supporting the "retain and regenerate" ethos of TM66.

LOWERING COSTS & CARBON FOOTPRINTS

- Avoid full replacements and their associated embodied carbon (TM65-aligned assessments guide our material choices).
- Our retrofits reduce energy use by 50%+ while extending fixture lifespans through field-replaceable parts.

DESIGNING FOR DISASSEMBLY & FUTURE USE

- TM66-compliant construction: Minimal adhesives, standardized fasteners, and separable materials ensure end-of-life recyclability.
- Smart compatibility: Retrofits include upgrade paths for IoT controls, future-proofing investments.

nulumentek's **CIRCULAR RETROFIT EXPERTISE**

We combine technical innovation with TM66 best practices to deliver retrofit solutions that are as sustainable as they are seamless:

MODULAR LED RETROFITS

- Custom LED modules and drivers designed for easy replacement, reducing waste and enabling future upgrades.

SUSTAINABLE MATERIAL SOURCING

- Prioritise recycled aluminum, polycarbonate, and other low-impact materials
- Comply with WEEE Directive and cradle to grave principles for end-of-life recovery.
- Embodied carbon data (per TM65) transparently shared with clients.

HERITAGE SENSITIVITY WITH CIRCULAR OUTCOMES

- For historic buildings, our retrofits preserve original aesthetics while embedding circular design (e.g., reversible modifications, matched finishes).

CERTIFIED PERFORMANCE

- All retrofit solutions undergo rigorous safety validation testing to ensure full compliance with EU directives (LVD, EMC, RoHS) before CE certification is issued
- Optical performance metrics (including luminous flux, CRI, and beam distribution) are independently verified through accredited laboratory testing



CASE STUDIES: CIRCULAR RETROFITS IN ACTION

- External facade luminaire: LED facade lighting upgrade, retrofitted exiting LED blue fixture with RGBW PCB and DMX controls to future proof for architects design requirements.
- High Output Architectural Highbay: Retrofitted high-bay fixture project, reclaiming the aluminum housings, cutting energy use and enabling easier maintenance and future upgrades.
- Linear Architectural Fixture: Retrofitted linear lights replacing T5 fluorescent lamp with a modular LED design, repurposing the existing aluminum extrusion using components with a lower carbon embodied footprint.

CONCLUSION: RETROFITTING FOR A CIRCULAR FUTURE

nulumentek's retrofit solutions prove that sustainability and aesthetics preservation can coexist. By designing for disassembly, prioritising recycled materials, and partnering with suppliers on TM66 principles, we transform legacy lighting into future-ready, circular assets.

nulumentek: Where Light Leads



INDIVIDUAL CASE STUDIES FOR PROJECT STATISTICS:

Almarai | 2013 - 2025 | Saudi Arabia

Over 150000 LED luminaires installed in food manufacturing, offices, logistics, and farm buildings.

Dublin Airport | 2012 - 2025 | Ireland

Over 30000 luminaires installed, of which more than 30% are bespoke.

Medite Smartply Manufacturing | Ireland

1600 luminaires installed in a large manufacturing facility.

Becton Dickenson Pharmaceutical | Ireland

1200 luminaires installed for a pharmaceutical retrofit.

Glaxo Pharmaceutical | Ireland

2800 luminaires installed in a pharmaceutical manufacturing plant.

Sanmina Medical Manufacturing Plant | Ireland

1450 luminaires installed. Complete lighting retrofit of the facility.

C&D Foods | Ireland

1585 luminaires installed. Full lighting retrofit in a food processing plant.

Kuehne + Nagel Logistics | Ireland

450 luminaires installed. Multiple warehouse lighting retrofits.

IBM Campus | 2017 - 2025 | Ireland

700 luminaires installed. Multiple lighting retrofits across the campus.

Flex Logistics | 2016 - 2025 | Ireland

640 luminaires installed. Continuous lighting retrofit of a large logistics hub.

Point square shopping center | 2023 - 2025 | Ireland

4500 luminaires installed. Complete Lighting retrofit

Belgard Square West - Residential Complex & Multistorey Carpark | 2024

1950 luminaires installed. Complete Retrofit (Design, supply & Installation)

A sample Retrofit
Lighting projects delivered.

Almarai Phase 1 & 2

Client: **Almarai**

Location: Multiple Locations in Saudi Arabia



Over 55,000 LED luminaires installed in food manufacturing, offices, and logistics buildings.

Almarai is the largest vertically integrated food manufacturer in the world, producing

dairy products, poultry, juices, bakery items, and more.

Almarai, the gold standard for food production, engaged us to develop their lighting retrofit program

	Existing	New	Saving
Annual Power (kWh)	47,392,000	13,172,525	72%
Annual Carbon Emission (kg CO ₂)	26,966,045	7,495,163	72%
Annual Energy Saving (kWh)		34,219,475	
ENERGY SAVING 72% =		34,219,475 kWh kilowatt - hours of electricity	





A sample Retrofit
Lighting projects delivered.

Dublin Airport

Client: **Dublin Airport Authority**
Location: Dublin, Ireland



We began developing lighting solutions for the airport in 2012, collaborating with the asset management team to create LED lighting units that maintained the existing form factor and mechanical structure of the original luminaires. This initiative led to the development of multiple customized fast-fit LED retrofit solutions, supporting the airport's

sustainability program while significantly reducing lighting energy consumption and maintenance costs.

Now, nearly 13 years later, we continue working with Dublin Airport on an ongoing mission to optimize their lighting infrastructure.

We have developed over 6000 bespoke solutions and designed and delivered over 30,000 general luminaires for every application possible including aircraft hangars, aprons, retail outlets, food courts, first class lounges and general terminal lighting for baggage handling, check in, arrivals, departures etc.

The following is an example of a recent retrofit project

	Existing	New	Saving
Annual Power (kWh)	9,216,255	3,426,333	63%
Annual Carbon Emission (kg CO ₂)	2,608,199	969,649	63%
Annual Energy Saving (kWh)		5,789,922	
ENERGY SAVING 63% =		5,789,922 kWh kilowatt - hours of electricity	

A sample Retrofit
Lighting projects delivered.

Medite Smartply Manufacturing

Client: **Medite Smartply Manufacturing**
Location: Clonmel, Co. Tipperary, Ireland



We carried out this project on a design, supply, and install basis for ESB Smart Energy Services. ESB is the largest utility provider in Ireland and promotes sustainability programs through Lighting as a Service, where projects are financed through the savings generated.

The project involved an advanced industrial manufacturing plant that processes timber from fully grown trees into finished MDF and Smartply products.

This project was part of the EXCEED (Excellence in Energy Efficiency Design) program and was verified under this criteria for energy design and savings.

	Existing	New	Saving
Annual Power (kWh)	2,099,440	666,903	68%
Annual Carbon Emission (kg CO ₂)	630,000	200,000	68%
Annual Energy Saving (kWh)		1,432,537	
ENERGY SAVING 68% =		1,432,537 kWh kilowatt - hours of electricity	

A sample Retrofit
Lighting projects delivered.

Sanmina Medical Manufacturing



SANMINA

Client: **Sanmina**
Location: Fermoy, Co. Cork, Ireland.
We carried out this project on a design & supply basis and also provided Measurement & Verification services to confirm energy savings and light levels.

The project involved a high-tech manufacturing facility producing high-quality PCBAs, subassemblies, and complete devices, including Class III medical devices.

	Existing	New	Saving
Annual Power (kWh)	878,530	237,411	73%
Annual Carbon Emission (kg CO ₂)	263,559	71,223	73%
Annual Energy Saving (kWh)		641,119	
ENERGY SAVING 73% =		641,119 kWh kilowatt - hours of electricity	



A sample Retrofit
Lighting projects delivered.

Point Square Shopping Center

Client: **Point Square Shopping Center**
Location: Dublin, Ireland

nulumentek designed, supplied, and installed the complete retrofit of the Point Square Shopping Center in Dublin, Ireland, including the car park.

The project involved upgrading 4,500 lights, achieving over 66% energy savings.

	Existing	New	Saving
Annual Power (kWh)	1,253,760	425,385	66%
Annual Energy Saving (kWh)		828,375	
ENERGY SAVING 66% =		828,375 kWh kilowatt - hours of electricity	

*A sample Retrofit
Lighting projects delivered.*

Sacred Heart Hospital

Client: **HSE**

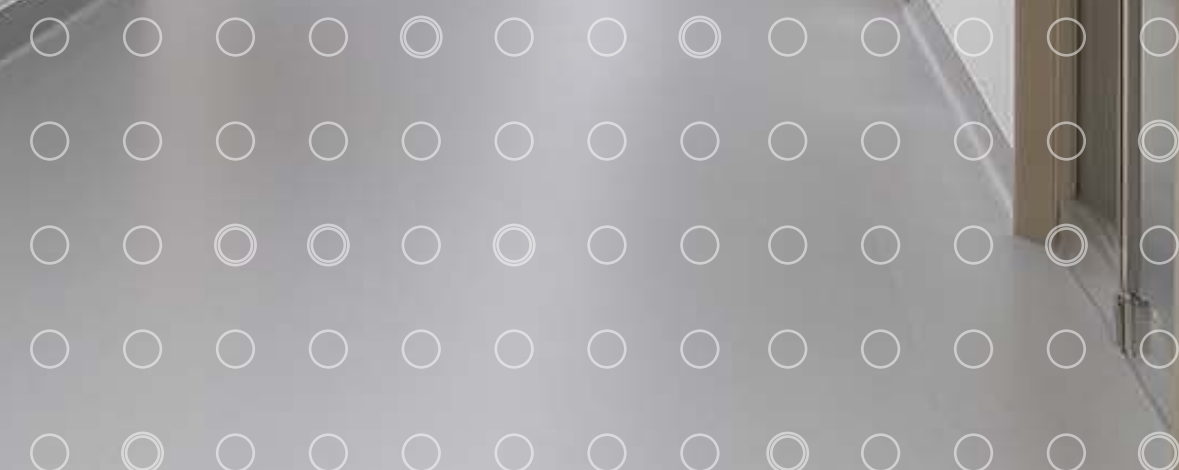
Location: Roscommon, Ireland

nulumentek designed and supplied the complete retrofit of the Sacred Heart Hospital in Roscommon, Ireland, including internal and external lighting.



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

The project involved upgrading 410 lights, achieving over 67% energy savings.





*A sample Retrofit
Lighting projects delivered.*

The Plunkett Community Nursing Home

Client: **HSE**
Location: Roscommon, Ireland

nulumentek designed and supplied the complete retrofit of the Plunkett Home Boyle Nursing Home in Roscommon, Ireland, including internal and external lighting.



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

The project involved upgrading 325 lights, achieving over 65% energy savings.



*A sample Retrofit
Lighting projects delivered.*

Roscommon University Hospital

Client: **HSE**
Location: Roscommon, Ireland

nulumentek designed and supplied the complete retrofit of the RUH in Roscommon, Ireland, including internal and external lighting.



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

The project involved upgrading 850 lights, achieving over 72% energy savings



IN-HOUSE TESTING & QUALITY ASSURANCE

nulumentek has made significant investments in its dedicated internal testing laboratory, enabling us to perform rigorous:

- Performance assessments
- Safety and compliance evaluations
- Endurance and lifecycle testing

This allows us to ensure that every product not only meets but exceeds industry benchmarks for reliability and performance, tailored to the demands of each specific application.

Our commitment to compliance and continuous improvement ensures peace of mind for our customers, project partners, and end users across all markets.

nulumentek's IRELAND-BASED LAB: Testing for Superior Quality and Performance.

At nulumentek, we are committed to delivering lighting solutions that meet the highest standards of safety, performance, and environmental responsibility. All nulumentek - supplied products are fully certified in accordance with the most recent European Union (EU) legislation and directives, ensuring compliance across multiple countries.

Our products are independently verified or self-certified (as applicable) to conform to the following directives:

- **Low Voltage Directive (LVD) – 2014/35/EU**
Ensures electrical safety for equipment operating within defined voltage limits.
- **Electromagnetic Compatibility Directive (EMC) – 2014/30/EU**
Guarantees that our products neither emit nor are susceptible to electromagnetic interference.
- **Restriction of Hazardous Substances (RoHS) – 2011/65/EU**
Limits the use of specific hazardous materials in electrical and electronic products to protect human health and the environment.
- **Eco-design Directive – 2009/125/EC**
Promotes energy efficiency and sustainable design, supporting a circular economy and reducing environmental impact.



SELECT CLIENTS

nulumentek is a trusted provider of advanced lighting solutions, working on a confidential basis with several Tier 1 firms and Fortune 500-level organizations. Our reputation for innovation, quality, and reliability has positioned us as a preferred partner across high-profile infrastructure, commercial, and public sector projects in Europe and the Middle East





THE **nulumentek** FOOTPRINT



IRELAND
Unit 8, North Point Business
Park, Mallow Road, T23
H337, Cork, Ireland

T: +353 21 439 5659
Ext: 500



UK / LONDON
nulumentek UK Limited,
86-90 Paul Street, London,
EC2A 4NE, P.O. Box 6945,
United Kingdom

T: +353 21 439 5659
Ext: 700



UAE / DUBAI
Office 200, The European
Business Center, Dubai
Investment Park, Dubai,
United Arab Emirates,
PO Box 416439

T: +971 4 585 8155



UAE / ABU DHABI
Office 124, First Floor,
Incubator Building, P.O.
Box 135054, Masdar City,
Abu Dhabi

T: +971 2 556 2729



KSA / RIYADH
Office 23, 2nd Floor, Tulip
Square, 3122 Northern
Ring Branch Road,
Al Munisiyah, Riyadh,
Saudi Arabia, 13253

T: +966 92 000 6393
Ext: 300



KSA / JEDDAH
nulumentek KSA
2nd Floor, Building 4176
Al Kayal Street, Ar Rawdah,
Jeddah, Saudi Arabia

T: +966 92 000 6393
Ext: 200



EGYPT / CAIRO
45th Abd El Hameed
Badawy St. El Nozha,
Cairo, Egypt
3rd Floor

T: +20 2 26233598

COMPANY INSURANCES
Insurer - Lloyds London

LLOYD'S

- \$13M Employers Liability
- \$6M Public Liability
- \$6M Product Liability
- \$2M Professional Indemnity



Operating from offices in Ireland, the UK, and across the Middle East, our team is composed of dedicated professionals, including engineers, project managers, architects, designers, and creatives.



nu**lumentek**[®]

E: info@nulumentek.com

W: nulumentek.com

Copyright © 2024 nulumentek. All Rights Reserved.

The nulumentek logo, nulumentek[™], nulumentek Ltd, the tagline 'Where Light Leads' and any product, services or solutions denoted with [™] or [®] are trademarks or registered trademarks of nulumentek Ltd. nulumentek trademarks may not be used in connection with any product or services that is not a nulumentek product or service.