



A marvel of engineering, this masterfully crafted 1.25" surface mount fixture emits more than 1000 lumens, surpassing competitors with a single gentle beam of discreet quality illumination.

There's a reason why the upcoming Finch, named after its small 1.25-inch aperture, was selected as a "Top 10 must-see" lighting solution at this year's LightFair. It's the same reason why visitors at Amerlux's booth were awed when they looked up at the pipe organ like display of fixtures coming straight down from the ceiling, then bending inward, illuminating a wall display. The quality was easy, even impressive, to see. When architects held Finch, the craftsmanship of the indoor and outdoor extruded aluminum fixture was more evident to feel.

The elusive beauty of Finch includes its capacity to generate a focused beam of light without any glare. This essential design feature ensures the visual comfort of individuals, resulting in a cleaner and more visually appealing ceiling design. Finch's adaptability goes beyond meeting diverse lighting needs. It offers customizable features such as direct/indirect lighting, wall-mounted options and round/square downlights, providing a comprehensive lighting solution for any environment.

[Amerlux_DeltaDigest_Finch_rev.pdf](#)

National LED Market Observer

1. RESEARCH: U.S. Lighting Market Analysis Published - Research and Markets has published the 18th edition of its United States Lighting Fixtures Market report for 2024. The seven-chapter report states that while the market slowed to pre-COVID-19 levels in 2024, estimates show market expansion is expected for the next two calendar years due to an expected increase in construction of non-residential projects. The analysis covers topics such as basic data and trends, the U.S. market structure, demand determinants and insights into international trade. For example, the report indicates that China continues to be the largest lighting fixture import partner of the U.S. while imports from Canada, Cambodia, Mexico and Vietnam are also significant. Lighting brands such as Acuity, LEDvance, Signify and Zumbotel along with many others are included in the analysis. To find the full report, visit: www.researchandmarkets.com



2. Flipping the Switch: Is Lighting the Next Tech Partner? by Jon Springer - Shopping carts are going to AI; robots are taking inventory and scrubbing floors. Payment has gone from checks and cash to cards to digital wallets to a swipe of the hand. Shoppers are dividing their spending between online, pickup and in-store. These one-time routine or analog practices—to name only a few—have seen rapid reinvention thanks to technology advances and a digital economy serving an increasingly digital shopper. Don't look now but your lighting provider might be flipping a similar switch. If carts can be smart and sweepers can be smart, lighting can be smart too. Lighting is moving into the digital transformation space with practical and potentially dramatic effects. Every light in a store sends out a unique IP address that a smartphone can detect, and by aligning the pattern of lights on the ceiling with locations of shelves and items on the store floor, makes it easier to find a product on a shelf. In-store navigation is just one of the connected lighting system's cloud capabilities. Retailers connected to the system can also manage and monitor system status, access tools to optimize energy savings and manage lighting remotely—a store, various parts of a store or a whole chain at a time. [Flipping the Switch: Is Lighting the Next Tech Partner? \(supermarketnews.com\)](#)

3. Interactive Robot Market Is Expected to Grow by Deborah L. O'Mara - Artificial intelligence (A.I.) is at it again, this time in the interactive or social robotics market. A.I., machine learning and language processing advancements have elevated the capabilities of interactive robots. They use advancing cognitive technologies to interact to gestures, voice and even people's emotions. According to the report, robots that can interact with their environment and react to outside stimuli are called interactive robots: "An interactive robot is an autonomous machine that interacts and communicates with people or other physical autonomous agents by adhering to the social norms and expectations of that function....." Robot technology, states the report, is in high demand in many industries because it can boost productivity, efficiency and safety. One of the markets that has increased its demand for robot control systems is manufacturing, where they can be used to automate processes while reducing labor and boosting quality assurance. This may be further fueled in the future by [Industry 4.0 endeavors](#) to increase automation in manufacturing. [Interactive Robot Market Is Expected To Grow - Electrical Contractor Magazine \(ecmag.com\)](#)

4. Space Management with Smart Technology - In an era of changing work trends, which has seen more employers adopt work-from-home and hybrid models instead of having workers in the office full time, facility managers and building owners are incorporating smart sensors into institutional and commercial facilities to enhance efficiency, safety and productivity in the workplace. According to McDannald and Wernick, the following are examples of some of the types of sensors available: [Space Management with Smart Technology - Facilities Management Insights \(facilitiesnet.com\)](#)

- Air quality sensors
- Noise sensors
- Temperature sensors
- Proximity sensors
- Desk sensors
- Light sensors
- Smart cameras
- Access controls
- People counters
- Infrared and ultrasonic sensors
- RFID and Bluetooth sensors

5. Honeywell, Cisco Collaborate for Better Energy Efficiency - Honeywell and Cisco are integrating their platforms to combine artificial intelligence and real-time occupancy data to optimize building energy management. Honeywell's Forge Sustainability+ for Buildings will use the real-time occupancy and environmental data Cisco Spaces collects [to provide insights into energy efficiency and building utilization](#), the companies said in an Aug. 29 news release. The integration will help building owners and operators monitor assets for conditions such as room temperature, lighting and ventilation in specific zones, individual buildings and entire campuses, according to the release. [Honeywell, Cisco integrate AI, real-time data on building energy efficiency, utilization | Utility Dive](#)

6. WHITE PAPER: Using Smart Technology to Control Building Energy Use - Have you asked if your facility is working as hard for you as it could? While staff training and workforce development are key to preparing your organization for decarbonization, so is optimizing building systems to work smarter, not harder. Smart building systems use sensors and monitors to collect real-time energy usage data that's leveraged to achieve more efficient building operations. Whether installing occupancy sensors to switch lights off in areas of a building that aren't in use or using heating, ventilation, and air conditioning (HVAC) controllers to fine-tune air flow and humidity in different zones, there are numerous ways to automate energy savings. Commercial, industrial, and multifamily buildings may be eligible for New York State and utility incentives to support adoption of energy management systems, smart technologies, and other energy efficiency improvements. [nyserda_cisponcon_article_august_facilityexecutive_smarttechnology_8.16.24-3.docx \(live.com\)](#)

7. Economic Benefits of Sensor Technology in Workplaces by Frank Rigas - Companies that use sensor technology can realize many economic benefits. In addition to fostering an employee-friendly workplace, companies that use sensor technology can realize many economic benefits. Sensor technology helps monitor and optimize the use of lighting and HVAC systems based on real-time occupancy and environmental conditions. By adjusting these systems only when necessary, facilities can significantly reduce energy consumption, leading to lower utility bills and overall operational costs. Sensors provide detailed insights into how different spaces within a workplace are being used. This data allows facilities to identify underutilized areas and optimize space allocation, reducing the need for excess office space and potentially lowering leasing costs. Improved space utilization can also enhance employee productivity by ensuring that workspaces are designed and used efficiently. [Economic Benefits of Sensor Technology in Workplaces - Facilities Management Insights \(facilitiesnet.com\)](#)

8. Maintaining the Right Light in WELL-Certified Buildings by Michael Jouaneh - The WELL Building Standard emphasizes natural light integration, appropriate lighting levels, and quality of electric lighting. Here are 5 tips for maintaining WELL certification.

- 1. Ensure light quality with tunable white lighting and in-fixture control**
- 2. Embrace daylight and mitigate glare with automated shading systems**
- 3. Use smaller lighting zones to enhance controllability and energy efficiency**
- 4. Use manual controls and occupancy sensors in more spaces**
- 5. Conduct regular check-ins with building occupants about the lighting environment**

[Maintaining The Right Light In WELL-Certified Buildings \(facilityexecutive.com\)](#)

9. AI Will Force a Transformation of Tech Infrastructure - Cloud services and private networks for years had to handle relatively limited amounts of data. Now that artificial intelligence and deep learning are driving vast quantities of photos, video, sound and natural language into the mix, however, data that was once counted in gigabytes and terabytes is measured in much larger units of petabytes and exabytes. Information systems, including the cloud, must expand to store all of that data. Less obvious—and more interesting—is the need to access all of that information at much higher speed and, critically, lower operating cost. [AI Will Force a Transformation of Tech Infrastructure - WSJ](#)

10. The Impossible Colored Light Bulb Created Thanks to a Tesla Prediction: The Shocking Effect It Has on Your Mind - Although most commercial LED bulbs emit a reasonable amount of blue light, it is a concern since it affects the health of the eye as well as sleep interruption. This is so because blue light interferes with the production of melatonin hormone, which controls sleep and wakefulness in human beings when it is at night. To counter this, the scientists, who were awarded a grant by the U. S. National Science Foundation, developed a new type of LED that produces lower levels of blue light but without the trade-off of the quality of the light. The researchers were able to further enhance this method by synthesizing a new luminescent crystalline phosphor with europium. When incorporated into a violet LED, this phosphor also achieved warm white light, but free of the detrimental blue spectrum. With this innovation, one will be able to overcome the issues of health effect that comes with blue light while continuing to support energy efficiency and the visual appearance of traditional LEDs. https://www.ledinside.com/news/2024/9/2024_09_18_03

11. LED End-of-Life Questions: What happens when it's time for an upgrade or replacement? by Craig DiLouie - In some regions of the United States, LED adoption has achieved a saturation of more than 50% of the installed lighting stock. Eight states have adopted regulations banning the sale of mercury-containing compact and linear fluorescent lamps. Like other traditional light sources that relied on incandescence or gaseous discharge, fluorescent is a dying technology—yet another casualty of the solid-state lighting revolution. A concern about LED's dominance is what happens at end of life. This is really three issues: how owners know when their lighting has reached the end of its useful life, what they are actually replacing and what happens after it's uninstalled. Electrical contractors can be good partners to customers in this regard, educating customers about the differences between LEDs and what they were previously using. In some cases, they can support customers as lighting stewards: visually inspecting the system, replacing defective components and periodically checking light levels. [LED End-of-Life Questions: What happens when it's time for an upgrade or replacement? - Electrical Contractor Magazine \(ecmag.com\)](#)

12. **NECA 2024 Preview** - It's almost time for thousands of electrical professionals to gather at one of the most important industry events of the year — the National Electrical Contractors Association (NECA) Convention and Trade Show. This year's event takes place from September 28 to October 1 at the San Diego Convention Center in San Diego. If you're planning on attending or not, some of the highlights at: [NECA 2024 Preview | EC&M \(ecmweb.com\)](#)

13. **NEMA and IES Announce New Partnership to Enhance Lighting Industry Standards** - The National Electrical Manufacturers Association (NEMA) and the Illuminating Engineering Society (IES)—recognized leaders in development of lighting industry standards—announced a new partnership to foster innovation, collaboration and consistency in lighting technical standards. The new partnership will enhance standards for lighting system performance, quality, safety, and sustainability. Specifically, the MOU identifies key areas of cooperation, including the sharing of subject matter experts and mutual participation in standards development committees. This collaborative effort will streamline the standards development process, ensuring comprehensive input from both organizations. www.nema.org

14. **Efficient Lighting's Newest Frontier: Building System Integration by Levin Nock** - When lighting manufacturers, contractors, distributors, and other commercial lighting stakeholders gather in Milwaukee for the DesignLights Consortium's (DLC) Controls Summit next month, the focus will be clear: There's a world of untapped energy savings waiting to be realized through widespread integration of lighting controls with HVAC and other building systems. Expanding upon previous DLC research showing that adding networked lighting controls (NLC) to commercial LED lighting projects can boost energy efficiency by an average of about 50%, a [2023 study](#) revealed that deeper energy savings are possible through integration of controlled LED lighting with HVAC systems. In that study, we found that when NLCs are paired with HVAC systems to deliver occupancy signals, total electric energy consumption by commercial buildings can drop by up to 20% in some facilities. Based on those results, the DLC recommended that its member utilities and energy efficiency programs across North America revamp their commercial rebate structures to capture these significant energy savings and decarbonization opportunities. [Efficient Lighting's Newest Frontier: Building System Integration | EC&M \(ecmweb.com\)](#)

15. **GE Vernova Releases Inaugural Sustainability Report** - GE Vernova Inc. (NYSE: GEV) today released its first-ever sustainability report as a stand-alone company, detailing how it is making progress on its mission to electrify and decarbonize the world. The report explains GE Vernova's innovative approach to sustainability and outlines ambitious goals built around a four-pillar framework – Electrify, Decarbonize, Conserve, and Thrive. The report also offers an overview of GE Vernova's broad portfolio of energy solutions across Power, Wind, and Electrification segments, as well as its Accelerator businesses. For more information, governova.com/sustainability and read the full Sustainability Report. [GE Vernova Releases Inaugural Sustainability Report – electrifED \(tedelectrified.com\)](#)

16. **Horne Installs LED Wall with 3D Effects** - A brand-new dimension was added to the view inside of the Horne Academic Center at Taylor University when it installed one more wall in the building. Down the hall in the building is a gigantic sound stage. The dark room built to house film productions will now hold an opportunity for students to capture the virtual world on film. The optimized LED wall is designed to produce a background that appears to be three-dimensional (3D) to a camera, John Bruner, professor of film and media arts, said. As the camera eye moves across the set, viewers will be able to see deeper into the visuals on the screen. [Horne installs LED wall with 3D effects - LEDinside](#)



Global LED Market Observer

17. **McKinsey: 3 Things Holding Back the Energy Transition** - Almost nine years after the Paris Agreement and nearly half-way through what has been called a “decisive decade” for climate change, the world stands at a critical juncture in their transition away from fossil fuels. While significant progress has been made in developing and deploying some of these technologies, notably solar and wind, for which installed capacity has risen sharply over the past 15 years, a significant gap has emerged between the actual results and the expected ones. The 2020s are a make-or-break decade for climate action and more needs to be done to accelerate clean technology deployments, asserts the team from McKinsey & Co. **Permitting and supply chain constraints are part of the problem but there are three bigger issues delaying the energy transition: Economic and policy uncertainty, high technology costs and a lack of maturity for emerging solutions.** [The reality gap in achieving net zero | McKinsey](#)

18. **Nichia’s Perspective of Light That Contributes to Human Centric Lighting (HCL)** - It has been 28 years since the white LED launched, which Nichia realized by combining a blue LED with yellow phosphor. Since then, LED technology has replaced incandescent bulbs and fluorescent lamps, becoming the predominant light source. The performance of LEDs continues to evolve daily, and now their luminous efficiency can well exceed 200 lm/W, enabling spaces to be brightly illuminated with even less energy. “HCL” is a term that has become widely used in the lighting industry in recent years. This is an abbreviation for Human Centric Lighting. Generally, HCL is defined as “lighting that is useful for human health both physically and mentally” and is commonly understood as “tunable lighting,” which changes the color of light according to the daily rhythm of life. However, Nichia takes a broader view of HCL, defining it as “lighting that supports a richer and more comfortable life through the effects of light,” and Nichia is dedicated to developing LEDs that deliver such light every day. [Nichia’s Perspective of Light That Contributes to Human Centric Lighting \(HCL\) - LEDinside](#)

19. **Council Converts 18,000 Streetlights to LED in Milton Keynes, UK** - Milton Keynes City Council (MKCC) in the UK is upgrading 18,000 existing streetlights to LED as part of its long-term vision to create a world-leading sustainable city. Lighting specialist Signify was selected to carry out the upgrade. which will enable the city to introduce innovation in terms of performance, quality of light, and connectivity to its lighting assets – and contribute to its climate action goals. The reduced energy usage is expected to pay for the project in full within eight years. The city council reports the upgrade will also increase visibility for motorists and pedestrians, and improve the quality of security camera footage, helping to improve the feeling of safety and deter criminal activity. [Council converts 18,000 streetlights to LED in Milton Keynes - LEDinside](#)

20. **Luceco: Sales Rise Beyond Expectations at Lighting Giant** - Revenue at LED lighting specialist Luceco grew beyond expectations during the first half of its financial year as easing inflation helped to stabilise prices. The London-listed firm, which is headquartered in Telford, saw its sales increase to £109.6m in the six months ending 30 June, 2024, up from £101.1m in the same period last year. This boost in revenue helped to bump up its pre-tax profit to £8.7m, compared to £6.2m in the first half of 2023. In February the group acquired the Tyne and Wear-headquartered supplier, D-Line, which it said would help it to grow its business in North America, due to its Kentucky distribution site. [Luceco: Sales rise beyond expectations at lighting giant - LEDinside](#)

Monthly Feature:

Using Networked Lighting Controls as a Demand Control Strategy by Levin Nock - Demand response and networked lighting controls are proven to relieve pressure on the grid. The electric grid is under a lot of pressure these days. New data centers are escalating load growth, and record heat waves mean there is more electricity demand for air conditioning. Data centers are projected to comprise up to 9% of U.S. electricity generation by 2030 - more than double what they currently use, according to an [Electric Power Research Institute \(EPRI\)](#) analysis published in May. EPRI pointed to generative artificial intelligence (AI) as a key driver of this growth, noting that a Chat-GPT query requires roughly ten times the electricity compared with a traditional Google search.

With climate change already wreaking havoc in both built and natural environments and excessive electricity demand straining reliability of the grid, it's clear that reining in electricity consumption is urgent and essential. One proven approach is demand response – a strategy that relieves pressure on the grid, thereby helping to decrease the need for more carbon-emitting power generation. And advanced lighting technologies – specifically, networked lighting controls (NLC) - are poised to enable and expand this solution. Demand response gives electricity end-users a significant role in managing operation of the electric grid by reducing or shifting their electricity usage during peak periods, usually accompanied by better rates or other financial incentives.

U.S. [Department of Energy \(DOE\)](#) data show that buildings drive up to 80% of peak power demand in some regions, and lighting comprises 17% of the electric load from buildings. Combined with networked controls, LED lighting is an intriguing option for managing electricity demand. While some manufacturing and healthcare sites have strict lighting requirements for safety, commercial spaces such as offices and retail establishments can temporarily dim the ambient light level by 10 to 20 percent with no adverse effects on occupants. If the ambient light level changes gradually over a few minutes, most occupants don't even notice, thanks to two properties of the human eye. First, our eyes have such a wide dynamic range that small changes in light level are inconsequential. For instance, if you need brighter light for a particular task, you don't need a light level 10% higher; you need it much higher – 200% or more to make a noticeable difference. Second, human pupil size changes quickly and automatically, growing or shrinking to let in more or less light, thus maintaining a perception of constant brightness. A report by the California Energy Commission provides details on how lighting controls in commercial buildings can help manage peak load at various timescales without disrupting occupants.

Maximizing the use of NLCs to drive demand response and load control solutions is also in line with a DOE vision that emphasizes the role of grid-interactive, efficient buildings to make electricity more affordable, integrate distributed energy resources, and meet varying needs of building occupants. "Although buildings are the key driver of electricity demand, they can also be part of the solution to peak demand issues," states the DOE's Office of Renewable Energy and Energy Efficiency, noting that facility operators can use NLCs to change the way a building schedules energy use to avoid high peak load costs – signaling HVAC systems to alter air conditioning by a few degrees at peak times, for example. The ability to enable demand control strategies is among the myriad benefits of NLCs. The DesignLights Consortium (DLC) views lighting controls as a critical building decarbonization strategy, with [research](#) showing that adding NLCs to commercial LED lighting projects can boost energy savings by almost 50%. [Integrating NLCs with HVAC systems](#) can add considerably more efficiency – saving up to 20% of total building energy use when lighting controls are paired with HVAC systems to deliver occupancy signals. The DLC's Qualified Products List for NLCs contains 73 listings from over 40 manufacturers – all independently vetted to meet our rigorous [NLC 5.1 Technical Requirements](#), including cybersecurity features. To learn more about NLCs and how they can contribute to demand response strategies and manage other building challenges, check out the DLC's [NLC Program page](#). [Using Networked Lighting Controls as a Demand Control Strategy | EC&M \(ecmweb.com\)](#)