BRISTOL UNIVERSITY, CENTRE FOR SPORTS

UNIVERSITY OF BRISTOL INVESTS IN LED FOR MAJOR SPORTS CENTRE REFURBISHMENT.

Dextra LIGHTING

ABOUT THE CLIENT

The University of Bristol appoints Dextra Lighting and AMP Electrical to brighten-up and future-proof its sports centre facilities. The LED upgrade has allowed the prestigious university to balance energy efficiency with superior light quality, whilst keeping installation and maintenance costs to a minimum.

Earning a place as one of the top 40 institutions in QS World University rankings doesn't come cheap. In order to maintain, and improve on, the outstanding quality and efficiency of its educational facilities, the University of Bristol has launched a £525 million capital investment programme to be delivered incrementally over the next 10 years. The plan will help the university enhance its profile and economic success by attracting students and prominent academics from around the world.

With over 5,000 staff members, 17,000 students and an estate occupying in excess of 300 buildings, the university is extremely conscious of its environmental impact. Sustainability has therefore been high on its agenda – in fact, it was the first university to take part in the Green Impact Awards and has since won multiple accolades for its environmental efforts, receiving accreditations for both ISO 14001 – an international environmental management standard, and ISO 14046 (CEMAS) – for carbon and emission reduction. Over the last 18 months alone, the university has allocated a substantial £2m budget to energy-saving technologies such as LED lighting. Using BREEAM, the world's leading sustainability assessment method, and other tools and measures, the university has been able to constantly monitor and improve on its energy-efficiency year upon year.

LED and Sustainable Refurbishment in Education

As improvements are both costly and necessary for universities to compete, LED lighting upgrades have been making a significant impact on the sustainability of development projects in the education sector. In addition to lowering carbon emissions and saving money, LED lighting helps boost an institution's green credentials, which makes good business sense as it projects an ethically sound image and allows universities to benefit financially from government schemes such as the Carbon Reduction Commitment. LED sources offer specific advantages over fluorescent and HID sources that will allow universities to recycle the accumulated energy and maintenance savings in other areas of need. These benefits include:

- Typical reductions in power load of an average of 60%
- Extended lumen maintenance (LEDs maintain light intensity for longer)
- No lamp maintenance required

Dextra Lighting offers its years of expertise in the education sector alongside a wide range of products, tried-and-tested in universities nationwide. With the support of its advanced bespoke design service, each installation is tailored to project-specific requirements, ensuring the fastest return on investment possible and full compliance with all environmental, safety and building regulations.

THE SOLUTION

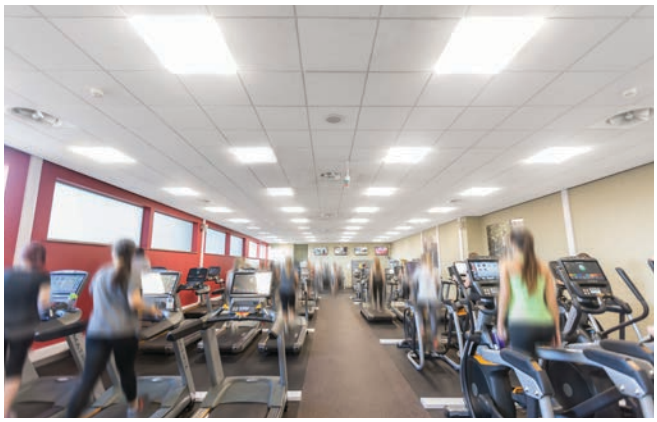
Dextra Lighting teamed up with the Bristol University approved installers – who undertook the work to an exacting standard, reprogramming the DALI system for maximum economic effect.

MODLED Recessed Curve – Main Lighting / Gyms & Aerobics Studios.

A total of 116 MODLED Curve luminaires were installed as main lighting for the dance and aerobics studios and two gym rooms featuring weights, resistance machines and treadmills. The versatile recessed luminaire was supplied in a 4500 lumen output, in 600 x 600mm body size to provide a direct replacement for the existing fittings and boost lux levels in all areas.

Its aesthetically-appealing, high-transmission contoured diffuser offered BSEN 12464 compliant glare control to meet the 3000 candela limit, making it ideal for VDU usage and maximum visual comfort. The Curve's efficient optic design provided excellent diffusion of its high-performance Lumileds LEDs, offering light-output-ratios of 78% and a wider and more even distribution onto the walls and ceilings. The result; an attractively-lit sports environment for students to enjoy offering typical reductions in power load of 60% compared to its fluorescent equivalents.

To suit a range of spaces and design specifications, the MODLED Curve is available in lumen outputs of up to 9000lm, in multiple body sizes with a number of emergency lighting options. In addition to the DALI dimming controls provided for this project, the luminaire also offers compatibility with most mainstream dimming functions and a wide selection of integral or standalone sensors from Dextra's Reacta range for further energy savings.



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Amenity Decorative LED Bulkhead – Changing Rooms and WC Facilities.

The AMED LED range is designed to offer similar performance to fluorescent alternatives. With lumen packages of 1500lm, 2000lm or 3000lm and LORs of over 80%, the luminaire offers outputs equivalent to 28w 2D, 38w 2D, and 55w 2D respectively. The difference, however, lies in its significantly lower energy consumption, and the long-life – low-maintenance benefits of its Lumileds sources. The AMED's efficient polycarbonate opal diffuser is also designed to provide excellent transmission and uniform light coverage.

For the sports centre's changing and WC facilities the versatile luminaire was sealed to IP65 to provide extra protection from water, dirt and dust ingress. As the name suggests, the luminaire's opal diffusers and angled rings bring a decorative dimension to Dextra's Amenity range, offering the sports facilities a modern and attractive look.

The AMED is also available in a wide range of integral emergency, sensor and dimming options to tailor each installation to suit the application.

AME Emergency Luminaire and LED3 Emergency Module.

Upon Mr. Whittard's request, standalone emergency LED luminaires were supplied to replace the integral emergency function of the original fixtures. Although integral emergency can often seem like the more practical solution, for this particular application he commented that "taking the emergency function outside of the luminaires made them more identifiable and serviceable". The efficient LED3 module, for example, allows emergency luminaires to be installed in optimum positions compared to the emergency drivers integral to the general lighting. For the university, this meant that the luminaires could be fitted in the most discrete and effective locations, whilst the installation needed to rely on fewer luminaires with lower charging currents as opposed to those commonly used in mains lighting.

As with the LED3 control module, the AME LED emergency bulkhead makes full use of the energy-saving properties and longevity of LED technology. The AME LED is available in highly-efficient 2.5w or 6w LED strips that provide a high output for maximum emergency coverage with minimal energy consumption. To add to the long-life and durability of the Lumileds LEDs, the AME LED's IP65-rated polycarbonate housing and lens, protect it from light impact, dust, dirt and water ingress and its hinged steel gear tray makes installation and maintenance quick and easy. Both products are manufactured to BS EN 60598 standards. All emergency lighting was provided with Autotest functions to ensure that any emergency failures are reported to a central location allowing them to be repaired quickly and eliminating the cost of testing emergency duration on luminaires individually.

FEATURED PRODUCTS

MODLED CURVE

AMENITY DECORATIVE LED

AME LED