

Case Study

Cairns Airport

Airport Avenue, Cairns Airport, Cairns QLD



Cairns Airport is the fifth-busiest airport in Australia, operating 24/7 with over 3 million people passing through the terminal each year. The airport began an extensive redevelopment project completed in 2010 at the cost of \$200m.

Ecologically sustainable lighting has now been incorporated into the redevelopment, which are all energy efficient and require minimal ongoing maintenance. Being completed over 2 stages the fit-out has improved the luminance and comfort to employees and passengers passing through the domestic and international terminals as well reducing the company's overall energy power consumption.

Source:
www.airport-technology.com/projects/cairnsinternational/
www.cairnsairport.com.au

THE PROJECT

Identifying lighting area constraints with appropriate LED lighting solutions to replace current fixtures:

INTERNATIONAL TERMINAL

- Departure Concourse
- Departure Lounge
- Arrivals Concourse
- Arrivals Customs Area
- Bagging Handling Area

ITB ARENA

- Middle Section Ground Floor

DOMESTIC TERMINAL

- Arrival and Departure Concourse
- Bagging Handling Area

THE SOLUTION

The Concourses: The International Terminal Arrival and Departure Concourses, and the Departure Lounge area was lit by over six hundred 400W and 175W Metal Halide High Bays mounted between 6 to 12 metres high.

The solution was to replace these with a selection of Lumex LED High Bays (SkyBays) across a range of power ratings, from 150W down to 60W. This design improved the overall light level and reduced the airport's energy consumption in these areas by around 80%.



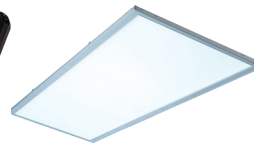
Use your smartphone to link to the website



SkyBay
High Bay



Light Rack
Floodlight



NovaBlade
LED Panel



Classico
Downlight



Linear LED
T8 Tubes

The Walkways: The Terminal Walkways were fitted with over one hundred 2x26W PLC recessed downlights. The solution was to replace them with 31W Classico Range LED downlights. This provided a higher level of illumination, and a 40% saving in energy.

The Baggage Area: The baggage area was lit with 130 weatherproof fixtures (2x36W T8). The fluorescent tubes were replaced with 18W Lumex Linear LED T8 to achieve a 50% energy saving without loss of lighting level.

The Security Area: The level of illumination in the Security and Inspection area of the Domestic Terminal was noticeably poor considering the importance of the activity there. To boost the light level the forty 2 x 28W T5 troffers were replaced with Lumex NovaBlade LED Panels drawing a total of 42W each. This not only achieved the desired improvement in the light levels, but also achieved an energy saving of around 25%.

COST SAVINGS

Cairns Airport has made a significant investment in upgrading their lighting and energy efficiency, but there is no doubt that the investment is a sound one. Running 24 hours a day, 365 days a year, the improvements in efficiency, and the savings in energy and ongoing maintenance will provide their payback expectations.

THE FACTS	
EXISTING	REPLACEMENT
638 x 400W – 175W Metal Halide High Bays	Lumex SkyBays, ranging from 150W to 60W
30 x 150W Metal Halide Rectangular Wall Washers	Lumex Light Rack LED Floodlights ranging from 90W to 100W
100+ Recessed Downlights (2x26W PLC)	Lumex Classico LED Downlight (31W)
130 Weatherproof Battens (2 x 36W T8 fluorescent tubes)	Lumex Linear 18W LED T8 Tubes
40 Recessed Troffers with 2 x 28W T5 tubes.	NovaBlade LED Panels (42W)

SkyBay LED Hi-Bay LL2LHB## Series



- Up to 80% energy saving
 - Industry best performance
 - Instant on, and restrike - no warm up
 - Minimal safety issues
 - Even dispersal of light
 - Full Australian Approvals
- lumexlighting.com.au/skybay/

Light Rack Floodlight LL3LRF## Series



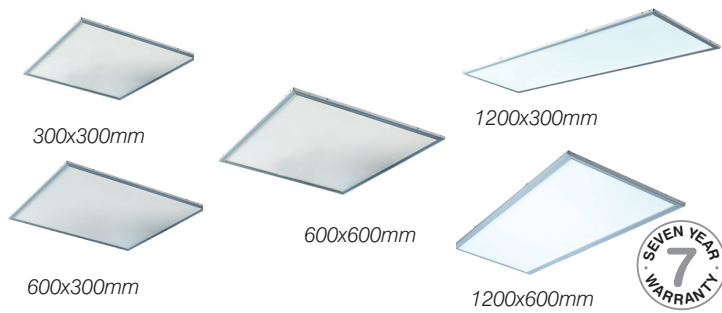
- Up to 80% energy saving
 - Instant on, and restrike - no warm up
 - Optimal thermal design
 - Available in vertical and horizontal configurations with 160° mount adjustability
 - Full Australian Approvals
- lumexlighting.com.au/light-rack-floodlight/

Classico Commercial Lighting LLICM## Series



- High performance - up to 3600Lm effective output
 - Energy savings up to 50% (compared to equivalent PLC)
 - Average life projection 50,000 hours at LM80
 - Frosted lens design provides excellent usable light with low glare
- Available second quarter 2013**

NovaBlade LED Panels LL9P## Series



- Even better performance and even higher output Excalibur models
 - More than 50% energy saving
 - Maintenance free life up to 50,000 hours
 - Outlasts more than 5 standard tubes
 - Smooth, even dispersal of light with minimal glare
 - Full Australian Approvals
- lumexlighting.com.au/novablade-led-panel/

Linear LED T8 Tubes LL9T8## Series



- Active/Neutral one end to meet regulatory safety requirement
 - > 50% power saving over equivalent Fluorescent fittings
 - Projected 50,000 lamp life
 - Full Australian Approvals
- lumexlighting.com.au/linear-led-t8-tubes/