

HELVAR IN CREATIVE CONTROL AT MARINA BAY SANDS

Text: John Houston / Wildwood Public Relations
Pictures: Marina Bay Sands

Resort hotels are becoming increasingly popular with travelers and holidaymakers of all nationalities. With a goal to deliver every service their customer either requires or desires on site, they are often large complexes built to luxurious standards. The recently completed Marina Bay Sands is an integrated resort fronting Marina Bay in Singapore.

Developed by Las Vegas Sands, it is billed as the world's most expensive standalone casino property at S\$8 billion (US\$5.7 billion). The resort features a 2560-room hotel, 120 000 sq-meter convention-exhibition centre, six restaurants, an art and science museum, two Sands Theatres, two floating pavilions, a casino with 500 tables and 1600 slot machines. The resort was officially opened in June 2010. The 200 metre high complex is topped by a 340 m-long SkyPark with a capacity of 3900 people and a 150 m swimming pool, set on top of the world's largest public cantilevered platform.

INNOVATION AND TECHNICAL INGENUITY

Innovation and technical ingenuity are combined in the new lighting scheme for the project. The scheme has been designed by PLD (Project Lighting Design), a Singapore-based lighting consultancy, with considerable experience in major projects across the world numbering up to 500 projects in twenty different countries. Their portfolio of work includes a broad spectrum of project types including, amongst others; transport, hotel, civic and commercial, museum as well as retail. In fact the practice worked on the Dubai Mall (the world's largest shopping mall) so is well used to dealing with the challenges of large projects. The familiarity with the related issues allows the practice to deliver innovative manageable and affordable solutions for each project they are commissioned to work on.

The 206.000 m² resort was designed by renowned architect, Moshe Safdie. A striking feature of the hotel is the three tower design linked by glass atria. The hotel lobby runs through this base. There are no ceilings in towers one and two as the towers taper

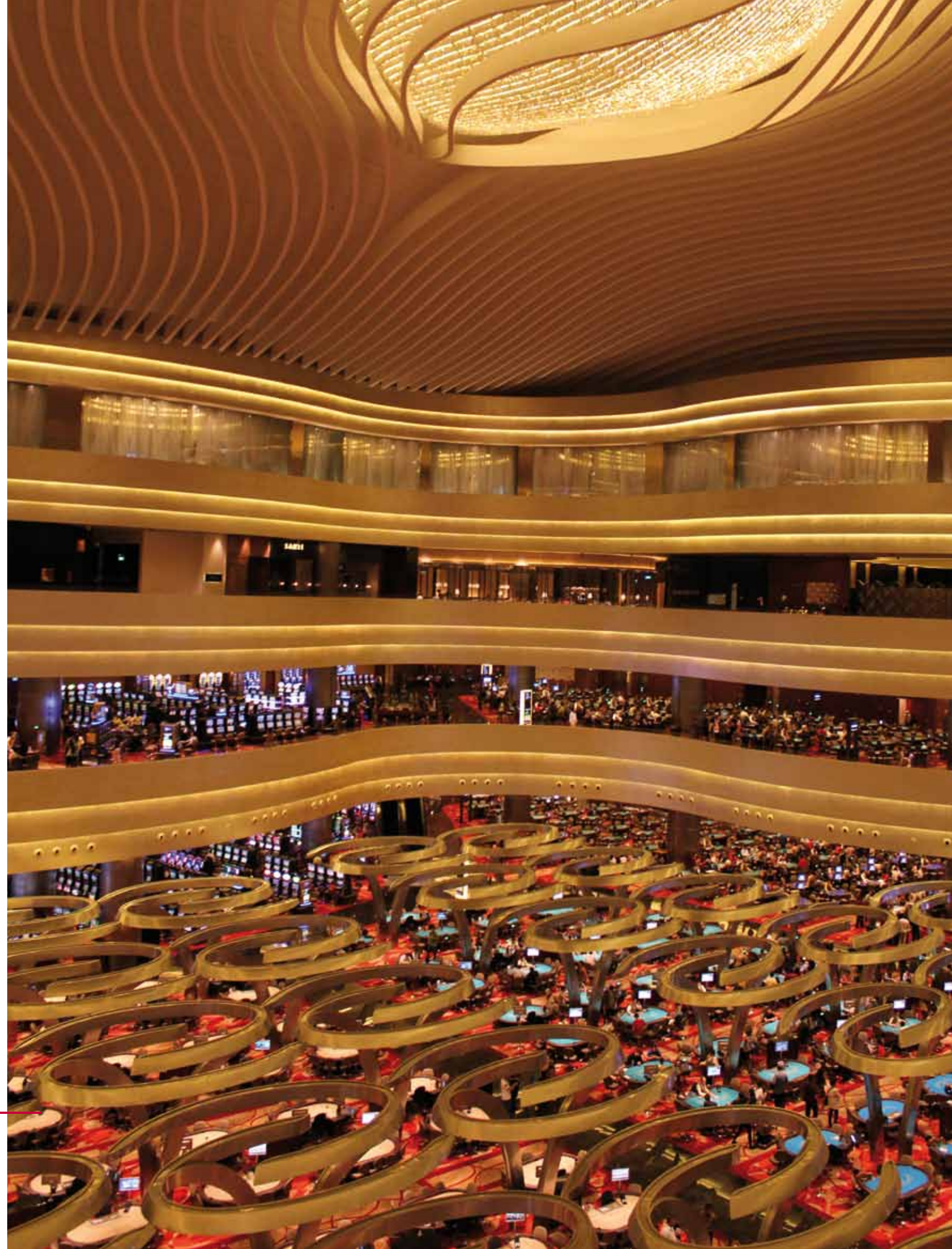
upwards. This has created huge open spaces: the lobby in tower one measures twenty six metres across by fifty metres long, and tower two measures seventy metres long by twelve metres across. Tower three is approximately fifty metres long by eight metres across.

FROM CHALLENGES TO ADVANTAGES

How to best light these large open spaces was a major challenge for PLD. With no ceilings, using downlights, chandeliers or pendants was out of the question. The solution was to mount 'light bars' high up on the parapet wall of the guest corridors which overlook the atrium spaces (approximately 20 m above floor level). Because the light bars would be difficult to access once installed, PLD chose DMX controlled Director DR8 moving luminaires by Remote Controlled Lighting (RCL). The Director DR8 is a remote controlled spotlight that is controllable in pan, tilt and dimmer level using the hand-held controller, DMX or DALI. In total there are twenty DMX 'universes' required to control all the moving lights. All the lights are tied into a single system by Helvar 920 Routers.

This major advantage of choosing this option is that during installation all lights could be controlled wirelessly from the anywhere in the lobby to focus and set the lighting levels appropriate to the environment. There are light sensors in each tower which turn on the lighting during the daytime with a time clock for automatic control during the day and evening. Overrides are in place in case of natural events such as thunderstorms. ▶

The Marina Bay Sands prestigious casino features an impressive Swarovski crystal chandelier suspended 40 meters over the heart of the casino's ceiling being one of the world's largest crystal chandeliers.





SUPPLY AND DEMAND – HELVAR BALLASTS INSTALLED AT MARINA BAY SANDS

Helvar has also supplied 10,000 electronic ballasts to the Marina Bay Sands resort complex. Supplied by Helvar's long-term distributor in the region Aptec Pte, the ballasts are installed in hotel guest rooms throughout the complex.

Energy efficiency, reliability and cost-effectiveness were the key specification qualities – alongside quick supply - as Henry Wee of Aptec relates: “We were delighted to be involved on Marina Bay Sands as it is such a well known project in the region. That also means we have to ensure that the products we supply are of the highest quality. We've worked with Helvar ballasts for many years and we always specify them with confidence. The EL-s is a great product and ideally suited to the project demands.” ■

Feels like on top of the world? From the Sands Sky-Park observation deck hundreds of visitors at a time can feast their eyes on the unforgettable panorama view of Singapore.

EXPERTS FROM SINGAPORE

IRC Pte. Ltd., located in Singapore, has been doing electrical and lighting installations since 1980. Managing Director Mingly Wong, the daughter of IRC's founder B.I.Wong, and her team of 10 engineering staff have more than 20 years history with Helvar lighting control products.

Over the years they have installed lighting systems in many prestigious Singapore projects, most recently the two new Integrated Resorts – Resorts World Sentosa and the newly opened Marina Bay Sands resort. ■



ENERGY SAVING AS A TOP PRIORITY

The Helvar 920 Router system controls all lighting in the public areas including the the entire length of the base of the three hotel towers as well as at the Skypark area. General ambient lighting throughout the hotel is controlled by Helvar's 458 dimmer, as are seventy five guest suites of varying size. The system showcases lighting control to great effect as well as ensuring that energy saving is a top priority by using pre-programmed lighting levels and scenes that are set to optimum levels of comfort, performance and efficiency.

Supplied and commissioned by IRC Pte. Ltd., a specialist in dimming systems for more than 20 years, the Helvar system seamlessly integrates the many lighting elements systems to combine energy efficient lighting design with striking displays of powerful scene-setting capability. The extended functionality of the Helvar 920 Router via the Ethernet backbone makes communication possible with third party peripherals, such as Building Management Systems (BMS), touch panels and Heating Ventilation and Air Conditioning (HVAC) systems if required. This feature allows the Helvar 920 Router to deliver integration

beyond lighting control – adding a much greater value for designers and specifiers looking to develop comprehensive and efficient building control systems.

Fully compatible with Helvar's existing Imagine controls range, the Helvar 920 Router provides fast and fine control over the many 458 dimmer channels as it is suitable for long gentle fades in large spaces. It has DMX capability for controlling both moving lights and colour changing LEDs. In short, the Helvar 920 Router opens up new creative possibilities while reducing both the complexity and cost of a large lighting system.

There has been a lot of debate about energy saving lighting control, but as the installation at Marina Bay Sands demonstrates, the adaptability and creativity offered by lighting control enables lighting designers to develop a comprehensive and efficient system that is capable of energy saving and a reduction in carbon footprint – without compromising design flair and creative expression. ■

