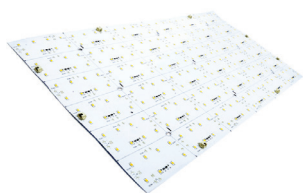


CASE STUDY

OVERSIZE CUSTOM LED BACKLIT LUXURY HOTEL SUITE CEILING

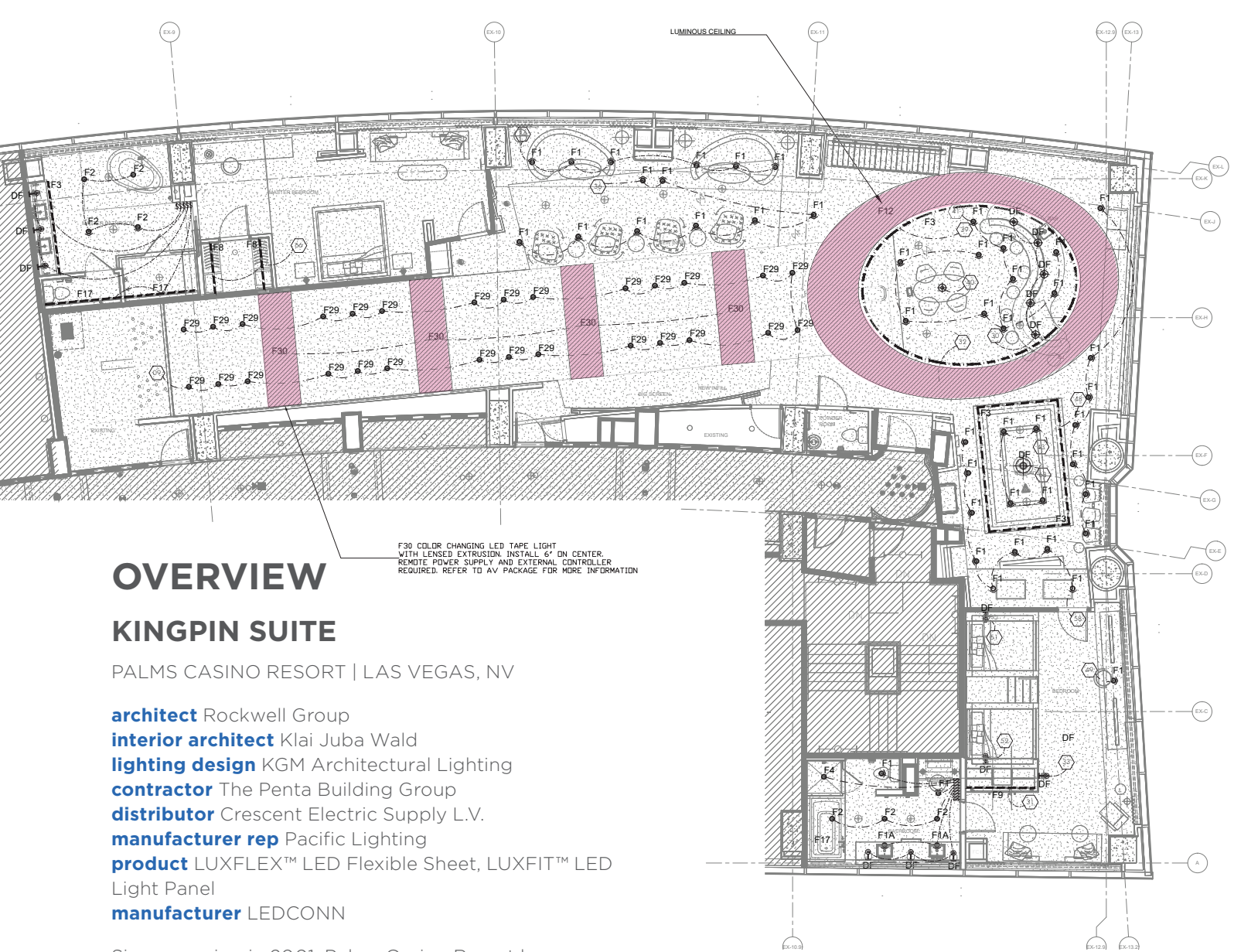


LUXFLEX™
LED FLEX SHEET



LUXFIT™
LED LIGHT PANEL

KINGPIN SUITE
PALMS CASINO RESORT
LAS VEGAS, NV



OVERVIEW

KINGPIN SUITE

PALMS CASINO RESORT | LAS VEGAS, NV

architect Rockwell Group

interior architect Klai Juba Wald

lighting design KGM Architectural Lighting

contractor The Penta Building Group

distributor Crescent Electric Supply L.V.

manufacturer rep Pacific Lighting

product LUXFLEX™ LED Flexible Sheet, LUXFIT™ LED Light Panel

manufacturer LEDCONN

Since opening in 2001, Palms Casino Resort has become a hot spot for celebrities and an icon of Las Vegas. Popular TV shows such as MTV's "Real World" and music videos such as Katy Perry's "Waking up in Vegas" have featured the Palms on-screen, taking advantage of its glitzy appearance. Nearly twenty years later, the hotel is getting a facelift to continue elevating its glamorous appeal with a \$620 million renovation.

The Kingpin Suite in particular is among the hotel's most luxurious rooms and is often booked to host fun, entertaining parties. The designer envisioned a 70's influenced makeover to attract more guests with an eclectic melange of funk, soul, and retro-infused glamour—think "Boogie Nights" meets Mid Century Modern revival. Entertainment appeal and retro glamour are the main themes permeating this luxury suite replete with two private professional bowling lanes, bowling shoes, bowling balls, and mid century-themed furniture and fixtures throughout. While retro is the stylistic goal, the designers behind this project were thinking along modern lines and carefully

selected every detail for sustainability and energy-efficiency, especially with regards to the selected LED lighting fixtures.

The designer wanted to create a glamorous, linear bronze metal mesh ceiling spanning from the bowling alley to the in-suite bar. A large oversize oval shape illuminates the bar area and a series of rectangles cascade down the bowling alley, creating a luxurious and warmly illuminated focal point. A combination 167 full and cut sheets of LUXFLEX LED flexible sheets were customized on-site to fit the unique oversize, oval-shaped ceiling design. The flexible and cuttable nature of the product provided great flexibility and allowed the product to curve to the oval shape. In addition to the oval-shaped ceiling fixture, twelve (12) LUXFIT LED light panels were also chosen to illuminate rectangular bronze metal structures mounted above the bowling alley. Together, these two types of luminaires create ample illumination and a chic, retro aesthetic.



PROJECT CHALLENGES

Finding the right light to illuminate the primary oval structure was a challenge due to the expansive size and complexity of the shape. Although LUXFIT LED light panels were chosen to illuminate the rectangular bronze and brass structures spaced out above the bowling alleys, LED light panels were not ideal for the primary oval structure because they didn't allow for on-site changes. The dimensions of the oval area remained unconfirmed until installation day, so the project needed a solution that would allow for on-site modification, such as LUXFLEX.

Constrained by a limited delivery time frame of only 3-4 weeks, the LEDCONN team needed to act quickly to provide a proper solution. The team made sure to set up a lighting consultation with the designer

to accurately assess the project needs and provide a recommended course of action. Even though the LUXFIT was originally considered to illuminate the oval structure, after further review of the installation conditions (brightness needs, on-site modification flexibility, evenness), the LEDCONN team and designer agreed LUXFLEX would be best suited for this application. Plus, the quick turnaround and low shipping cost of LUXFLEX also proved advantageous for delivering product on schedule—within 20 days—and within budget.

THE KEYS TO SUCCESS

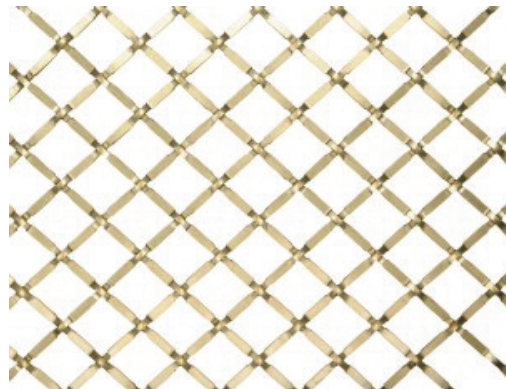
There are two components that ensure the success of every custom project: a lighting consultation and mockup. For this project, the initial consultation with the designer helped solidify the lighting strategy and narrowed the field for product selection. Shortly thereafter the designer ordered a sample mock up to ensure the selected product fit snugly into the project dimensions with quality illumination.

The custom manufacturing process is filled with challenges that the LEDCONN team overcomes every time, and the Kingpin suite is no exception. From addressing the illumination needs of the irregular, oversize shape to managing an efficient and timely process, the LEDCONN team was able to deliver a fantastic installation as a result of their years of experience managing custom applications.



STRUCTURE SURFACE MATERIAL

For this project, both LUXFLEX and LUXFIT luminaires were placed within luxurious-looking brass and brushed bronze structure covered with a metal mesh ceiling wrap.



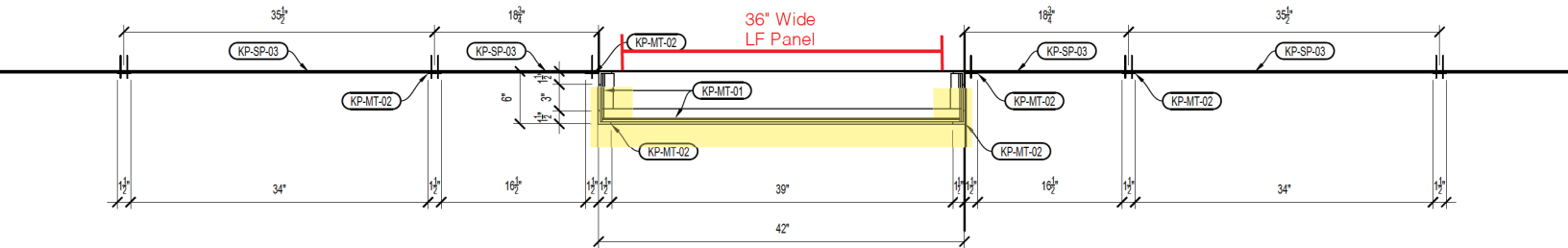
MOUNTING

INSTALLATION: LUXFIT LED PANELS

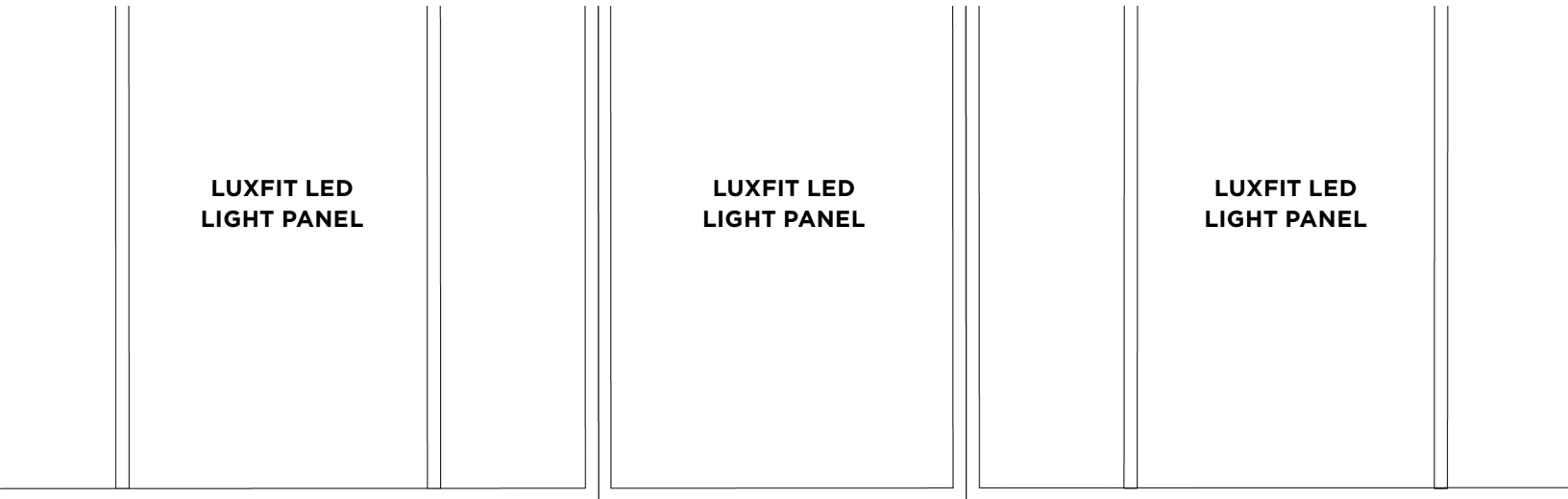
LUXFIT LED light panels were cut to size and placed to lay flat inside of the brass structures housing them.



Cross section of a segment of the brass structure above the bowling alley



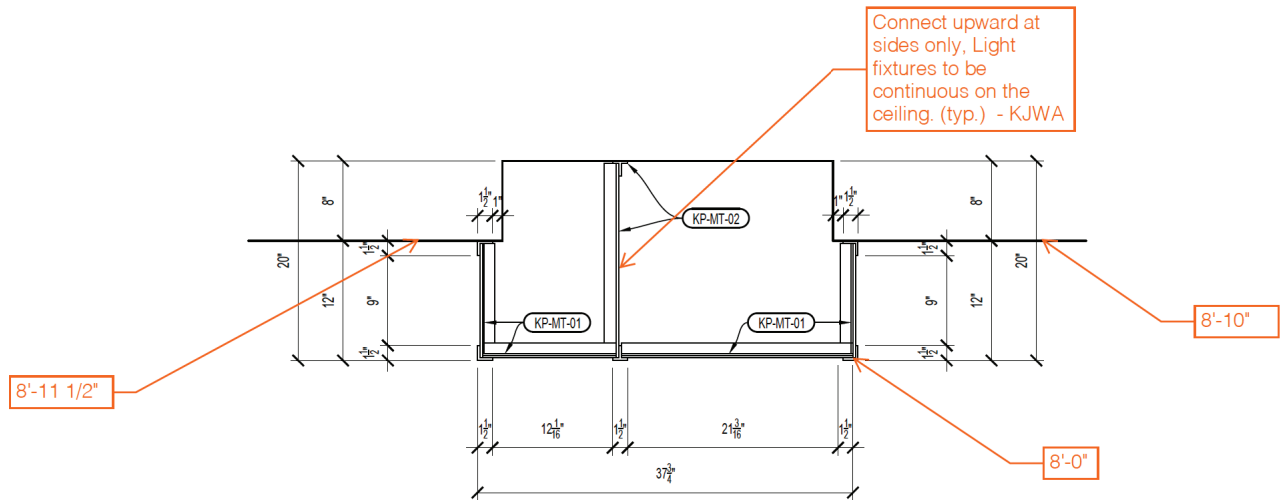
No drilling or screwing was needed to secure the panels to the structures.



MOUNTING

INSTALLATION: LUXFLEX LED SHEETS

Using the provided holes and adhesive backing, GCs were able to quickly install the flexible sheets. The diagram below is an example cross section of a segment of the oval structure designed to fit LUXFLEX.



GCs peeled the adhesive on the back side the pieces and sheets of LUXFLEX LED flexible sheets to attach the sheets to the structures they would be inserted into.



After bonding the sheet to the structure, GCs identified and fastened screws through the full sheets and cut pieces to secure them to the oval fixture.

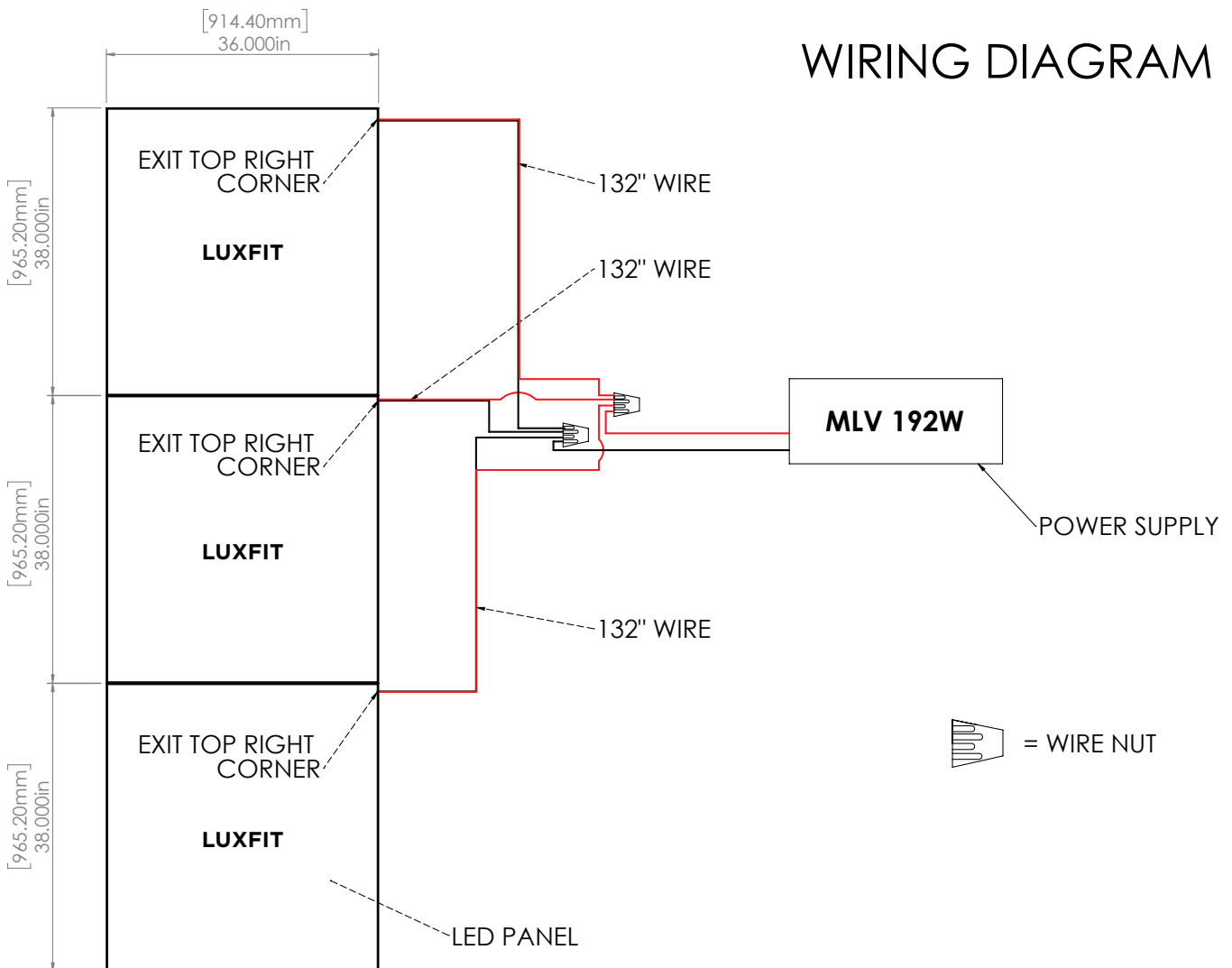
LIGHTING

WIRING & POWER: LUXFIT

LEDCONN provided LUXFIT panels sized and cut to lay flat inside of the rectangular brass and bronze ceiling structures mounted above the bowling alley. Each set of three LUXFIT panels are chained and connected to a single magnetic low voltage 192W power supply.

Wiring exits were placed on the top right corner of each LUXFIT panel to make it easier to connect each grouping of three LUXFIT panels to a single shared power supply. A total of 4 power supplies were used to chain each group of three LUXFIT together across the bowling alley.

WIRING DIAGRAM

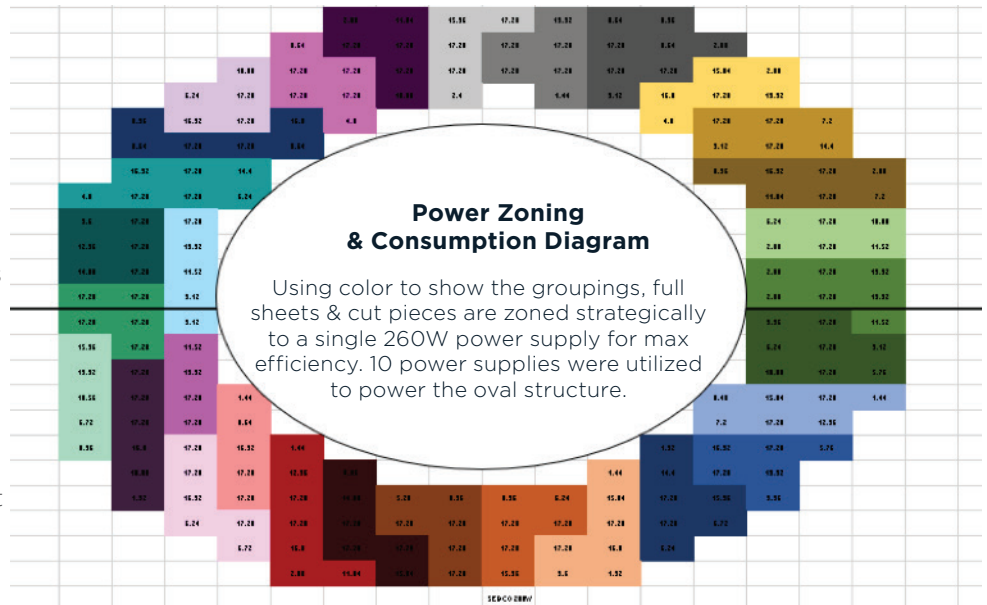


LIGHTING

POWER ZONING: LUXFLEX

To achieve a clean look and make installation as easy as possible for the general contractors, LEDCONN's engineering team managed the power wattage layout of each piece of LUXFLEX used in the oval shape:

- LEDCONN developed a power zoning diagram to calculate wattage consumption.
- A total of 10 Sebco 24VDC 288W Magnetic Dimmable LED Power Supplies were utilized to power all 167 LUXFLEX sheets and pieces.
- Each SEBCO power supply was provided with 3 connectable ports from which three clusters of LUXFLEX were grouped together based on wattage consumption.
- Overall, the 10 SEBCO power supplies created thirty different wattage zones. These zones were grouped together by color as pictured in the zoning diagram.

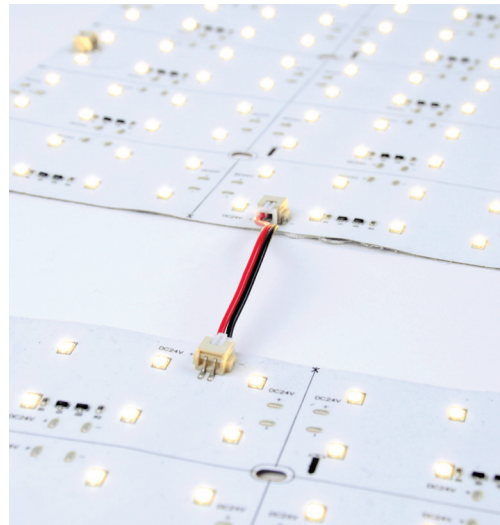


	1	2	3	4	5	6	7	8	9	10	
	75.4	79.2	86.4	73	82.1	75.8	69.6	89.3	83.5	80.6	
	74.4	73.9	79.7	82.6	84.5	82.6	93.6	86.4	79.7	60	
	80.2	72.5	65.3	71.5	69.6	67.2	61	47.5	61	81.1	Total Power
Power	230	226	231	227	236	226	224	223	224	222	2269

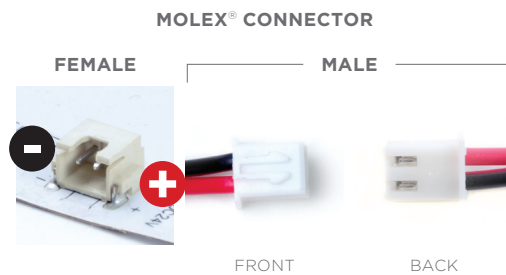
LIGHTING

WIRING: LUXFLEX

GCs were advised to connect sheets and cut pieces of LUXFLEX together via the Molex connectors provided with the LUXFLEX sheets.



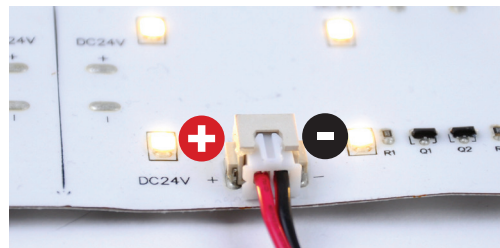
Each sheet and piece featured a female Molex connector. Sheets and pieces were then connected to one another through the male tiling connectors.



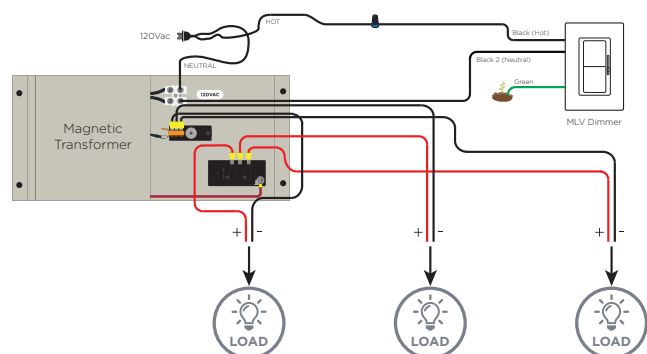
TILING CONNECTOR



GCs identified the charges of the female and male connectors and matched them accordingly.



The LUXFLEX sheets and pieces within an assigned power zone and closest to any of the 10 power supplies were then hardwired to the nearest power supply.

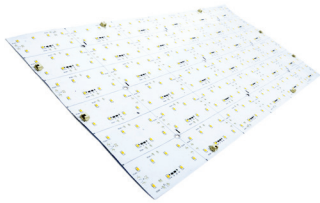


LIGHTING FIXTURES



LUXFIT CUSTOM LED LIGHT PANELS

- Customizable product allows for lighting fixture size to match glass surface dimensions.
- Large panel sizes up to 5ft x 10ft
- Requires minimal airgap and still looks hotpot free/seamless
- Arrives pre-cut to spec dimensions. May be provided with predrilled holes for easy installation depending on application need.

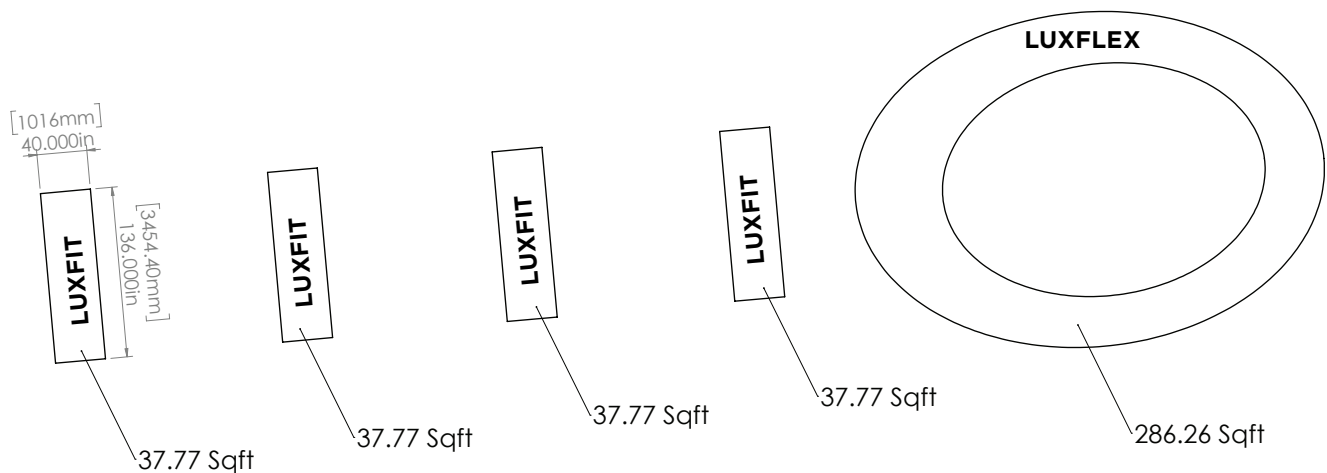


LUXFLEX CUTTABLE LED FLEXIBLE SHEETS

- Customizable product allows for chaining of full sheets and cut pieces via provided Molex connectors.
- Full sheets are sized at 12" x 24" and may be cut in 2"x4" increments.
- Provided with adhesive and holes for screw mounting.

ILLUMINATION AREA

Altogether, the project required a total of 437.34 sq ft to be illuminated with a combination of LUXFIT and LUXFLEX.



THE FINAL RESULT

- Quick, timely turnaround
- Even illumination throughout the entire ceiling design
- Creation of a glamorous, ornate aesthetic with a retro feel
- Designed with energy-efficiency in mind
- Hassle-free installation for GCs as a result of clear installation and wiring instructions



Through the combined efforts of the Designer, GC, and manufacturer, this beautiful hotel suite was expediently completed in less than a month without a snag.

Thank you to everyone who helped make this project a success!

Do you need a lighting solution for your project? Our team is ready to help.
Reach out to us for a complimentary lighting consultation today!