



## Kauffman Center for the Performing Arts – Kansas City, MO

### APPLICATION:

**BACKLIGHTING, COVE,  
SPECIALTY, STRAND**

### PROJECT:

Kauffman Center for the Performing Arts, Kansas City, Missouri

### LIGHTING DESIGN:

LAM Partners - Boston, MA

Derek Porter Studios - Kansas City, MO.

3-Form Light Design - Salt Lake City, UT (Mark Raissen)

### ARCHITECT::

Safdie Architects, Kansas City, MO,

### PRODUCT

Tivoli Platinum Covelum Designers Series LED - Colors



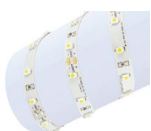
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Tivoli Architectural Channel



Tivoli Tivotape LED Static



Visitors of the expanded Muriel Kauffman Theatre experience the subtle lighting accents of Tivoli products from the hallway entry, to the main auditorium, to the great hall lounge and even the dressing rooms. The versatility of Tivoli's portfolio leaves its artful touch on this Kansas City landmark.



*The Muriel Kauffman Theatre, home of the performing arts in Kansas City, presents a diversity of entertainers and performances from around the world. The 1,800-seat venue originally designed with the inspiration of the great opera houses of Europe, is visually striking, yet retains an intimate experience for both audiences and performers.*



In 2011, Muriel Kauffman Theatre' completed a dramatic expansion under the leadership and design of renowned architect Moshe Safdie. The expanded facilities provide dramatically enhanced performance capabilities—including a vast 5,000-square-foot stage; a larger orchestra pit; increased backstage facilities; a 74-foot tall fly tower; and a flexible proscenium stage opening.

The building's most distinctive features are the Muriel McBrien Kauffman Theatre, Helzberg Hall, and Brandmeyer Great Hall. As the leader in LED linear systems for over 40 years, Tivoli, LLC was able to provide a variety of illumination solutions for this facility expansion from both their architectural and venue portfolio.

### THE PROJECT SCOPE: KAUFFMAN THEATRE AUDITORIUM

Architect, Moshe Safdie and Architect, Glenn Heinmiller from LAM Partners, a Boston-area architectural lighting design firm were responsible for the total project expansion.

They collaborated with a number of creative designers including Derek Porter Studios and 3form Advanced Technology Group (ATG) and 3form Light Design to design a variety of areas throughout the entire project.

[more >>>](#)



### Covelum Designer Series

- Use in both low and high ambient light conditions
- +/- 45° Directional LED modules (90° total adjustability) offer the ability to manually set the angular throw of light individually, distributing light over a 150° viewing angle of LEDs
- Specific color temperature LED modules with tight bin sorting for color consistency
- Lamp spacing: 2.5", 3", 4" O.C.
- LED life: 40K hours for all cool color mixes/ 80K hours for all warm color mixes
- Full range dimming available



### THE BALCONY

To create the stunning curved facades that accent the main balcony seating area, Glenn Heinmiller collaborated with Mark Raissen of 3Form Light Design Group.

The design intent of the panels was to create a dynamic warm flowing visual form. Mark Raissen conceptualized a series of 39 panels constructed with 3form Varia Ecoresin Texture Way to create the textured formed design of each panel that is located throughout the auditorium balcony. Once the panel material was selected and design concept was completed, 3Form needed a compact, low maintenance, illumination solution to provide backlighting for each panel. The desired concept was to create a one of a kind glowing visual which would change with varying viewing angles and would cast a soft glow as patrons entered the theatre.

### PROJECT SOLUTION:

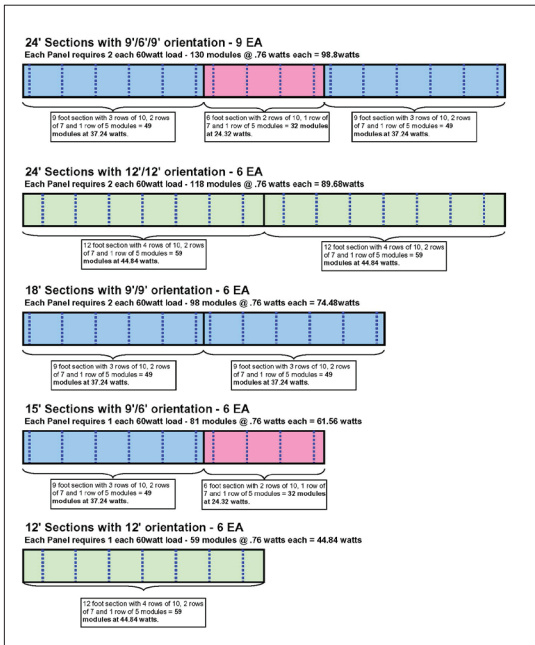
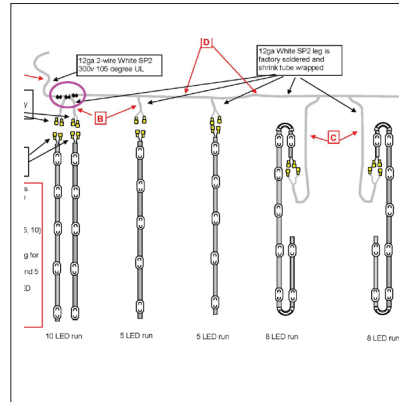
To make this vision a reality, they needed an energy efficient and easy to install solution to illuminate these facades. Tivoli's Covelum Designer Series, a flexible, linear LED solution, was selected as the ideal solution that could achieve the designers vision. Tivoli engineers worked closely with the 3form lighting design team to develop a custom indirect and direct backlighting solution utilizing this flexible LED linear system.



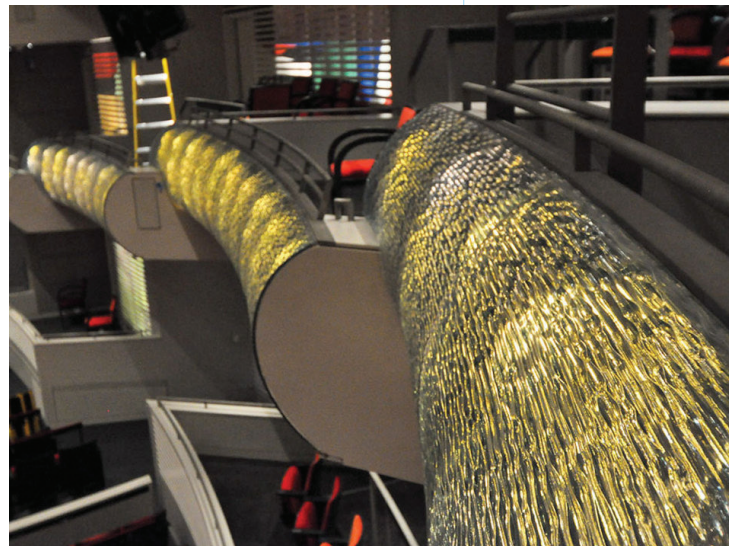
Designer Series Whites



The panel design consisted of 39 panels in a variety of 6', 9' and 12' sections. The designer used an irregular layup of Tivoli's Covelum Designer Series flexible LEDs to provide the indirect / direct backlighting effect. Each strand of LED modules was identified for length and the specific wiring and aiming that was needed to accomplish the glowing appearance in each 3'x6' panel. The panels were also integrated into the ETC house dimming system to enable dimming for performances.



This diagram illustrates how Tivoli's Covelum Designer Series were assembled into the panels. With +/- 45° directional LED modules (90° total adjustability), The Covelum Designer Series offer the ability to manually set the angular throw of light individually, distributing light over a 150° viewing angle of LEDs.



To achieve the gold tone they wanted for the overall effect, they used Tivoli's custom color temperature mixing capabilities utilizing modules in a mix of 2300K - 2400K Warm White. The textured panels were a translucent white color without the lighting. By having the LEDs reflect off the back custom reflector surface and the angle of incidence striking the 3form panels created amazing beam refraction that "glisters" and "flows" throughout the space. This dynamic use of color and light created a one of a kind glowing visual which changes as you move to various viewing angles.

**TIVOLICOLORMIX**  
Tivoli's custom color temperature mixing capabilities utilizing modules in a mix of 2300K - 2400K Warm White. created the gold tone the designers wanted to achieve.



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### ABOUT TIVOLI:

Tivoli is the original innovator with 40 years experience in LED based linear lighting products.

When Color Matters —  
Tivoli is the choice.

*Uniquely focused on 'the right light' – color temperature and output for low ambient cove and niche applications.*

Most other commercial manufacturers in the US are focused on higher output LED illumination. Tivoli is focused on low wattage, highly energy efficient, linear LED systems for accent cove and niche lighting applications. We specialize in small source applications that create the sparkle to delineate a project.

Using our expertise with color mixing LEDs for theater lighting we have created incandescent color equivalents and even improvement to incandescent using LED color mixes.

As the market leader in emerging LED linear lighting, we offer a complete line of architectural, signage and auditorium linear LED based lighting systems. Our products are flexible, adaptable energy-saving LED-based linear lighting products for broad architectural / commercial applications, both indoor and out. Tivoli's architecturally significant designs have been providing visible delineation or concealed illumination effects for over forty five years.

Lighting is our business,  
color is our concern.

Tivoli products can be found in various locations of the Kauffman Center from the hallway entry, to the main auditorium, to the great hall lounge and even the dressing rooms.



### Tivoli Coveline 120

provides a perfect cove lighting solution for the narrow restrictions of the architectural cove within the refreshment area.

This award winning product provides a line voltage LED solution with flexibility, adjust-ability and full range dimming. It is a flexible system that bends 90° horizontal and 30° vertical to fit concave and convex curves without special hardware.



**Tivoli Tivotape LED Static** was the perfect solution to illuminate the promotional boxes showcasing upcoming performances.

Tivoli is the original founder of linear LED flexible strip products such as TivoTape -- a multi-purpose, field-cuttable LED tape light strips that deliver illumination that is discreet with a small profile.



**Tivoli Architectural Channel** brings the word "Star" to the theaters main dressing rooms. This product was an ideal solution to illuminate and frame the dressing room mirrors with just the right "star" treatment.

The Architectural Channel Series is a lightweight, aluminum alloy channel that incorporates strand lighting or lamps for use in marquee, portecoche, borderline, amusement parks, casinos, bridges and boat applications.

