terchangeable design modules. It comprises four variable beam profile projectors with beam angles of 7-14 degrees, 11-26 degrees, 16-34 degrees, and 24-28 degrees. These projectors come in two different configurations: one for an axially mounted 1000 watt lamp; the other for a 1000 or 1200 watt lamp positioned in the base of the unit with a conventional grid type filament. In addition, Thornley designed modules which convert the luminaires to a focusing fresnel or plano-convex projector.

Lee Colortran is selling the Windsor range both as complete units or as separate modules. To build the basic lamp from modules, the components include a housing, a fork which allows variable positioning to balance the unit when color changers or other accessories are added, four lens tubes with gates and color boxes, a fresnel lens mounting and a plano-convex mounting. Two modules are provided for the rear of the housing; one for an axially mounted lamp and one for a basic down lamp. At the bottom of the housing, two different troughs accommodate a combined fresnel and plano-convex, or a basic down profile.

Only four screws secure the front and back modules to the housing, and the base clips into a spring-loaded hinge. This means converting the luminaires to new configurations can take a matter of minutes, and if spare modules are on hand, parts requiring repair or maintenance can be replaced swiftly.

The Windsors accept lamps at 100, 120, 220, and 240 volts. Other features of the range include a rotating gate, and a main electrical supply connector situated within the handle of the unit to avoid damage to the socket.

Thornley takes pride in his claim that the Windsors are going to be the safest theatre luminaires on the market. "When you put a new 1200 watt lamp into a live socket, you can lose skin from your fingers when it goes on," he says. That is impossible with the Windsors because the lamps are automatically disconnected from the power supply as the mounting assemble drops out of the housing for lamp replacement.

Making the Windsor range safe also meant that Thornley stuck rigidly to the safety standards incorporated in the new international IEC 598/2/17 electrical code. According to Thornley, this code is the most stringent ever devised.

The Windsor range was greeted as a welcome innovation by observers at its unveiling at the Light & Sound Show at London's Olympia exhibition center in September 1988. But because the luminaires only recently became available for delivery from Lee Colortran's British production facilities at Norfolk and Kearsley, nobody really knows how well the units will stand up to the wear and tear of life in the theatre. In a much broader sense, Joe Thornley's luminaires represent a vital element in Lee Colortran's multi-million dollar investment program to update

The company estimates that nearly a third, or maybe more, of all Windsor sales will be to rental companies. That is because the instant changeability of the modules could solve one of the most nagging problems confronting the hire contractors -- meeting rush orders from existing stock. But the real payoff for the Windsor range will come from large orders from major theatres.

The Windsors will be sold in Europe by Lee Colortran subsidiaries and sister companies, including Mole-Richardson in France and Spain. In the United Kingdom, Lee Colortran is opening a theatre lighting shop in Nottingham, offering over the counter service.

With its first range of luminaires outside the United States, Lee Colortran will be seeking the same turnkey contracts for the stage that is has been securing for the television studio market. (Last year, for example, Lee secured a valuable contract to refurbish the largest studio at the BBC Television Center in London, as well as a massive order from China Central Television in Beijing.) In a much broader sense, Joe Thornley's luminaires represent a vital element in Lee Colortran's multi-million dollar investment program to update its product portfolio and develop a competitive presence in the theatre sector. This is especially important now when Lee Colortran's parent company, Lee Panavision International, is undergoing a complex financial restructuring due to the acquisition of Panavision last year.

Success will depend on more than just a unique range of modular luminaires. "There's a lot of competition in the market," suggests Robert Anderson, a lighting consultant in London. "Lee is hardly known in the theatre. But they are catching up. They have spent a great deal of money in the last five years, and the idea seems to invest in the future. They need to build a lot of customer loyalty to succeed."

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