

GEC / Phillips made an immensely important contribution to the lighting of the Opera House. Without them, or some equally expert manufacturer, it is doubtful if the excellent results achieved would have been possible. At the time of their engagement lighting design was a rarely practised art. There were lights fitting designers in Australia, but no lighting designers. But GEC / Phillips actually created very few design concepts, most of which originated from the architects. GEC / Phillips, particularly John Waldram, were marvellous team members in testing & developing concepts then finally manufacturing about 80% of the fittings for the House. Where simple utilitarian fittings were suitable for their purpose, eg plant and workshop spaces, they were used in the interests of economy.

The history of GEC / Phillips involvement essentially was:

- the sculptural qualities of the building, both in concept and detail, made conventional approaches to lighting inappropriate.
- the architects at an early stage asked for a lighting manufacturer (actually I suggested Edison Price, from the USA) to be appointed to work in the design team to develop concepts, supply test and prototype fittings and ultimately manufacture the fittings to be installed.
- the selection of the most suitable manufacturer was clearly going to present a problem. Not many manufacturers had the design and technical

capability required. By forming a consortium GEC/Phillips virtually eliminated the competition and therefore the need to make a selection. This alone would not have ensured their engagement had they not had expertise of the highest quality. As it happened, it was GEC, through John Waldram and David Mackellar, who contributed most to the design and lighting engineering.

So a team comprising GEC/Phillips, the architects and Julius Poole and Gibson, the electrical engineers, was set up jointly to design and install the lighting of all except stage areas.

The main aims were to integrate the lighting with the architecture and to display it without displaying the lighting itself. At the time of its completion the Opera House stood pre-eminent among modern buildings in the use of projected light to display sculptured surfaces, the ~~excessive~~ extent of low brightness fittings, specially designed to fit with the architectural detailing, the use of cut-off baffles for the avoidance of glare, control of angles to minimize reflections that would detract from the views through the glass walls, remote flood lighting sources and, where appropriate, purpose designed decorative but functional fittings, e.g. Hall's Balls, which now light Macquarie Street and the whole of the Circular Quay waterfront as well as the Broadwalks and Farm Cove.

In its way, the lighting design matched the originality of the rest of the building. In many respects it was highly innovative. Undoubtedly

the process was greatly helped because, when it was done, much of the building structure existed. It was therefore possible to conduct tests at full scale of both appearance and light levels, thus developing and refining concepts to produce spectacular but never garish effects. The involvement of the manufacturers was crucial at this stage and contributed much to the success of the finished product.