

What in me is dark illumine

ROLAND ORMEROD

The Presbyterian Church of St. Andrew & St. Paul in Montreal is typical ecclesiastical architecture and provided the lighting consultant with all the problems one would expect in a church built some 45 years ago when the service was known by rote and lighting was a secondary consideration. Whatever the original natural illumination provided by the architect, it was soon reduced by the enthusiastic congregation who lavished coloured glass of great beauty upon every available window in the building.

Artificial illumination for the chancel and nave, provided by 14 pendant lanterns, was so low that the congregation, at evening service, migrated to the pools of light directly under each lantern, giving the nave a lily pond effect. The whole area, of course, was extremely dull.

The new lighting scheme had not only to raise the illumination to a reasonable level, but also to provide meaningful highlights for significant areas as well as beautify the interior; all to be achieved without adding to, hanging from, or changing in any way, the architectural aspect of the interior. As one can imagine, such terms of reference had attendant problems particularly when the ceiling is of a hung plaster on mesh construction of limited bearing strength. The work had to be carried out with no interference with church routine, and dust and dirt were not allowed.

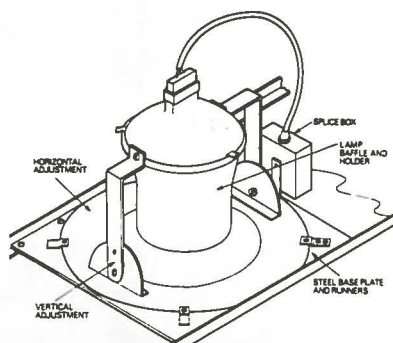
As the new lighting called for 36 holes and two slots to be cut into the ceiling (some 70 ft. above floor), plus surface lighting units along the side aisles all with conduit feeds, the restrictions placed upon the electrical contractor were almost a demand for a miracle. However, careful planning by all concerned did achieve an end result which pleased even the most critical observer, mainly John Bradley, with whom I worked on the lighting control.

One example of good thinking was the method employed for cutting the holes in the ceiling for the recessed downlights. A $\frac{1}{8}$ -in. pilot hole was drilled, through which was dropped an $\frac{1}{8}$ -in. cable. An inverted umbrella-like contraption, some 36 in. in diameter, was attached to the cable, hauled up to the ceiling and secured above.

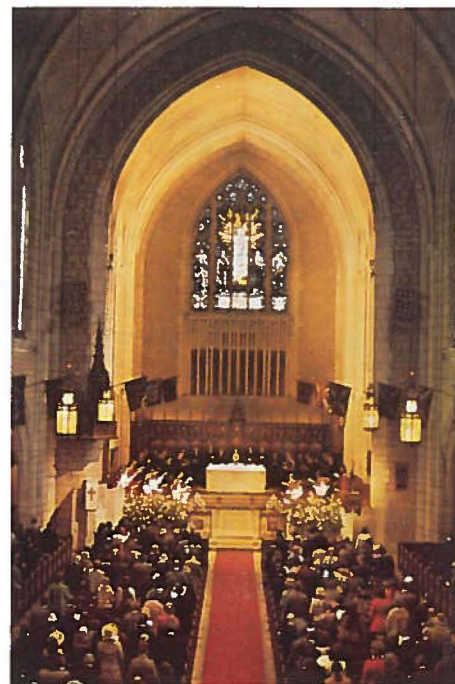
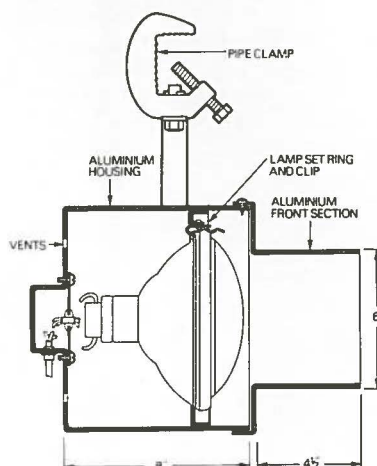
A 12-in. diameter hole was then cut and the dirt plus cut-out caught in the umbrella, close up to the ceiling. After the dust had settled, the contraption was lowered to the floor, taken out and the contents dumped.

The lighting scheme was designed and the work supervised by the lighting consultants Glemmo & Associates Ltd., of Montreal, and, under their direction, the work was accomplished cleanly and with despatch.

All the recessed lighting units are serviced from above the ceiling where the various points are reached by a catwalk system which negotiates ceiling hangers and contours like a commando training course, the system being approached via an air-conditioning duct along which one must crawl. It is just as well that the dimming control system seems to have been made for



Custom built luminaires include recessed downlights (above) and special chancel lighting units (below).



exceptional lamp life; in six years there has been only one lamp changed. Rated life of the various lamps used is 500 to 2,000 hours and the system is in use every day of the year.

The ceiling downlights have a throw distance ranging from 70 to 90 ft. However, the PAR lamps specified have light control and an efficiency such that highlight areas of 70-ft. candles have been achieved and the average light level throughout the nave, side aisles and chapel is 14-ft. candles.

Walls and ceiling of the nave are washed by the light from twelve original lanterns which the consultant had intended to eliminate; however, much righteous flak from "the church" securely nailed the lid on that idea, which is just as well as the space would have been awfully bare without them and by increasing the efficiency of the body lighting they do provide the very necessary light for the vertical surfaces.

Custom-built lights (36 x 500w units) and Patt. 123 Fresnels, situated above the organ pipes on each side, provide the wall and ceiling wash for the chancel as well as a basic level of 30-ft. candles at floor level, with altar, choir stalls, lectern and pulpit supplemented by ceiling downlights. Two ceiling slots house four Patt. 293 profile spots which are used to highlight various areas, from the chancel steps to the altar, as service or special ceremony demands.

The original specification called for 11 dimmer controls and the use of a patch panel. However, after careful analysis of

The control channels as designated on a strip fixed below the second scene preset.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CHOIR		CENTRE CHANCEL	ELDERS' STALLS	LECTERN	PULPIT	CROSSING		NAVE DOWNLIGHTS			CHANDELIERS	NARTHEX & PORTE COCHER VESTIBULE	CHAPEL	
WEST	EAST					CENTRE	SIDES	FRONT	CENTRE	REAR			DOWNLIGHTS	ACCENT