

**Topic 059****Point Source methods****Point Source lighting**

Most stage lighting fixtures perform as 'point' sources. In this respect they produce a single shadow and they provide a light output that follows the inverse square law. For example, A lighting fixture 50 feet away might provide 100 footcandles. If the distance is doubled to 100 feet, only 25 footcandles are provided (one quarter).

Point source lighting forms the fundamental basis of all stage lighting design. The basic ingredients of all lighting design include the FRONT, BACK, DOWN, DIAGONAL, SIDE and UP light (and everything in between). The designer will sometimes use these basic single sources alone but most often they will be combined. Nothing is more dramatic than a modern dance piece lighted only with a series of isolated down lights or a single diagonal backlight, against an illuminated cyclorama. Nothing is more tiring and boring than watching a drama illuminated only with a series of tight pools of light.

The student designer must get to know the FRONT, BACK, DOWN, DIAGONAL, SIDE and UP light very well. He should experiment in an actual theatre with different types of equipment mounted in these positions. He should try different angles and should light different backgrounds, scenery and even actors. When the basic single sources have been mastered, two or more lighting angles should be combined on a single area. This is a very important exercise and forms the basis of all lighting design.

There are also a number of lighting books that contain photographic lighting studies of the basic sources (front, back, side, etc.) lighting a mannequin or an actor. One of the better studies is by Jean Rosenthal in her book 'The Magic of Light'. This photographic essay shown a number of lighting fixtures mounted in typical theatre lighting locations. The study contains excellent photographs, renderings and drawings of many different examples. There is also a light plot included showing the type and layout of all the equipment used.