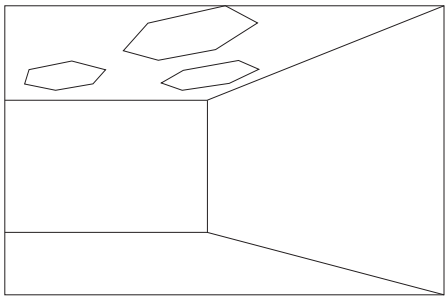
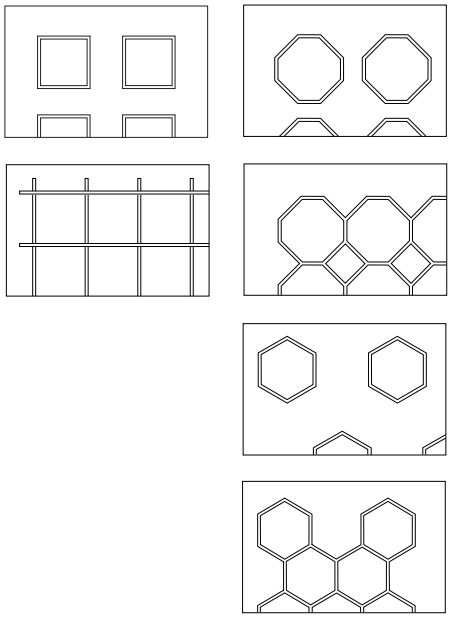


An arrangement of several hexagonal light structures subdivides the ceiling area irrespective of the surrounding architecture and becomes an active design element in the space.



Light structures using 90°, 135° and 120° angles in arrangements: individual and combined structures.

form of the space. This may involve following the existing lines or purposefully arranging the luminaires in contrast to the existing formal language. Linear arrangements allow greater design scope, but do entail more stringent design requirements. As the linear arrangement of the luminaires does not necessarily relate to an actual line – the course a wall follows, ceiling projections or joists – the luminaire arrangement can only be created on the basis of the perception of gestalt. These laws of gestalt must receive special attention during the planning phase. The crucial criteria are the proximity of the luminaires and their equidistance.

Whereas linear arrangements consisting of series of points are only produced indirectly by the perception of the gestalt, they can be directly formed of linear elements. These linear elements can be particular types of luminaires, e.g. louvred luminaires, or even trunking systems. Continuous systems, light structures and almost all track arrangements or other trunking systems belong in this design category.

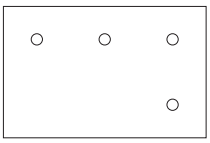
The formal language of linear arrangements is identical to that of rows of points. As the visual forms produced when linear luminaires are used are real and not only implied, more complex arrangements can be planned with no danger of distortion through perception. Creative design allows both the alternating application of different luminaire forms and the use of spotlights on lighting structures or trunking systems. This allows differentiated lighting without individual luminaires disturbing the in-trinsic form of the structure.

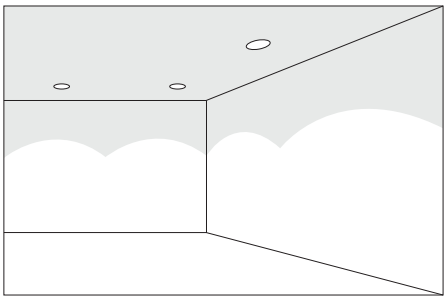
The application of linear elements also allows the transition from linear arrangements to more planar layouts. Light structures and trunking systems are particularly suitable in this regard. The formal language of such networking depends primarily on the connectors available for the specific structures. Adjustable connectors allow specially variable design. In general, connectors are available with fixed angles of 90° and 45°, 120° and 60°. Each of these angles can produce a wide range of forms, from rectangular forms at angles of 90° to honeycomb-shaped arrangements at angles of 120°.

Apart from basic design concepts it is possible to compile a set of general rules for some aspects of lighting layouts; in the case of regular lighting layouts this applies above all for the distances between the luminaires and from the walls.

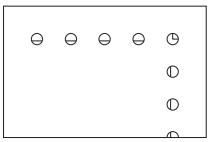
For ceiling-mounted downlights the distance to the wall should be about half the distance between the downlights. In the case of wallwashers the recommended distance to the wall is around one third of the room height, the distance between the wallwashers should not exceed one and a half times the distance to the wall.

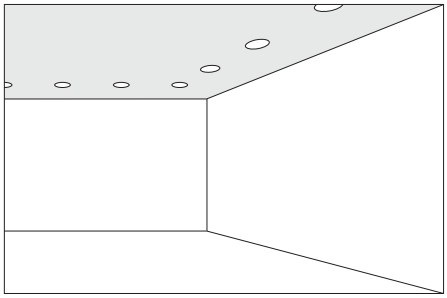
When illuminating paintings or sculptures using spotlights, the luminaires should be arranged so that the angle of incidence of the light is approximately 30°, the so-called "museum angle"; this produces maximum vertical lighting and avoids reflected glare that may disturb the observer.



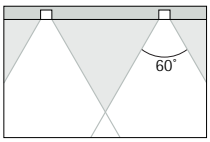


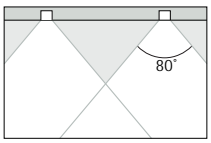
The recommended distance of downlights to the wall is generally half the distance between the downlights. Corner-mounted luminaires should be mounted on the 45° line to produce identical scallops on both walls.

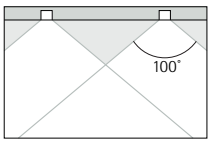




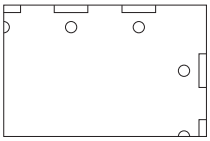
The distance of wall-washers and wash-lights from the wall should be 1/3 of the room height; the distance between the luminaires themselves should not exceed one and a half times the distance to the wall.

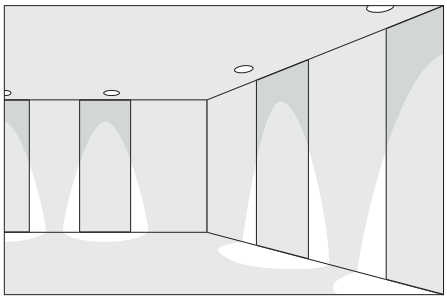




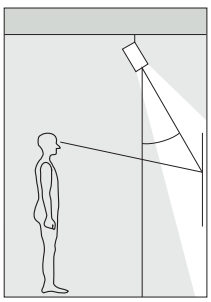


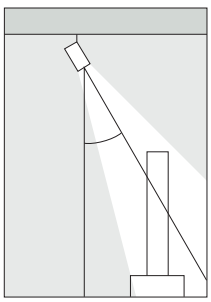
Overlapping light beams (beam spreads 60°, 80° and 100°) on the working plane at a spacing to height to height ratio of 1:1.



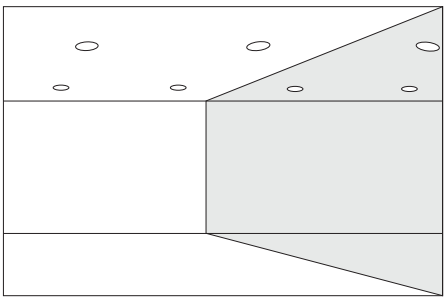


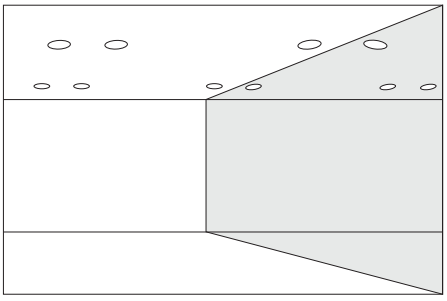
In spaces with dominant architectural features the lighting layout should harmonize with the architectural elements.





The optimum angle of incidence for the illumination of paintings and sculptures is 30°.





In the case of mirror walls the lighting layout should be planned such that the arrangement of luminaires appears consistent in the mirror image.