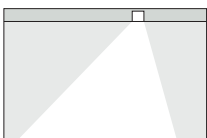
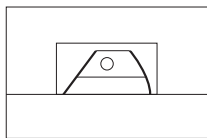
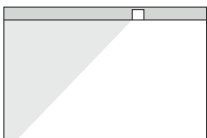
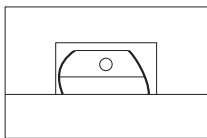
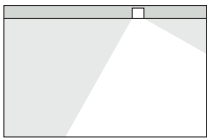
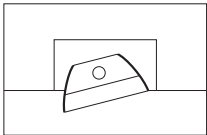


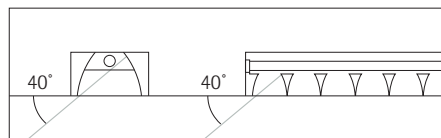
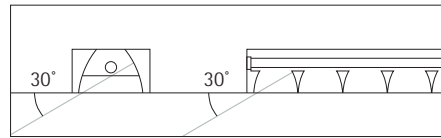
Asymmetric louvred luminaires predominantly radiate light in one direction only. They can be used for the uniform lighting of walls or to avoid glare caused by light projected onto windows or doors.

VDT louvred luminaires are designed for use in spaces with computer workstations. In Germany they must have a cut-off angle of at least 30° along both main axes and must not exceed an average luminance of 200 cd/m² above the cut-off angle. They are therefore generally equipped with highly specular louvres. When using positive contrast monitors higher luminances are permissible, in critical cases a cut-off angle of 40° may be required.

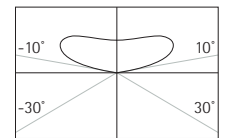
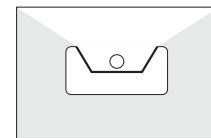
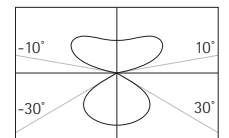
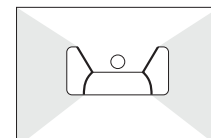
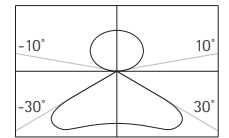
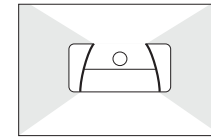
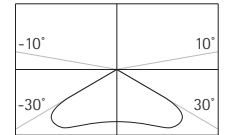
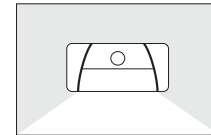
Direct-indirect louvred luminaires are suspended from the ceiling or mounted on the wall. They produce a direct component on horizontal surfaces beneath the luminaire and at the same time light the ceiling and provide diffuse ambient lighting.



Asymmetric louvred luminaires (from the top down): the wall can be lit by tilting the symmetrical reflector, lighting using a wall-washer with an elliptical side reflector. Lighting without a wall component (e.g. in the vicinity of a window) using a luminaire with a flat side reflector.

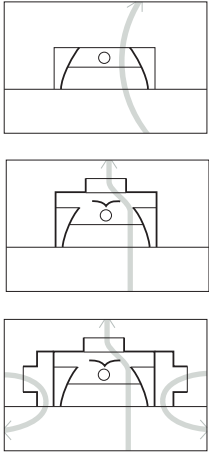


Cut-off angle of 30° (limiting angle 60°) along both main axes (above), cut-off angle of 40° (limiting angle 50°) along both main axes (below).



Typical light distribution curves for louvred luminaires: direct luminaire, direct-indirect luminaire with a predominantly direct component, direct-indirect luminaire with a predominantly indirect component, indirect luminaire.

Air-handling louvred luminaires are designed to handle supply air and return air and provide a more harmonious ceiling layout. Air-handling louvred luminaires can be provided with connections/outlets for supply air, return air, or both supply air and return air.

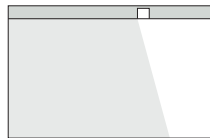
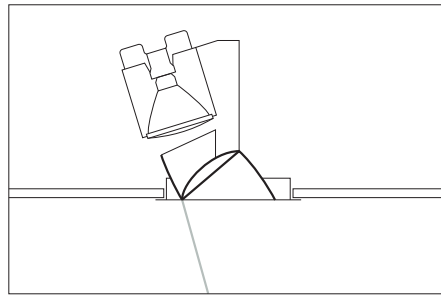


Louvred luminaires with air-return component for negative pressure ceilings, for funnelling return air off into extract air ducts and for combined supply air and return air handling.

2.7.1.4 Washlights

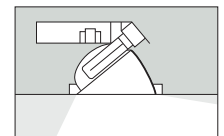
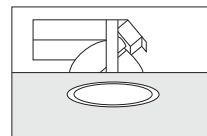
Washlights are designed to provide uniform lighting over extensive surfaces, mainly walls, ceilings and floors, therefore. They are included in the group downlights and louvred luminaires, although washlights do have their own luminaire forms.

Wallwashers illuminate walls and – depending on how they are designed – also a part of the floor. Stationary wallwashers are available as recessed and surface-mounted luminaires.

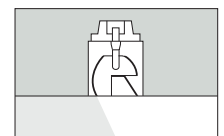
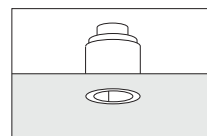


Wallwashers for reflector lamps with a lens to spread the light beam and a darklight reflector. Very little light is directed onto the floor, the wall lighting is especially uniform.

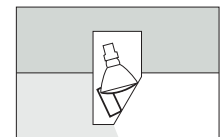
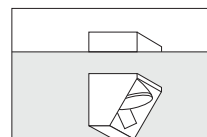
Wallwasher for compact fluorescent lamps.



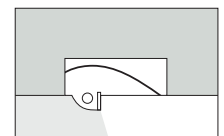
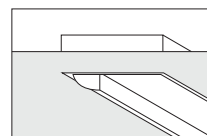
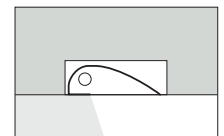
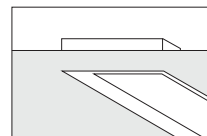
Wallwasher with ellipsoidal reflector for halogen lamps.



Wallwasher with sculpture lens and reflector attachment for reflector lamps.



Wallwasher for fluorescent lamps. The direct light component is cut off, the reflector contour produces especially uniform lighting over the wall surface. In the diagram below a supplementary prismatic diffuser below ceiling level provides light directly from the top of the wall.



Cantilever-mounted wallwasher.

