

Lighting design

General notes for lighting design

DESIGN

The technology of daylighting design involves step-by-step-analysis of determined theoretical calculation values together with actual measured values.

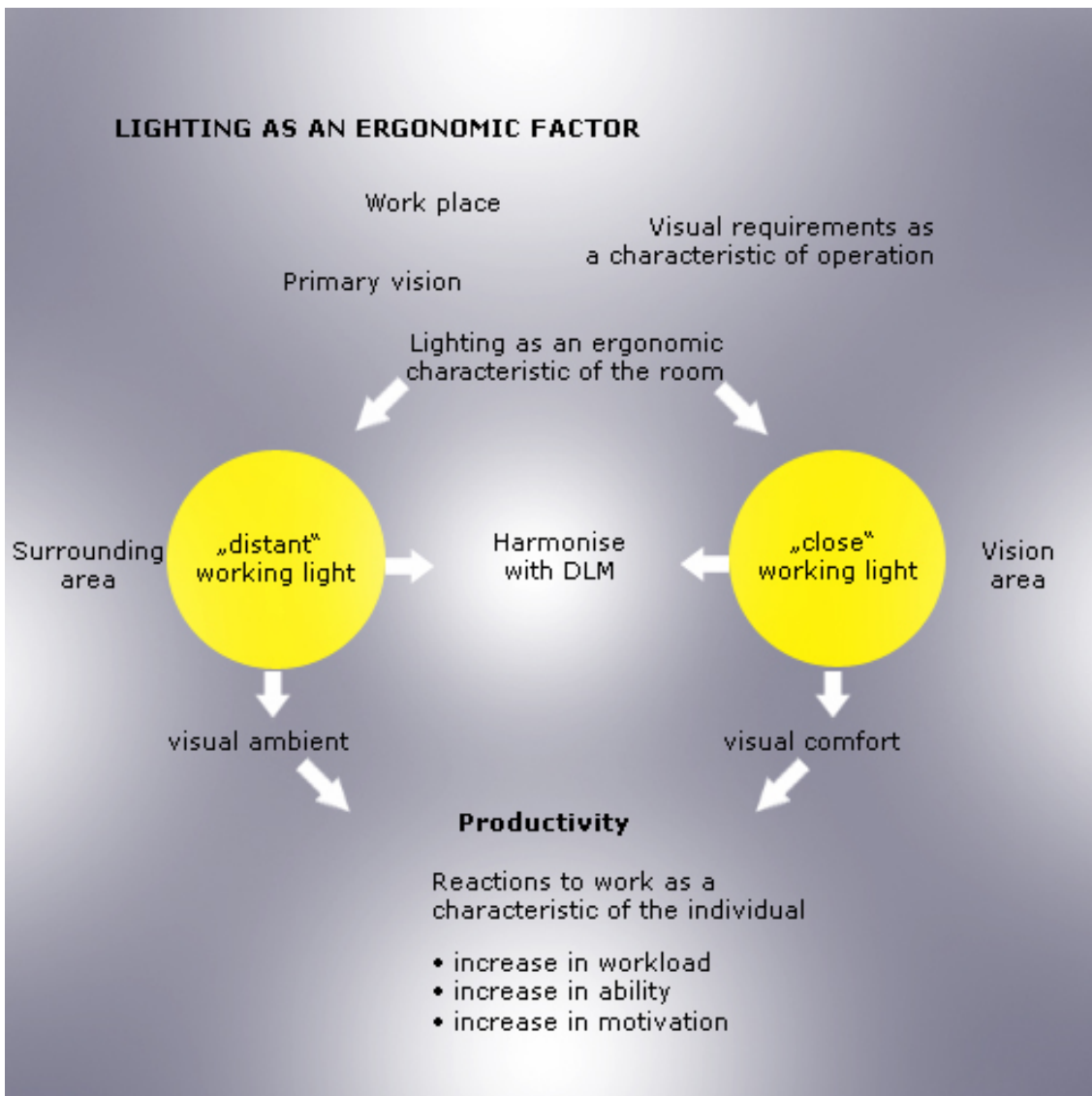
However, the resulting figures often appear abstract and meaningless - requiring expert advice.

The complexity of room-aspects and the resulting light-atmospheres make computer-simulation a necessity.

The daylight source is simulated by an artificial sky and the daylight levels are quickly visualised.

It is suggested that a daylighting engineer is employed for consultation in these matters.

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**LIGHTING OF SPACES WITH
MONITOR-WORKSTATIONS**

Critical Standards and Guidelines:

A
Constructional measures with regard to spaces
and window openings
(DIN 5034, ASR 7/1)


B
Lighting Criteria for artificial lighting systems
and window areas
(DIN 5034, DIN 5035, EN 410)

C
Government Regulations (e.g. Germany):

a. Monitor Workstation Regulation
(BGBI part 1 - pg 1841, dated 10.12.1996)

b. Work Spaces Regulation
(BGBI part 1 - pg 1841, dated 4.12.1996)

c. Work Spaces Guidelines ASR 7/1,
View to outside

 Lighting design**CRITERIA AND LIMITING VALUES
FOR SYSTEM-EVALUATION**

1. minimum lighting level at a monitor-workstation located close to a window of $E_h = 500 \text{ lx}$ (to DIN 5035) resp. Minimum Tq-value of 0.9 (0.75) at half-depth of room (to DIN 5035).

2. Compliance with light-intensity periphery values (DIN 5035) - Max. light-intensity difference between monitor and work surface not greater than 3:1; between monitor and surroundings not greater than 10:1 (100/1).

3. Maximum light-intensity of any surface that can reflect in the monitor to reduce reflex-gare (DIN 5035).

a. Average light-intensity of window area not greater than 200 cd/m^2

b. Maximum light-intensity of window area not greater than 400 cd/m^2 .