

(2) Where supplementary lighting is used in combination with overhead lighting, particular care shall be exercised to eliminate glare at other points in the room. Adequate shielding and careful adjustment of the direction shall be provided to minimize both direct and reflected glare.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.05 Illumination at the work. Electric illumination at the point of work in rooms and spaces of school buildings shall be supplied and maintained in accordance with the minimum values shown in the following table:

Room or space to be illuminated	Minimum maintained illumination at the work, foot-candles
(1) Classrooms—all spaces used for study or instructions excepting (3) & (4). -----	30 f.c.
(2) Study halls, lecture rooms, offices, laboratories and libraries. -----	30 f.c.
(3) Sight saving classrooms. -----	50 f.c.
(4) Drafting, typing and sewing rooms. -----	50 f.c.
(5) Gymnasiums and natatoriums. It is recommended that consideration be given to underwater lighting for natatoriums. -----	25 f.c.
(6) Auditoriums (not for study), cafeterias, locker rooms, wash rooms, corridors containing lockers and stairways. -----	10 f.c.
(7) Other corridors and store rooms. -----	5 f.c.
(8) Shops—vocational training and industrial arts -----	
(a) Bench and machine areas -----	50 f.c.
(b) General areas -----	30 f.c.

Note: The values are minimum, not average.

Where it is desired to see objects in their daylight hues, as for example, art work, the use of electric light having an approximate daylight spectrum is suggested; increased illumination is usually desirable.

In planning electric lighting, allowance of at least 30% should be made for depreciation from dirt and other causes.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.06 Shielding of lamps. No exposed lamps or tubes having a brightness greater than 1200 foot lamberts shall be installed in rooms used for study or vocational training purposes. All sources having brightness in excess of 1200 foot lamberts shall be provided with suitable shielding either as a component of the luminaire or as a structural element, so that occupants will be protected from direct glare. Where fluorescent lamps are used, the minimum shielding shall be 25° lengthwise and 35° crosswise of the source measured below the horizontal line. Surface brightness of the shielding elements, if of the diffusing type, shall not exceed 1200 foot lamberts.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.07 Distribution of light. Luminaires or luminous ceilings shall be so installed in regard to mounting height, location, and spacing as to provide uniform distribution of illumination at the work.

Note: Section Ind 17.07 does not apply to toilet rooms, cloak rooms, store rooms, boiler rooms and other spaces devoted to similar purposes.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.08 Diffusion of light. Luminaires shall be so installed in regard to mounting height, location and spacing as to avoid sharply

defined and deep shadows from overhanging structural parts or persons in normal working positions.

Note: Section Ind 17.08 does not apply to toilet rooms, cloak rooms, store rooms, boiler rooms and other spaces devoted to similar purposes.

Note: Deep shadows interfere with work in the shaded area and are a strain on the eyes. In general, some shadows may be present, in fact, they aid in observing objects in 3 dimensions, but they should be soft and luminous.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.09 Emergency lighting. (1) **EXIT, STAIR AND CORRIDORS.** The lighting in all stairways and exits and in the passageways leading thereto shall be connected independently of the room lighting. Such lighting and exit lights shall comply with the terms of the Wisconsin state building code and the Wisconsin state electrical code and shall be so supplied as not to be subject to failure because of the failure of the room lighting from internal causes.

(2) **NATATORIUMS.** In all natatoriums the lighting shall be connected with the emergency lighting.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Ind 17.10 Daylight. (1) **WHERE REQUIRED.** All classrooms and spaces in school buildings used for instruction and study purposes shall be provided with side wall clear glass vision panels or windows except gymnasiums, auditoriums, cafeterias, lunch rooms, libraries, science rooms, audio-visual rooms, homemaking rooms, art rooms, music rooms, vocational shops and similar areas.

(2) **VISION AREA OR WINDOWS.** The vision area or windows in each classroom shall have a total area of not less than 40 square feet. The sill height shall not exceed 3'6" above the floor and the horizontal width of the vision area shall not be less than 5 feet. A minimum of 10 square feet of the glass area, with the least dimension not less than 2 feet shall be arranged to open.

(3) **GLASS BLOCK CONSTRUCTION.** (a) Glass block construction for all spaces to which this code applies, may be used under the restrictions of the Wisconsin state building code and those imposed by this code in so far as they apply.

(b) Glass block wall panels exposed to direct sun rays and above the 5 foot level shall be of a type capable of directing the light rays horizontally or upward.

(4) **BRIGHTNESS CONTROL.** In class or study rooms, all windows, skylights, clerestories, top lights and other openings containing clear glass or equivalent translucent material which is exposed to the direct or reflected (as from snow) rays of the sun shall be provided with an effective means of brightness control. Opaque shades shall be used only where it is necessary to darken the room for visual instruction.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57; am. (1) and (2), Register, January, 1961, No. 61, eff. 2-1-61.

Ind 17.11 Windows in front wall prohibited. Windows shall not be located in the front wall of classrooms, recitation rooms and study halls.

Note: By front wall is meant the wall pupils face directly when in their seats.

History: Cr. Register, November, 1957, No. 23, eff. 12-1-57.

Register, January, 1961, No. 61
School lighting