

## LIGHT FORMULA

$$L_1 = L_0 \times WF \times E = WA / FA$$

$L_1$  = LIGHT INSIDE

$L_0$  = LIGHT OUTSIDE

WF = WINDOW FACTOR

E = EFFICIENT COEFFICIENT

WA = WINDOW AREA

FA = FLOOR AREA

•  $L_0$  = LIGHT OUTSIDE -

GENERALLY ~~IF~~ AN OVERCAST SKY IS GIVEN A CONSTANT NO. OF "5000" LUX (MEASUREMENT OF LIGHT)

• WF = WINDOW FACTOR -

GENERALLY ASSUMED TO BE IN THE REGION "OF 50%"  
SO ".5" IS USED AS A CONSTANT NO. IN FORMULA

• EFFICIENT COEFFICIENT -

IS GENERALLY ASSUMED TO BE ".4" IN FORMULA

• THEREFORE:-

$$L_1 = L_0 \times WF \times E \times WA / FA$$

$$L_1 = 5000 \times .5 \times .4 \times WA / FA$$

## LIGHT QUESTION EXAMPLE:-

A ROOM MEASURING 3M X 4M, WITH AN UNOBSTRUCTED VIEW, REQUIRES AN ILLUMINATION OF 150 LUX. DETERMINE USING THE DEGREE OF EFFICIENCY METHOD, THE APPROPRIATE AREA OF GLAZING REQUIRED.

$$1 \quad L_1 = L_0 \times WK \times E \times WA / FA$$

$$2 \quad L_1 = 5000 \times .5 \times .4 \times WA / FA$$

$$3 \quad L_1 = 1000 \times WA / FA$$

$$4 \quad 150 = 1000 \times WA / 3 \times 4$$

$$5 \quad 150 = 1000 \times WA / 12$$

$$6 \quad 150 \times 12 = 1000 \times WA$$

$$7 \quad 150 \times 12 / 1000 = WA$$

$$8 \quad 1.8 \text{m}^2 = WA$$