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Magdalene Pfister

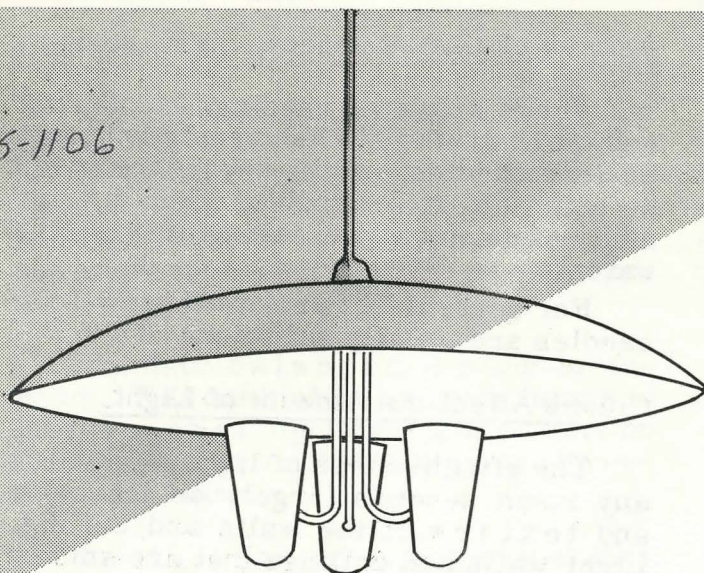
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Good Lighting for the Home

By Magdalene Pfister

A home that is well lighted night and day will give family members comfortable and convenient conditions for work and play. Carefully planned lighting makes a home more attractive. A well-lighted room, like a cheerful day, raises your spirits.

Two types of lighting are needed in the home: general or over-all illumination and specific lighting. General lighting makes it easy to move about and eliminates extreme light and dark shadows which cause eye strain. There should be at least one-tenth as much general light in the room as there is for a specific task. A good source of general illumination is the ceiling fixture. Concentrated light is needed in addition to general lighting wherever you perform special tasks. The amount of light depends on the job to be done.

Benefits of good lighting include saving time and energy, promoting cleanliness, preventing eye defects, promoting human well being, providing safety and adding beauty to the home.

Good Lighting Is:

Light Enough: to see clearly and quickly what you are doing. You need more light to see a small object than a large one, and to sew on dark fabrics than on light-colored materials. Eyes with less than normal vision need more light than eyes with normal vision.

Light Without Glare: insures your comfort and protects your eyes. Shade all your light bulbs to avoid direct glare and to give you a more diffused light.

Light Well Distributed: prevents bright spots and deep shadows in a room. Even though a single lamp gives enough light for reading, the bright page contrasts with the dark room and tires your eyes more quickly.

Light Correctly Placed: insures that no shadows fall on what you are doing. Shadows make seeing difficult and sometimes it is your own shadow that gets in the way.

Kinds of Electric Lighting.

Incandescent lighting, the most common lighting, uses a glass bulb with a metal filament to produce the light. It has the following desirable qualities:

- Fixtures and bulbs cost less.
- Light is sympathetically warm and "full" in color and is more flattering.
- Textures and forms are emphasized because the light comes from a relatively small source.
- Light comes the minute you push the switch.
- There is no flicker or hum and less likelihood of radio interference.

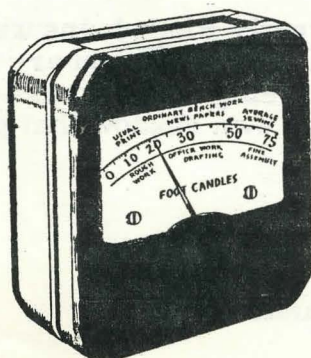
Fluorescent lighting uses glass tubes with a gas inside to produce light. The advantages of this type of light:

- Bulbs last about 7 times as long as do incandescent.
- Produce about 2 1/2 times as much light for current used.
- Light source is considerably larger, which spreads the light more and produces less glare.
- Almost no heat is produced.

Fluorescent tubes are available in several colors. The warm tone or soft white fluorescents emphasize the warmer tones and are more pleasing in many rooms. There is a "white" tube which is good for kitchens and laundries.

How to Measure Light.

Light can be measured in terms of foot-candles. Since light meters are expensive you probably would not buy one, but you can usually borrow one from the local power company or the County Superintendent of Schools to check your light.



Amount of Light Needed.

Tasks such as reading, laundering and work in the kitchen require at least 40 foot-candles, while sewing requires at least 175 foot-candles. A lamp for study requires a bulb taking at least 100 watts.

For general illumination 5-foot-candles are usually sufficient.

Colors Affect the Amount of Light.

The effectiveness of light supplied in any room depends largely on the color and texture of the walls and ceiling. Light walls and ceilings that are smooth will reflect a greater amount of light and the room will appear lighter than if the walls are dark and rough. Even dark furniture and woodwork absorb light and increase the amount of light needed to illuminate the room. Textures that are too smooth may be shiny and reflect glare which is uncomfortable and undesirable.

Approximate Amount of Light Reflected by Various Colors Used for Paint, Paper, and Wood Finishes.

<u>Color</u>	<u>Light Reflected</u>
White	85%
Light	
Cream	75%
Gray	75%
Yellow	75%
Green	65%
Blue	55%
Medium	
Yellow	65%
Gray	55%
Green	52%
Blue	35%
Dark	
Gray	30%
Red	13%
Brown	10%
Blue	8%
Green	7%
Wood Finish	
Maple	42%
Satinwood	34%
English Oak	17%
Walnut	16%
Mahogany (dark).	12%

It is well to remember, too, that in dimly lighted rooms true colors are not seen, but where there is much diffused light, colors come to life.

Light for Television Viewing.

It is a mistake to darken the room for television as for a movie because the television screen is both brighter and smaller than a movie screen. Strong contrast between a bright television tube and dark surrounding areas causes eye-strain and fatigue.

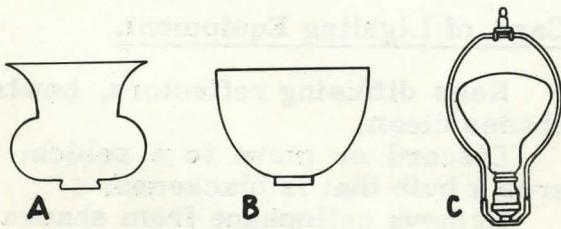
Maintain balanced lighting in the room. This can be done by using lamps to give general lighting. These may be turned to low or medium if they are three-way light bulbs.

Avoid placing the lamps so that they are reflected from the screen back into your eyes. Turn on the proposed lighting arrangement with the television set off. Sit in various viewing positions in the room. If you can see the lighted lamps reflected on the darkened screen, that same brightness will remain as an annoyance when the set is on. Then rearrange the lamps or viewing positions.

A 15 or 25 watt bulb behind the set lightens the area around the screen, making viewing more comfortable.

Quality of Light.

The kind of light is as important as the right amount of light. By good quality we mean soft light, without glare and contrast. Glare is caused by bare bulbs or bulbs that have not been properly shaded; by using lamp shades that are not deep enough to hide the bulbs; by placing lamps so that the exposed bulb can be seen; or by light being reflected back from shiny surfaces.



Certified glass diffusing bowl (A), another style diffusing bowl (B) and a wide harp with an Indirect-Lite bulb (C) are devices to assure soft, glare-free light.

Direction of Light.

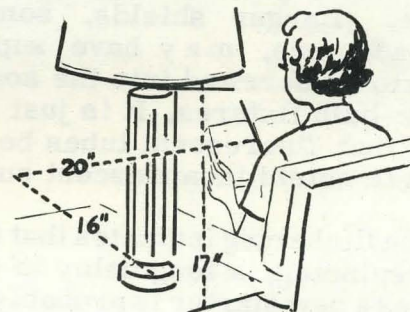
Light from a number of sources makes a room luminous rather than merely lighted, tends to spread interest throughout the room and is comfortable.

Light for working should illuminate the task without shadows and should not shine in the worker's eyes.

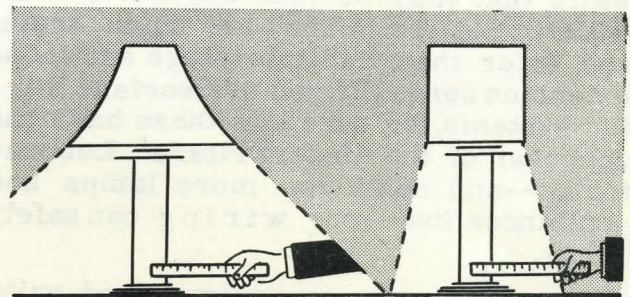
Light from near the floor flatters people--as do theater footlights. It also is a good safety device near steps and halls and is a refreshing surprise.

Light below eye level seems friendly and draws people together. It is useful in watching television.

Light high in the room seems formal.



For good lighting with table lamp; lamp 25 to 30 inches to top of reflector; diffusing bowl, 8 to 9 inches across; shade at least 16 inches across bottom; 50-100-150 three-way bulb, set at 150, or 150-watt white indirect bulb without bowl. Place lamp on table about 25 inches high.

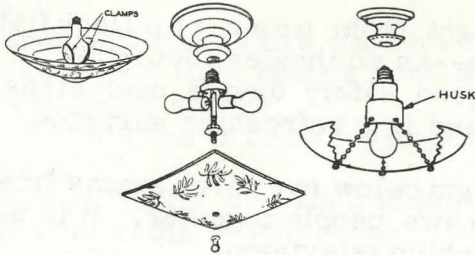


In order to select a lamp that will give a good spread of light, choose one that is of proper height and with a shade of a large enough lower diameter.

How to Improve Your Lighting.

Sometimes the purchase of one good new lamp and the rearrangement of others will greatly improve your lighting.

One of the least expensive solutions to the problem of bare bulbs in ceiling fixtures is the use of the yellow "decorator" or the silvered bowl bulbs.



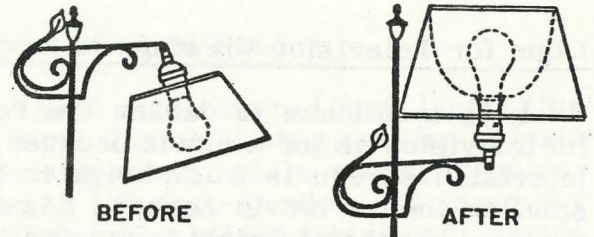
Shades or shields that clip onto the bare bulbs or tubes of a ceiling fixture are another way to make light more comfortable. Larger shields, sometimes called adapters, may have supporting frames to be screwed into the sockets of a single-bulb fixtures. It is just as necessary that fluorescent tubes be shaded as it is to shield incandescent bulbs.

Tube flickering indicates that the tube needs replacing, a long delay in starting indicates a new starter is probably needed. A poor tube will ruin a starter and, conversely, a poor starter will ruin a good tube. If an objectionable humming sound develops in the fixture, the ballast may need to be remounted or replaced.

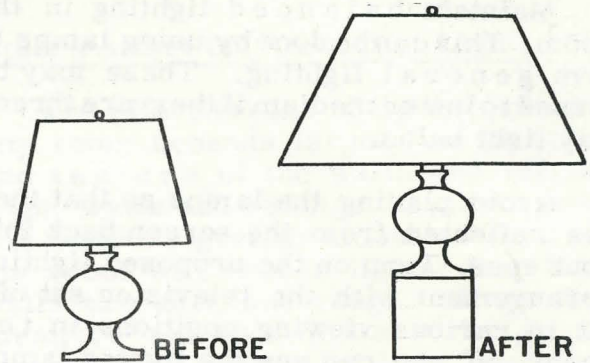
If a shortage of outlets is limiting your use of portable lamps, see if more could be added economically. There are surface wiring systems to be fastened to walls that may be less expensive than built-in outlets. They are much neater and safer than multiple plugs and loose extension cords. If you use surface wiring systems, be sure that these have the approval of the Underwriters' Laboratories--and don't use more lamps and appliances than your wiring can safely carry.

Some lamps can be improved quite simply.

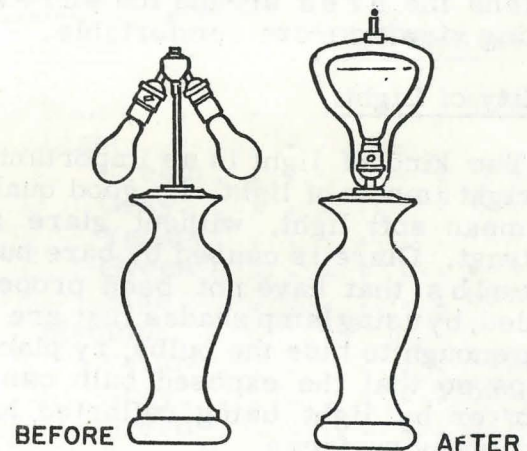
Invert the socket of a turned-down bridge lamp. Then add a diffusing bowl and a wider shade to give better softer light.



Cement the little lamp to a block of wood and give it a wider shade for more light.



Replace the double socket with a single socket, so that you can use a large white (R 40) indirect bulb. Use a wide "harp" to hold the shade.



Care of Lighting Equipment.

Keep diffusing reflectors, bowls and shades clean.

Discard or move to a seldom-used area a bulb that is blackened.

Remove cellophane from shades before using. Wrappings create glare and may cause frame to warp.

Use one large bulb in a fixture rather than several small ones. A 100-watt bulb gives about 40 per cent more light than four 25-watt bulbs and uses the same amount of current.