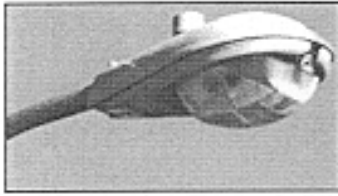
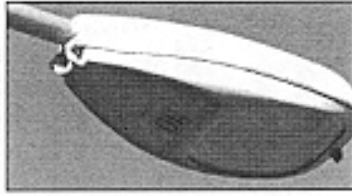


# IDENTIFYING GOOD & BAD LIGHTING FIXTURES

## Street Lighting



Non-Cutoff Cobra Head



Cutoff Cobra Head

The cobra head fixture mounted at conventional heights is the most efficient and cost effective luminaire to use for local streets and highways. The cutoff cobra head fixture will perform the lighting task better than the non-cutoff cobra head with the drop-down globe. Utilizing the same wattage with the cutoff fixture and at no additional cost, there will be less glare and improved night vision

## Post-Top Decorative Light Fixtures



This fiberglass fixture is being installed for street lighting by electric utilities. The lamp (bulb) is usually located directly behind the panels and become a direct glare source visible in our line of sight as we drive. This fixture is not as efficient as the cobra head shown above.



This "acorn" luminaire generates a lot of glare and spill-light with almost half the light going upward and sideways, missing the intended target area. It is a poor choice for lighting streets and parking lots.



Near cutoff equivalent designs can be acceptable if the wattage is not excessive. Minor glare may not be a problem in a "main street/downtown" environment that has some ambient light. The better models have no more than 4% of the total lamp lumens rising above the horizon (980 degrees above nadir).



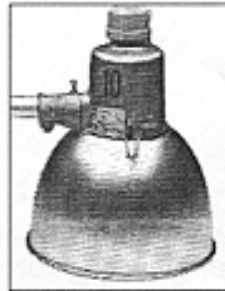
Cutoff types such as these will provide good lighting without causing unnecessary light pollution while maintaining the decorative look of the post-top fixture.

## NEMA-Head Fixtures

NEMA-head luminaires are still being used almost everywhere, in parking lots as well as wall mounted security lights, in park facilities and some even remain as old, inefficient streetlights.

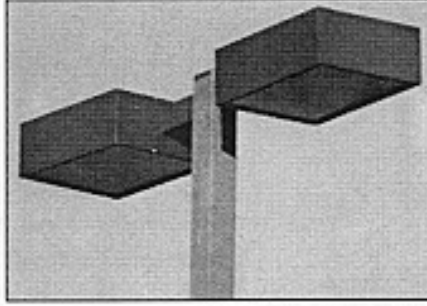
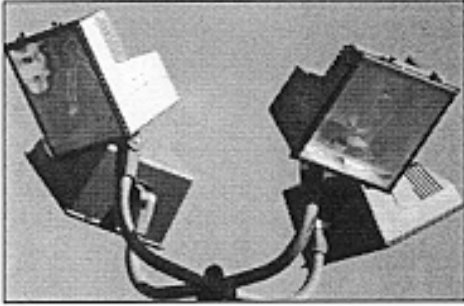


The "dusk-to-dawn" unshielded NEMA-head fixture has been around for many years, light polluting our environment. Half of the glary light goes upward, wasting energy. Most have inefficient mercury vapor lamps.



This same type of NEMA-head fixture, with an inexpensive shield and high pressure sodium lamp, becomes an efficient cutoff light fixture. The upward light is redirected downward, significantly increasing the illuminance within the target area – and with no light pollution !

## Parking Lot & Area Lighting



Floodlights such as those at far left should not be used to illuminate parking lots. When tilted as shown, they cause significant glare and light spillage. When lamp wattage is excessive, the problem intensifies and become disabling to our vision. The fixtures in the next photo are cutoff "shoe box" types. At proper light levels, they perform the task effectively without unnecessary light pollution.

## Electric Utility Floodlights



These fixtures are mounted on wooden utility poles. Many of these lights are very noticeable along major and minor roadways because they have been installed quite inappropriately. They are a source of considerable glare and unnecessary light spilling onto adjacent property. The photo at far left shows such a fixture. The next photo shows a properly installed fixture. Note how it is aimed more downward and has a shield to prevent light spillage.

## Wall-Mounted Lighting



The fixture at far left is commonly referred to as a "wallpack" type. It represents a category of poorly designed luminaires that will perform most lighting tasks badly, casting glare in all unwanted directions. The remaining fixtures shown are all cutoff or equivalent. The fixture at far right is a floodlight installed in a cutoff position. The four fixtures at the right provide excellent lighting without unnecessary light pollution.

**Note:** The above photos are intended to represent typical lighting equipment presently being used. These are available from various manufacturers. No endorsement of any particular manufacturer is expressed nor implied by use of these photos here. There are many more styles available.