plate is very sensitive in the region of .59μ, and it is difficult to eliminate this effect in the fire-fly curves. The hump in the curve of the light from the glow worm and of *Photinus consanguineus* at .59μ is, therefore, not considered of real significance. The curves of these two samples were obtained from the photographs taken with the small spectrograph.

Knowing the distribution of energy in the spectrum of the glow lamp, given in fig. 26, it is possible to determine the spectral energy distribution

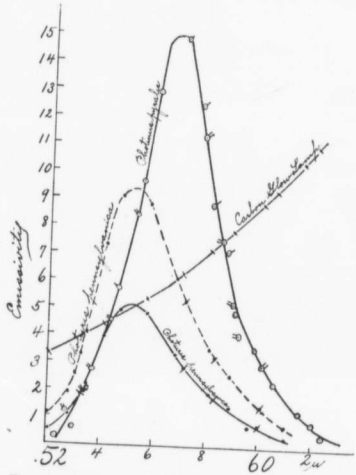

FIG. 26.—Spectral energy curves of fire-flies and glow lamp.

of the fire-fly by multiplying the energy values of the glow lamp by the ratio of densities, $\frac{\text{fire-fly light}}{\text{glow lamp light}}$, at each wave length. The resultant curves are given in figs. 26 and 27. In fig. 26 the spectral energy curve of the *Photuris pennsylvanica* and of the *Photinus pyralis* are plotted to the same scale in the blue-green. An integration of these two curves shows that for the same emissivity in the blue the energy curve of the *Photinus pyralis* is 2.83 times that of the *pennsylvanica*. To the eye it is apparent that the illuminating power of the *Photinus* is far greater than that of the *Photuris*.