Book reviews

Molecular Processes in Vision. Eds. EDWIN W. ABRAHAMSON and SANFORD EUGENE OSTROY. Pp. 431. US\$ 55.00. Academic Press: New York. 1981.

This volume is essentially a collection of published papers dealing with the biochemical basis of visual excitation, electrophysiology of the retina, and the relation of retinal events to responses in the visual cortex. There are also 5 articles written expressly for this collection. Each of the 6 sections has a brief editorial introduction setting the context for the papers which follow. Briefly, Part I deals with the biochemistry of rhodopsin, Part II with its photochemistry, and Part III with its disposition in the membrane of rod outer segments. Part IV covers the renewal process in photoreceptors and the role of the pigment epithelium, Part V biochemical studies of the transduction process, and the last part deals with electrophysiological observations from the photoreceptor level and leads up to a final paper on receptive fields in the striate cortex.

One may say at the outset that it seems an interesting notion to collect a series of important original contributions together in one place, although no doubt other editors would have made a different selection. We have a collection which will be useful for a scientist commencing work in this field who wishes to obtain a general idea of its progress during the last 20 years. That being granted, it must also be said that most of the papers reprinted should be available through any reasonable library and that in some instances, particularly where the original appeared in journals such as *Nature* or *Science*, the method of reproduction has led to some loss of quality in the text and in the half-tone plates. It is not easy to imagine what the readership for this book will be beyond that suggested above. Established workers in the field will already be aware of the contributions and will probably prefer up-to-date review volumes (and of course the current literature), and scientists outside the field may find the contents too specialised. This will inevitably restrict the appeal of the book.

D. F. COLE

Exterior Lighting for Industry and Security. By STANLEY L. LYONS. Pp. 321. £20.00. Applied Science Publishers: London. 1980.

This work should be judged in terms of its purpose as a sort of recipe book for designers of exterior lighting, with especial reference to security. It is unfortunately sloppy and inaccurate, especially where it strays from that area. For example, in the opening section on vision the version of the well-known cross-section of the eye as shown in Fig. 1 has a lenticular cornea and a flat lens.

The author may have intended to rephrase scientific and technical definitions in down-to-earth English. Unfortunately his loose style renders the notorious photometric units more confusing than ever. It is stated on page 33 that the lumen is derived from the candela, whereas

on page 34 the candela is 'accurately defined arbitrarily' in terms of the lumen.

These flaws must detract from the true worth of the book as a source of practical hints drawn from wide experience. There are details of various modern lamp types and their installation and maintenance as well as their applications in industrial areas. One has only to view a big urban area at night, especially from the air, to realise how important the subject has become, especially where there are security problems. The book meets a need for those who can pick through it critically.

D. A. PALMER

Human Factors in Lighting. By P. R. BOYCE. Pp. 421. £26.00. Applied Science Publishers: London. 1981.

This unique and well-written book deals with all aspects of lighting in the most up-to-date way. Light, by definition, is visible electromagnetic radiation and necessarily involves humans, whence the title. Almost every conceivable interaction between lighting and people is touched upon. Dr Boyce has crammed many themes into a single, well-balanced volume.

The subjects include interior and exterior lighting designs of all kinds—industrial, commercial, recreational domestic, professional, and clinical. The logic of the ordering is peculiar, under whimsical chapter headings, but the arrangement of such a vast array of material is bound to be somewhat arbitrary. The assumption is of a reader at graduate level in a scientific or technical subject. Thus this is a good reference book for lighting engineers and scientists, not a student textbook. There are ample references for the specialist who seeks even more details. There are no obvious misprints or misstatements of fact.

D. A. PALMER

All About Glaucoma. By WOLFGANG LEYDHECKER and RONALD PITTS CRICK. Pp. 76. £4.95. Faber and Faber: London. 1981.

This little book is written for the hypochondriac patient, to answer all his doubts and apprehensions. Indeed the authors also might be labelled as rather overcautious: in reckoning that, where there is glaucoma in the family, even young children should be tested every 5 years; that, after operation, 'patients can usually leave hospital after about a week'; that, of over-40s, 2% have glaucoma, when the percentage with true glaucoma (significant field loss) is nearer a tenth of this.

One could cavil too at odd linguistic assertions, like 'acute means sudden', 'acute=sudden' (actually acute means sharp-pointed), 'Glaukos means the Colour of the sea', and 'there is no special colour in a glaucomatous eye.' (Glaukos originally meant gleaming, then a light-grey colour, particularly of the eyes—as those of Athena—hence the 'glaucosis' applied by Hippocrates to blind eyes which looked murky, as they do in congestive glaucoma.)

It is rather chummy and personal in style ('we always recommend . . .'); and even if timolol is what they so often recommend, the authors do offer a fairly balanced picture,