

# Book Review: "Museum Lighting: A Guide for Curators and Conservators", by David Saunders



Review by Joyce Townsend

Museum Lighting: A Guide for Curators and Conservators  
David Saunders  
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Until the publication of *Museum Lighting* in 2020, the topics of lighting and environmental control in museums had long been covered by Garry Thomson's *The Museum Environment*, first published in 1978 and revised in 1986. Still frequently cited, and over the decades forming the foundation of the lighting and loan policies of the world's museums, this had not been bettered or updated as far as lighting was concerned—although the period from 1986 to 2020 could pretty well span a whole institutional career. Many more publications and conference proceedings over that period have been devoted to climate control in both museums and historic houses, in first- and third-world countries, from internal pollutants and their control, to studies of the degradation of the extremely numerous materials that can be found in collections worldwide. There were conferences on lighting in the 1980s and even the 1990s though far fewer since then, while most of the more recent research relevant to lighting is all too well dispersed throughout the conservation, scientific and vision science literature. There was a great need for a book to bring all the key information into one place, to assess it critically, re-present recent research for a predominantly non-scientist audience, point out its relevance and provide key facts on museum lighting that link into the issues of sustainability, financial stringency and inclusivity that dominate museum life today.

*Museum Lighting* steps into this knowledge gap with flair and elegant prose and is a worthy successor. It is necessarily much longer than Thomson's book (at around 3 times the pages devoted to lighting, with smaller font too). It's far more profusely illustrated with graphics, summarising thousands of words into concepts that matter for collections care of movable objects, and many excellent images showing lighting installations and examples of good practice at many sites in several countries. (It wisely stops short of illustrating bad practice, though the ghosts of terrible lighting installations will spring into the minds of readers anyway, as they finally realise which concept had been mis-applied.) Its bibliography is surprisingly short, given its scope, but is very comprehensive.

The text encompasses all types of collections in museums, historic houses and public buildings that house collections generally, which is a wider remit than Thomson covered, but stops short of discussing external lighting for buildings and sites. Saunders, like Thomson, spent a large portion of his career in the National Gallery, London, carrying out research into colour change and lighting, and is the obvious author for this topic. He has also worked within many international research projects concerned with lighting in historic buildings, at the British Museum, and has carried out research into a wider range of materials than could Thomson. He also teaches conservation professionals, and his explanations are very lucid.

Thomson stated in his preface that "... in the future the domains of Part I [concerning museums] and Part II [theoretical] will find themselves in separate books and be the better for it" and that "No one who reads this book will fail to end with a realisation of our general ignorance ...". Four decades on, there is a great deal of new knowledge to include. Saunders begins with the theory, which takes up 5 chapters: the physics of light; the psychophysics of colour classification and measurement; light sources used over past decades and new lighting technologies including LEDs; light and ultraviolet light as agents of deterioration for all the main classes of organic materials found in collections (and some inorganic materials too). He frequently relates new

knowledge to the content of *The Museum Environment* and describes former assumptions and practice, thus making a new contribution to the history of conservation as it pertains to display policy in the later 20th century.

Chapter 6 on Light for Studying and Viewing is particularly fascinating, especially the section on age and the viewer. It is here that the findings of a generation of vision scientists, active since Thomson wrote, are summarised so cleverly. (Thomson had rather little to go on in the 1970s, most research into vision having been done on limited numbers of students who were then all young.) The comparisons of visual performance in each decade of life up to extreme old age are quite sobering, and will likely surprise younger readers who have yet to experience any appreciable changes in their own colour discrimination and colour matching abilities. That those in the age range 55–75 need ever increasing light levels in order to appreciate close detail and dark, low-contrast objects is little discussed even today – except by the individuals who already experience it. This is a core audience age range for many museums in the west. Inclusivity, a goal of all museums, certainly should involve enabling all ages of viewers to see and experience cultural heritage properly, given that the very act of providing access involves using up some of the collection's finite lifetime. This chapter has much material that is likely to be new to the target audience defined in the book's title, or at least not findable without a lot of time and effort. It provides a valuable theoretical basis for lighting and loan policies, and institutional objectives on access for audiences of all ages. If the book had ended here, it would still be a well-targeted and important textbook for the heritage sector and its training programmes.

But it's much more: this is a book targeted at museum professionals in the widest sense of the term. It's possible that readers on the curatorial, interpretation and design side of museum practice will be tempted to start at chapter 7 on lighting in museum practice, and will want to proceed by dipping into the practical chapters that follow, up to chapter 10 on lighting policy, giving the short appendices of equations and data tables as wide a berth as the earlier theoretical chapters. The relevance of concepts such as object lifetime, micro-fading, accelerated ageing and their contribution to lighting and display strategies are introduced in the last chapter. Even these later chapters are fairly dense reads, although written with great clarity, beautifully illustrated and well structured so that the time-challenged can home in on their immediate need. I would urge anyone who wants to save the earlier theoretical chapters for a need-to-know basis to begin with chapter 6 rather than chapter 7, and to give it a lot of attention.

Museums exist to give their audiences meaningful access, and all museums make daily compromises between increased access and preservation that turn into precedent and then, unnoticed, become set in stone for very long periods. This book gives its readers the tools to make such choices into informed, evidence-based decisions that are the best compromises for whatever challenges they need to meet.

#### AUTHOR BYLINE

Joyce Townsend is IIC's director of publications, and senior conservation scientist at Tate, London, UK, where she specialises in technical studies of artists of the 19th and 20th centuries, deterioration of materials used by artists and microfading studies of mainly 20th-century works. Having also held an earlier position at Glasgow Museums involving preventive conservation and the use of dosimeters for museum lighting, Joyce has always been involved with colour

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