

# **THE LIGHTING ART: ITS PRACTICE AND POSSIBILITIES**

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The Lighting Art: Its Practice and Possibilities by M. Luckiesh

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**M. LUCKIESH**

**THE LIGHTING ART:  
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# THE LIGHTING ART

## ITS PRACTICE AND POSSIBILITIES

BY

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NATIONAL LAMP WORKS OF GENERAL ELECTRIC COMPANY.

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**Dedicated to**

THE RELATIVELY SMALL GROUP OF MEN WHOSE UNSELFISH EFFORTS IN  
LIGHTING ARE DIRECTED TOWARD THE CONSERVATION OF VISION  
—THAT MOST VALUABLE HUMAN RESOURCE—AND TOWARD  
THE INCREASE IN THE SAFETY, THE EFFICIENCY,  
AND THE PLEASURE OF MANKIND THROUGH  
THE APPLICATIONS OF LIGHT—THAT  
MOST POTENT NATURAL AGENCY.





## PREFACE

Mankind has enjoyed such an abundance of natural daylight throughout the entire existence and evolution of the human race that the present general indifference to the possibilities in lighting is easily accounted for. With the advent of artificial light-sources of greater adaptability, the activities of man changed considerably and as modern artificial illuminants are readily controllable there naturally has arisen a new science and art, namely, that of lighting. Such desirable features as adaptability and controllability often result in misuses of artificial light at the hands of those who are indifferent to or untrained in the proper use of light. This together with the greatly increased possibilities led to the development of specialists in lighting and, owing to his connection with many of the activities upon which the production of light depends, the engineer became the embryo from which the so-called illuminating engineer of today evolved.

As the efficiency and adaptability of artificial light-sources and the knowledge of the importance of proper lighting developed, the demands upon the engineer became more varied until today when the many aspects and possibilities are becoming more appreciated, the engineer must greatly extend his horizon and knowledge in order to qualify as a lighting specialist in the broadest sense. Notwithstanding the extensive possibilities in lighting at the present time and the myriad ramifications of the attendant problems into various sciences and arts, there is still a tendency on the part of many to look upon a lighting problem primarily from the engineering standpoint regardless of the nature of the problem.

Bearing witness to this fact are the books on lighting which consist largely of engineering data and considerations. A vast amount of lighting which has been well done, has been accomplished through applications of scientific and artistic principles not covered by engineering data. However, the latter are of

great value and there is no intention on my part to depreciate their value. These data have a definite place in lighting and they have aided to no small degree in the development of lighting practice. But in practising lighting from the engineer's viewpoint dominantly and persistently, the results are naturally those of illuminating engineering. However if lighting be practised from that broader viewpoint of the lighting specialist who has become familiar with the sciences and arts into which the problems lead, the results will be more worthy of the potentiality of light.

The purpose of this book is to discuss lighting broadly from an unusual viewpoint. Engineering and scientific data may be found elsewhere in great abundance so that the following chapters will be confined to discussions of many scientific and artistic aspects of lighting with the aim to indicate greater possibilities in the use of light. Believing that discussions of principles aid in cultivating creative ability I have given unusual prominence to this aspect of lighting.

It is a pleasant duty to acknowledge my gratitude to the management of the National Lamp Works of the General Electric Company for the facilities which I have enjoyed in the study of lighting and to Dr. E. P. Hyde, Director of Nela Research Laboratory, for placing these facilities at my disposal.

M. LUCKIESH.

October, 1917.