NOMENCLATURE AND DEFINITIONS APPLICABLE TO RADIOMETRIC AND PHOTOMETRIC CHARACTERISTICS OF MATTER

American Soc. for Testing & Mat'ls.

NOMENCLATURE AND DEFINITIONS APPLICABLE TO RADIOMETRIC AND PHOTOMETRIC CHARACTERISTICS OF MATTER

ASTM SPECIAL TECHNICAL PUBLICATION 475



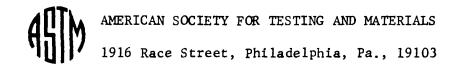
AMERICAN SOCIETY FOR TESTING AND MATERIALS 1916 Race Street, Philadelphia, Pa. 19103 NOMENCLATURE AND DEFINITIONS

APPLICABLE TO RADIOMETRIC

AND PHOTOMETRIC CHARACTERISTICS OF MATTER

ASTM SPECIAL TECHNICAL PUBLICATION 475

List price \$3.00



Contents

Radiometric and Photometric Characteristics of Matter	1
Emission	5
Reflection	6
Absorption	22
Transmission	24
Diffusion	28
Refraction	30

Foreword

This Special Technical Publication (STP) contains a brief discussion of basic considerations governing development of terminology as well as terms, symbols, and definitions for use wherever photometric or radiometric concepts applicable to the characteristics of materials are involved. No attempt was made, however, to correlate the material contained herein with that published in ASTM Standard E 284, Definitions of Terms Relating to Appearance of Materials, or in ASTM E 349, Definitions of Terms Relating to Space Simulation

This publication was developed for the Commission International de l'Eclairage (CIE) by Ake S:son Stenius, Swedish Forest Products Research Laboratory, Stockholm, Sweden. It incorporates the terminology proposed by Deane B. Judd in his paper, Terms, Definitions, and Symbols in Reflectometry, J. Opt. Soc. Am. Vol. 57, 1967, pp. 445-452, but has not been published by the CIE. The material is being published by ASTM because of its close relationship to the work of several ASTM Committees and because of the close relationship of ASTM to the CIE, ASTM being one the Constituent Organizations of the U.S. National Committee of the CIE. ASTM Committee E-12 on Appearance of Materials through its representatives to the U.S. National Committee has undertaken to keep the Society informed on technical matters arising in the CIE.

This publication supplements American National Standard Z 7.1 - 1967, Nomenclature and Definitions for Illuminating Engineering. The nomenclature, symbols, and definitions in this STP are consistent with those in Z 7.1 - 1967 as well as those in the forthcoming 3rd Edition of the International Lighting Vocabulary sponsored jointly by CIE and the International Electrotechnical Commension. Because of the international importance of the nomenclature and definitions contained in this Special Technical Publication, and its relation to Society activities, comments will be appreciated.