U. S. DEPARTMENT OF COMMERCE

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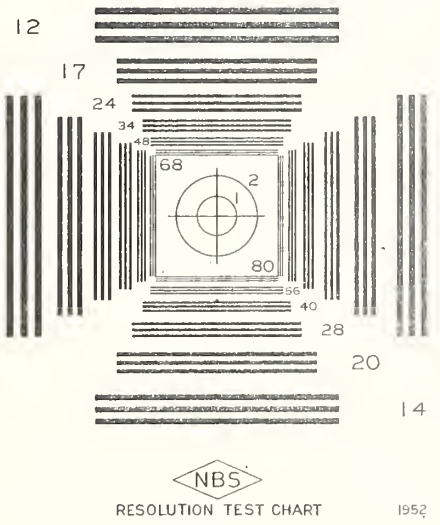
NATIONAL BUREAU OF STANDARDS
Washington 25, D.C.

Letter
Circular
LC1029

RESOLVING-POWER CHART

This Letter Circular has been prepared to answer the many requests the Bureau receives for information on photographic testing charts. Charts for determining the resolving power of photographic lenses and instructions for their use are given in National Bureau of Standards Circular 533, Method for Determining the Resolving Power of Photographic Lenses.

This publication provides the photographer with two sets of charts by which the resolving power of a photographic lens may be numerically measured with respect to a definite scale of values. A detailed description is given of the procedure and technique to be followed in order that comparable values may be obtained by different observers. The test provides an objective method of testing a photographic lens. The six charts of one set are printed in black ink on a white background to form a high-contrast chart. The six charts of the other set are printed with gray ink on a gray background to form a low-contrast chart. Additional uses of these charts are also described, including the testing of goggle lenses for definition and prismatic power and the testing of telescopes and binoculars for definition.



Figure, left, is a reproduction of high-contrast resolving-power chart from NBS Circular 533. The ratio of the line spacings in adjacent groups is equal to $\sqrt{2}$; however, the ratio of the line spacings of corresponding opposite patterns is $\sqrt[4]{2}$. Consequently, when this chart is photographed at the standard distance of 26f, the values of resolving power that can be measured range from 12 to 80 lines per millimeter in a geometric series proceeding by $\sqrt[4]{2}$.

NBS Circular 533, Method for Determining the Resolving Power of Photographic Lenses, by Washer and Gardner, may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for $1.75 (stamps not accepted).

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