

Void

see 7 Apr. 73

*FAIRCHILD PRECISION CAMERA
CALIBRATION LABORATORY*

CALIBRATION REPORT

T-11 CAMERA SERIAL NO. 51-095
INNER CONE SERIAL NO. SF211
LENS SERIAL NO. SF211

CALIBRATION CERTIFICATE

Submitted By

FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

JAMAICA I, N. Y.

Camera Type T-11 Camera 51-095

Cone No. SP 211

Lens SP 211

a) Make and Type Bausch and Lomb Metrogon

b) Nominal Focal Length 6 inch

c) Maximum Aperture f/6.3

This Certificate applies to the above subject precision camera with lens as stated herein. It was tested at maximum aperture. All measurements were made with parallel light incident on the lens. The effective wave length was 575 millimicrons.

I. FOCAL LENGTH

Flange Focal Distance	Equivalent Focal Length	Calibrated Focal Length
MM 132.74	MM 153.02	MM 153.00

The probable errors of these determinations of focal length do not exceed ± 0.10 mm.

II. DISTORTION

Distortion Referred to the Calibrated Focal Length

7.5°	15°	22.5°	30°	35°	40°	45°
0.00	0.01	0.04	0.10	0.12	0.08	-0.12

The values of the distortion are measured in millimeters and indicate the displacement of the image from its distortion-free position. A positive value indicates a displacement from the center of the plate. The probable error is approximately ± 0.02 mm.

III. RESOLVING POWER (Aerographic Film)

	0°	7.5°	15°	22.5°	30°	35°	40°	45°
Tangential	25	27	26	21	20	18	18	13
Radial	22	22	22	20	19	16	17	14

The values of the resolving power are given at specified intervals from the center of the field and are obtained by photographing suitable test charts comprised of patterns of parallel lines. The series of patterns of the test chart are imaged on the negative with lines per millimeter spaced as follows: 10, 11, 13, 14, 16, 18, 20, 22, 25, 28, 31, 36, 40, 45, 50, 57, 63, 71, 80.

The row marked "Tangential" gives the number of lines per millimeter in the image on the negative of the finest pattern of the test chart that is distinctly resolved into separate lines when the lines lie perpendicular to the radius drawn from the center of the field. The row marked "Radial" gives similar values for the pattern of test lines lying parallel to the radius.

IV. CALIBRATION

The lines joining opposite pairs of collimation index markers intersect at an angle of $90^\circ \pm 1$ minute of arc, and their intersection indicates the location of the **point of Symmetry** with a probable error not exceeding **0.05 mm.**

V. COLLIMATION MARKER SEPARATION

A - B **237.20mm**
C - D **235.39mm**

Markers A and B lie in the line of flight.
The calibration of this camera was performed at a temperature of approximately 72° Fahrenheit.

VI. CALIBRATED FOCAL LENGTH MARKER SEPARATION

These marker separations are set at a distance equal to the calibrated focal length ± 0.05 mm.

FAIRCHILD CAMERA AND INSTRUMENT CORPORATION


Precision Camera Calibration Laboratory

Jamaica, New York

51-095

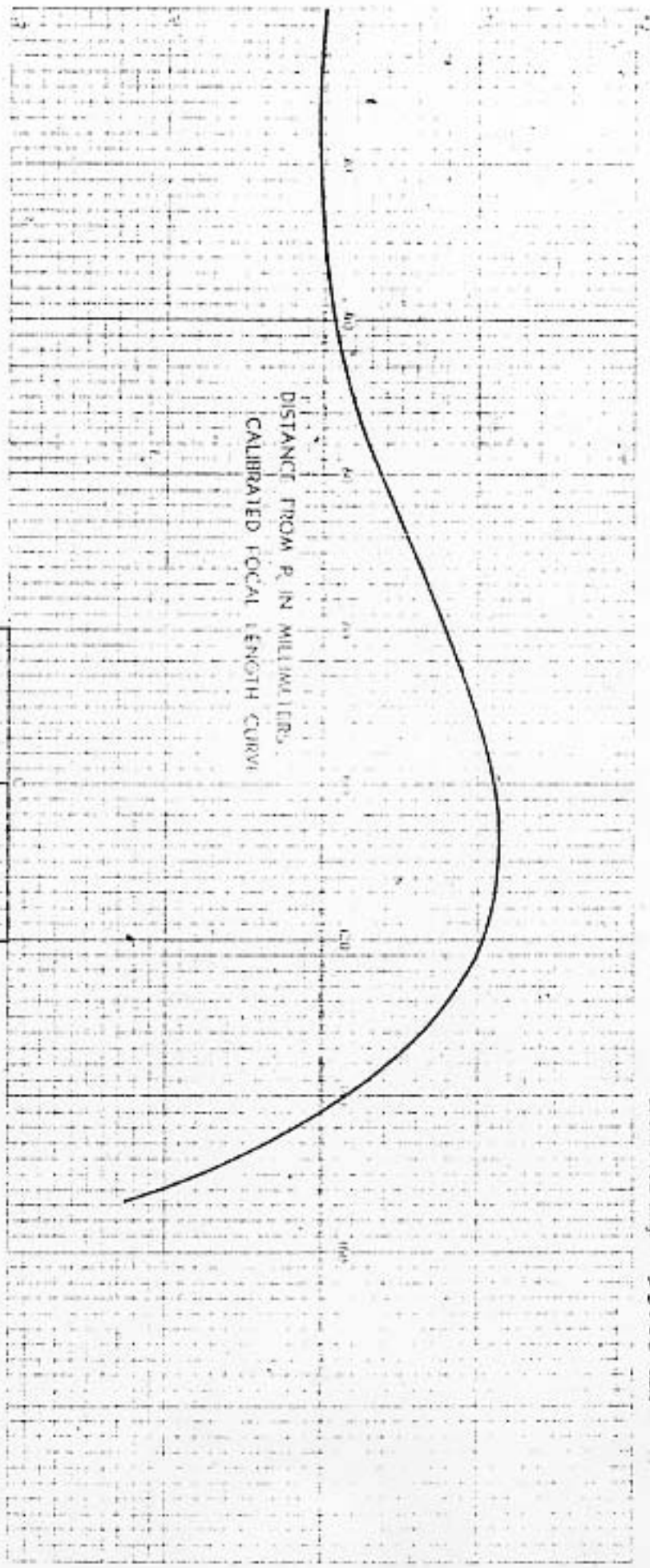
Fairchild Camera and Instrument Corp.
Jamaica, New York

Line SP 211 Date 12.18.51

Camera 51-095

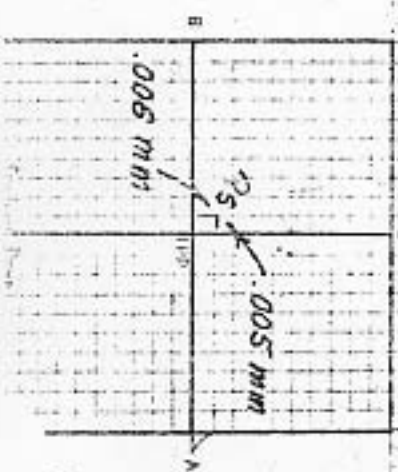
Calibrated Focal Length 153.00 MM

DISTORTION IN MILLIMETERS



DISTANCE BETWEEN PRINCIPALS
A-----B= 237.20 MM.
C-----D= 235.39 MM.

$X_{fs} = .005$ mm
 $Y_{fs} = .006$ mm



RESOLUTION AEROSPACE FILM

Angle of View	Line Pairs	Line Pairs	Detail
0	25	22	22
7.5	27	22	22
15	26	22	22
22.5	21	20	20
30	20	19	19
35	18	16	16
40	18	17	17
45	17	17	17

Signed *A. J. Morton*
Precision Camera Calibration Laboratory