

TEST OF AERIAL SURVEY CAMERA
TO
SPECIFICATIONS FOR AIR SURVEY PHOTOGRAPHY

for

Foto Flight Ltd
757A Aviation Blvd N E
Calgary Alberta T2E 7G1

Author J. PlummerApproved *S. Power*
for Director

Manufacturer: Wild
Camera Type: RC 8
Lens Type: Universal Aviogon
Nominal Focal Length: 153 mm
Optical Unit No.: UAg 337

Lens No.: UAg 337
Maximum Aperture: F/5.6
Calibration Aperture: F/5.6
Date of Calibration: 1 June 1982
Calibrated Focal Length: 152.621 mm
Photographic Emulsion: Panchromatic

FILTER (Section 1.2.3.7):

Number: 2374 Type: 500nm AV 1.4X
Maximum deviation: 1 Second
Maximum Change of Deviation: 1 Second
Maximum Departure from Parallelism: 2 Seconds

"A"

IMAGE ILLUMINATION (Section 1.2.3.6):

Minimum 35 % to 140 mm off axis.

212.007

CAMERA SHUTTER (Section 1.2.2.7):

Operation: Satisfactory
Speeds

Mark	100	200	300	400	500	600	700
Total Time Seconds	$\frac{1}{120}$	$\frac{1}{175}$	$\frac{1}{275}$	$\frac{1}{360}$	$\frac{1}{450}$	$\frac{1}{525}$	$\frac{1}{620}$
Effective Time Seconds	$\frac{1}{135}$	$\frac{1}{215}$	$\frac{1}{330}$	$\frac{1}{440}$	$\frac{1}{555}$	$\frac{1}{650}$	$\frac{1}{760}$

LM LOCATION SURFACE (Section 1.2.3.1):

Defined by: Fiducial Frame Deviation from flatness: $\pm .002$ mm.

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FOCUS (Section 1.2.2.11):

Focus Setting: Satisfactory

FOCAL LENGTH (Section 1.2.3.2):

Calibrated focal length: 152.621 mm.

Equivalent focal length: 152.65 mm.

RADIAL MEASURED DISTORTION (Section 1.2.3.3):

Unit-0.001 mm

Angle Degrees	Distortion at Semi-Diagonals				Average Distortion	Reference Distortion
	1	2	3	4		
5.63	4	2	3	1	2	5
11.25	8	7	5	5	6	8
16.88	6	9	11	7	8	8
22.50	3	8	9	6	6	6
28.13	-2	5	6	0	2	2
33.75	-9	-3	1	-7	-4	-7
39.38	-14	-4	0	-14	-8	-7
42.19	-15	2	5	-11	-5	-3

Maximum departure of average from reference .003 mm to 42.2 Deg.

ASYMMETRY ABOUT PRINCIPAL POINT OF AUTOCOLLIMATION (Section 1.2.3.3):

Maximum asymmetry .01 mm to 42.2 Deg.

ASYMMETRY ABOUT PRINCIPAL POINT OF BEST SYMMETRY (Section 1.2.3.3)

Maximum asymmetry .002 mm to 42.2 Deg.

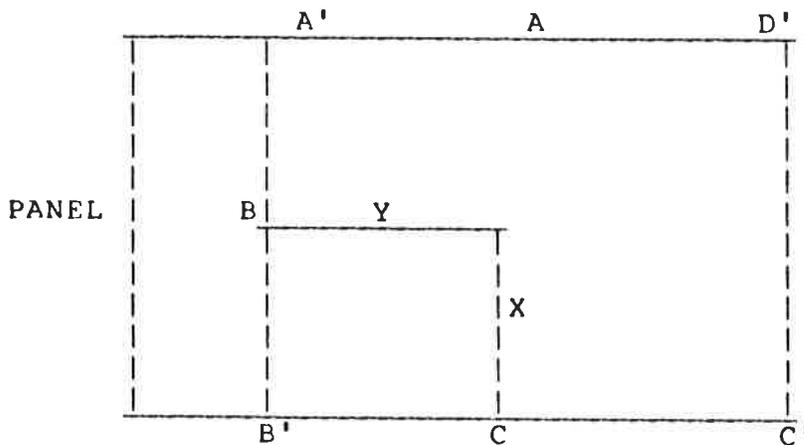
TANGENTIAL MEASURED DISTORTION (Section 1.2.3.3):

Maximum tangential distortion .005 mm to 42.2 Deg.

FIDUCIAL MARKS (Sections 1.2.2.6, 1.2.3.4):

Semi-diagonal 2

Semi-diagonal 1



---> Flight Direction

Semi-diagonal 3

Semi-diagonal 4

Angle between A'C'- B'D' is $90 \text{ deg} + 7 \text{ seconds}$. The fiducial centre is within .014 mm of the point of autocollimation. Distance between the fiducial marks, and also between the marks and the principal point of autocollimation, P, are as follows:

A' - B'	212.001 mm	A' - P	149.900 mm
B' - C'	212.007 mm	B' - P	149.912 mm
C' - D'	212.004 mm	C' - P	149.923 mm
D' - A'	212.014 mm	D' - P	149.910 mm

Principal point of autocollimation (X = -0.013, Y = 0.006) mm.

Principal point of best symmetry (X = -0.016, Y = -0.007) mm.

SUMMARY

The measured properties of this optical unit meet the requirements of Category A of the Specification.