

TEST OF AIR SURVEY CAMERA
TO
SPECIFICATION FOR AIR SURVEY PHOTOGRAPHY
for

North West Survey Corporation (Yukon) Ltd.
Deville Building
17203 - 103 Avenue
Edmonton, Alberta

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for Director

Manufacturer: Wild
Camera Type: RC-10
Lens Type: Super Aviogon II
Nominal Focal Length: 88 mm
Optical Unit No: SAG II 2097

Lens No: SAG II 2097
Maximum Aperture: f/5.6
Calibration Aperture: f/5.6
Date of Calibration: 9 December 1980
Calibrated Focal Length: 88.189 mm
Photographic Emulsion: Panchromatic

FILTER (Section 1.2.3.7):

Number: 4314 Type: 525 nm AV 3X
Maximum deviation: 1 second
Maximum change of deviation: 1 second
Maximum departure from parallelism: 2 seconds

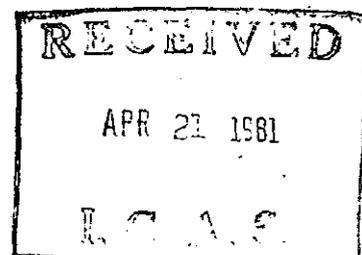
IMAGE ILLUMINATION (Section 1.2.3.6):

Minimum 46% to 125mm off axis.

CAMERA SHUTTER (Section 1.2.2.7):

Operation: Satisfactory
Speeds:

'A' 212.004



Mark	200	400	600	800	1000		
Total Time Seconds	$\frac{1}{145}$	$\frac{1}{295}$	$\frac{1}{445}$	$\frac{1}{590}$	$\frac{1}{750}$		
Effective Time Seconds	$\frac{1}{195}$	$\frac{1}{390}$	$\frac{1}{590}$	$\frac{1}{790}$	$\frac{1}{980}$		

FILM LOCATION SURFACE (Section 1.2.3.1):

Defined by: Fiducial Frame Deviation from flatness: ±0.001 mm.

FOCUS (Section 1.2.2.11):

Focus setting: Satisfactory

FOCAL LENGTH (Section 1.2.3.2):

Calibrated focal length: 88.189 mm.
 Equivalent focal length: 88.17 mm.

RADIAN 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	-2	-4	-1	-1	-2	-1
11.25	-5	-6	-3	-4	-4	-3
16.88	-10	-8	-3	-7	-7	-5
22.50	-13	-12	-7	-10	-10	-8
28.13	-16	-13	-7	-13	-12	-9
33.75	-15	-11	-6	-9	-10	-9
39.38	-14	-6	-4	-6	-7	-8
42.19	-13	-3	11	-3	-2	-5
45.00	-8	3	16	3	3	0
50.63	3	9	23	12	12	12
56.23	-38	-15	6	-7	-14	-5

Maximum departure of average from reference 0.003 mm to 42.2 DEG;
 0.003 mm from 42.2 to 53.5 DEG; 0.009 mm beyond 53.5 DEG

ASYMMETRY ABOUT PRINCIPAL POINT OF AUTOCOLLIMATION (Section 1.2.3.3):

Maximum asymmetry 0.012 mm to 42.2 DEG;
 0.012 mm from 42.2 to 53.5 DEG; 0.024 mm beyond 53.5 DEG

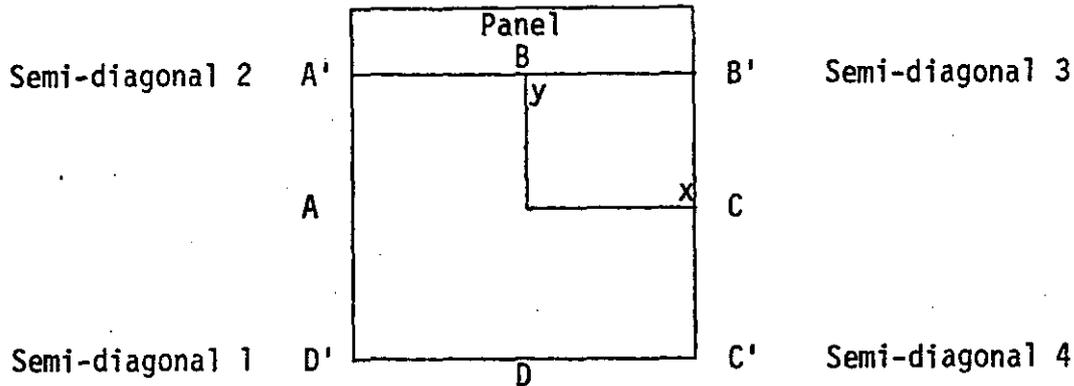
ASYMMETRY ABOUT PRINCIPAL POINT OF BEST SYMMETRY (Section 1.2.3.3):

Maximum asymmetry 0.004 mm to 42.2 DEG;
 0.007 mm from 42.2 to 53.5 DEG; 0.005 mm beyond 53.5 DEG

TANGENTIAL MEASURED DISTORTION (Section 1.2.3.3):

Maximum tangential distortion 0.004 mm to 42.2 DEG;
 0.009 mm from 42.2 to 53.5 DEG; 0.009 mm beyond 53.5 DEG

FIDUCIAL MARKS (Sections 1.2.2.6, 1.2.3.4):



Angle between A C - B D is $90^\circ \pm 6$ seconds. The fiducial centre is within 0.008 mm of the point of autocollimation. Distances between the fiducial marks, and also between the marks and the principal point of autocollimation, P, are as follows:

A' - B'	212.005 mm	A' - P	149.914 mm
B' - C'	212.001 mm	B' - P	149.898 mm
C' - D'	212.009 mm	C' - P	149.909 mm
D' - A'	212.002 mm	D' - P	149.917 mm
	<u>212.004</u>		

The positions of the principal point of autocollimation and of the principal point of best symmetry are given in a rectangular coordinate system as shown, with the fiducial centre as origin.

Principal point of autocollimation (x = 0.008, y = 0.003) mm.
 Principal point of best symmetry (x = -0.000, y = -0.004) mm.

SUMMARY:

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