Determination of the resolution (complete system: camera, lens, film/sensor)

Camera values	
Image values	
Calculated values	

Camera	**Minox I (Riga Minox)**		
Lens	**Minostigmat**		
Focal length	15	mm	*lens*
KB focal length	47	mm	
Crop factor	3,16		
Film	**ADOX CMS 20 (exposed ISO 12)**		
Negative/sensor width	11	mm	*Minox film negative*
Negative/sensor height	8	mm	*Minox film negative*
Negativesensor size	88	mm²	*Minox film negative*
Digital image width	9504	Pixel	*(from image file)*
Digital image height	6336	Pixel	*(from image file)*
Pixel size on negative/sensor	0,00129717	mm	*(Negative or sensor width / Digitized negative width)*
Image file	raw-Film-2-13-plan.jpg		
Shooting technique	flash, bulb, distance dial 1m		
Object distance	980	mm	measured with a ruler
Object reference width	400	mm	*(object width of the test pattern)*
Digitized negative width	8480	Pixel	*(negative width in image file)*
Image reference width	4817	Pixel	*(measured in image file)*
Magnification object-negative	64,02		*(Object reference width / Image reference width*
			** Digitized negative width / Negative/sensor width)*

Siemens star	48	Rays		*(https://www.ags.tu-bs.de/?id=produktionen:medientechnik:siemensstern)*
Limiting diameter (scan)	58	Pixel		*(measured in scan)*
Limiting diameter (negative)	0,08	mm		*(Limiting diameter scan * pixel size)*
Limiting diameter (object)	4,82	mm		*(Limiting diameter negative * magnification)*
Circumference on negative	0,24	mm		*(Limiting diameter negative* pi)*
Line pairs per mm	**203**	LP/mm		*(number of rays / circumference on negative)*
Lines / picture height	4468	LPH		*(Negative height *line pairs *2)*
Photo print up to	447		325	*Photo print max. size in mm x mm (at 5 LP/mm eye resolution limit)*

USAF 1951	top left		top right		bottom right		bottom left	
Group	0		0		0		0	
Element	6		6		3		6	
Resolution’	1,782	LP/mm	1,782	LP/mm	1,260	LP/mm	1,782	LP/mm
Resolution	**114**	LP/mm	**114**	LP/mm	**81**	LP/mm	**114**	LP/mm

(Resolution': object size)
*(Resolution = magnification * resolution')*