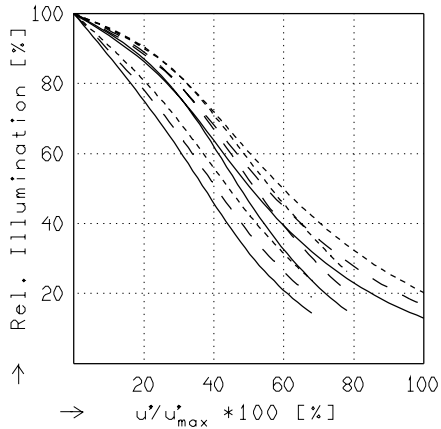
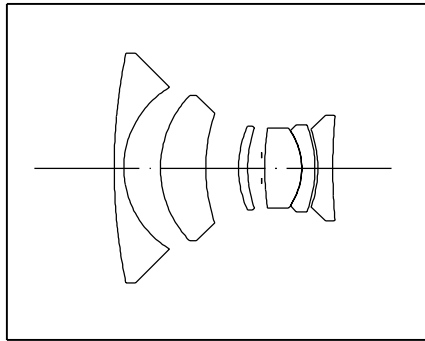


**SUPER-SYMMAR XL 5.6/150 ASPH.**

$f' = 148.1 \text{ mm}$      $\beta_p = 1.027$   
 $s_F = -107.6 \text{ mm}$      $s_{EP} = 36.6 \text{ mm}$   
 $s_{F'} = 135.9 \text{ mm}$      $s_{A'P} = -16.1 \text{ mm}$   
 $HH' = 24.8 \text{ mm}$      $\Sigma d = 77.4 \text{ mm}$

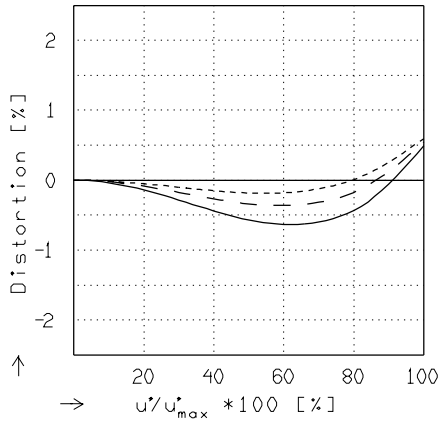


**RELATIVE ILLUMINATION**

The relative illumination is shown for the given focal distances or magnifications.

$f / 5.6$        $f / 8.0$        $f / 22.0$

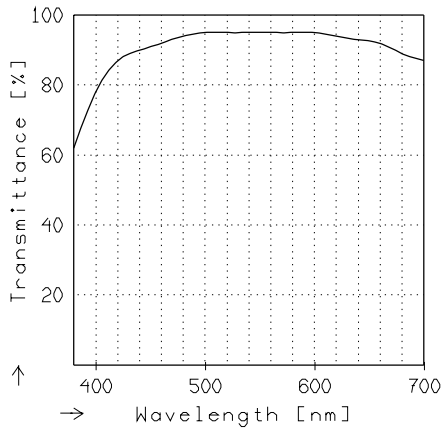
—  $\beta' = 0.0000$      $u'_{max} = 193.9$      $00' = \infty$   
 - -  $\beta' = -0.1000$      $u'_{max} = 194.0$      $00' = 1816.$   
 - · -  $\beta' = -0.2000$      $u'_{max} = 194.2$      $00' = 1091.$



**DISTORTION**

Distortion is shown for the given focal distances or magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

—  $\beta' = 0.0000$      $u'_{max} = 193.9$      $00' = \infty$   
 - -  $\beta' = -0.1000$      $u'_{max} = 194.0$      $00' = 1816.$   
 - · -  $\beta' = -0.2000$      $u'_{max} = 194.2$      $00' = 1091.$



**TRANSMITTANCE**

Relative spectral transmittance is shown with reference to wavelength.

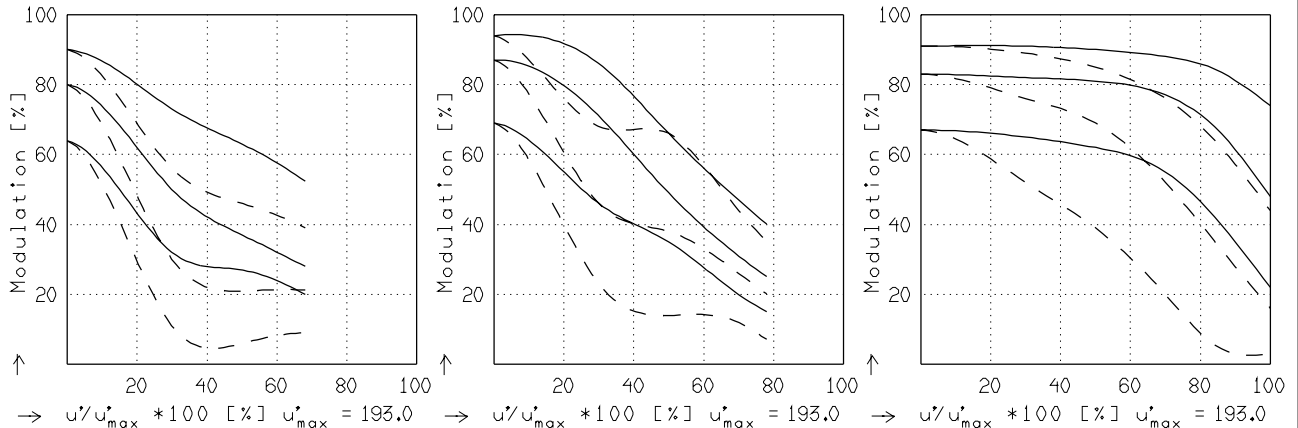
Jos. Schneider Optische Werke GmbH  
 Ringstrasse 132 55543 Bad Kreuznach Germany

**SUPER-SYMMAR XL 5.6/150 ASPH.**

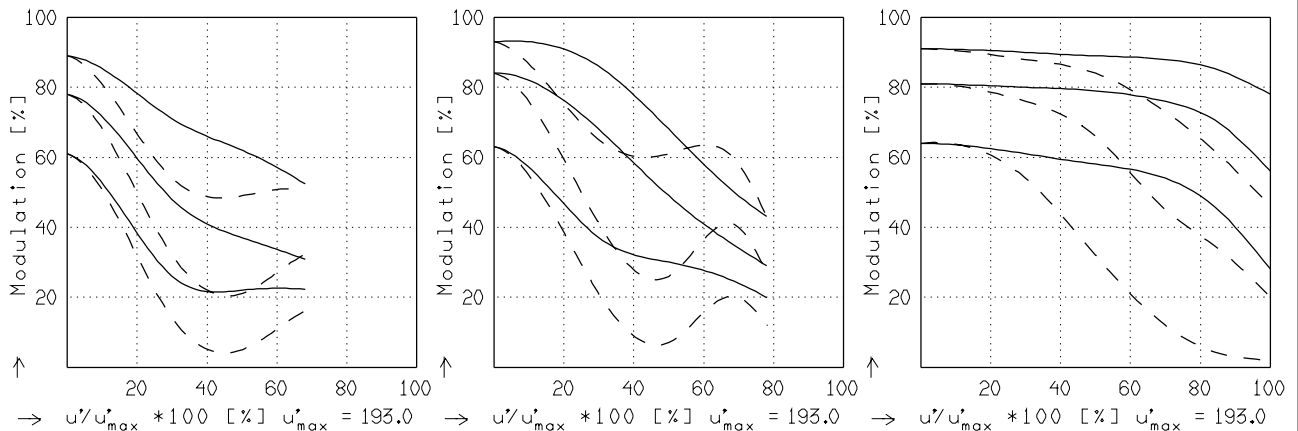
**MODULATION** with reference to the relative image height

Wavelength $\lambda$	[nm]	546	644	588	480	436	405
Spectral weighting	[%]	24.6	18.6	22.1	12.4	15.2	7.1
Spatial frequency R	[1/mm]	5	10	20			
Format	[mm X mm]	180.0	X240.0				
Diagonal $2u'$	[mm]	386.0					

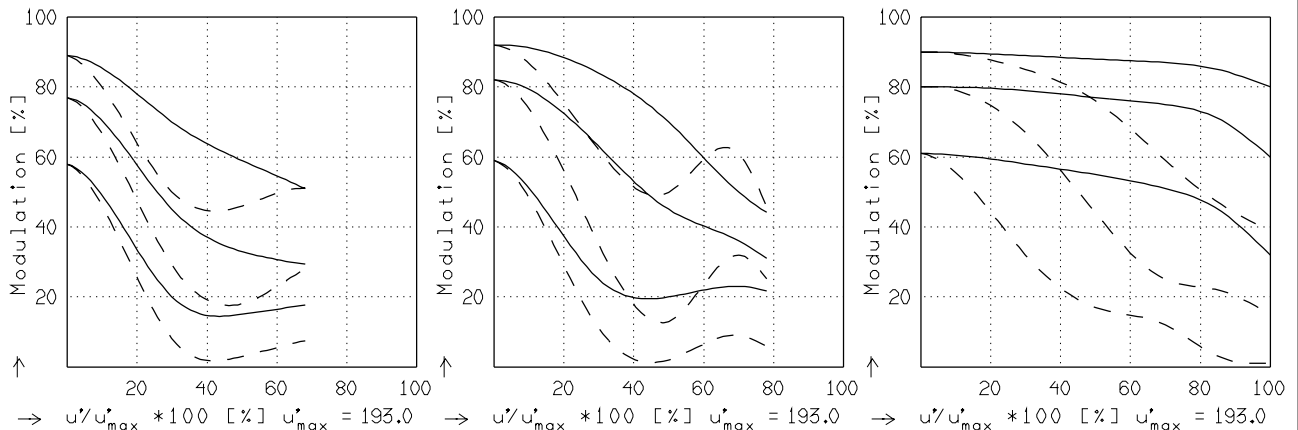
radial —  
tangential - -



$f' = 148.1$   $f/5.6$   $1/\beta' = \infty$   $00' = \infty$      $f' = 148.1$   $f/8.0$   $1/\beta' = \infty$   $00' = \infty$      $f' = 148.1$   $f/22.0$   $1/\beta' = \infty$   $00' = \infty$



$f' = 148.1$   $f/5.6$   $1/\beta' = -10.00$   $00' = 1816$ .     $f' = 148.1$   $f/8.0$   $1/\beta' = -10.00$   $00' = 1816$ .     $f' = 148.1$   $f/22.0$   $1/\beta' = -10.00$   $00' = 1816$ .

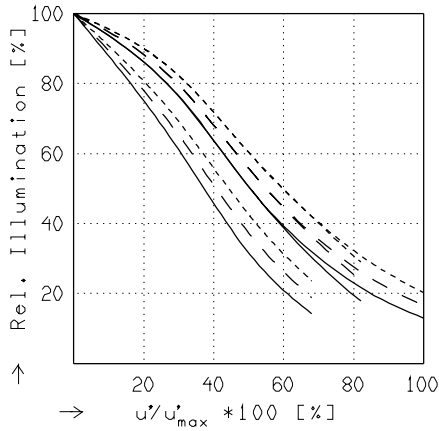
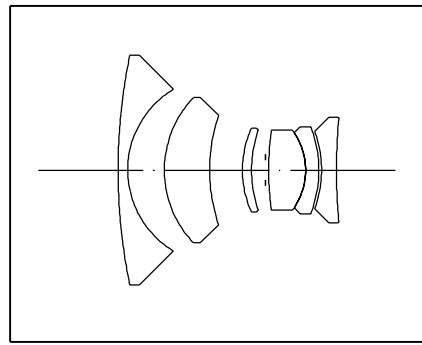


$f' = 148.1$   $f/5.6$   $1/\beta' = -5.00$   $00' = 1091$ .     $f' = 148.1$   $f/8.0$   $1/\beta' = -5.00$   $00' = 1091$ .     $f' = 148.1$   $f/22.0$   $1/\beta' = -5.00$   $00' = 1091$ .

Focusing :  $MTF_{max}$  at  $f/5.6$  ,  $R = 20$  1/mm,  $u'/u'_{max} = 0$

# SUPER-SYMMAR 5.6/150 XL ASHERIC

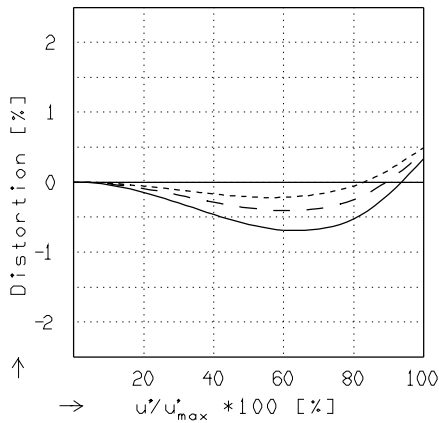
$f' = 147.7 \text{ mm}$      $\beta_p = 1.028$   
 $s_F = -107.0 \text{ mm}$      $s_{EP} = 36.6 \text{ mm}$   
 $s_{F'} = 135.7 \text{ mm}$      $s_{A'P} = -16.1 \text{ mm}$   
 $HH' = 24.8 \text{ mm}$      $\Sigma d = 77.4 \text{ mm}$



## RELATIVE ILLUMINATION

The relative illumination is shown for the given focal distances or magnifications.

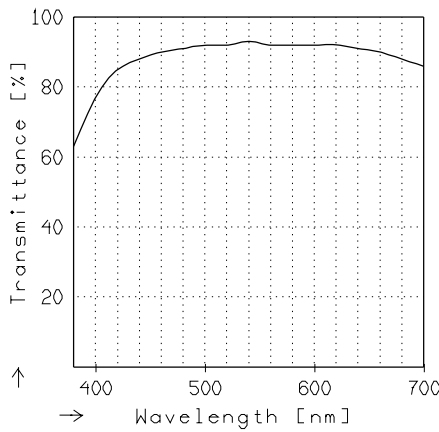
	$f / 5.6$	$f / 11.0$	$f / 22.0$
—	$\beta' = 0.0000$	$u_{\max}' = 193.7$	$00' = \infty$
- -	$\beta' = -0.1000$	$u_{\max}' = 193.8$	$00' = 1811.$
- · -	$\beta' = -0.2000$	$u_{\max}' = 194.0$	$00' = 1088.$



## DISTORTION

Distortion is shown for the given focal distances or magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

—	$\beta' = 0.0000$	$u_{\max}' = 194.0$	$00' = \infty$
- -	$\beta' = -0.1000$	$u_{\max}' = 194.0$	$00' = 1811.$
- · -	$\beta' = -0.2000$	$u_{\max}' = 194.0$	$00' = 1088.$



## TRANSMITTANCE

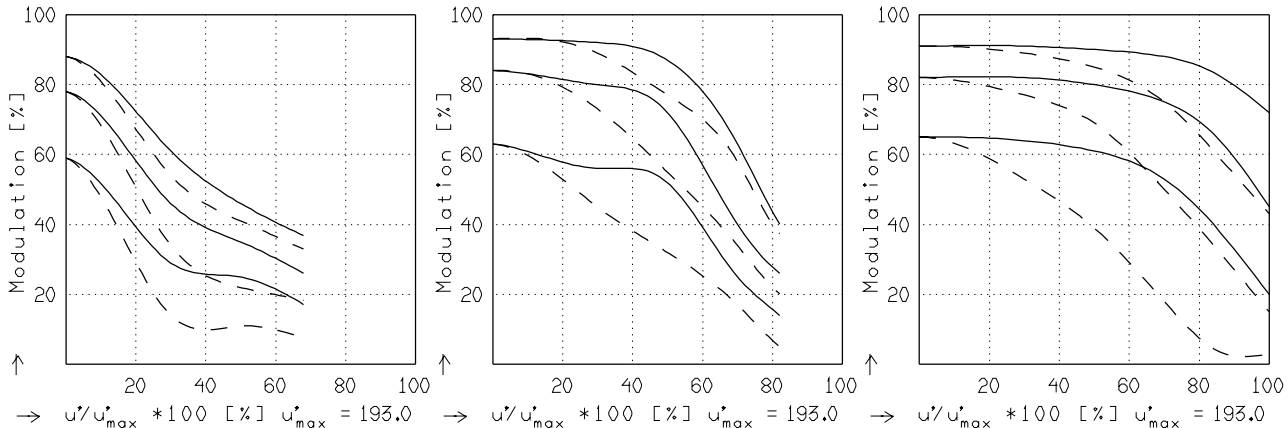
Relative spectral transmittance is shown with reference to wavelength.

SUPER-SYMMAR 5.6/150 XL ASHERIC

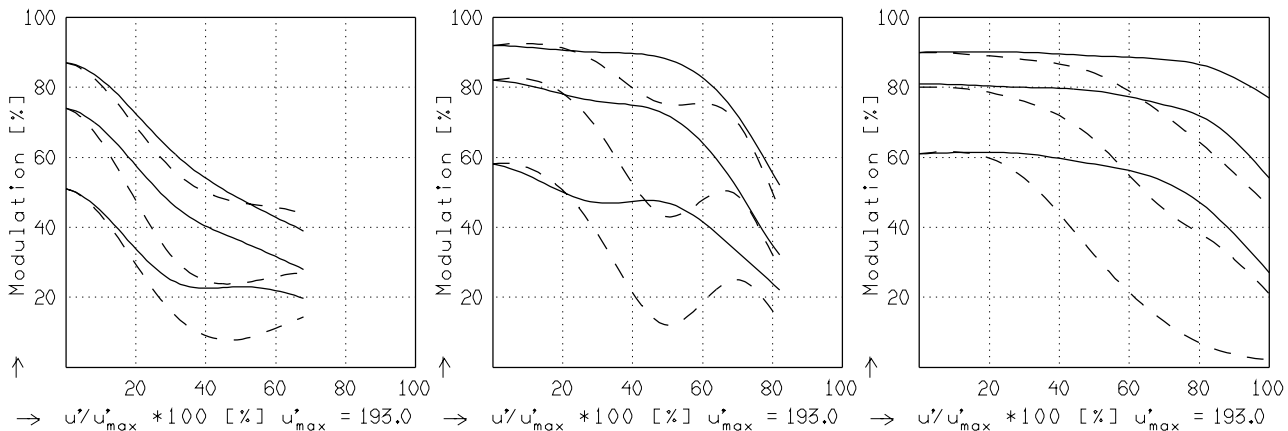
MODULATION with reference to the relative image height

Wavelength $\lambda$	[nm]	546	644	588	480	436	405
Spectral weighting	[%]	24.6	18.6	22.1	12.4	15.2	7.1
Spatial frequency R	[1/mm]	5	10	20			
Format	[mm X mm]	180.0	X240.0				
Diagonal $2u'$	[mm]	386.0					

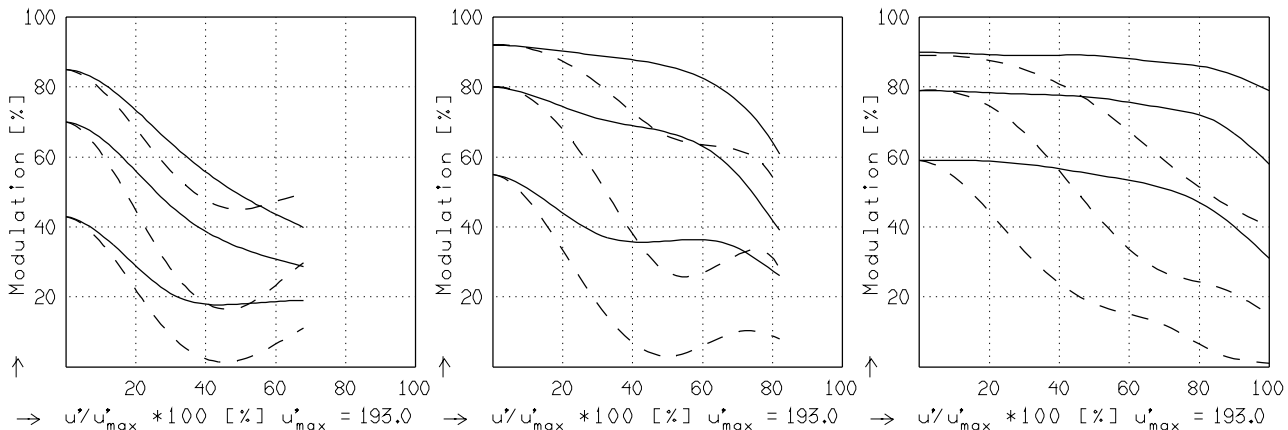
radial —  
tangential - -



$f' = 147.7$   $f/5.6$   $1/B' = \infty$   $00' = \infty$      $f' = 147.7$   $f/11.0$   $1/B' = \infty$   $00' = \infty$      $f' = 147.7$   $f/22.0$   $1/B' = \infty$   $00' = \infty$



$f' = 147.7$   $f/5.6$   $1/B' = -10.00$   $00' = 1811$ .     $f' = 147.7$   $f/11.0$   $1/B' = -10.00$   $00' = 1811$ .     $f' = 147.7$   $f/22.0$   $1/B' = -10.00$   $00' = 1811$ .



$f' = 147.7$   $f/5.6$   $1/B' = -5.00$   $00' = 1088$ .     $f' = 147.7$   $f/11.0$   $1/B' = -5.00$   $00' = 1088$ .     $f' = 147.7$   $f/22.0$   $1/B' = -5.00$   $00' = 1088$ .

Focusing :  $MTF_{max}$  at  $f/5.6$  ,  $R = 20$  1/mm,  $u'/u'_{max} = 0$

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