

# MODERN PHOTOGRAPHY

## How to Test Your Lenses



# 35mm Camera Lenses

## RESOLUTION

Fisheye (to 16.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	36-39 40-44 45-50 51+	Accept. Good V. Good Excellent	20-24 25-28 29-31 32+
Next	36-39 40-44 45-50 51+	Accept. Good V. Good Excellent	20-24 25-28 29-31 32+
Middle	40-44 45-50 51-55 56+	Accept. Good V. Good Excellent	22-25 26-29 30-35 36+
f 11-f 22	40-44 45-50 51-55 56+	Accept. Good V. Good Excellent	24-28 29-31 32-35 36+

## CONTRAST

Fisheye (to 16.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	20-25 26-37 38+	Low Medium High	12-16 17-24 25+
Next	24-28 29-41 42+	Low Medium High	15-21 22-29 30+
Middle	28-32 33-45 46+	Low Medium High	18-23 24-33 34+
f 11-f 22	26-30 31-37 38+	Low Medium High	16-22 23-31 32+

## RESOLUTION

Wide-Angle (25mm to 39.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	36-44 45-49 50-55 56+	Accept. Good V. Good Excellent	25-28 29-31 32-39 40+
Next	36-44 45-49 50-55 56+	Accept. Good V. Good Excellent	25-28 29-31 32-39 40+
Middle	40-44 45-49 50-62 63+	Accept. Good V. Good Excellent	28-31 32-39 40-44 45+
f 11-f 22	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	32-35 36-39 40-44 45+

## CONTRAST

Wide-Angle (25 to 39.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	26-32 33-41 42+	Low Medium High	18-22 23-31 32+
Next	29-35 36-47 48+	Low Medium High	18-24 25-35 36+
Middle	35-39 40-55 56+	Low Medium High	22-31 32-43 44+
f 11-f 22	32-37 38-46 47+	Low Medium High	22-30 31-39 40+

## RESOLUTION

Ultra-Wide-Angle (17 to 24.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	36-39 40-44 45-50 51+	Accept. Good V. Good Excellent	20-24 25-28 29-35 36+
Next	36-44 45-49 50-55 56+	Accept. Good V. Good Excellent	20-24 25-28 29-35 36+
Middle	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	28-31 32-36 37-39 40+
f 11-f 22	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	28-31 32-36 37-39 40+

## CONTRAST

Ultra-Wide-Angle (17 to 24.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	25-29 30-39 40+	Low Medium High	16-20 21-29 30+
Next	28-33 34-44 45+	Low Medium High	17-23 24-33 34+
Middle	32-36 37-49 50+	Low Medium High	20-27 28-39 40+
f 11-f 22	28-33 34-41 42+	Low Medium High	22-29 30-37 38+

## RESOLUTION

Ultra-Fast Wide-Angle (to 39.5mm, faster than f/2.1)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	36-39 40-44 45-49 50+	Accept. Good V. Good Excellent	22-25 26-29 30-33 34+
Next	36-39 40-44 45-49 50+	Accept. Good V. Good Excellent	22-25 26-29 30-33 34+
Middle	40-49 50-55 56-62 63+	Accept. Good V. Good Excellent	27-31 32-35 36-39 40+
f 11-f 22	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+

## CONTRAST

Ultra-Fast Wide-Angle (to 39.5mm, faster than f/2.1)			
Aperture	Center (%)		Corner (%)
Maximum	25-31 32-41 42+	Low Medium High	14-18 19-29 30+
Next	28-33 34-46 47+	Low Medium High	18-23 24-34 35+
Middle	32-37 38-55 56+	Low Medium High	22-30 31-42 43+
f 11-f 22	32-36 37-44 45+	Low Medium High	22-31 32-40 41+

## RESOLUTION

Normal (40 to 60.5mm)			
Aperture	Center Lines mm		Corner Lines mm
Maximum	40-45 46-50 51-55 56 ·	Accept. Good V. Good Excellent	25-29 30-32 33-35 36 ·
Next	40-49 50-56 57-62 63 ·	Accept. Good V. Good Excellent	30-34 35-39 40-44 45 ·
Middle	45-55 56-62 63-70 71 ·	Accept. Good V. Good Excellent	36-40 41-49 50-55 56 ·
f 11-f 22	45-50 51-55 56-62 63 ·	Accept. Good V. Good Excellent	36-40 41-44 45-49 50 ·

## CONTRAST

Normal (40 to 60.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	26-34 35-44 45 ·	Low Medium High	20-24 25-33 34 ·
Next	30-39 40-51 52 ·	Low Medium High	20-25 26-36 37 ·
Middle	38-44 45-57 58 ·	Low Medium High	24-33 34-44 45 ·
f 11-f 22	34-39 40-49 50 ·	Low Medium High	24-32 33-39 40 ·

## RESOLUTION

Short Tele (61 to 135.5mm)			
Aperture	Center Lines mm		Corner Lines mm
Maximum	36-40 41-44 45-49 50 ·	Accept. Good V. Good Excellent	25-28 29-31 32-35 36 ·
Next	36-40 41-45 46-50 51 ·	Accept. Good V. Good Excellent	28-31 32-35 36-39 40 ·
Middle	40-44 45-50 51-62 63 ·	Accept. Good V. Good Excellent	32-36 37-40 41-44 45 ·
f 11-f 22	40-44 45-49 50-55 56 ·	Accept. Good V. Good Excellent	32-36 37-40 41-44 45 ·

## CONTRAST

Short Tele (61 to 135.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	26-33 34-44 45 ·	Low Medium High	20-25 26-33 34 ·
Next	28-37 38-49 50 ·	Low Medium High	20-25 26-34 35 ·
Middle	37-43 44-56 57 ·	Low Medium High	24-34 35-44 45 ·
f 11-f 22	32-37 38-43 44 ·	Low Medium High	24-31 32-38 39 ·

## RESOLUTION

Super-Fast Normal (40 to 60.5mm, faster than f 1.4)			
Aperture	Center Lines mm		Corner Lines mm
Maximum	36-40 41-44 45-49 50 ·	Accept. Good V. Good Excellent	24-26 27-29 30-33 34 ·
Next	40-45 46-50 51-55 56 ·	Accept. Good V. Good Excellent	25-29 30-32 33-35 36 ·
Middle	45-55 56-62 63-70 71 ·	Accept. Good V. Good Excellent	32-39 40-49 50-55 56 ·
f 11-f 22	45-50 51-55 56-62 63 ·	Accept. Good V. Good Excellent	36-40 41-44 45-49 50 ·

## CONTRAST

Super-Fast Normal (40 to 60.5mm, faster than f 1.4)			
Aperture	Center (%)		Corner (%)
Maximum	22-32 33-43 44 ·	Low Medium High	14-18 19-27 28 ·
Next	28-37 38-49 50 ·	Low Medium High	17-22 23-33 34 ·
Middle	42-41 42-55 56 ·	Low Medium High	23-32 33-43 44 ·
f 11-f 22	32-36 37-46 47 ·	Low Medium High	23-32 33-39 40 ·

## RESOLUTION

Telephoto (136 to 250.5mm)			
Aperture	Center Lines mm		Corner Lines mm
Maximum	32-35 36-40 41-49 50 ·	Accept. Good V. Good Excellent	25-28 29-31 32-35 36 ·
Next	32-35 36-40 41-49 50 ·	Accept. Good V. Good Excellent	25-28 29-31 32-35 36 ·
Middle	40-44 45-49 50-55 56 ·	Accept. Good V. Good Excellent	32-35 36-39 40-44 45 ·
f 11-f 22	40-43 44-47 48-49 50 ·	Accept. Good V. Good Excellent	32-34 35-37 38-39 40 ·

## CONTRAST

Telephoto (136 to 250.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	25-33 34-42 43 ·	Low Medium High	20-25 26-32 33 ·
Next	25-33 34-42 43 ·	Low Medium High	20-25 26-32 33 ·
Middle	35-42 43-53 54 ·	Low Medium High	24-33 34-43 44 ·
f 11-f 22	30-34 35-39 40 ·	Low Medium High	24-31 32-37 38 ·

## 35mm Camera Zoom Lenses

### 35mm Camera Lenses (continued)

#### RESOLUTION

Long Tele (251 to 500.5mm)			
Aperture	Center Lines/mm		Corner Lines/mm
Maximum	32-34 35-39 40-44 45+	Accept. Good V. Good Excellent	24-27 28-31 32-35 36+
Next	32-34 35-39 40-44 45+	Accept. Good V. Good Excellent	24-27 28-31 32-35 36+
Middle	36-40 41-45 46-49 50+	Accept. Good V. Good Excellent	32-34 35-37 38-39 40+
f 11 - f 22	32-35 36-39 40-44 45+	Accept. Good V. Good Excellent	32-34 35-37 38-39 40+

#### CONTRAST

Long Tele (251-500.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	24-31 32-39 40+	Low Medium High	20-24 25-31 32+
Next	24-31 32-39 40+	Low Medium High	20-24 25-31 32+
Middle	32-39 40-49 50+	Low Medium High	24-32 33-41 42+
f 11 - f 22	28-32 33-37 38+	Low Medium High	23-31 32-36 37+

#### RESOLUTION

Zoom (to 39.5mm)			
Aperture	Center Lines/mm		Corner Lines/mm
Maximum	32-39 40-44 45-49 50+	Accept. Good V. Good Excellent	23-25 26-28 29-31 32+
Next	32-39 40-44 45-49 50+	Accept. Good V. Good Excellent	23-25 26-28 29-31 32+
Middle	36-39 40-49 50-55 56+	Accept. Good V. Good Excellent	25-27 28-31 32-35 36+
f 11 - f 22	36-39 40-44 44-49 50+	Accept. Good V. Good Excellent	25-27 28-31 32-35 36+

#### CONTRAST

Zoom (to 39.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	24-29 30-35 36+	Low Medium High	16-21 22-29 30+
Next	28-34 35-44 45+	Low Medium High	16-27 28-33 34+
Middle	32-37 38-51 52+	Low Medium High	20-29 30-39 40+
f 11 - f 22	30-35 36-43 44+	Low Medium High	20-29 30-39 40+

#### RESOLUTION

Super Tele (501mm and longer)			
Aperture	Center Lines/mm		Corner Lines/mm
Maximum	32-34 35-39 40-44 45+	Accept. Good V. Good Excellent	24-27 28-31 32-35 36+
Next	32-34 35-39 40-44 45+	Accept. Good V. Good Excellent	24-27 28-31 32-35 36+
Middle	36-40 41-45 46-49 50+	Accept. Good V. Good Excellent	32-34 35-37 38-39 40+
f 11 - f 22	32-35 36-39 40-44 45+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+

#### CONTRAST

Super Tele (501mm and longer)			
Aperture	Center (%)		Corner (%)
Maximum	22-29 30-43 44+	Low Medium High	18-23 24-30 31+
Next	22-29 30-43 44+	Low Medium High	18-23 24-30 31+
Middle	30-36 37-45 46+	Low Medium High	24-31 32-39 40+
f 11 - f 22	26-30 31-35 36+	Low Medium High	23-30 31-35 36+

#### RESOLUTION

Zoom (40mm to 60.5mm)			
Aperture	Center Lines/mm		Corner Lines/mm
Maximum	36-39 40-44 45-49 50+	Accept. Good V. Good Excellent	25-27 28-31 32-35 36+
Next	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+
Middle	45-49 50-55 56-62 63+	Accept. Good V. Good Excellent	36-39 40-44 45-49 50+
f 11 - f 22	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	32-35 36-39 40-44 45+

#### CONTRAST

Zoom (40mm to 60.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	25-29 30-39 40+	Low Medium High	18-23 24-31 32+
Next	28-37 38-47 48+	Low Medium High	20-24 25-35 36+
Middle	34-41 42-51 52+	Low Medium High	22-31 32-41 42+
f 11 - f 22	32-39 40-47 48+	Low Medium High	22-31 32-39 40+

## 4.5×6cm (1<sup>5</sup>/<sub>8</sub> × 2<sup>1</sup>/<sub>4</sub>) Camera Lenses

35mm Camera Zoom Lenses (continued)

### RESOLUTION

Zoom (61mm to 135.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	36-39 40-44 45-49 50+	Accept. Good V. Good Excellent	23-25 26-28 29-31 32+
Next	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	25-27 28-31 32-35 36+
Middle	45-49 50-55 56-62 63+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+
f 11-f 22	40-44 45-49 50-55 56+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+

### CONTRAST

Zoom (61mm to 135.5mm)			
Aperture	Center (%)		Corner (%)
Maximum	24-29 30-39 40+	Low Medium High	18-23 24-31 32+
Next	24-29 30-39 40+	Low Medium High	18-23 24-31 32+
Middle	33-39 40-49 50+	Low Medium High	24-31 32-39 40+
f 11-f 22	30-33 34-39 40+	Low Medium High	24-29 30-35 36+

### RESOLUTION

Wide-Angle (to 74.5 mm)			
Apertures	Center Lines mm		Corner Lines mm
Maximum	27-30 31-34 35-41 42	Accept. Good V. Good Excellent	17-21 22-24 25-29 30
Next	30-34 35-38 39-42 43	Accept. Good V. Good Excellent	19-21 22-27 26-33 34
Middle	34-38 39-42 43-47 48	Accept. Good V. Good Excellent	21-24 25-29 30-37 38
f 11-f 22	30-34 35-38 39-41 42	Accept. Good V. Good Excellent	24-27 28-30 31-33 34

### CONTRAST

Wide-Angle (to 74.5 mm)			
Apertures	Center %		Corner %
Maximum	25-29 30-29 40+	Low Medium High	15-22 23-29 30+
Next	28-33 34-41 42+	Low Medium High	18-24 25-34 35+
Middle	30-36 37-47 48+	Low Medium High	20-27 28-39 40+
f 11-f 22	28-32 33-39 40+	Low Medium High	22-29 30-37 38+

### RESOLUTION

Zoom (136mm and longer)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	23-25 26-27 28-31 32+
Next	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	23-25 26-27 28-31 32+
Middle	36-39 40-44 45-49 50+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+
f 11-f 22	32-35 36-39 40-44 45+	Accept. Good V. Good Excellent	28-31 32-35 36-39 40+

### CONTRAST

Zoom (136mm and longer)			
Aperture	Center (%)		Corner (%)
Maximum	22-29 30-39 40+	Low Medium High	18-21 22-29 30+
Next	22-29 30-39 40+	Low Medium High	18-21 22-29 30+
Middle	28-35 36-41 42+	Low Medium High	23-29 30-37 38+
f 11-f 22	28-34 35-39 40+	Low Medium High	23-29 30-35 36+

### RESOLUTION

Normal (75 to 94.5 mm)			
Apertures	Center Lines mm		Corner Lines mm
Maximum	27-30 31-34 35-41 42	Accept. Good V. Good Excellent	10-21 22-24 25-29 30
Next	34-37 38-40 41-42 43	Accept. Good V. Good Excellent	21-24 25-29 30-37 38
Middle	38-41 42-44 45-47 48	Accept. Good V. Good Excellent	24-27 28-33 34-41 42
f 11-f 22	34-37 37-38 39-41 42	Accept. Good V. Good Excellent	24-27 28-33 34-37 38

### CONTRAST

Normal (75 to 94.5 mm)			
Apertures	Center %		Corner %
Maximum	25-32 33-41 42+	Low Medium High	15-23 24-31 32+
Next	28-35 36-49 50+	Low Medium High	18-24 25-35 36+
Middle	32-43 44-53 54+	Low Medium High	24-32 33-42 44+
f 11-f 22	32-40 41-47 48+	Low Medium High	26-33 34-43 44+

## RESOLUTION

Telephoto (95 mm and Longer)			
Apertures	Center Lines/ mm		Corner Lines/ mm
Maximum	24-27 28-30 31-37 38	Accept. Good V. Good Excellent	19-21 22-24 25-29 30
Next	27-30 31-37 38-41 42	Accept. Good V. Good Excellent	21-24 25-29 30-33 34
Middle	30-33 34-41 42-47 48	Accept. Good V. Good Excellent	24-27 28-33 34-37 38
f:11-f:22	30-33 34-37 38-41 42	Accept. Good V. Good Excellent	24-27 28-33 34-37 38

## CONTRAST

Telephoto (95 mm and Longer)			
Apertures	Center %		Corner %
Maximum	24-29 30-37 38+	Low Medium High	15-22 23-31 32+
Next	28-32 33-32 42+	Low Medium High	18-24 25-35 35
Middle	32-37 38-47 48+	Low Medium High	22-30 31-41 42
f:11-f:22	30-34 35-41 42+	Low Medium High	24-30 31-41 42

## RESOLUTION

Normal (75 to 94.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	18-19 20-21 22-24 25+
Next	32-35 36-39 40-43 44+	Accept. Good V. Good Excellent	20-21 22-24 25-27 28+
Middle	36-39 40-43 44-49 50+	Accept. Good V. Good Excellent	22-24 25-27 28-31 32+
f:11-f:22	32-35 36-39 40-43 44+	Accept. Good V. Good Excellent	22-24 25-27 28-31 32+

## CONTRAST

Normal (75 to 94.5mm)			
Aperture	Center %		Corner %
Maximum	26-29 30-39 40+	Low Medium High	16-18 19-27 28+
Next	28-32 33-44 45+	Low Medium High	18-21 22-31 32+
Middle	32-37 38-49 50+	Low Medium High	20-23 24-33 34+
f:11-f:22	30-34 35-41 42+	Low Medium High	22-25 26-33 34+

## 6×6cm (2¼×2¼) Camera Lenses

## RESOLUTION

Wide-Angle (to 74.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	14-17 18-21 22-24 25+
Next	32-35 36-39 40-43 44+	Accept. Good V. Good Excellent	18-21 22-24 25-27 28+
Middle	32-35 36-39 40-49 50+	Accept. Good V. Good Excellent	18-21 22-24 25-31 32+
f:11-f:22	32-35 36-39 40-43 44+	Accept. Good V. Good Excellent	22-24 25-27 28-31 32+

## CONTRAST

Wide-Angle (to 74.5mm)			
Aperture	Center %		Corner %
Maximum	24-29 30-39 40+	Low Medium High	15-19 20-27 28+
Next	28-32 33-43 44+	Low Medium High	16-20 21-29 30+
Middle	32-35 36-47 48+	Low Medium High	18-22 23-31 32+
f:11-f:22	30-34 35-41 42+	Low Medium High	20-23 24-31 32+

## RESOLUTION

Telephoto (95mm and longer)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	25-27 28-31 32-35 36+	Accept. Good V. Good Excellent	18-19 20-21 22-24 25+
Next	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	20-21 22-24 25-27 28+
Middle	32-35 36-39 40-43 44+	Accept. Good V. Good Excellent	20-24 25-27 28-31 32+
f:11-f:22	28-31 32-35 36-39 40+	Accept. Good V. Good Excellent	20-24 25-27 28-31 32+

## CONTRAST

Telephoto (95mm and longer)			
Aperture	Center %		Corner %
Maximum	22-25 26-37 38+	Low Medium High	16-18 19-25 26+
Next	26-29 30-41 42+	Low Medium High	18-20 21-29 30+
Middle	30-35 36-47 48+	Low Medium High	20-23 24-31 32+
f:11-f:22	28-33 34-43 44+	Low Medium High	22-24 25-31 32+

## 6×7cm (2¼×2¾) Camera Lenses

### RESOLUTION

Super-Wide (to 59.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	16-19 20-24 25-27 28+	Accept. Good V. Good Excellent	9-9.9 10-10.9 11-12.4 12.5+
Next	18-19 20-24 25-27 28+	Accept. Good V. Good Excellent	10-11.4 12.5-13 14-15 16+
Middle	22.5-24 25-27 28-31 32+	Accept. Good V. Good Excellent	12.5-15 16-17 18-19 20+
f/11-f/22	22.5-24 25-27 28-31 32+	Accept. Good V. Good Excellent	14-17 18-22 22.5-24 25+

### CONTRAST

Super-Wide (to 59.5mm)			
Aperture	Center %		Corner %
Maximum	19-23 24-32 33+	Low Medium High	10-13 14-17 18+
Next	22-27 28-35 36+	Low Medium High	12-14 15-19 20+
Middle	25-29 30-39 40+	Low Medium High	14-17 18-23 24+
f/11-f/22	25-29 30-39 40+	Low Medium High	16-17 18-23 24+

### RESOLUTION

Wide-Angle (60 to 89.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	18-22 22.5-27 28-31 32+	Accept. Good V. Good Excellent	11-12 12.5-13.9 14-15 16+
Next	20-22 22.5-27 28-31 32+	Accept. Good V. Good Excellent	12.5-13.9 14-15 16-17 18+
Middle	22.5-24 25-31 32-35 36+	Accept. Good V. Good Excellent	14-17 18-22 22.5-27 28+
f/11-f/22	25-27 28-31 32-35 36+	Accept. Good V. Good Excellent	16-19 20-24 25-27 28+

### CONTRAST

Wide-Angle (60 to 89.5mm)			
Aperture	Center %		Corner %
Maximum	20-24 25-37 38+	Low Medium High	14-17 18-25 26+
Next	24-29 30-39 40+	Low Medium High	16-19 20-29 30+
Middle	28-35 36-43 44+	Low Medium High	18-22 23-33 34+
f/11-f/22	28-33 34-41 42+	Low Medium High	20-25 26-35 36+

### RESOLUTION

Normal (90 to 119.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	20-24 25-31 32-35 36+	Accept. Good V. Good Excellent	12.5-13 14-17 18-19 20+
Next	22.5-27 28-31 32-35 36+	Accept. Good V. Good Excellent	14-17 18-22.4 22.5-24 25+
Middle	25-27 28-31 32-35 36+	Accept. Good V. Good Excellent	16-19 20-24 25-27 28+
f/11-f/22	25-27 28-31 32-35 36+	Accept. Good V. Good Excellent	18-22.4 22.5-27 28-31 32+

### CONTRAST

Normal (90 to 119.5mm)			
Aperture	Center %		Corner %
Maximum	20-24 25-38 39+	Low Medium High	15-18 19-27 28+
Next	28-33 34-41 42+	Low Medium High	18-23 24-31 32+
Middle	32-35 36-43 44+	Low Medium High	20-24 25-33 34+
f/11-f/22	32-35 36-41 42+	Low Medium High	24-27 28-35 36+

### RESOLUTION

Tele (120 to 499.5mm)			
Aperture	Center Lines/ mm		Corner Lines/ mm
Maximum	18-19 20-27 28-31 32+	Accept. Good V. Good Excellent	11-13 14-17 18-19 20+
Next	20-24 25-27 28-31 32+	Accept. Good V. Good Excellent	12.4-15 16-19 20-22 22.5+
Middle	22.5-27 28-31 32-35 36+	Accept. Good V. Good Excellent	14-17 18-22 22.5-24 25+
f/11-f/22	25-27 28-31 32-35 36+	Accept. Good V. Good Excellent	16-19 20-24 25-27 28+

### CONTRAST

Tele (120 to 499.5mm)			
Aperture	Center %		Corner %
Maximum	18-21 22-31 32+	Low Medium High	12-14 15-17 18+
Next	22-27 28-35 36+	Low Medium High	14-16 17-21 22+
Middle	25-29 30-37 38+	Low Medium High	16-19 20-23 24+
f/11-f/22	28-31 32-37 38+	Low Medium High	18-21 22-25 26+

## 6 · 7cm Camera Lenses (continued)

### RESOLUTION

Super Tele (500mm and longer)			
Aperture	Center Lines: mm		Corner Lines: mm
Maximum	16-17 18-22 22.5-24 25+	Accept. Good V. Good Excellent	11-13 14-15 16-17 18+
Next	18-19 20-24 25-27 28+	Accept. Good V. Good Excellent	12.5-13 14-17 18-19 20+
Middle	20-24 25-27 28-31 32+	Accept. Good V. Good Excellent	14-17 18-22 22.5-24 25+
f 11-f 22	22.5-24 25-27 28-31 32+	Accept. Good V. Good Excellent	16-19 20-24 25-27 28+

### CONTRAST

Super Tele (500mm and longer)			
Aperture	Center %		Corner %
Maximum	16-19 20-29 30+	Low Medium High	9-11 12-15 16+
Next	20-24 25-33 34+	Low Medium High	12-14 15-19 20+
Middle	24-28 29-35 36+	Low Medium High	14-17 18-23 24+
f 11-f 22	26-29 30-35 36+	Low Medium High	16-19 20-23 24+