

BEGINNING PHOTOGRAPHY

PHOTO 1

ASSIGNMENT: LIGHTING RATIOS

Instructor:

1:1 Ratio

A product of a totally diffused light source.

No measurable difference between the highlight areas and the shadow areas.

Beneficial for depicting a subject where a shaded area might otherwise obscure detail.

Can be useful in conveying the emotional feelings of lightness and purity.

2:1 Ratio

The brightness of the highlight area is now doubled that of the shadow area.

Can be measured with an incident light meter by a 1 f/stop difference.

Is the standard ratio for full information photography.

Is the standard ratio for clothing catalogs because detail will be rendered throughout the garment.

Conveys strong feelings of openness, expansiveness and sparkle.

3:1 Ratio

The brightness of the highlight area is now a stop and a half more than the shadow area.

Can be measured with an incident light meter by a 1 f/stop difference.

Is the standard ratio for full information photography.

Is the standard ratio for clothing catalogs because detail will be rendered throughout the garment.

Conveys strong feelings of openness, expansiveness and sparkle.

4:1 Ratio

The brightness of the highlight area is now quadrupled that of the shadow area.

Can be measured with an incident light meter by a 2 f/stop difference.

The highlight and shadow relationship is much like our eyes would sense in sunlight on a clear day.

Typically used for men's portraits, photographic illustrations and advertising images.

Used in circumstances where emphasis is more important than complete information.

Defines definite and vigorous emotions.

8:1 Ratio

This is a 3 f/stop difference between the highlights and the shadow area.

This is the actual ratio the film record on a clear, sunny day.

This is a good ratio to use when photographing architecture or landscapes.

This ratio is used for its very vivid effect on film. It denotes great strength, precision and power; or feelings of conflict and aggression.

A strong specular light source with this ratio causes the highlight and shadow areas to have an abstract relationship.

16:1 Ratio

This is a 4 f/stop difference between the highlights and the shadow area. It happens frequently in artificial lighting setups, is seldom encountered naturally.

This is the practical limit of photographic reproduction, beyond this ratio little change can actually be recorded.

Lighting Ratios in Footcandles

Key Light in footcandles	Fill Light in Footcandles					
	2:1	3:1	4:1	8:1	16:1	32:1
10	5	3.3	2	NA	NA	NA
20	10	7	5	2	NA	NA
30	15	10	8	4	NA	NA
40	20	14	10	5	2	NA
50	25	17	13	6	3	NA
75	37.5	25	19	10	5	2
100	50	33	25	13	6	3
125	62.5	42	32	16	8	4
150	75	50	38	19	10	5
200	100	67	50	25	13	6
250	125	83	63	32	16	8
300	150	100	75	38	19	9
350	175	117	88	44	22	11
400	200	133	100	50	25	13
450	225	150	112	56	28	14
500	250	167	125	63	32	16