

Diafragma



Acacadabra van diafragma getal

ISO	S	A
100	1/30	22
200	1/60	16
400	1/125	11
800	1/250	8.0
1600	1/500	5.6
3200	1/1000	4.0
6400	1/2000	2.8

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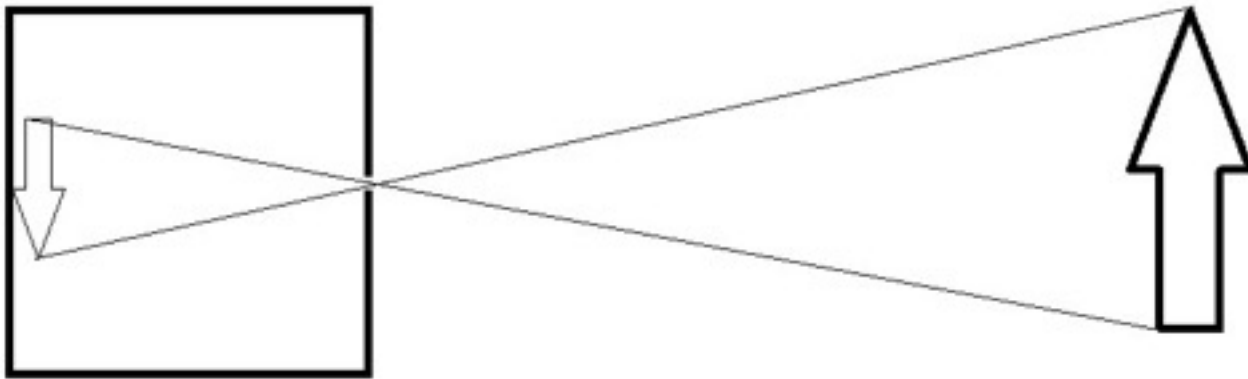
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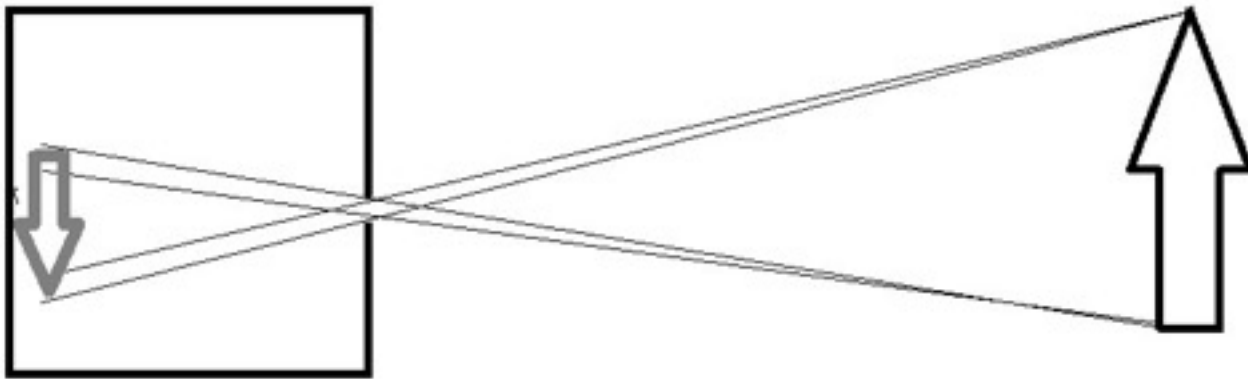
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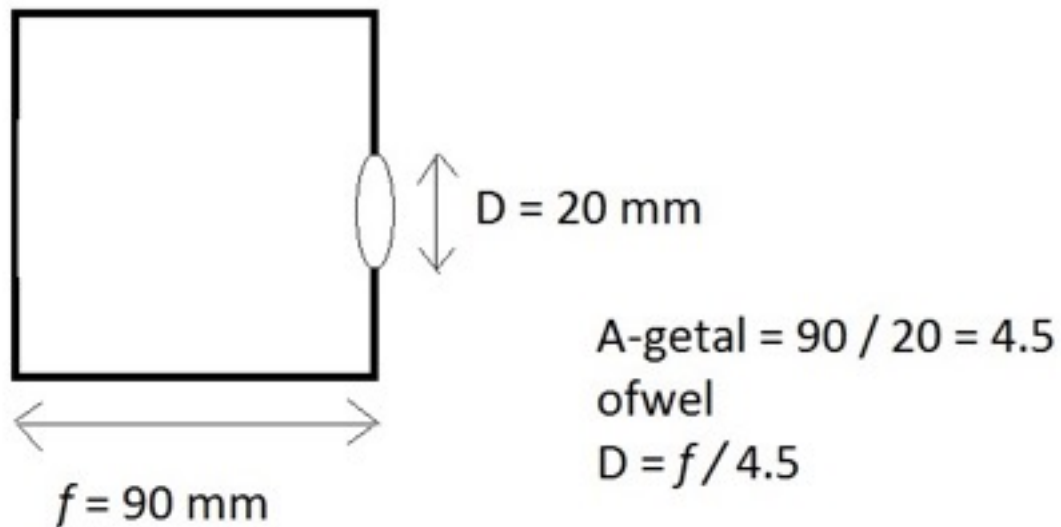
Pin-hole fotografie



Gat groot -> afbeelding vaag

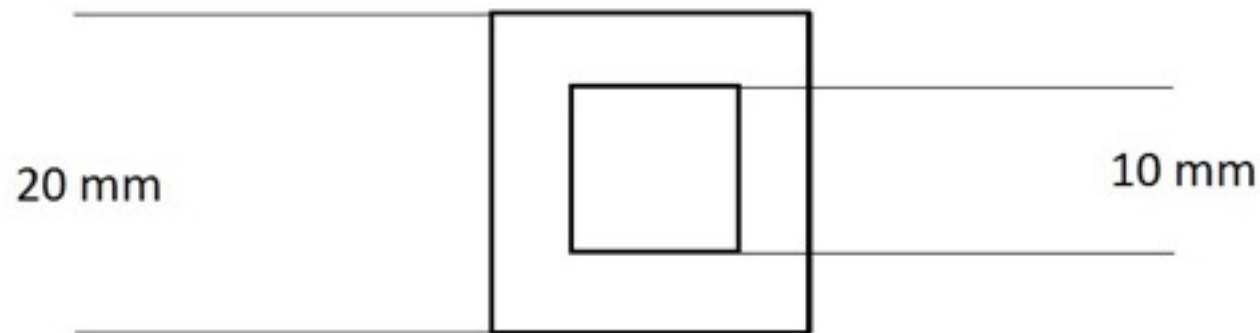


Diafragma getal: verhouding Focal length / lensopening



Hoeveelheid licht evenredig met oppervlak

Oppervlak = Lengte x Breedte

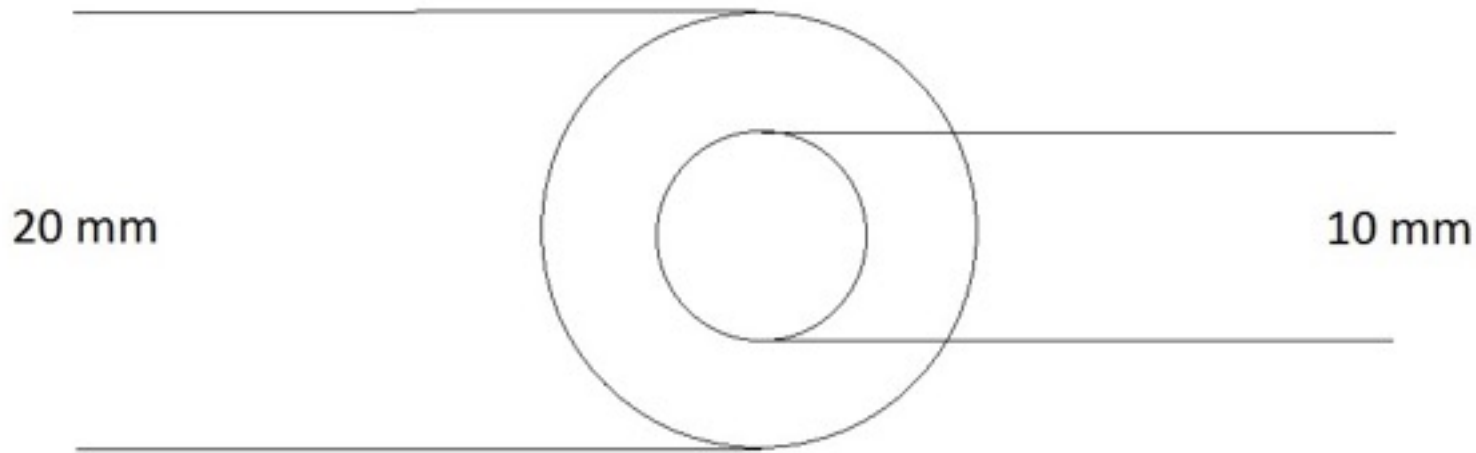


$$\text{Opp.} = 20 \times 20 = 400 \text{ mm}^2$$

$$\text{Opp.} = 10 \times 10 = 100 \text{ mm}^2$$

Bij rond gat: factor 3,14 / 4

$$\text{Oppervlak} = 3,14 \times D^2 / 4$$



$$O = 314 \text{ mm}^2$$

$$O = 78.5 \text{ mm}^2$$

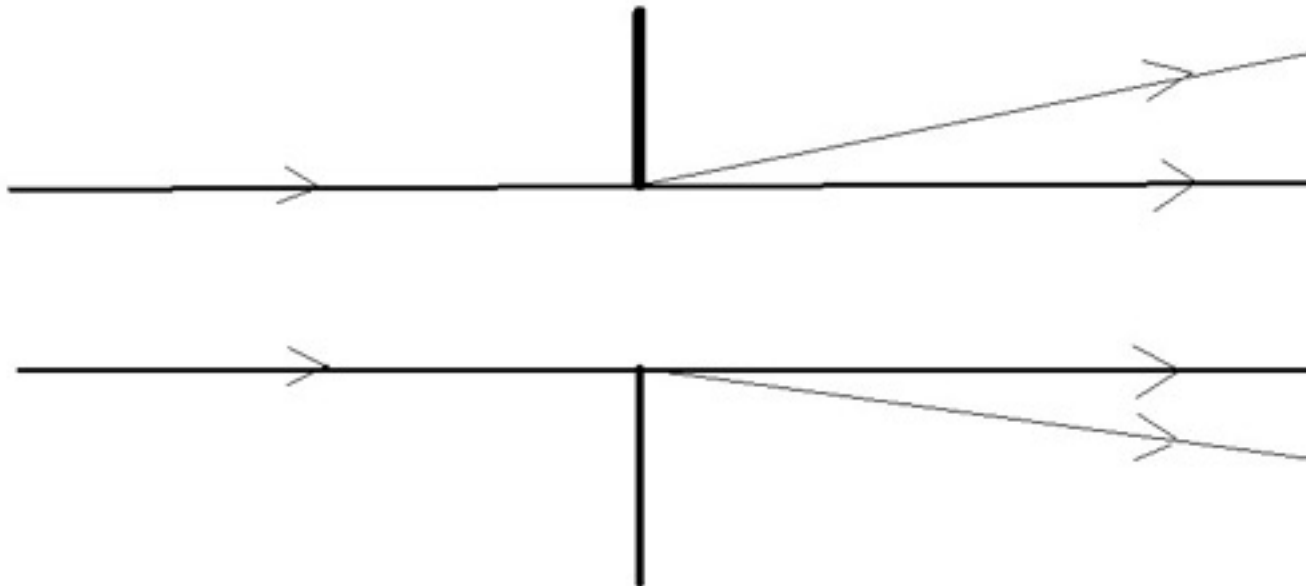
Diafragmagetal en Oppervlak

A	Opp
22	16 mm ²
16	31 mm ²
11	65 mm ²
8.0	123 mm ²
5.6	250 mm ²
4.0	491 mm ²
2.8	1002 mm ²

DiffRACTie

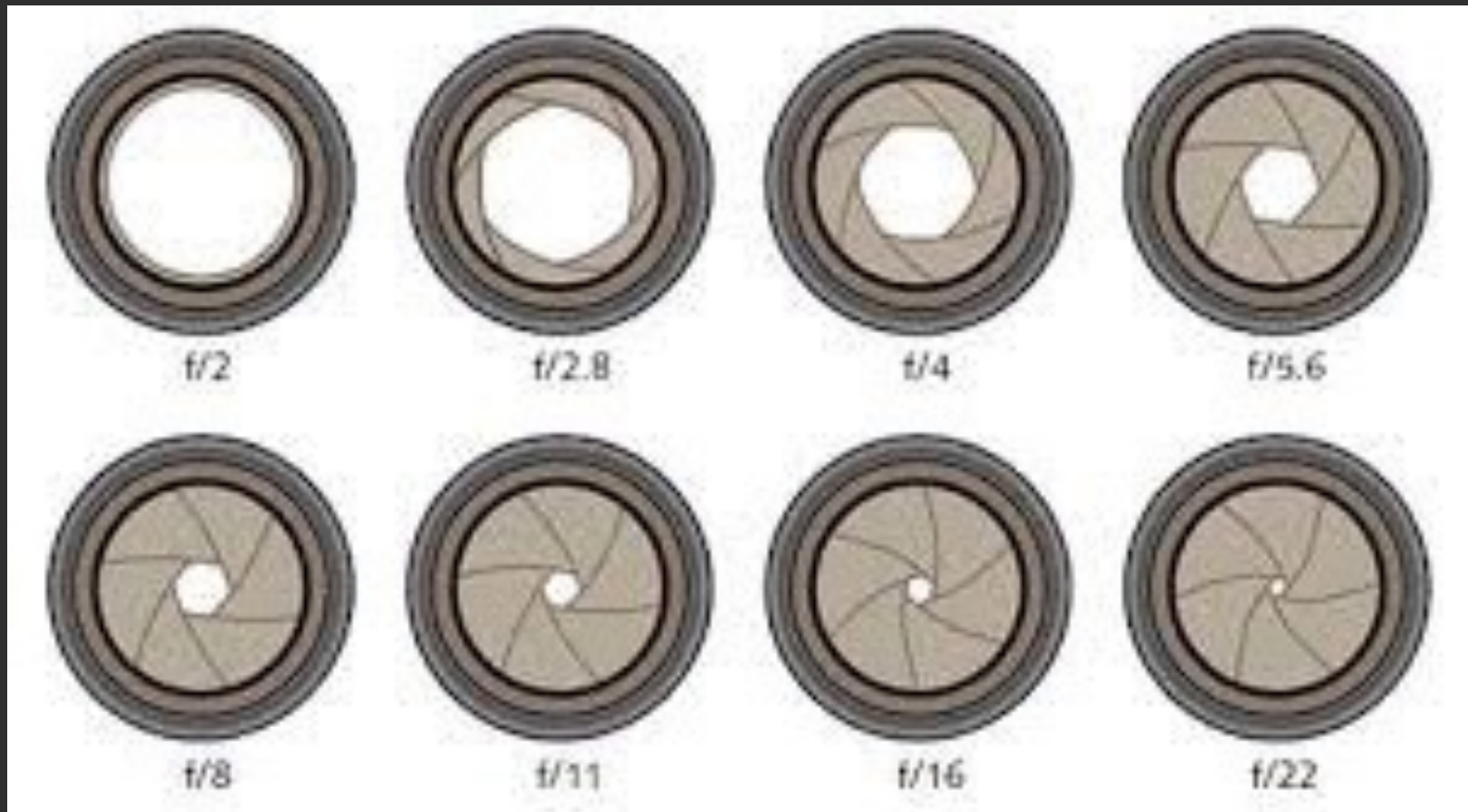


Licht buigt af langs randjes



DiffRACTIE langs randen

Klein diafragma: Omtrek : Oppervlak groot



Bij klein diafragma dikke randen!

Samen met reflecties binnen lens:



1x, 2x of 3x het aantal lammellen van het diafragma

Kleine diafragma's

Bij diafragma kleiner dan $f / 11$:
Vervaging en verkleuring van
contrast randen!