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# Datacenters hebben behoefte aan beter cameratoezicht

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## Even voorstellen

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## Waarom Camera's?

### 12.9 Surveillance

#### 12.9.1 Introduction

Closed Circuit Television or CCTV camera's serve several purposes in the security of the data center:

- Enable security and monitoring personnel to centrally view many locations simultaneously:
- Provide a visual record of monitored area during alarms and access control events
- Record crimes, civil and operational offenses for use as evidence in prosecution and human resources processes
- Record monitored areas and employee activity for use as a defense in civil and criminal prosecution against the data center

#### Reference:

ANSI/BICSI 002-2011, Data Center Design and Implementation Best Practices



## Waarom Camera's?

### 12.9 Surveillance

#### 12.9.1 Introduction

Closed Circuit Television or CCTV camera's serve several purposes in the security of the data center:

### Video Surveillance

### Video Verification/situational awareness

### Video Recording

#### Reference:

ANSI/BICSI 002-2011, Data Center Design  
and Implementation Best Practices



## Waar camera's?

### 12.9 Surveillance

#### 12.9.2 Recommendations

Placement of camera's, frames per second, resolution, lighting, and other criteria should all be determined as a result of a risk/threat and vulnerability assessment.

A qualified security consultant should identify the vulnerable areas and evaluate the operational, technical and environmental parameters before the CCTV design is approved.

#### Reference:

ANSI/BICSI 002-2011, Data Center Design and Implementation Best Practices



## Waar camera's?

	Tier 1	Tier 2	Tier 3	Tier 4
<b>CCTV monitoring:</b>				
Building perimeter & parking	No	No	Yes	Yes
Generators	N.a.	N.a.	Yes	Yes
Access Controlled Doors	No	Yes	Yes	Yes
Computer Room Floors	No	No	Yes	Yes
UPS, Telephone & MEP Rooms	No	No	Yes	Yes
<b>CCTV:</b>				
CCTV Recording of all activity on all camera's	No	No	Yes, digital	Yes, digital
Recording Rate (fps)	N.a.	N.a.	20 fps	20 fps

### Reference:

TIA-942, Telecommunications  
Industry Association



## Waar camera's?

### G.4.2.3 Tier 3 (architectural)

A security fence should be considered, with controlled, secured access points. The perimeter of the site should be protected by a microwave intruder detection system and monitored by visible or infrared Closed Circuit Television (CCTV) systems.

#### Reference:

TIA-942, Telecommunications  
Industry Association



## Beeld van camera's?

### 12.9 Surveillance

#### 12.9.2 Recommendations

CCTV placement should be coordinated with lighting designers to provide adequate image to recognize faces, vehicles, discern activity and other significant facts.



#### Reference:

ANSI/BICSI 002-2011, Data Center Design and Implementation Best Practices

**Normalisatie**

Nederlandse norm

# **NEN-EN 50132-7**

(en)

Alarmsystemen - Gesloten  
televisiebewakingssystemen voor gebruik in  
beveiligingstoepassingen - Deel 7: Richtlijnen  
voor de toepassing



## NEN-EN 50132-7

### 1 Scope

This European Standard gives recommendations and requirements for the selection, planning, installation, commissioning, maintaining and testing of CCTV systems comprising of image capture device(s), interconnection(s) and image handling device(s), for use in security applications.

### 4.2 Risk assessment

#### 4.2.1 General

Prior to CCTV system design, and to help understand its purpose, a threat assessment and risk analysis should be performed.

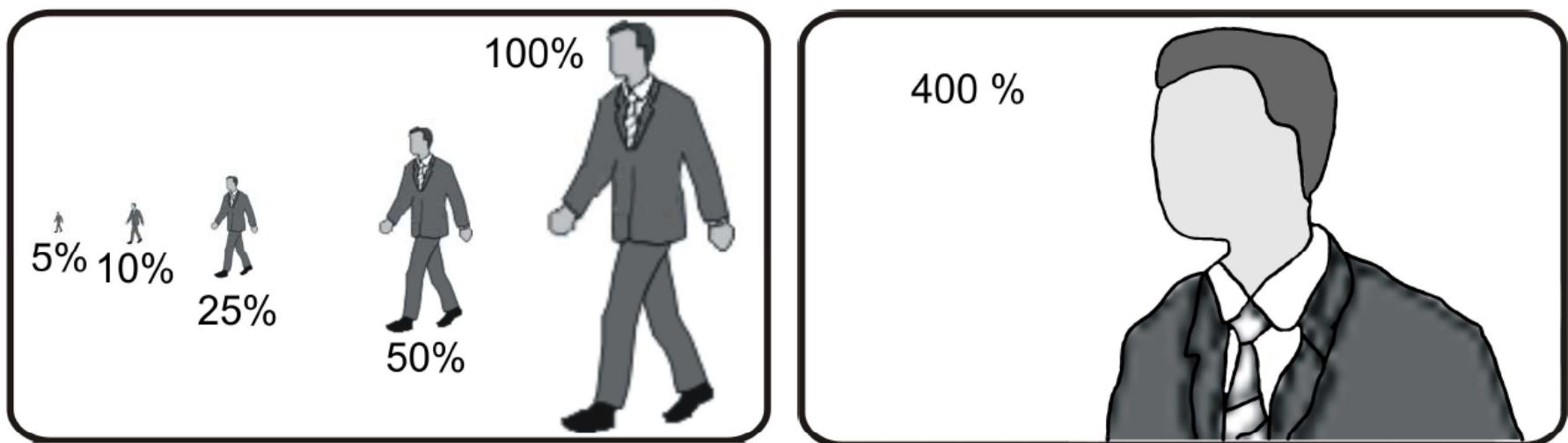


## NEN-EN 50132-7

### 12.9 Surveillance

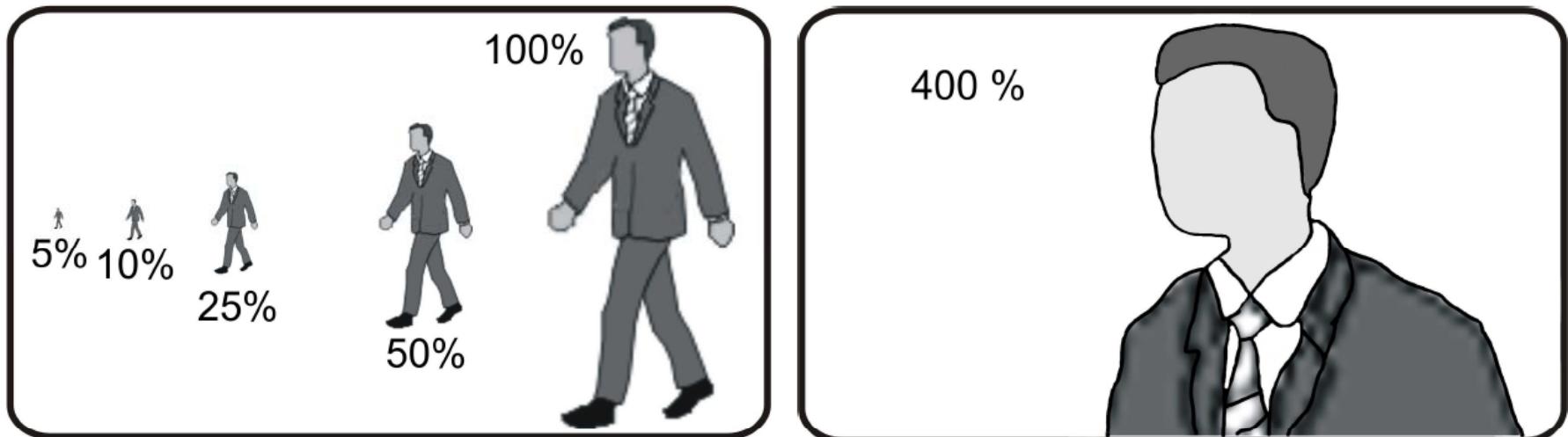
#### 12.9.2 Recommendations

CCTV placement should be coordinated with lighting designers to provide adequate image to recognize faces, vehicles, discern activity and other significant facts.



## NEN-EN 50132-7

- Monitor 5% of picture height or 80 mm per pixel
- Detect 10% 40 mm
- Observe 25% 16 mm
- Recognize 50% 8 mm
- Identify 100% 4 mm
- Inspect 400% 1 mm



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## Praktijk

+/- 5 mm per pixel



+/- 2 mm per pixel



**INFRA**

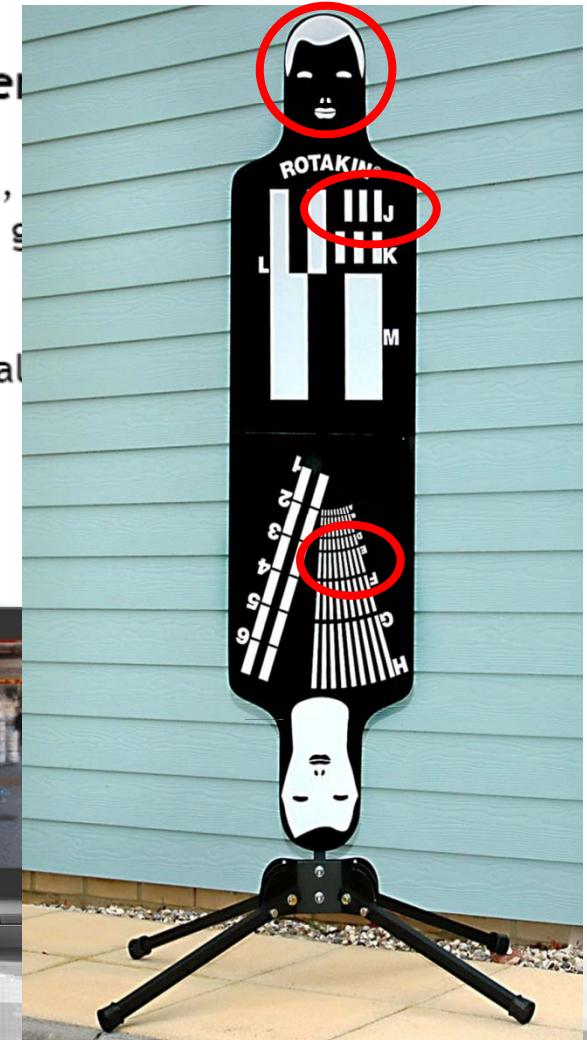
## LET OP Beoordelingsrichtlijn Cameratoezicht

### 2.2.4 Eisen aan waarnemen, herkennen en identificeren

Om met de camera's in het camerasysteem te kunnen waarnemen, zijn er eisen gesteld aan de objectgrootte die op het beeldscherm moet staan. Dit is voorzien om de kwaliteit van dit beeldmateriaal.

Voor de objectgrootte geldt paragraaf 7.6 uit de NEN-EN-50132-7 als volgt:

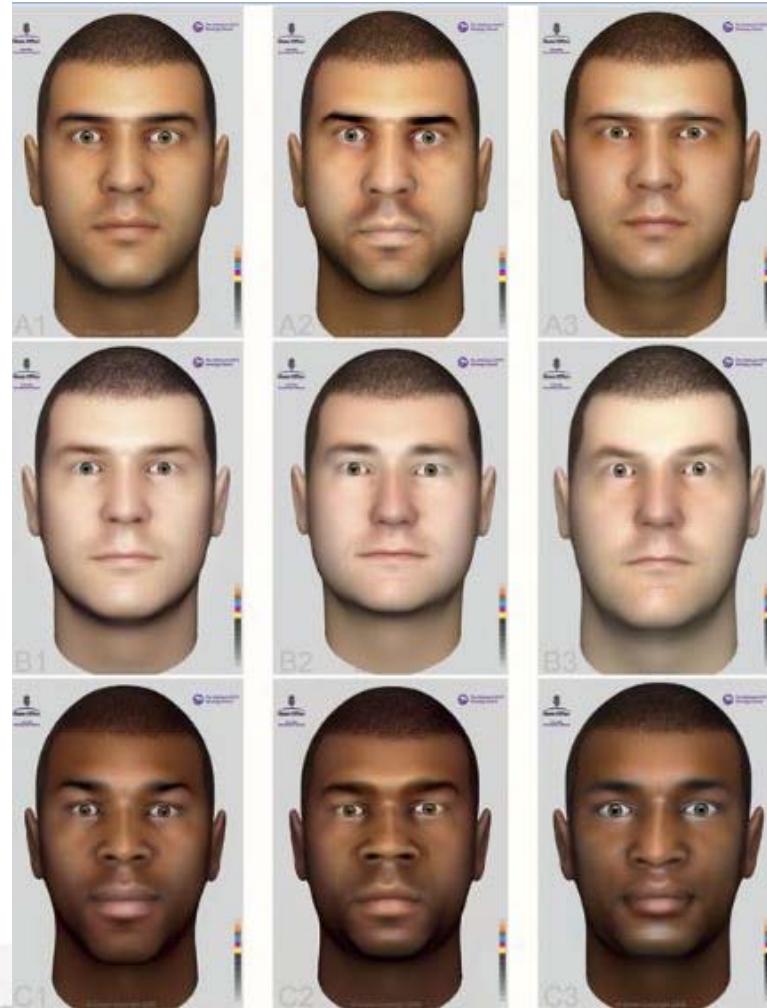
- Waarnemen (volgens paragraaf 7.6 sub d);
- Herkennen (volgens paragraaf 7.6 sub b);
- Identificeren (volgens paragraaf 7.6 sub a).



## NEN-EN 50132-7 test protocol

Globale test voorwaarden:

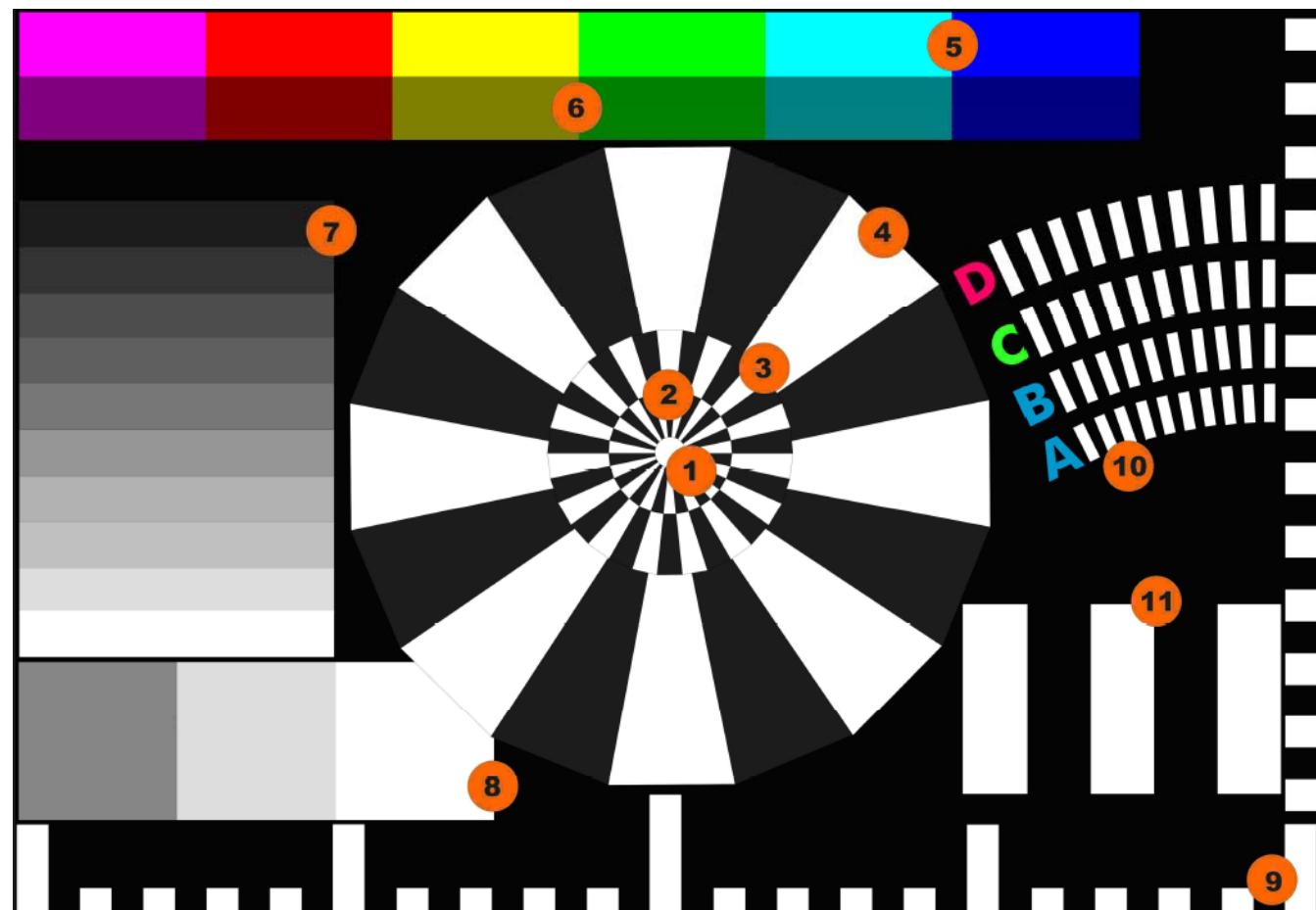
- In operationele omgeving
- hoogte testkaart 1,7 meter
- per operator min. 2 willekeurige gezichten
- max. 30 sec. per gezicht
- iedere positie/camera
- live en opgenomen



## NEN-EN 50132-7 test protocol

Image quality:

- 1.Inspect
- 2.Identify
- 3.Recognise
- 4.Detect



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## Pixels per camera



Demo films:

<https://www.youtube.com/watch?v=kvs3fQG7f2A>

<https://www.youtube.com/watch?v=gO3tiBwP8hw>



**Hartelijk dank voor uw belangstelling !**



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**We make real what matters.**