

What is a Board Certified PSP?

The Physical Security Professional designation is a specialty certification awarded to security practitioners who have demonstrated in-depth knowledge and experience in threat assessment and risk analysis; integrated physical security systems; and the appropriate identification, implementation, and ongoing evaluation of security measures.

The PSP credential allows practitioners to demonstrate expertise in conducting physical security surveys to identify vulnerabilities and performing cost analysis for the selection of integrated physical security measures. The PSP officially recognizes specialized knowledge in systems design, procurement, final acceptance testing, and implementation procedures.

Currently 9 PSP's in Indiana.



Can You See What I See?

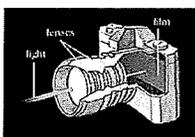
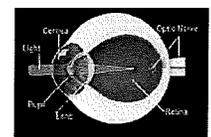
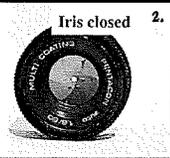
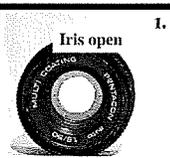
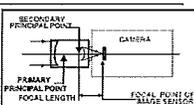
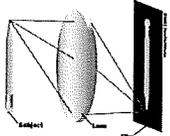
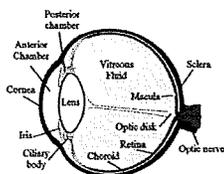
May 19, 2015

■ Lighting Influence on Surveillance and Cameras



Ensure Phones are set to silent

Cameras and Eyes



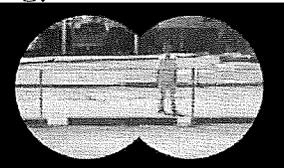
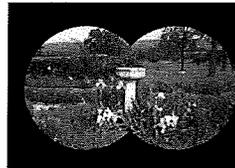
Information from http://www.steves-digitalcameras.com/news/finding_the_iso_of_the_human_eye.html
 Information from http://www.cctv-information.co.uk/i_lenses
 Information from http://www.pasadenaeye.com/faq/faq15/faq15_text.html

Surveillance Can Occur:

Naturally

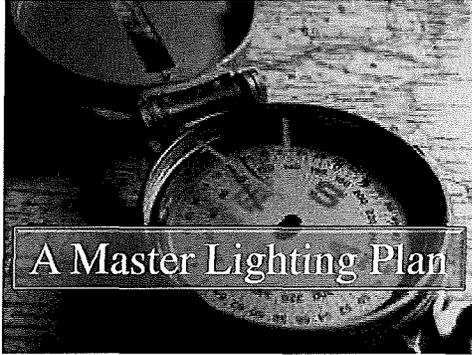


Or With Technology



Images from Google search

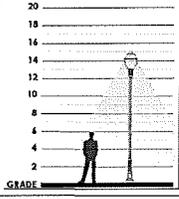
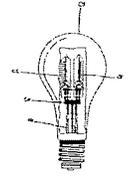
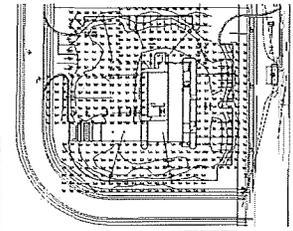
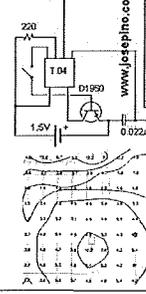
Does Facilities Have A Lighting Direction?



Images from Google search

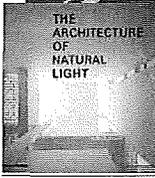
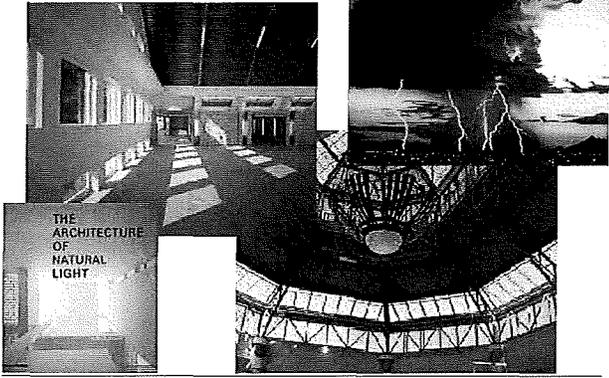
Design

1.5V 4W
FLUORESCENT
LIGHT



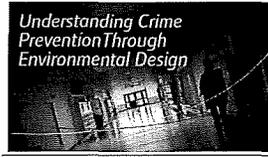
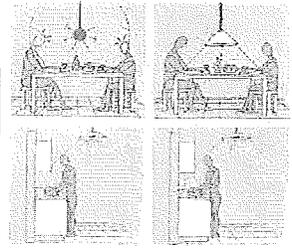
Images from Google search

Natural Light



Images from Google search

Man Made Light



Understanding Crime
Prevention Through
Environmental Design



Images from Google search

Framing Our Discussion On Lighting Categories

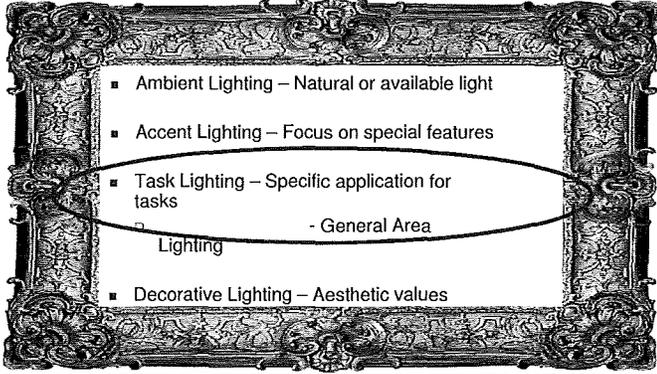
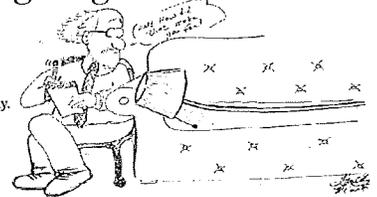


Image from Google search

Psychology Of Lighting

Stimulating emotional reactions
Each color stimulates us in a different way. Depending on their intensity and their color temperature, colors can induce specific feelings.



Colors in the red area of the color spectrum are known as warm colors and include red, orange and yellow. These warm colors evoke emotions ranging from feelings of warmth and comfort to feelings of anger and hostility

Green is the most reassuring color and can range from being withdrawn or can create a feeling of stability— however only when used in soft tones.

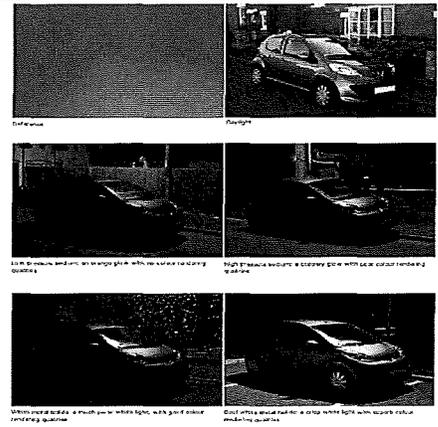
Colors on the blue side of the spectrum are known as cool colors and include blue, purple and green. These colors are often described as calm, but can also call to mind feelings of sadness or indifference.

Information from <http://psychology.about.com/od/sensationandperception/a/colorpsych.htm>
Sketch by Presenter



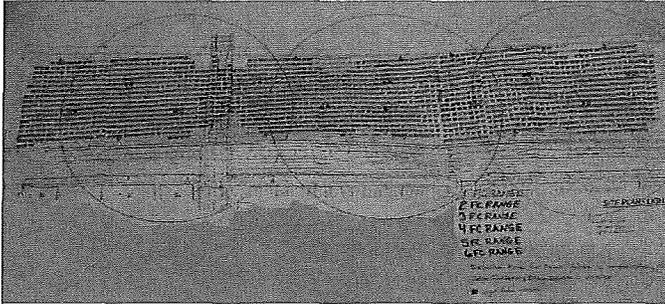
Pictures taken by Presenter at the Smithsonian Science Museum

What You See Is What You Get – WYSIWYG Continued



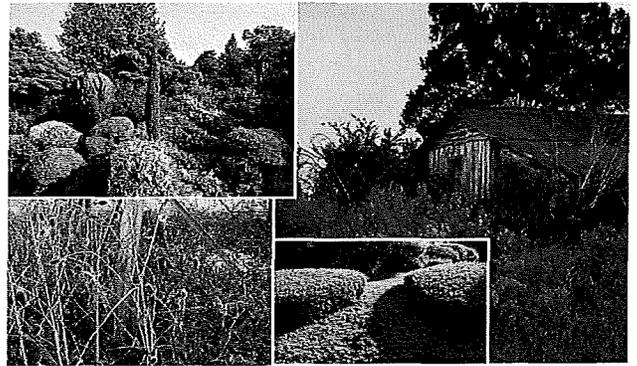
Information from: http://www.securebydesign.com/pdf/110102_LightingAgainstCrime.pdf

Photometric For A Parking Lot Under Review



Images from a project under review

Foliage Will Influence LRV



Images from Google search

Existing Lighting Conditions?

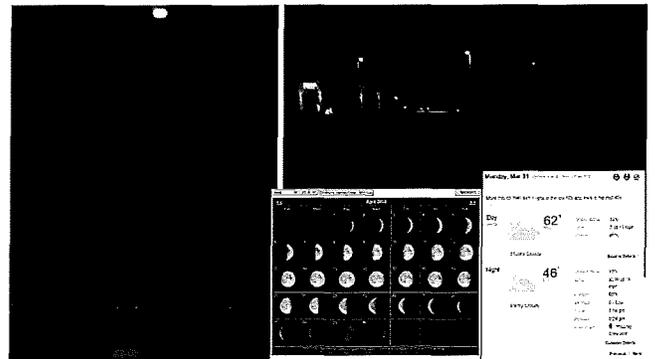
A Few Tools of the Trade.

- Light readings
 - Weather Report
- Distance Wheel
- Compass or GPS
- AutoCAD drawings
- Compass – mechanical
- Scale Master
- Specialized software
- Experience (s)
- Product cut sheet (s)



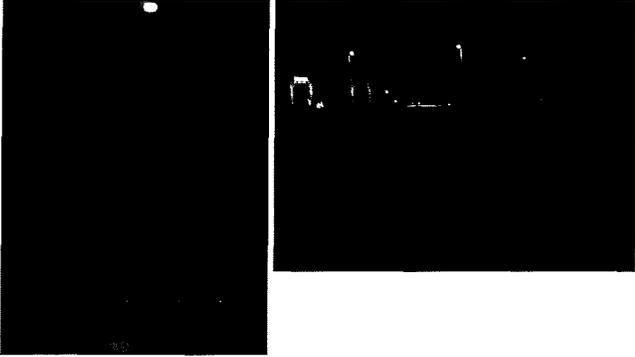
Pictures taken by Presenter

Real Life - Night Survey



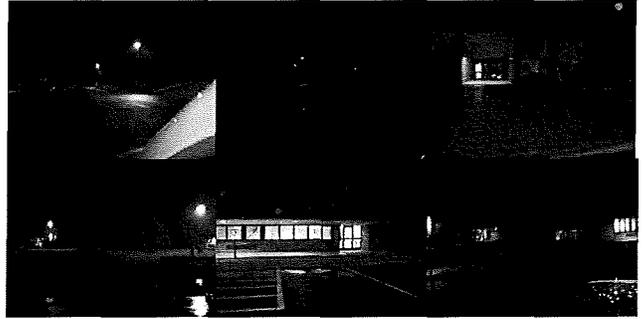
Pictures taken by Presenter, chart and weather information courtesy of Google search

Night Survey



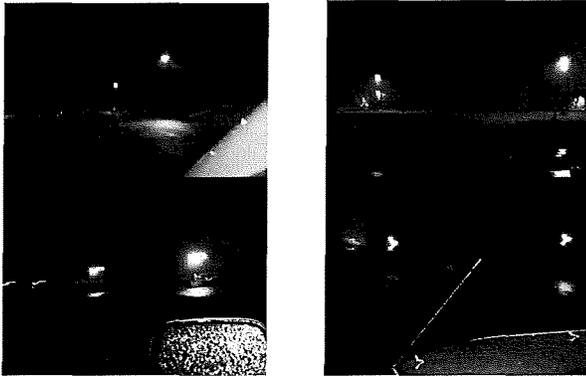
Pictures taken by Presette

More Night Survey Lighting Examples



Pictures taken by Presette

Hot Spots



Pictures taken by Presette

Impact of Glare



Information from: <http://www.physics.fsu.edu/observatory/lightpollsecurity.html#Glare&inhtNoSec>

Impact of Backlight



Camera without BLC



Camera with BLC

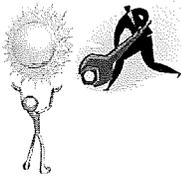


Image from Google search

Choice



Lighting does not stop criminal activity but provides choices to predator and victim.

Images from Google search

Thermal Cameras Invisible Radiant Energy Infrared (IR)



Thermal Cameras operate in the 8–15 μm range

Images from Proximeter and YouTube <http://www.youtube.com/watch?v=0B3K1u3H1E0>

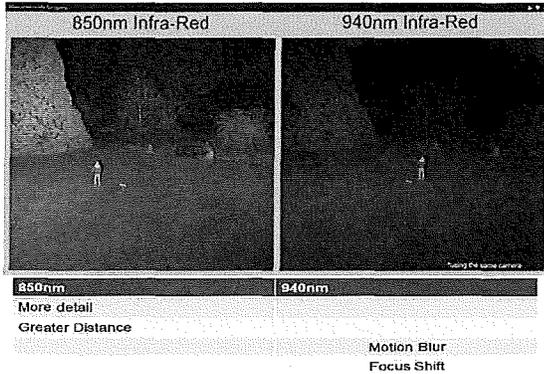
Effect of White Light



And the influence on both natural and technology surveillance

Images from Google search

So Is There A Difference Between IR?



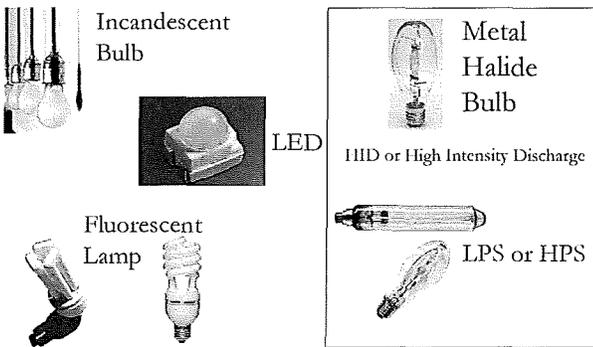
Information based on: <http://www.ipcameraworld.com/2010/08/08/850nm-vs-940nm-infra-red-cameras/>

Effect of IR Lighting With CCTV



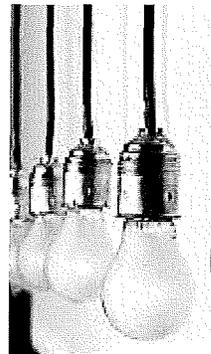
For an interesting view of what a spiders web looks like from the vantage point of the camera:
http://www.youtube.com/watch?v=8R6G0u5JT_8

Types of Illumination



Images from Google search

Incandescent Bulbs



• Incandescent (IN)
 ...WHITE, sometimes warm WHITE →

Incandescent Bulbs

- Low cost
- 10% efficient – 90% heat
- Require regular replacement
- Good color rendition

Drawbacks

- Expensive to operate
- Expensive to maintain

Images from Google search

Fluorescent



- Fluorescent (FL) → WHITE



Fluorescent Lamps

- 40% efficient – 60% heat
- Lasts 10-20 times longer than normal incandescent bulbs
- Good color rendition

Drawbacks

- Produces a "flicker"
- Contains mercury

Images from Google search

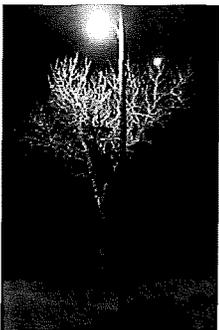
Fluorescent = Movement to Cameras



Images from Google search and Presenter



Mercury Vapor



HID or High Intensity Discharge

- Mercury Vapor (HV) → SOMEWHAT green



HID Lamps – Mercury Vapor

- 60-80% efficient – 20-40% heat
- Poor color rendition

Drawbacks

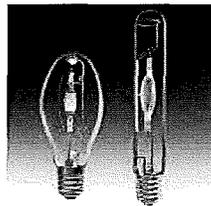
- Slow start up



Note: Indiana House Bill 1839 section 10, makes this type of fixture illegal in the State of Indiana

Images from Google search

Metal Halide



- Metal Halide (MH) → SOMEWHAT blue/white



Halogen Bulb

- Halogen 15% efficient – 85% heat
- Require regular replacement
- Good color rendition

Drawbacks

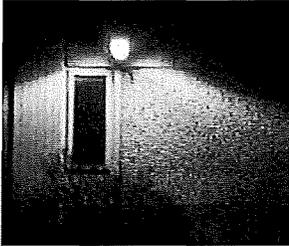
- Expensive to operate
- Expensive to maintain



Images from Google search

Low and High Pressure Sodium

- Low Pressure Sodium (LPS) —VERY yellow/orange
- High Pressure Sodium (HPS) —SOMEWHAT yellow/orange



HID Lamps – LPS or HPS

- 60-80% efficient – 20-40% heat
- Poor color rendition

Drawbacks

- Slow start up



Images from Google search

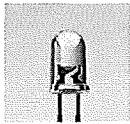
Wondering What The Impact Is?



Pictures taken by Presenter

LED

As Technology Develops, the lighting future is on the horizon



LEDs • LED —SOMEWHAT blue/white

- 80-90% efficient – 10-20% heat
- Extremely low running costs
- Extremely long life
- Durable and insensitive to vibration
- Uniform illumination
- Global shift in lighting from incandescent bulbs to LEDs



Images from Google search

A Detour – Away From Just Lighting



Image from Google search

Function One - Deterrent

- Function 1, It can act as a deterrent to criminal activity



Images from Google search

Less Vandalism...



Picture taken and created by Presenter

Reduction In Shrink



Images from Google search

Function Two

- Function 2, It provides life-safety functions (footing/illuminated paths and walkways)

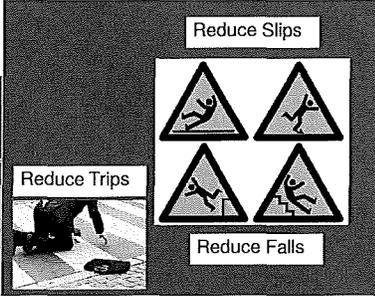


Images from Google search

Improve Visibility For:



Better Footing



Images from Google search and Presenter

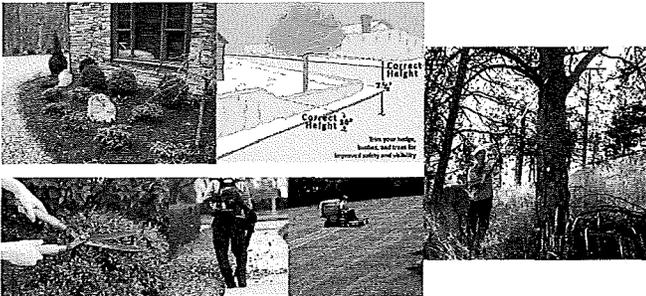
Function Three

- Function 3, Lighting areas for subsystems (CCTV)



Images from Google search

Landscaping should be less than 30'' in height and Tree Limbs higher than 7'6''



Images from Google search

What Do You See?



Pictures taken by Presenter

What Do You See?



Pictures taken by Presenter

What Do You See?



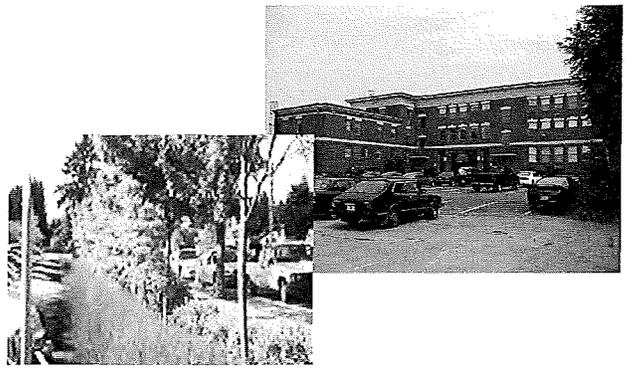
Pictures taken by Presenter

What Do You See?



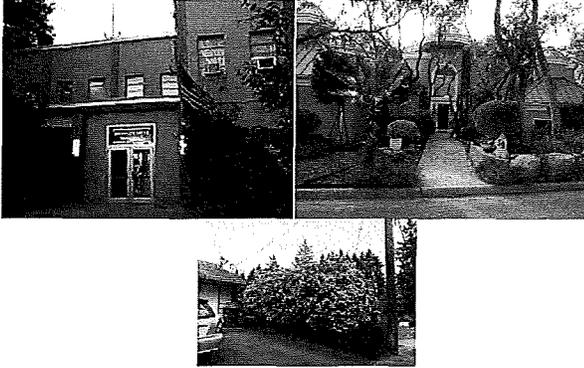
Pictures taken by Presenter

Landscaping and Parking Areas



Images from Google search

Landscaping and Entry Points



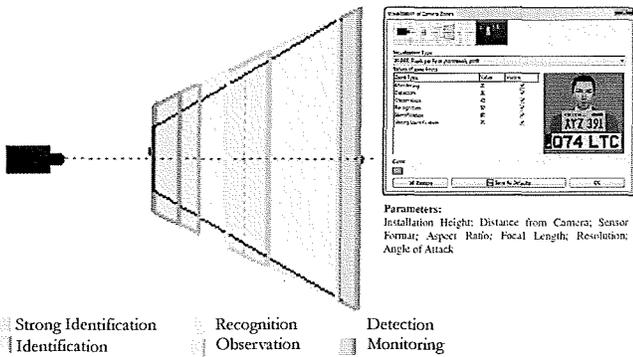
Images from Google search

Fencing



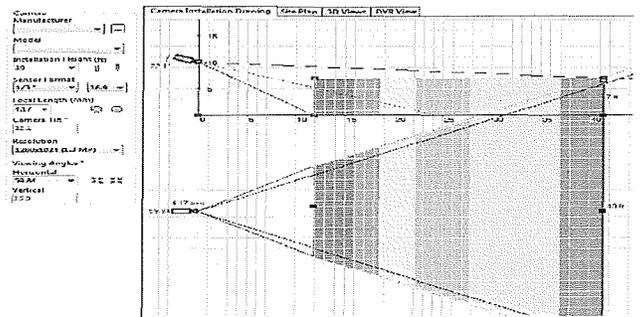
Images from Google search

Pixels Per Foot On Target



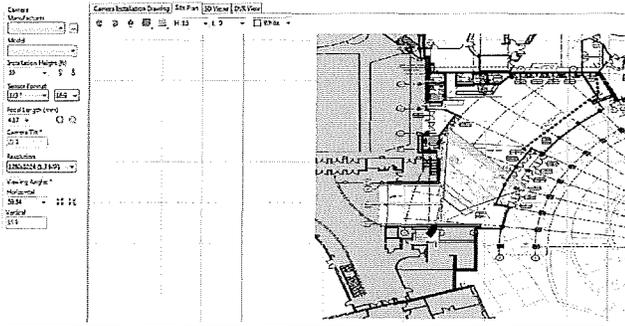
Images are screenshots created by Pre-secter

Which Camera Is Right For My Application



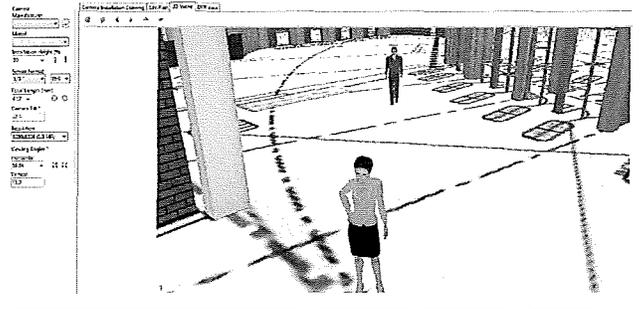
Images are screenshots created by Pre-secter

Which Camera Is Right For My Application



Images are screenshots created by Presenter

Which Camera Is Right For My Application

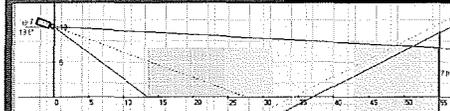


Images are screenshots created by Presenter



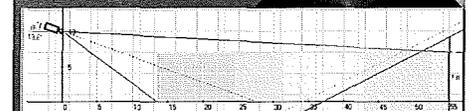
3MP @ 30'

Images are screenshots created by Presenter



3MP @ 25'

Images are screenshots created by Presenter





3MP @ 15'

Images are screenshots created by Presenter

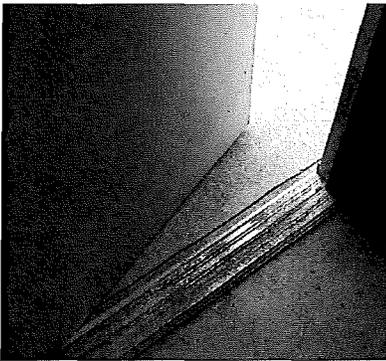


Developing A Culture Of Vigilance



Image from Google search

What Do You See?



Photos by Presenter

What Do You See?



Photos by Presenter

Conclusion

Thank You For Your Time

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