



The Standard of Lighting

South African National Occupational Health and Safety Conference 2019

July 2019



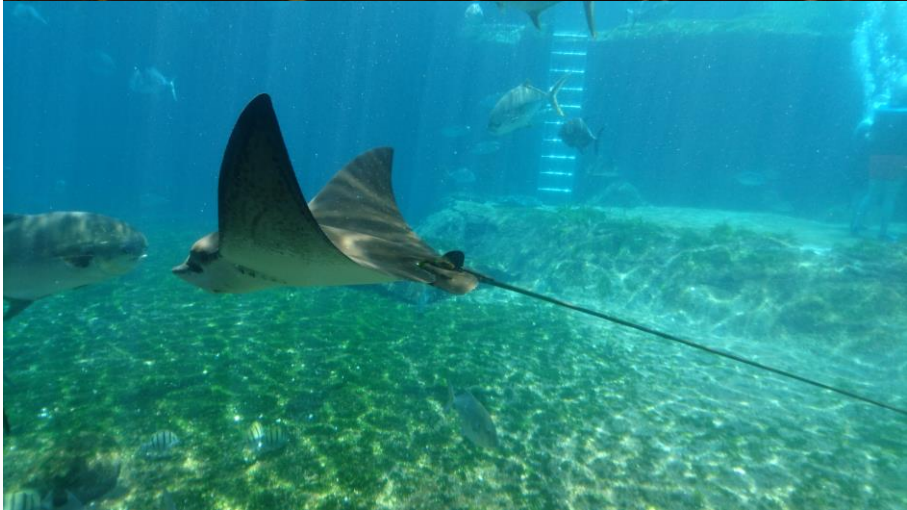
Topics for Discussion

1. Light is Life;
2. Light the right way;
3. Whose responsible - achieve vision zero;
4. Prevention is better than cure;
5. Ask IESSA



Light is Life

Why is light so important to us?





Light is Life

- Did you know
 - Globally, it is estimated that approximately 1.3 billion people live with some form of vision impairment.¹
 - 826 million people live with a near vision impairment.¹
 - The prevalence of visual impairment in South Africa is the highest of all disabilities (32%) and it is estimated that 97% of all blind and partially sighted people in the country are unemployed.²



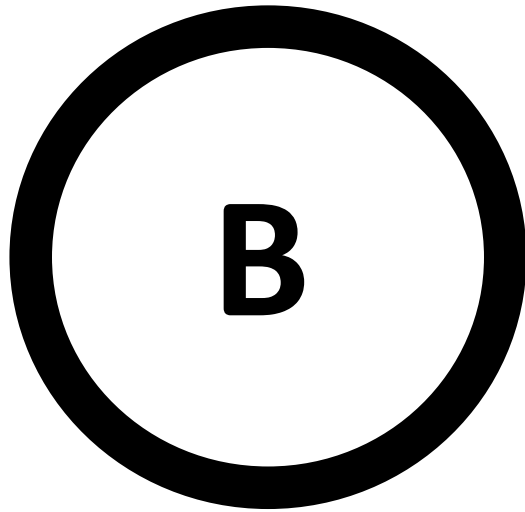
Light is Life

Snellen Test

E	1	20/200
F P	2	20/100
T O Z	3	20/70
L P E D	4	20/50
P E C F D	5	20/40
E D F C Z P	6	20/30
F E L O P Z D	7	20/25
D E F P O T E C	8	20/20
L E F O D P C T	9	
F D P L T C E O	10	
P E Z O L C F T D	11	



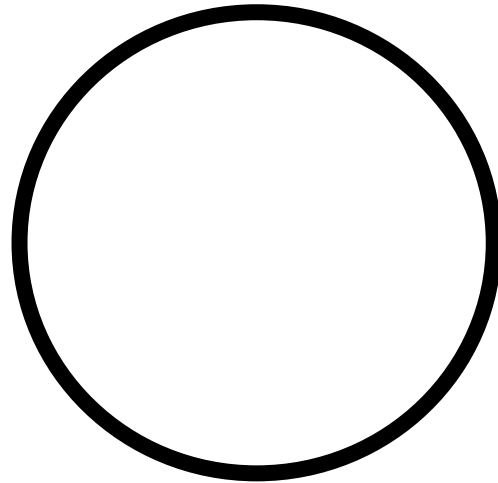
Light is Life





Light is Life

E





Light is Life

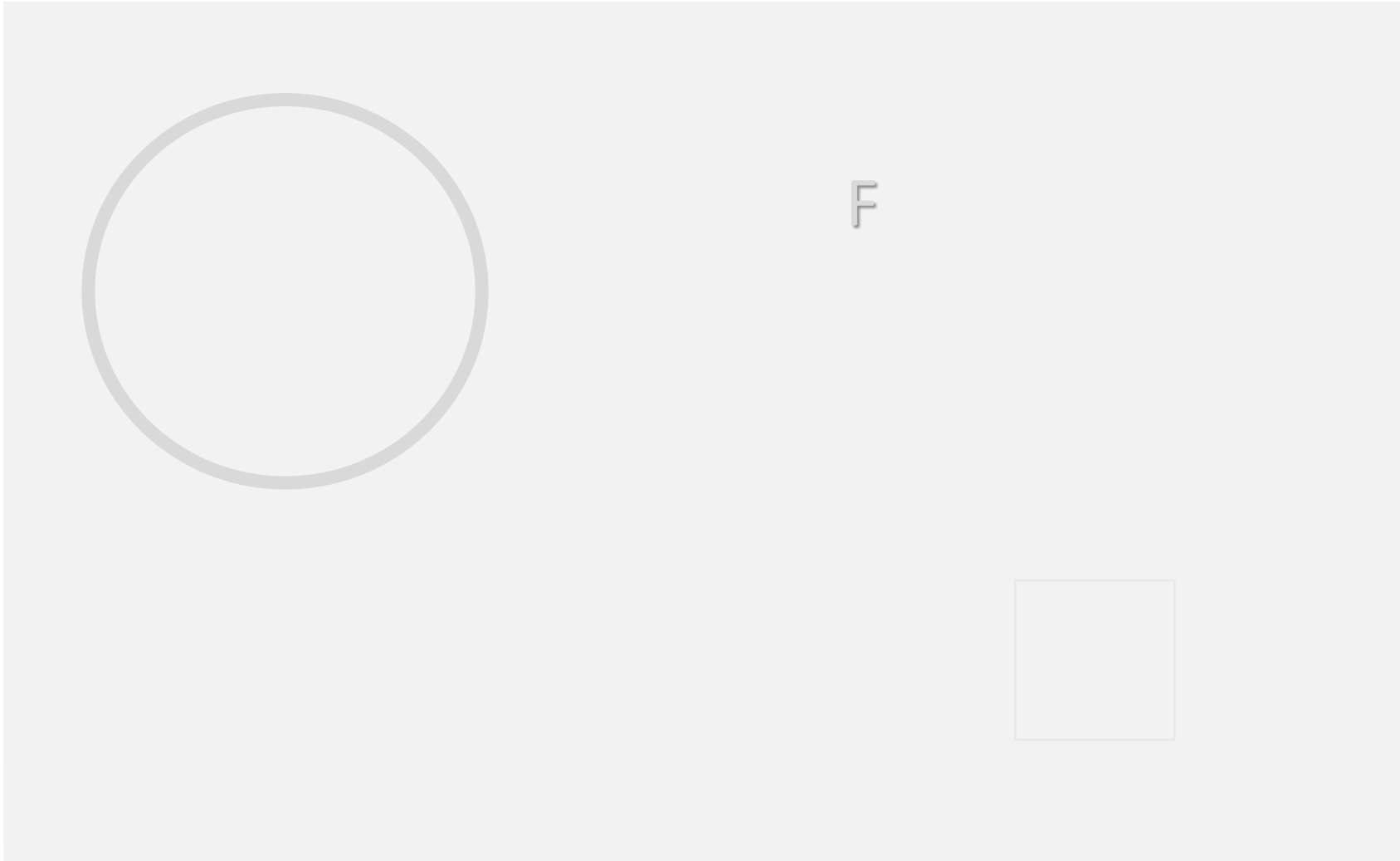




FIGURE 5: Comparisons between ages for those with self-reported vision difficulties and those without vision difficulties.³

- Who is the lighting for?
 - Age Group
 - Observer Visual Ability
 - Task

Light the Right Way



Road forest shadows Reference 4

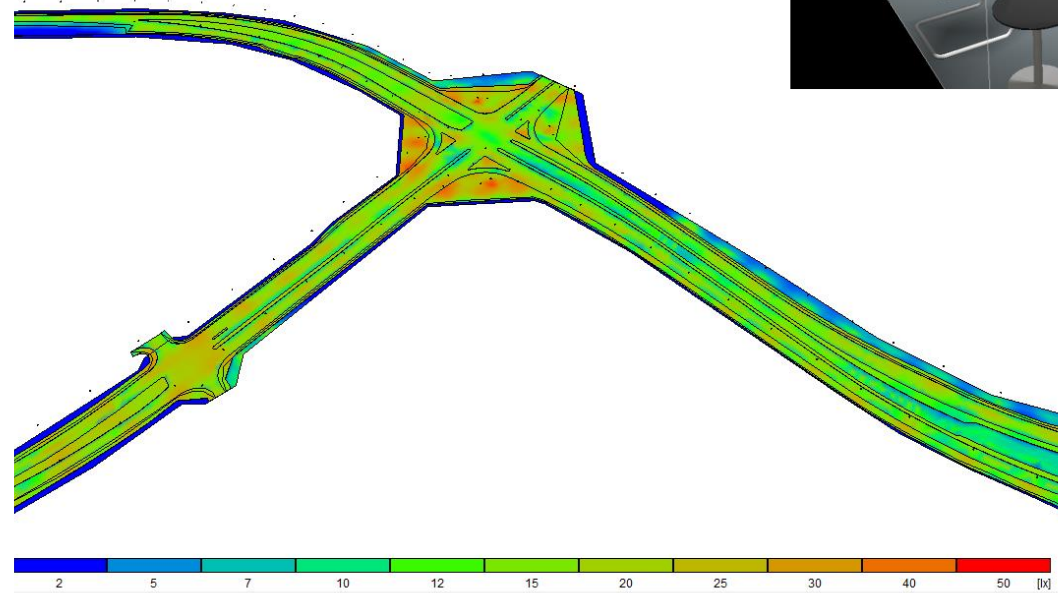
Light the Right Way



Tree Shadow Lighting Reference 5

Light the Right Way

- What are the CRITERIA to Right Lighting
- Considering performance, efficiency & comfort
- SANS Lighting Standards & Recommendations
- Department of Labour - Environmental Regulations for Workplaces
 - Known as “OHS Act”
- Building Regulations



Whose responsible - achieve vision zero





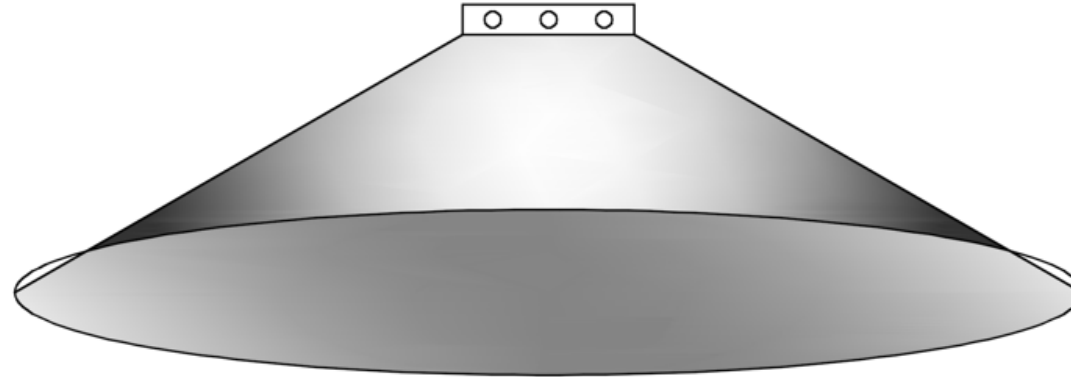
Prevention is better than cure

- Quality & Performance
- Adhere to the Standards
 - Public Safety
 - Implement best industry practice
- Maintenance, Maintenance, Maintenance
 - Cleaning Cycles
 - Regular Testing
- Training
- Lighting awareness
- Avoid legal implications
 - Medical Claims
 - Incident Claims

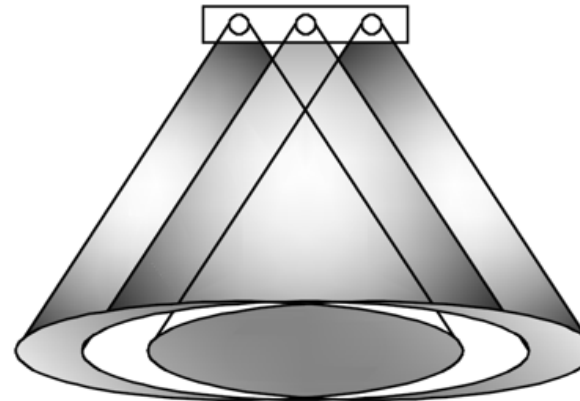
Prevention is better than cure

Example:
Poor “retro-fit”

Fluorescent
Lamps



LED Fluorescent
Replacement Lamps



Prevention is better than cure

Example of a poor specification for Lighting

**No mention of SANS
Lighting Standards**

**No mention of lighting
levels required**

SPECIFICATIONS

The [REDACTED] Municipality seeks to retrofit lighting in its main office building from the current lighting system (which is predominantly fluorescent lights) to LED lighting.

Project scope: Assess and convert existing lighting fixtures to be able to fit LED tube lights.

- 1) To replace existing 4 feet 36 watt tube light with 4 feet, 18 watt LED tube light;
- 2) To replace existing 5 feet 58 watt tube light with 5 feet, 22 watt LED tube light;
- 3) To replace existing 8 feet 75 watt tube lights with equivalent LED tube lights;
- 4) To replace existing incandescent bulbs with LED bulbs

	Lights	Quantity
1	4 feet fluorescent tube	138
2	5 feet fluorescent tube	159
3	8 feet fluorescent tube	6
4	Incandescent bulbs	14 Screw-in 8 Bayonet

The appointed service provider must be certified electrician that can sign off on work after completion and provide an electrical certificate of compliance.

The above mentioned materials must be supplied and delivered to the Supply Chain Management stores, address: [REDACTED]

Retrofitting to take place at main building, address: [REDACTED]

- LED Lights must be SABS Certified
- The Installation of the LED Lights must be done by a qualified electrician who has a Compliance Certificate (COC), Proof of accredited qualification to be submitted.



Prevention is better than cure

Right Light

Reduces Fatigue

Reduces Incidences

Reduces Risk



Prevention is better than cure

Right Light

Improves Productivity

Improves Health

Improves Safety



Prevention is better than cure

Right Light
Safe Lives



Ask IESSA – Who is IESSA

- IESSA – Illumination Engineering Society of South Africa
- Independent, voluntary, non-profit organisation
- Lighting Industry representative to South African Local Government



Ask IESSA – What does IESSA do

- To be recognised as the official body responsible for all technical matters related to the lighting industry.
- To ensure efficient public relations on all lighting matters in South Africa.
- To provide a forum for its members that is representative of all aspects of the lighting industry.



Ask IESSA – What does IESSA do

- To maintain membership and promote the objectives of the International Commission on Illumination, CIE.
- Creating a learning centre for persons interested in lighting.
- Training and Accrediting Lighting Practitioners.



Ask IESSA

Is the light right in your working environment?

What lighting product is right for you?



Ask IESSA

Right Light
Safe Lives

Where will the light take you





Questions



Thank You

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