

ISBN 978-0-626-28950-8

SANS 10098-1:2007

Edition 3.3

Any reference to SABS 098-1 is deemed
to be a reference to this standard
(Government Notice No. 1373 of 8 November 2002)

SOUTH AFRICAN NATIONAL STANDARD

Public lighting

Part 1: The lighting of public thoroughfares

Published by SABS Standards Division
1 Dr Lategan Road Groenkloof ☒ Private Bag X191 Pretoria 0001
Tel: +27 12 428 7911 Fax: +27 12 344 1568
www.sabs.co.za
© SABS

SABS

SANS 10098-1:2007

Edition 3.3

Table of changes

Change No.	Date	Scope
Amdt 1	1996	Amended to change the categorization of roads, replace tables 1 and 2, eliminate the glare control mark and replace appendix B on luminaire depreciation.
Amdt 2	1998	Amended to clarify aspects on luminance, add a clause on the measurement of illuminance, and add a reference.
Amdt 3	2007	Amended to update referenced standards.

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance derived from publications of the following organizations:

British Standards Institution
International Commission on Illumination
Standards Association of Australia
Standards Association of New Zealand

and also wishes to acknowledge the initiative taken by members of

The Association of Municipal Electricity Undertakings of South Africa
The Institute of Lighting Engineers of South Africa
The South African National Committee on Illumination

Foreword

This South African standard was approved by National Committee SABS SC 64C, *Lighting and optics – Luminaires*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in September 2007.

This document supersedes SABS 098-1:1990 (second revision).

A vertical line in the margin shows where the text has been technically modified by amendment Nos 1, 2 and 3.

**Reaffirmed and reprinted in June 2013.
This document will be reviewed every five years
and be reaffirmed, amended, revised or withdrawn.**

Preface

A number of new concepts have been introduced in line with modern international investigations into lighting and visibility at night.

With the advent of computers and their increased application by public authorities and industry, the more complicated design calculations needed for road luminance are no longer a problem. The idea of converting luminance to illuminance to facilitate calculations as contained in the superseded code is not valid and this outdated concept has now been eliminated. Alternative methods of lighting design are given in this part of SANS 10098 for use when a designer does not have access to a computer. These methods, while not strictly accurate for all types of installations, are far more applicable than those used in the old system and are therefore to be recommended.

Road lighting to international standards is known to have a marked effect on road accident and crime reduction. For these reasons alone, every Authority should ensure that when new lighting is installed or old lighting upgraded, the standards recommended in this part of SANS 10098 are correctly applied and maintained. If this is done, considerable reductions in public costs will be made and the tragic effects of road accidents and crime will be considerably reduced.

This revised part of SANS 10098 has been adapted from the recommendations presented in the following CIE publications:

Publication 23	International recommendations for motorway lighting, 1973.	
Publication 27	Photometry of luminaires for street lighting, 1973.	
Publication 30.2	Calculation and measurement of luminance and illuminance in road lighting, 2nd ed. 1982.	Amdt 3
Publication 31	Glare and uniformity in road lighting installations, 1976.	
Publication 32A/B	Lighting in situations requiring special treatment.	
Publication 33A/B	Depreciation of installations and their maintenance, 1977.	
Publication 47	Road lighting for wet conditions, 1979.	
Publication 66	Road surfaces and lighting, 1984. Joint technical report CIE/PIARC.	
Publication 92	Guide to the lighting of urban areas, 1992.	Amdt 1
Publication 115	Recommendations for the lighting of roads for motorized and pedestrian traffic, 1995.	Amdt 1
Publication 140	Road lighting calculations.	Amdt 3

These are essential reading for all public lighting engineers, especially since this part of SANS 10098 has its basis in these publications.