

The Managing Director  
Shanghai Nanhua Electronics Factory.  
**Attention: Mr Michael Sun**  
Building 7. No.198  
Chang He Road, Putuo District  
Shanghai  
China

Your ref.: Payment 2008-02-15  
Our ref.: BE135B  
Enquiries: J Marema  
Tel.: 012 428-6073  
**Report No.:** 2330/BE1048B  
Date: 2008-07-10  
Page: 1 of 3

### TESTING OF WARNING LIGHT

#### 0. CONCLUSION

The warning light **complied** with the requirements of ICAO ANNEX 14 VOL ONE 3<sup>RD</sup> EDITION for which it was tested. See Table 1 and 2.

#### 1. DESCRIPTION OF SAMPLE

The sample consisted cylindrical shaped red housing containing a cluster of clear LED's emitting a red light fitted to a yellow die-cast aluminium base. The electronic circuitry was mounted inside the housing. A two core cable was provided for connection to the supply.

The sample was marked as follows: "NAVLIGHT  
NL-LS702-48"

See page 3 for the photographs of the sample.

#### 2. TESTS REQUESTED

The testing of a warning light for compliance to ICAO ANNEX 14 VOL ONE 3<sup>RD</sup> EDITION.

#### 3. SAMPLES SUBMITTED

The sample was received in a condition suitable for testing.

Date sample received : 2008-02-04  
Starting date of test : 2008-02-20  
Completion date of test : 2008-02-20

**1 Dr Lategan Road Groenkloof, Private Bag X191 Pretoria 0001, Tel: +27 (012) 428-7911,  
Fax: +27 (012) 344-1568.**

This test was performed by SABS Commercial (Pty) Ltd.  
This report relates only to the specific sample(s) tested as identified herein. It does not imply SABS approval of the quality and/or performance of the item(s) in question and the test results do not apply to any similar item that has not been tested. (Refer also to the complete conditions printed on the back of this page.)



The acceptance of an item for test and the issue of a test report are subjected to the SABS's CONDITIONS OF TEST\*, from which the following have been extracted:

1. If published or reproduced by the client, a test report shall be reproduced **in full**, i.e. the reproduction shall contain the printed as well as the typed parts of the report, nothing excepted. In special circumstances an abridged form of the report or certain parts of the report may be published or reproduced, provided that the abridged form or partial version of the report is approved in writing by the President and CEO of the SABS before publication or issue.
2. A test report relates only to an item submitted for the actual test. It furnishes or implies no guarantee whatsoever in respect of a similar item that has not been tested.
3. The performance of a test and the issue of a test report do not imply approval by the SABS of the quality and/or performance of the item that has been tested. This does not authorize the use of a certification mark.

**NOTE** - An unlawful statement implying that an item has been approved by the SABS constitutes a punishable offence in terms of section 21(1) of the Standards Act.

4. While every endeavour will be made to ensure that a test is representative and accurately performed, and that a report is accurate in the quoted results and conclusions drawn from the test, the SABS or its officers shall in no way be liable for any error made in carrying out the test or for any erroneous statement, whether in fact or in opinion, contained in a report issued pursuant to a test.

\*Obtainable upon request from the President and CEO, SABS, Private Bag X191, Pretoria, 0001.

**4. TEST METHOD**

The tests were conducted as per the requirements of ICAO ANNEX 14 VOL ONE 3<sup>RD</sup> EDITION.

- 4.1 The warning light was mounted vertically in the centre of a rotating goniometer
- 4.2 The warning light was connected to a stabilized DC supply and tested at 52,8V
- 4.3 Measurements were taken with a photocell at a test distance of 3,162 m from the light centre of the light.
- 4.4 During all the measurements the ambient temperature was held at 25 ± 2 °C.

**5. TESTS RESULTS**

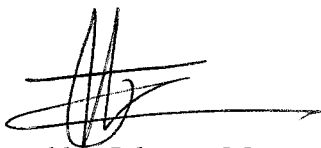
The test results are given in Table 1 and 2.

**TABLE 1- WARNING LIGHT**

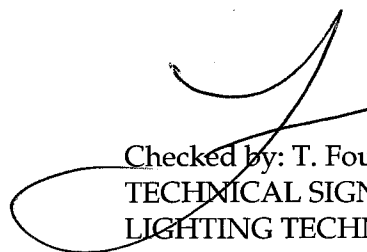
Properties	Requirements	Result
Photometric Properties	ICAO ANNEX 14 VOL ONE 3 <sup>RD</sup> EDITION	Complied 52,8V= See Annex A and B

**TABLE 2- COLOUR TEST**

Sample	Chromaticity co-ordinates			Results
	x	y	z	
Red	0,704	0,296	0	Complied See attached diagram ANNEX C



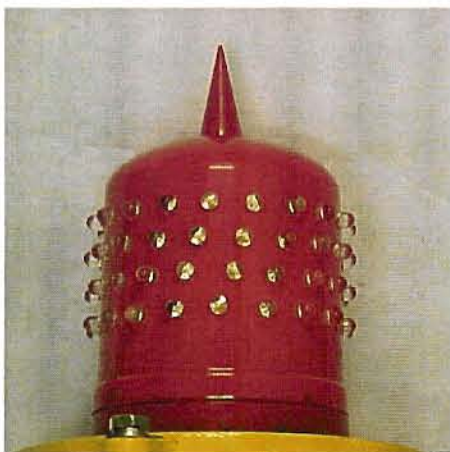
Tested by: Johnson Marema  
TEST OFFICER  
LIGHTING TECHNOLOGY



Checked by: T. Fourie  
TECHNICAL SIGNATORY  
LIGHTING TECHNOLOGY

This test was performed by SABS Commercial (Pty) Ltd, an affiliate of the SABS.  
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**PHOTOGRAPH OF THE SAMPLE**



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# SABS

Annex A

Photometric Test Report  
WARNING LIGHT  
NAVIGATION LIGHT AVIA/A

Date 20. Feb 2008  
Time  
Department LIGHTING TECHNOLOGY  
Name JOHNSON/THEO  
Page 1

Project : NAVLIGHT  
BE135  
NAVILITE  
TESTED@ 52.8V DC / 112mA  
NL-LS702  
6 - 10 degrees Elevation (1 intervals)  
0 - 360 Azimuth ( 30 intervals)

Channel 3,162m

	H	V	MIN	MAX	SAMPLE	
0U/0H	0.00	0.00	10.000		31.500	cd
6U/30H	30.00	6.00	10.000		28.100	cd
6U/0H	90.00	6.00	10.000		24.000	cd
6U/60H	60.00	6.00	10.000		26.300	cd
6U/90H	90.00	6.00	10.000		24.000	cd
6U/120H	120.00	6.00	10.000		29.000	cd
6U/150H	150.00	6.00	10.000		26.800	cd
6U/180H	180.00	6.00	10.000		29.100	cd
7U/180H	180.00	7.00	10.000		26.700	cd
7U/150H	150.00	7.00	10.000		25.200	cd
7U/120H	120.00	7.00	10.000		26.300	cd
7U/90H	90.00	7.00	10.000		22.500	cd
7U/60H	60.00	7.00	10.000		24.100	cd
7U/30H	30.00	7.00	10.000		26.100	cd
7U/0H	0.00	7.00	10.000		25.400	cd
8U/0H	0.00	8.00	10.000		23.400	cd
8U/30H	30.00	8.00	10.000		24.299	cd
8U/60H	60.00	8.00	10.000		21.900	cd
8U/90H	90.00	8.00	10.000		20.900	cd
8U/120H	120.00	8.00	10.000		24.000	cd
8U/150H	150.00	8.00	10.000		23.700	cd
8U/180H	180.00	8.00	10.000		24.400	cd
9U/180H	180.00	9.00	10.000		22.700	cd
9U/150H	150.00	9.00	10.000		22.700	cd
9U/120H	120.00	9.00	10.000		21.700	cd
9U/90H	90.00	9.00	10.000		19.110	cd
9U/60H	60.00	9.00	10.000		20.030	cd
9U/30H	30.00	9.00	10.000		22.110	cd
9U/0H	0.00	9.00	10.000		21.430	cd
10U/0H	0.00	10.00	10.000		19.950	cd
10U/30H	30.00	10.00	10.000		19.970	cd
10U/60H	60.00	10.00	10.000		18.050	cd
10U/90H	90.00	10.00	10.000		17.470	cd
10U/120H	120.00	10.00	10.000		19.580	cd

# SABS

Annex B

Photometric Test Report  
WARNING LIGHT  
NAVIGATION LIGHT AVIA/A

Date 20. Feb 2008  
Time  
Department LIGHTING TECHNOLOGY  
Name JOHNSON/THEO  
Page 2

Project : NAVLIGHT

	H	V	MIN	MAX	SAMPLE	
10V/180H	180.00	10.00	10.000		20.710	cd
6U/0H	0.00	6.00	10.000		26.800	cd
6U/-30H	-30.00	6.00	10.000		29.300	cd
6U/-60H	-60.00	6.00	10.000		28.000	cd
6U/-90H	-90.00	6.00	10.000		27.700	cd
6U/-120H	-120.00	6.00	10.000		28.900	cd
6U/-150H	-150.00	6.00	10.000		26.400	cd
6U/-180H	-180.00	6.00	10.000		29.000	cd
7U/-180H	-180.00	7.00	10.000		26.600	cd
7U/-120H	-120.00	7.00	10.000		27.500	cd
7U/-90H	-90.00	7.00	10.000		25.800	cd
7U/-60H	-60.00	7.00	10.000		25.700	cd
7U/-30H	-30.00	7.00	10.000		27.400	cd
7U/0H	0.00	7.00	10.000		24.901	cd
8U/0H	0.00	8.00	10.000		22.900	cd
8U/-30H	-30.00	8.00	10.000		25.800	cd
8U/-60H	-60.00	8.00	10.000		23.700	cd
8U/-90H	-90.00	8.00	10.000		23.900	cd
8U/-120H	-120.00	8.00	10.000		25.600	cd
8U/-150H	-150.00	8.00	10.000		23.100	cd
8U/-180H	-180.00	8.00	10.000		24.100	cd
9U/-180H	-180.00	9.00	10.000		22.300	cd
9U/-150H	-150.00	9.00	10.000		21.100	cd
9U/-120H	-120.00	9.00	10.000		23.500	cd
9U/-90H	-90.00	9.00	10.000		22.000	cd
9U/-60H	-60.00	9.00	10.000		21.700	cd
9U/-30H	-30.00	9.00	10.000		24.000	cd
9U/0H	0.00	9.00	10.000		21.000	cd
10U/0H	0.00	10.00	10.000		19.600	cd
10U/-30H	-30.00	10.00	10.000		21.600	cd
10U/-60H	-60.00	10.00	10.000		19.560	cd
10U/-90H	-90.00	10.00	10.000		20.170	cd
10U/-120H	-120.00	10.00	10.000		21.520	cd
10U/-150H	-150.00	10.00	10.000		18.820	cd
10V/-180H	-180.00	10.00	10.000		20.430	cd

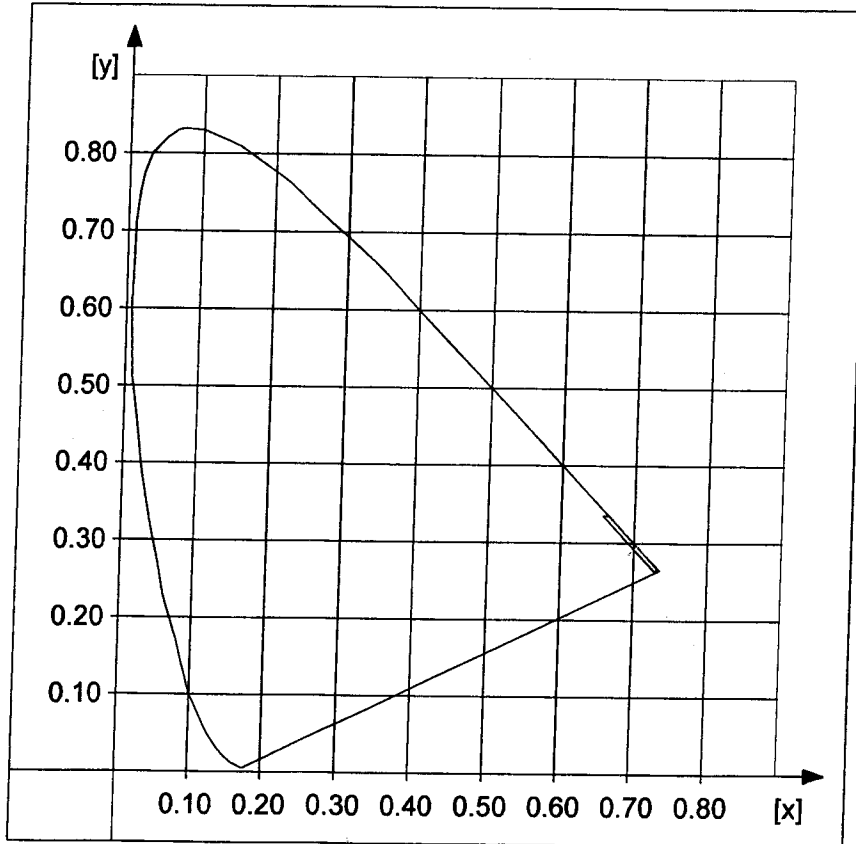
Test passed

**Photometric Test Report**

Date 20. Feb 2008  
Time 10:48:33  
Department LIGHTING TECHNOLOGY  
Name JOHNSON  
Page 1

**Project :** Navlight: NL-LS702  
BE 135  
Tested @ 52,8VDC

colour region SANS 1376-3 RED / ECE R7/ECE R38 RED



Channel color standard

	H	V	colour x	colour y	illuminance
first angle	0.00	0.00	0.704	0.296	4.010
second angle	0.00	0.00	0.704	0.296	4.010
third angle	0.00	0.00	0.704	0.296	4.009

Test passed