INTERMODAL MATERIÉL
AND
NAUTICAL/NUCLEAR ANALYSIS
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CERTIFICATION TEST REPORT

Rev. 09/16

CERTIFICATION TEST REPORT
20979-4
NAVIGATIONAL LIGHT TESTING
PORT SIDELIGHT (2 MILE)
M/N: 11.062.21
ABYC AND NMMA REQUIREMENTS
FOR
OSCULATI S.r.l.

CUSTOMER:

Osculati S.r.l.
Via Pacinotti 12
20090 Segrate MI
Italy

Segrate

MANUFACTURER OF TEST ARTICLE:

REPORT NO.: 20979-4
IMANNA JOB NO.: 20979
CUSTOMER P.O. NO.: verbal
CONTRACT: N/A
PAGES IN REPORT: 9

DATE: Dec. 20, 2017

STATE OF FLORIDA
COUNTY OF BREVARD

ROBERT L. WHITE, being duly sworn, deposes and says: The information contained in this report is the result of complete and carefully conducted tests and is to the best of his knowledge true and correct in all respects.

Robert L White

SUBSCRIBED and sworn to before me this 20th day of December, 2017

RACHEL SANCHEZ
Commission # GG 141542
Expires September 6, 2021
Bonded Thru Troy Fain Insurance 800-385-7019

IMANNA shall have no liability for damages of any kind to person or property, including special or consequential damages resulting from IMANNA's providing the service covered by the report.

IMANNA LABORATORY, Inc.
TEST BY

Robert White
PROJ. MANAGER

1. TEST ARTICLE

   One Red, LED, 2 NM-Navigational Port Sidelight was received for test. The light is designed to be mounted above the sheer line on a boat deck. The following information is engraved into the light cover: OSCULATI 11.062.21 9-33V DC 1W USCG 2NM ABYC A-16 Made in Taiwan

2. MODEL NUMBER

   Osculati 11.062.21 / Port Sidelight
   designed to meet 2 mile requirements

3. REQUIREMENTS

   The requirements for this effort are to test the light in accordance with the USCG COLREG 1972 (IMO) standards and verify conformance with the navigation light regulations of ABYC A-16.

4. PROCEDURES

   The procedure used in performing this test program is IMANNA Laboratory, Inc. Test Procedure NAV-LITE-1. This procedure details the requirements and procedures specified by the NMMA under the section entitled Navigation Lights without additions or deletions. The procedure contains the detailed steps necessary to determine the compliance of the test article to the USCG IMO requirements.

5. TESTING SEQUENCE

   - Receiving Inspection
   - Functional Operation
   - Chromaticity Test
   - Luminous Intensity Tests
   - Cut-off Angle Verification
   - Weathertightness Test

6. RESULTS

   The results of the tests performed are presented below by their order within the test sequence.

   6.1 RECEIVING INSPECTION

   One light sample was received for test. The light appeared to in good condition and ready for testing.

6.2 FUNCTIONAL OPERATION

The lights were mounted on a panel simulating a boat deck surface then operated and tested using a DC electrical power supply set at 12.84 VDC.

6.3 CHROMATICITY TEST

The chromaticity of the light emissions from the lens was measured and found to be within the "Red Light" range as specified by the standards. The chromaticity chart is included in the Appendix.

6.4 LUMINOUS INTENSITY TESTS

The luminous intensity of the light was measured to be above the 2 mile limit of 4.3 candelas in the critical areas.

6.5 CUT-OFF ANGLE VERIFICATION

The light intensity that was measured was graphed and included in the Appendix. The graph also includes the minimum required cut-off angle of 4.3 candelas.

The data for the light sample shows that the light emits sufficient light in the required zones and prevents light from entering the "keep out" zones. This indicates that the light meets the photometric requirements of the standard.

6.6 WEATHERTIGHTNESS TEST

Since the light will be installed above the sheer line, it was subjected to the Weathertightness Test. This test consisted of a continuous water spray using nozzles over the entire top and all exposed sides of the structure for 15 minutes at a rate of at least two inches (50mm) per hour, at an operating pressure of five psi (0.352 kilograms per square centimeter).

No water intrusion was present after the 15 minute duration and therefore the light meets the weathertightness test.

7.0 COMMENTS AND OBSERVATIONS

The data from these tests show that the sample tested meets the requirements of the standards listed above for sail or power driven vessels under 20 meters in length.

All equipment used in the performance of these tests was calibrated to standards traceable to the N.I.S.T and/or verified at the time of the test using internationally recognized methods to validate the accuracy and repeatability of the values recorded or collected during the tests. The results of the tests presented herein apply only to the test article as prepared and as tested.

The data from these tests show that the sample tested meets all of the functional requirements of the standards. In order to be fully certified the light must also meet the in label information requirements set forth by the USCG in 33 CFR 183.810 that state in part that a light must:

(3) Bear a permanent and indelible label that is visible without removing or disassembling the light and states the following:

(i) "USCG Approval 33 CFR 183.810."
(ii) "Meets ABYC A-16."
(iii) "Tested by Imanna Lab., Inc."
(iv) Name of manufacturer.
(v) Number of model.
(vi) Visibility of the light in nautical miles.
(vii) Date on which the light was type-tested.
(viii) Identification and specifications of the bulb used in the compliance test.

If a light is too small to attach the required label –

(1) Place the information from the label in or on the package that contains the light: and
(2) Mark the light "USCG" followed by the certified range of visibility in nautical miles. Once installed, this mark must be visible without removing the light.

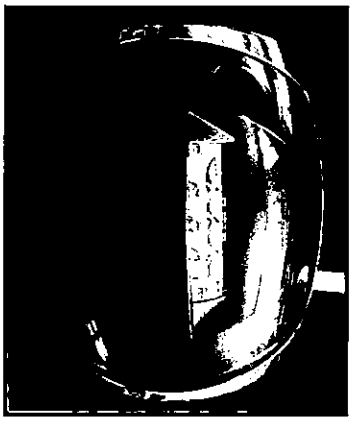

Figure 1: view of tested light