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| IALA RECOMMENDATION |

Document reference

Marine Signal Lights– Colours

Edition 1.0

Document date

Revisions to this IALA Document are to be noted in the table prior to the issue of a revised document.

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| Date | Page / Section Revised | Requirement for Revision |
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THE COUNCIL

**RECALLING** the function of IALA with respect to Safety of Navigation, the efficiency of maritime transport and the protection of the environment;

**RECOGNISING** the need to provide guidance within which the colours and colour boundaries of lights on aids to navigation should be determined;

**RECOGNISING ALSO** that that such guidance should enable a common approach to be made world-wide, thus greatly assisting mariners, who, while passing through waters of different authorities, should not be confused by light colours that are ambiguous;

**RECOGNISING** FURTHER that this document supersedes the IALA “Recommendations for the Colours of Light Signals on Aids-to-Navigation” dated December 1977;

**NOTING** this document applies only to marine Aid-to-Navigation lights installed after its published date;

**NOTING** ALSO that from three years after the date of publication of this Recommendation, all lanterns placed in service should have colour coordinates in either the IALA Optimum or IALA Temporary regions but that to avoid colour confusion, the IALA Optimum region is preferred;

**NOTING** FURTHER that from ten years after the date of publication of this Recommendation, all lanterns placed in service should have colour coordinates in the IALA Optimum region;

**ADOPTS** the Recommendation on Marine Signal Lights in the annex of this recommendation; and,

**RECOMMENDS** that National Members, other appropriate Authorities and manufacturers providing marine aids to navigation services adopt the system for coloured light signals set out in the Annexes to this Recommendation.

**RECOMMENDS ALSO** that colour is specified by using used in the CIE 1931 standard colorimetry system and x, y chromaticity;

**RECOMMENDS ALSO** that the colours used for marine signal lights according to IALA MBS comply with the colour regions defined in the Annex;

*Question for ENG 5:*

*What about illumination of structures? Should we mention them? Normally the regions are not valid for these lights.*

*Remove temporary region?*

*Is there a need to change boundaries?*

1. ??
2. IALA RECOMMENDED CHROMATICITY REGIONS FOR LIGHTS



1. Chromaticity regions of the recommended IALA colours for lights in terms of the CIE 1931 Standard Colorimetric System

**Note:**

IALA Optimum boundaries in solid lines, IALA Temporary boundaries in dashed lines.

1. Chromaticity Corner Co-ordinates of IALA Optimum Regions
2. Chromaticity Corner Co-ordinates of IALA Optimum Regions

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Colour | 1 | | 2 | | 3 | | 4 | | 5 | |
| *x* | *y* | *x* | *y* | *x* | *y* | *x* | *y* | *x* | *y* |
| Red | 0.71 | 0.29 | 0.69 | 0.29 | 0.66 | 0.32 | 0.68 | 0.32 |  |  |
| Yellow | 0.5865 | 0.413 | 0.581 | 0.411 | 0.555 | 0.435 | 0.56 | 0.44 |  |  |
| Green | 0.009 | 0.720 | 0.284 | 0.520 | 0.207 | 0.397 | 0.013 | 0.494 |  |  |
| White | 0.44 | 0.382 | 0.285 | 0.264 | 0.285 | 0.332 | 0.453 | 0.44 | 0.453 | 0.382 |
| Blue | 0.104 | 0.1 | 0.15 | 0.1 | 0.175 | 0.07 | 0.149 | 0.025 |  |  |

1. Chromaticity Corner Co-ordinates of IALA Temporary Regions
2. Chromaticity Corner Co-ordinates of IALA Temporary Regions

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Colour | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | |
| *x* | *y* | *x* | *y* | *x* | *y* | *x* | *y* | *x* | *y* | *x* | *y* |
| Red | 0.71 | 0.29 | 0.69 | 0.29 | 0.645 | 0.335 | 0.665 | 0.335 |  |  |  |  |
| Yellow | 0.602 | 0.398 | 0.596 | 0.396 | 0.555 | 0.435 | 0.56 | 0.44 |  |  |  |  |
| Green | 0.2296 | 0.7543 | 0.2908 | 0.4907 | 0.2260 | 0.3872 | 0.0130 | 0.4940 |  |  |  |  |
| White | 0.48 | 0.382 | 0.44 | 0.382 | 0.285 | 0.264 | 0.285 | 0.332 | 0.453 | 0.44 | 0.48 | 0.44 |