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Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM X ENG **□** PAP X Input

**□** ENAV **□** VTS **□** Information

Agenda item [[2]](#footnote-2) 6.4

Technical Domain / Task Number 2 Reports from Rapporteurs

Author(s) / Submitter(s) M Nicholson

Developments in New Light Sources

As the title suggests, the author is requested to report on new developments in light sources.

## Action arising from the input of the document

For information, any members having experience or developing light sources are invited to contribute to this input paper in future sessions.

## Related documents

IALA Guideline 1043 on Light Sources

# Background

This rapporteurship was established at EEP16 with a view to providing members the latest update on light source technology.

# Developments

## Carbon Filament

With the imminent withdrawal of tungsten filament lamps\*, carbon filament lamps are becoming available. Mostly for decorative purposes, but may become viable for use in AtoN in the future because of the various filament shapes that can be achieved.

NO DEVELOPMENTS

## Tungsten Filament\*

The progressive withdrawal of tungsten filament lamps has met some resistance in the USA. However, most specialist filament lamps (e.g. BSL) are exempt.

NO DEVELOPMENTS

## Tungsten Halogen

NO DEVELOPMENTS

## Metal Halide

Philips Lighting has added new lamps to their ceramic range. Available in 20W, 35W, 50W and 70W with energy savings ranging from 30-70%

Measurements conclude the 20W Evolution has 20% less light output than the previous 35W CDM-T and can be a suitable replacement. Similar results were measured with the 50W version.

WARNING – Great care should be exercised when choosing the correct ballast to drive these lamps.

## Light Emitting Diodes

R&RNAV have further developed their six-sided LED light source as a replacement for traditional sources with great success. Two new light sources using the same heatsink have been developed with smaller light source centres for use in smaller optics. Results have shown ranges of 20M+ in 4th order rotating lenses for 35W of power for the RLS15-6 and ranges of up to 17M in a 3rd order fixed lens for the RLS-11-18. Two further light sources have been developed, tested and deployed. These light sources have 12 sides, providing additional redundancy and greater light output.



## Plasma

The LiFi-STA product series from LUXIM is designed for use in outdoor, commercial, infrastructure, growth and industrial lighting. STA products incorporate Luxim's Light Emitting Plasma technology to provide the following primary benefits:

* Lowest Cost of Ownership
* Energy Efficiency
* Reliability & Long Life
* Brilliant White Light

12,000 initial lumens, 50,000hrs life &160W at 6.3A

NO DEVELOPMENTS

# References

1. http://www.venturelightingeurope.com/en/metal-halide-lamps/lamps.php?code=cm-city
2. http://www.helvar.com/default.asp?path=3386,3400,3475,3476&article=7565&index=X&page=1
3. <http://www.luxim.com/dynamic/display.php/71>

# Action requested of the Committee

The Committee is requested to:

Note the information above and provide any input for ENG2 to the author.

1. ........
2. Annex Heading 1
   1. Annex heading 2
      1. Annex heading 3
3. ........
4. Appendix heading 1
   1. Appendix heading 2
      1. Appendix heading 3

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)