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Claims

1. An emergency lighting system comprising a control node and plurality of emergency luminaires, wherein each
5 the plurality of emergency luminaires receives control signals directly from the control node across a wireless communications network, the control node being configured to transmit test initiation signals to each emergency luminaire.
- 10 2. An emergency lighting system according to claim 1 wherein the wireless communications network is a LoRa network.
3. An emergency lighting system according to claim 1 or 2 wherein the plurality of emergency luminaires is a
15 plurality of the emergency luminaires of any of claims 5 to 11.
4. An emergency lighting system according to claim 1, 2 or 3 wherein control node is the control node of any of claims 19 to 28.
- 20 5. An emergency luminaire for use in an emergency lighting system:
the emergency luminaire being configured to receive a test signal across a wireless communications network directly from a control node and to activate a test
25 procedure at the emergency luminaire on receipt of the test signal.
6. An emergency luminaire according to claim 5 comprising a radio receiver for receiving the test signal directly from the control node.
- 30 7. An emergency luminaire according to claim 6, further comprising:
processor for executing a test procedure at the emergency luminaire in response to receiving the test signal; and
35 radio transmitter for transmitting performance

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results associated with the executed test procedure directly to the control node.

8. An emergency luminaire according to claim 5, 6 or 7 wherein test signal is received at the emergency

5 luminaire, and the performance results are transmitted from the emergency luminaire, across a LoRa network.

9. An emergency luminaire according to any of claims 5 to 8 wherein the emergency luminaire comprises an emergency lighting node, the emergency lighting node

10 comprising the radio receiver and radio transmitter.

10. An emergency luminaire according to claim 5 to 9 wherein the emergency luminaire comprises an activation means and a performance measurement system, the processor initiating the test procedure by activating the activation
15 means to activate a light source in the emergency luminaire for a predefined activation period, the performance measurement system measuring the performance of the emergency luminaire during the activation period.

11. An emergency luminaire according to claim 10 wherein
20 the performance of the emergency luminaire is the current and voltage performance during the activation period.

12. Method for testing the performance of an emergency lighting system, the emergency lighting system comprising a plurality of emergency luminaires, comprising the steps
25 of:

at a control node, transmitting a test signal from a control node to each of the plurality of emergency lights; and

30 at an emergency luminaire receiving the radio test signal directly from the control node and activating a test procedure at the emergency luminaire on receipt of the test signal.

13. Method according to claim 12, wherein the step of receiving the radio test signal directly from the control
35 node is performed at a receiver at the emergency luminaire.

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14. Method according to claim 13 comprising the step of:
at the emergency luminaire transmitting performance results from the executed test procedure directly to the control node.
- 5 15. Method according to claim 12, 13 or 14 wherein the steps of receiving the radio test signals at the emergency light and transmitting the performance results from the emergency luminaire are performed across a LoRa network.
- 10 16. Method according to any of claims 12, 13, 14 or 15 wherein each emergency luminaire comprises an emergency lighting node, the emergency lighting node comprising the radio receiver and radio transmitter.
- 15 17. Method according to any of claims 12, 13, 14, 15 or 16 comprising the further step of storing identification for each of the plurality of emergency luminaires at the control node.
18. Method according to claim 17 comprising the step of comparing received performance results with stored identification to identify whether performance results
20 have been received from each of the plurality of emergency luminaires.
19. A control node for an emergency lighting system comprising a control node and a plurality of emergency luminaires:
- 25 the control node comprising:
transmitter configured to transmit a test initiation signal across a wireless communication network to each of a plurality of emergency luminaires to initiate a test procedure at each emergency luminaire;
- 30 receiver configured to receive results signals across the wireless communication network directly from each of the emergency luminaires, the results signals comprising the results from the test procedure from the emergency luminaires.
- 35 20. A control node for an emergency lighting system according to claim 19 comprising a transmitter configured

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to transmit a results transmission signal across the wireless network directly to the plurality of emergency luminaires, the results transmission signal configured to initiate the emergency luminaires to transmit the results signals.

21. Control node for an emergency lighting system according to claim 19 or 20 wherein the wireless communication network is a LoRa network.

22. Control node for an emergency lighting system according to any of claims 19, 20 or 21 wherein each of the plurality of emergency luminaires has a node ID, the node ID of the emergency luminaire being included in the results signal from the emergency lighting node.

23. Control node for an emergency lighting system according to any of claims 19, 20, 21 or 22, the radio control node further comprising memory, the memory storing the node ID of each of the plurality of emergency luminaires.

24. Control node for an emergency lighting system according to claims 19 to 23 the radio control node further comprising a processor, the processor configured to compare the node ID of each of the plurality of emergency lighting nodes stored in the memory with node IDs of the received results signals.

25. Control node for an emergency lighting system according to any of claims 19 to 24, the control node further comprising an alert system.

26. Test system for an emergency lighting system according to claim 25, the processor further comprising a clock, the processor being configured to activate the alert system if a results signal is not received from an emergency luminaire within a predefined time period.

27. A control node for an emergency lighting system, the control node comprising a gateway and a server, the gateway comprises a radio antenna and a radio driver, and wherein the server comprises the processor, the gateway

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and the server being connected via a communication channel.

28. A control node according to claim 27 wherein the communication channel is an ethernet connection.

5 29. A method for measuring the performance of an emergency lighting system comprising the steps of:
at a control node transmitting a test initiation signal across a wireless communication network directly to a plurality of emergency lighting nodes, each emergency
10 lighting node being associated with an emergency luminaire, to initiate a test procedure at the emergency luminaire; and,

receiving at the control node results signals across the wireless communications network, the results signals
15 comprising the results from the test procedure from the emergency lighting nodes.

30. A method according to claim 29 comprising the further step of transmitting a results transmission signal across the wireless network directly to the plurality of
20 emergency lighting nodes, the results transmission signal configured to initiate the emergency lighting nodes to transmit the results signals.

31. A method according to claim 29 or 30 comprising the further step of determining the performance of emergency
25 luminaires in dependence on the results signals.

32. A method according to claim 29, 30 or 31 wherein the wireless communication network is a LoRa network.

33. A method according to any of claims 29, 30, 31 or 32 wherein each of the plurality of emergency lighting nodes
30 has a node ID, the node ID of the emergency lighting node being included in the results signal from the emergency lighting node.

34. A method according to any of claims 29, 30, 31, 32 or 33, the control node further comprising memory, the memory
35 storing the node ID of each of the plurality of emergency lighting nodes.

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35. A method according to claim 34, the control node further comprising a processor, the processor performing the step of comparing the node ID of each of the plurality of emergency lighting nodes stored in the memory with node
5 IDs of the received results signals.

36. A method according to any of claims 29, 30, 31, 32, 33, 34 or 35, the control node further comprising an alert system.

37. A method according to claim 36, the processor further
10 comprising a clock, the processor performing the step of activating the alert system if a results signal is not received from a node within a predefined time period.

38. A method for measuring the performance of an emergency lighting system comprising the steps of:
15 receiving at an emergency lighting node a test initiation signal directly from a radio control node;
initiating a test procedure at an emergency luminaire associated with the emergency lighting node on receipt of the test initiation signal and recording results of the
20 test procedure;
transmitting the results of the test procedure directly to the control node.

39. A method according to claim 38 wherein the emergency light comprises an activation means and a performance
25 measurement system, the processor performing the step of initiating the test procedure by activating the activation means to activate the emergency light for a predefined activation period, the performance measurement system measuring the performance of the emergency light during
30 the activation period.

40. A method according to claim 39 wherein the performance of the emergency light is the current and voltage performance during the activation period.