

# MEASUREMENT/TECHNICAL REPORT

Cooper Lighting

Models: M-5 & M-7

FCC ID: NCG-5

RF Emission Measurements Performed For Determination of  
Compliance with the US Code of Federal Regulations

Title 47, Chapter I, FCC Part 18

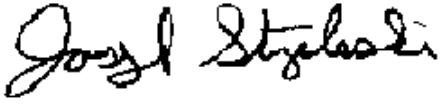
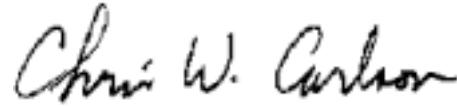
As Required for Certification for ISM Equipment

Radiometrics Midwest Corporation Test Document RP-3979

Issue Date: 10/19/99

This report concerns: Original grant

Equipment type: Consumer RF Lighting device

<i>Tests Performed For</i>  <b>Cooper Lighting</b> 1121 Highway 74 South Peachtree City, GA 30269	<i>Test Facility</i>  <b>Radiometrics Midwest Corporation</b> 12 East Devonwood Romeoville, IL 60446 Phone: (815) 293-0772 FAX: (815) 293-0820 radiomet@ix.netcom.com
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## 1.0 General Information

### 1.1 Product Description

The EUT (Equipment Under Test) is a commercial lighting fixture and power supply in one (L = 4.125" X W = 2.875" X H = 1.25") package. The EUT is part of lighting fixtures from Cooper Lighting. The Iris M32T module was used in both the M-5 and M-7 housings.

The products use the same RF circuitry and the same ballast. The M-5 has a 32 Watt light and the M-7 has a 42 watt light. Both items were fully tested because of the two power levels.

These products are directed toward the residential market. The input power requirements are 120 VAC at 60 Hz.

### 1.2 Related Submittals

Cooper Lighting is not submitting any other submittals related to the EUT.

### 1.3 Tested System Details

The FCC IDs for all equipment, plus descriptions of all cables used in the tested system are:

Model Number Serial Number	FCC ID	Manufacturer & Description	Cable Descriptions
M/N: Iris M-5 (EUT)	NCG-5	Cooper Lighting Lighting Fixture & Housing	Unshielded, 1 meter Power Cord
M/N: Iris M-7 (EUT)	NCG-5	Cooper Lighting Lighting Fixture & Housing	Unshielded, 1 meter Power Cord

### 1.4 Test Methodology

Testing was performed according to the procedures in FCC/OET MP-5 and FCC rules part 18. The tests were performed from 450 kHz to 30 MHz.

The EUT's power supply had a frequency output value of 42 kHz modulated with 60 Hz. Since this is the highest frequency used in the EUT, only conducted emissions testing was done as per section 18.309.

Conducted emission measurements were performed using an Electrometrics Model FCC/VDE 50/2 Line Impedance Stabilization Network (LISN) as the pick-up device.

### 1.5 Test Facility

The conducted measurement facility is located on 12 East Devonwood, Illinois. This site has been fully described in a report (31040/SIT) submitted to your office.

## 2.0 System Test Configuration

The system was configured for testing in a typical fashion (as a customer would normally use it). Power was supplied at 115 VAC with a three wire, one meter, unshielded cord.

### 2.1 Justification

Since 42 kHz was the highest frequency used in the EUT, only conducted emissions testing was done as per section 18.309.

### 2.2 Special Accessories

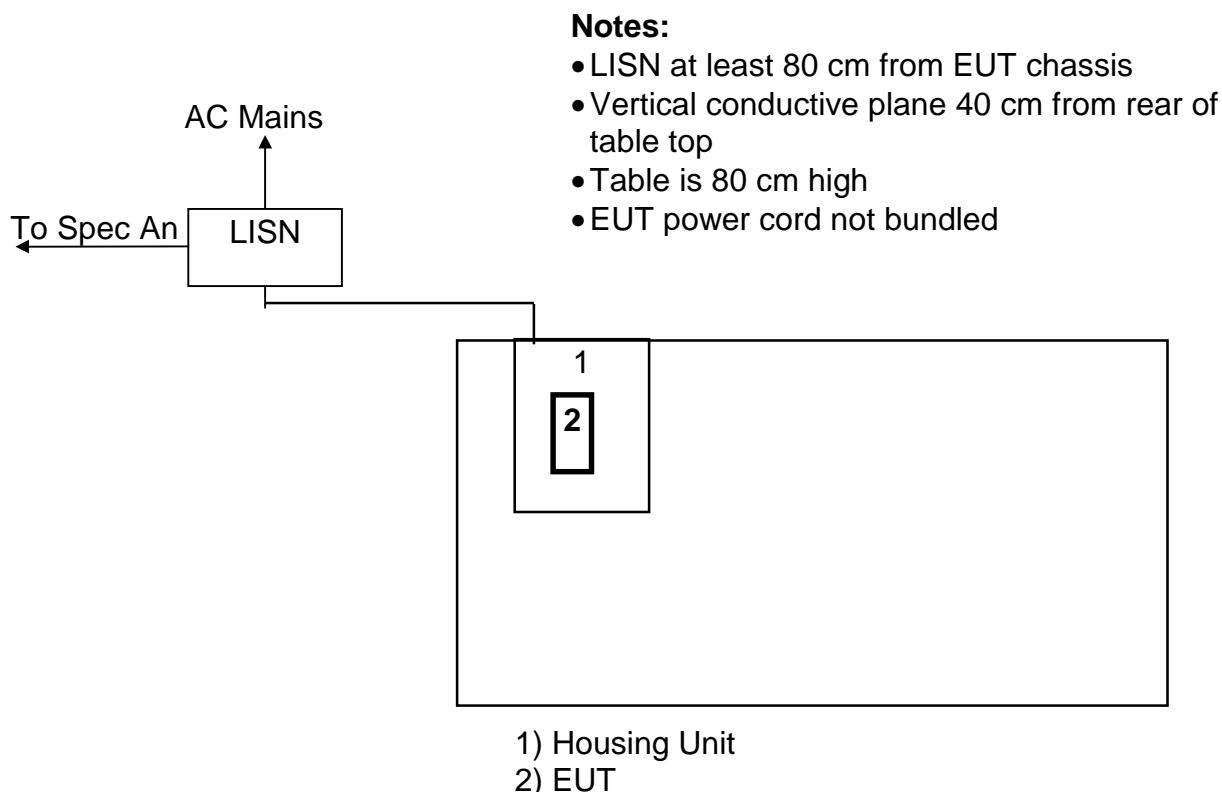
There were no special accessories used to achieve compliance.

### 2.3 Equipment Modifications

No equipment modifications were made to the EUT to achieve compliance.

### 2.4 Configuration of Tested Systems

**Figure 2.1 Configuration of Tested System**



### 3.0 Conducted Emission Data

3.1 The initial step in collecting conducted data is a spectrum analyzer peak scan and plotting the measurement range. Significant peaks are marked, then measured using a quasi-peak detector. The following represents the worst case emissions after maximizing.

IRIS M5

Line Tested	Freq. MHz	Analyzer Reading dBuV	Cable Loss dB	Strength of Signal dBuV	Limit dBuV	Margin dB
AC Hot	0.4607	41.4	0.1	41.5	48.0	6.5
AC Hot	3.854	39.4	0.1	39.5	48.0	8.5
AC Hot	12.54	39.7	0.2	39.8	48.0	8.2
Neutral	0.474	27.7	0.1	27.8	48.0	20.2
Neutral	0.535	27.5	0.1	27.6	48.0	20.4
Neutral	13.83	27.8	0.2	27.9	48.0	20.1

IRIS M-7

Line Tested	Freq. MHz	Analyzer Reading dBuV	Cable Loss dB	Strength of Signal dBuV	Limit dBuV	Margin dB
AC Hot	0.452	27.3	0.1	27.4	48.0	20.6
AC Hot	0.535	25.6	0.1	25.7	48.0	22.3
AC Hot	15.19	26.5	0.2	26.7	48.0	21.3
Neutral	0.475	40.7	0.1	40.8	48.0	7.2
Neutral	0.621	40.1	0.1	40.2	48.0	7.8
Neutral	3.175	39.4	0.1	39.5	48.0	8.5
Neutral	12.56	36.0	0.2	36.2	48.0	11.8

\* All readings are quasi-peak with a 9 kHz bandwidth and no video filter.

Judgment: Passed by 6.5 dB

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