

EMC Technologies (NZ) Ltd

Test Report No 81239.1

Report date: 22 December 1998

TEST REPORT

DOT-1100 18W PL-C Horizontal Luminaire

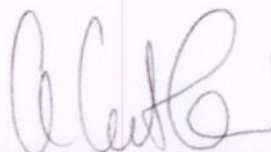
tested to the Specification

CISPR 15, EDITION 5, 1996

for

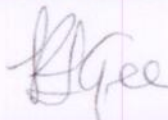
Nimbus Lighting Group Ltd

This Test Report is issued with the authority of:



Andrew Cutler - General Manager

Prepared By:



Keely Gee - Office Administrator



All tests reported
herein have been
performed in accordance
with the laboratory's
scope of accreditation

EMC Technologies (NZ) Ltd

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1. STATEMENT OF COMPLIANCE

The **DOT-1100 18W PL-C Horizontal Luminaire** complies with CISPR 15, Edition 5, 1996.

2. RESULTS SUMMARY

The results from testing the sample **DOT-1100 18W PL-C Horizontal Luminaire** are summarised in the following table:

Parameter	Result
Radiated Emissions 9 kHz - 30 MHz	Complies with a 20.0 dB margin at 23.88 MHz (Quasi-Peak) on Loop 1 and at 24.72 MHz (Quasi-Peak) on Loop 3.
Noise Terminal Voltage 9 kHz - 30 MHz	Complies. No significant emissions observed.

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3. INTRODUCTION

This report describes the tests and measurements performed on a sample of the **DOT-1100 18W PL-C Horizontal Luminaire** for the purpose of determining compliance with the specification.

The equipment test sample was selected by the client.

This report relates only to the equipment test sample.

This report does not contain corrections or erasures.

4. CLIENT INFORMATION

Company Name	Nimbus Lighting Group Ltd
Address	PO Box 12-535
City	Auckland
Country	New Zealand
Contact	Mr Michael Austin

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5. DESCRIPTION OF TEST SAMPLE

Brand Name	DOT-1100
Model Number	18W PL-C Horizontal
Product	Luminaire
Manufacturer	Unknown
Country of Origin	Unknown
Serial Number	3648

6. MEASUREMENT STANDARD, SETUPS AND PROCEDURES

Standard

The sample was tested in accordance with CISPR 15, edition 5, 1996.

Methods and Procedures

The measurement methods and procedures used were as follows:

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6.1 Description Of Terminal Disturbance Voltage Test Setup

Terminal disturbance voltage testing on the DOT-1100 18W PL-C Horizontal Luminaire was carried out over the frequency range of 9 kHz to 30 MHz. Testing of the Device Under Test (DUT) for conducted emissions was carried out at the laboratory's MacKelvie Street premises in a 2.4 m x 2.4 m x 2.4 m screened room.

The DUT was placed 0.8 m away from the artificial mains terminal network on the emissions test table which is 1 m x 1.5 m, and is 0.8 m above the screened room floor which acts as the horizontal ground plane and is 0.4 m away from the screened room wall which acts as the vertical ground plane.

The device was powered at 230 V AC from the mains.

The device was tested in the following mode(s) of operation: operating with an 18W fluorescent bulb as the load, after a 15 minute warm up period.

Measurement uncertainty with a confidence interval of 95% is:
- Mains terminal tests (0.09 - 30 MHz) ± 2.2 dB

6.2 Description Of Radiated Emissions Test Setup

Radiated emissions testing on the DOT-1100 18W PL-C Horizontal Luminaire was carried out over the frequency range of 9 kHz to 30 MHz.

Testing of the Device Under Test (DUT) for radiated emissions was carried out at the laboratory's MacKelvie Street premises in a 5.6 m x 9.6 m x 4.1 m screened room using a 2m Van Veen Loop.

The DUT was placed in the centre of the Van Veen Loop with each loop in turn being scanned between 9 kHz and 30 MHz.

The device was powered at 230 V AC from the mains.

The device was tested in the following mode(s) of operation: operating with an 18W fluorescent bulb as the load, after a 15 minute warm up period.

Measurement uncertainty with a confidence interval of 95% is:
- Radiated emissions tests (0.09 - 30 MHz) ± 3.0 dB

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7. TEST EQUIPMENT USED

Instrument	Manufacturer	Model	Serial No	Asset Ref
Measurement Receiver	Rohde & Schwarz	ESHS 10	828404/005	RFS 3728
Artificial Mains Network	Rohde & Schwarz	ESH 2-Z5	881362/032	
Spectrum Analyzer	IFR	A-7750		
2m Triple Antenna	Rohde & Schwarz	HM020	843885/004	
Measuring Receiver	Rohde & Schwarz	ESCS 30	839873/1	
Controller	Rohde & Schwarz	BG020	4024.1002.02	843542/004

8. ACCREDITATIONS

The tests were carried out in accordance with the terms of EMC Technologies (NZ) Ltd's International Accreditation New Zealand (TELARC) Accreditation to the New Zealand Code of Laboratory Management Practice incorporating ISO Guide 25: 1990 and ISO 9002: 1994.

All measurement equipment has been calibrated in accordance with the terms of EMC Technologies (NZ) Ltd's International Accreditation New Zealand (TELARC) Accreditation to the New Zealand Code of Laboratory Management Practice incorporating ISO Guide 25: 1990 and ISO 9002: 1994.

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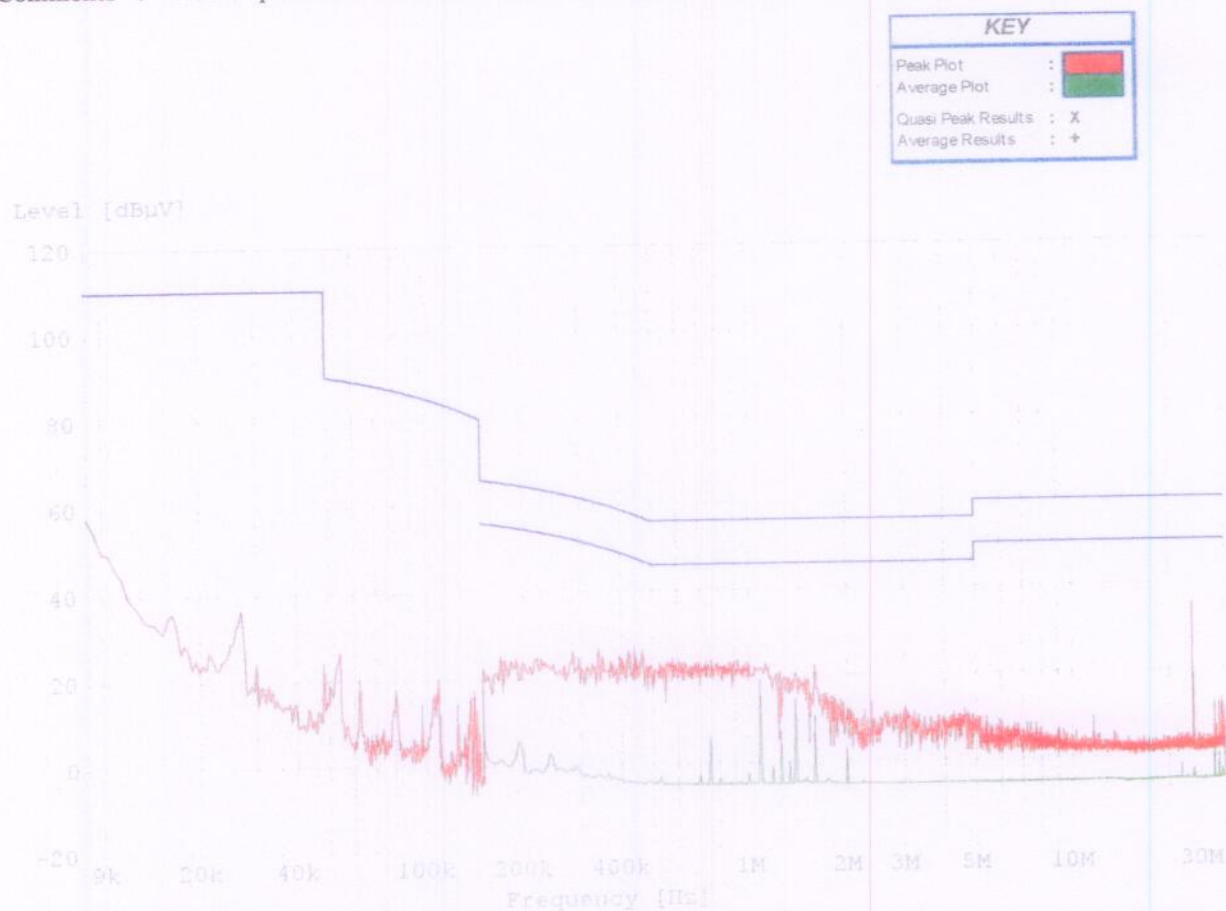
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9. RESULTS

Noise Terminal Voltage

Comments : Device powered at 230 volts with an 18W fluorescent bulb as the load after a 15 minute warm up.



Quasi-Peak Measurements

Frequency MHz	Level dBμV	Limit dBμV	Margin dBμV	Exceed	Phase	Rechecks dBμV
No Result Recorded						

Average Measurements

Frequency Mhz	Level dBμV	Limit dBμV	Margin dBμV	Exceed	Phase	Rechecks dBμV
No Result Recorded						

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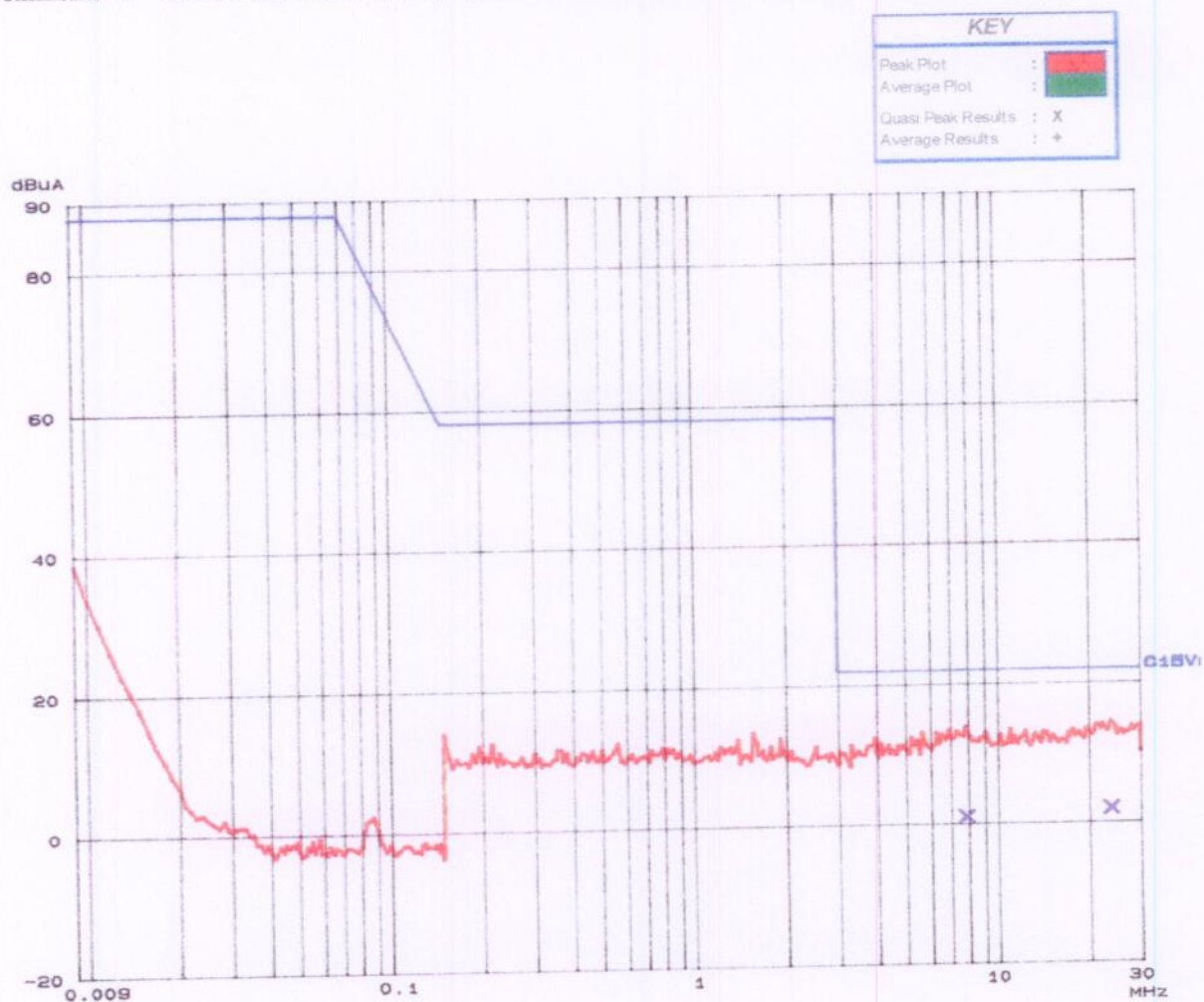
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Radiated Emissions

Comments : Device tested with an 18W fluorescent bulb as the load after a 15 minute warm up (Loop 1).



Date: 21 Dec 98

Final Measurement Results:

Frequency MHz	QP Level dBuA	Recheck	QP Margin dB
7.86000	0.9		-21.0
23.88000	1.9		-20.0

* limit exceeded

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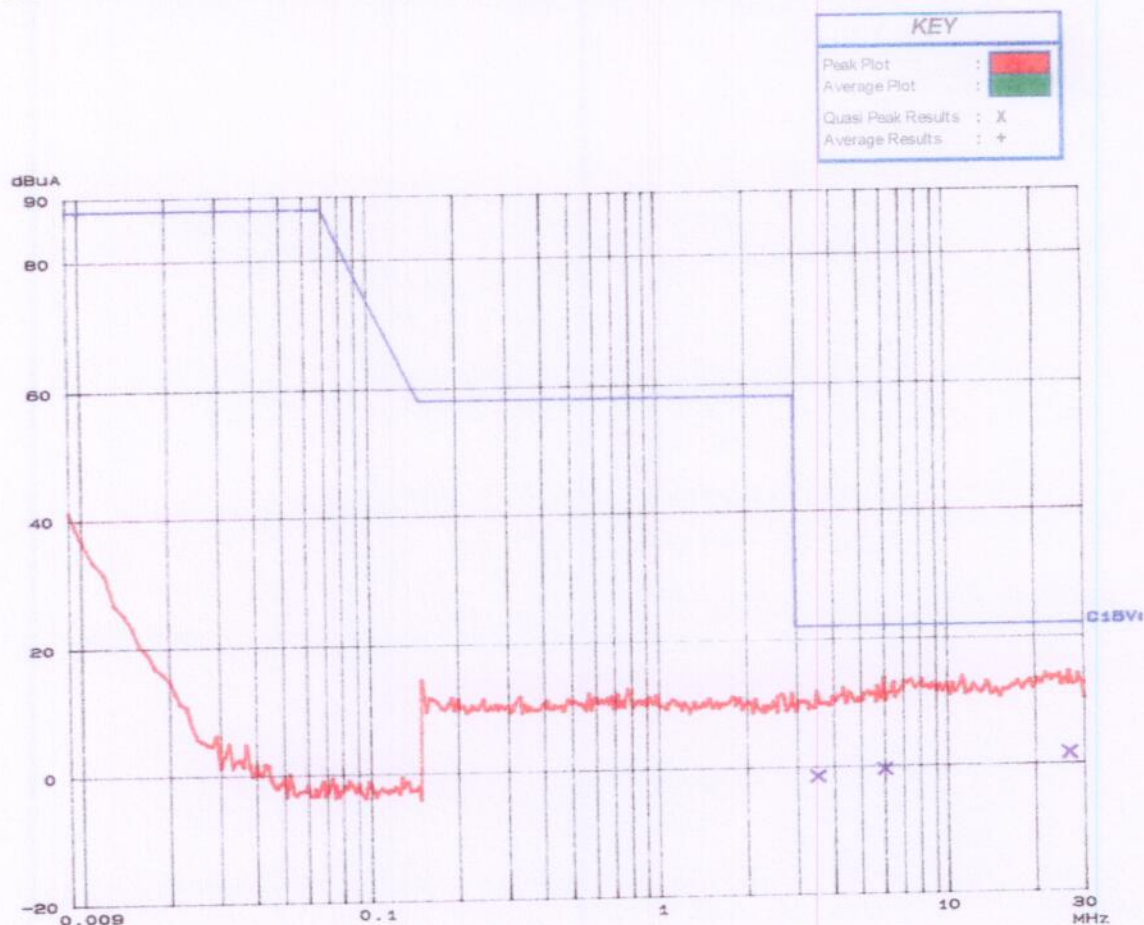
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Report date: 22 December 1998

Radiated Emissions

Comments : Device tested with an 18W fluorescent bulb as the load after a 15 minute warm up (Loop 2).



Date: 21 Dec 98

Final Measurement Results:

Frequency MHz	QP Level dBuA	Recheck	QP Margin dB
3.50000	-1.4		-23.4
6.00000	-0.5		-22.5
26.70000	1.5		-20.4

* limit exceeded

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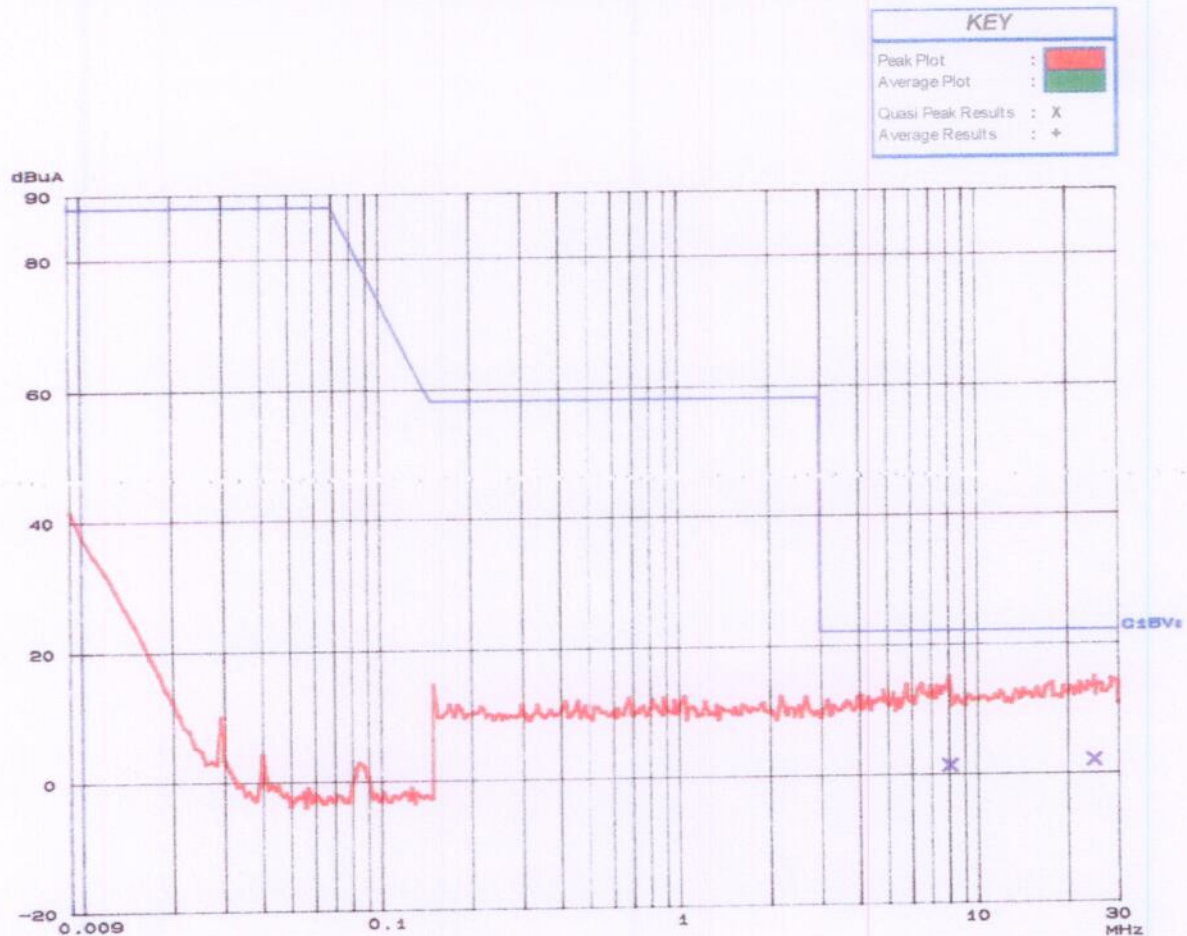
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Radiated Emissions

Comments : Device tested with an 18W fluorescent bulb as the load after a 15 minute warm up (Loop 3).



Date: 21 Dec 98

Final Measurement Results:

Frequency MHz	QP Level dBμA	Recheck	QP Margin dB
8.02000	1.2		-20.7
24.72000	1.9		-20.0
* limit exceeded			

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