



REPORT

Intertek ETL SEMKO

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3090086

Date: February 16, 2006

REPORT NO. 3090086CRT-001b

PHOTOMETRIC TEST OF ONE
LIGHT THERAPY LAMP

RENDERED TO

FULL SPECTRUM SOLUTIONS
712 EAST SOUTH STREET
JACKSON, MI 49203

DATA REQUESTED

The client requested electrical measurements, illumination tests, color rendering index, color temperature and chromaticity coordinates of a Light Therapy Lamp sample in accordance with selected ANSI Specifications and IESNA Test Measurement Guides.

AUTHORIZATION

This test service was authorized by signed quote number 19050999.

REFERENCE DOCUMENTS:

The following Illuminating Engineering Society of North American Test Guides were used in part or totally to test each specimen:

IESNA LM 58:
ANSI C82.1:

Guide for Spectrophotometric Measurements
Specifications for Fluorescent Lamp Ballasts and/or ANSI C82.11:
High Frequency Fluorescent Lamp Ballasts

DEVICES SUBMITTED

Intertek procured the test sample on January 23, 2006 in undamaged condition, and the sample was tested after the sample was seasoned. The sample designation is F3001Z.

DATES OF TESTS

February 6, 2006 through February 10, 2006.

An independent organization testing for safety, performance, and certification.

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EQUIPMENT LIST

<u>Equipment Used</u>	<u>Model Number</u>	<u>Control Number</u>	<u>Calibration Date</u>
Optroninc Spectroradiometer	OL750D	E288	Before Use
Intertek Two Meter Integrating Sphere	---	N308	Before Use
LaCroy Oscilloscope	9354AL	E310	02/24/05
UDT Illumination Meter	371R	L060	11/15/05
Fluke Multimeter	PM2425	M127	06/24/05
Optronic Spectral Irradiance Standard	FEL	F731	03/30/03
Xitron Power Analyzer	2502AH	E235	06/03/05

TESTS AND TEST METHODS

The electrical circuitry used in the measurements performed on each fluorescent lamp and ballast combination complied with the requirements stated in ANSI C82.2. The test sample, lamp, and light output were allowed to stabilize prior to making any measurements.

Lamp Current Measurement – High Frequency Ballast

The rated input voltage and frequency was applied to the test specimen under the specified load condition. The rms current was measured for each lamp using a current transformer connected to the Xitron Power Analyzer. The peak current was measured using current transformers connected to an oscilloscope. The current crest factor was calculated by dividing the maximum peak current by the rms current.

Color Measurements

Spectral irradiance measurements were conducted with an Optronic spectroradiometer at a distance where the illumination from the test sample was 10000 lux. Color rendering Index, color temperature and chromaticity coordinates were computed based on the spectral irradiance data.

Calibration of the spectroradiometer is traceable to the National Institute of Standards and Technology. The ambient temperature during the test was $77 \pm 5^{\circ}\text{F}$. The test sample was operated at 120 volts A.C. during the tests. The input electrical parameters to each unit were recorded by the Xitron Power Analyzer.

Sample Description

Type of Fixture: Light Therapy Lamp
Type of Light Source: Fluorescent Lamp – FT 55 DL
Type of Ballast: Electronic for two F72T12 HO Lamps
Number of Light Sources: Two

Checked by: 



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RESULTS OF TESTElectrical Measurements

Sample Designation	Input Voltage	Input Current (amps)	Input Power (watts)	Ballast Frequency	Lamp Current (Amps)	Current Crest Factor	Cathode Voltage	Cathode Current (Amps)
<u>Light Therapy Lamp</u>								
F3001Z	120.0	2.208	135.8	18.2kHz	-	-	-	-
Lamp 1	-	-	-	-	0.781	1.45	2.82	0.400
Lamp 2	-	-	-	-	0.790	1.48	5.20	0.400
Nominal Value	-	-	-	-	0.500	1.7 Max	-	0.760

Photometric and Spectrophotometric Measurements

Sample Designation	Illumination (Lux)	Color Temperature	Color Rendering Index	Chromaticity Coordinates	
				x	y
<u>Light Therapy Lamp</u>					
F3001Z	10000	4059k	75.00	0.382	0.393

CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:



David Ellis
Senior Project Engineer
Photometric Testing

Report Reviewed By:



Ernest Dykeman
Senior Project Engineer
Photometric Testing

Attachment: None