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08/10/10

Letter Report No. 100225182DAL-001  
Project No. G100225182

Cason Coplin  
EcoFit Lighting LLC  
8527 Bluejacket  
Lenexa, KS 66214

Ph: (913) 859-9449

email: ccoplin@ecofitlighting.com

Subject: Performance test of the LED Driver Model: D-2-240-525-63

Dear Mr. Coplin,

This letter concludes and represents the results of the performance tests of the above referenced equipment to the requirements contained in the following standards:

*IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits:1991 - IEEE C62.41.2 (Issued:2002/11/11)*

*Issue:2002/11/11 IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000 V and Less) AC Power Circuits - (IEEE C62.45 )*

This investigation was authorized by Cason Coplin, with PO, dated 09/15/10. Prototype sample(s), S/N 001 - 006 were received on and evaluated from 07/08/10 to 07/08/10 and tested at the Intertek Plano, Texas facility.

The following are the test results of the repetitive surge impulses applied to on your surge suppression device; the surge waveform is reference in the Surge Guide IEEE C62.41.2 and IEEE C62.45. The surge parameters were conducted via the instructions of an LSI representative. The following are the test observations.

Surge Waveform: Ring wave  
Phase Angle: 0°dgree  
Surge Voltage and Current: 6kV/500A

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot	Pass	Pass	--
2 <sup>nd</sup> Shot	Pass	Pass	--
3 <sup>rd</sup> Shot	Pass	Pass	--



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Surge Waveform: Ring wave  
Phase Angle: 90°dgree  
Surge Voltage and Current: 6kV/500A

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot	Pass	Pass	Pass
2 <sup>nd</sup> Shot	Pass	Pass	Pass
3 <sup>rd</sup> Shot	Pass	Pass	Pass
4 <sup>th</sup> Shot	Pass	Pass	Pass
5 <sup>th</sup> Shot	Pass	Pass	Pass

Surge Waveform: Ring wave  
Phase Angle: 270°dgree  
Surge Voltage and Current: 6kV/500A

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot	Pass	Pass	Pass
2 <sup>nd</sup> Shot	Pass	Pass	Pass
3 <sup>rd</sup> Shot	Pass	Pass	Pass

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New Samples

Surge Waveform: Combination waveform  
Phase Angle: 90°dgree  
Surge Voltage and Current: 10kV/5kA

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot (+ shot)	Pass	Pass	Pass
1 <sup>st</sup> Shot (- shot)	Pass	Pass	Pass
2 <sup>nd</sup> Shot (+ shot)	Pass	Pass	Pass
2 <sup>nd</sup> Shot (- shot)	Pass	Pass	Pass
3 <sup>rd</sup> Shot (+ shot)	Pass	Pass	Pass
3 <sup>rd</sup> Shot (- shot)	Pass	Pass	Pass



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New Samples

Surge Waveform: Combination waveform  
Phase Angle: 90°dgree  
Surge Voltage and Current: 10kV/5kA

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot (+ shot)	Pass	Pass	--
1 <sup>st</sup> Shot (- shot)	Pass	Pass	--
2 <sup>nd</sup> Shot (+ shot)	Pass	Pass	--
2 <sup>nd</sup> Shot (- shot)	Pass	Pass	--
3 <sup>rd</sup> Shot (+ shot)	Pass	Pass	--
3 <sup>rd</sup> Shot (- shot)	Pass	Pass	--

Surge Waveform: Combination waveform  
Phase Angle: 90°dgree  
Surge Voltage and Current: 10kV/5kA

Mode	L-N	L-G	N-G
1 <sup>st</sup> Shot (+ shot)	Pass	--	--
1 <sup>st</sup> Shot (- shot)	Pass	--	--
2 <sup>nd</sup> Shot (+ shot)	Pass	--	--
2 <sup>nd</sup> Shot (- shot)	Pass	--	--
3 <sup>rd</sup> Shot (+ shot)	Pass	--	--
3 <sup>rd</sup> Shot (- shot)	Pass	--	--

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Photos



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Summary:

After 6 surge impulses at positive 10kV and 6 surge impulses at negative 10kV there were not noted observations of the ballast nor is the LED being damage from L-N mode.

This letter report completes our evaluation covered by Intertek Project No. G100225182, If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact, Mrs. Melinda Jumperat (847) 439-5667.

Please note; this Letter Report does not represent authorization for the use of any Intertek certification marks.

Completed by: Title:	Javier Lozano Associate Engineer	Reviewed by: Title:	Shumphert Holbert II Project Engineer
Signature: Date	_____ 08/10/10	Signature Date:	_____ 08/10/10