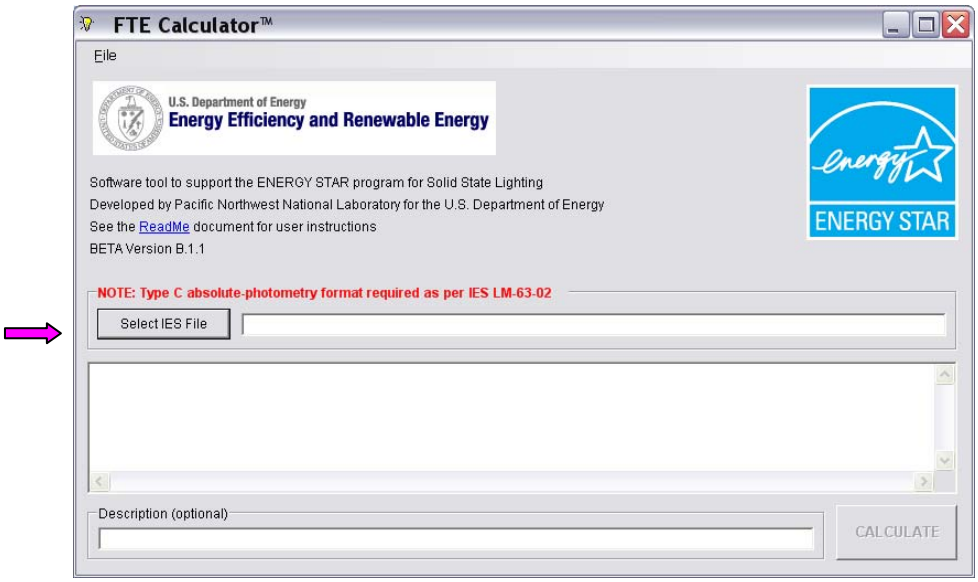
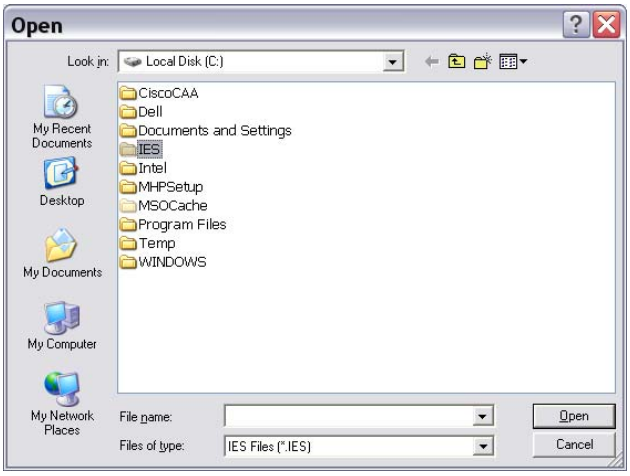
NOTE: As with any EXE file, the FTE Calculator won't run directly on Mac operating systems.

NOTE: <u>Before</u> opening an IES file in FTE Calculator, verify the following per IES LM-63-02:

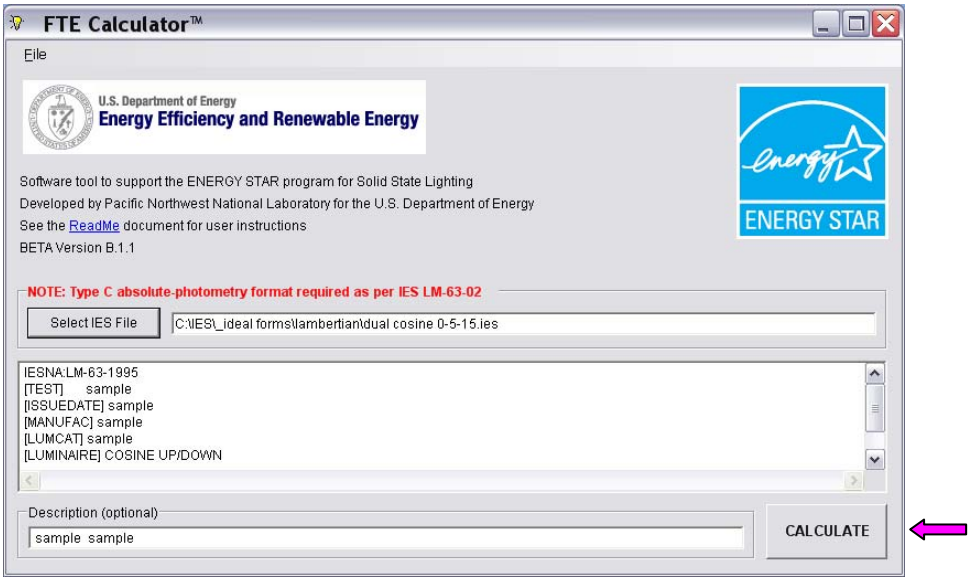
1. The value contained in <lumens per lamp> field is "-1" for absolute photometry, as required by ENERGY STAR and IES LM-79-08.
    a. *Contact the <u>manufacturer</u> if only relative photometry is offered. Although it is possible to modify an IES file using a simple text editor, such work should only be performed by the manufacturer, to ensure the resulting total lumen output (derived from the candela array) is appropriately scaled and accurately corresponds to the input wattage field.*
2. The value contained in <photometric type> field is "1" for Type C photometric web.
3. The value contained in luminaire <input watts> field is accurate.



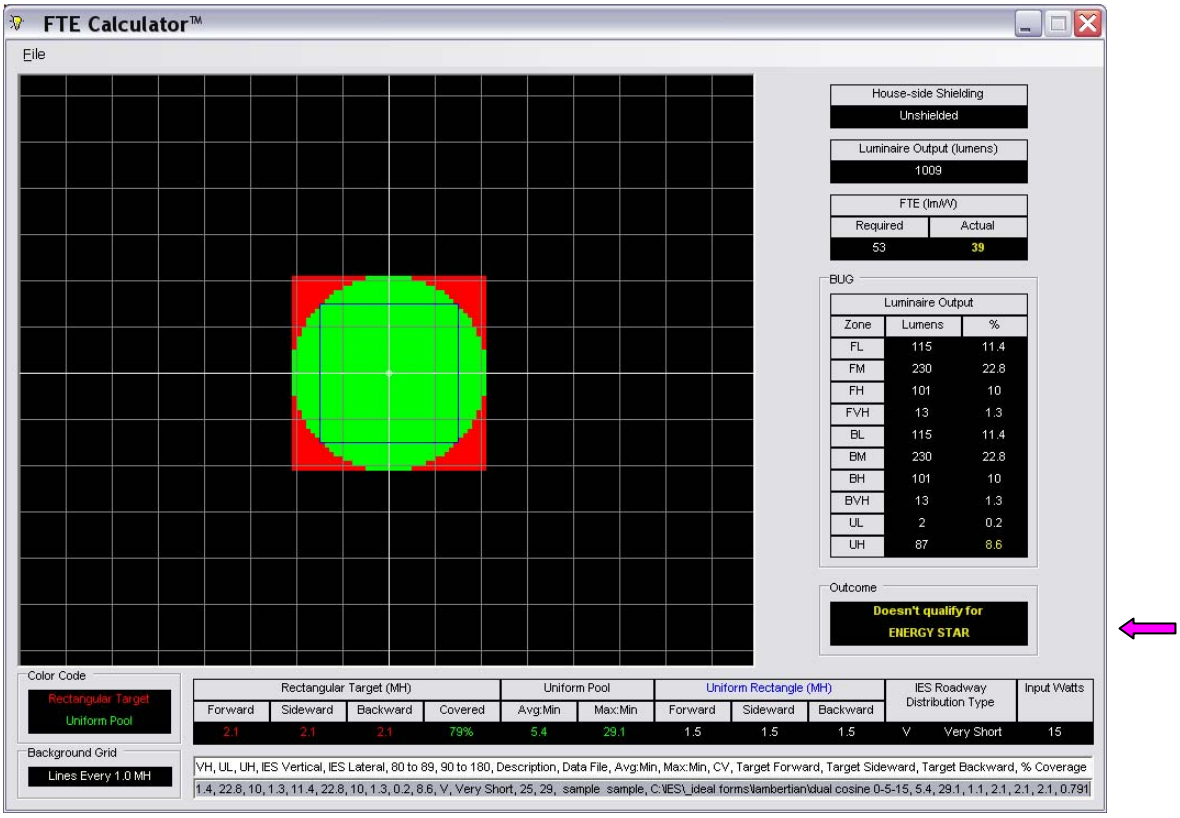
Shown above is a screen-capture of the FTE Calculator opening screen that would be seen after launching the EXE file. Click the button indicated by the magenta arrow to browse to your IES file.



Shown below is the opening screen after an IES file has been loaded. Hit the calculate button to evaluate the represented luminaire. The calculation may take a few seconds.

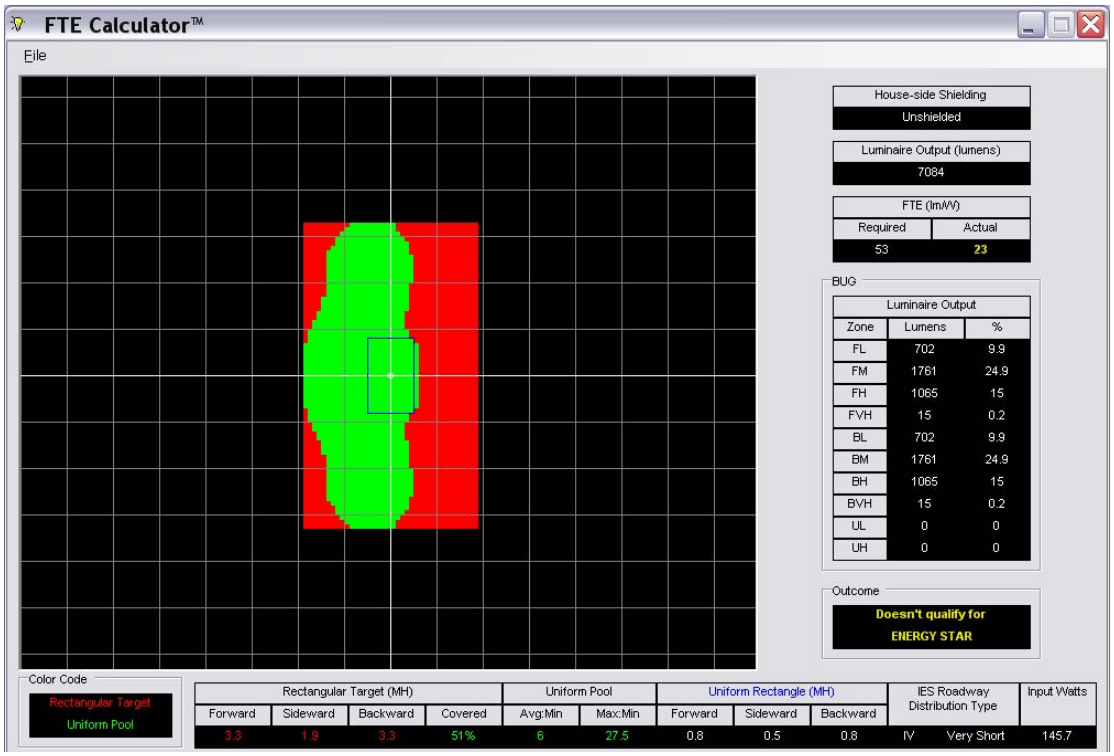


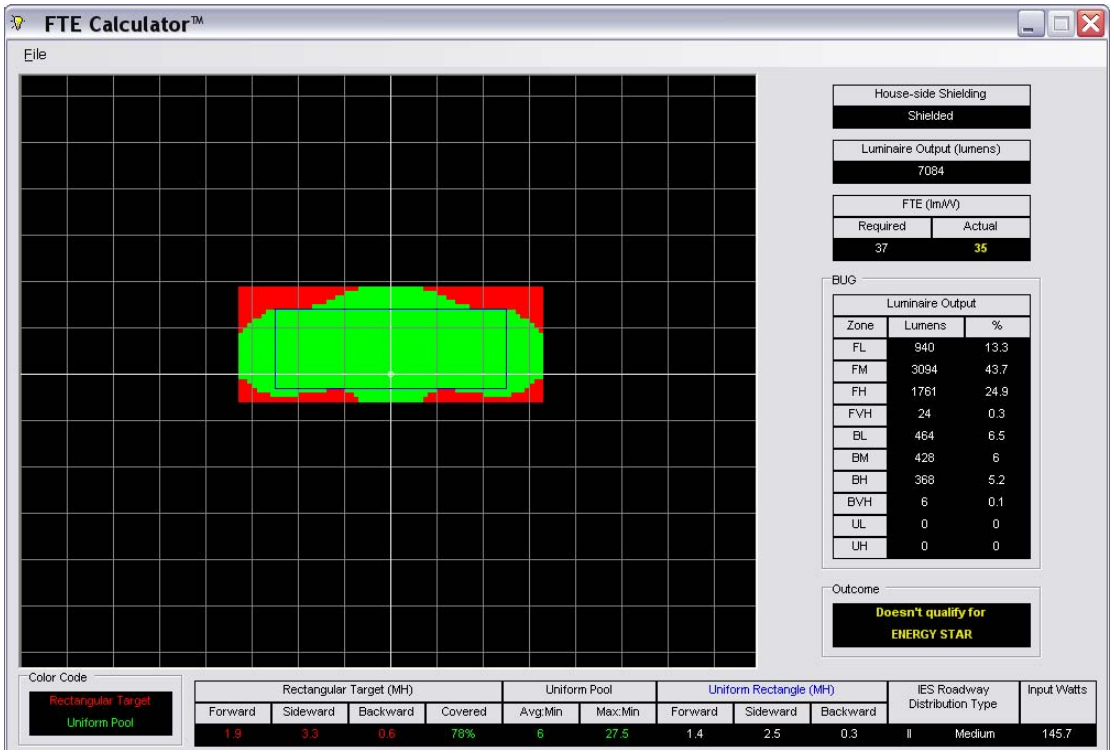
Shown below is the screen summarizing calculation results.



Essential metrics are shown to the right of the diagram. Text in yellow indicates non-compliance with ENERGY STAR requirements and restrictions. Additional descriptive information is provided above the diagram. Pass/Fail is indicated in the text box beside the bottom-right corner of the diagram. Additional files can be evaluated by closing this window and selecting another IES file. If desired, results can be exported to a comma-delimited text file (for importing into Excel) by copy-pasting from the two text boxes along the bottom of the window.

Sometimes IES files contain data that is not properly oriented per IES. The following two images show the effect of improper rotation on luminaire evaluation. Note the impact on FTE and BUG values and the classification changes. (Imagine a road running left-to-right just above the horizontal axis.)





The blue rectangle drawn within the Uniform Pool is supplemental to the IES Roadway Distribution Type and has no impact on FTE calculation. The dimensions shown allow for apples-to-apples comparison of FTE with luminaires having similar output and distribution. (More meaningful than IES Type alone.)

An overview of the FTE metric is provided at www.drintl.com/htmlemail/FTEoverview01Jul09.pdf.

The FTE calculation procedure is explained at www.drintl.com/htmlemail/FTEalgorithm01Jul09.pdf.

Please email fte.support@pnl.gov with any questions.