

Instabase - Manufacturers Guidelines

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Overview

Lighting Analysts software programs AGi32, ElumTools and Photometric Toolbox are designed to utilize a searchable database of photometric files supplied and maintained by the lighting industry's most prominent manufacturers. We call this collection pf product data the **Instabase**.

The Instabase provides a convenient platform for lighting professionals to obtain photometric data electronically for immediate use. The system is timely and intuitive making it a natural first choice for photometric decisions.

With Instabase, Lighting professionals always have access your latest photometric data. The Instabase is designed for search and query access across one or many suppliers, and as you will see in this document, how manufacturers prepare their data has a direct bearing whether their data appears in appropriate consumer queries.

The process of assembling the data and uploading to Instabase is straight forward with maintenance possible on your own schedule. Manufacturers are provided with a Supplier portal to the Instabase to view statistics relative to their product data usage.

Terms of Use

Using these Manufacturer's Guidelines means that you have agreed to <u>Lighting Analysts'</u> then-current *Terms of Use*.

Data formats

The Instabase utilizes the following data formats: IES (*.IES), EULUMDAT (*.LDT, *.EXL) or CIBSE TM-14 (*.CIB, *.TML). However, the Instabase query functions work most precisely using IES format data. The Instabase allows for queries based on IES keywords, custom search keywords (CSK's) and associated data which are not present in non-IES format data files. Queries for calculated metrics such as LCS or IES roadway classifications will function across all data formats. The construction of this document assumes the use of IES format data.

Organizing the data

The key to an effective data structure that is easy to navigate and search is its level of organization. Within the Instabase system, this means planning a coherent folder tree broken down by product line. This will require some planning on your part, although

nothing that can't be easily sketched out in a few minutes time. We recommend following the structure already used on your website as your customers are most likely familiar with it.

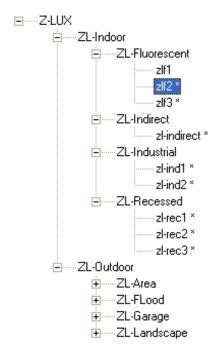
The amount of effort you put into naming folders, associating luminaire images, including keywords and organizing descriptive information in your photometric files will directly affect the level of customer satisfaction with your data.

Ingredients of a successful Instabase data structure:

- 1. The Folder Tree
- 2. Photometric Files (IES preferred)
- 3. IES Keyword Responses and Custom Search Keywords (CSK's)
- 4. Custom Luminaire Symbols (optional)
- 5. Luminaire Images (very important)
- 6. More Information URL File (InfoURL.txt, optional)

The Folder Tree

A folder tree is simply a folder containing other folders, which in turn may contain other folders. Folders at some level in the tree contain photometric files. When we refer to a folder tree containing your photometric data, it might look something like the fictitious data structure below.



In the Z-Lux data structure, the top node is created from a folder titled "Z-LUX".

Within the Z-Lux folder are two other folders, one titled ZL-Indoor and one titled ZL-Outdoor. Within the ZL-Indoor folder, there are four other folders titled: ZL-Fluorescent, ZL-Indirect, ZL-Industrial, ZL-Recessed.

Finally, within the ZL-Fluorescent folder, there are three IES files: zlf1, zlf2, zlf3, The zlf2 file is currently selected in the image shown.

In the case of the Z-Lux fictitious data, we have divided the tree into two main branches by application: Indoor luminaires and Outdoor luminaires. Each of these branches is in

turn broken down by application, or by luminaire type. In some cases, it may make sense to divide products by function, in others by source or application. Think of how users might browse through your data organization. It is often logical to mimic the organizational structure already presented to the public on your website.

It is best to keep your folder structure confined to a manageable number of branches or sub-branches. If customers must go too deep to reach the photometric files, they may find the database slow and inconvenient.

It is valuable when planning your folder structure to keep products similar in appearance contained in the same folder. If products are quite different in appearance, it will be more time consuming to match luminaire photographs and custom luminaire symbols with your database (more on this to follow).

The character string length limitation and restrictions

It is vital when planning your data structure to stay within Windows maximum character string length of 260 characters. This is the combined length of the data path from the root folder (C:\) to the end of your most deeply buried files. This applies not only your specific data path, it also includes the preceding folders on the end user's system when the files are downloaded. AGi32 places all downloaded Instabase files in:

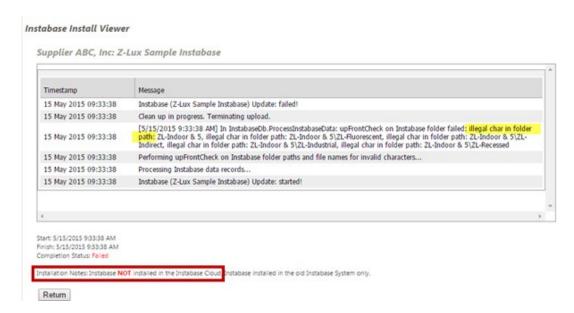
C:\ProgramData\AGi32\PhotometricData DownloadedFromCloud

For example, the following path is 116 characters (with spaces):

C:\ProgramData\AGi32\PhotometricData_DownloadedFromCloud\Z-Lux Sample Instabase\ZL-Outdoor\ZL-Landscape\Zl land2.ies

Bottom line: avoid extra-long folder names and/or filenames. It is best practice to avoid using spaces, commas, extra periods and other non-alpha-numeric characters in your file or folder names.

IMPORTANT! The following characters must not be used in any file or folder names: plus sign (+), single quote or apostrophe ('), hash or pound sign (#) and the ampersand (&). Any incidences found will cause your data structure to fail the build process. See the example below.



Photometric Files (IES preferred)

The standard file format for luminaire photometry in North America and much of the world is maintained by the Illuminating Engineering Society (IES). The technical document is titled LM-63 and the most recent version is dated 2002 (LM-63-02). It can be obtained electronically from www.ies.org. Every manufacturer should own a copy.

LM-63 version differences

Lighting Analysts software will read files in IES format as far back as the original release of LM-63 in 1986. However, early versions of the format were tolerant of untidy testing and reporting procedures that various LAI software will not permit (see 1995 version below). It is suggested that all manufacturers update their photometric file offerings to the 1995 release of LM-63 as an absolute minimum. If you want to ensure that your files operate flawlessly with all modern software programs, update them to the 2002 release of LM-63. Our software *Photometric Power Tools* can be a valuable aid here.

| LM-63 version | Summary | Major changes |
|---------------|--------------------------------------|----------------------------------|
| LM-63-1986 | Inaugural release. All data prior to | |
| | TILT= line is free form character | |
| | based, 80 chr. per line | |
| LM-63-1991 | First line in the file must be | 13 approved keywords, no custom |
| | IESNA91. Keywords added to text | keywords |
| | description (lines before TILT=). | |
| LM-63-1995 | First line in file must be IESNA:LM- | Custom keywords allowed with |
| | 63-1995. Keywords expanded. | underscore before keyword. E.G.: |
| | Definitions for shape of luminous | [_CUSTOM]. |
| | opening expanded. | IMPORTANT: Asymmetric Type C |

| | | luminaires MUST end at horizontal angle =360 and vertical angle=90 or 180. Type B photometric files MUST end at +90 on both horizontal and vertical angle. |
|------------|--|--|
| LM-63-2002 | First line in the file must be IESNA:LM-63-2002. Certain keywords now required. Changes and additions to luminous shapes. Lines can now be 256 chr. in length. | Keywords REQUIREDIES extension REQUIRED. 90-270 Horizontal reports no longer valid. Some luminous shapes changed from 1995: Circular, Sphere, Vertical Cylinder, Horizontal cylinder, Ellipse, Ellipsoid |

IES keyword responses and custom search keywords (CSK's)

The use of specific keywords is mandatory in LM-63-02. In LM-63-95, the specific keywords are "recommended". In either version, custom keywords MUST be preceded by an underscore. In the table below we show the mandatory keywords for LM-63-02 and what we would recommend for LM-63-95 compatibility.

| LM-63-02 | LM-63-95 |
|-----------------------|----------------------|
| Required keywords | Recommended keywords |
| [TEST] | [TEST] |
| [TESTLAB] | [DATE] |
| [ISSUEDATE] | [MANUFAC] |
| [MANUFAC] | [LUMCAT] |
| Recommended additions | [LUMINAIRE] |
| [LUMCAT] | [LAMPCAT] |
| [LUMINAIRE] | [LAMP] |
| [LAMPCAT] | |
| [LAMP] | |



IMPORTANT: It is HIGHLY recommended that all manufacturers provide concise and accurate descriptive keyword responses for all IES files.

Custom Search Keywords (CSK's)

Instabase provides users the ability to search for products of interest across multiple manufacturers. In order to ensure that your products are included in end user queries, the use of Custom Search Keywords (CSK's) is strongly recommended.

Current CSK's include:

[_SEARCH_SOURCETYPE]
[_SEARCH_APPLICATION]
[_SEARCH_MOUNTING]
[_SEARCH_CERTIFICATION]
[_SEARCH_CLASSIFICATION]
[_SEARCH_SP_RATIO]
[_SEARCH_CRI]
[_SEARCH_COLORTEMP]

The use of all CSK's is optional and you can pick and choose as you wish. As a minimum we recommend the use of "SOURCETYPE, APPLICATION, MOUNTING and COLORTEMP".

PDF describing CSK's

Inserting CSK's into your IES files can be done in bulk using our free software utility, the *Instabase Keyword Editor (IKE)*. See "Editing IES Files" below. This task can also be done using *Photometric Power Tools*.

Editing IES files (IKE utility)

With the previous sections in mind, you may find yourself faced with editing a large number of IES files to bring them up to standard with keywords and descriptions. There are tools to help you with this, beginning with our *Instabase Keyword Editor (IKE)*.

IKE can insert Custom Search Keywords for Instabase to increase the chances that your products are found by end user queries. IKE can be downloaded from Lighting Analysts website (link below).

Download IKE

Watch the videos on using IKE

Our software programs *Photometric Toolbox* and/or *Photometric Power Tools* will help you correct many photometric errors and make appropriate changes to migrate from different versions of LM-63. These can be a very useful tools when faced with upgrading old IES files.

While editing all your IES files may seem like a monumental chore, rest assured, the end users who must make sense out of your data will appreciate it. Most manufacturers will see the payback in terms of increased business. You would be surprised how many times we hear "I won't use their products as the data is poorly organized", or "their descriptive information is unintelligible".

Lastly, if you need assistance, we have access to consultants who can perform this task for you as a service. Contact info@agi32.com for a list.

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Luminaire Images

The use of product photographs in your data structure is optional but STRONGLY recommended. It will make your data structure much more informative allowing users to easily narrow their interests.

Format and Size

Instabase is designed to accept graphics files in JPG format. When the files are uploaded, they are converted to *Base64* images.

The optimum file size is 165 x 165 pixels for best display quality in AGi32. Smaller image sizes may be stretched and appear distorted. Files that are rectangular and not square will be located against the top or left edge of the picture area depending on aspect ratio.

We recommend you crop your images into a square aspect ratio using graphics software. Then resize them appropriately. This is a simple and easy process using most graphics software. DO NOT attempt to use large high resolution images in your data structure.

Image association with photometric files

Associating images with photometric files is most efficiently done on the folder level. You should organize your folders such that a single image can satisfy all of the photometric files contained within that folder. This is not an absolute requirement, but it is preferred.

To utilize a single JPG image for all photometric files in a single folder:

- 1. Place the image file in the folder.
- 2. Rename the image file to be identical to the folder name (retain the JPG extension).

As an example, consider a folder named "Mt_Elbert_Series". For an image in that folder to cover all photometric files enclosed, drop the image file in the folder and name it "Mt_Elbert_Series.JPG". The symbol name and folder name must be identical (not case sensitive).

If there are photometric files contained in a folder that should use a different image, or, you just want to associate an image with a single photometric file, this can be easily done. The disadvantage of course, is if you have many of these instances, you will end up with many image files in your data structure. To associate an image with a single photometric file, simply name the image exactly like the photometric file (keep the JPG extension).

Example: **12345.IES** and **12345.JPG**



IMPORTANT: The application of images is a cascading event. Once an image has been applied on the folder level, it will be associated with all files and folders beneath it in the tree unless another image has been applied on the folder or file levels below.

Custom Luminaire Symbols

While the creation of custom symbols for your products is completely optional, it can be a very nice touch for users when rendering, especially for unusual interior luminaires. We would recommend that manufacturers selling high-end interior products begin a process of creating and assigning custom symbols to at least some of your products. Historically, most manufacturers find their time spent in this area results in very appreciative customers and future sales.

Creation and implications

Creating custom symbols is much easier than you might think and can be done in AGi32 from existing tools, or by importing from SketchUp (using our free plugin), or 3D-CAD. Acceptable simple approximations can usually be made using a combination of AGi32 object types. Geometries imported from SketchUp and 3D-CAD might be beautiful but will most likely need major simplification. As a rule of thumb, the more surfaces contained within the symbol, the longer the radiosity calculations will take. A reasonable simplified approximation of the luminaire is preferred to an exact replica. NEVER attempt to use your mechanical designer's 3D models as AGI32 symbols! Also, keep in mind that exterior pole mounted luminaires seldom need custom symbols as they are very difficult to see in a rendering as most of the light is directed downwards!

For information on how to create custom luminaire symbols, please see the <u>AGi32 Help</u> system.

Symbol association with photometric files

When your symbols are named and located correctly, they will automatically gain association with the appropriate photometric files when used in AGi32. This not only makes your products appear more attractive in the rendered images, it can eliminate the question of symbol choice making end users more comfortable with your data.

Associating symbols with photometric files is exactly the same as JPG images and is most efficiently done on the folder level. You should organize your folders such that a single symbol can satisfy all of the photometric files contained within that folder. This is not an absolute requirement, but it is preferred.

To utilize a single custom symbol for all photometric files in a single folder:

- 3. Copy the symbol file as created from within AGi32 (*.SYM) and place it in that folder.
- 4. Rename the symbol to be identical to the folder name (retain the SYM extension).

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As an example, consider a folder named "Mt_Elbert_Series". For a symbol in that folder to cover all photometric files enclosed, drop the symbol file in the folder and name it "Mt_Elbert_Series.SYM". The symbol name and folder name must be identical (not case sensitive).

If there are photometric files contained in a folder that should use a different symbol, or, you just want to associate a custom symbol with a single photometric file, this can be easily done. The disadvantage of course, is if you have many of these instances, you will end up with many symbol files in your data structure.

To associate a custom symbol with a single photometric file:

- 1. Copy the symbol file as created from within AGi32 (*.SYM) and place it in that folder.
- 2. Rename the symbol to be identical to the photometric filename that the symbol is to be associated with (retain the SYM extension).



IMPORTANT: The application of symbols is a cascading event. Once a symbol has been applied on the folder level, it will be associated with all files and folders beneath it in the tree unless another symbol has been applied on the folder or file levels below.

Revit families

The Instabase system does not currently support families for Autodesk[®] Revit[®]. However, ElumTools has a compilation of generic families that can be used in your projects and matched with photometric data from the Instabase. See the <u>ElumTools Help</u>.

Information URL files

Instabase can work together with your website to create a richer information experience for the end user interested in your products through the use of "Information URL's". An Information URL is a dynamic link to a specific location in your website for additional information on the luminaire, or more powerfully, a web script that can point to literally any content on your site.



The More Information hyperlink in Instabase is displayed in the "Details" section.

Static InfoURL

NOTE: links used in this section are for illustration only and do not exist.

In its simplest form, the "InfoURL" is a simple static link to a website, for example: http://z-lux.AGi32.com/, or a specific location in the website: http://z-lux.AGi32.com/zl-industrial.htm. In this context, you might employ a unique InfoURL.txt file in each folder in your tree structure to point to a relevant location in your website for the files contained within that folder.

The *InfoURL.txt* file is an ASCII text file (*.txt) created using Notepad (or other text capable applications). Its name must always be: *InfoURL.txt* (although it is not case sensitive). The content of the static file is simply one line, the URL. For example: the URL to point to the Lighting Analysts website would be: http://www.lightinganalysts.com

Scripted InfoURL

A much more flexible and robust application of the *InfoURL.txt* file is to link it to a specific script on your webserver that will then route all traffic requests as they arrive. In this case, you need only one *InfoURL.txt* file located in the top most folder of the tree structure. The content of the *InfoURL.txt* file then contains a URL to point to the script name and location on your server.

Typical composition of a scripted URL:

http://z-lux.AGi32.com/Instabase

In this case, "Instabase" is the name of the script located at z-lux. AGi 32.com

In order to facilitate this action, Instabase will automatically send an extended URL to the script depending on where the focus point is in the database at the time the *More Information* link is selected. The script then needs only to point to an appropriate place in the website relative to the extended URL.

Typical extended URL sent by clicking the *More Information* link with the *Zlroad Lies* file selected:

http://z-lux.AGi32.com/photometrics.htm?Filename=Zlroad1.ies

In this case, the script should point to a web page with information relevant to the Zlroad1 luminaire.

Get Your Data Online!

This portion of the document assumes that you have completed the composition of your folder structure as specified in the previous sections.

Getting your data online requires you to use an FTP process to upload your folder structure. Get used to using FTP (if not already) as this will be your avenue for updating your data once online.

We recommend you use FTP client software. We recommend <u>FileZilla</u> (Note: we recommend you download only from the author's site: https://filezilla-project.org/).

Step 1 - Open an FTP client window

Using *Filezilla*, open the *Site Manager* and create an entry for the address: *sftp://suppliers.lightinganalysts.com*. Your *Username* and *Password* were sent to you when your account was created. If you do not have this information yet, complete the form and accept the Terms of Use on <u>Lighting Analysts website</u>.

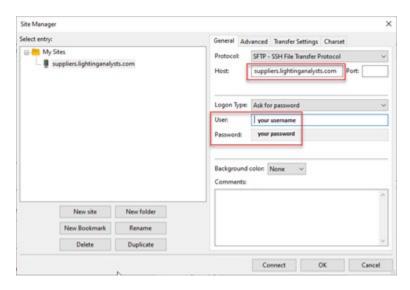
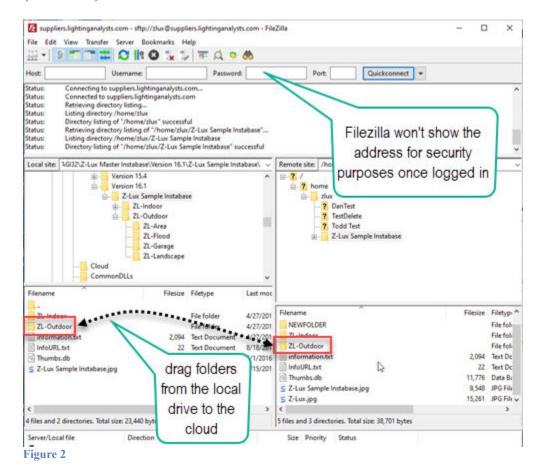


Figure 1

Step 2 - Drag and Drop your Data

New suppliers will upload their entire data structure the first time. Once the data is in the cloud, you don't need to update the entire database for each change. Instead, you will simply upload any files that have changed or are being added, as well as remove any obsolete files from the online version available via FTP.

<u>Using Filezilla</u>: Navigate to your master folder on your local drive in the left side window. Then drag and drop your folder structure (or any changes) from the left side to the right side as shown. The upload process will show in the lower portion of the window (not shown).



IMPORTANT Best Practice: Do not rename your data structure master folder for each update (DO NOT label with a new date for example). Using a new name will cause the data to become a new database online and will not overwrite the old data! It is preferred to use the original master folder name and simply make changes.

Step 3 – Log-in to the Instabase Portal

Once uploaded, open a browser window to: http://photometrics.lightinganalysts.com. Log in with your unique username and password (same as you used for FTP). Your account will come up as shown below.

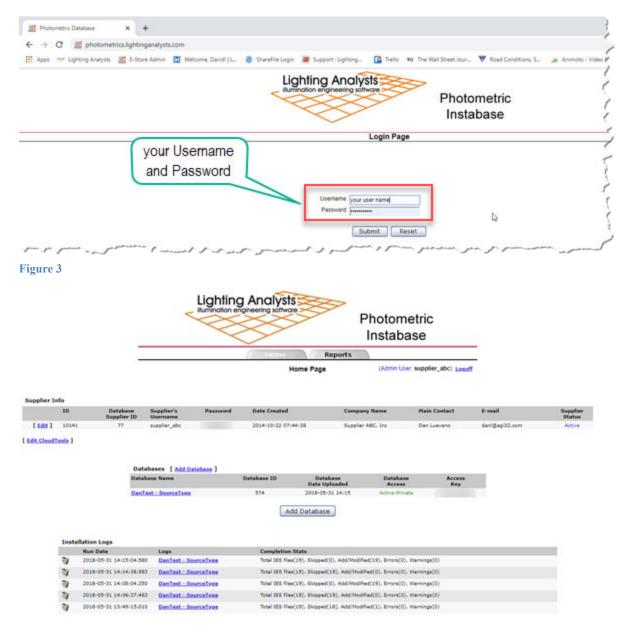


Figure 4

New Suppliers (first time)

If you are a new supplier and doing this for the first time, select the *Add Database* link or button (same function). See below for existing suppliers.

- 1. Select your newly uploaded data from the drop down menu as shown (figure 5).
- 2. Set the access to *Public* or *Private*. Public data can be seen by all users, Private data can only be seen by users that have created a User Profile in the Instabase system and have been given your private access code.
- 3. Click Submit button.

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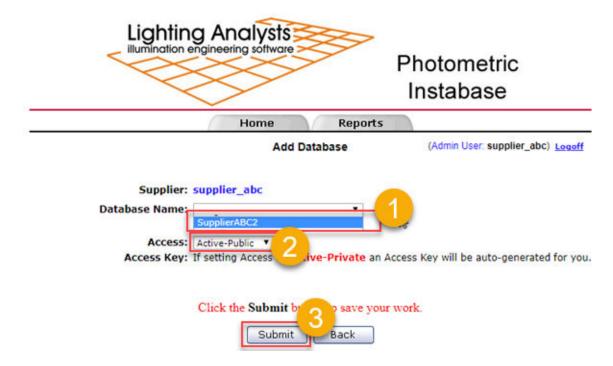


Figure 5

This process may take some time depending on the size of your data structure. Instabase will automatically resample oversize photographic images at this time to 165 pixels in the largest dimension. If there are problems creating your database, the following window will report them. Otherwise you will see a "Completed Successfully" message as shown below (figure 6).

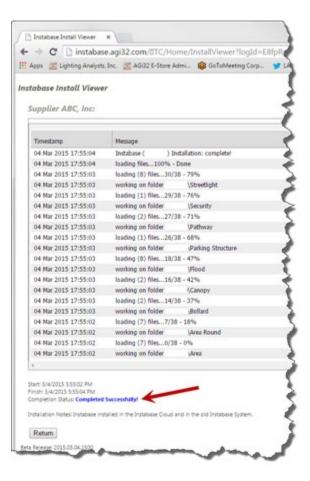


Figure 6

Updating your Data

If you are an existing supplier and modifying your existing database, click on the link for the database name in your list of existing databases (figure 7). If you have only one master folder structure, you should have only one database.

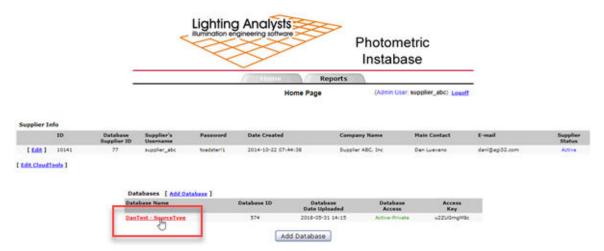


Figure 7

The Edit Database screen will appear (figure 8). From this screen you have several options:

- 1. Set the access to Public or Private. Public databases can be seen by all users, Private databases can only be seen by users that have created a User Profile in the Instabase system and have been given your private access code.
- 2. Set a Database Action:
 - a. The most common is to "Update existing database...". This should be your choice if you have only made changes to your existing data structure.
 - b. Update access keys for private databases
 - c. Delete databases
 - d. Rename your existing database
 - e. Export Photometric file links (URL's)
- 3. Click the Submit button

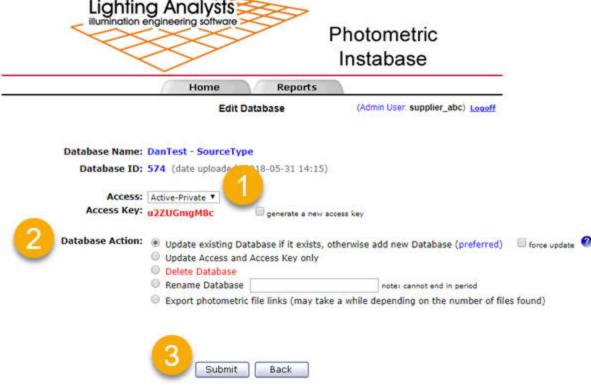


Figure 8

Once you have clicked the Submit button your database will be processed (figure 6). This can take some time depending on the size of your data structure. At this point, the entire database must be reprocessed for even a small number of changes.

Supplier Homepage

After processing click the return button, the screen shown below will appear. This is your Edit Supplier page. You can login to the Suppliers area of the Instabase anytime. Be sure to logout when you are finished making changes to your database files.

For additional information on the various reports available to track your data statistics, see the Supplier's Portal document. This document is attached to the Welcome email when Lighting Analysts establishes your supplier account.

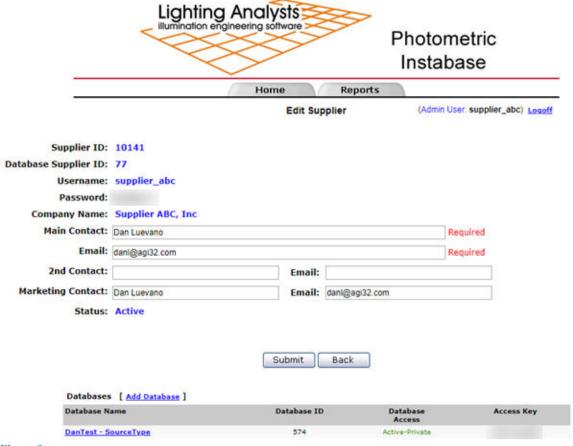


Figure 9

Step 4 - View your Data in Instabase!

View your data in the Instabase and tell all of your customers!

Start Instabase from within AGi32, ElumTools or Photometric Toolbox software programs, then click on the Select Manufacturers link as shown below. Select your database (and any others of interest) by checking and then clicking "OK" at the bottom of the dialog.

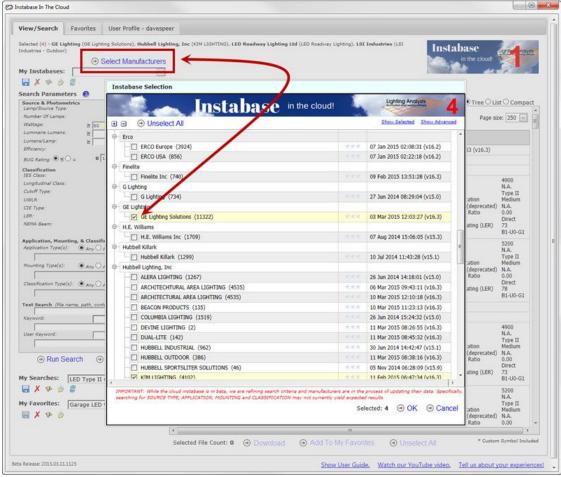


Figure 6

Use the search functions on the left side of the dialog to find IES files by performance metrics and Custom Search Keywords. Investigate files of interest using the "Details" links and checkmark the files for download when ready to use in your software.

Learn how to use the Instabase with this Overview video.

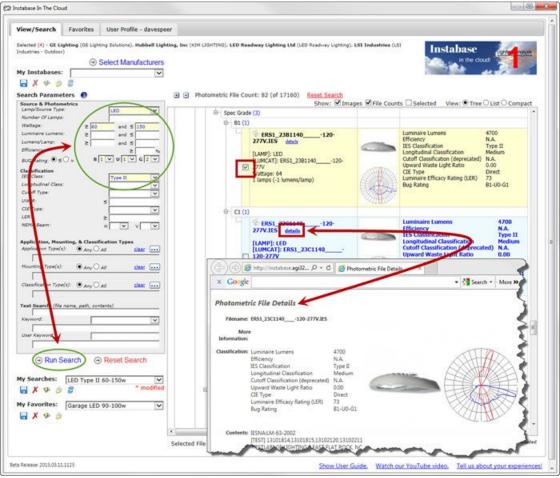


Figure 7

Need assistance? Please contact Lighting Analysts, Inc., Customer Care department email: supportreport@agi32.com.