

PERFECT LITE

LIGHTING DESIGN SOFTWARE

UPGRADE NOTES FOR VERSION 4.89

Released - March 2010
Revised - July 2010

1. INTRODUCTION

Version 4.89 (DOS component) contains changes that affect some of the modules in the package. Details of these changes are provided in the sections below.

As always, I am open to suggestions on future improvements, so if you have any please give me a ring on (07) 3275 2406, 0417 732 763 or send me an email.

Complete details on the range of software is on the Web at:

Home Page: www.perfectlite.com
Email address: support@perfectlite.com

2. PERFECT LITE MENU (DOS Application)

The first menu displayed when you start the DOS Perfect Lite software (Ple.exe) is shown below. The following sections detail the changes/enhancements to the various modules selected from this menu.

```
[ PERFECT LITE MENU ]
Program setup
Luminaire Library manager...
Exterior lighting design...
Zebra crossing lighting design
Upward Waste Light Ratio
Terminate Perfect Lite
```

2.1. Program setup

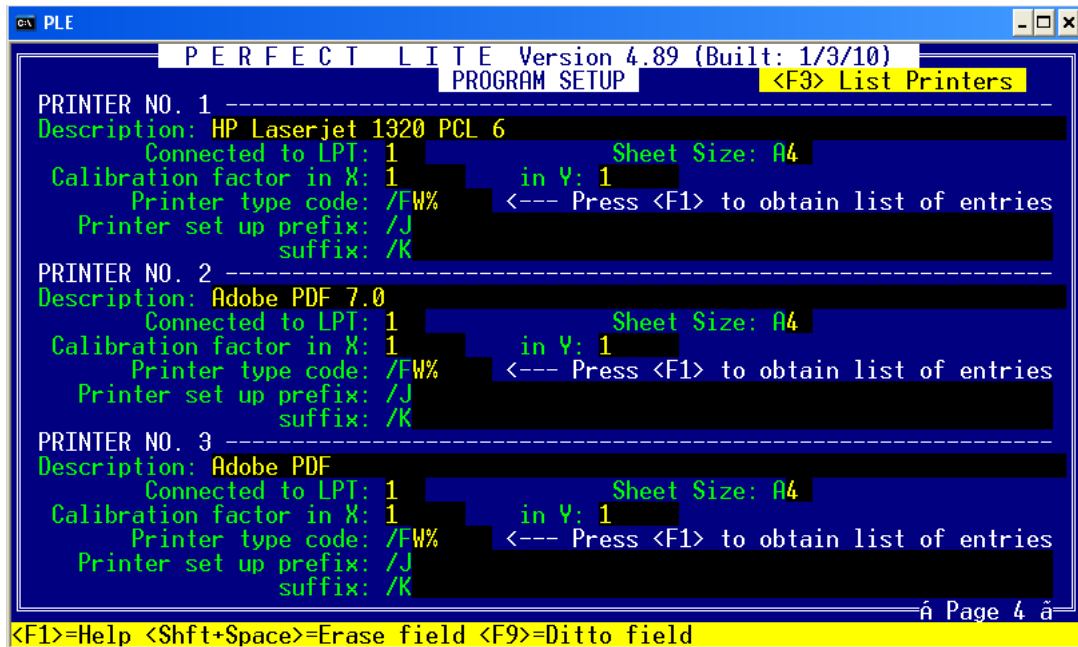
At the bottom of Page 2 there is now a field where you nominate your computer's **Operating System**. Use an **X** in the field unless you have Vista or Windows 7 then use a **V** (to invoke Vista/Windows 7 compatibility mode). Using a **V** will bypass the part in the **Exterior lighting design** module where you would normally view the isolux contours on the screen. Instead the program goes straight to the selection of outputting to the printer or DXF file etc. More details are available in Section 2.3 below.

Below is a snapshot of Page 2 of the input screens.



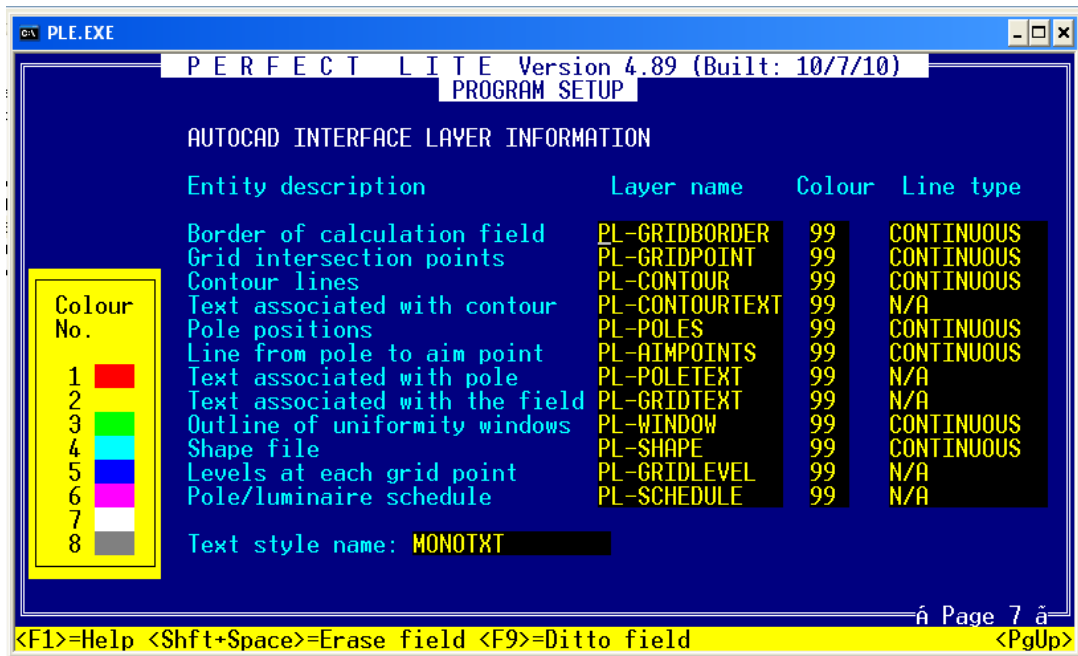
On Page 4, the field **Maximum Print width** has been replaced by **Sheet Size**. So now you nominate 4 for A4, 3 for A3 etc. rather than the number of characters across the printed sheet.

Below is a snapshot of Page 4 of the input screens.



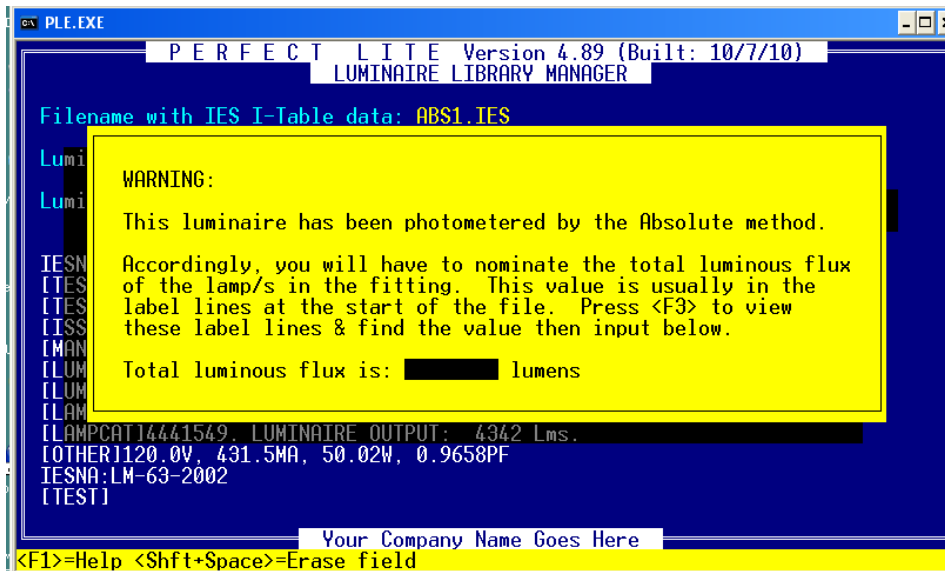
On Page 7, the **Layer name** lines can now be user defined.

Below is a snapshot of Page 7 of the input screens.



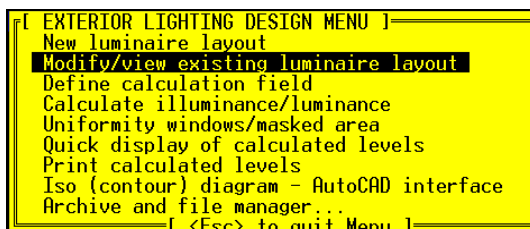
2.2. Luminaire Library manager

This module now supports reading Absolute photometry i-tables, although, a total luminous flux of the luminaire is required to be input. This value is usually contained within the label lines at the top of the i-table file. A screen like below will be displayed where you input the value.

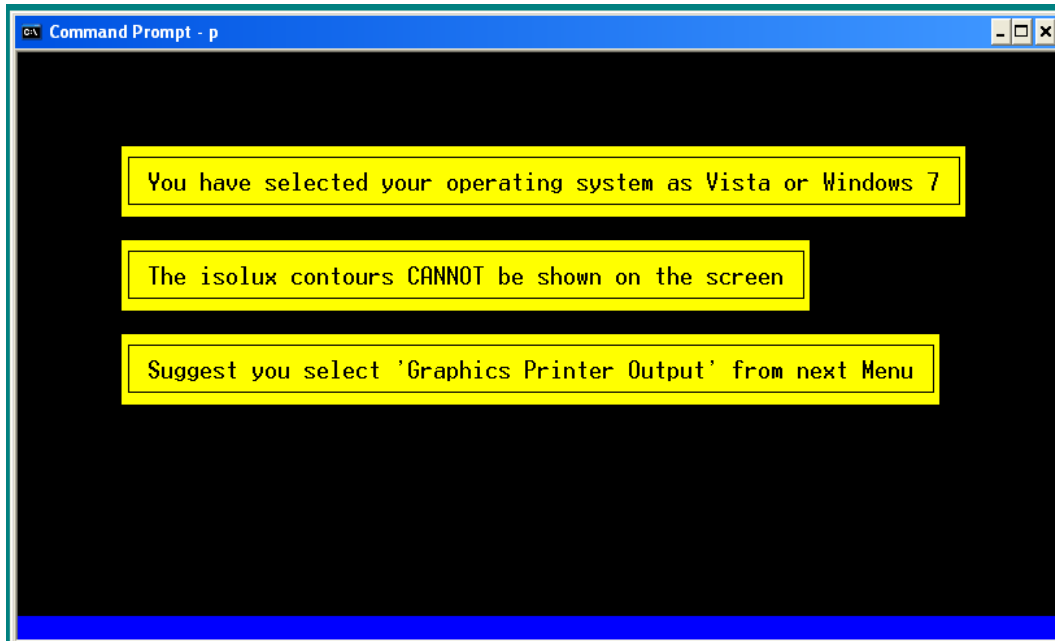


2.3. Exterior Lighting design

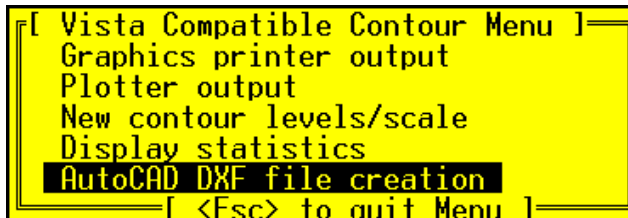
Below shows the Exterior Lighting Design Menu of version 4.89.



No significant changes have been made to this group of modules other than in the **Iso (contour) diagram – AutoCAD interface** selection when drawing isolux contours in Vista/Windows 7 compatibility mode, see Section 2.1. A screen such as below will now be displayed.



The menu below will be immediately displayed after pressing the Space bar on the above screen.



It is regretted that in Vista/Windows 7 compatibility mode the contours cannot be displayed on the screen. This is due to an incompatibility between DOS and Vista/Windows 7 internal screen management. However, it is still possible to view the contours as printed output or importing into AutoCAD via a DXF file. See Section 7 for another option to resolve this issue.

2.4. Zebra crossing lighting design

Late 2009 saw the long awaited revision to AS 1158.4 1987 by Standards Australia. Included were many changes applicable to both Australia and New Zealand. The new Standard seems to imply the use of asymmetric floodlights with a flat (horizontal) face. Previously used (symmetrical) floodlights (even with a louvre) will generally no longer comply due to a combination of glare, minimum illuminance & possibly UWLR. Using these types of floodlights (with higher than normal wattage lamps) aimed virtually straight down (or even backwards) can sometimes obtain compliance over the crossing zone. However, you must be aware that in these cases the illuminance in front of the crossing zone will be **far** in excess of what is on the crossing.

The Australian changes are summarised below:-

Australia

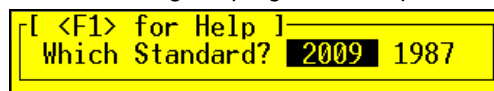
Lighting Category	Point Vertical Illuminance (E _{PV}) ⁽¹⁾	Glare Control at 90° ⁽¹⁾	Glare Control at 70° ⁽¹⁾	UWLR ⁽¹⁾
AS 1158.4-1987				
PX	45 lx ⁽²⁾	n/a	8000 cd	n/a

AS/NZS 1158.4:2009				
PX1	32 lx ⁽³⁾	0 cd	6000 cd	2%
PX2	32 lx ⁽³⁾	0 cd	6000 cd	2%
PX3	16 lx ⁽³⁾	0 cd	4000 cd	2%

⁽¹⁾ Maximum values ⁽²⁾ Initial values ⁽³⁾ Maintained values

- PX** one level applicable to all crossings in the earlier 1987 Standard
- PX1** Local or arterial road - Posted Speed Limit <= 60 km/h
- PX2** Local or arterial road - Posted Speed Limit <= 50 km/h (Traffic slowed)
- PX3** Local road (Traffic deterred)

Now onto using the program, a couple of new menu selections are available as below.

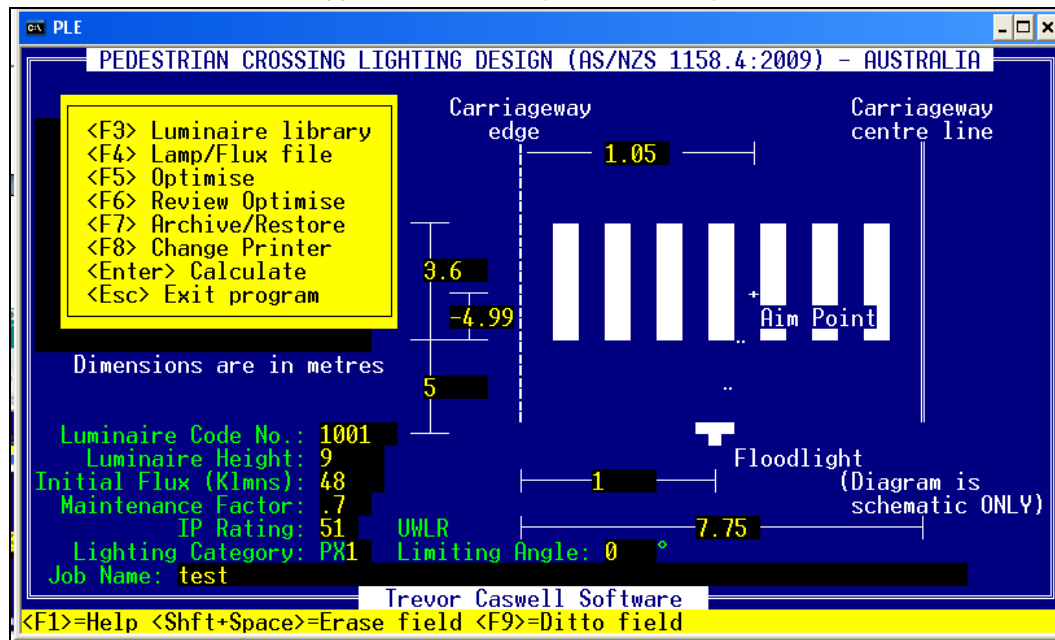


From the above you can still assess a crossing using the 1987 Standard, if required.



For the 2009 Standard selection, you can assess either to the Australia or New Zealand variations. Although, be aware at this point in time the New Zealand module is not available.

The screen below will then appear for Australia (2009 Standard).



Fields that have been added and/or changed since the last version of the software are:-

- Initial Flux (Klmns)** the Standard now refers to **maintained** illuminance levels over the crossing zone rather than initial. So the lamp flux value entered in this field, in combination with the next, results in the appropriate calculated levels
- Maintenance Factor** Enter an appropriate value here based on your maintenance cycle and lumen depreciation etc.. A value up to 0.8 can be used if the **IP Rating** of the luminaire is 6x or up to 0.7 if **IP Rating** is 5x

- IP Rating** Input into this field the IP (Ingress Protection) Rating of the selected luminaire. This value can be obtained from the respective luminaire manufacturer or associated product data sheet. A value between 50 & 59 or 60 & 69 is acceptable.
- Lighting Category** Enter a value of 1, 2 or 3 to signify PX1, PX2 or PX3 respectively and the appropriate limiting values will be used in the program for compliance checking
- UWLR Limiting Angle** Input into this field the highest upcast angle for the selected luminaire such that the Upward Waste Light Ratio (UWLR) does not exceed the limit set out in AS/NZS1158:2009, Table 3.2, which is currently 2%

2.5. Upward Waste Light Ratio

No changes applicable.

2.6. Terminate Perfect Lite

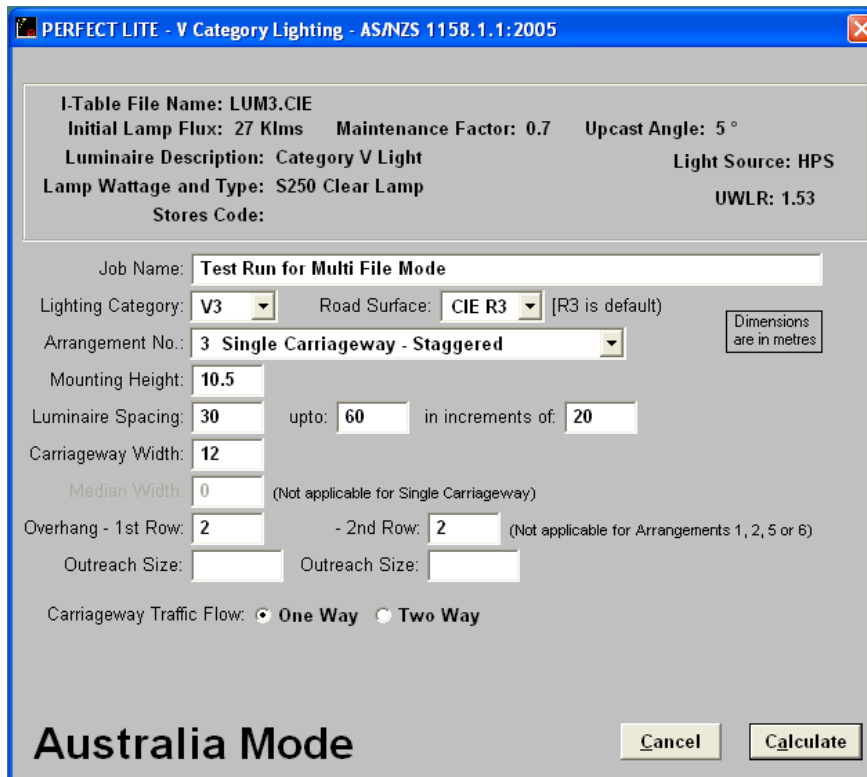
No changes applicable.

3. P CATEGORY LIGHTING (Windows Application)

Changes to this component of the software are still under development and will be released later in 2010.

4. V CATEGORY LIGHTING (Windows Application)

Only a minor change has been made to this component of the software. Two additional fields have been added to the calculation input screen named, **Outreach Size**. A text value can be input into each of these fields representing the actual outreach size giving the **Overhang** mentioned above it. N.B. The value in this Outreach Size field is for display purposes only, it is not used in the calculation process.



5. IESNA to CIE/SAASTAN CONVERSION (Windows Application)

This is an additional component to the Perfect Lite package and will need to be fully downloaded by most users. The software is used to convert photometric i-tables files in the IESNA format to the CIE/SAASTAN format suitable for use in the P Category & V Category software.

Operation of the software is relatively straight forward and is detailed in the respective user manual that can be downloaded from my website at: <http://www.perfectlite.com/manuals.htm>

6. CIE/SAASTAN to IESNA CONVERSION (Windows Application)

This is an additional component to the Perfect Lite package and will need to be fully downloaded by most users. The software is used to convert photometric i-tables files in the CIE/SAASTAN format to the IESNA format. IESNA formatted i-table files is required by some other lighting calculation software.

Operation of the software is relatively straight forward and is detailed in the respective user manual that can be downloaded from my website at: <http://www.perfectlite.com/manuals.htm>

7. AUTOLISP LIGHTING DESIGN INTERFACE (Windows Application)

This particular software, CEPLIsp, is the Perfect Lite Interface for AutoCAD that is designed and sold by Graeme Palmer of Constant Energy. It is an AutoCAD AutoLISP application that works using the Perfect Lite package within an AutoCAD drawing session to make lighting design a whole lot easier.

This software has been upgraded to Version 1.88.1 for compatibility with AutoCAD 2010. Upgrade packages are being issued to current licence holders by email. To request your upgrade package please send an email to wadello@gil.com.au with your name, business contact details and the text that appears when you run AutoCAD command **CEPLE**.

For further information please contact Graeme Palmer of Constant Energy on mobile 0412 982 133.

Trevor Caswell
Mob. 0417 732 763
July 2010