“CalcExpress” lighting calculation programme

CalcExpress is an online tool that allows you to approximately calculate the number of luminaires required for square rooms. It allows simple regular arrays of luminaires.

The calculation is based on room size, mounting height and the height of the working plane as well as on the illuminance level required on the working plane.

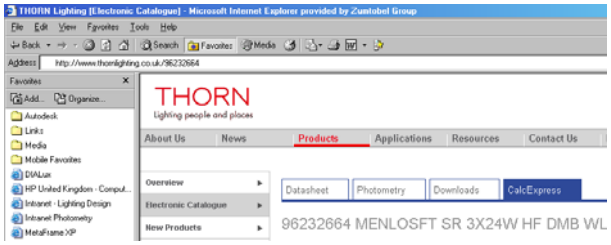
You may also specify either the illuminance to find the number of luminaires or the number of luminaires to get an assessment of the average illuminance level obtained.

CalcExpress calculates the light output according to lumen method.

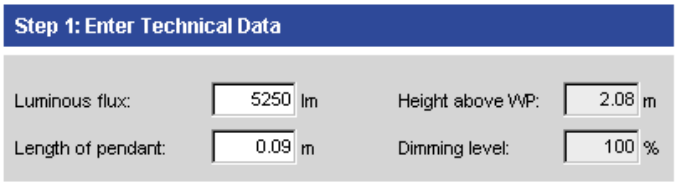
To find out the number of luminaires required for you chosen luminaire:

1. Navigate through the Thorn Website to find the luminaire you require (you can do this by typing the 8 digit SAP code in the explorer address bar eg. http://www.thornlighting.co.uk/96232664)

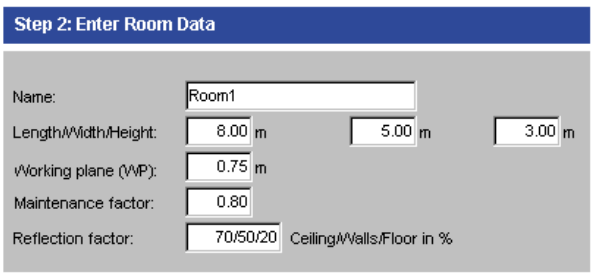
2. Click on the CalcExpress tab and the interface opens.



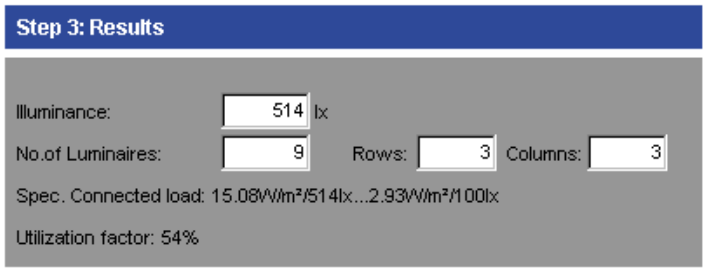
3. The calculation will show an initial result. The luminaire data is filled in by our database but can be adjusted if required.



4. In the Room data section of CalcExpress enter room size, height of the working plane, the reflection factors for the room surfaces and the maintenance factor value into the corresponding entry fields.



5. In the Result section at the bottom of the window, enter a value into the entry field for the average illuminance level required.



6. The number of luminaires required and their distribution to luminaire rows and columns will be shown in the Result section and as a graphic representation, the connected load is also shown in W/m^2 and W/m^2/100lux.

To find out the illuminance from a number of luminaires chosen by you, complete steps 1-4 above then:

5. In the Result section at the bottom of the window, enter the number of luminaires you require either in total or by changing the numbers of rows or columns in the relevant field.
6. The average illuminance will be shown in the Result section and the graphic layout updated.

When you are happy with your result, add the project description and any other relevant data into the Description field at the bottom of the CalcExpress page.

To Print the calculation

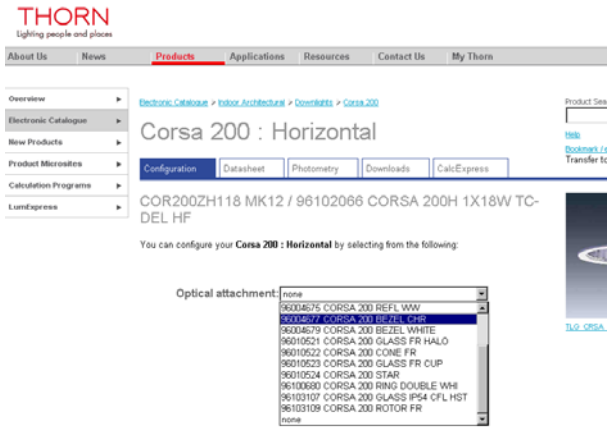
Click the “View results as pdf” link to obtain the results of the calculation including the product data sheet as a pdf.

Performing another calculation

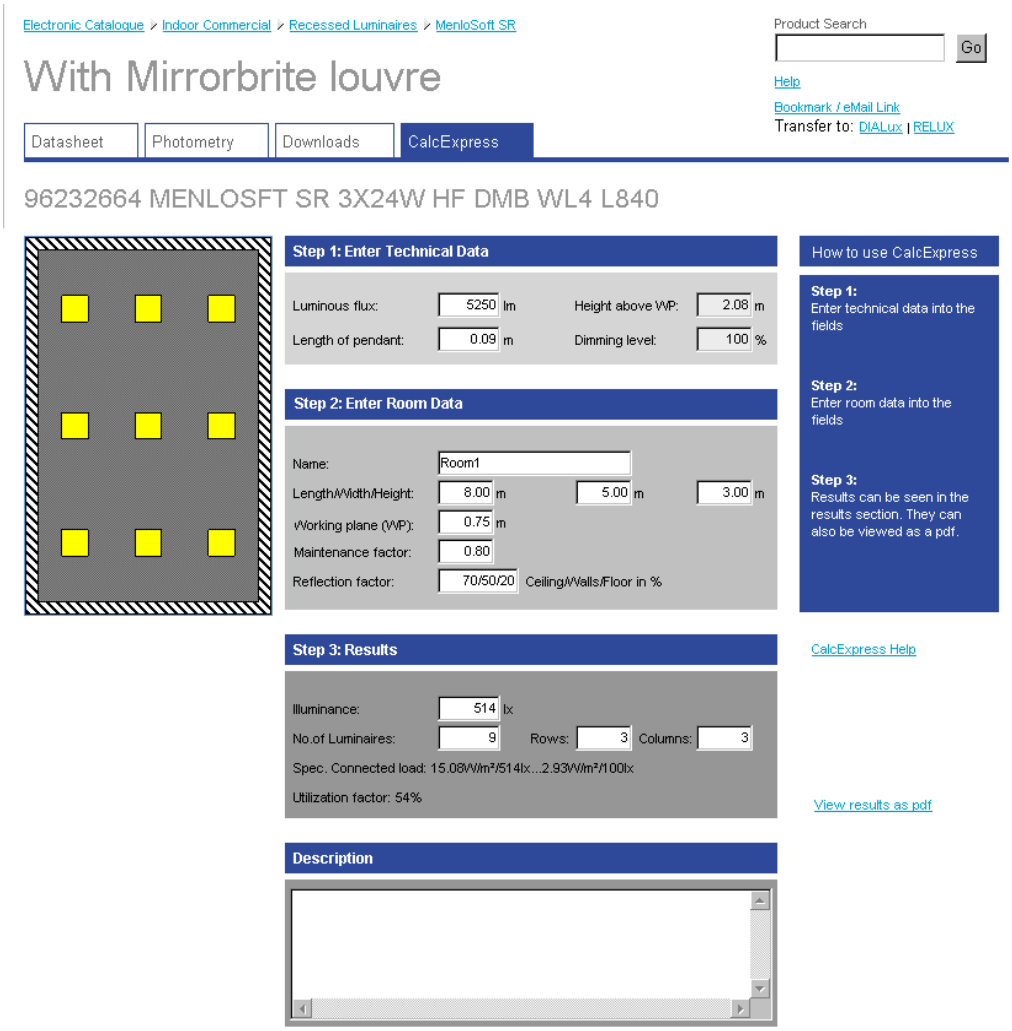
To base your calculation on a new luminaire, you could either use the product catalogue or the explorer navigation bar.

Luminaires with a selection of attachments

Not only basic luminaires, but also those with attachments may be used for calculation purposes. The luminaire attachment is chosen via the Configuration tab. Then select the CalcExpress interface as before to display and calculate the basic luminaire plus attachment.



The complete CalcExpress page:



Luminaire data section:

In the Luminaire data section, data is entered automatically.

If a dimming is available for the selected luminaire then the Dimming field is enabled.

Room data section:

Here, the room title can be specified and will appear as a heading when the pdf is printed.

Result:

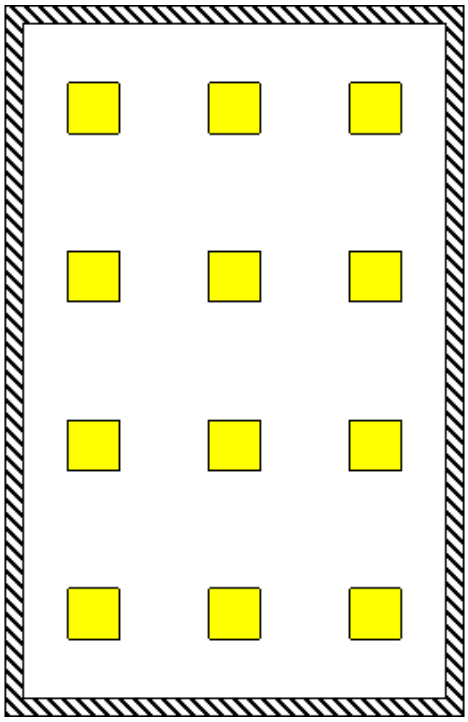
You may edit the fields indicating illumination level, number of luminaires, rows and columns.

Description:

This text will appear as a heading when the pdf is printed. (An example of the output follows).

THORN

Room1



Average illuminance:		**685 lx**
Direct:		565 lx
Indirect:		120 lx
No.of Luminaires:		**12 Pieces**
Total luminous flux:	Dimming level: 100 %	63000 lm
Total power:		804.0 W
4 luminaire rows each with 3 luminaires		
Longitudinal spacing:		2.000 m
Transverse spacing:		1.667 m
Luminaires / m2:		0.300 Pieces
Height above WP:		2.083 m
Length of pendant:		0.085 m
Spec. Connected load:		20.10 W/m²
Connected load:		2.93 W/m²/100lx
Utilization factor:		54 %

Dimensions: Length=8.00 m; Width=5.00 m; Height=3.00 m; Working plane (WP)=0.75 m; A=40.00 m²; Room index=1.48
Reflection factor (Ceiling / Walls / Floor): 70 % / 50 % / 20 %
Maintenance factor: 0.80
The original value of the installation is based on a 1-year maintenance interval and high-purity rooms. In order to keep the maintenance value of illuminance, it is recommended to replace faulty lamps immediately and to clean the luminaires regularly.

No.	Pieces	Order No.	Designation
001 Luminaire	12	96232664	MENLOSFT SR 3X24W HF DMB WL4 L840

You can find more product information quickly and easily via the Internet in the Thorn Product Catalogue (includes product photos, descriptions and photometric data etc.). Open your Internet browser and enter the following link in the address bar:

http://www.thornlighting.co.uk/96232664

MenloSoft SR

96232664 MENLOSFT SR 3X24W HF DMB WL4 L840

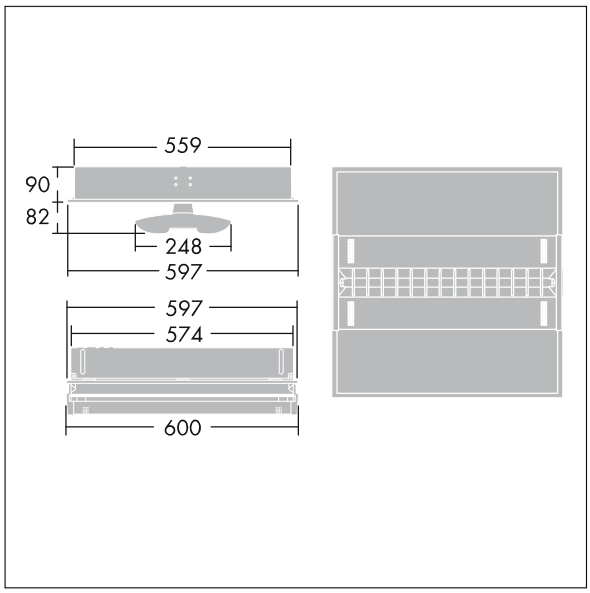
G5	24W T16	F	IP20	Ta 0 +25	⏚	CE	850°C

A recessed luminaire with a slim suspended optic which blends upward and downward light for a simple, attractive solution to perfectly balanced office lighting

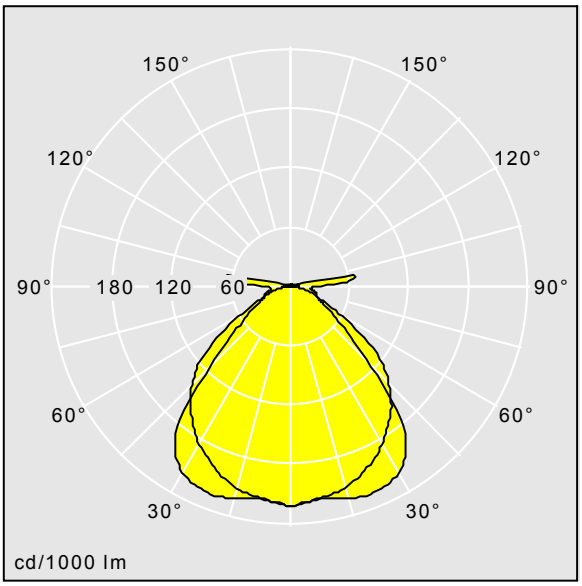
Semi-recessed luminaire for 3 x 24W T16 lamps with electronic - fixed output circuit. White painted steel body and reflectors. Suspended optic with central aluminium louvre in mirrorbrite finish, micro-perforated white lacquered wings and white polycarbonate endcaps. Lays into 15 or 24mm exposed grid ceiling systems and can be installed into concealed fix ceilings with mini-wedge suspension brackets (supplied). Electrical connection via factory fitted 4 pole GST male connector. Complete with 840 lamp(s).

Dimensions : 600 x 597 x 172 mm
Total power : 67 W
Weight: 8.4 kg

TLG_MNLO_F_SRMB1.jpg



TLG_MNLO_M_SRLD1.wmf



TLG_SP_r0034195.ldt

Lamp position:STD - standard
Lamp:T16 24W
LOR: 0,61 ULOR: 0,06 DLOR: 0,55