

## K311/312

Installation : CPP Summer Works

Project number : 1059CLN  
Customer : Simon Wheeler @ Vickery Holman  
Processed by : Chris Norsworthy  
Date : 03.07.2017

### Project description:

I have carried out calculations as per your instructions and guidance. Please check and confirm all details are correct. All areas have been assumed as being open plan without any obstructions above the working plane. Please be aware of L2 requirements and check that conformity has been met where required. SBEM calculations are the responsibility of the contractor.

If our design has been submitted with emergency lighting coverage, it was designed as a service to provide an overall illuminance in line with current emergency lighting recommendations, but to be strictly in line with guidelines, other factors need to be considered including, but not limited to,

- Any change of direction requires emergency lighting consideration.
- Any change in floor levels (Including a step or ramp) requires additional consideration.
- Any fire-fighting equipment (Hoses or extinguishers) needs additional consideration.
- Any fire assembly areas require additional considerations.
- All fire call points require additional consideration.
- Exit routes need extra considerations.

We have not carried out a risk assessment for emergency lighting on the site. We accept no responsibility for current requirements that under HSE and fire regulations are the responsibilities of the 'Responsible Person' or management of the site owners or operators. The emergency scheme must be checked and confirmed with a local building/fire control officer and ultimately approved by the owner of the building.

We have used common design parameters in order to carry out all our calculations and if any divergences that are not accepted, please contact us in order for re calculations to be carried out prior to an order. Please ensure that this lighting scheme complies with all requirements, and if further details/ calculations are required please contact us on the above number. Final quantities are to be confirmed prior to an order/installation.

Whilst every effort will be made by Fitzgerald to adhere to the written or product specification, it is always the responsibility of the customer to ensure that any scheme, specification or product satisfies the end users requirements.

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

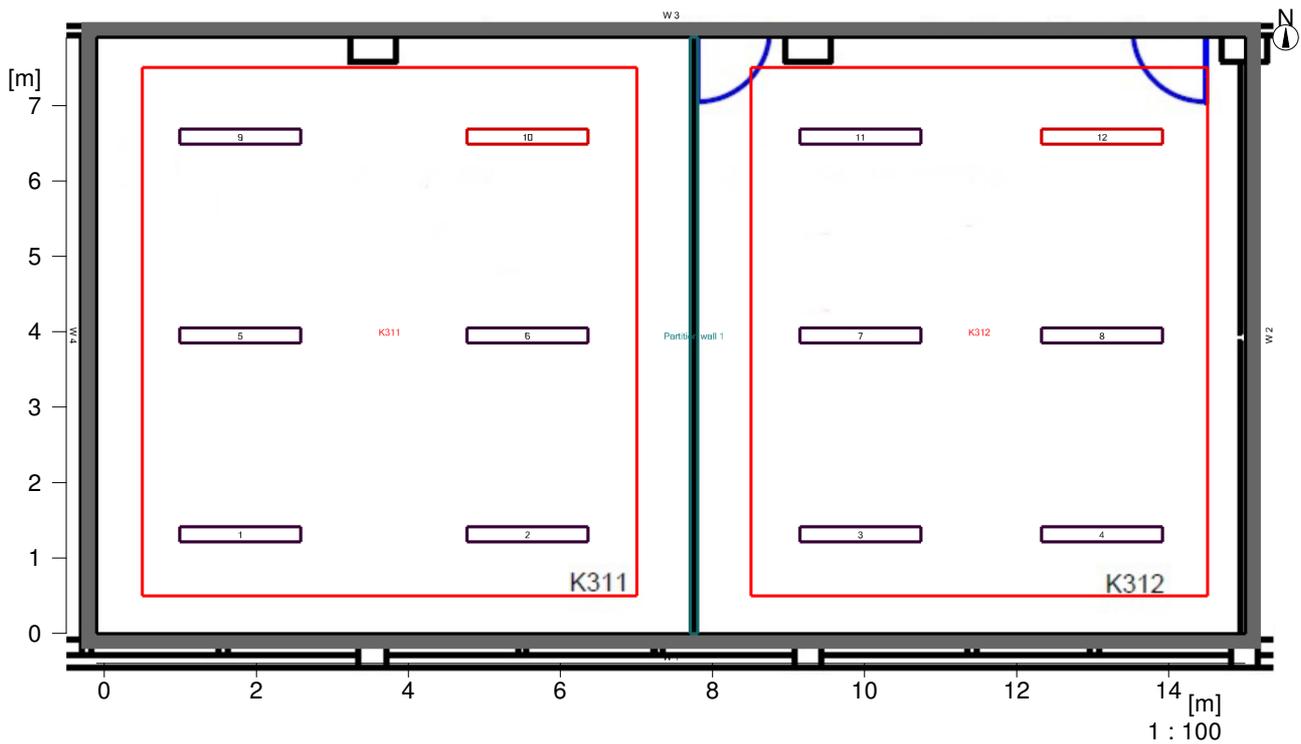
Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

# 1 Room 1

## 1.1 Description, Room 1

### 1.1.1 Floor plan

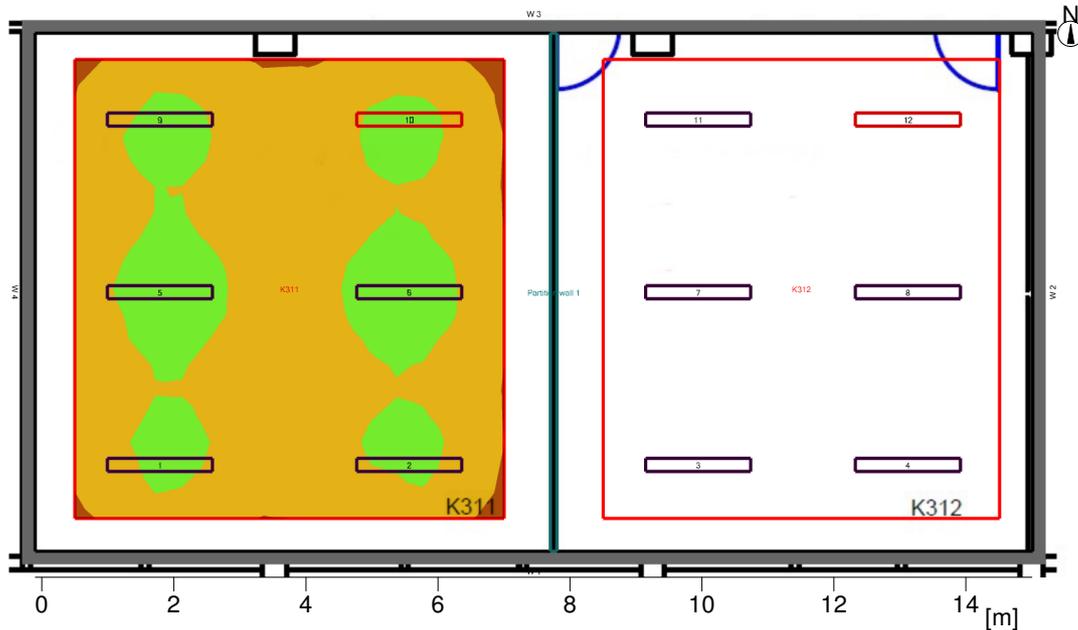


Wall	x	y	Length	Reflectance
1	15.50 m	23.00 m	15.10 m	50.0 %
2	15.50 m	30.90 m	7.90 m	50.0 %
3	0.40 m	30.90 m	15.10 m	50.0 %
4	0.40 m	23.00 m	7.90 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		2.80 m		
Height of reference plane		----		

# 1 Room 1

## 1.2 Summary, Room 1

### 1.2.1 Result overview, K311



#### General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.75 m
Height of luminaire plane	2.80 m
Maintenance factor	0.85

Total luminous flux of all lamps	74280 lm
Total power	804 W
Total power per area (119.29 m <sup>2</sup> )	6.74 W/m <sup>2</sup>

#### Illuminance

Average illuminance	Eav	451 lx
Minimum illuminance	Emin	335 lx
Maximum illuminance	E <sub>max</sub>	607 lx
Uniformity U <sub>o</sub>	E <sub>min</sub> /E <sub>m</sub>	1:1.35 (0.74)

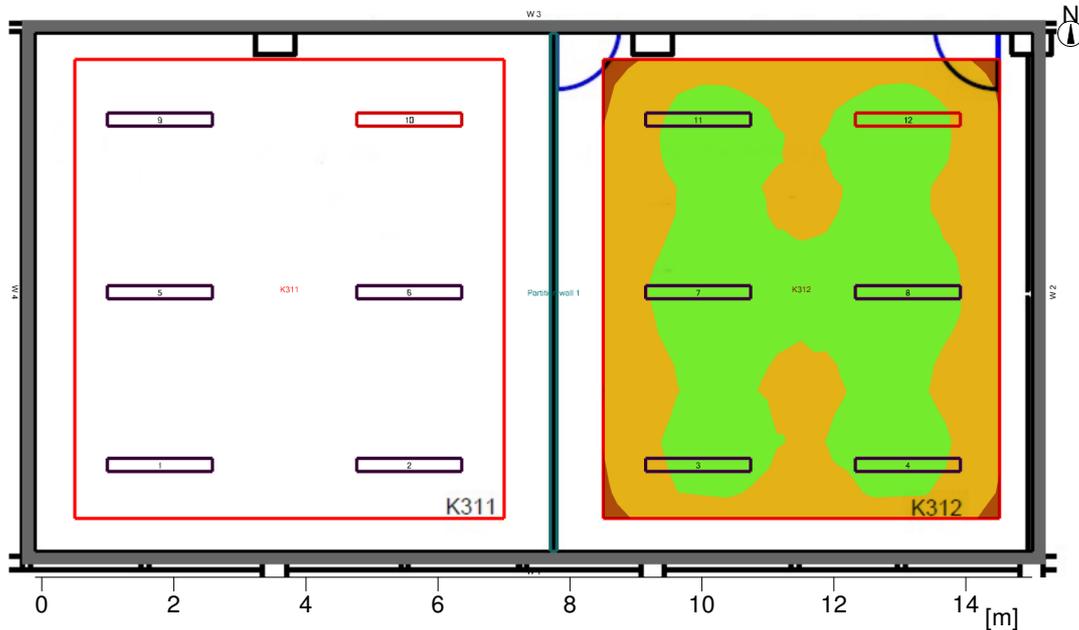
#### Type No.\Make

##### Fitzgerald Lighting

1	5	Order No.	: SPE66/5T/CO/840
		Luminaire name	: SPECTRUM
		Equipment	: 1 x LED MODULES / 6190 lm
2	1	Order No.	: SPE66/5T/CO/840
		Luminaire name	: SPECTRUM LED
		Equipment	: 1 x LED MODULES / 6190 lm

## 1.2 Summary, Room 1

### 1.2.2 Result overview, K312



#### General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.75 m
Height of luminaire plane	2.80 m
Maintenance factor	0.85

Total luminous flux of all lamps	74280 lm
Total power	804 W
Total power per area (119.29 m <sup>2</sup> )	6.74 W/m <sup>2</sup>

#### Illuminance

Average illuminance	Eav	493 lx
Minimum illuminance	Emin	342 lx
Maximum illuminance	E <sub>max</sub>	628 lx
Uniformity U <sub>o</sub>	E <sub>min</sub> /E <sub>m</sub>	1:1.44 (0.69)

#### Type No.\Make

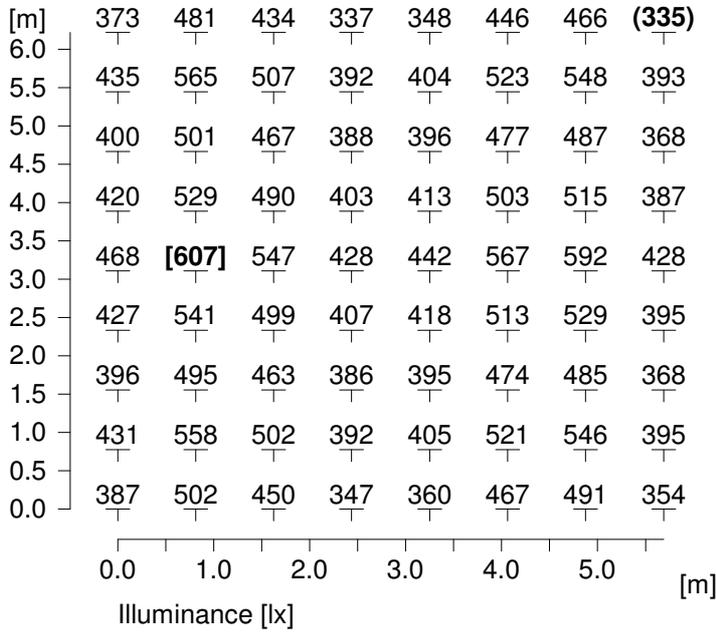
##### Fitzgerald Lighting

1	5	Order No.	: SPE66/5T/CO/840
		Luminaire name	: SPECTRUM LED
		Equipment	: 1 x LED MODULES / 6190 lm
2	1	Order No.	: SPE66/5T/CO/840
		Luminaire name	: SPECTRUM LED
		Equipment	: 1 x LED MODULES / 6190 lm

# 1 Room 1

## 1.3 Calculation results, Room 1

### 1.3.1 Table, K311 (E)

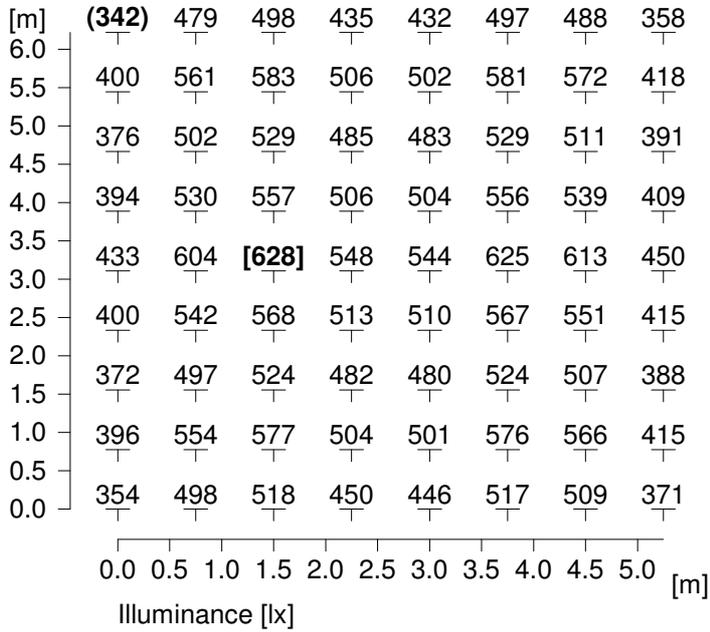


Height of the reference plane

Average illuminance	Eav	: 0.75 m
Minimum illuminance	Emin	: 451 lx
Maximum illuminance	Emax	: 335 lx
Uniformity Uo	Emin/Eav	: 607 lx
		: 1 : 1.35 (0.74)

### 1.3 Calculation results, Room 1

#### 1.3.2 Table, K312 (E)

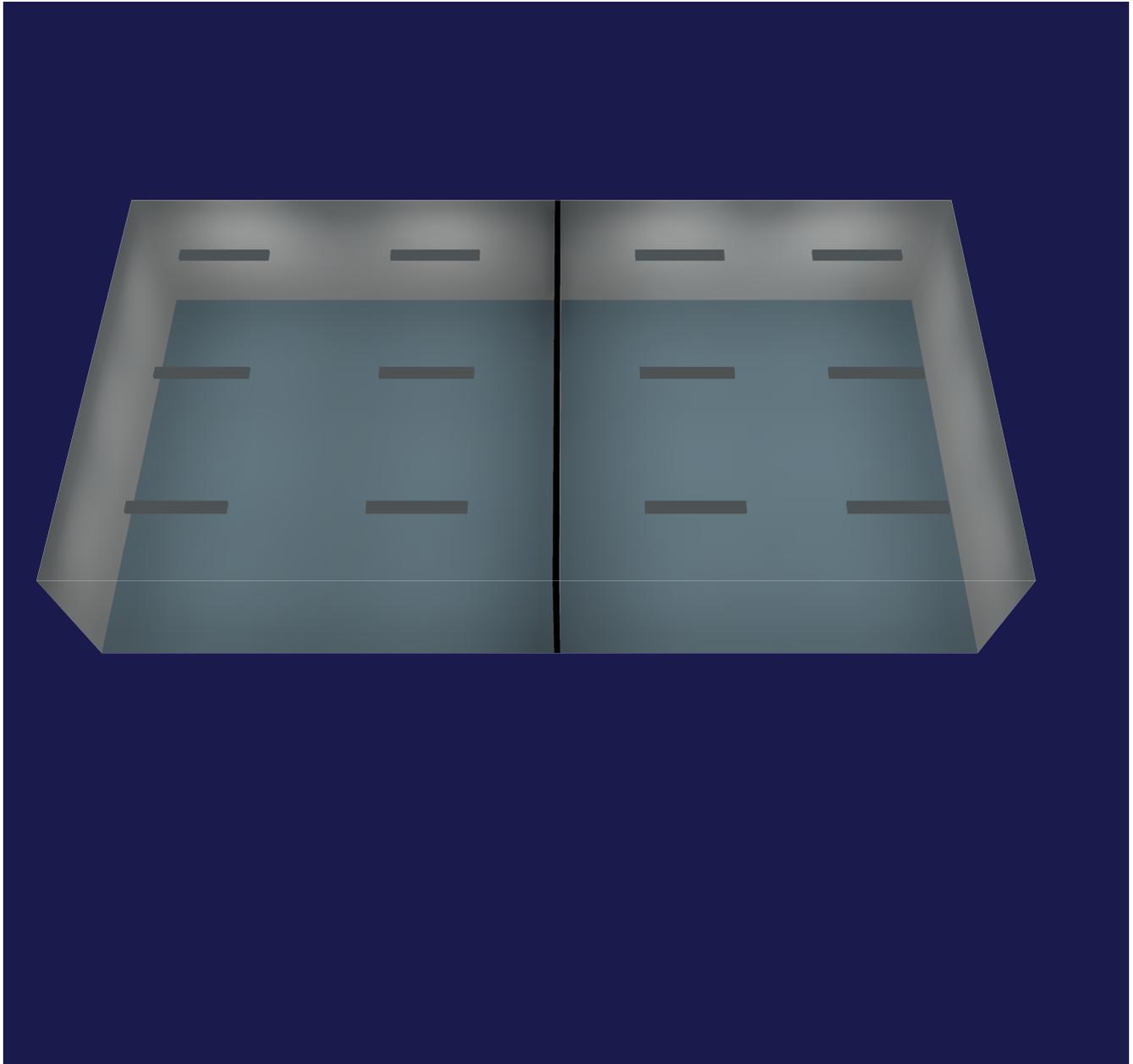


Height of the reference plane

Average illuminance	Eav	: 0.75 m
Minimum illuminance	Emin	: 493 lx
Maximum illuminance	Emax	: 342 lx
Uniformity U <sub>o</sub>	Emin/Eav	: 628 lx
		: 1 : 1.44 (0.69)

### 1.3 Calculation results, Room 1

#### 1.3.3 3D luminance, View 1



Luminance in the scene  
Minimum: : 0 cd/m<sup>2</sup>  
Maximum: : 168 cd/m<sup>2</sup>

### 1.3 Calculation results, Room 1

#### 1.3.4 3D pseudo colours, View 1 (E)

