



***DESIGN & ACCESS STATEMENT***

***FOR***

***APPROVAL OF EXTERNAL LIGHTING SCHEME***

***AT***

***SPAR CONVENIENCE STORE***

***HIGH ST. COEDPOETH, WALES***

***AMMENDED IN ACCORDANCE WITH DRAWING***  
***“1547.EL01A Proposed Lighting Layout”***

***31<sup>st</sup> JULY 2017***

## **CONTENTS**

- 1.0**    *Introduction*
- 2.0**    *Planning Policy*
- 3.0**    *Scale*
- 4.0**    *Layout*
- 5.0**    *Design Criteria*
- 6.0**    *Appearance*
- 7.0**    *Access*
- 8.0**    *Conclusion*

*Appendix A – Original Luminaire Schedule*

*Appendix B – Revised Luminaire Schedule*

*Appendix C – Lighting Unit Details*

## **1.0 Introduction**

### **1.1**

*The Design and Access Statement accompanies an external lighting proposal and therefore the detail included within this statement is in keeping with the size of the proposal of the works in question. This Design and Access Statement should be read in conjunction with the External Lighting design document produced by Ansell Lighting Design Department.*

*The principle aim of this external lighting application is to provide a safe lighting level for deliveries, staff and customers visiting the store whilst not having a detrimental effect to neighboring properties.*

*This application seeks approval for an external lighting scheme to the car park and service areas of the convenience store on High Street, Coedpoeth*

## **2.0 Planning Policy**

### **2.1**

*During the design process, careful consideration has been given to ensure that the proposals comply with local and national planning policies.*

*The site was granted planning permission on 4<sup>th</sup> December 2014. The Planning Ref APP / H6955 / A / 15 / 3006442*

## **3.0 Scale**

### **3.1**

*The proposed external lighting will be of a scale that is in keeping with the setting of the convenience store. The configuration will not be overbearing and not detract from the visual amenity of the site.*

*Please see Appendix A for the original proposed external lighting and Lux contour diagrams produced by Ansell Lighting.*

*Please see Appendix B for the revised external lighting scheme which shows the Lux contour diagram for the new lighting positions at the front of the store.*

*The Ansell Lighting Lux diagrams show that the concentration of the lighting is retained within the site where possible to limit the effect of light spill onto neighboring property and land.*

## **4.0 Layout**

### **4.1**

*The lighting layout has been carefully considered to keep high level lighting units on the line of adjoining properties where possible.*

*The high-level flood lighting will be directed to ensure that it is directed into the correct areas of the car park.*

*The services areas of the site will be lit by surface fixed bulk head lights fitted to the external envelope of the building.*

## **5.0 Design Criteria**

### **5.1**

*The External Lighting has been designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.*

*Emergency lighting design conforms to BS5266/EN1838 where applicable.*

## **6.0 Appearance**

### **6.1**

*Please see Appendix C which outlines the lighting units that have been proposed within the car park area.*

*Ansell lighting where unable to provide a lighting specification for lights that have been installed at the rear and side of the property as the products are now discontinued. However, Ansell have highlighted that the lights specified in Appendix C are updated versions of those which have been installed and bare the same LED information.*

*Delta CFL Bulkhead 20W White relates to the specification for the Tardo LED 20W LED Black.*

*Orion Ecco Polycarb Floodlight LED 50W relates to the Mira LED Floodlight 50W LED Graphite.*

## **7.0 Access**

### **7.1**

*The convenience store opening hours are 07.00 - 23.00 on Mondays – Saturdays and 07.00 - 22.00 on Sundays and bank holidays.*

*The external lighting controls will be set to allow external lighting 30 minutes prior to the store opening times and 30 minutes after the store closing time on each individual day.*

## **8.0 Conclusion**

### **8.1**

*The proposed lighting scheme has been designed in accordance with the latest recommended guidance with careful consideration to local and national planning guidance. Therefore, it is our belief that the completed design is now acceptable.*

## ***APPENDIX A***

# Coedpoeth External Lighting

Installation : Proposed New Lighting

Project number : 99-29443-LB  
Customer : ADM Surveyors  
Processed by : Mike Burgess  
Date : 12.12.2016

Project description:

Calculation based on standard reflectances.

Room/exterior area dimensions and floor to ceiling/mounting heights issued from wholesaler.

PLEASE NOTE: All room/exterior area dimensions to be checked on-site prior to installation.

Lighting designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.

Emergency lighting design conforms to BS5266/EN1838 where applicable. Please note that 'points of emphasis' such as locations of fire fighting equipment also require emergency lighting, these locations are to be confirmed by contractor. Please note that the emergency lighting calculation MUST be produced using the emergency lighting calculation facility within this program, failure to use the correct method will show false results.

Luminaires fitted as per instruction from contractor.

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.

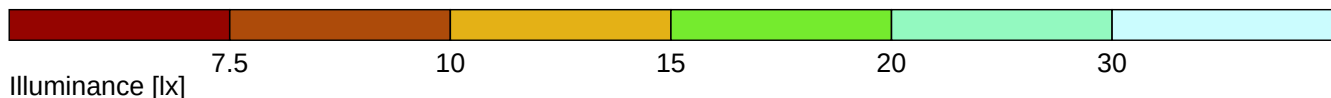
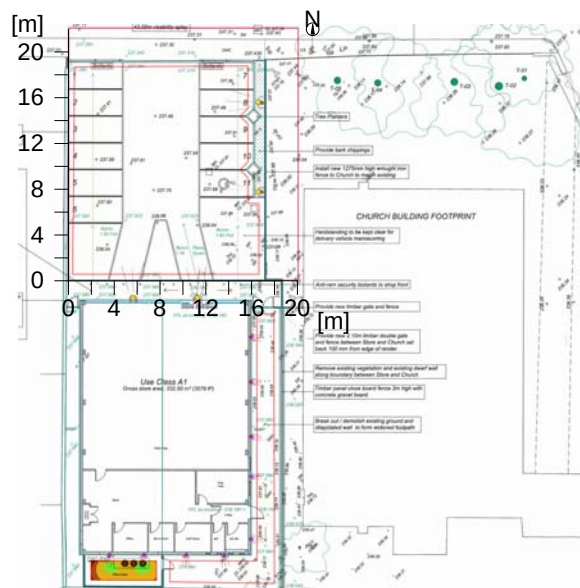
Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.



# 1 Exterior 1

## 1.2 Summary, Exterior 1

### 1.2.1 Result overview, Plant Area



#### General

|                                  |                             |
|----------------------------------|-----------------------------|
| Calculation algorithm used       | Average indirect fraction   |
| Height of evaluation surface     | 0.02 m                      |
| Maintenance factor               | 0.80                        |
| Total luminous flux of all lamps | 35807 lm                    |
| Total power                      | 421.4 W                     |
| Total power per area (440.26 m²) | 0.96 W/m² (7.43 W/m²/100lx) |

#### Illuminance

|                     |           |              |
|---------------------|-----------|--------------|
| Average illuminance | Eav       | 12.9 lx      |
| Minimum illuminance | Emin      | 5.1 lx       |
| Maximum illuminance | Emax      | 17.3 lx      |
| Uniformity Uo       | Emin/Em   | 1:2.52 (0.4) |
| Diversity Ud        | Emin/Emax | 1:3.39 (0.3) |

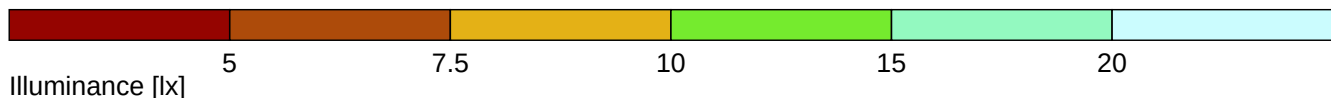
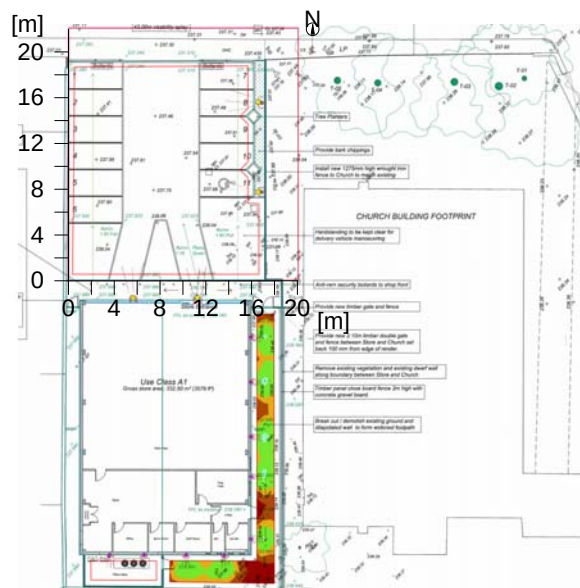
#### Type No. \ Make

|   |   |                |                                       |
|---|---|----------------|---------------------------------------|
| 1 | 4 | <b>ANSELL</b>  |                                       |
|   |   | Order No.      | : AMLED50                             |
|   |   | Luminaire name | : Floodlighting - Mira LED Floodlight |
|   |   | Equipment      | : 1 x 50.4 W / 4130 lm                |
| 2 | 9 |                |                                       |
|   |   | Order No.      | : ATALED                              |
|   |   | Luminaire name | : Amenity - Tardo LED                 |
|   |   | Equipment      | : 1 x 24.42 W / 2143 lm               |



## 1.2 Summary, Exterior 1

### 1.2.3 Result overview, Path



#### General

|                                  |                             |
|----------------------------------|-----------------------------|
| Calculation algorithm used       | Average indirect fraction   |
| Height of evaluation surface     | 0.02 m                      |
| Maintenance factor               | 0.80                        |
| Total luminous flux of all lamps | 35807 lm                    |
| Total power                      | 421.4 W                     |
| Total power per area (440.26 m²) | 0.96 W/m² (9.02 W/m²/100lx) |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Eav       | 10.6 lx       |
| Minimum illuminance | Emin      | 2.2 lx        |
| Maximum illuminance | Emax      | 17 lx         |
| Uniformity Uo       | Emin/Em   | 1:4.83 (0.21) |
| Diversity Ud        | Emin/Emax | 1:7.75 (0.13) |

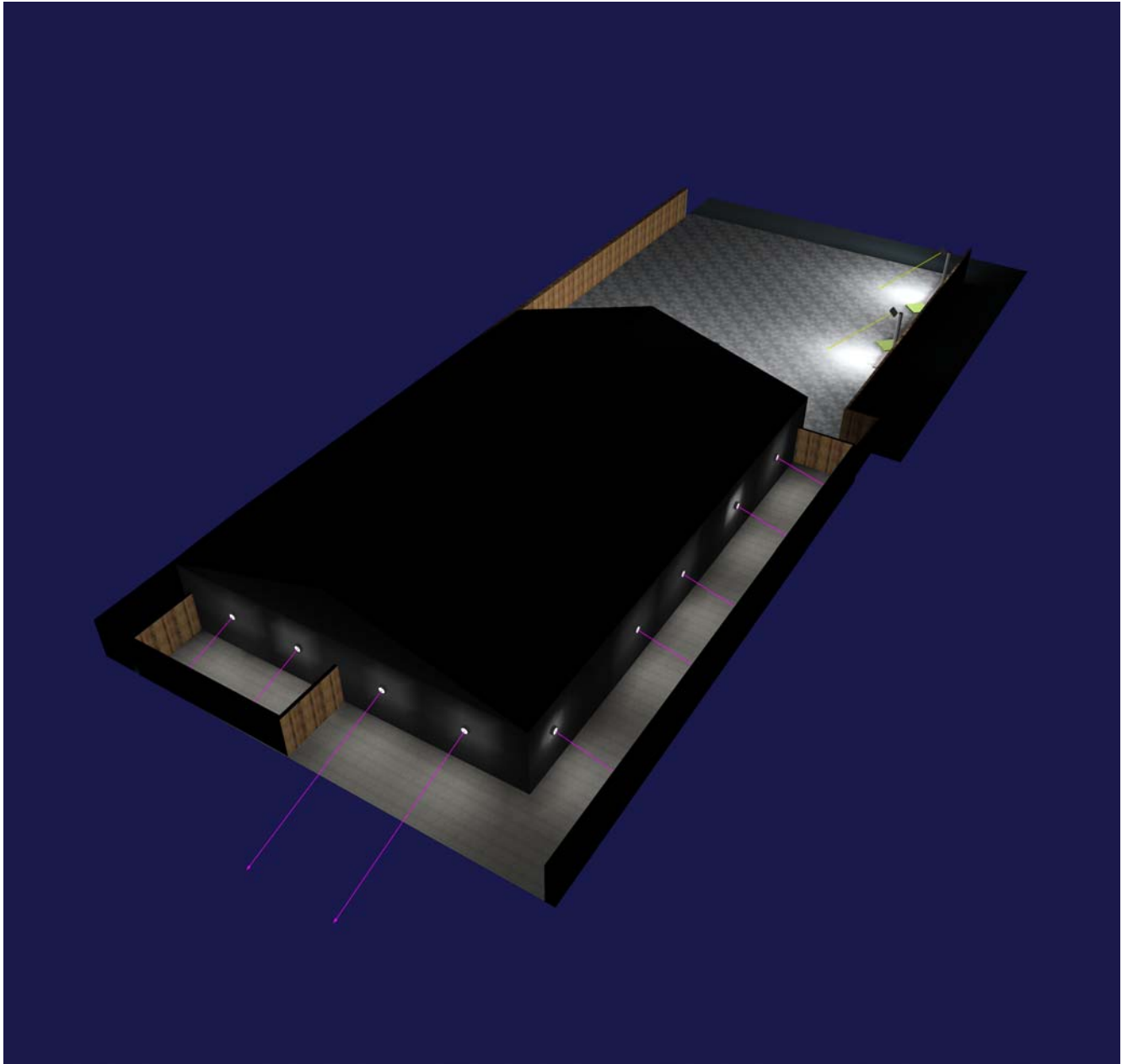
#### Type No.\Make

|   |   |                |                                       |
|---|---|----------------|---------------------------------------|
| 1 | 4 | <b>ANSELL</b>  |                                       |
|   |   | Order No.      | : AMLED50                             |
|   |   | Luminaire name | : Floodlighting - Mira LED Floodlight |
|   |   | Equipment      | : 1 x 50.4 W / 4130 lm                |
| 2 | 9 |                |                                       |
|   |   | Order No.      | : ATALED                              |
|   |   | Luminaire name | : Amenity - Tardo LED                 |
|   |   | Equipment      | : 1 x 24.42 W / 2143 lm               |

## 1 Exterior 1

### 1.3 Calculation results, Exterior 1

#### 1.3.1 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m<sup>2</sup>  
Maximum: : 19.3 cd/m<sup>2</sup>

### 1.3 Calculation results, Exterior 1

#### 1.3.2 3D luminance, View 2



Luminance in the scene

Minimum: : 0 cd/m<sup>2</sup>  
Maximum: : 19.3 cd/m<sup>2</sup>

## ***APPENDIX B***

# Coedpoeth External Lighting Revision A

Installation : Proposed New Lighting

Project number : 99-29443-LB  
Customer : ADM Surveyors  
Processed by : Mike Burgess  
Date : 31.07.2017

Project description:

Calculation based on standard reflectances.

Room/exterior area dimensions and floor to ceiling/mounting heights issued from wholesaler.

PLEASE NOTE: All room/exterior area dimensions to be checked on-site prior to installation.

Lighting designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.

Emergency lighting design conforms to BS5266/EN1838 where applicable. Please note that 'points of emphasis' such as locations of fire fighting equipment also require emergency lighting, these locations are to be confirmed by contractor. Please note that the emergency lighting calculation MUST be produced using the emergency lighting calculation facility within this program, failure to use the correct method will show false results.

Luminaires fitted as per instruction from contractor.

REVISION A - 31st JULY 2017 ;.REVISE AS PER NEW PLANS FROM ISAAC TIMSON AT ADM SURVEYORS

**\*\*PLEASE NOTE ANSELL ARE UNABLE TO USE THE ORION ECCO FLOOD AND DELTA CFL IN THIS REVISED DESIGN AS THESE PRODUCTS ARE NOW DISCONTINUED AND ANSELL NO LONGER RETAIN UPTO DATE LDT FILES FOR THESE 2 LUMINAIRES\*\***

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 Exterior 1

### 1.1 Description, Exterior 1

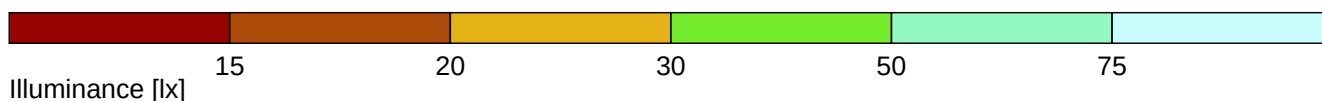
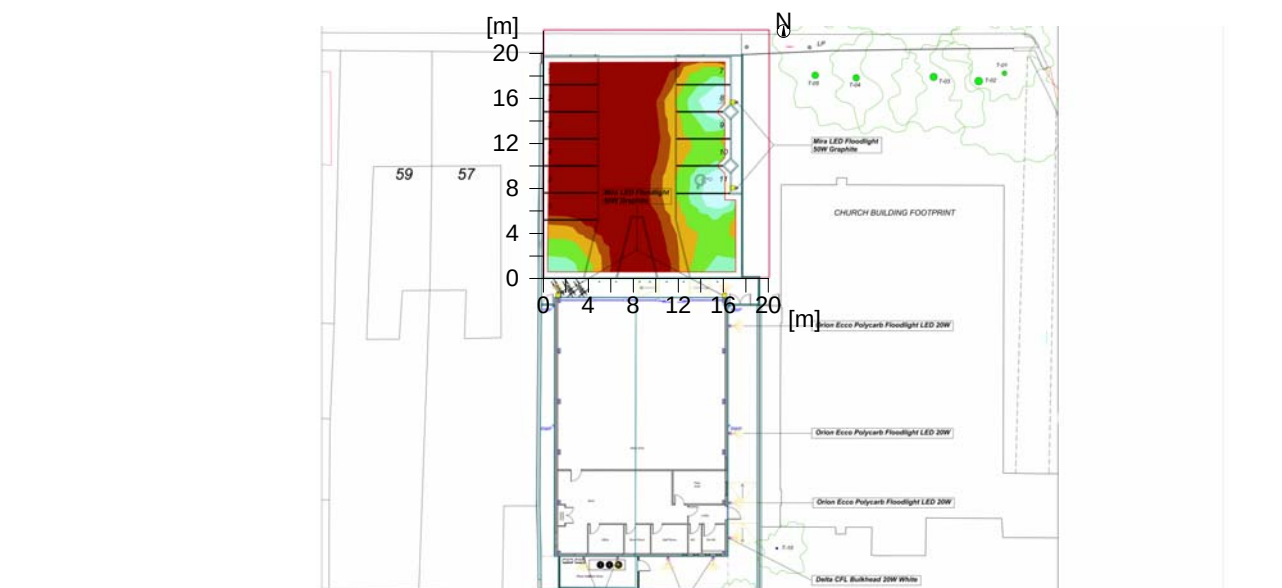
#### 1.1.1 Floor plan



# 1 Exterior 1

## 1.2 Summary, Exterior 1

### 1.2.1 Result overview, Car Park



#### General

|                                  |                             |
|----------------------------------|-----------------------------|
| Calculation algorithm used       | Average indirect fraction   |
| Height of evaluation surface     | 0.02 m                      |
| Maintenance factor               | 0.80                        |
| Total luminous flux of all lamps | 16520 lm                    |
| Total power                      | 201.6 W                     |
| Total power per area (440.26 m²) | 0.46 W/m² (1.83 W/m²/100lx) |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Eav       | 25 lx         |
| Minimum illuminance | Emin      | 3 lx          |
| Maximum illuminance | Emax      | 130 lx        |
| Uniformity Uo       | Emin/Em   | 1:9.27 (0.11) |
| Diversity Ud        | Emin/Emax | 1:48.3 (0.02) |

#### Type No. \ Make

|   |   |                |                                       |
|---|---|----------------|---------------------------------------|
| 1 | 4 | <b>ANSELL</b>  |                                       |
|   |   | Order No.      | : AMLED50                             |
|   |   | Luminaire name | : Floodlighting - Mira LED Floodlight |
|   |   | Equipment      | : 1 x 50.4 W / 4130 lm                |

## 1 Exterior 1

### 1.3 Calculation results, Exterior 1

#### 1.3.1 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m<sup>2</sup>  
Maximum: : 19.3 cd/m<sup>2</sup>

## ***APPENDIX C***

# Tardo LED 20W LED Black

## Product Datasheet



### Description

Halo light spill effect, Die-cast aluminium construction with tamperproof stainless steel allen key screws retain opal polycarbonate diffuser and frame, Exceeds performance of 2 x 26W PLC, Removable gear tray forease of installation, Optional mounting framefor photocell location and/or surface conduit entry, 50,000 hours average lifetime, Non-dimmable, Supplied c/w driver



| Code   | Description | Lamp |
|--------|-------------|------|
| ATALED | 20W         | LED  |

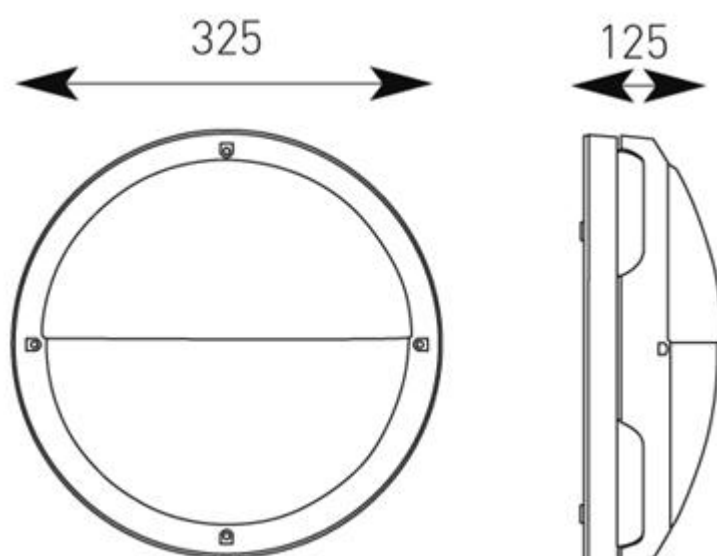
Options

|      |                           |
|------|---------------------------|
| /M3  | Emergency                 |
| /MWS | Integral Microwave Sensor |



#### LED Information

|               |        |
|---------------|--------|
| Total (Watts) | 20W    |
| Lumens        | 2500lm |
| CCT           | 4000K  |
| Input         | 240V   |



## Mira LED Floodlight 50W LED Graphite

### Product Datasheet



### Description

Architectural slim die-cast LED floodlight, 50W LED comparable light output to 70W HQI, 100W LED exceeds performance of 150W HQI, Optically textured glass for enhanced light output, Heat sink design provides optimum LED life, Graphite textured paint finish, Pre-wired with 1 metre of rubber insulated cable for ease of installation, 40000 hours average lifetime, Non-dimmable, Supplied c/w integral driver



# Mira LED Floodlight 50W LED Graphite

## Product Datasheet

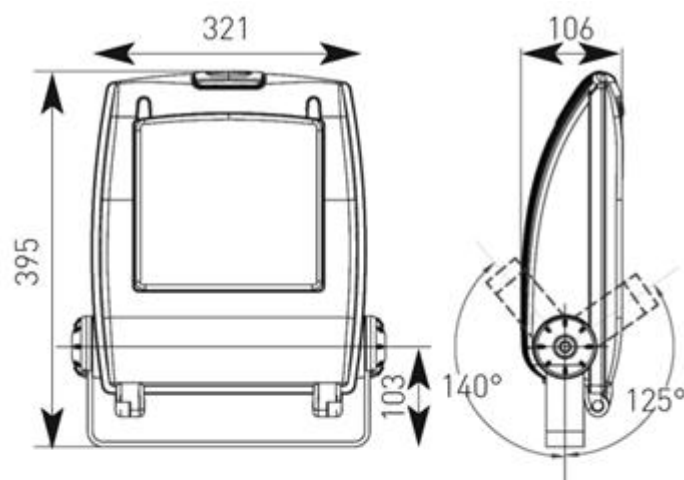


| Code    | Description    | Lamp |
|---------|----------------|------|
| AMLED50 | 50W Cool White | LED  |
| Options |                |      |
| /PC     | Photocell      |      |

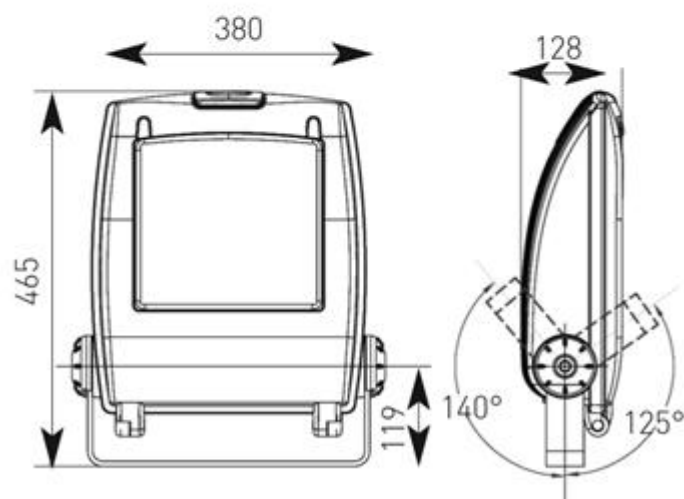


### LED Information

|               |        |
|---------------|--------|
| Total (Watts) | 50W    |
|               | 100W   |
| Lumens 50W    | 3500lm |
| Lumens 100W   | 7000lm |
| CCT           | 4750K  |
| Input         | 240V   |



AMLED50



AMLED100