

<b>Consultant Document Submittal Report No</b>	<b>2765145</b>
<b>Issued</b>	08/08/2018 09:38:30
<b>Project</b>	UCLH Phase 5
<b>Description</b>	UCLH Phase 5
<b>Company</b>	Dornan Engineering Services Ltd
<b>Address</b>	Dornan Engineering Services Ltd, 2nd floor , Emperor's Gate, 114a Cromwell Road, London, SW7 4ES
<b>Tel</b>	
<b>Fax</b>	

<b>File Name</b>	P5-DES-001-ZZ-TS-E-0070	<b>Issue [ 1 ]</b>	<b>Revision Letter</b> P01	<b>Issued By</b> St Marie, Sandra
<b>Attachment(S)</b>	[ 0 ]			
<b>Register</b>	Technical Submittals			
<b>Document Status</b>	Client Accepted (with comments)			
<b>Title</b>	Type T4 Luminaire			
<b>Document Category</b>	Electrical			
<b>Sheet Size</b>	A4			

**Comment:** [Title: Project Status Change] The project status of document: P5-DES-001-ZZ-TS-E-0070, has been changed from 'Client Rejected' to 'Client Accepted (with comments)' by Wilson, Andrew of Mace. (Reason for change: Fitting technically accepted as Arup comments. Location to be revised by BMJ therefore p&p rejection changed to accepted with comments.) (Raised ByWilson, Andrew ()OfMaceon10/10/2018 17:11:21ref:Comment-45375)

**Comment:** [Title: Client rejected with comments ] The project status of document: P5-DES-001-ZZ-TS-E-0070, has been changed from 'CMT Review' to 'Client Rejected' by Bowler, Chris (Louise, Earle,) of ARUP. (Reason for change: See attached document ) (Raised ByBowler, ChrisofARUPon10/10/2018 15:24:34ref:Comment-45353 Attached Doc: P5-DES-001-ZZ-TS-E-0070 181010 - CMT Review Status C)

**Comment:** [Title: Project Status Change] The project status of document has been changed to 'CMT Review' by Wilson, Andrew of Mace. (Reason for change: For CMT Review) (Raised ByWilson, AndrewofMaceon14/09/2018 09:05:37ref:Comment-43901)

**Comment:** [Title: Project Status Change] The project status of document has been changed to 'Accepted' by Wilson, Andrew of Mace. (Reason for change: Mace no comment) (Raised ByWilson, AndrewofMaceon14/09/2018 09:03:23ref:Comment-43899)

**Comment:** [Title: Project Status Change] The project status of document has been changed to 'Pending Review' by Ssekitoleko, Juliet of Mace. (Reason for change: QA checked) (Raised BySsekitoleko, Juliet ()OfMaceon08/08/2018 16:43:22ref:Comment-42166)

Report generated and printed by St Marie, Sandra of Dornan Engineering Services Ltd on 19/10/2018 09:20:10

# Design Sub-Deliverable Report

## 16035 - UCLH Phase 5

i3PT Lead: Muneer Khan - i3PT

Email: Muneerkhan@i3pt.co.uk

Sub-Deliverable Name: P5-DES-001-ZZ-TS-E-0070

Upload Date:

Submitted Date:

Sub-Deliverable Raised By: Louise Earle - i3PT

Review Deadline Date: 2018-09-28

Primary Sign-off Responsibility: Mike Sung - Arup

Seconday Sign-off Responsibility: N/A

Third Sign-off Responsibility: N/A

Fourth Sign-off Responsibility: N/A

*Note: All information contained herein was provided by the aforementioned responsible party.*

## 1. Design Sub-Deliverable Submission Details

Design Sub-Deliverable Details	Mandatory Requirements for Review	Finish-Start Relationship with:	Relevant Standards/Codes/Documents
Type T4 Luminaire	•		•

Derogations Panel

## 2. Submission Documentation

---

*P5-DES-001-ZZ-TS-E-0070.pdf*

### 3. Primary Sign-Off Review

Name	Mike Sung - Arup
General Comments	
General Attachments	P5-DES-001-ZZ-TS-E-0070_T4_B.pdf
Design SubDeliverable Status	Accepted with comments
Note: See Attachments below	

### 3.b. Primary Reviewer Documentation

---

# Technical Submittal - UCLH P5 33695



© Mace Ltd Classification & Handling Status: Restricted / Confidential / Unrestricted *delete as appropriate*

<b>Package Number:</b>	6000
<b>Package Name:</b>	Mechanical & Electrical
<b>Company Name:</b>	Dornan Engineering
<b>Sub Contractor manager:</b>	James Ryan
<b>File Name:</b>	P5-DES-001-ZZ-TS-E-0070
<b>Document Title:</b>	Type T4 Luminaire
<b>Purpose of Issue:</b>	See Conject for current purpose of issue.

<b>Status by Lead Reviewer:</b>	<b>See Conject for current status</b>
---------------------------------	---------------------------------------

Version History			
Revision No.	Date Issued	Prepared By	Status
P01	08/08/18	Blagoya Chakreski	For Approval

<b>ARUP</b>	<b>Action</b>	
By <i>M.S.</i>	<b>Mike Sung</b>	
Date 01/10/2018	A. No comment	
<small>The extent of this review has been to 'validate' that engineering design intent, H&amp;S, and checking &amp; approval processes have been complied with – it has not been subject to a technical 'verification' check. This review does not relieve the Contractor of any of his responsibilities under the Contract.</small>	B. Comment as noted	✓
	C. Do NOT proceed with works - ReSubmit	
	D. See individual status as detailed below	

**Arup Comment:**

1. Relevant BS / test certificate shall be provided.
2. Please confirm the proposed light fitting meet the against Breeam Luminous efficacy requirement.
3. Light fitting finishes shall be subject to architectural comments.
4. Installation detail shall be accepted by the architect.

<b>Design Information and Technical Data used to prepare submittal</b>	
Equipment Data Sheets / Schedules :	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0011_iss1_revT01</li> <li>•</li> <li>•</li> </ul>
Particular Specification:	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0004_iss2_revT02</li> <li>•</li> <li>•</li> </ul>
Materials & Workmanship:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Drawings:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Schematics/Diagrammatic:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Supplementary Specs:	<ul style="list-style-type: none"> <li>• HTM_06-01_Part_A</li> <li>•</li> <li>•</li> </ul>

## Attachments *(Tick as appropriate)*

- Catalogue Details
- Design Check Calculations
- Manufacturing Drawings
- Wiring/Control Diagrams
- Sample List
- BWIC requirements
- Assembly / installation details
- O&M instructions
- List of recommended spares
- Interface and coordination with other packages
- FAT / SAT Test Requirements
- Description of Operation



<b>Specification Compliance Statement</b>			
<p>Technical Submission fully compliant</p> <p>If no then proposed deviations are:</p>			
<table border="1" style="margin-left: auto;"> <tr> <td style="width: 40px; height: 20px;"></td> <td style="width: 40px; height: 20px; text-align: center;">N</td> </tr> </table>			N
	N		
<b>Specification Requirement</b>	<b>Proposed Deviation</b>		
Whitecroft Model BLF3614kG	Whitecroft Model BRLY34KRB		

1) ARUP SDS

Please refer to next page

Job Title: UCLH Phase 5

Date: 22/01/2015

Job Number: 232426-00

Purpose of Issue: Tender


Revision: T01

**Luminaire Reference: TYPE T4**

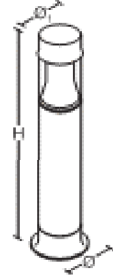
## General Description

IP65 LED Bollard with extruded aluminium body and clear polycarbonate diffuser. With 360 degree distribution

## General Appearance

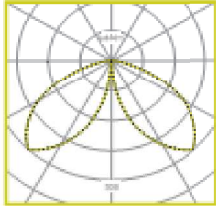


### Dimensions



Ø	H	Ø <sub>1</sub>	KG
250	1100	180	7.1

### Photometric Performance



10W 484 lumen  
• LOR = 100%

### Luminaire

Manufacturer	Whitecroft
Manufacturing standard	BS EN 60598
Catalogue number	broadwalk - BLF3614kG
Finish	Aluminium
EMC	BS EN 55015

### Light Source

Type	LED
Wattage	10W
Designation	484lm
Colour / Beam	4000K - Ra min 80

### Control Gear / Transformer

Type	DALI 220-240 Vac
Dimmable	Yes
Location (Remote/Integral)	Integral

### Accessories

Lens	-
Baffle	-
Other	IP65

### Location

L6 Roof garden
----------------

*Equipment supplied to be as specified or equal approved*

## Additional Information

- 1.
- 2.
- 3.
- 4.



PROJECT – UCLH P5 33695

## 2) Catalogue Details



# Broadwalk RS



**Project reference:**

T4

**Part number:**

BRLY34KRB

**Product description:**

IP65 LED bollard in black polyester powder coated reinforced steel. With clear polycarbonate diffuser and shielded LED module for control of upward light – as Whitecroft Lighting BROADWALK RS



## Light source

**Light source:**

LED, 960 lumen output

**Colour temperature:**

4000K

**Colour render index:**

>80

**Colour consistency:**

MacAdam 3 SDCM

**Control gear:**

DALI dimmable

**Integral control:**

N/A

## Luminaire performance

**LL/CW:**

69

**Circuit watts:**

14.4W

**Light output ratio:**

100%

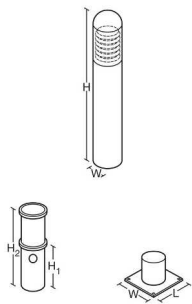
**Emergency**

N/A

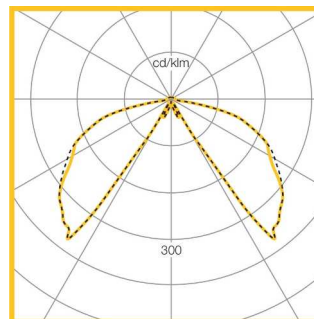
**Finish**

Black

## Dimensions & Weight



## Polar Curve (Indicative Only)



VERSION	L	W	H	H2	KG
Body		177	976		9
Root Mount			610	455	7
Flange Mount	191	191			3

## 4. Secondary Sign-Off Review

Name	Rob McGill - STW
General Comments	
General Attachments	P5-DES-001-ZZ-TS-E-0070 - STW comments - 02-10-2018.pdf
Design SubDeliverable Status	Accepted with comments
Note: See Attachments below	

### 4.b. Secondary Reviewer Documentation

---

# Technical Submittal - UCLH P5 33695



© Mace Ltd Classification & Handling Status: Restricted / Confidential / Unrestricted delete as appropriate

<b>Package Number:</b>	6000
<b>Package Name:</b>	Mechanical & Electrical
<b>Company Name:</b>	Dornan Engineering
<b>Sub Contractor manager:</b>	James Ryan
<b>File Name:</b>	P5-DES-001-ZZ-TS-E-0070
<b>Document Title:</b>	Type T4 Luminaire
<b>Purpose of Issue:</b>	See Conject for current purpose of issue.

<b>Status by Lead Reviewer:</b>	<i>See Conject for current status</i>
---------------------------------	---------------------------------------

Version History			
Revision No.	Date Issued	Prepared By	Status
P01	08/08/18	Blagoya Chakreski	For Approval

**Scott Tallon Walker Architects**

<b>Drawing Status</b>	<b>Checked by</b>	<b>Date</b>
Approved	STU	2/10/18
No Comments	RN	
Approved Subject to Comments		
Returned with Comments		

\*Approved means examined for adherence to the architectural design intent. Design and execution of the works remain the responsibility of the originator.

<b>Design Information and Technical Data used to prepare submittal</b>	
Equipment Data Sheets / Schedules :	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0011_iss1_revT01</li> <li>•</li> <li>•</li> </ul>
Particular Specification:	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0004_iss2_revT02</li> <li>•</li> <li>•</li> </ul>
Materials & Workmanship:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Drawings:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Schematics/Diagrammatic:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Supplementary Specs:	<ul style="list-style-type: none"> <li>• HTM_06-01_Part_A</li> <li>•</li> <li>•</li> </ul>



## Attachments *(Tick as appropriate)*

- Catalogue Details
- Design Check Calculations
- Manufacturing Drawings
- Wiring/Control Diagrams
- Sample List
- BWIC requirements
- Assembly / installation details
- O&M instructions
- List of recommended spares
- Interface and coordination with other packages
- FAT / SAT Test Requirements
- Description of Operation

<b>Specification Compliance Statement</b>			
<p>Technical Submission fully compliant</p> <p>If no then proposed deviations are:</p>			
<table border="1" style="margin-left: auto;"> <tr> <td style="width: 40px; height: 20px;"></td> <td style="width: 40px; height: 20px; text-align: center;">N</td> </tr> </table>			N
	N		
<b>Specification Requirement</b>	<b>Proposed Deviation</b>		
Whitecroft Model BLF3614kG	Whitecroft Model BRLY34KRB		

1) ARUP SDS

Please refer to next page

Job Title: UCLH Phase 5

Date: 22/01/2015

Job Number: 232426-00

Purpose of Issue: Tender


Revision: T01

**Luminaire Reference: TYPE T4**

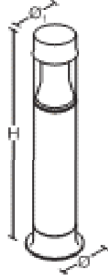
## General Description

IP65 LED Bollard with extruded aluminium body and clear polycarbonate diffuser. With 360 degree distribution

## General Appearance

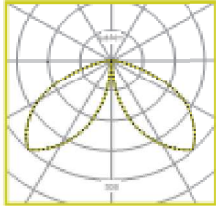


### Dimensions



Ø	H	Ø <sub>1</sub>	KG
250	1100	180	7.1

### Photometric Performance



10W 484 lumen  
• LOR = 100%

### Luminaire

Manufacturer	Whitecroft
Manufacturing standard	BS EN 60598
Catalogue number	broadwalk - BLF3614kG
Finish	Aluminium
EMC	BS EN 55015

### Light Source

Type	LED
Wattage	10W
Designation	484lm
Colour / Beam	4000K - Ra min 80

### Control Gear / Transformer

Type	DALI 220-240 Vac
Dimmable	Yes
Location (Remote/Integral)	Integral

### Accessories

Lens	-
Baffle	-
Other	IP65

### Location

L6 Roof garden
----------------

*Equipment supplied to be as specified or equal approved*

## Additional Information

- 1.
- 2.
- 3.
- 4.



PROJECT – UCLH P5 33695

## 2) Catalogue Details



# Broadwalk RS



**Project reference:**

T4

**Part number:**

BRLY34KRB

**Product description:**

IP65 LED bollard in black polyester powder coated reinforced steel. With clear polycarbonate diffuser and shielded LED module for control of upward light – as Whitecroft Lighting BROADWALK RS



## Light source

**Light source:**

LED, 960 lumen output

**Colour temperature:**

4000K

**Colour render index:**

>80

**Colour consistency:**

MacAdam 3 SDCM

**Control gear:**

DALI dimmable

**Integral control:**

N/A

## Luminaire performance

**LL/CW:**

69

**Circuit watts:**

14.4W

**Light output ratio:**

100%

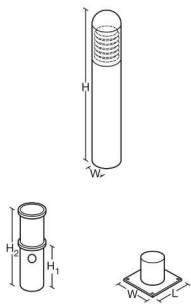
**Emergency**

N/A

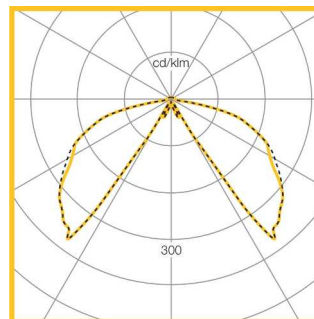
**Finish**

Black

## Dimensions & Weight



## Polar Curve (Indicative Only)



VERSION	L	W	H	H2	KG
Body		177	976		9
Root Mount			610	455	7
Flange Mount	191	191			3

## 5. Third Sign-Off Review

Name	Simon Smith - Pilbrow
General Comments	
General Attachments	P5-DES-001-ZZ-TS-E-0070. Status C.pdf.pdf
Design SubDeliverable Status	Rejected
Note: See Attachments below	

### 5.b. Third Reviewer Documentation

---

# Technical Submittal - UCLH P5 33695



© Mace Ltd Classification & Handling Status: Restricted / Confidential / Unrestricted *delete as appropriate*

<b>Package Number:</b>	6000
<b>Package Name:</b>	Mechanical & Electrical
<b>Company Name:</b>	Dornan Engineering
<b>Sub Contractor manager:</b>	James Ryan
<b>File Name:</b>	P5-DES-001-ZZ-TS-E-0070
<b>Document Title:</b>	Type T4 Luminaire
<b>Purpose of Issue:</b>	See Conject for current purpose of issue.

<b>Status by Lead Reviewer:</b>	<b><i>See Conject for current status</i></b>
---------------------------------	--

Version History			
Revision No.	Date Issued	Prepared By	Status
P01	08/08/18	Blagoya Chakreski	For Approval

## Pilbrow & Partners REJECTED

T4 - refer to comments on DR-E-1004.

Cannot be accepted in isolation.

Further information required on coordinated roof garden proposals and how the design intent shown in the WI will be achieved.



<b>Design Information and Technical Data used to prepare submittal</b>	
Equipment Data Sheets / Schedules :	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0011_iss1_revT01</li> <li>•</li> <li>•</li> </ul>
Particular Specification:	<ul style="list-style-type: none"> <li>• P5-ARP-Z0-SP-Z-0004_iss2_revT02</li> <li>•</li> <li>•</li> </ul>
Materials & Workmanship:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Drawings:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Schematics/Diagrammatic:	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
Supplementary Specs:	<ul style="list-style-type: none"> <li>• HTM_06-01_Part_A</li> <li>•</li> <li>•</li> </ul>

## Attachments *(Tick as appropriate)*

- Catalogue Details
- Design Check Calculations
- Manufacturing Drawings
- Wiring/Control Diagrams
- Sample List
- BWIC requirements
- Assembly / installation details
- O&M instructions
- List of recommended spares
- Interface and coordination with other packages
- FAT / SAT Test Requirements
- Description of Operation

<b>Specification Compliance Statement</b>			
<p>Technical Submission fully compliant</p> <p>If no then proposed deviations are:</p>			
<table border="1" style="margin-left: auto;"> <tr> <td style="width: 40px; height: 20px;"></td> <td style="width: 40px; height: 20px; text-align: center;">N</td> </tr> </table>			N
	N		
<b>Specification Requirement</b>	<b>Proposed Deviation</b>		
<p>Whitecroft Model BLF3614kG</p>	<p>Whitecroft Model BRLY34KRB</p>		

1) ARUP SDS

Please refer to next page

Job Title: UCLH Phase 5

Date: 22/01/2015

Job Number: 232426-00

Purpose of Issue: Tender


Revision: T01

**Luminaire Reference: TYPE T4**

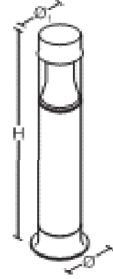
## General Description

IP65 LED Bollard with extruded aluminium body and clear polycarbonate diffuser. With 360 degree distribution

## General Appearance

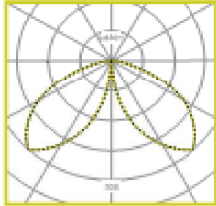


### Dimensions



Ø	H	Ø <sub>1</sub>	KG
250	1100	180	7.1

### Photometric Performance



10W 484 lumen  
• LOR = 100%

### Luminaire

Manufacturer	Whitecroft
Manufacturing standard	BS EN 60598
Catalogue number	broadwalk - BLF3614kG
Finish	Aluminium
EMC	BS EN 55015

### Light Source

Type	LED
Wattage	10W
Designation	484lm
Colour / Beam	4000K - Ra min 80

### Control Gear / Transformer

Type	DALI 220-240 Vac
Dimmable	Yes
Location (Remote/Integral)	Integral

### Accessories

Lens	-
Baffle	-
Other	IP65

### Location

L6 Roof garden
----------------

*Equipment supplied to be as specified or equal approved*

## Additional Information

- 1.
- 2.
- 3.
- 4.



PROJECT – UCLH P5 33695

## 2) Catalogue Details

# Broadwalk RS



**Project reference:**  
T4

**Part number:**  
BRLY34KRB

**Product description:**

IP65 LED bollard in black polyester powder coated reinforced steel. With clear polycarbonate diffuser and shielded LED module for control of upward light – as Whitecroft Lighting BROADWALK RS



## Light source

**Light source:**

LED, 960 lumen output

**Colour temperature:**

4000K

**Colour render index:**

>80

**Colour consistency:**

MacAdam 3 SDCM

**Control gear:**

DALI dimmable

**Integral control:**

N/A

## Luminaire performance

**LL/CW:**

69

**Circuit watts:**

14.4W

**Light output ratio:**

100%

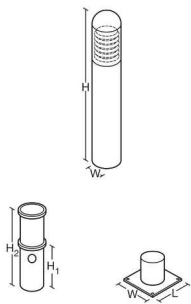
**Emergency**

N/A

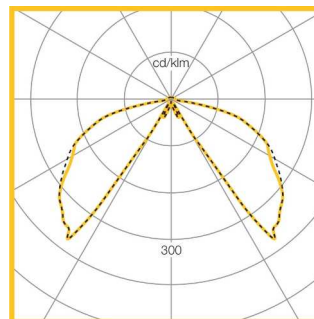
**Finish**

Black

## Dimensions & Weight



## Polar Curve (Indicative Only)



VERSION	L	W	H	H2	KG
Body		177	976		9
Root Mount			610	455	7
Flange Mount	191	191			3

## 6. Design Sub Deliverable Acceptance

---

Design Sub-Deliverable Submitted By	Louise Earle - i3PT
Design Sub-Deliverable Status	Rejected

Declaration:

The contractor has read the comments and conditions attached to this Design Sub-Deliverable. The contractor has understood the aforementioned comments and conditions. Where there was any ambiguity surrounding any of the information herein, the contractor has made contact with the relevant parties and sought clarification.

[Signature]