

LIGHTING NOTES

New lamp sources to be LED.
 Path/Ramp:
 C1-15 shall be new Abacus 5m, light duty, root mounted, mid-hinge r/l columns. A counterbalance unit is not required to raise and lower this type of column and can be done manually by a single person.
 C1-15 shall be fitted with post top mounted OrangeTek Ignis Mini luminaire

Footbridge:
 DW Windsor Garda Anti-climb unit containing LED luminaires shall be installed along the bridge deck interior.

Lighting Columns Painting/Colour:
 New columns shall be painted in accordance with NR requirements. Paint colour (RAL number) requirements to be determined at detail design stage.

Emergency Lighting:
 Emergency lighting is not required

Cleaning & Lamp Replacement:
 The design is based upon a 12 month cleaning cycle and 20 year luminaire replacement cycle.

Circuit Connection:
 Circuit allocation will be determined at detail design stage.

Lighting Control:
 Lighting to be controlled via photocell and time switch arrangement. Refer to Form A2 for further details.

Catalogue Number/Product Code:
 Column:
 5m mid-hinge raise and lower root mounted - TBC
 Luminaire:
 Columns C1-15 - OrangeTek Ignis Mini - TBC

The minimum levels of illumination to be achieved shall be:

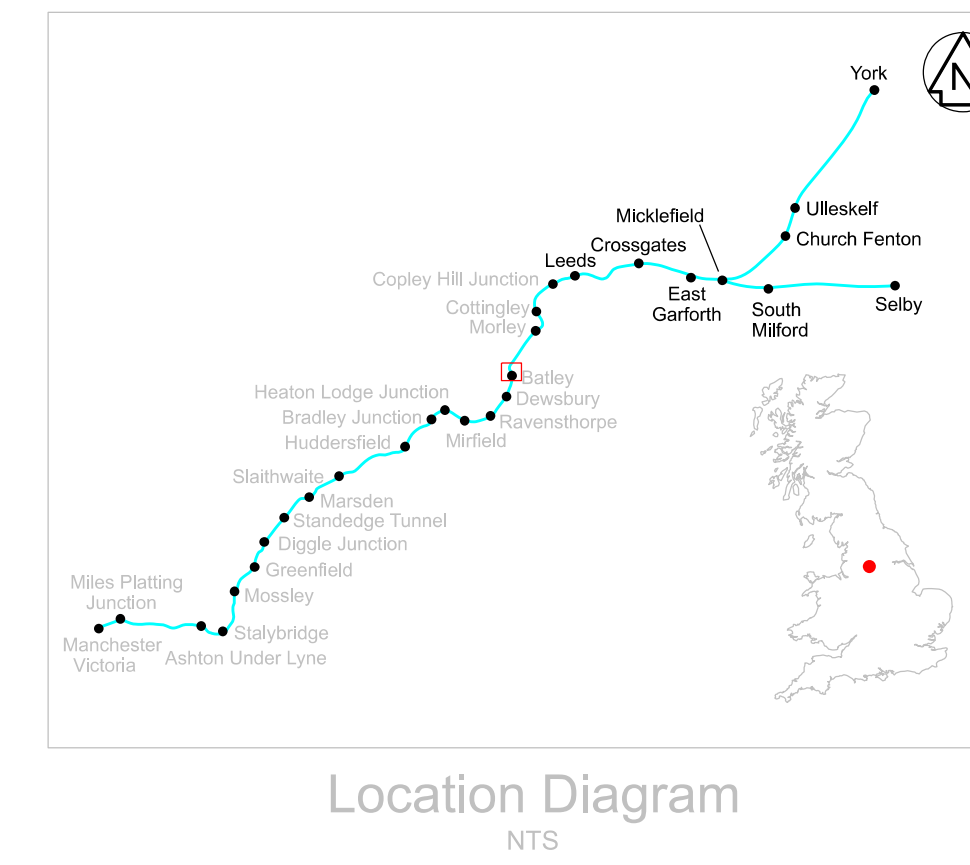
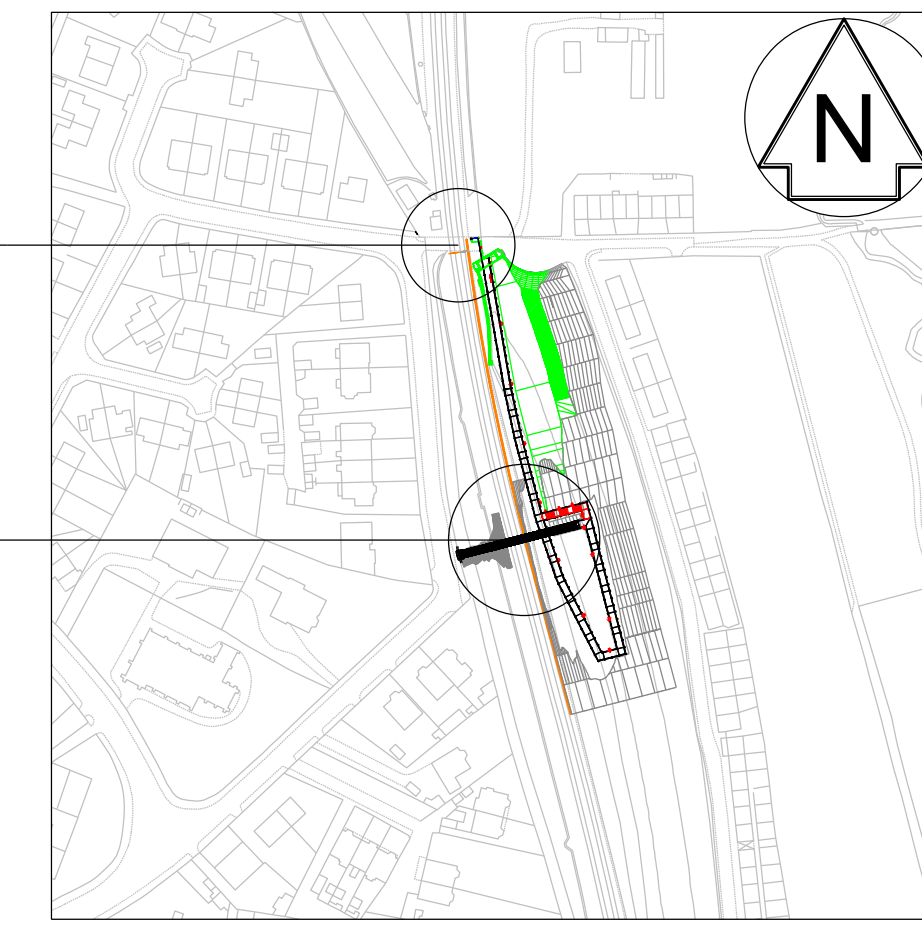
Path/Ramp - Eave 7.5 lux, Emin 1.5 lux (BS EN 13201-2:2015 - Class P3)

Stairs - Eave 20 lux, Emin 10 lux (BS 5489-1:2020)

Footbridge (open deck) - Eave 20 lux, Emin 10 lux (BS 5489-1:2020)

Refer to lighting calculations within Form A2 for further details on achieved lighting levels.

DRAFT



Legend/Notes

1. This drawing is for path/ramp/bridge lighting and small power only.
2. All dimensions are in millimetres unless stated otherwise.
3. Do not scale from drawing.
4. Civils layout taken from: 151667-TSA-48-MDL1-DRG-E-EP-080012
5. Unless otherwise stated installation works shall be carried out in accordance with all relevant Railway Group & Network Rail company standards.
6. All wiring and electrical installation work to be carried out in accordance with the 18th Edition of the IET wiring regulations BS7671 and the Electricity at Work regulations.
7. Cables to be routed alongside the path/ramp in buried ducting with chambers local to electrical equipment and change of direction.
8. Power shall be derived from Batley Signal Box.
9. New lighting control equipment shall be provided near to the distribution boards to serve the new lighting circuits.
10. To be read in conjunction with: 151667-TSA-48-MDL1-DRG-E-EP-080012 Electrical Schematic and Electrical Form A2 documentation.

Colour Key:

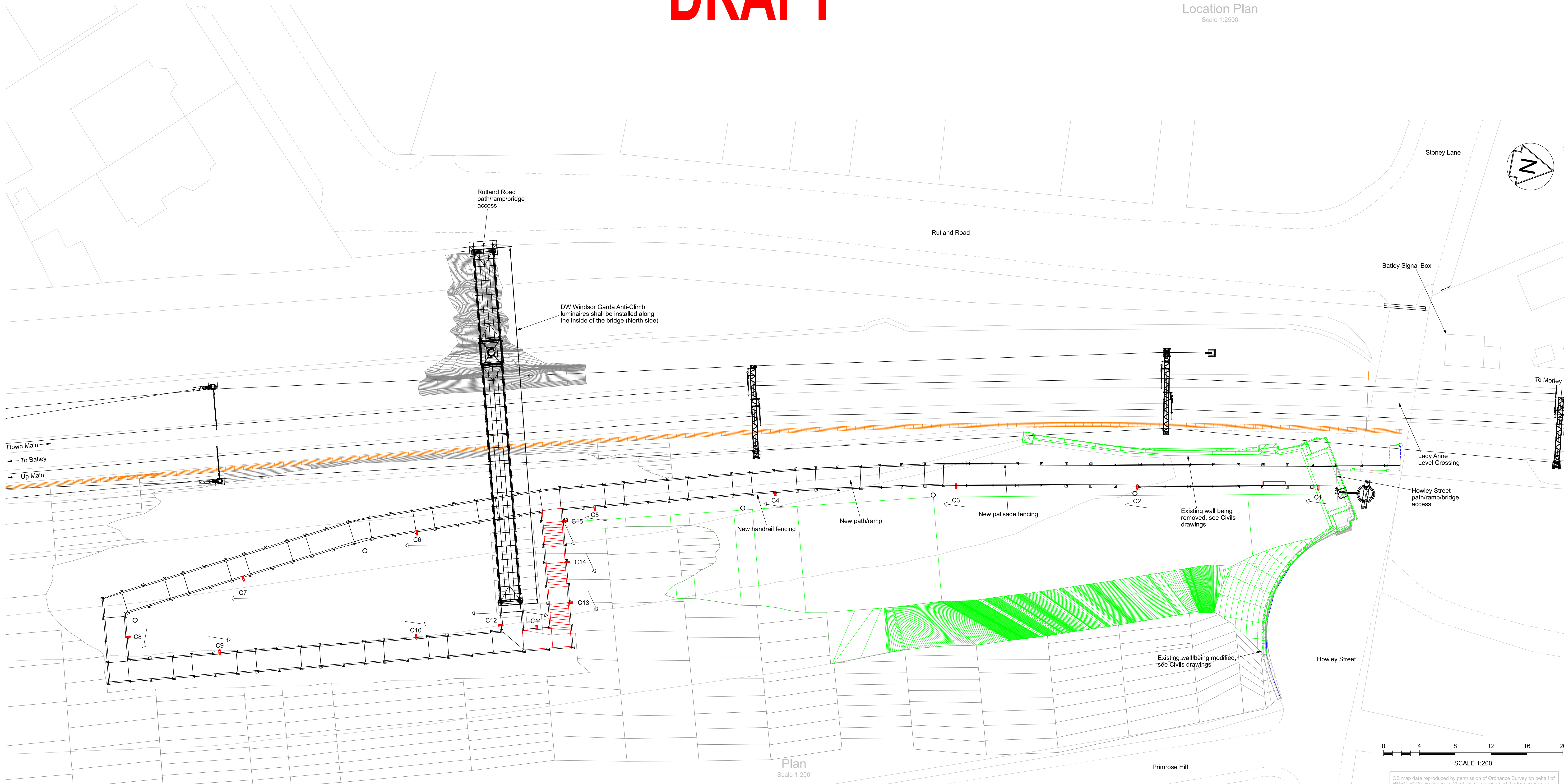
- █ Black Indicates existing or unchanged assets.
- █ Green Indicates existing assets to be removed or abandoned.
- █ Red Indicates proposed assets.
- █ Blue Indicates assets to be modified or to be moved.

Safety, Health and Environmental Information
 For Health and Safety information, refer to discipline specific Project Hazard Record.

Add description in here (Tip-specify hazard and specific area)
 Wol-xxx

Post top mounted OrangeTek LED luminaire upon 5m Raise and Lower Column

Arrow denotes tilt down direction



DRAFT

P01	09/03/22	First Issue	DM	RH	RH
P02.1					
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Status: **Initial Status WIP** Suitability: **S0**



Authorised: _____ Signed: _____ Date: _____

Contractor(s): **TRU West Alliance**

Location: **THORNHILL LNW JN - HOLBECK EAST JN (MIRFIELD - LEEDS)**
 Type: **CAD Drawing** Sub-type: _____
 Role: **Electrical Engineer** Sub-Role: **General**
 Zone: **Morley Cut Off**
 Phasing: **Modified** Project Stage: **GRIP 4**

Transpennine Route Upgrade

Contract No.: **151667**

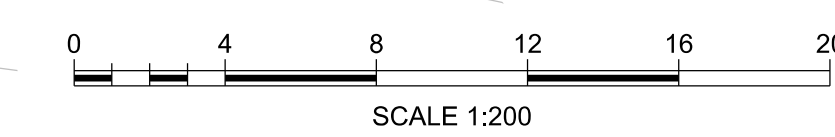
Contract Title: **West of Leeds**

Drawing Title: **MDL1/32A Lady Anne Crossing Proposed Footbridge and Access Lighting General Arrangement**

Designed	D ROUNDS	Signed		Date	
Drawn		Signed		Date	
Checked		Signed		Date	
Approved		Signed		Date	

Scale(s): **As Shown** ELR & Mileage **35.1132** to **0**

Alternative Reference: _____ Sheet **1** of **1**
 Drawing Number: **151667-TSA-48-MDL1-DRG-E-EP-080012** Revision: **P02.1**



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TRU - Lady Ann Footbridge

Footbridge/Ramp Lighting

Date: 10.04.2022
Operator: Danny Rounds

Amey Consulting

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TRU - Lady Ann Footbridge

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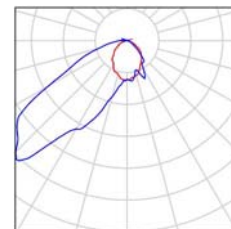
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TRU - Lady Ann Footbridge / Luminaire parts list

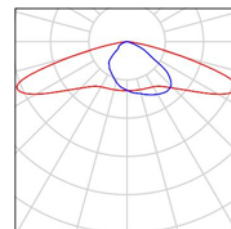
22 Pieces DW Windsor Garda Anti Climb 300 - 3LED -4k-4W- Asymmetric- Garda Anti Climb 3LED Asym
Article No.: Garda Anti Climb 300 - 3LED -4k-4W- Asymmetric-
Luminous flux (Luminaire): 244 lm
Luminous flux (Lamps): 244 lm
Luminaire Wattage: 4.0 W
Luminaire classification according to CIE: 99
CIE flux code: 35 74 94 99 100
Fitting: 1 x 3x 4K LED 4W (Correction Factor 0.662).

See our luminaire catalog for an image of the luminaire.



15 Pieces ORANGETEK IGNIS mini 20 MPH
4.0_70_203_2168 IGNIS mini - 20 LEDs, MPH,
4000K, 0203mA, Opt2
Article No.: IGNIS mini 20 MPH
4.0_70_203_2168
Luminous flux (Luminaire): 2168 lm
Luminous flux (Lamps): 2168 lm
Luminaire Wattage: 14.0 W
Luminaire classification according to CIE: 100
CIE flux code: 31 66 95 100 100
Fitting: 1 x OSRAM SQUARE CRI70 SPR1.57
4000K N7 (Correction Factor 0.745).

See our luminaire catalog for an image of the luminaire.



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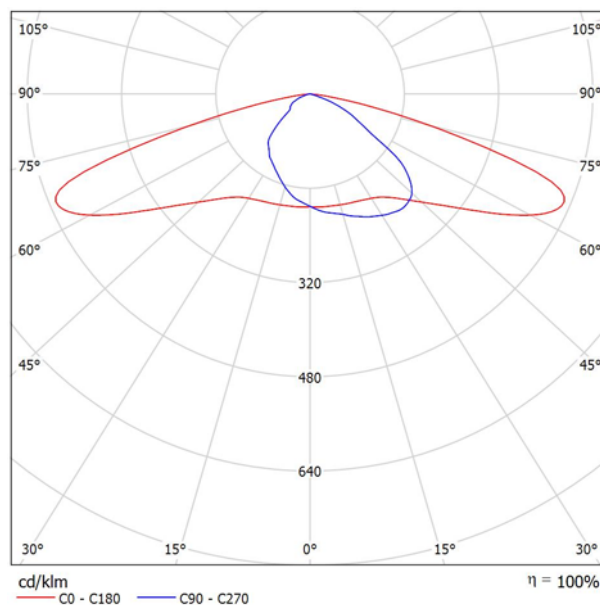
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ORANGETEK IGNIS mini 20 MPH 4.0_70_203_2168 IGNIS mini - 20 LEDs, MPH, 4000K, 0203mA, Opt2 / Luminaire Data Sheet

Luminous emittance 1:

See our luminaire catalog for an image of the luminaire.



Luminaire classification according to CIE: 100
CIE flux code: 31 66 95 100 100

Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

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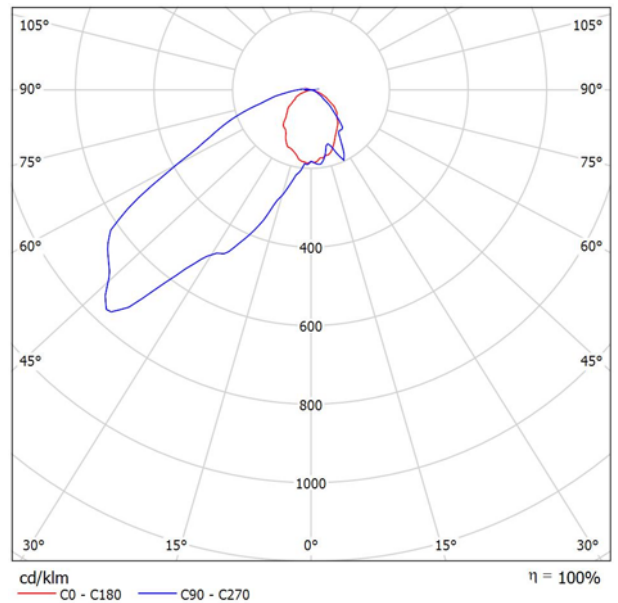
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DW Windsor Garda Anti Climb 300 - 3LED -4k- 4W- Asymmetric- Garda Anti Climb 3LED Asym / Luminaire Data Sheet

Luminous emittance 1:

See our luminaire catalog for an image of the luminaire.



Luminaire classification according to CIE: 99
CIE flux code: 35 74 94 99 100

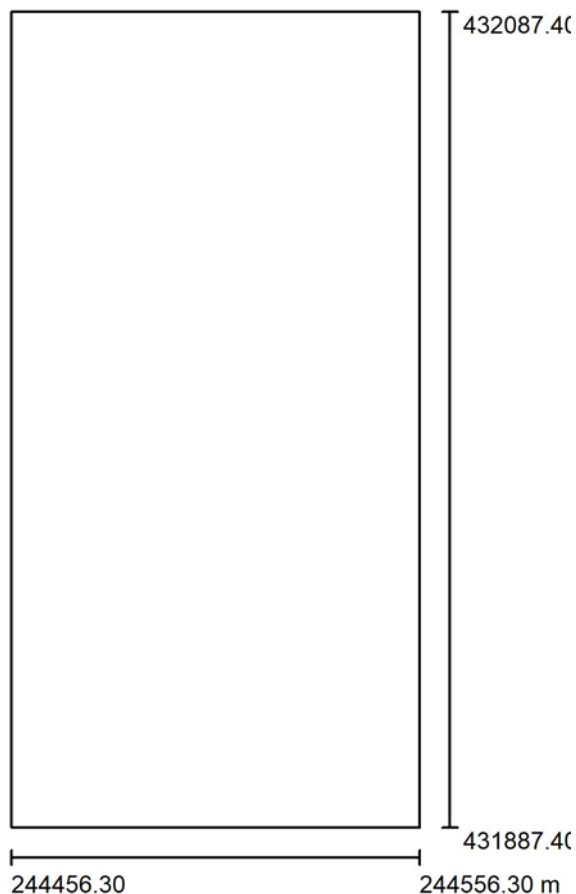
Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

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Exterior Scene 1 / Planning data



Maintenance factor: 1.00, ULR (Upward Light Ratio): 0.0%

Scale 1:1854

Luminaire Parts List

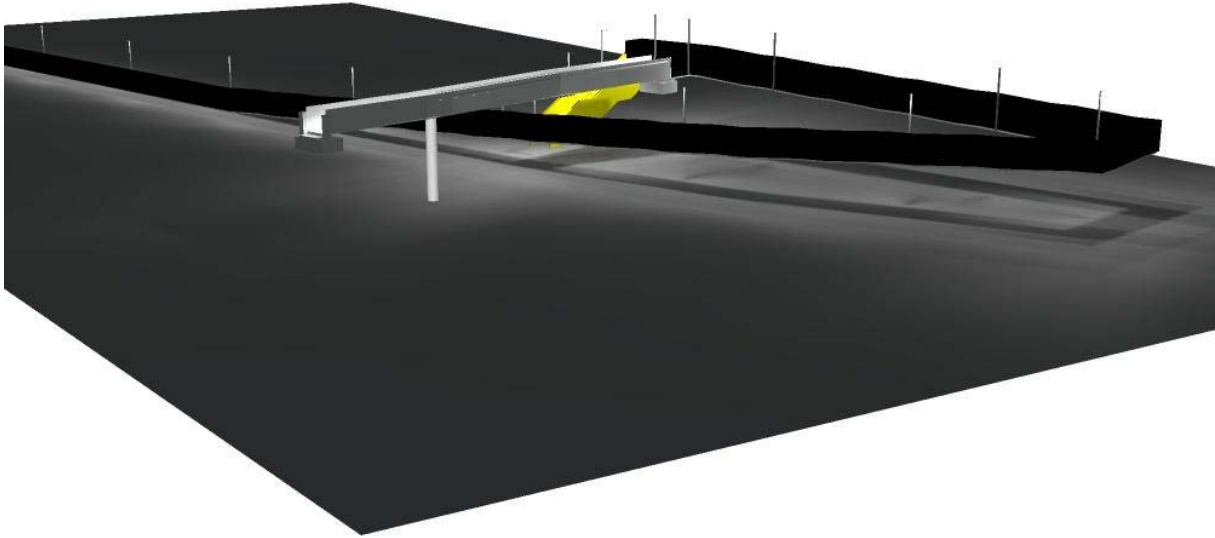
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	22	DW Windsor Garda Anti Climb 300 - 3LED - 4k- 4W- Asymmetric- Garda Anti Climb 3LED Asym (0.662)	244	244	4.0
2	15	ORANGETEK IGNIS mini 20 MPH 4.0_70_203_2168 IGNIS mini - 20 LEDs, MPH, 4000K, 0203mA, Opt2 (0.745)	2168	2168	14.0
Total:			37887	37888	298.0

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Exterior Scene 1 / 3D Rendering

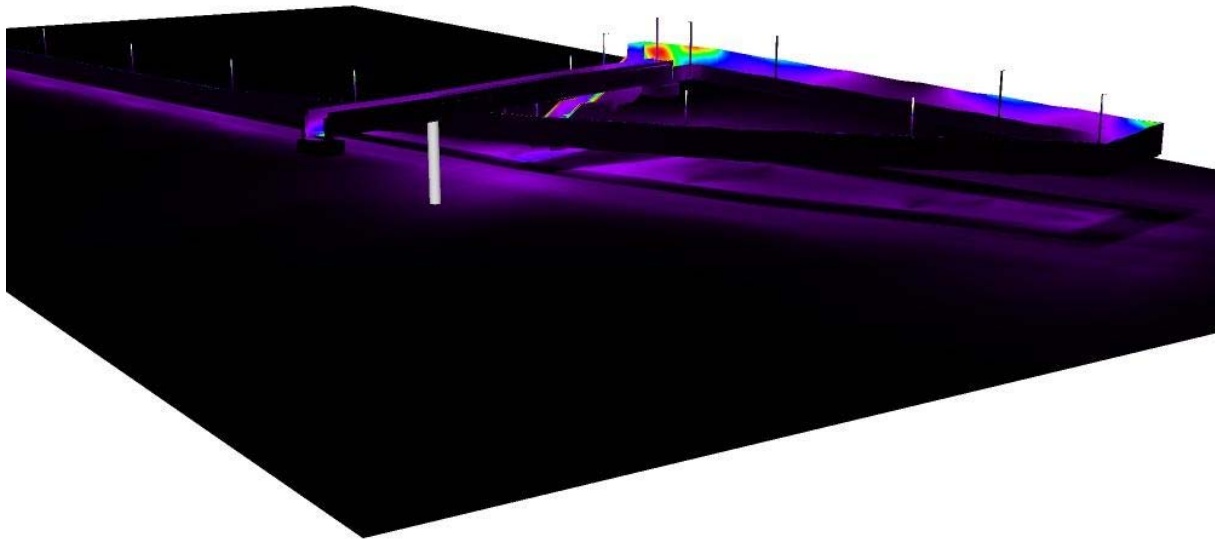


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Exterior Scene 1 / False Colour Rendering



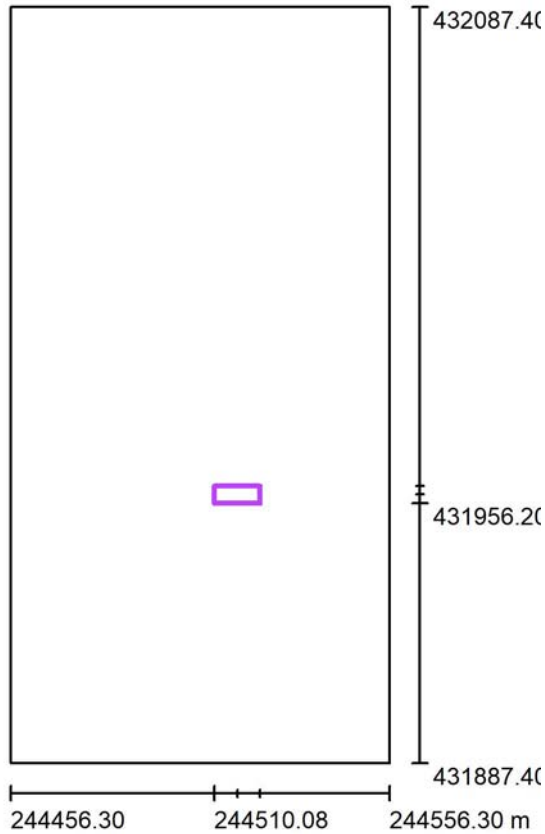
lx

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Exterior Scene 1 / Stairs / Summary



Scale 1 : 2002

Position: (244516.121 m, 431958.525 m, 2.211 m)
Size: (12.083 m, 4.646 m)
Rotation: (0.0°, 0.0°, 0.0°)
Type: User defined, Quantity Points: 96

Results overview

No.	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$	E_{min} / E_{max}	$E_{h\ m} / E_m$	H [m]	Camera
1	horizontal	32	20	41	0.63	0.49	/	0.000	/

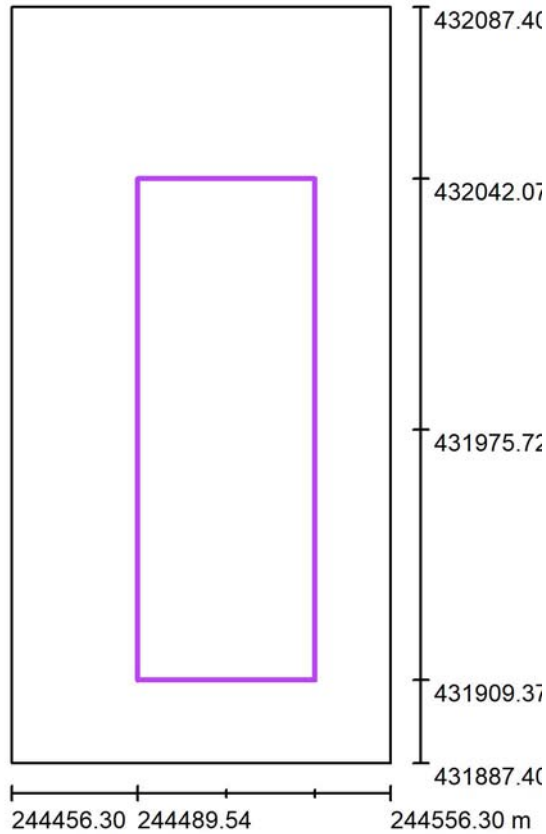
$E_{h\ m} / E_m$ = Relationship between middle horizontal and vertical illuminance, H = Measuring Height

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Exterior Scene 1 / Path/Ramp / Summary



Scale 1 : 2002

Position: (244512.971 m, 431975.722 m, 0.063 m)
Size: (46.856 m, 132.700 m)
Rotation: (0.0°, 0.0°, 0.0°)
Type: User defined, Quantity Points: 648

Results overview

No.	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0	E_{min} / E_{max}	$E_{h\ m} / E_m$	H [m]	Camera
1	horizontal	10	4.42	31	0.42	0.14	/	0.000	/

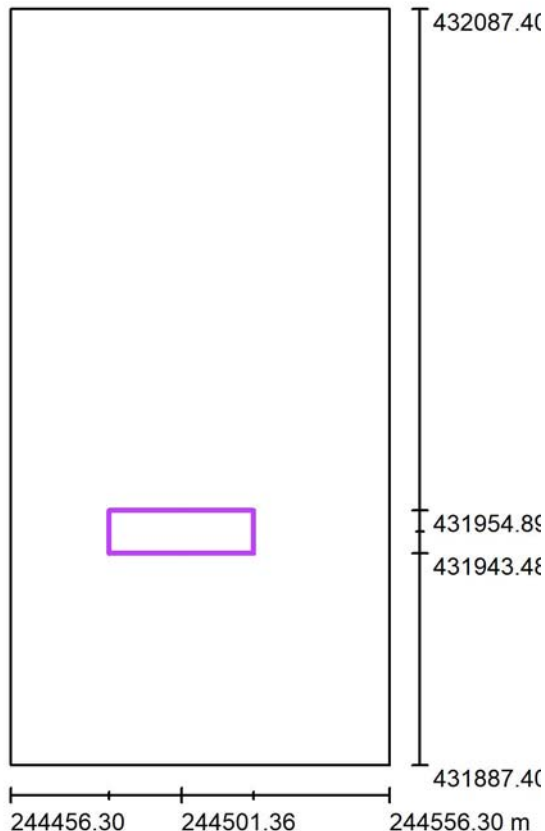
$E_{h\ m} / E_m$ = Relationship between middle horizontal and vertical illuminance, H = Measuring Height

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Exterior Scene 1 / Bridge / Summary



Scale 1 : 2002

Position: (244501.358 m, 431949.188 m, 6.918 m)
Size: (38.252 m, 11.413 m)
Rotation: (0.0°, 0.0°, 0.0°)
Type: User defined, Quantity Points: 120

Results overview

No.	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0	E_{min} / E_{max}	$E_{h\ m} / E_m$	H [m]	Camera
1	horizontal	32	14	56	0.42	0.24	/	0.000	/

$E_{h\ m} / E_m$ = Relationship between middle horizontal and vertical illuminance, H = Measuring Height