

H Z LOGISTICS

Installation : YARD

Project number : HZ-EX-01

Customer : ANGLOFLORA FARMS LTD

Processed by ROLLINS GROUP

Date 31/10/2023

Project description:

Calculation based on standard reflectances.

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

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. If dimmable luminaires have been specified, then it is the responsibility of the contractor to establish which dimming ballasts/system is required by the lighting control ethos/specification.

Emergency lighting design conforms to BS5266/EN1838 where possible. 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.

Rollins Electrical Mechanical Services Ltd

THE CURRENT BUILDINGS

JARVIS GATE

SUTTON ST. JAMES

Tel: 01945 440 779

SPALDING

Fax: 01945 440 614

LINCOLNSHIRE PE12 0ER

Email: sales@rollinsgroup.uk



Table of contents

First Page	1
Table of contents	2
1 Luminaire data	
1.1 ANSELL, FLOODLIGHTS - Aztec Asymme... (AAZLED300/ASY)	
1.1.1 Data sheet	3
1.2 ANSELL, FLOODLIGHTS - Aztec Symmetrical (AAZLED100)	
1.2.1 Data sheet	4
2 Exterior 1	
2.1 Description, Exterior 1	
2.1.1 Floor plan	5
2.2 Summary, Exterior 1	
2.2.1 Result overview, Yard	6
2.2.2 Result overview, Spill Area	7
2.2.3 Result overview, Main A47	8
2.3 Calculation results, Exterior 1	
2.3.1 Table, Yard (E)	9
2.3.2 Table, Spill Area (E)	10
2.3.3 Table, Main A47 (E)	12
2.3.4 Longitudinal section, Main A47 (E)	15
2.3.5 Cross section, Main A47 (E)	16
2.3.6 3D luminance, View 1	17
2.3.7 3D luminance, View from above	18

1 Luminaire data

1.1 ANSELL, FLOODLIGHTS - (AAZLED300/ASY)

1.1.1 Data sheet

Manufacturer: **ANSELL**



AAZLED300/ASY Ceiling mounted luminaire FLOODLIGHTS - Aztec Asymmetric

AAZLED300/ASY
FLOODLIGHTING
LED 300W - Cool White

Supplied c/w Integral Driver

- High performance die-cast aluminium LED floodlight
- High output, high efficiency asymmetric lens technology for anti-light pollution
- Pre-installed breathable gland prevents condensation
- High specification IP66, IK08 ratings
- 60x120° beam angle
- 300W exceeds performance of 400W HQI-T
- Pre-wired with 1.5 metre of rubber insulated cable for ease of installation
- LED lifespan L80 B10 54,000 hours
- Non-dimmable

Option
/PIR

Operating Temp -30°C to 50°C

- Suitable for external use
- 5 Year Product Warranty
- IP66

Luminaire data

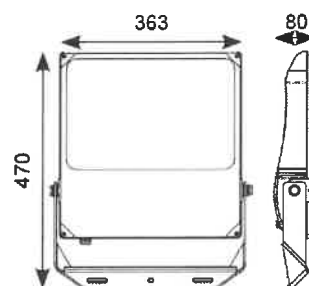
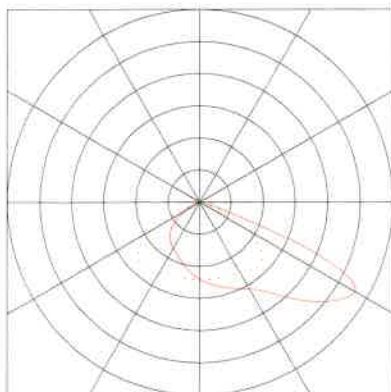
Absolute Photometry

Luminaire efficacy	: 141.86 lm/W
Classification	: A40 ↓100.0% ↑0.0%
CIE Flux Codes	: 39 81 99 100 100
UGR 4H 8H	: 39.7 / 33.2
Control gear	: Electronic ballast
Power	: 300 W
Luminous flux	: 42559 lm

Dimensions : 336 mm x 220 mm x 1 mm

Equipped with

Quantity	: 1
Designation	: LED single 840
Colour	: 4000K
Socket	: --
Colour reproduction	: --



AAZLED300

1 Luminaire data

1.2 ANSELL, FLOODLIGHTS - (AAZLED100)

1.2.1 Data sheet

Manufacturer: ANSELL



AAZLED100 Ceiling mounted luminaire FLOODLIGHTS - Aztec Symmetrical

AAZLED100

FLOODLIGHTING

Aztec LED Symmetrical Floodlight

LED 100W - Cool White

Supplied c/w Integral Driver

- High performance diecast aluminium luminaire with symmetrical light distribution
- High output, high efficiency floodlight
- Pre-installed breathable gland prevents condensation
- High specification IP66, IK08 ratings
- 120° beam angle
- 100W exceeds performance of 150W HQI-TS
- Pre-wired with 1.5 metre of rubber insulated cable for ease of installation
- LED lifespan L80 B10 54,000 hours
- Non-dimmable

Option

/PIR

Operating Temp -30°C to 50°C

- Suitable for external use
- 5 Year Product Warranty
- IP66

Luminaire data

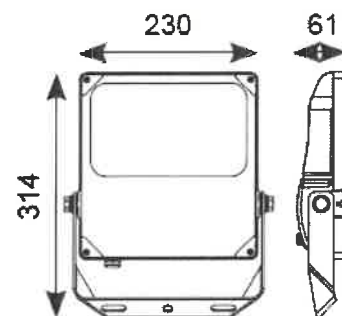
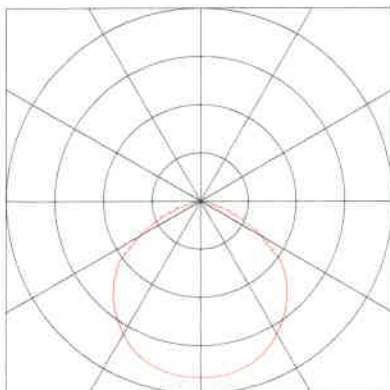
Absolute Photometry

Luminaire efficacy	: 147.59 lm/W
Classification	: A40 ↓100.0% ↑0.0%
CIE Flux Codes	: 51 85 99 100 100
UGR 4H 8H	: 32.6 / 33.4
Control gear	: Electronic ballast
Power	: 100 W
Luminous flux	: 14759 lm

Dimensions : 202 mm x 120 mm x 1 mm

Equipped with

Quantity	: 1
Designation	: LED single 840
Colour	: 4000K
Socket	: --
Colour reproduction	: --

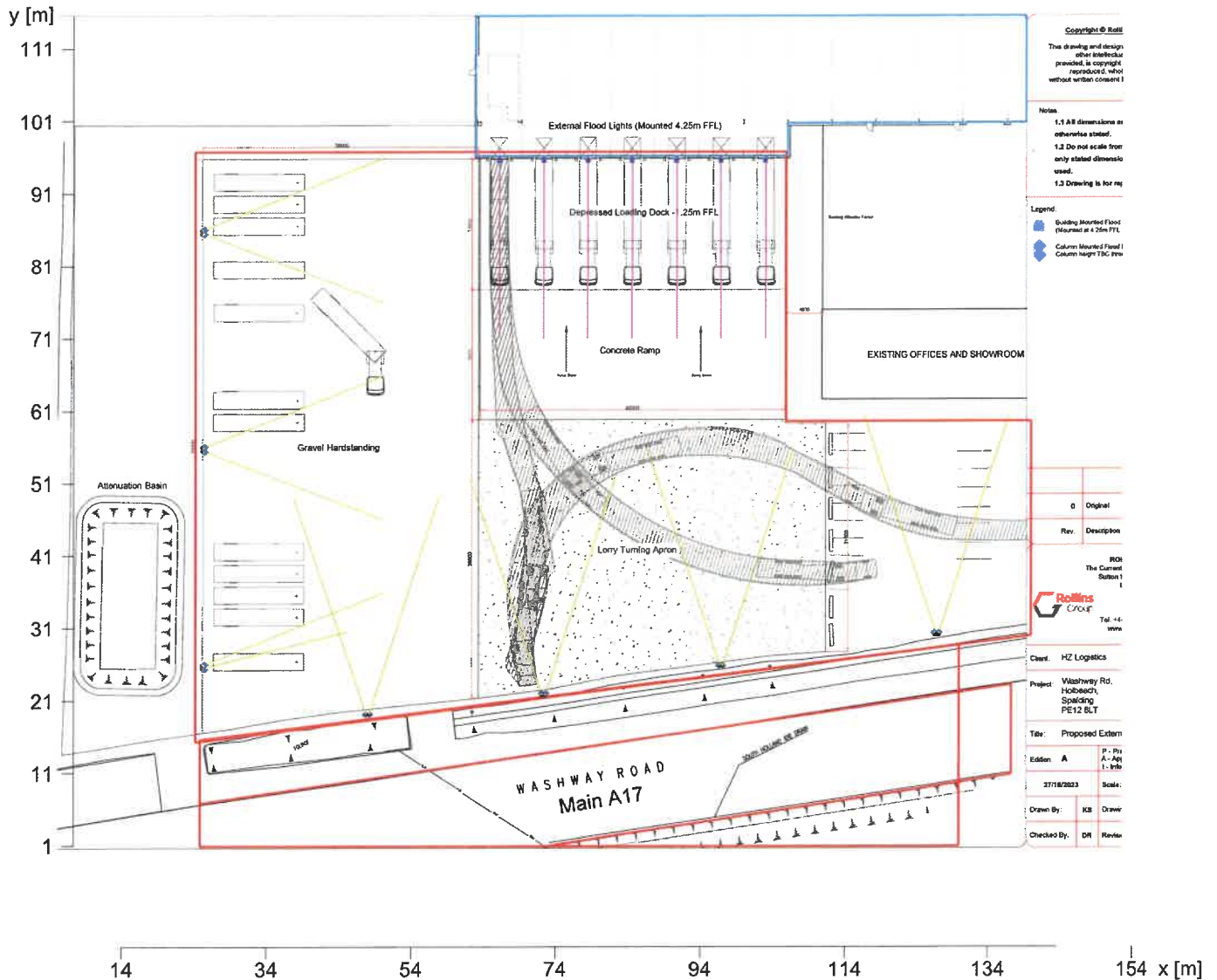


AAZLED100

2 Exterior 1

2.1 Description, Exterior 1

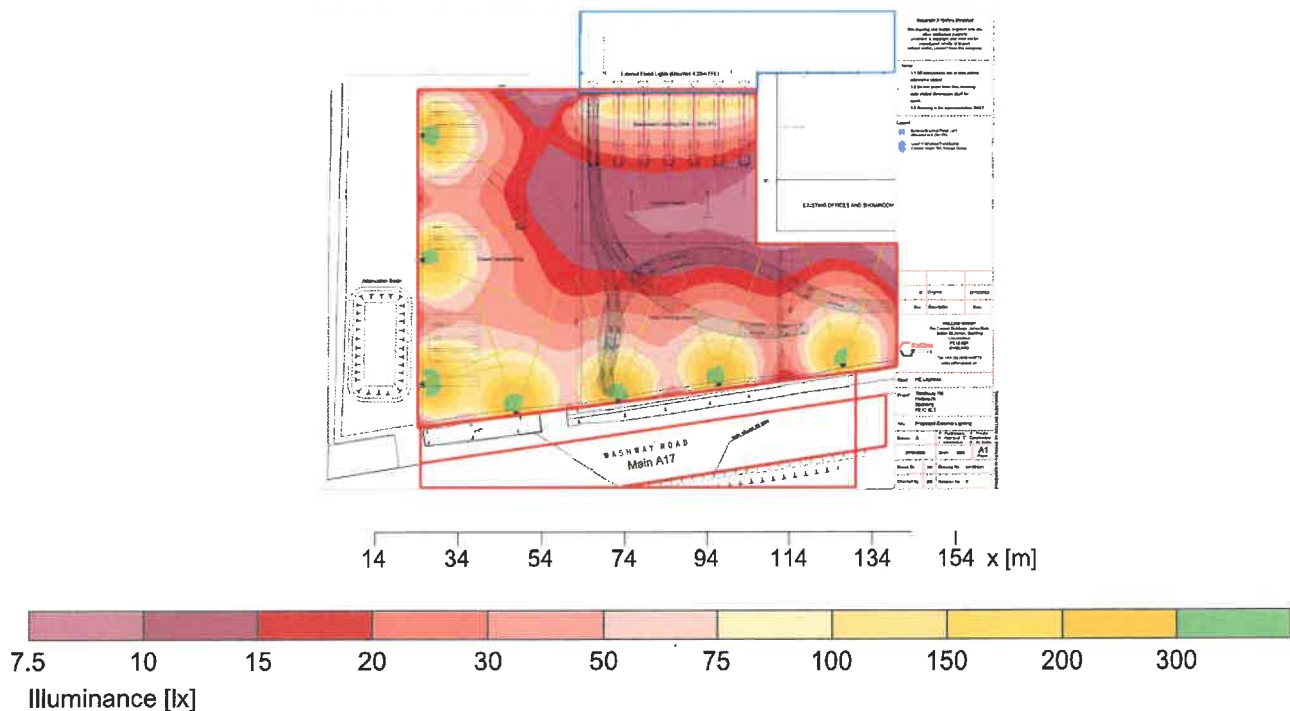
2.1.1 Floor plan



2 Exterior 1

2.2 Summary, Exterior 1

2.2.1 Result overview, Yard



General

Calculation algorithm used
Maintenance factor

Average indirect fraction
0.80

Total luminous flux of all lamps
Total power
Total power per area (7304.46 m²)

699139.00 lm
4900.0 W
0.67 W/m² (1.17 W/m²/100lx)

Yard

Em
Emin
Emin/Em (Uo)
Emin/Emax (Ud)
Position

Yard

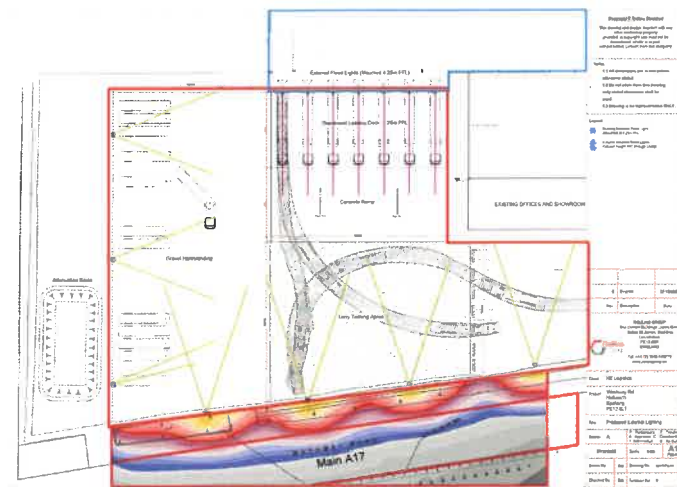
Horizontal
57.5 lx
8.2 lx
0.14
0.02
0.00 m

Type No.\Make

1	14	ANSELL	
		Order No.	: AAZLED300/ASY
		Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
		Equipment	: 1 x LED single 840 300 W / 42559 lm
2	7	Order No.	: AAZLED100
		Luminaire name	: FLOODLIGHTS - Aztec Symmetrical
		Equipment	: 1 x LED single 840 100 W / 14759 lm

2.2 Summary, Exterior 1

2.2.2 Result overview, Spill Area



14 34 54 74 94 114 134 154 x [m]



General

Calculation algorithm used
Maintenance factor

Average indirect fraction
0.80

Total luminous flux of all lamps
Total power
Total power per area (2225.64 m²)

42559.00 lm
300.0 W
0.13 W/m² (0.91 W/m²/100lx)

Spill Area

Em
Emin
Emin/Em (Uo)
Emin/Emax (Ud)
Position

Spill Area

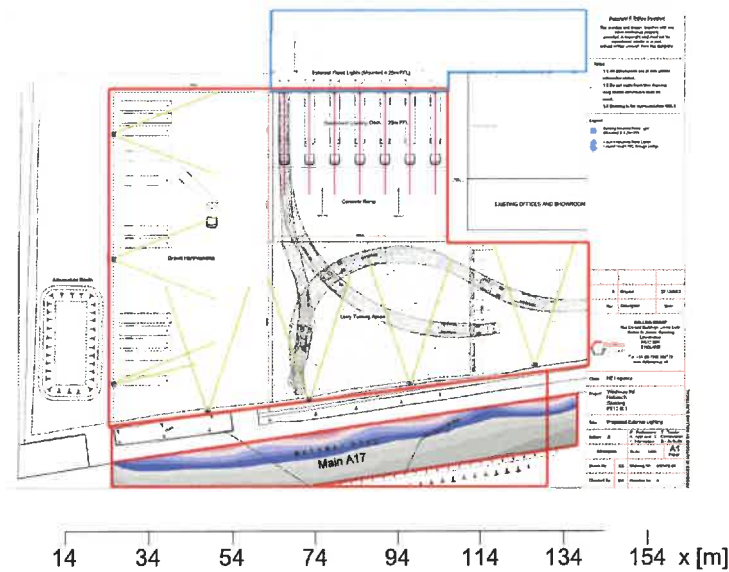
Horizontal
14.8 lx
0.2 lx
0.01
0.00
0.00 m

Type No.\Make

1	1	ANSELL	
		Order No.	: AAZLED300/ASY
		Luminaire name	: FLOODLIGHTS - Aztec Asymmetric
		Equipment	: 1 x LED single 840 300 W / 42559 lm

2.2 Summary, Exterior 1

2.2.3 Result overview, Main A47



General

Calculation algorithm used
Maintenance factor

Average indirect fraction
0.80

Main A47

Em
Emin
Emin/Em (Uo)
Emin/Emax (Ud)
Position

Main A47

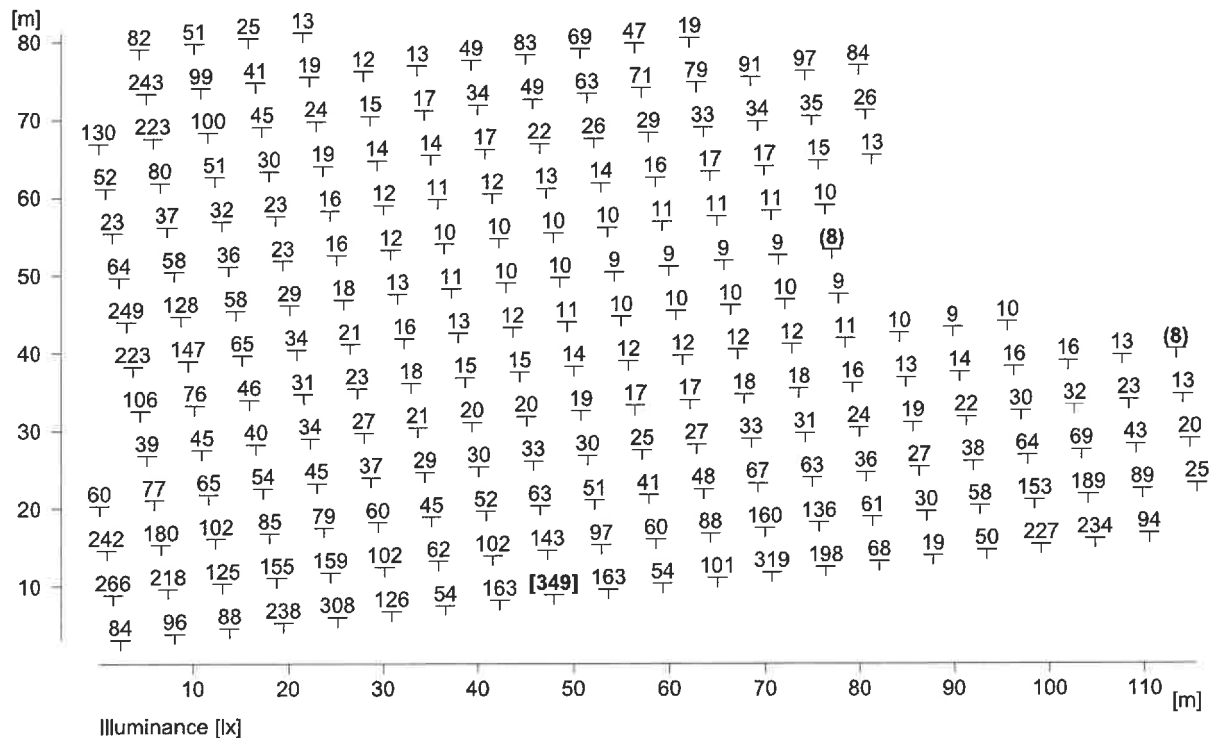
Horizontal
1.29 lx
0.21 lx
0.16
0.02
0.00 m

Type No.\Make

2 Exterior 1

2.3 Calculation results, Exterior 1

2.3.1 Table, Yard (E)

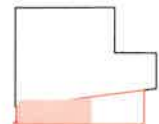
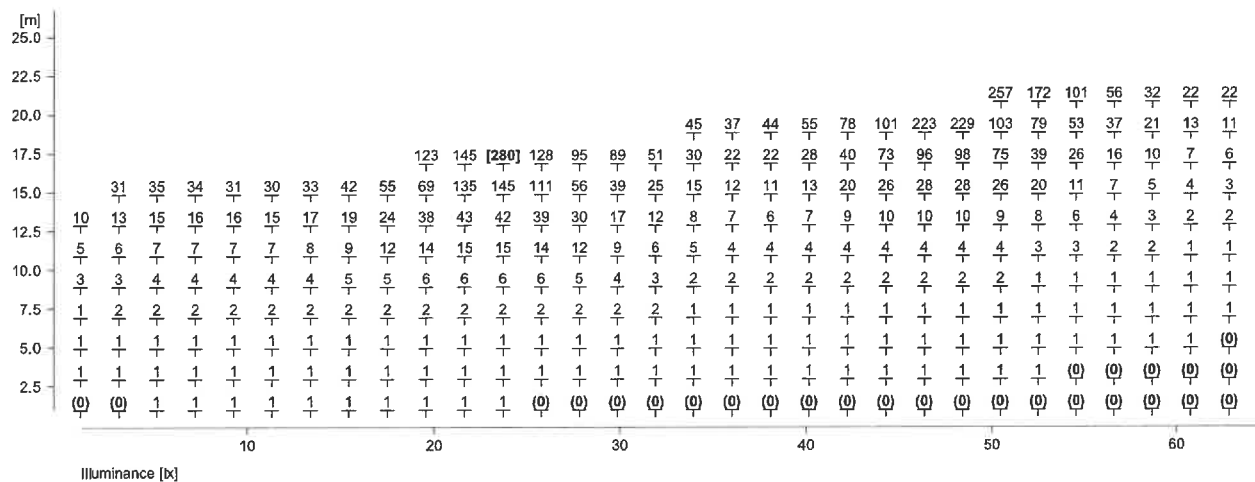


Height reference plane
Average illuminance
Minimum illuminance
Maximum illuminance
Uniformity U_o
Diversity U_d

: 0.00 m
Em : 58 lx
E_{min} : 8 lx
E_{max} : 349 lx
E_{min}/E_m : 1 : 6.99 (0.14)
E_{min}/E_{max} : 1 : 42.42 (0.02)

2.3 Calculation results, Exterior 1

2.3.2 Table, Spill Area (E)



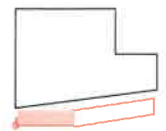
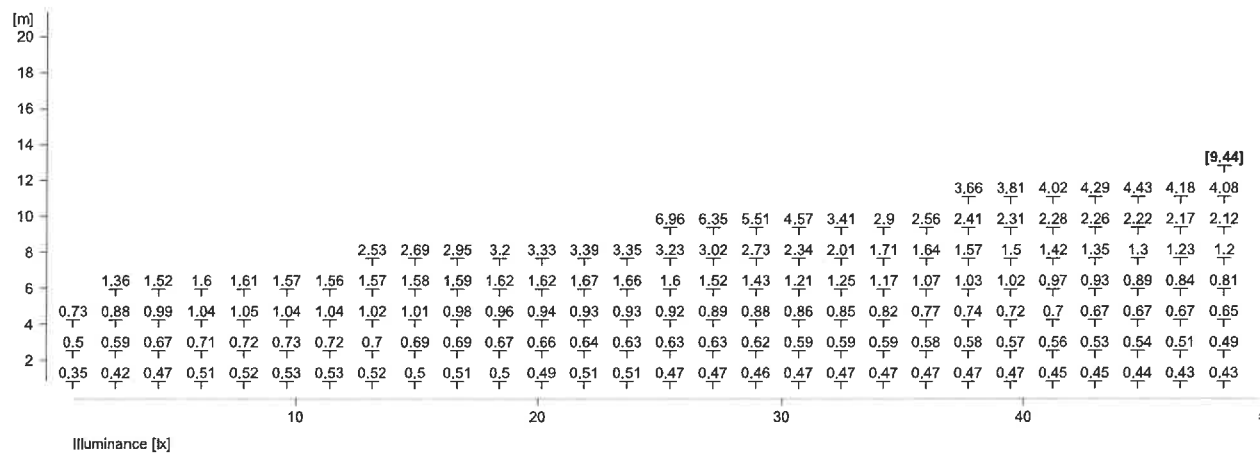
Part1

Height reference plane		: 0.00 m
Average illuminance	Em	: 15 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 280 lx
Uniformity Uo	Emin/Em	: 1 : 86.04 (0.01)
Diversity Ud	Emin/Emax	: 1 : 1627.20 (0.00)

A diagram of a composite figure consisting of a large rectangle with a smaller rectangle attached to its right side. A red trapezoid is highlighted at the bottom, with its vertices marked by red dots. The trapezoid's top base is the bottom edge of the smaller rectangle, and its bottom base is the bottom edge of the larger rectangle. The height of the trapezoid is the vertical distance between these two bases.

2.3 Calculation results, Exterior 1

2.3.3 Table, Main A47 (E)



Part1

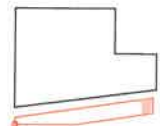
Height reference plane	: 0.00 m
Average illuminance	Em : 1.29 lx
Minimum illuminance	Emin : 0.21 lx
Maximum illuminance	Emax : 9.44 lx
Uniformity Uo	Emin/Em : 1 : 6.08 (0.16)
Diversity Ud	Emin/Emax : 1 : 44.67 (0.02)

2.3 Calculation results, Exterior 1

2.3.3 Table, Main A47 (E)

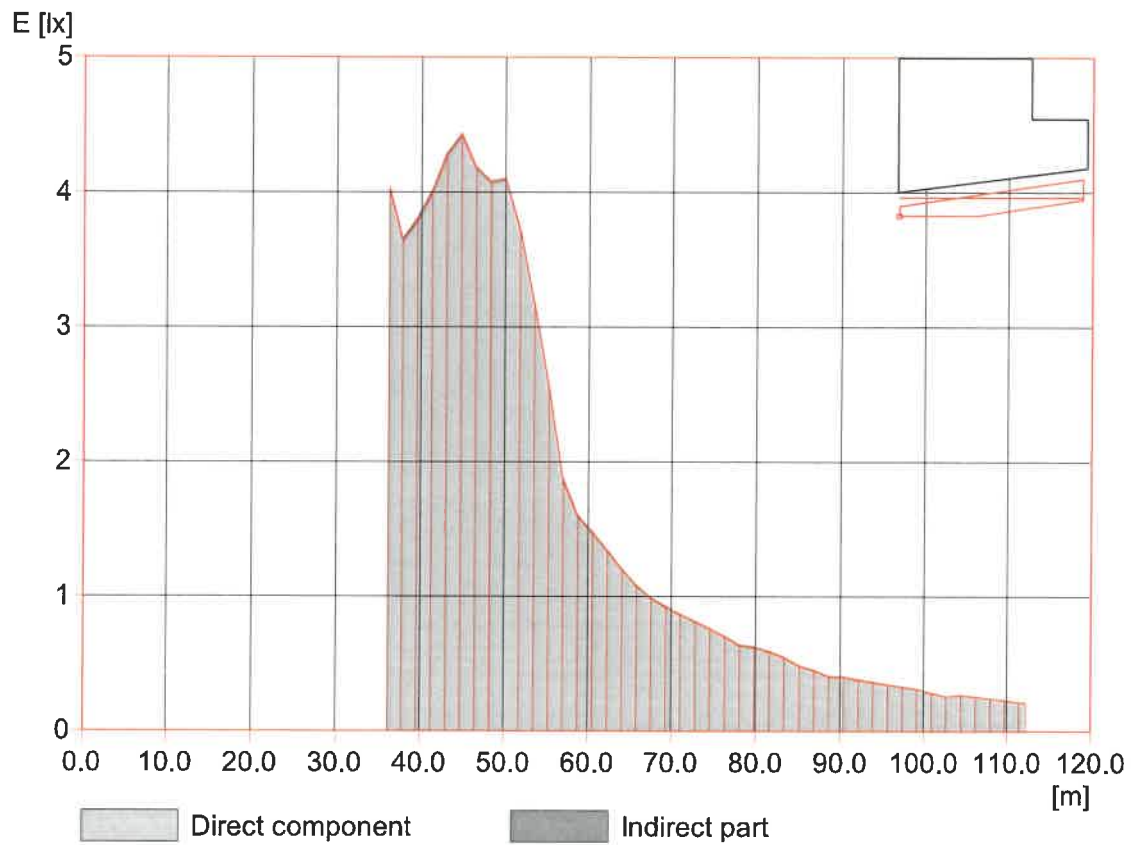
			6,22	3,85	2,88
3,71	3,54	3,21	2,69	2,08	1,38
1,57	1,49	1,34	1,18	0,99	0,79
0,73	0,68	0,63	0,56	0,54	0,49
0,43	0,42	0,39	0,37	0,36	0,3
0,35	0,33	0,29	0,27	0,24	0,25
0,26	0,27	0,26	0,25	0,23	0,22
0,24	0,23	0,22	(0,21)		

110
[m]



2.3 Calculation results, Exterior 1

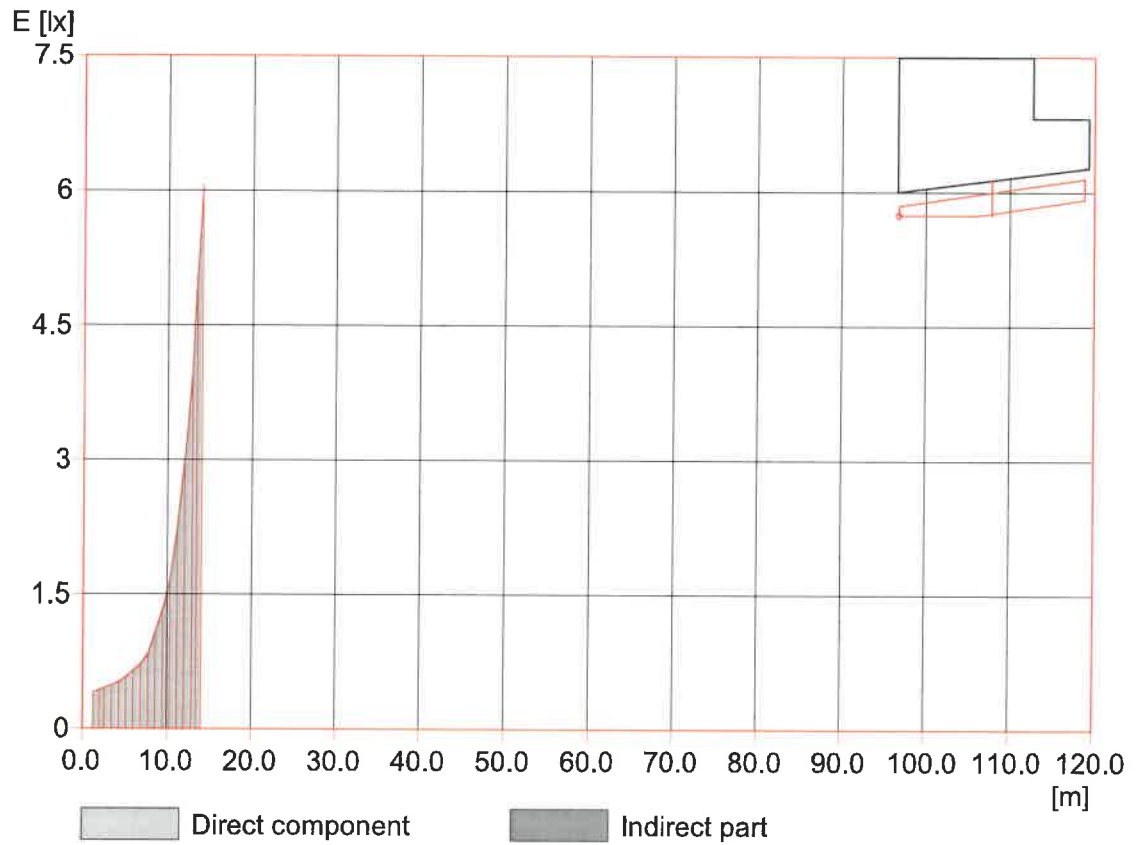
2.3.4 Longitudinal section, Main A47 (E)



Longitudinal section at $y = 11.12$ m

2.3 Calculation results, Exterior 1

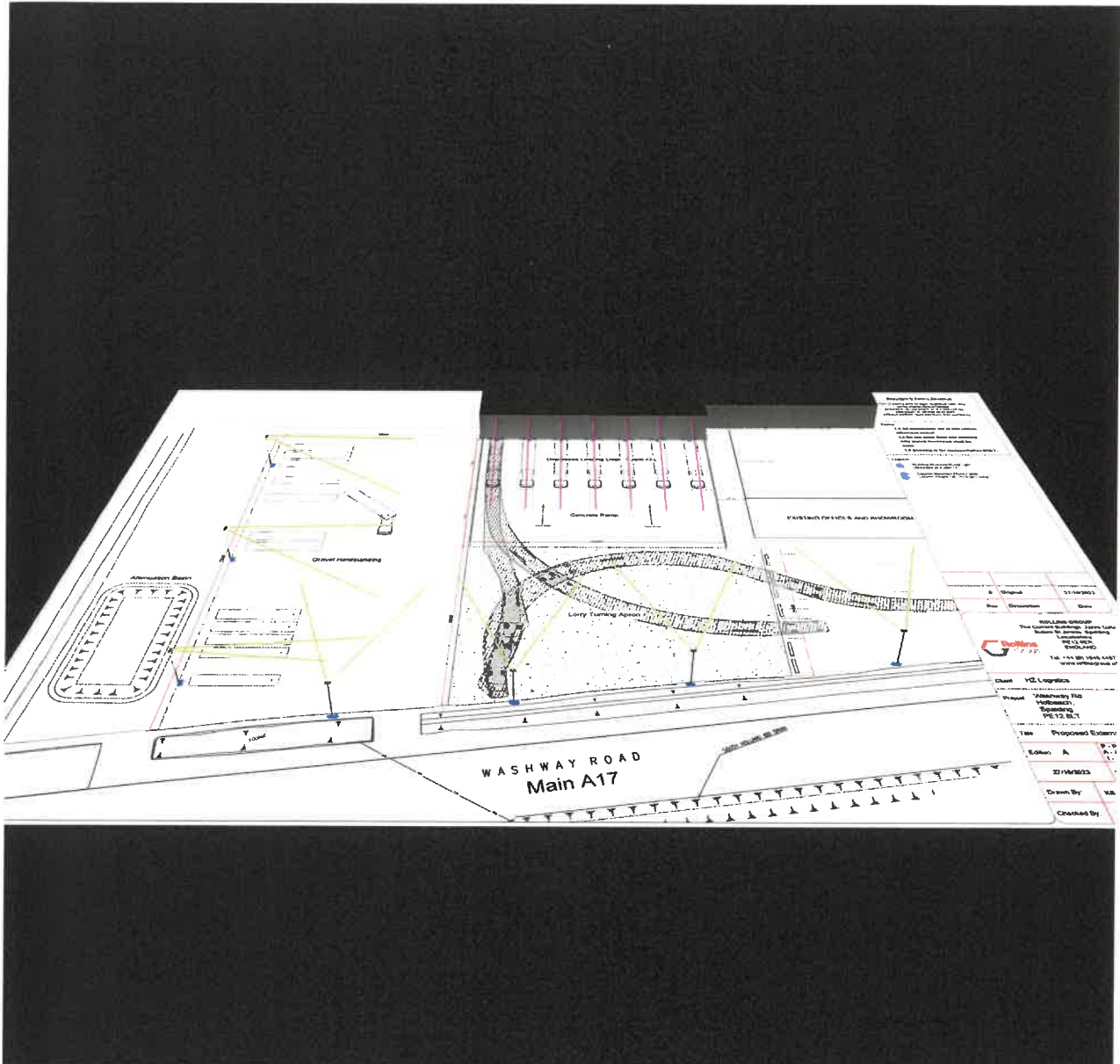
2.3.5 Cross section, Main A47 (E)



Cross section at $x = 56.12$ m

2.3 Calculation results, Exterior 1

2.3.6 3D luminance, View 1



2.3 Calculation results, Exterior 1

2.3.7 3D luminance, View from above

