

Globe and Simpson - Exterior Lighting

Installation : Exterior Lighting Models

Project number :

Customer : Briggs and Forrester

Processed by :

Date : 10.02.2022

the photometric data files used are for a single optic, hence 2 fittings are used at each luminaire point

The upward luminaire is a 12 degree beam to give a narrow shaft of light up the building, the downward luminaire is a wide asymmetric beam to give a wider spread of light around the building surround pathways.

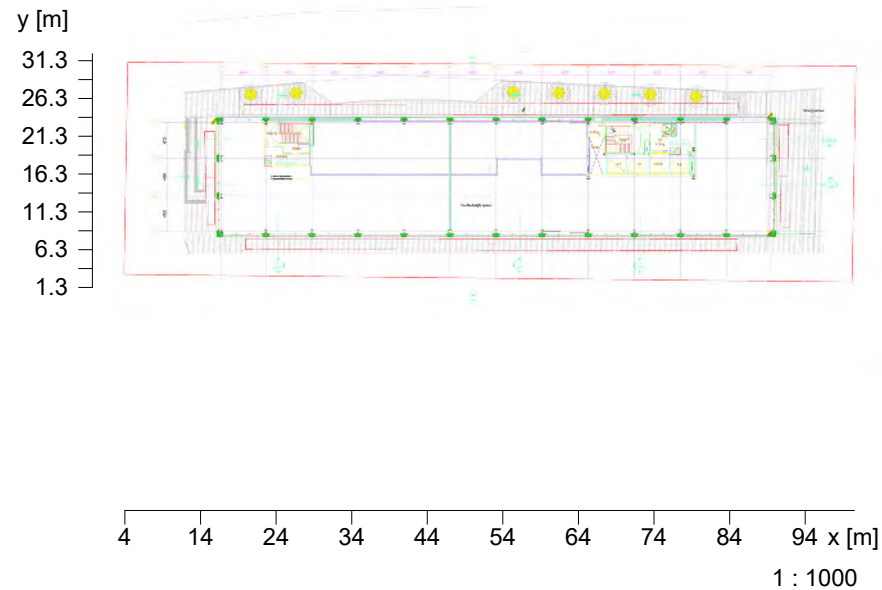
The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

1 Exterior 1

1.1 Description, Exterior 1

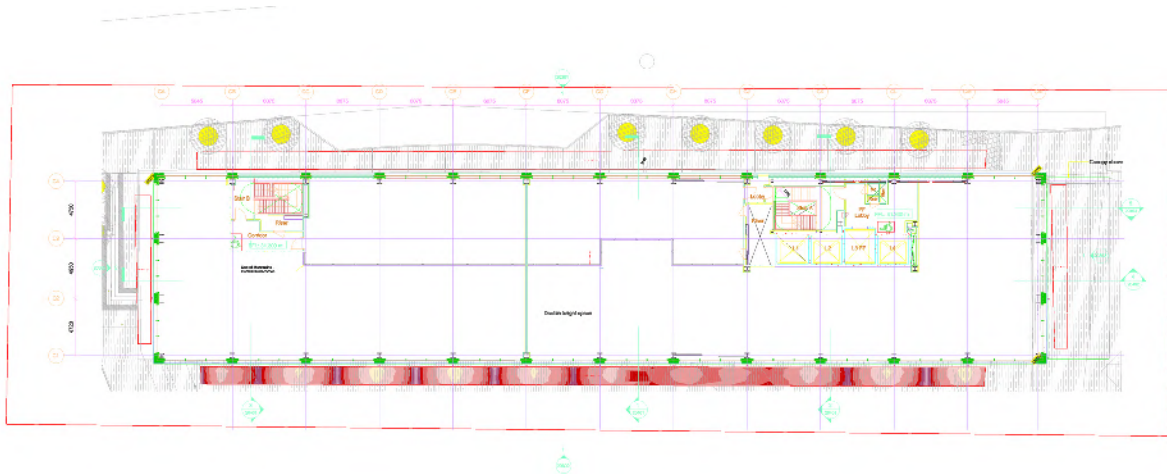
1.1.1 Floor plan



1 Exterior 1

1.2 Summary, Exterior 1

1.2.1 Result overview, Rear Building Surround



4 14 24 34 44 54 64 74 84 94 x [m]



5 7.5 10 15 20 30 50 75

Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	59644 lm
Total power	468 W
Total power per area (2712.38 m²)	0.17 W/m²

Illuminance

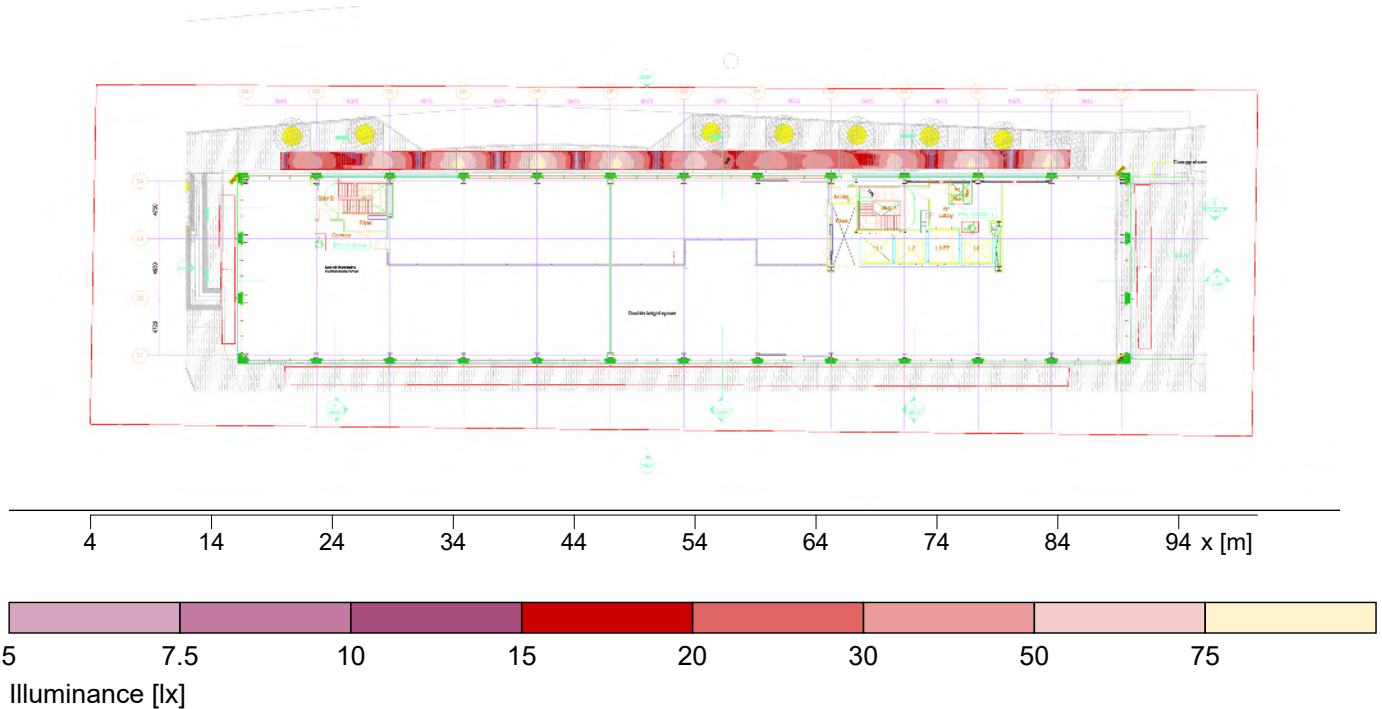
Average illuminance	Em	40.4 lx
Minimum illuminance	Emin	5.1 lx
Maximum illuminance	Emax	89.2 lx
Uniformity Uo	Emin/Em	1:7.95 (0.13)
Diversity Ud	Emin/Emax	1:17.5 (0.06)

Type No.\Make

4	26		Spurlite Ltd
			Order No. : !MOK-32024X.4.11
			Luminaire name : MOK-32024X.4.11
Equipment : 1 x LL01CR-CEO12L02 9 W / 1147 lm			
6	26		Order No. : !MOK-32024X.4.13
			Luminaire name : MOK-32024X.4.13
			Equipment : 1 x LL01CR-CEO38L02 9 W / 1147 lm

1.2 Summary, Exterior 1

1.2.2 Result overview, Front Building Surround



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	59644 lm
Total power	468 W
Total power per area (2712.38 m²)	0.17 W/m²

Illuminance

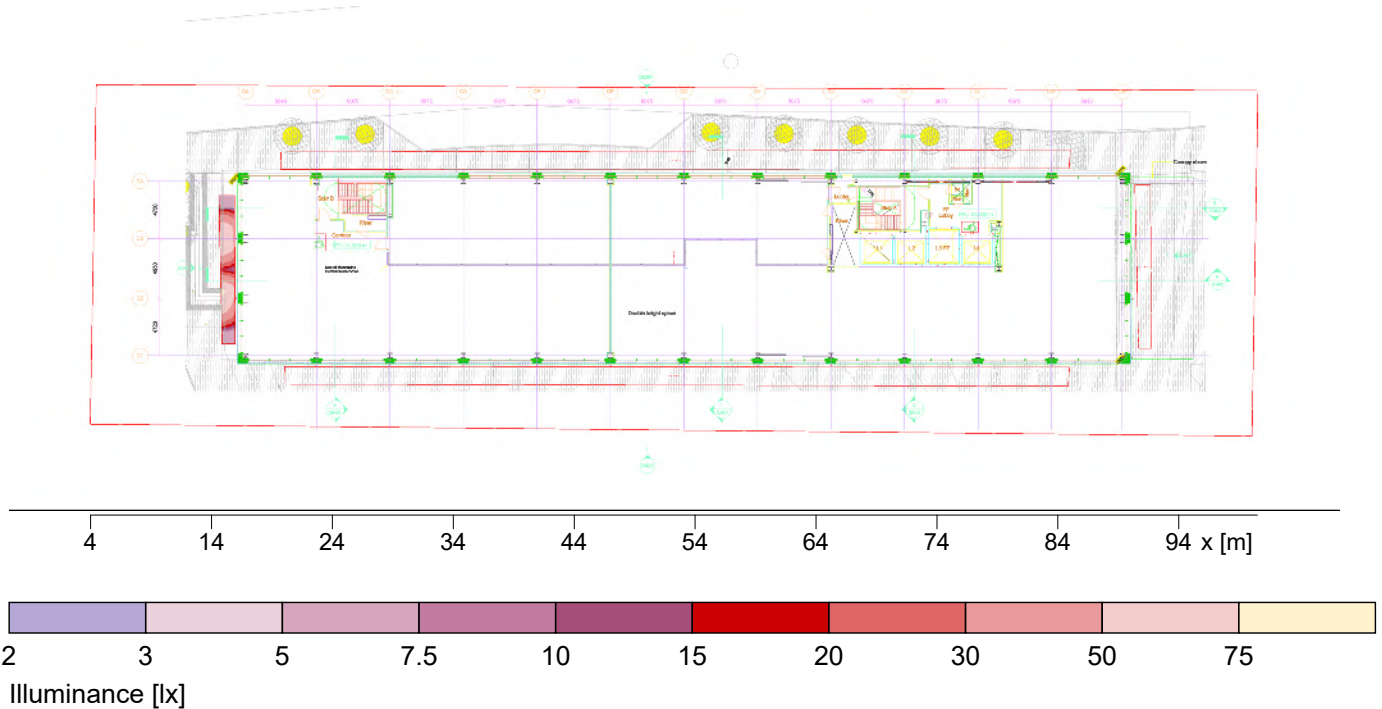
Average illuminance	Em	39.1 lx
Minimum illuminance	Emin	5.3 lx
Maximum illuminance	Emax	90.6 lx
Uniformity Uo	Emin/Em	1:7.36 (0.14)
Diversity Ud	Emin/Emax	1:17.1 (0.06)

Type No.\Make

4	26	Spurlite Ltd	
		Order No.	: !MOK-32024X.4.11
		Luminaire name	: MOK-32024X.4.11
		Equipment	: 1 x LL01CR-CEO12L02 9 W / 1147 lm
6	26	Order No.	: !MOK-32024X.4.13
		Luminaire name	: MOK-32024X.4.13
		Equipment	: 1 x LL01CR-CEO38L02 9 W / 1147 lm

1.2 Summary, Exterior 1

1.2.3 Result overview, Side of building 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	59644 lm
Total power	468 W
Total power per area (2712.38 m²)	0.17 W/m²

Illuminance

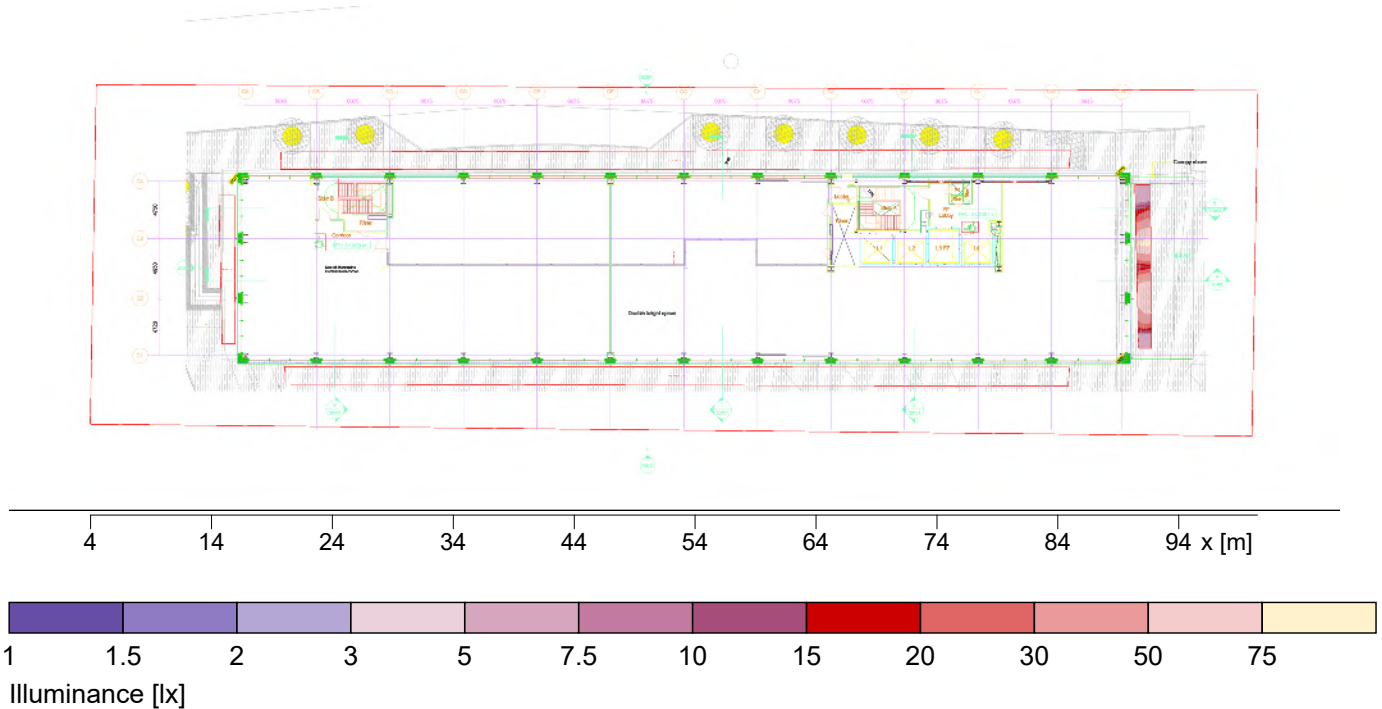
Average illuminance	Em	36.3 lx
Minimum illuminance	Emin	5.7 lx
Maximum illuminance	Emax	76.1 lx
Uniformity Uo	Emin/Em	1:13.6 (0.75)
Diversity Ud	Emin/Emax	1:28.4 (0.04)

Type No.\Make

4	26	Spurlite Ltd	
		Order No.	: !MOK-32024X.4.11
		Luminaire name	: MOK-32024X.4.11
		Equipment	: 1 x LL01CR-CEO12L02 9 W / 1147 lm
6	26	Order No.	: !MOK-32024X.4.13
		Luminaire name	: MOK-32024X.4.13
		Equipment	: 1 x LL01CR-CEO38L02 9 W / 1147 lm

1.2 Summary, Exterior 1

1.2.4 Result overview, Side of building 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	59644 lm
Total power	468 W
Total power per area (2712.38 m²)	0.17 W/m²

Illuminance

Average illuminance	Em	33.5 lx
Minimum illuminance	Emin	5.4 lx
Maximum illuminance	Emax	81.1 lx
Uniformity Uo	Emin/Em	1:24.4 (0.16)
Diversity Ud	Emin/Emax	1:59 (0.07)

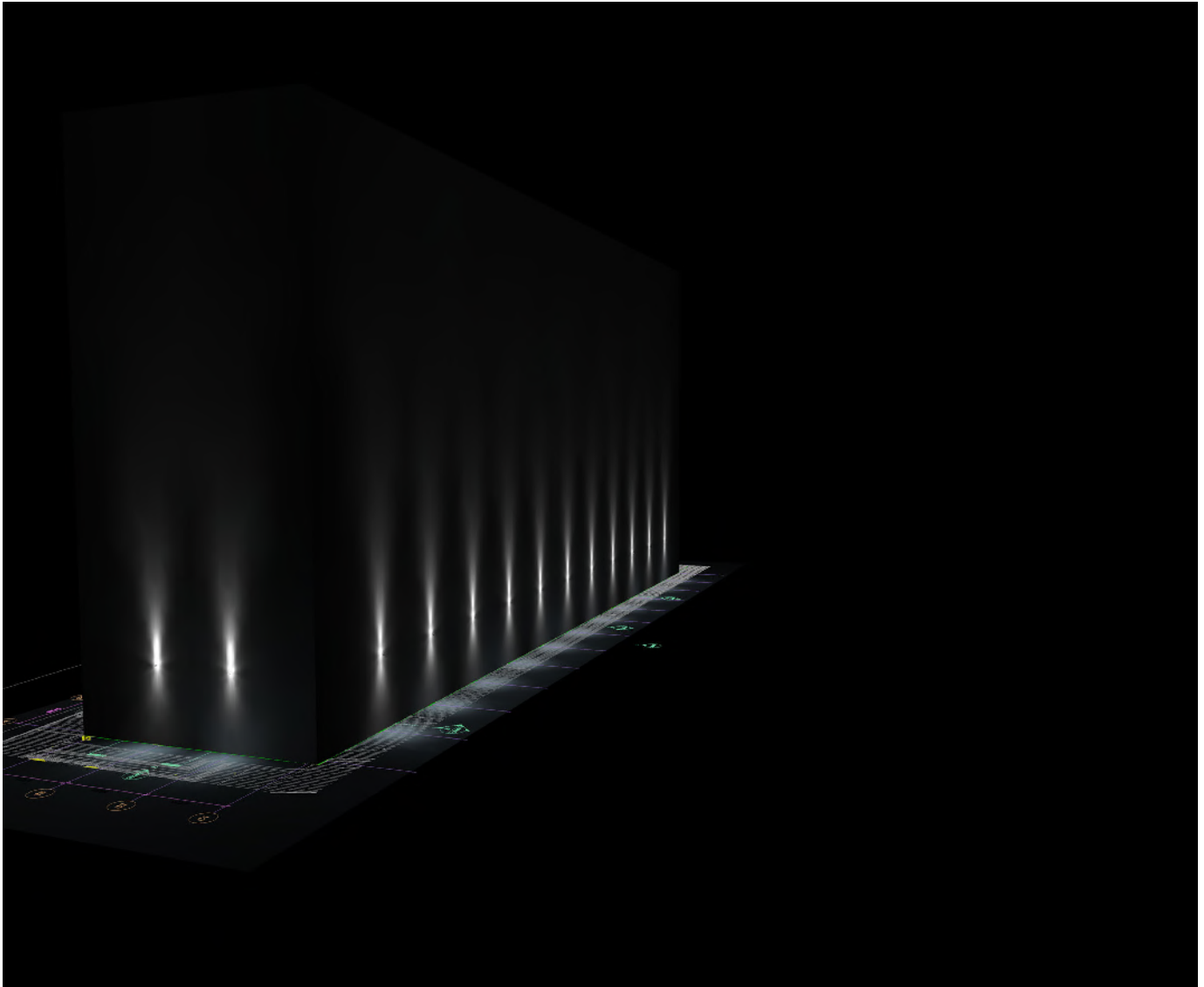
Type No.\Make

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		Luminaire name	: MOK-32024X.4.11
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6	26	Order No.	: !MOK-32024X.4.13
		Luminaire name	: MOK-32024X.4.13
		Equipment	: 1 x LL01CR-CEO38L02 9 W / 1147 lm

1 Exterior 1

1.3 Calculation results, Exterior 1

1.3.1 3D luminance, View 1



Architectural floor plan of the ground floor showing lighting layout. The plan includes a grid from CA to CN and C1 to C4. Key areas include a Cafe, Unit, Reception, Lobby, Stair A, Stair B, Gas Meter, Riser, and various rooms (L1, L2, L3 FF, L4). A legend in the top right corner defines symbols for Light Switch, 2Way Light Switch, Microwave Detector, Presence Detector, and IP65 Presence Detector. The plan shows the placement of these devices throughout the building, including a note about lighting within staircases controlled via sensors integral to the luminaires.

SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR

[illegible]

Client.

ALLIED LONDON



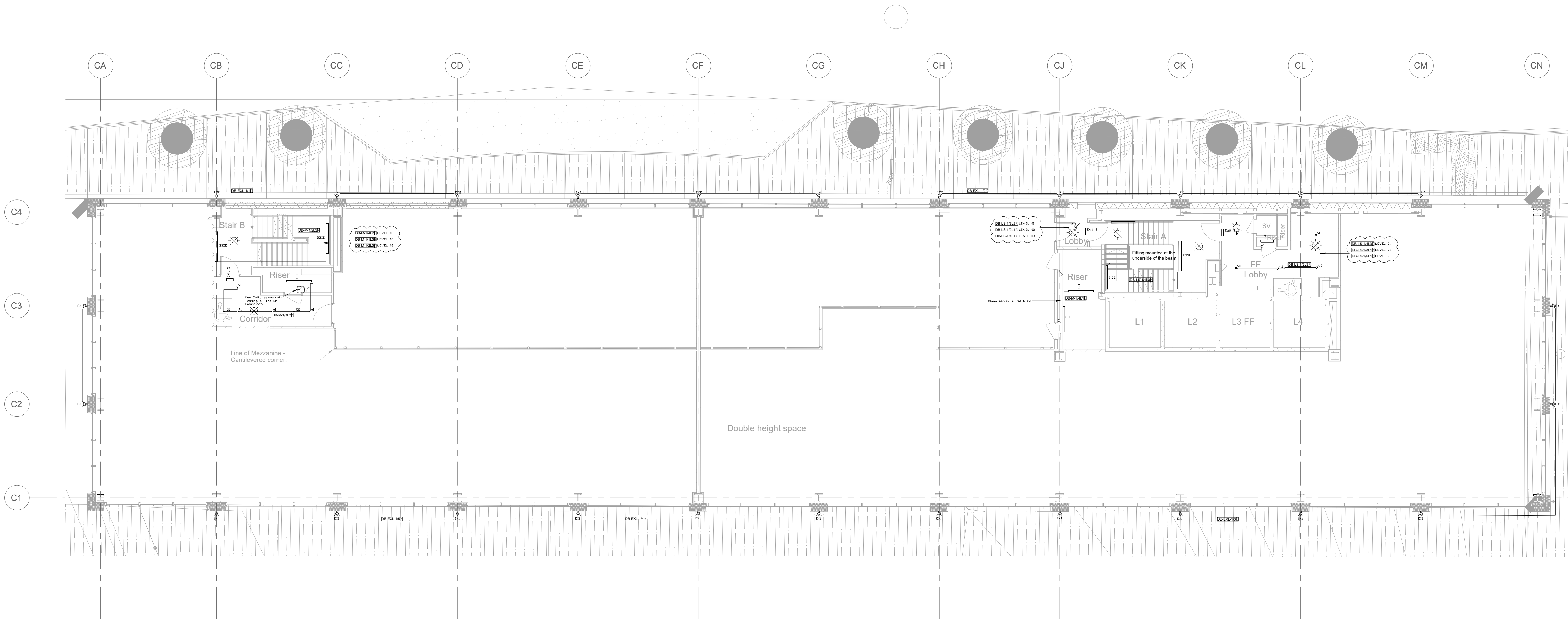
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SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR



Notes.

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2. DO NOT SCALE FROM THIS DRAWING.

3. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.

4. LIFT SHAFT LIGHTING TO BE CARRIED OUT BY THE LIFT CONTRACTOR.

5. EMERGENCY LIGHTING TO BE CO-ORDINATED WITH THE FINAL LOCATION OF THE FIRE ALARM AND ACCESS CONTROL EQUIPMENT.

6. FOR THE TYPES OF LUMINAIRES USED PLEASE REFER TO THE LUMINAIRE SCHEDULE.

7. ALL SWITCHES INSTALLED EXTERNALLY AND IN THE PLANT ROOMS SHALL BE IP65 RATED.

ARCHITECT / CONSULTANT

DRAWING No

REV

C02

30.07.21

CONSTRUCTION ISSUE

Stair A & Stair B Luminaires Change

SG

RR

C01

19.04.21

CONSTRUCTION ISSUE

SG

RR

P01

12.03.21

DESIGN ISSUE

SG

RR

Rev

Date

Description

Drn

Chkd

Rev

Date

Description

Drn

Chkd

BUILDING OUTLINE DRAWINGS

DO NOT SCALE OFF THIS DRAWING

Project.

GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102

Description.

LIGHTING LAYOUT
MEZZANINE

Client.

ALLIED LONDON

Scale.

1:100

A1

Date.

MAR 2021

Drawn By.

SG

Checked.

RR

DRAWING No.

SJQ-102-BAF-XX-L00M-DR-E-63001

Rev.

C02



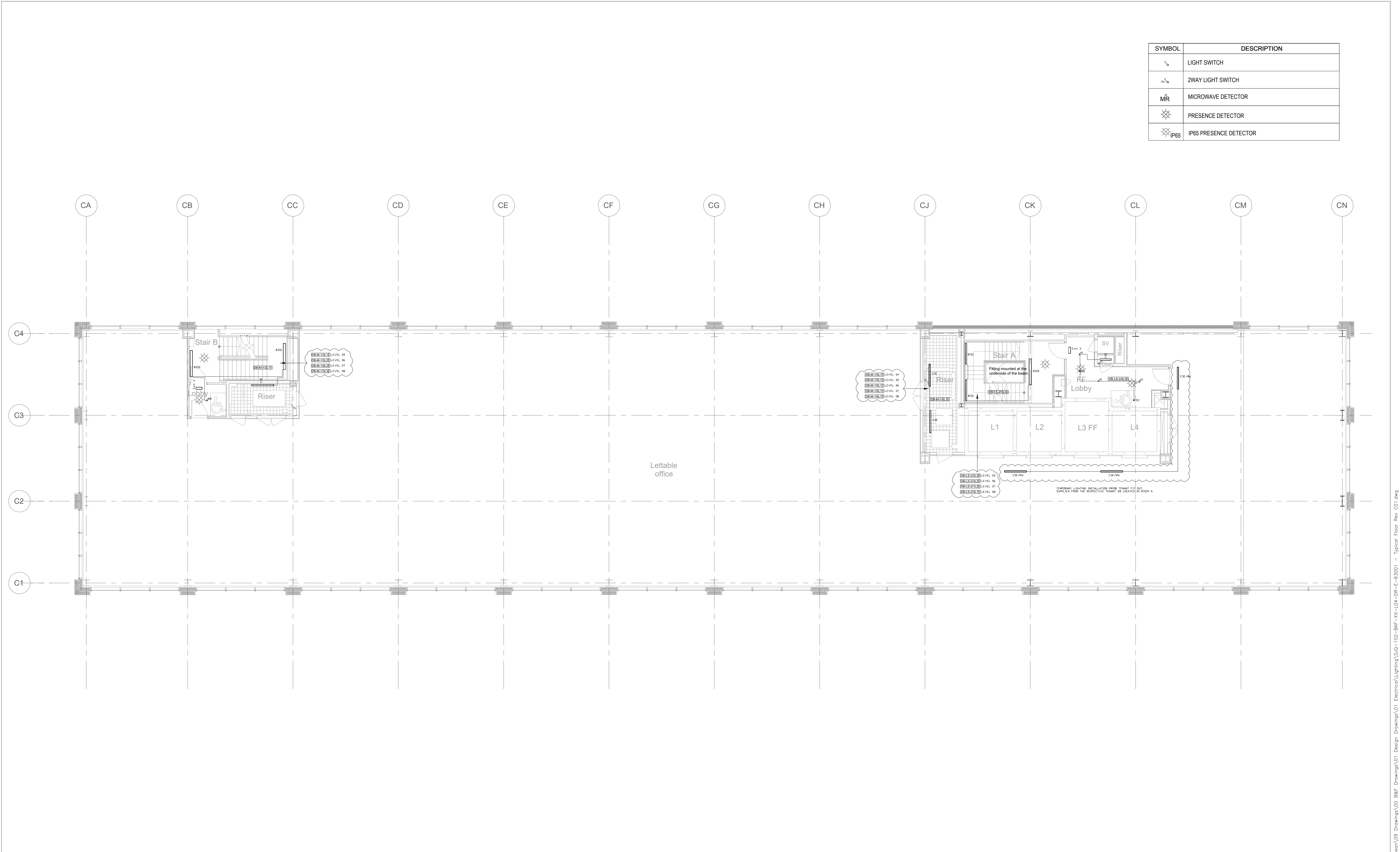
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C:\p\Projects\5255\Globe & Simpson\09 Drawings\00 B&F Drawings\01 Electrical\Lighting\SJQ-102-BAF-XX-L00M-DR-E-63001 - Mezz Level Rev C02.dwg



Notes.

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ARCHITECT / CONSULTANT

DRAWING No

REV

C02

30.07.21

CONSTRUCTION ISSUE

Stair A & Stair B Luminaires Change

SG

RR

C01

19.04.21

CONSTRUCTION ISSUE

SG

RR

P01

12.03.21

DESIGN ISSUE

SG

RR

BUILDING OUTLINE DRAWINGS

DO NOT SCALE OFF THIS DRAWING

Rev

Date

Description

Drn

Chkd

Rev

Date

Description

Drn

Chkd

Project.

GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102

Description.

LIGHTING LAYOUT
TYPICAL FLOOR

Client.

ALLIED LONDON

Scale.

1:100

A1

Date.

MAR 2021

Drawn By.

SG

Checked.

RR

DRAWING No.

SJQ-102-BAF-XX-L04-DR-E-63001

Rev.

C02

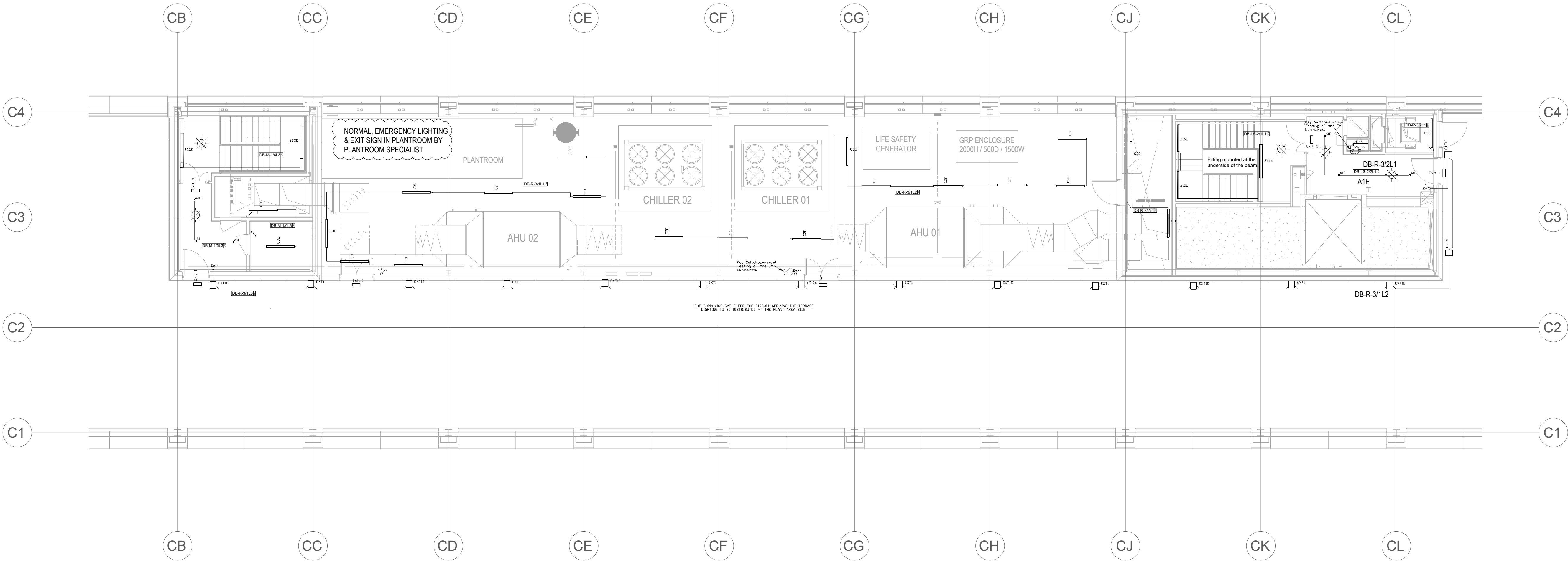
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C:\p\Projects\5258 GLOBE & SIMPSON\09 Drawings\00 B&F Drawings\01 Electrical\Lighting\SJQ-102-BAF-XX-L04-DR-E-63001 - Typical Floor Rev. C01.dwg

SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR



- Notes.
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ARCHITECT / CONSULTANT		DRAWING No		REV	C02		30.07.21	CONSTRUCTION ISSUE	SG	RR
					C01		19.04.21	CONSTRUCTION ISSUE	SG	RR
					P01		12.03.21	DESIGN ISSUE	SG	RR
					Rev		Date	Description	Drn	Chkd
					Rev		Date	Description	Drn	Chkd

Project.	GLOBE & SIMPSON ST JOHN'S PLACE BUILDING 102
Description.	LIGHTING LAYOUT ROOF

Client.	ALLIED LONDON
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Scale.	1:100	A1
Date.	MAR 2021	
Drawn By.	SG	Checked. RR
DRAWING No.	SJQ-102-BAF-XX-LRF-DR-E-63001	Rev. C02

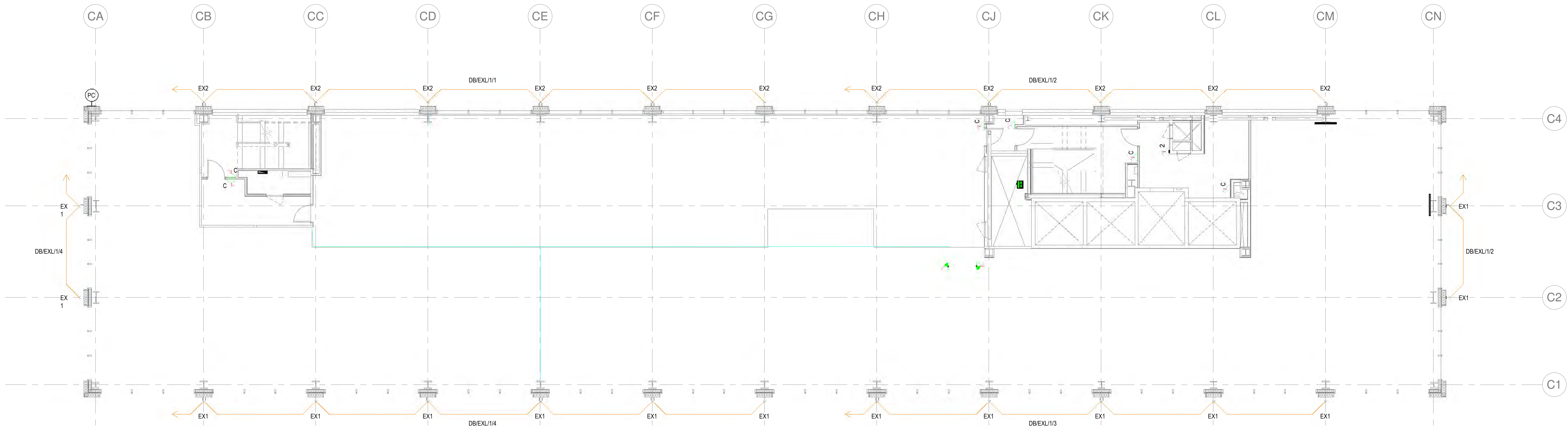
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Building Outline Information	
Architect Model/Drawing Number	Revision
B&F PROJECT NUMBER: 5258	

- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
 - THIS DRAWING REPRESENTS DESIGN INTENT ONLY & SHALL NOT BE USED FOR SETTING OUT PURPOSES.
 - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN LINE WITH BS7671.
 - EXTERNAL LIGHTING TO BE CONTROLLED BY PHOTOCELL & TIME CLOCK ARRANGEMENT.
- REFER TO LUMINAIRE SCHEDULE FOR FURTHER LUMINAIRE DETAILS.
- LEGEND:
- EX1 - SURFACE MOUNTED LED DOWN LIGHTER
 - EX2 - SURFACE MOUNTED LED DOWN LIGHTER
 - PC - PHOTOCELL



C01	CONSTRUCTION ISSUE	RC	21.04.21
P01	DESIGN ISSUE	AH	13.11.20
Rev	Description	Drawn	Date
Briggs & Forrester ENGINEERING SERVICES LTD Crescent Court 2550 Cranbury Park Cranbury W44 4GE www.briggsandforrester.co.uk Registered in England No. 1875841			
Client: LENDLEASE		Tel: (01928) 780779	
Project: GLOBE AND SIMPSON (5258)			
Drawing Title: SITE PLAN EXTERNAL LIGHTING LAYOUT			
Scale: 1 : 100 @ A0		Checked: SU	
Drawing Number: SJQ-102-BAF-XX-XX-DR-E-63002		Revision: C01	
Suitability: A1		Drawing Status: CONSTRUCTION	
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VC 658367			

Date 02/08/2021

Ref: TS018 Rev 1 - SJQ-102-BAF-XX-XX-TS-E-018

FORM BFES 10/2

To: Lend Lease Construction Europe Ltd

For the attention of Peter King

Contract Title: Globe & Simpson

Contract No: 5258

TECHNICAL SUBMISSION

T.S. No. TS018 General Lighting

Dear Sirs

We are pleased to submit the following for your approval by Monday 16th August 2021

Equipment: General Lighting

Manufacturer: Spurlite

Description: Light Fitting Technical Data Sheets

Specification References: SJQ-102-CWC-XX-XX-SP-ME-40407_iss3_revT3 M&E
Services Stage 4a Performance Specification Section 5.16

Drawing References: SJQ-102-BAF-XX-B01-DR-E-63001-C02-Basement Lighting
SJQ-102-BAF-XX-L00-DR-E-63001-C01-Ground Floor Lighting
SJQ-102-BAF-XX-L00M-DR-E-63001-C02-Mezzanine Lighting
SJQ-102-BAF-XX-L04-DR-E-63001-C02-Typical Floor Lighting
SJQ-102-BAF-XX-LRF-DR-E-63001-C02-Roof Lighting
SJQ-102-BAF-XX-ZZ-SH-E-60003 – C02 Luminaire Schedule
SJQ-102-BAF-XX-ZZ-SH-E-60006 – C02 Lighting Calculations

Note

Attached detail documents:

Manufacturers Data: ☒

Manufacturers Leaflet: ☐

Manufacturers Drawings: ☒

Electrical Requirements: Included

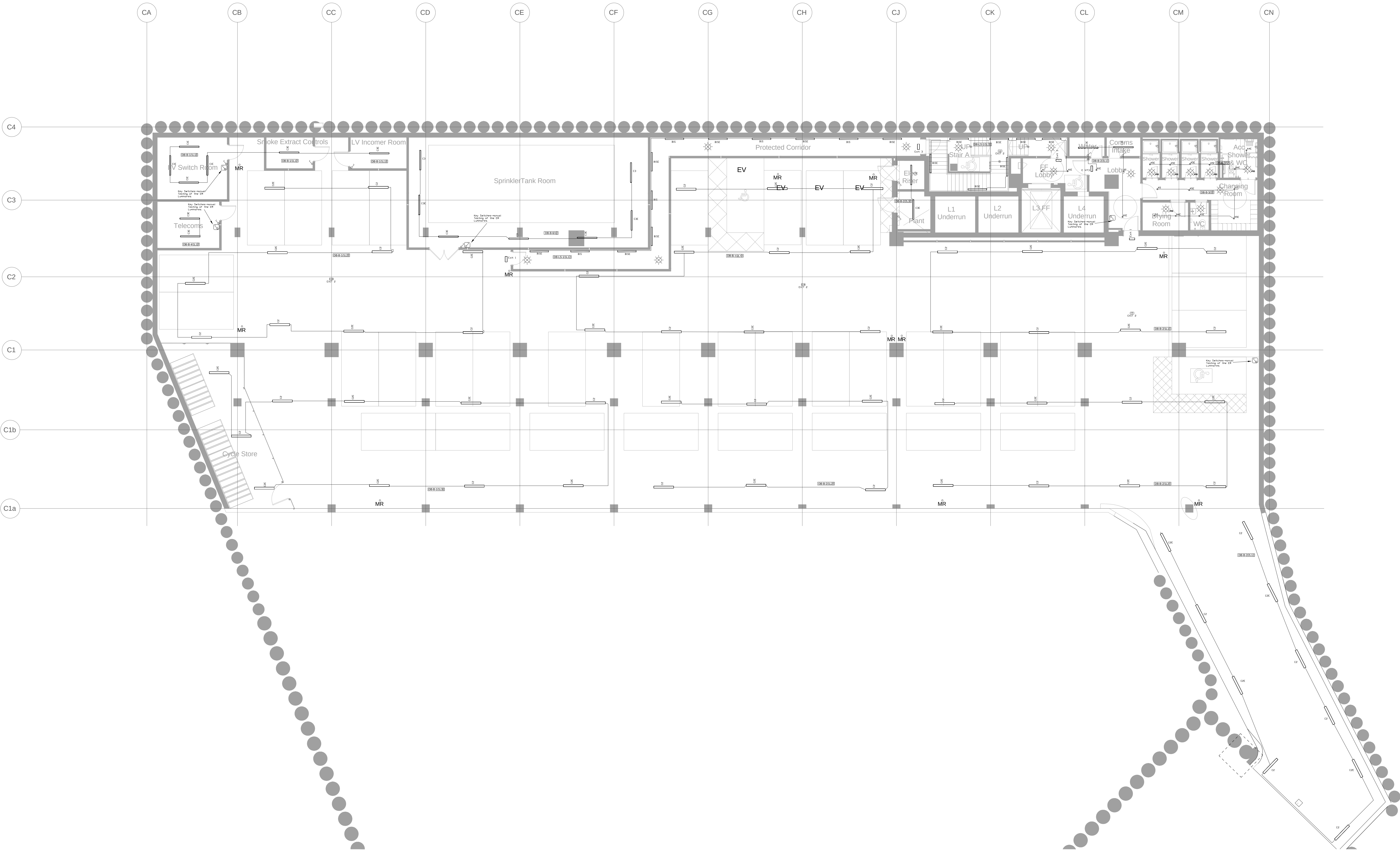
For Briggs & Forrester Engineering Services Ltd

Alan Wilkinson

Approved/Approved with Comment

Date:

Comments:



SYMBOL	DESCRIPTION
S	LIGHT SWITCH
Z	ZWAY LIGHT SWITCH
MR	MICROWAVE DETECTOR
PD	PRESENCE DETECTOR
IP65	IP65 PRESENCE DETECTOR

Notes:

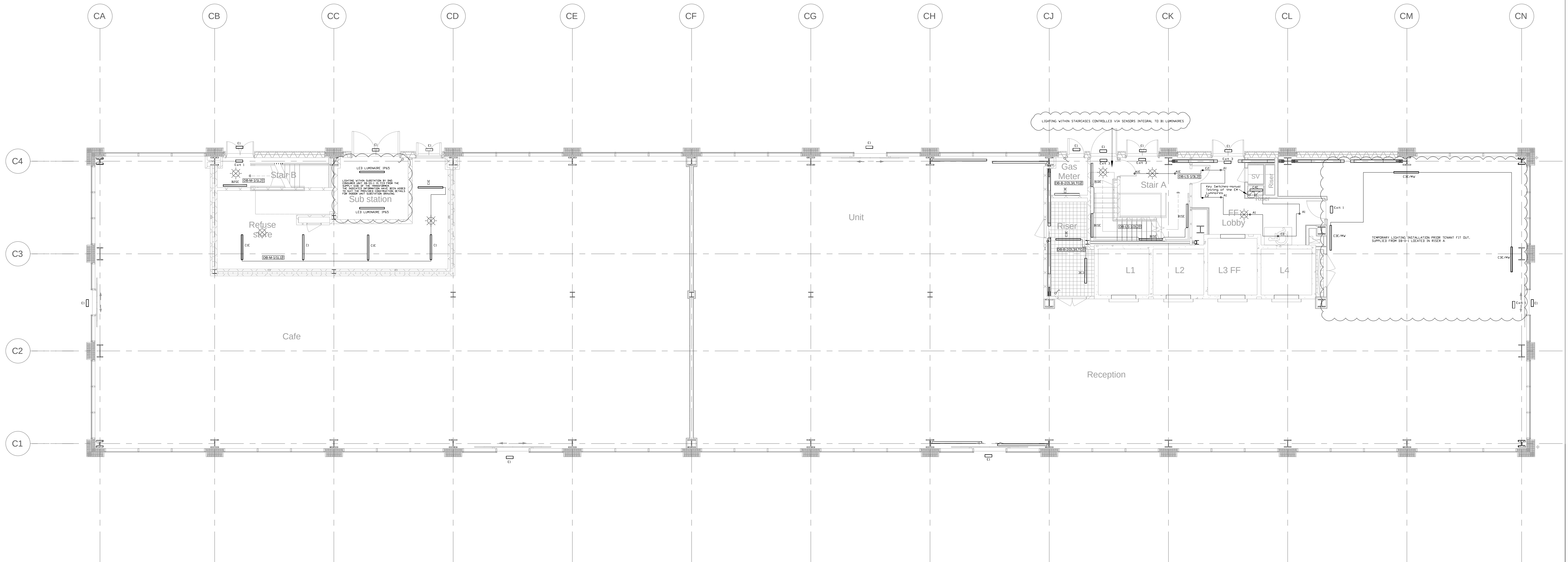
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ARCHITECT / CONSULTANT	DRAWING No.	REV	DATE	Rev	Date	Description	Dwn	Chkd	Rev	Date	Description	Dwn	Chkd
BUILDING OUTLINE DRAWINGS				DO NOT SCALE OFF THIS DRAWING									
				C02	30.07.21	CONSTRUCTION ISSUE	SG	RR					
				C01	19.04.21	Protected Corridor Luminaires Change	SG	RR					
				P02	12.03.21	Lighting in Cycle Store reviewed	SG	RR					
				P01	13.11.20	Lighting in the Lift shaft	JH	SU					
				Rev	Date	Description	Dwn	Chkd	Rev	Date	Description	Dwn	Chkd

Description	Project	Client
LIGHTING LAYOUT BASEMENT FLOOR	GLOBE & SIMPSON ST JOHN'S PLACE BUILDING 102	ALLIED LONDON

Scale	1:100	A0
Date	MAR 2021	
Drawn By	SG	Checked RR
DRAWING No.	SJQ-102-BAF-XX-801-DR-E-63001	Rev C02
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SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR



Notes.

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[illegible]

Project.	
GLOBE & SIMPSON ST JOHN;S PLACE BUILDING 102	
Description.	
LIGHTING LAYOUT GROUND FLOOR	

Client.

ALLIED LONDON

Scale. 1:100		A1
Date. MAR 2021		
Drawn By. SG	Checked. RR	
DRAWING No. SJQ-102-BAF-XX-L00-DR-E-63001		Rev. C02



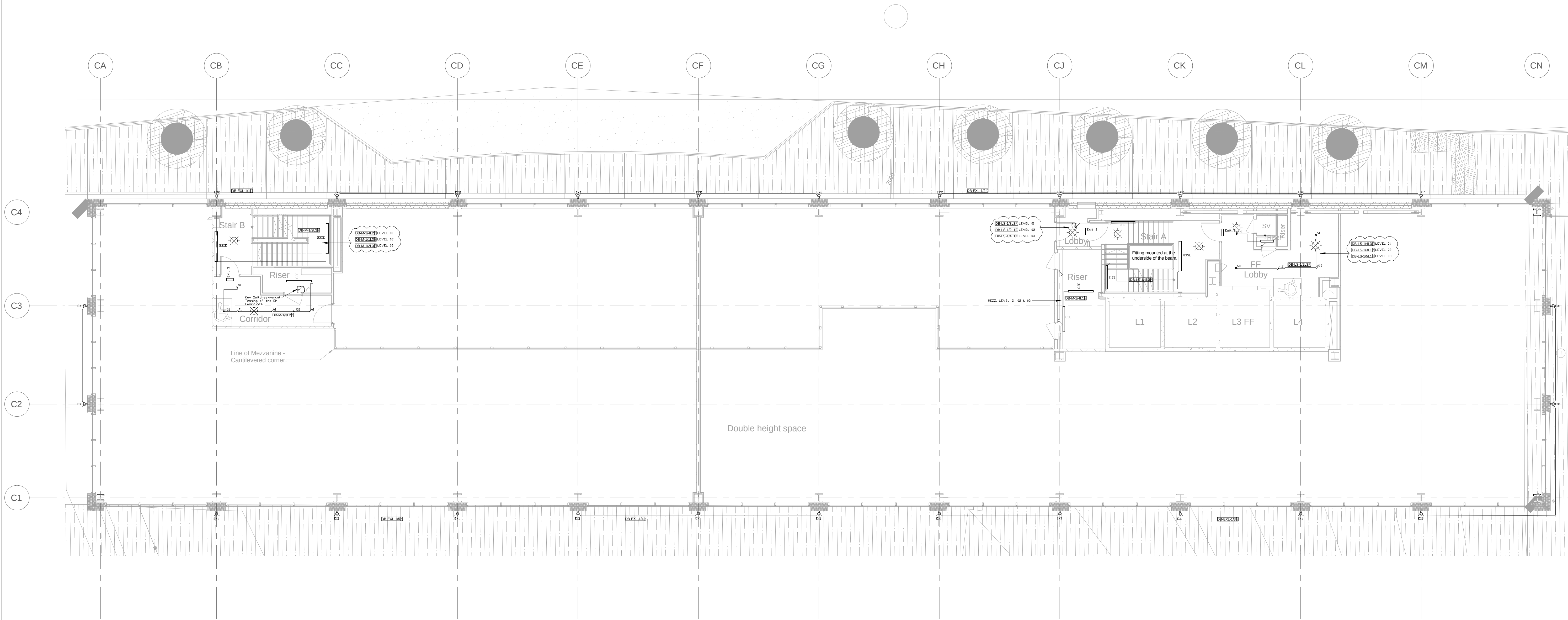
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ARCHITECT / CONSULTANT

DRAWING No

REV

C02

30.07.21

CONSTRUCTION ISSUE

Stair A & Stair B Luminaires Change

SG

RR

C01

19.04.21

CONSTRUCTION ISSUE

SG

RR

P01

12.03.21

DESIGN ISSUE

SG

RR

Rev

Date

Description

Drn

Chkd

Rev

Date

Description

Drn

Chkd

BUILDING OUTLINE DRAWINGS

DO NOT SCALE OFF THIS DRAWING

Project.

GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102

Description.

LIGHTING LAYOUT
MEZZANINE

Client.

ALLIED LONDON

Scale.

1:100

A1

Date.

MAR 2021

Drawn By.

SG

Checked.

RR

DRAWING No.

SJQ-102-BAF-XX-L00M-DR-E-63001

Rev.

C02



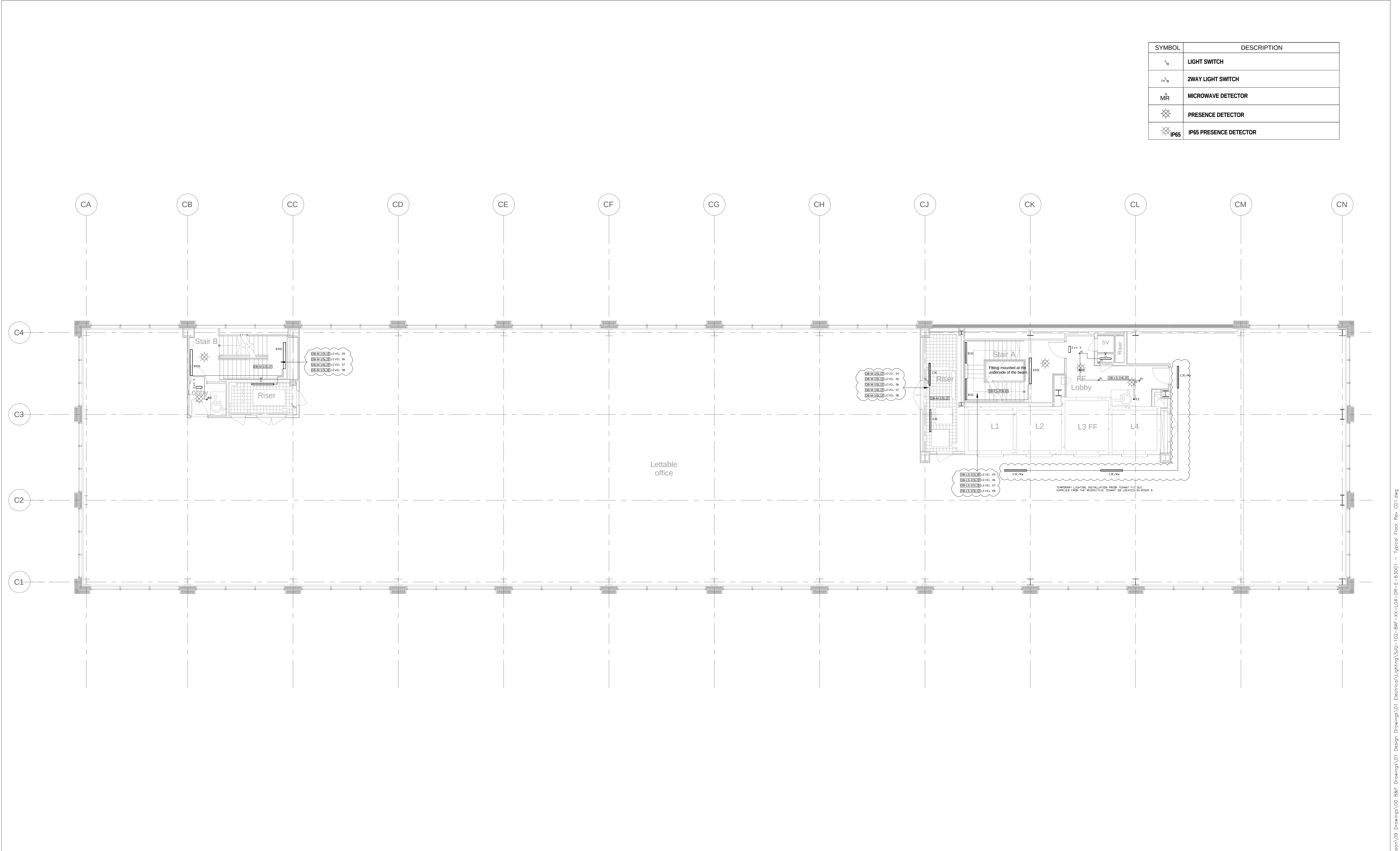
Briggs & Forrester
ENGINEERING SERVICES LTD

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SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR

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ARCHITECT / CONSULTANT

DRAWING No

REV

C02

30.07.21

CONSTRUCTION ISSUE

Stair A & Stair B Luminaires Change

SG

RR

C01

19.04.21

CONSTRUCTION ISSUE

SG

RR

P01

12.03.21

DESIGN ISSUE

SG

RR

Rev

Date

Description

Drn

Chkd

Rev

Date

Description

Drn

Chkd

Project.

GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102

Description.

LIGHTING LAYOUT
TYPICAL FLOOR

Client.

ALLIED LONDON

Scale.

1:100

A1

Date.

MAR 2021

Drawn By.

SG

Checked.

RR

DRAWING No.

SJQ-102-BAF-XX-L04-DR-E-63001

Rev.

C02

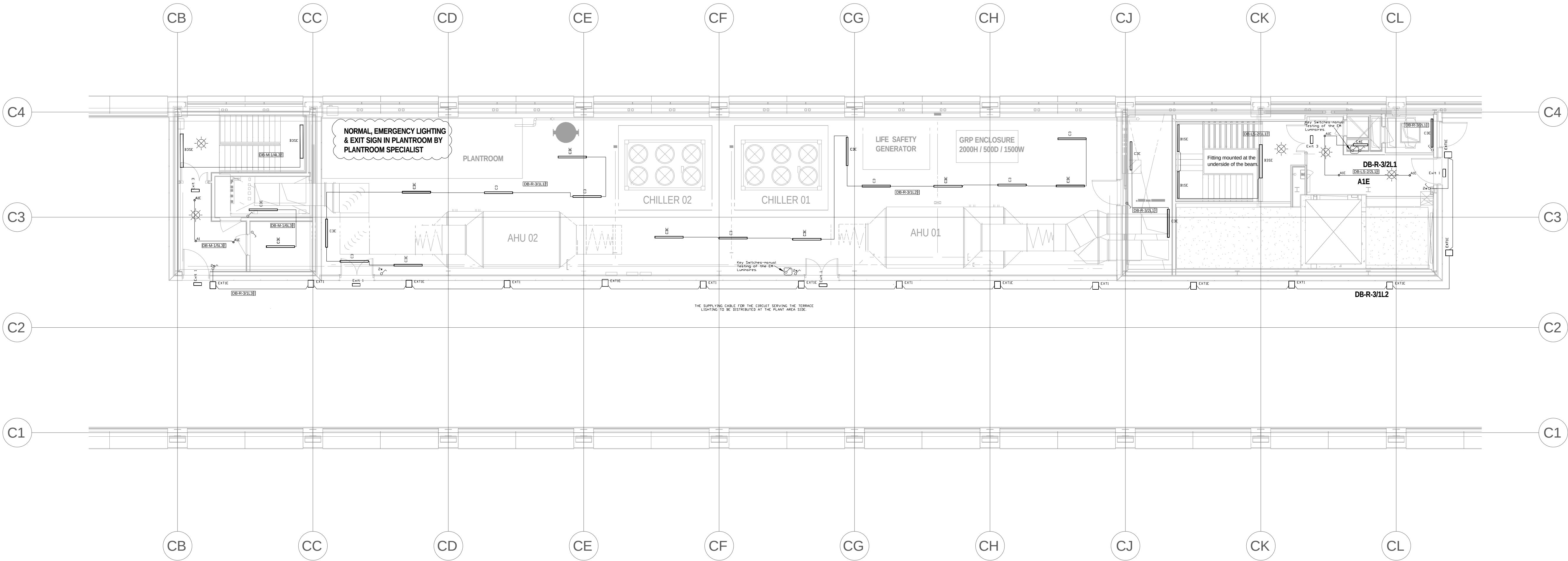
Briggs & Forrester
ENGINEERING SERVICES LTD

Briggs & Forrester Engineering Services Ltd
Cinnabar Court, 6200 Daresbury Park
Daresbury, Warrington WA4 4GE
www.briggsandforrester.co.uk
Tel: 01928 798279

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C:\Users\j\Documents\Projects\09 Drawings\09 Drawings\01 Electrical\Lighting\SJQ-102-BAF-XX-L04-DR-E-63001 - Typical Floor Rev. C01.dwg

SYMBOL	DESCRIPTION
	LIGHT SWITCH
	2WAY LIGHT SWITCH
	MICROWAVE DETECTOR
	PRESENCE DETECTOR
	IP65 PRESENCE DETECTOR



- Notes.
- ALL DIMENSIONS ARE INDICATED IN mm.
 - DO NOT SCALE FROM THIS DRAWING.
 - THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
 - LIFT SHAFT LIGHTING TO BE CARRIED OUT BY THE LIFT CONTRACTOR
 - EMERGENCY LIGHTING TO BE CO-ORDINATED WITH THE FINAL LOCATION OF THE FIRE ALARM AND ACCESS CONTROL EQUIPMENT.
 - FOR THE TYPES OF LUMINAIRES USED PLEASE REFER TO THE LUMINAIRE SCHEDULE.
 - ALL SWITCHES INSTALLED EXTERNALLY AND IN THE PLANT ROOMS SHALL BE IP65 RATED.

ARCHITECT / CONSULTANT	DRAWING No	REV
BUILDING OUTLINE DRAWINGS		
DO NOT SCALE OFF THIS DRAWING		

C02	30.07.21	CONSTRUCTION ISSUE	SG	RR
C01	19.04.21	CONSTRUCTION ISSUE	SG	RR
P01	12.03.21	DESIGN ISSUE	SG	RR

Rev	Date	Description	Drn	Chkd
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Project.
**GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102**

Description.
**LIGHTING LAYOUT
ROOF**

Client.
ALLIED LONDON

Scale.	1:100	A1
Date.	MAR 2021	
Drawn By.	SG	Checked. RR
DRAWING No.	SJQ-102-BAF-XX-LRF-DR-E-63001	Rev. C02

**Briggs & Forrester**
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Project: St. Johns Place Globe & Simpson

Project No: 5258

Luminaire Schedule

Document Ref: SJQ-102-BAF-XX-ZZ-SH-E-60003

Issue Status: For Construction

Issue Date: 30rd July 2021

Suitability: A1

Engineer: RR

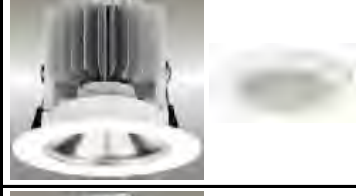
Revision Details				
Rev	Date	Description	By	Checked
P01	16 rd March 2021	For Review and Comment	SG	RR
C01	22 rd April 2021	For Construction	SG	RR
C0	30 rd July 2021	For Construction (Interior Lighting Update)	SG	RR

Project Title: Globe & Simpson
Luminaire Schedule
Project No: 5258



Document Ref: SJQ-102-BAF-XX-ZZ-SH-E-60003
Issue Date: 30/07/2021

Issue Status: Construction Issue
Prepared By: SG
Checked By: RR

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS																
LUMINAIRE DETAILS						L2A CALCULATION										
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details CCT°K	RA	ImTOT /luminaire	WCCT /luminaire	Control Factor	Lamp Im/W _{CCT} /luminaire	Luminaire Im*W _{CCT} /luminaire	
A1		Lobbies A & B	LED recessed downlight. 105mm overall diamter and a hole cut-out size of 92mm.	20	Spurlite Dot 9128B/40	A	37	1.00	4000	80	1035	10.00	0.90	103.50	103.50	
A1E		Lobbies A & B	As per type A1 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	20	Spurlite Dot 9128B/40	A	22	1.00	4000	80	1035	10.00	0.90	103.50	103.50	
A4		Shower Area	LED recessed downlight complete with a IP65 lense. 105mm overall diamter and a hole cut-out size of 92mm.	IP65 Lense	Spurlite Dot 9138B/40 + A921DL	A	1	1.00	4000	80	1332	14.00	0.90	95.14	95.14	
A4E		Shower Area	As per type A3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65 Lense	Spurlite Dot 9138B/40 + A921DL	A	3	1.00	4000	80	1332	14.00	0.90	95.14	95.14	
A5		Shower Area	LED recessed downlight complete with a IP65 lense. 105mm overall diamter and a hole cut-out size of 92mm.	IP65 Lense	Spurlite Dot 9158B/40 + A921DL	A	2	1.00	4000	80	1810	20.00	0.90	90.50	90.50	
A5E		Shower Area	As per type A3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65 Lense	Spurlite Dot 9158B/40 + A921DL	A	7	1.00	4000	80	1810	20.00	0.90	90.50	90.50	
B1S		Stair A & Protected Corridor	BALLISTA LED ceiling mounted, 4Ft, Single Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body.	IP20	Spurlite Ballista BAL25/840	A	5	1.00	4000	80	2500	25.00	0.90	100.00	100.00	
B1SE		Stair A & Protected Corridor	As per type B1S above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL25/M3/840	A	37	1.00	4000	80	2500	25.00	0.90	100.00	100.00	

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS																
LUMINAIRE DETAILS						L2A CALCULATION										
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details		ImTOT	WCCT	Control	Lamp	Luminaire	
									CCT°K	RA	/luminaire	/luminaire	Factor	Im/W _{CCT} /luminaire	Im*W _{CCT} /luminaire	
B2SE		Stair B	BALLISTA LED ceiling mounted, 4Ft, Twin Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body. Equiped with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL45/M3/840	A	1	1.00	4000	80	4500	45.00	0.90	100.00	100.00	
B3SE		Stairs A & B	BALLISTA LED ceiling mounted, 5Ft, Twin Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body. Equiped with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL60/M3/840	A	30	1.00	4000	80	6000	60.00	0.90	100.00	100.00	
C1		Plant Areas	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V380400U	A	2	1.00	4000	80	2400	16.00	0.90	150.00	150.00	
C1E		Plant Areas	As per type C1 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400U	A	7	1.00	4000	80	2400	16.00	0.90	150.00	150.00	
C2		Car Park	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V399400Z	A	26	1.00	4000	80	2620	20.00	0.90	131.00	131.00	
C2E		Car Park	As per type C2 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V399400Z	A	27	1.00	4000	80	2620	20.00	0.90	131.00	131.00	
C3		Plant Areas	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V380400S	A	10	1.00	4000	80	4340	27.00	0.90	160.74	160.74	
C3E		Plant Areas	As per type C3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400S	A	55	1.00	4000	80	4340	27.00	0.90	160.74	160.74	
C3E/MW		Plant Areas	As per type C3 above c/w integral MW detector.	IP65	Spurlite Futurix VS380400S/MW/ST	A	27	1.00	4000	80	4340	27.00	0.90	160.74	160.74	

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS															
LUMINAIRE DETAILS						L2A CALCULATION									
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details		ImTOT	WCCT	Control	Lamp	Luminaire
									CCT°k	RA	/luminaire	/luminaire	Factor	Im/W _{CCT} /luminaire	Im*/W _{CCT} /luminaire
C4E		FF Riser	As per type C4 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400D	A	9	1.00	4000	80	3100	23.00	0.90	134.78	134.78

Usage Gategories: A) OFFICE, INDUSTRIAL & STORAGE; B) OTHER AREAS; C) DISPLAY LIGHTING. * Denotes LUMINAIRE lumens for Category A & LAMP lumens for Category B & C
Control Factor obtained from Non Domestic Building Services Compliance Guide: 2013 Edition Table 42



Project: St. Johns Place Globe & Simpson

Project No: 5258

Lighting Calculations

Document Ref: SJQ-102-BAF-XX-ZZ-SH-E-60006

Issue Status: For Construction

Issue Date: 30rd July 2021

Suitability: A1

Engineer: RR

Revision Details				
Rev	Date	Description	By	Checked
P01	16 rd March 2021	For Review and Comment	AP	RR
C01	23 rd April 2021	For Construction	AP	RR
C02	30 rd July 2021	For Construction (Protecting Corridor and Stairs A & B update)	AP	RR

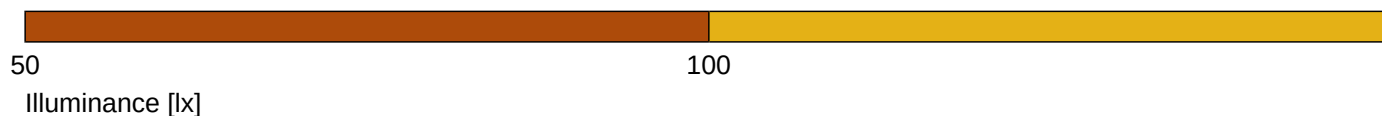
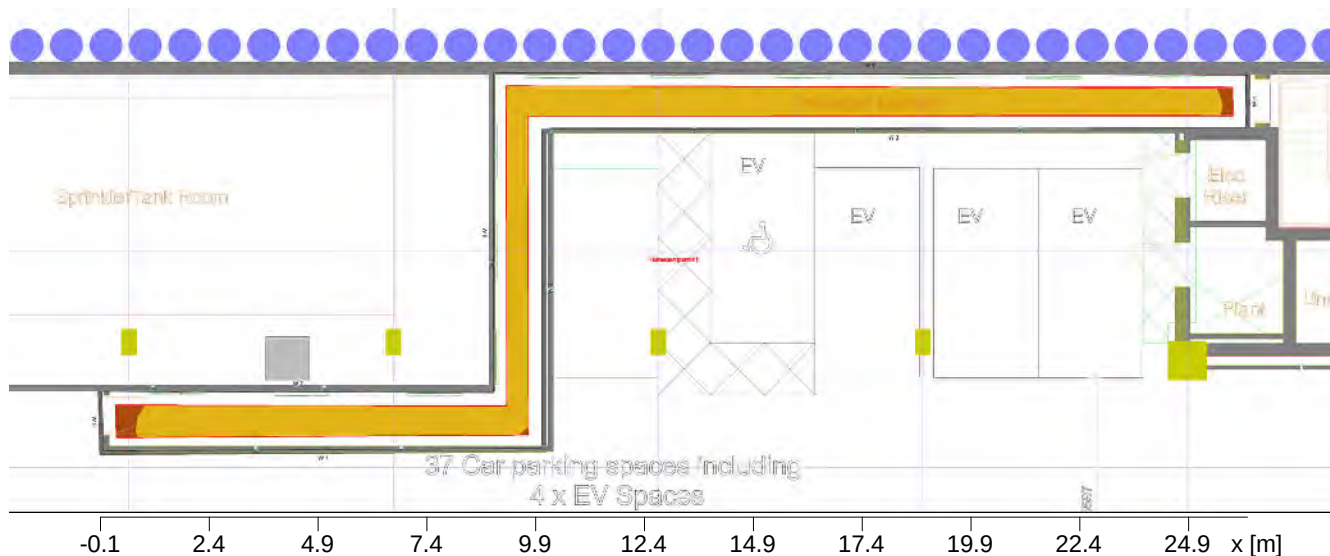
Object : Globe and Simpson
 Installation : Protected Corridor - Linear Wall Mounted
 Project number :
 Date : 02.03.2021

RELUX®

1 Protected Corridor Std

1.1 Summary, Protected Corridor Std

1.1.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	1.80 m
Maintenance factor	0.80
Total luminous flux of all lamps	30000.00 lm
Total power	300.0 W
Total power per area (41.56 m²)	7.22 W/m² (5.41 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	133 lx
Emin	77 lx
Emin/Em (Uo)	0.58
Emin/Emax (Ud)	0.39
Position	0.00 m

Major surfaces

	Em	Uo
M 1.9 (Ceiling)	176 lx	0.52
M 1.1 (Wall)	184 lx	0.37
M 1.2 (Wall)	250 lx	0.33
M 1.3 (Wall)	209 lx	0.36
M 1.4 (Wall)	105 lx	0.68
M 1.5 (Wall)	123 lx	0.39
M 1.6 (Wall)	167 lx	0.40
M 1.7 (Wall)	109 lx	0.38
M 1.8 (Wall)	91 lx	0.62

-please put your own address here-

Object : Globe and Simpson
Installation : Protected Corridor - Linear Wall Mounted
Project number :
Date : 02.03.2021



1 Protected Corridor Std

1.1 Summary, Protected Corridor Std

1.1.1 Result overview, Evaluation area 1

Type No. Make

		Spurlite Ltd	
19	12	Order No.	: SSA25-840.ltd
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm

Object : Globe and Simpson
Installation : Protected Corridor - Linear Wall Mounted
Project number :
Date : 02.03.2021



1 Protected Corridor Std

1.2 Summary, Protected Corridor Std

1.2.1 Result overview (emergency lighting)

Type No. Make

		Spurlite Ltd	
19	7	Order No.	: SSA25-840.ltd
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 362 lm

Result evaluation area

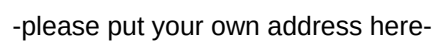
Calculation algorithm used: Direct component
Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Emergency area 1					
1	1.0	1.2	9.7	1: 8.24	0.00
Call Point					
1	1.0	5.0	23.0	1: 4.57	1.35

DELUX[®]

1.1.1 Floor plan



Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.1 Description, Staircase A Basement Level Std and EM Wall Mounted

1.1.1 Floor plan

Wall	x	y	Length	Reflectance
1	72.59 m	55.51 m	5.17 m	50.0 %
2	72.56 m	57.79 m	2.28 m	50.0 %
3	76.35 m	57.83 m	3.79 m	50.0 %
4	76.42 m	59.79 m	1.97 m	50.0 %
5	68.83 m	59.79 m	7.59 m	50.0 %
6	68.60 m	59.79 m	0.22 m	50.0 %
7	67.40 m	59.82 m	1.21 m	50.0 %
8	67.43 m	59.01 m	0.80 m	50.0 %
9	67.23 m	59.01 m	0.19 m	50.0 %
10	67.21 m	57.84 m	1.17 m	50.0 %
11	67.44 m	57.84 m	0.23 m	50.0 %
12	67.42 m	55.51 m	2.33 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		37.50 m		
Height of ref. plane		0.75 m		

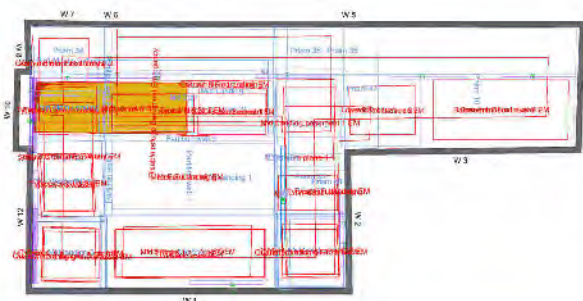
Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



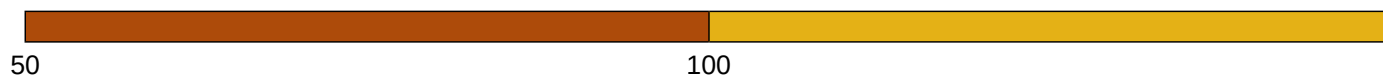
1 Staircase A Basement Level Std and EM Wall Mounted

1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.1 Result overview, Basement Floor level 1



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	160 lx
Minimum illuminance	Emin	91 lx
Maximum illuminance	Emax	203 lx
Uniformity Uo	Emin/Em	1:1.76 (0.57)
Diversity Ud	Emin/Emax	1:2.24 (0.45)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.1 Result overview, Basement Floor level 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

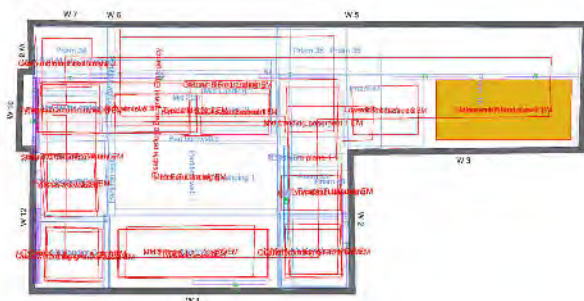


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

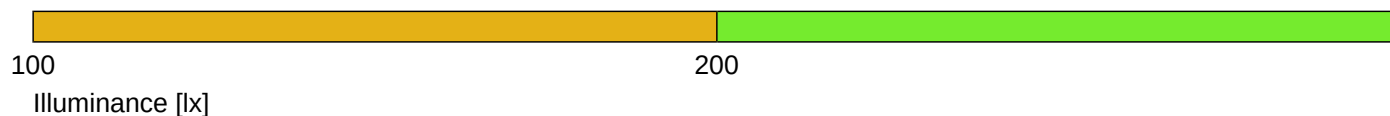


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.2 Result overview, Basement Floor Level 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	217 lx
Minimum illuminance	Emin	169 lx
Maximum illuminance	Emax	235 lx
Uniformity Uo	Emin/Em	1:1.28 (0.78)
Diversity Ud	Emin/Emax	1:1.39 (0.72)

Type No. lMake

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.2 Result overview, Basement Floor Level 2

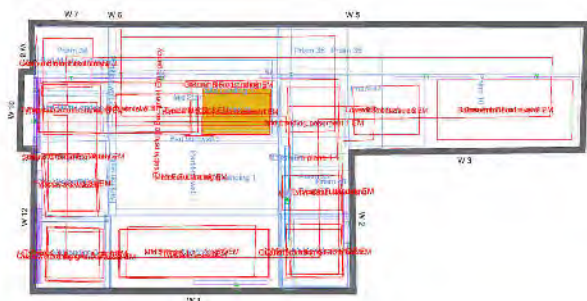
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

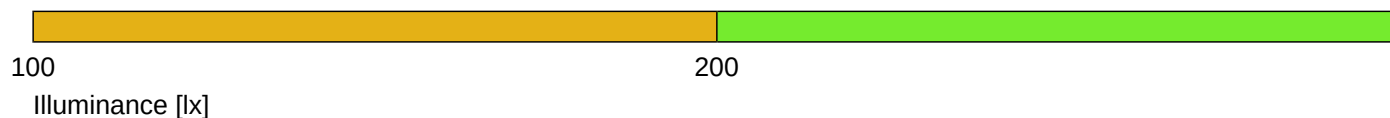


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.3 Result overview, Lower stair basement 1



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	155 lx
Minimum illuminance	Emin	138 lx
Maximum illuminance	Emax	161 lx
Uniformity U ₀	Emin/Em	1:1.12 (0.89)
Diversity U _d	Emin/Emax	1:1.34 (0.75)

Type No. lMake

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.3 Result overview, Lower stair basement 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

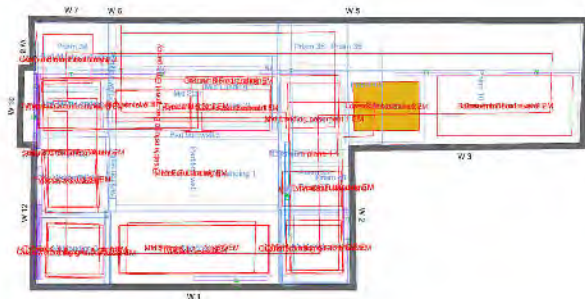


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

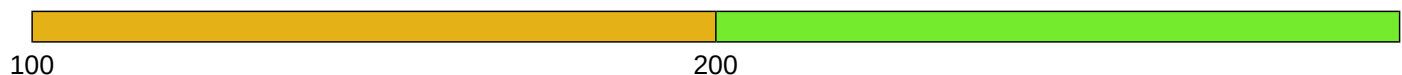


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.4 Result overview, Lower Stair basement 2



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	225 lx
Minimum illuminance	Emin	190 lx
Maximum illuminance	Emax	243 lx
Uniformity Uo	Emin/Em	1:1.19 (0.84)
Diversity Ud	Emin/Emax	1:1.28 (0.78)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

-please put your own address here-

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.4 Result overview, Lower Stair basement 2

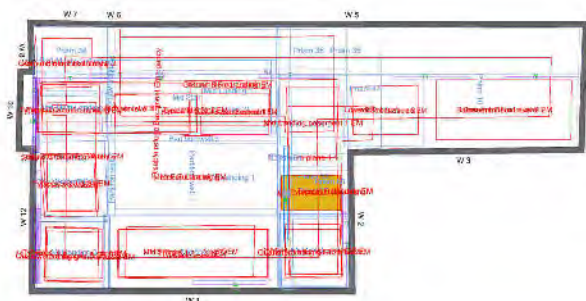
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

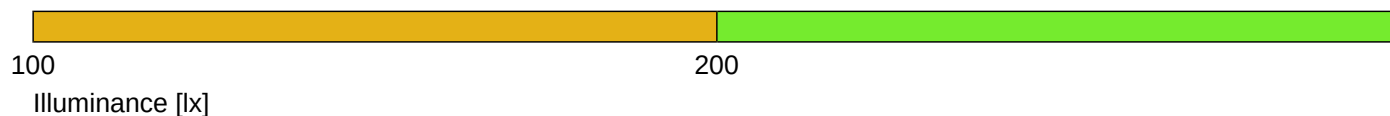


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.5 Result overview, Mid Stair basement



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	197 lx
Minimum illuminance	Emin	158 lx
Maximum illuminance	Emax	223 lx
Uniformity U ₀	Emin/Em	1:1.25 (0.8)
Diversity U _d	Emin/Emax	1:1.41 (0.71)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.5 Result overview, Mid Stair basement

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

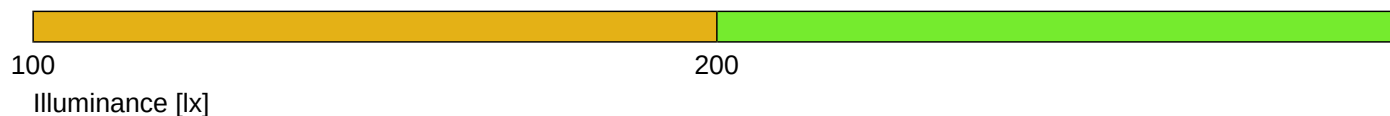


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.6 Result overview, Mid Landing basement 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	1.37 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	249 lx
Minimum illuminance	Emin	187 lx
Maximum illuminance	Emax	275 lx
Uniformity Uo	Emin/Em	1:1.33 (0.75)
Diversity Ud	Emin/Emax	1:1.47 (0.68)

Type No. lMake

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.6 Result overview, Mid Landing basement 2

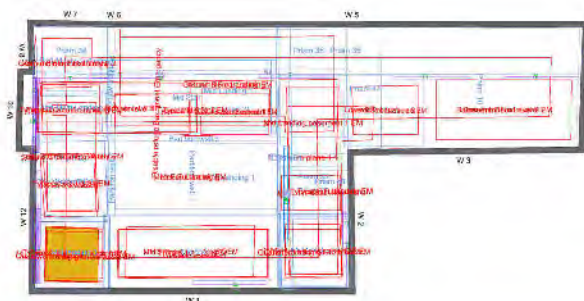
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

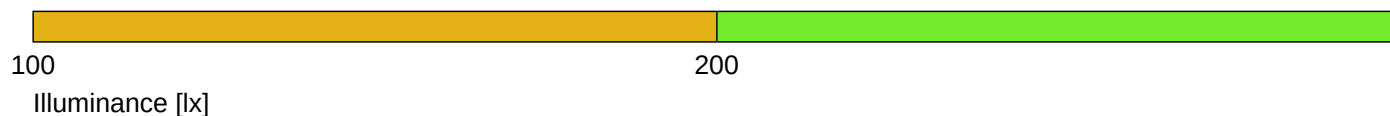


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.7 Result overview, Mid landing basement to GF



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	2.52 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	160 lx
Minimum illuminance	Emin	111 lx
Maximum illuminance	Emax	186 lx
Uniformity Uo	Emin/Em	1:1.44 (0.7)
Diversity Ud	Emin/Emax	1:1.67 (0.6)

Type No. lMake

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.7 Result overview, Mid landing basement to GF

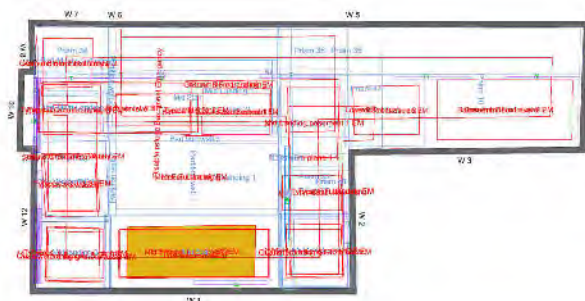
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

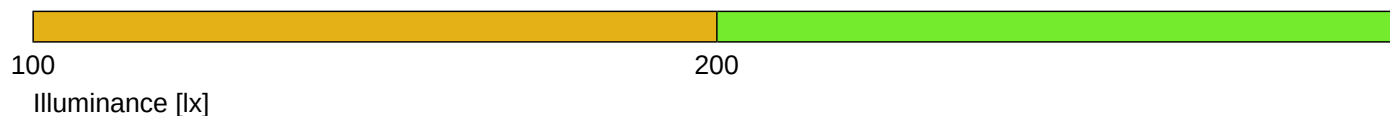


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.8 Result overview, Mid Stair basement to GF



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	258 lx
Minimum illuminance	Emin	145 lx
Maximum illuminance	Emax	324 lx
Uniformity U _o	Emin/Em	1:1.79 (0.56)
Diversity U _d	Emin/Emax	1:2.24 (0.45)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.8 Result overview, Mid Stair basement to GF

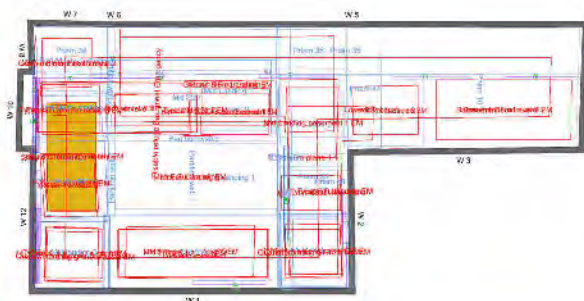
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

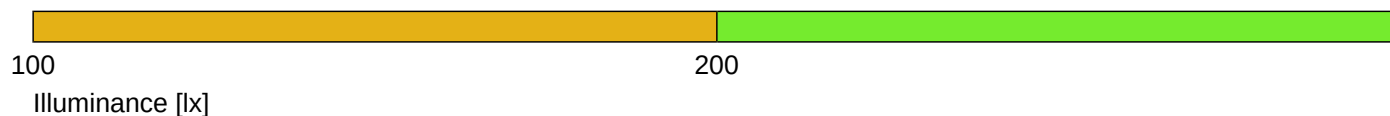


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.9 Result overview, Stair to Ground Exit lobby



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	162 lx
Minimum illuminance	Emin	124 lx
Maximum illuminance	Emax	186 lx
Uniformity U _o	Emin/Em	1:1.3 (0.77)
Diversity U _d	Emin/Emax	1:1.5 (0.67)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.9 Result overview, Stair to Ground Exit lobby

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

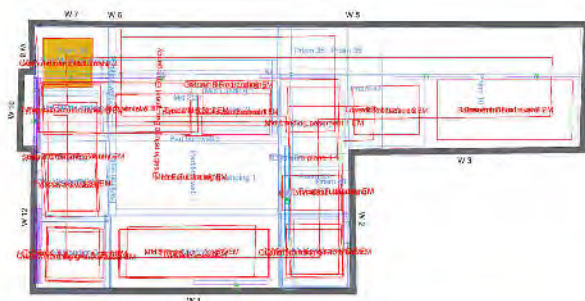


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

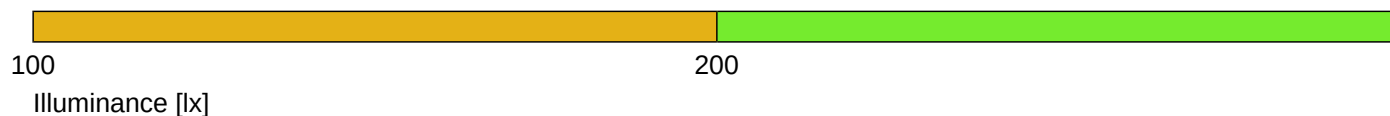


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.10 Result overview, Ground Floor Exit Lobby



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.43 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	193 lx
Minimum illuminance	Emin	155 lx
Maximum illuminance	Emax	218 lx
Uniformity Uo	Emin/Em	1:1.25 (0.8)
Diversity Ud	Emin/Emax	1:1.41 (0.71)

Type No. lMake

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.10 Result overview, Ground Floor Exit Lobby

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

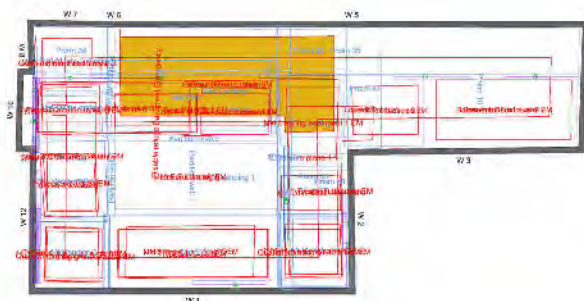


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

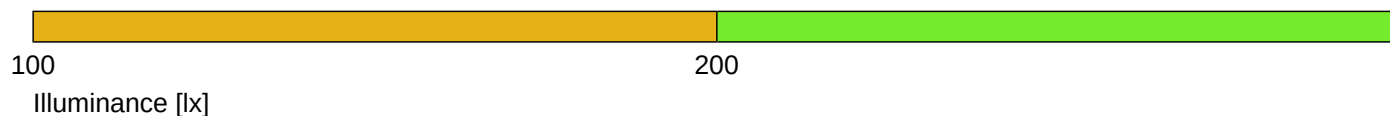


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.11 Result overview, Ground Floor Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.41 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	225 lx
Minimum illuminance	Emin	134 lx
Maximum illuminance	Emax	294 lx
Uniformity Uo	Emin/Em	1:1.68 (0.6)
Diversity Ud	Emin/Emax	1:2.19 (0.46)

Type No. lMake

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.11 Result overview, Ground Floor Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm



Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

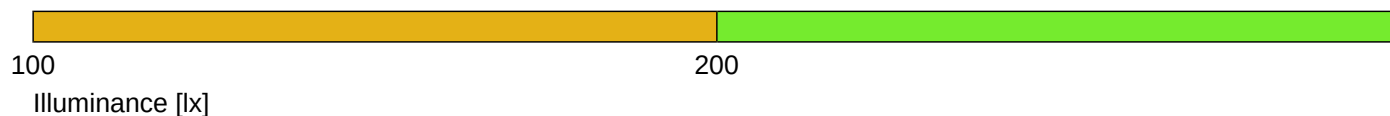


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.12 Result overview, Quarter Landing GF to Mezz



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	4.14 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	249 lx
Minimum illuminance	Emin	189 lx
Maximum illuminance	Emax	302 lx
Uniformity Uo	Emin/Em	1:1.32 (0.76)
Diversity Ud	Emin/Emax	1:1.59 (0.63)

Type No.1Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.12 Result overview, Quarter Landing GF to Mezz

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

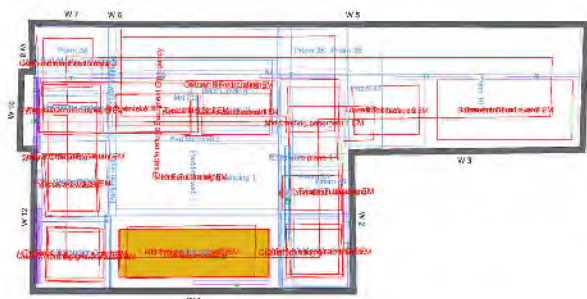


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

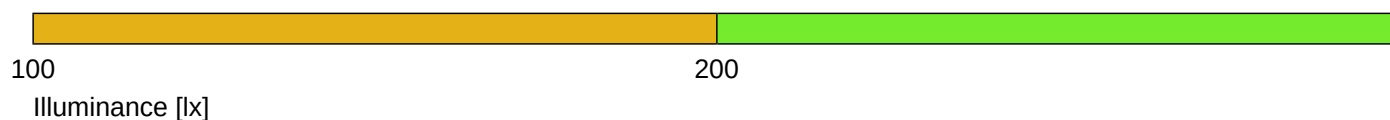


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.13 Result overview, Mid Stair to Mezz



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	153 lx
Minimum illuminance	Emin	115 lx
Maximum illuminance	Emax	225 lx
Uniformity Uo	Emin/Em	1:1.33 (0.75)
Diversity Ud	Emin/Emax	1:2.08 (0.48)

Type No. lMake

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.13 Result overview, Mid Stair to Mezz

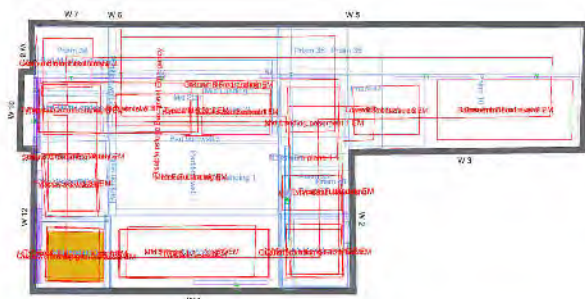
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

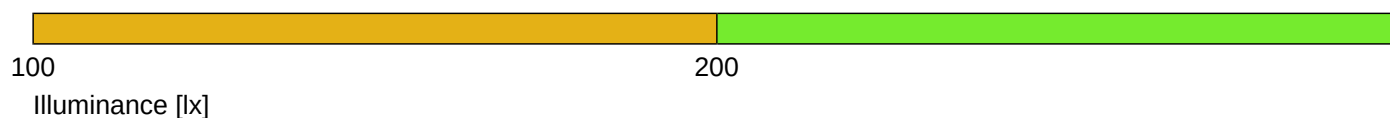


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.14 Result overview, Quarter Landing GF to Mezz 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.34 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	228 lx
Minimum illuminance	Emin	181 lx
Maximum illuminance	Emax	260 lx
Uniformity Uo	Emin/Em	1:1.26 (0.79)
Diversity Ud	Emin/Emax	1:1.44 (0.7)

Type No. lMake

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.14 Result overview, Quarter Landing GF to Mezz 2

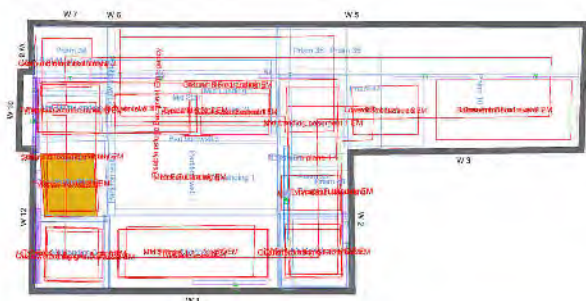
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

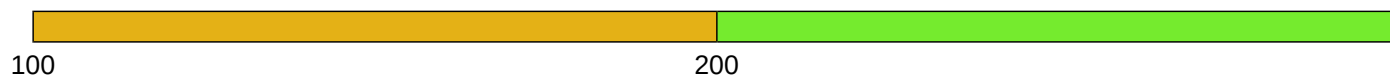


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.15 Result overview, Stair To Mezz



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	246 lx
Minimum illuminance	Emin	195 lx
Maximum illuminance	Emax	278 lx
Uniformity Uo	Emin/Em	1:1.26 (0.8)
Diversity Ud	Emin/Emax	1:1.42 (0.7)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.15 Result overview, Stair To Mezz

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

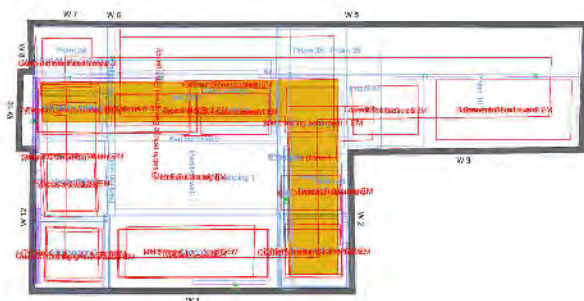


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

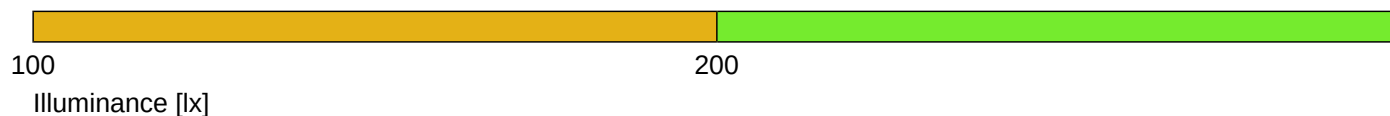


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.16 Result overview, Mez Full Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.87 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	219 lx
Minimum illuminance	Emin	145 lx
Maximum illuminance	Emax	279 lx
Uniformity Uo	Emin/Em	1:1.51 (0.66)
Diversity Ud	Emin/Emax	1:1.92 (0.52)

Type No.1Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.16 Result overview, Mez Full Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

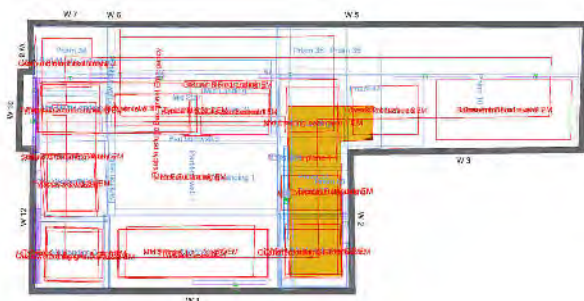


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

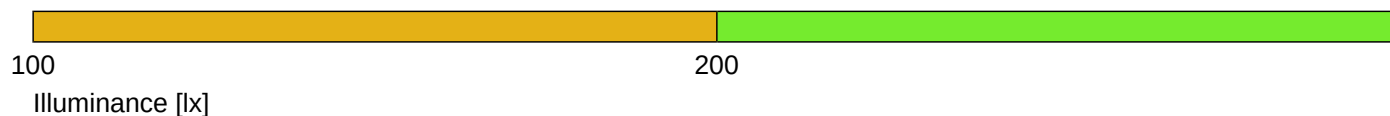


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.17 Result overview, Typical Full Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	9.22 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	221 lx
Minimum illuminance	Emin	137 lx
Maximum illuminance	Emax	281 lx
Uniformity Uo	Emin/Em	1:1.61 (0.62)
Diversity Ud	Emin/Emax	1:2.05 (0.49)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.17 Result overview, Typical Full Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

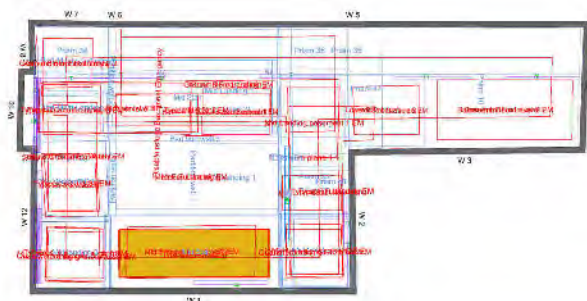


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

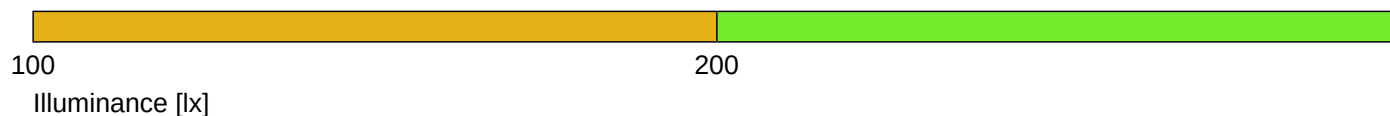


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.18 Result overview, Typical Mid Stair



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	216 lx
Minimum illuminance	Emin	158 lx
Maximum illuminance	Emax	277 lx
Uniformity U _o	Emin/Em	1:1.37 (0.73)
Diversity U _d	Emin/Emax	1:1.76 (0.57)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.18 Result overview, Typical Mid Stair

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

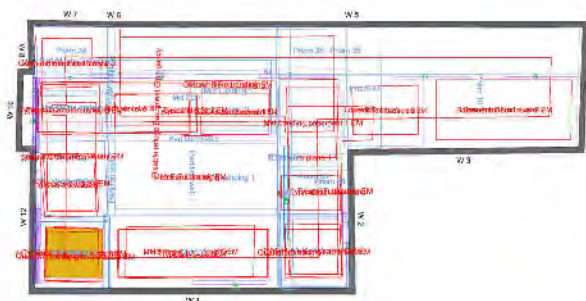


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

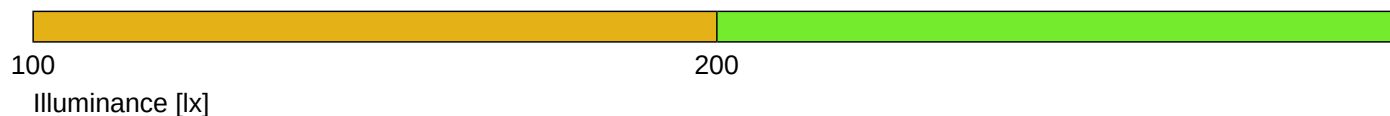


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.19 Result overview, Typical Quarter Landing 1



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	10.47 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	165 lx
Minimum illuminance	Emin	113 lx
Maximum illuminance	Emax	202 lx
Uniformity Uo	Emin/Em	1:1.46 (0.69)
Diversity Ud	Emin/Emax	1:1.78 (0.56)

Type No.1Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.19 Result overview, Typical Quarter Landing 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

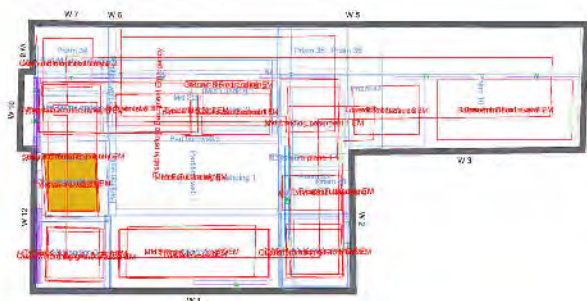


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

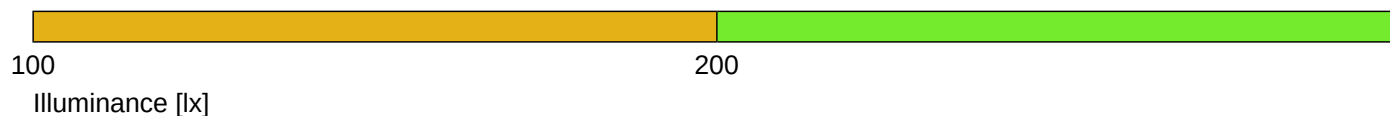


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.20 Result overview, Typical Short Stair



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	217 lx
Minimum illuminance	Emin	166 lx
Maximum illuminance	Emax	252 lx
Uniformity Uo	Emin/Em	1:1.31 (0.76)
Diversity Ud	Emin/Emax	1:1.52 (0.66)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.20 Result overview, Typical Short Stair

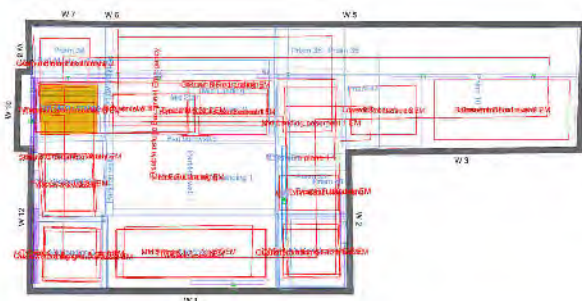
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

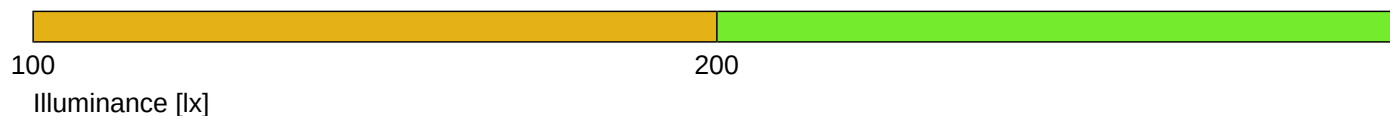


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.21 Result overview, Typical Quarter Landing 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	11.07 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	202 lx
Minimum illuminance	Emin	163 lx
Maximum illuminance	Emax	245 lx
Uniformity Uo	Emin/Em	1:1.23 (0.81)
Diversity Ud	Emin/Emax	1:1.5 (0.67)

Type No.1Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.21 Result overview, Typical Quarter Landing 2

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

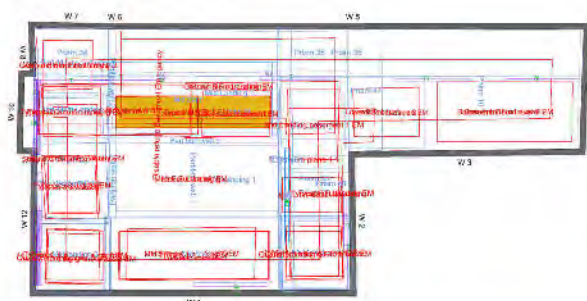


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

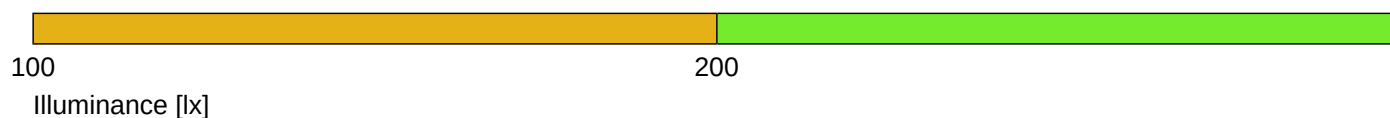


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.22 Result overview, Typical Mid Stair 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	220 lx
Minimum illuminance	Emin	188 lx
Maximum illuminance	Emax	250 lx
Uniformity Uo	Emin/Em	1:1.17 (0.86)
Diversity Ud	Emin/Emax	1:1.33 (0.75)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.22 Result overview, Typical Mid Stair 2

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm



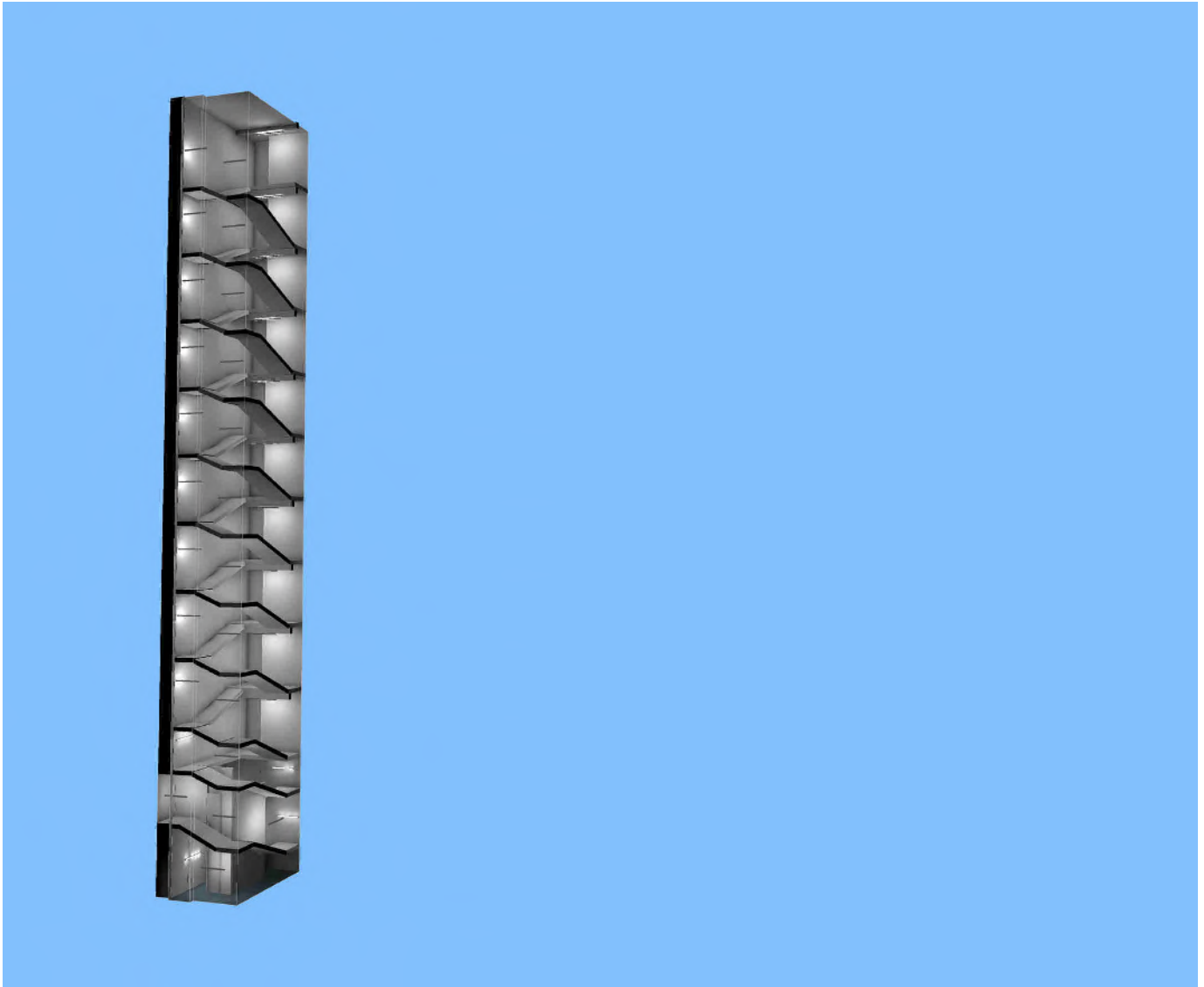
Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

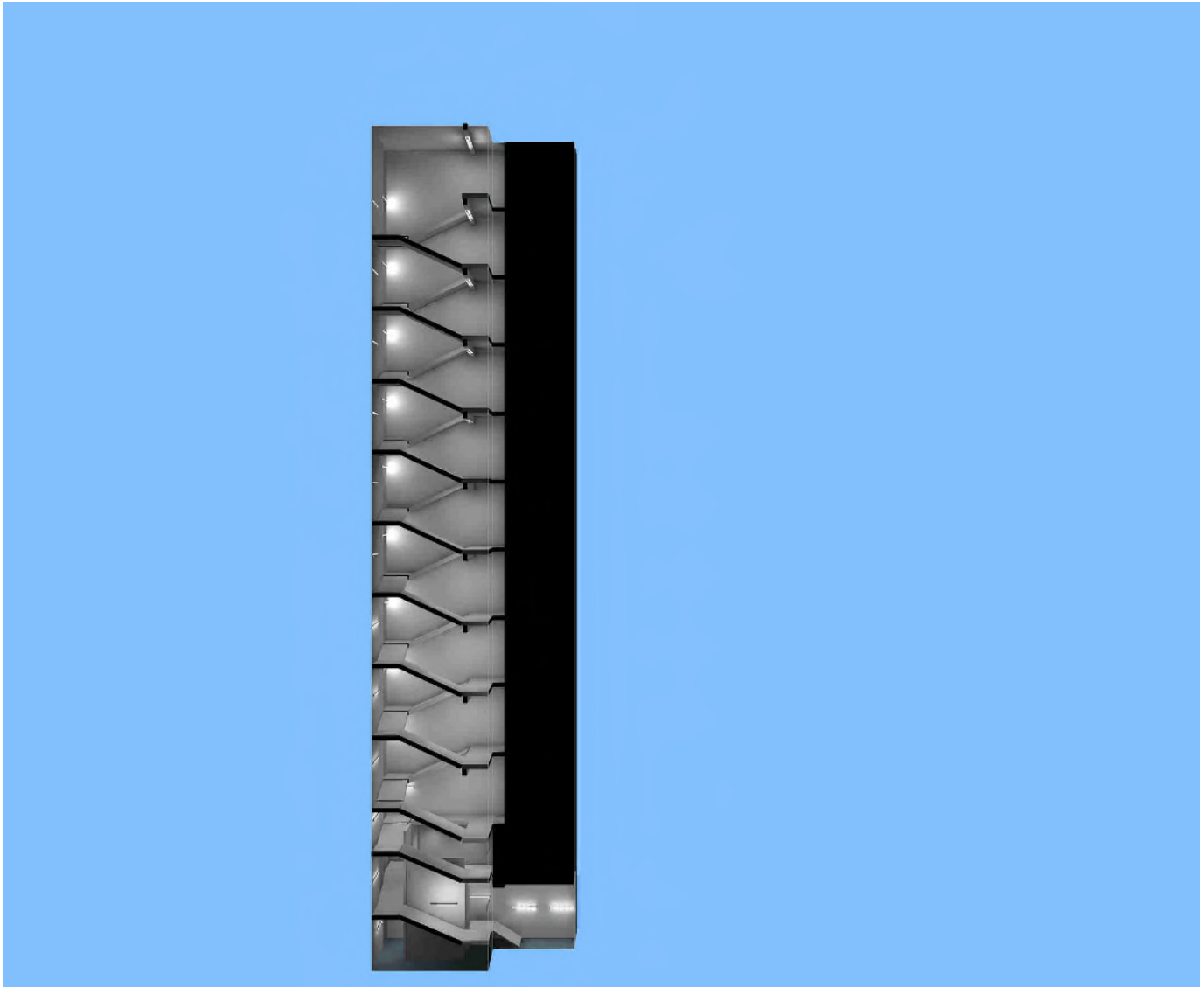
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.1 3D luminance, View 1



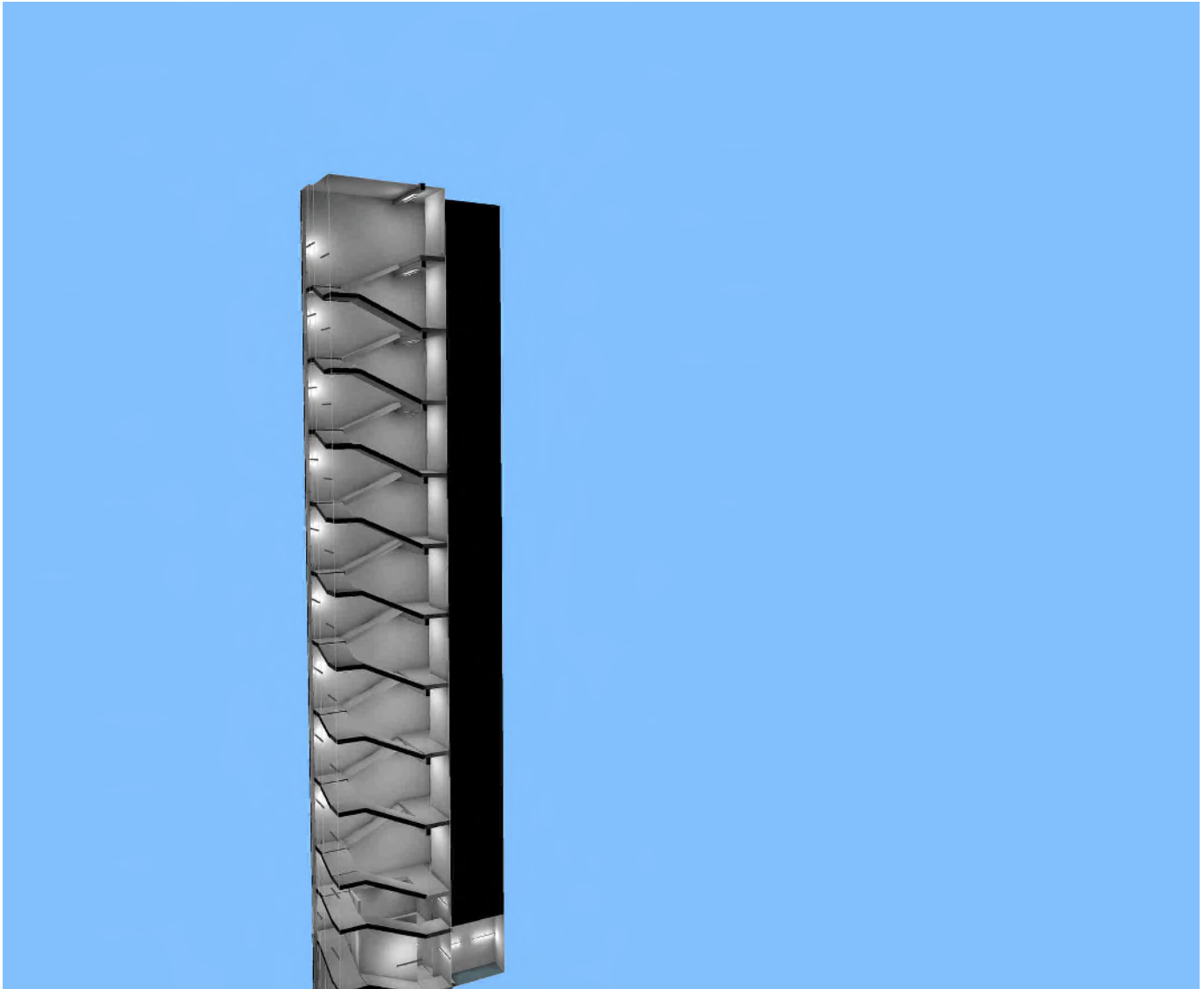
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.2 3D luminance, View from the front



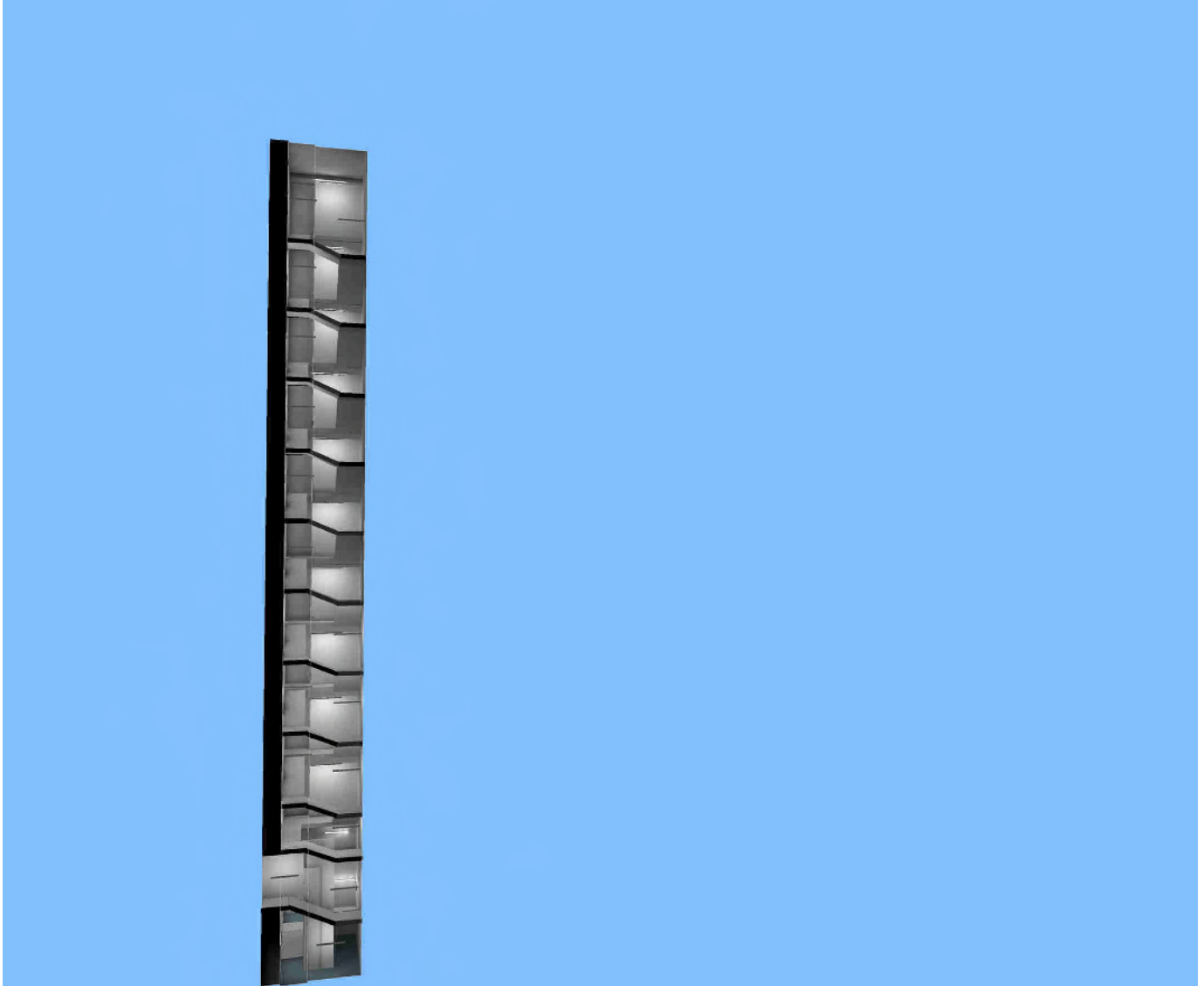
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.3 3D luminance, View 3



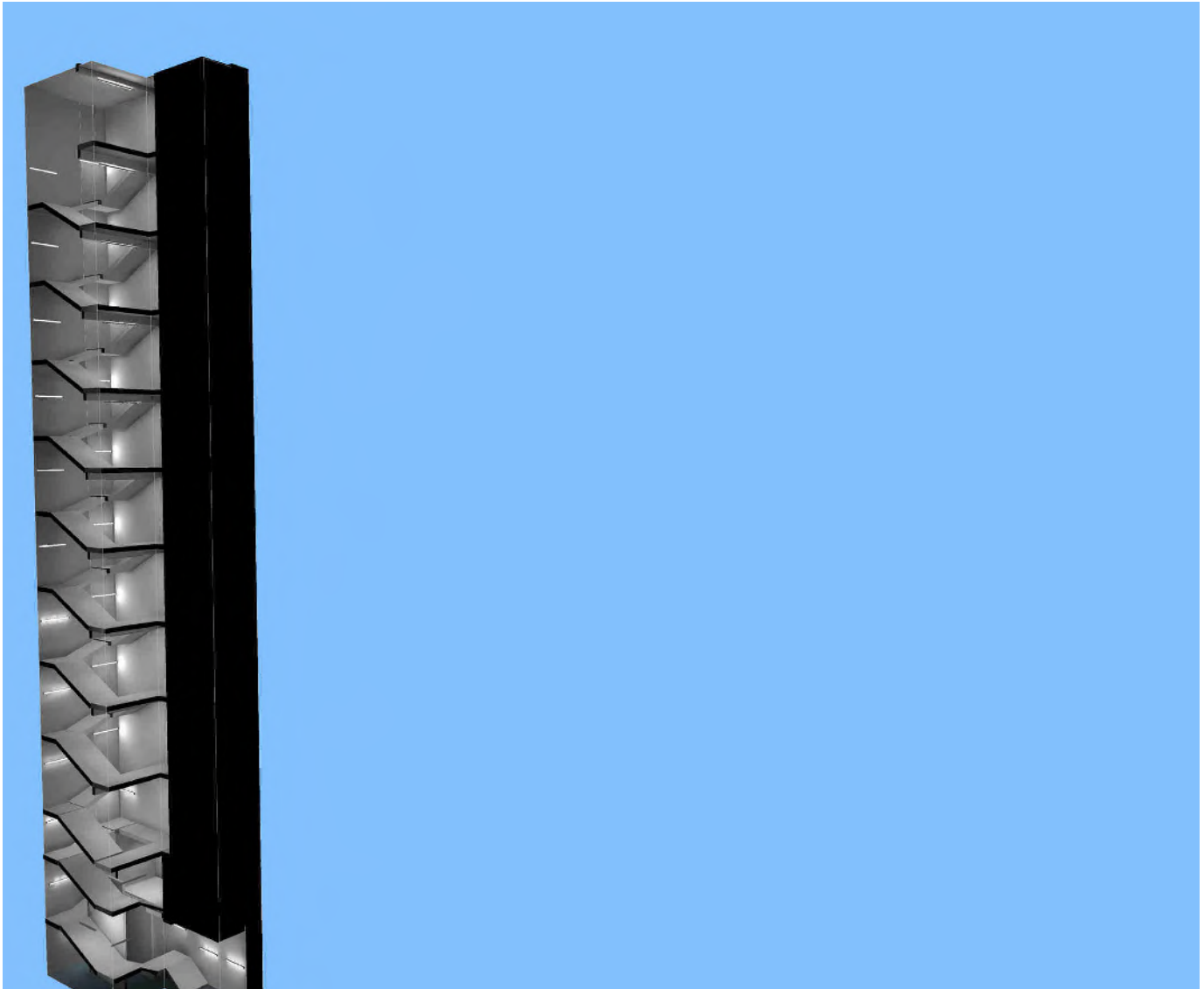
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.4 3D luminance, View 4



1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.5 3D luminance, View 5



Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Type No. Make

		Spurlite Ltd		
20	30	Order No.	: SSA25-840.Idt	
		Luminaire name	: Ballista 1200mm single	
		Equipment	: 1 x LED 25 W / 357 lm	
21	10	Order No.	: SSA60-840.Idt	
		Luminaire name	: Ballista 1500mm twin	
		Equipment	: 1 x LED 60 W / 360 lm	
		Nimbus Lighting Group,		
5	1	Order No.	: DOT9128B/40/A920/GEN3	
		Luminaire name	: Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN	
		Equipment	: 1 x 10 W / 217 lm	

Result evaluation area

Calculation algorithm used: Direct component
 Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Basement Floor level 1 EM					
35	1.0	4.5	17.2	1: 3.84	0.00
Basement Floor Level 2 EM					
35	1.0	10.3	16.8	1: 1.62	0.00

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Lower stair basement 1 EM					
35	1.0	6.9	13.8	1: 2.01	0.12
Lower Stair basement 2 EM					
35	1.0	9.6	17.9	1: 1.87	0.85
Mid Landing basement 1 EM					
35	1.0	15.3	22.7	1: 1.48	0.87
Mid Landing basement 2 Em					
35	1.0	15.1	23.9	1: 1.58	1.37
Mid landing basement to GF Em					
34	1.0	9.0	15.6	1: 1.73	2.52
Mid Stair basement to GF EM					
35	1.0	9.3	28.3	1: 3.03	2.52
Disable refuge Basement Emergency					
36	1.0	5.7	17.5	1: 3.05	0.00
Disabled refuge call point basement					
37	1.0	9.8	22.4	1: 2.28	1.14
Fire alarm call point basement					
76	1.0	24.0	34.4	1: 1.43	1.14
Stair to Ground Exit lobby EM					
73	1.0	8.1	15.6	1: 1.92	2.53
Ground Floor Exit Lobby EM					
73	1.0	10.2	17.9	1: 1.76	3.43
Ground Floor Landing EM					
73	1.0	1.1	29.9	1: 19.96	3.41

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Quarter Landing GF to Mezz EM					
74	1.0	15.1	31.2	1: 2.06	4.14
Mid Stair to Mezz EM					
73	1.0	6.3	21.7	1: 3.45	5.29
Quarter Landing GF to Mezz 2 EM					
73	1.0	12.3	20.1	1: 1.63	5.34
Stair To Mezz EM					
73	1.0	11.5	19.4	1: 1.68	5.32
Mez Full Landing EM					
73	1.0	5.2	19.6	1: 3.79	5.87
Typical Full Landing EM					
73	1.0	3.6	12.9	1: 3.63	9.22
Typical Mid Stair EM					
73	1.0	6.6	12.2	1: 1.85	10.45
Typical Mid Stair EM					
75	1.0	6.6	12.2	1: 1.85	10.45
Typical Quarter Landing 1 EM					
73	1.0	7.9	13.8	1: 1.75	10.47
Typical Short Stair EM					
73	1.0	11.3	15.9	1: 1.41	10.50
Typical Quarter Landing 2 EM					
74	1.0	8.1	15.1	1: 1.86	11.07
Typical Mid Stair 2 EM					
74	1.0	9.4	15.6	1: 1.66	11.12

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Fire alarm call point GF Lobby Exit

77	1.0	12.3	19.1	1: 1.55	4.41
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Fire alarm call point GF Exit

78	1.0	5.2	15.4	1: 2.96	4.60
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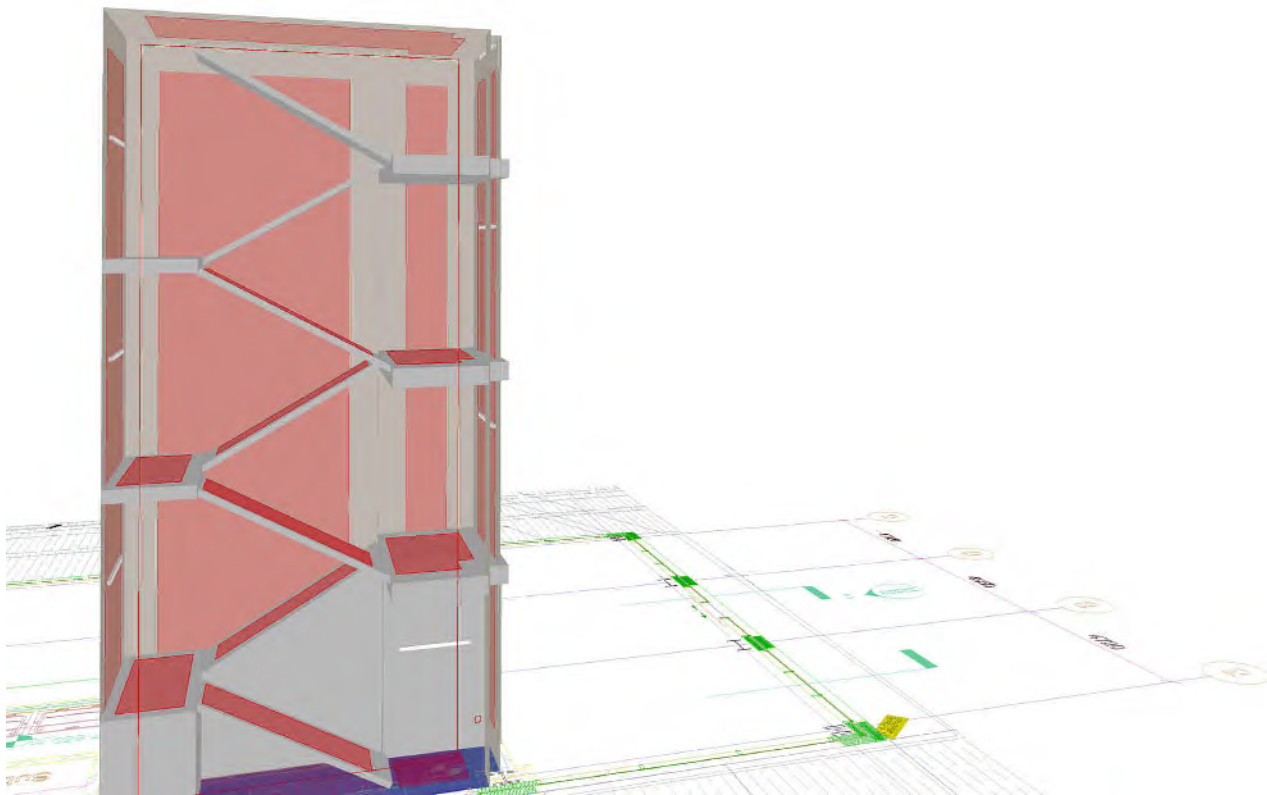
Object : Globe and Simpson Stair B
Installation : Lighting Models to Clients requirements
Project number :
Date : 30.07.2021

RELUX®

1 Staircase B Plus EM & Call Point

1.1 Description, Staircase B Plus EM & Call Point

1.1.1 3D view, View 1



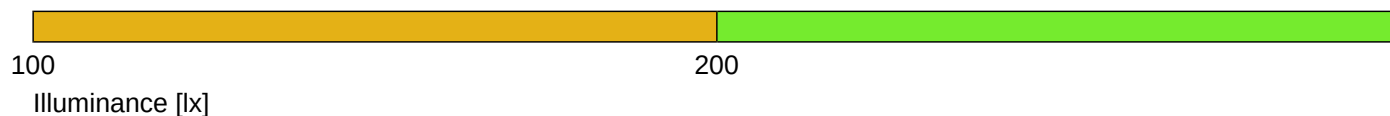
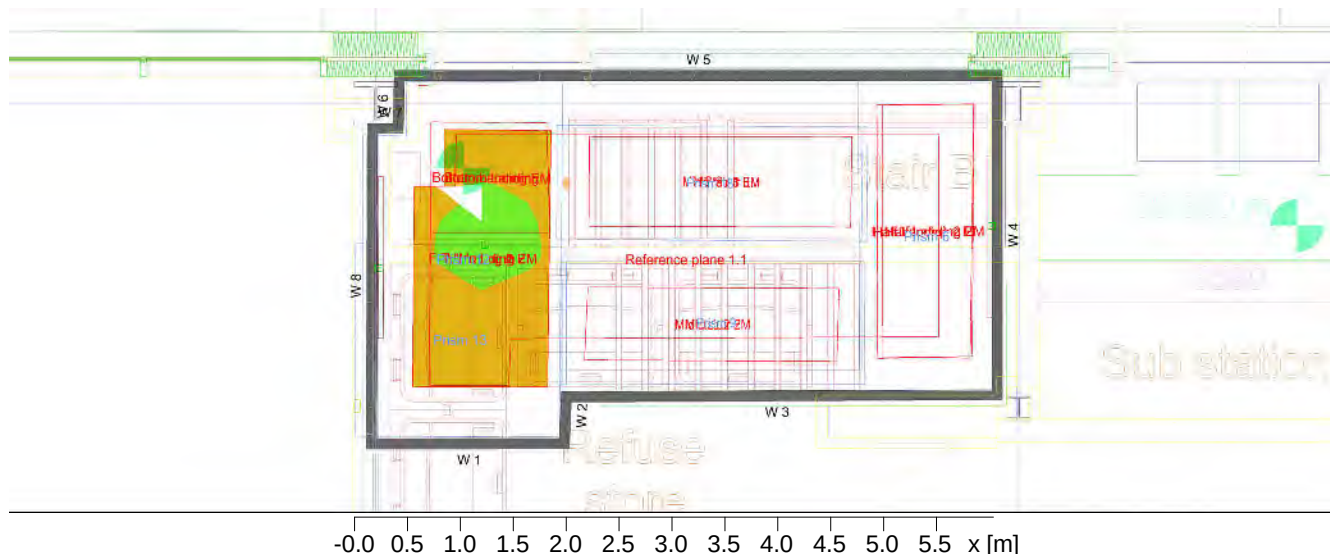
Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021

RELUX®

1 Staircase B Plus EM & Call Point

1.2 Summary, Staircase B Plus EM & Call Point

1.2.1 Result overview, Full Landing 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.32 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

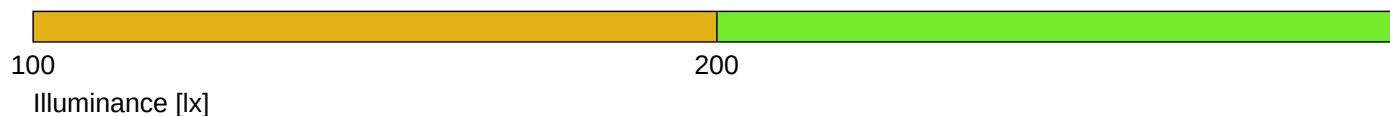
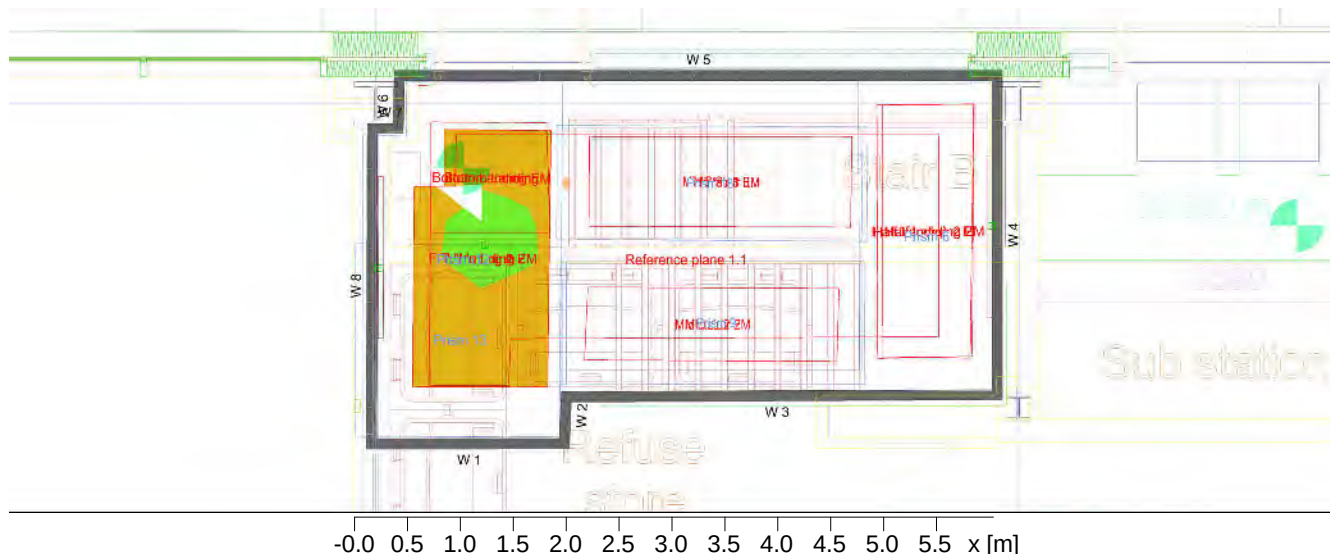
Average illuminance	Em	175 lx
Minimum illuminance	Emin	125 lx
Maximum illuminance	Emax	200 lx
Uniformity Uo	Emin/Em	1:1.39 (0.72)
Diversity Ud	Emin/Emax	1:1.59 (0.63)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.2 Result overview, Full Landing 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	6.62 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

Average illuminance	Em	174 lx
Minimum illuminance	Emin	125 lx
Maximum illuminance	Emax	197 lx
Uniformity Uo	Emin/Em	1:1.39 (0.72)
Diversity Ud	Emin/Emax	1:1.58 (0.63)

Type No. Make

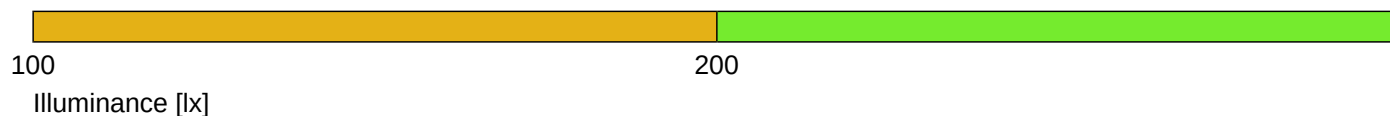
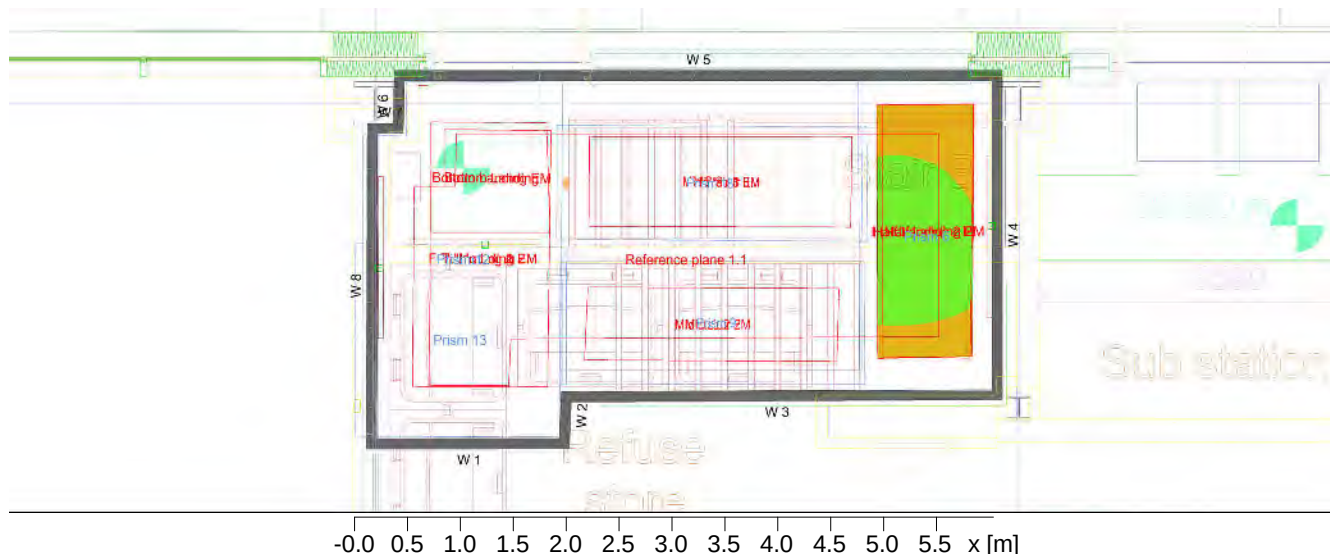
		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021

RELUX®

1.2 Summary, Staircase B Plus EM & Call Point

1.2.3 Result overview, Half Landing 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	1.72 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

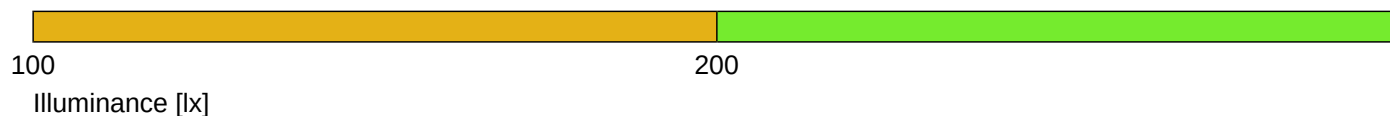
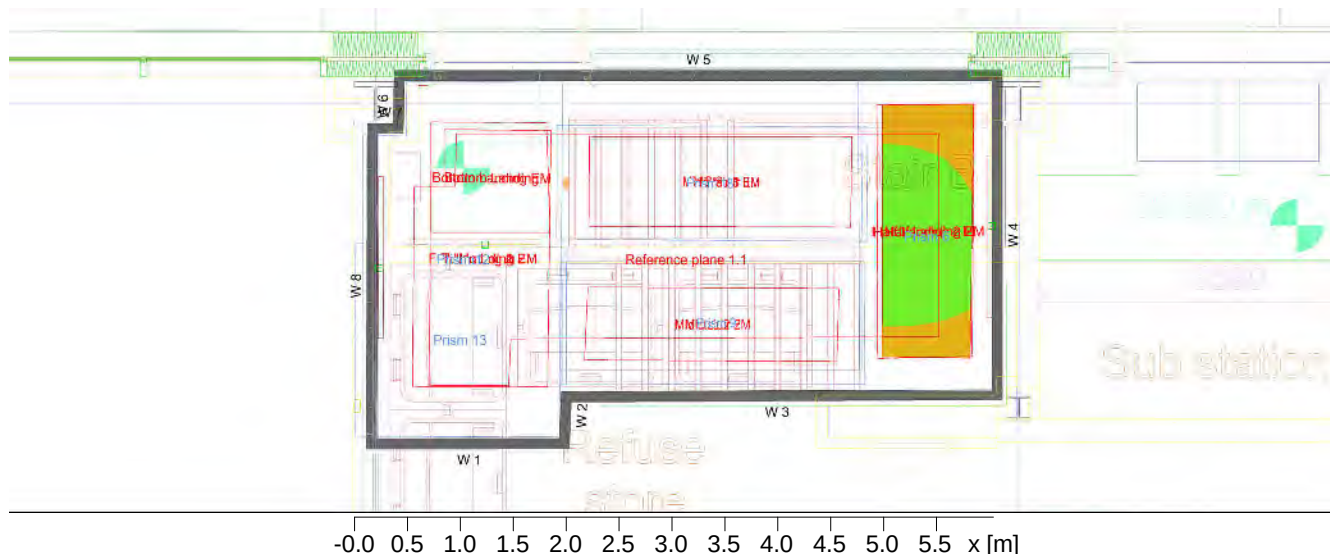
Average illuminance	Em	198 lx
Minimum illuminance	Emin	123 lx
Maximum illuminance	Emax	242 lx
Uniformity Uo	Emin/Em	1:1.61 (0.62)
Diversity Ud	Emin/Emax	1:1.97 (0.51)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.4 Result overview, Half Landing 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

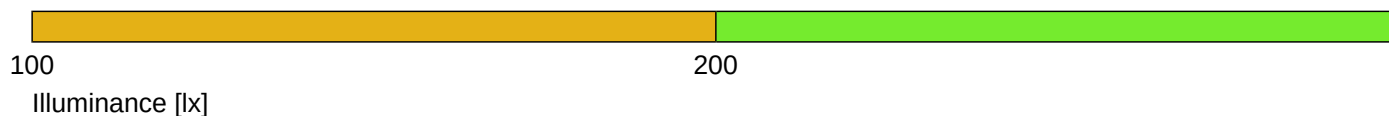
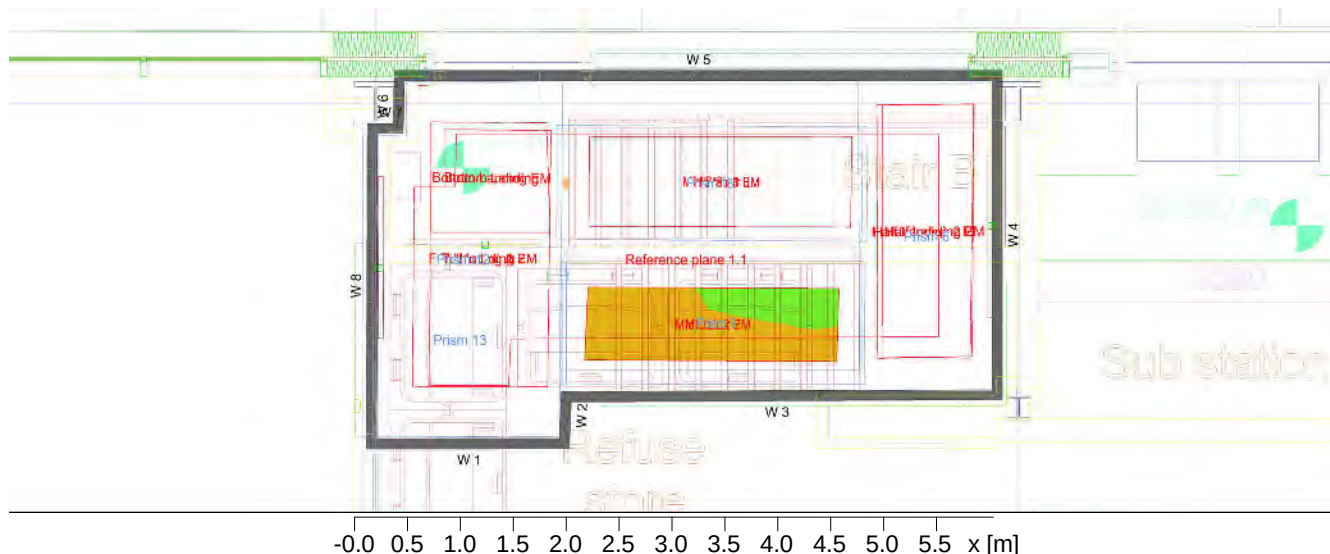
Average illuminance	Em	204 lx
Minimum illuminance	Emin	131 lx
Maximum illuminance	Emax	249 lx
Uniformity Uo	Emin/Em	1:1.55 (0.64)
Diversity Ud	Emin/Emax	1:1.9 (0.53)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.5 Result overview, Mid stair 4



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

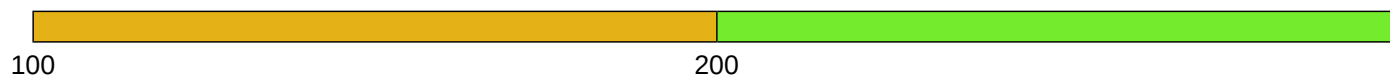
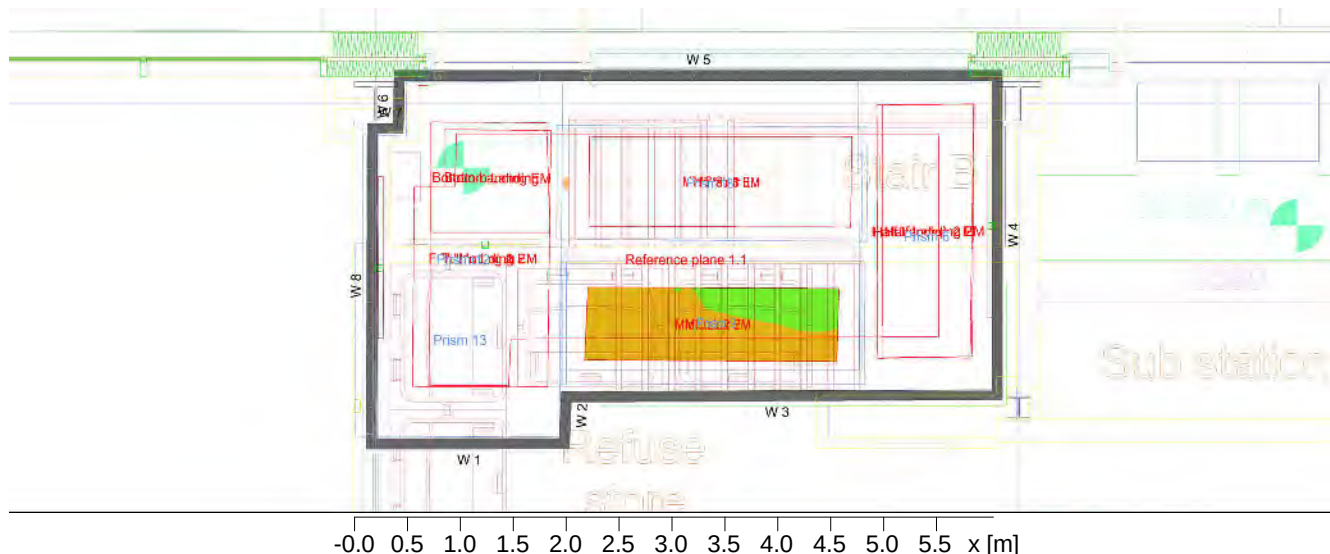
Average illuminance	Em	172 lx
Minimum illuminance	Emin	120 lx
Maximum illuminance	Emax	241 lx
Uniformity Uo	Emin/Em	1:1.44 (0.7)
Diversity Ud	Emin/Emax	1:2.01 (0.5)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.6 Result overview, Mid stair 2



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

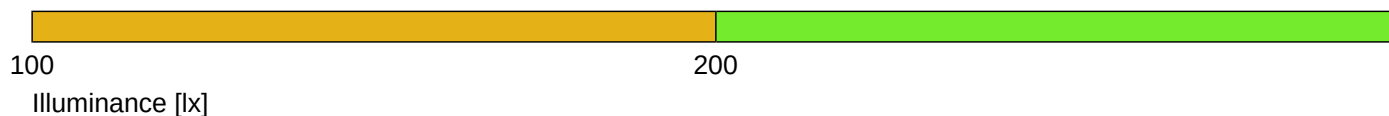
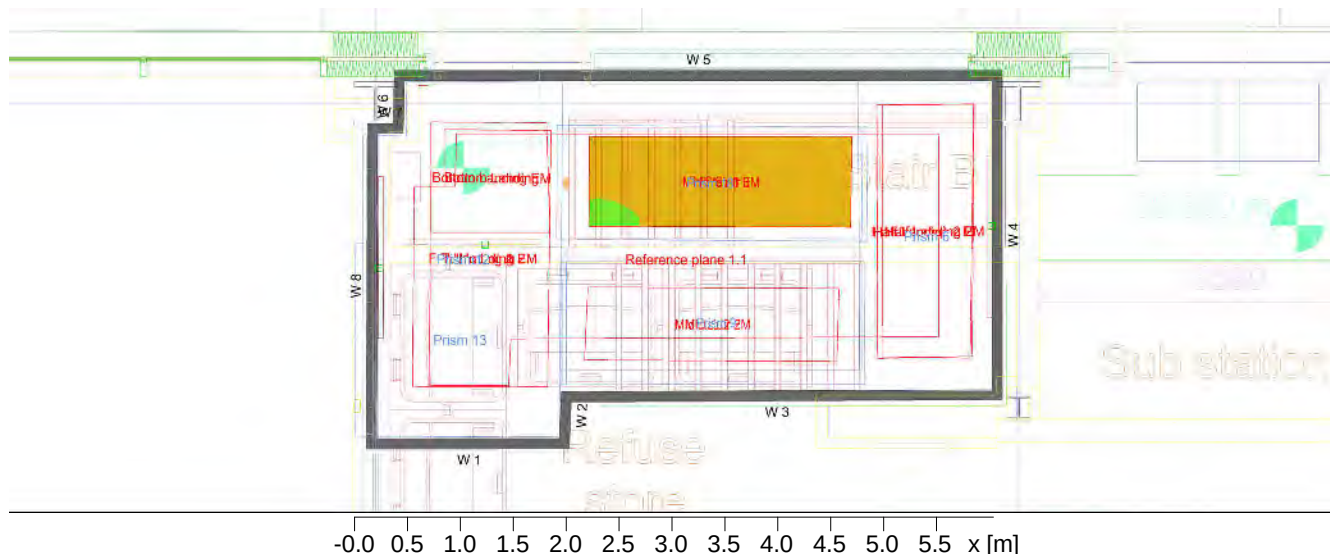
Average illuminance	Em	173 lx
Minimum illuminance	Emin	120 lx
Maximum illuminance	Emax	245 lx
Uniformity Uo	Emin/Em	1:1.44 (0.69)
Diversity Ud	Emin/Emax	1:2.04 (0.49)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.7 Result overview, Mid Stair 1



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

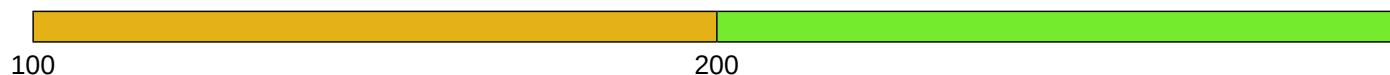
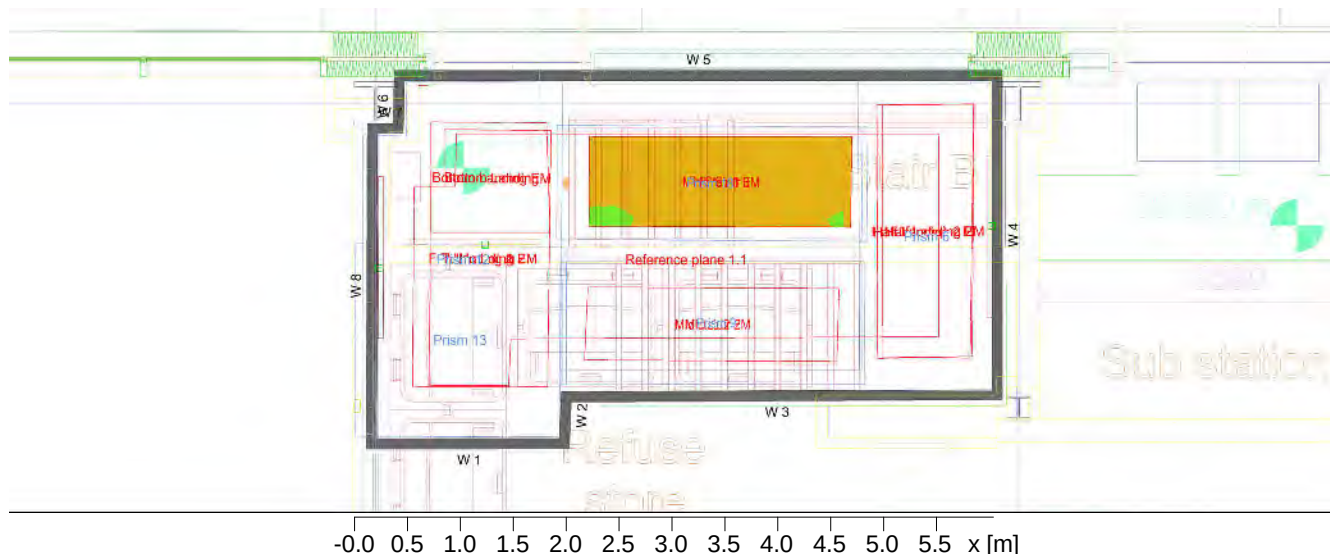
Average illuminance	Em	171 lx
Minimum illuminance	Emin	114 lx
Maximum illuminance	Emax	194 lx
Uniformity Uo	Emin/Em	1:1.5 (0.67)
Diversity Ud	Emin/Emax	1:1.7 (0.59)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.8 Result overview, Mid Stair 3



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

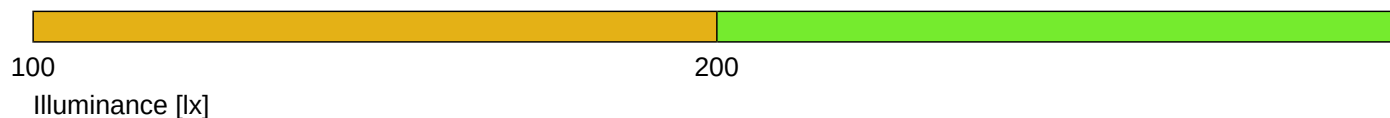
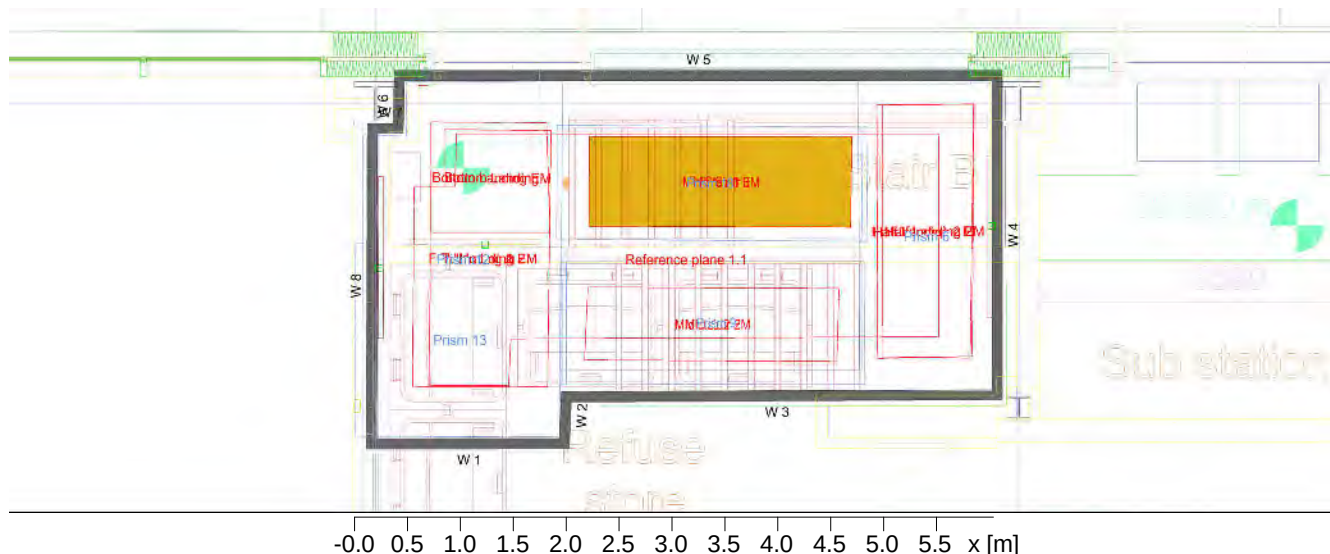
Average illuminance	Em	170 lx
Minimum illuminance	Emin	112 lx
Maximum illuminance	Emax	193 lx
Uniformity Uo	Emin/Em	1:1.52 (0.66)
Diversity Ud	Emin/Emax	1:1.72 (0.58)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.9 Result overview, Bottom Stair



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

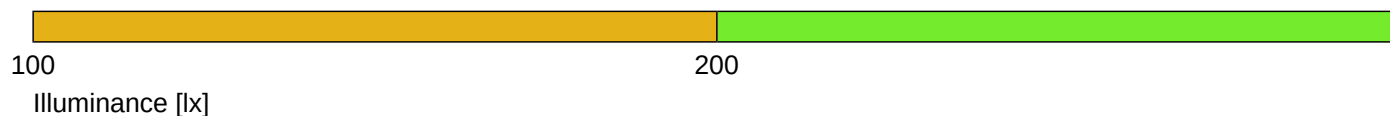
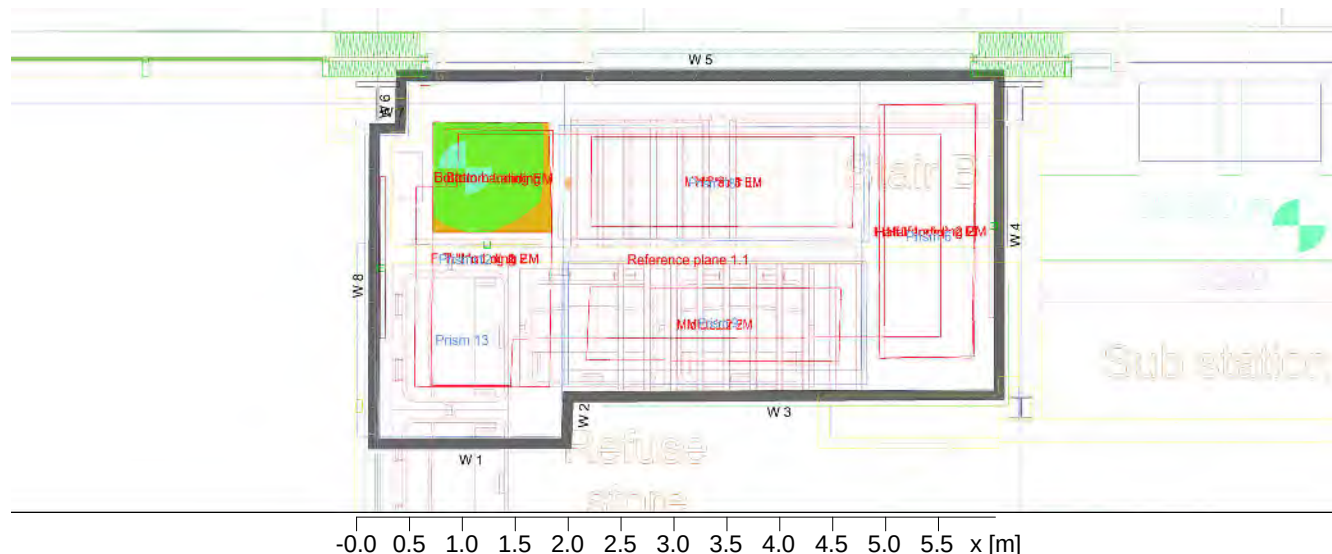
Average illuminance	Em	152 lx
Minimum illuminance	Emin	117 lx
Maximum illuminance	Emax	185 lx
Uniformity Uo	Emin/Em	1:1.28 (0.77)
Diversity Ud	Emin/Emax	1:1.79 (0.56)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.10 Result overview, Bottom Landing



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

Average illuminance	Em	207 lx
Minimum illuminance	Emin	176 lx
Maximum illuminance	Emax	224 lx
Uniformity Uo	Emin/Em	1:1.18 (0.85)
Diversity Ud	Emin/Emax	1:1.27 (0.79)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

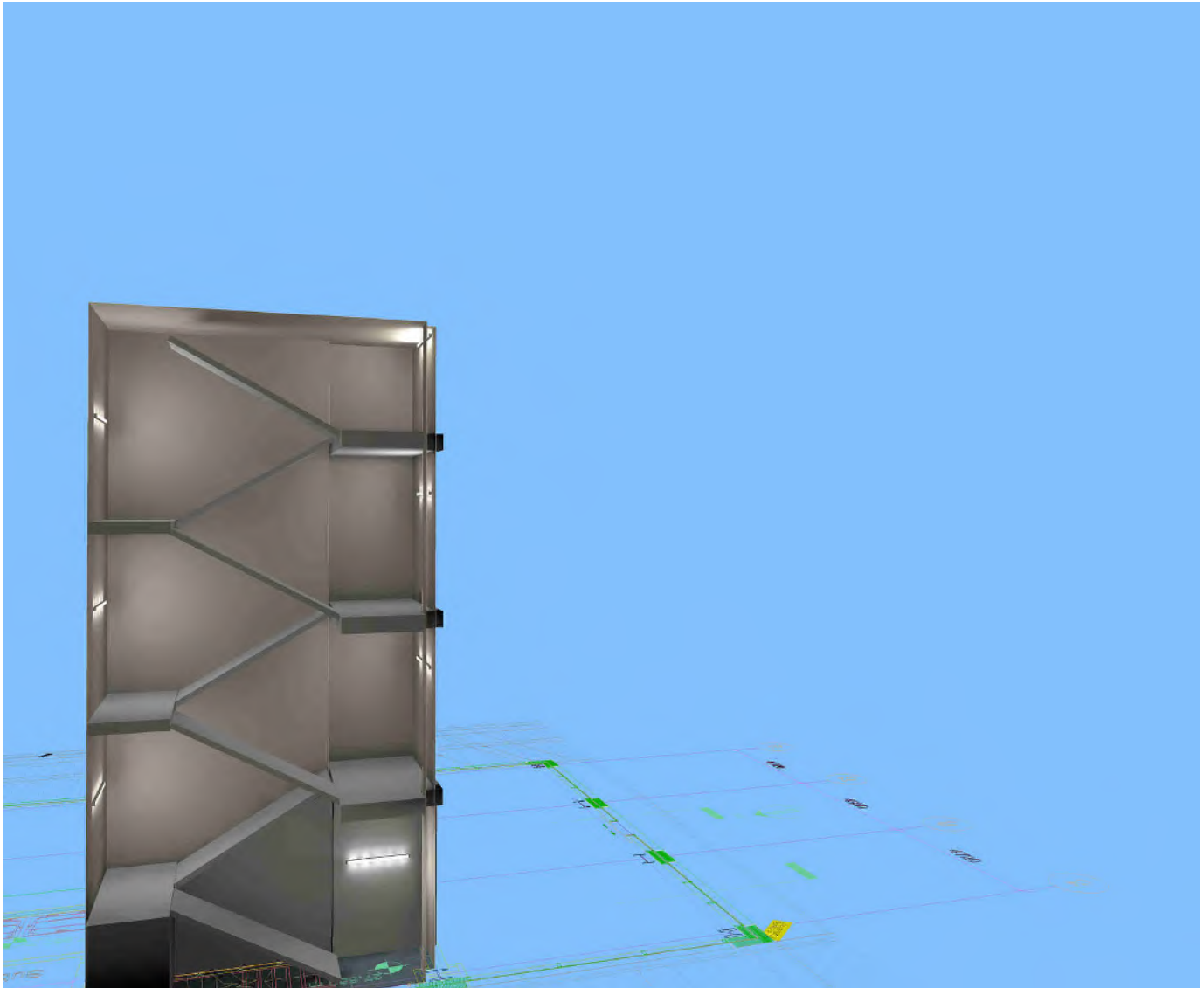
Object : Globe and Simpson Stair B
Installation : Lighting Models to Clients requirements
Project number :
Date : 30.07.2021

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1 Staircase B Plus EM & Call Point

1.3 Calculation results, Staircase B Plus EM & Call Point

1.3.1 3D luminance, View 1



Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021



1 Staircase B Plus EM & Call Point

1.4 Summary, Staircase B Plus EM & Call Point

1.4.1 Result overview (emergency lighting)

Type No. Make

	25	1	Spurlite Ltd	
			Order No.	: SSA45-840.Idt
			Luminaire name	: Ballista 1200mm twin
			Equipment	: 1 x LED 45 W / 360 lm
	27	6	Order No.	: SSA60-840.Idt
			Luminaire name	: Ballista 1500mm twin
			Equipment	: 1 x LED 60 W / 360 lm

Result evaluation area

Calculation algorithm used: Direct component
 Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Full Landing 2 EM					
18	1.0	3.3	6.8	1: 2.04	6.62
Full Landing 1 EM					
13	1.0	3.3	6.9	1: 2.07	3.32
Half Landing 1 EM					
18	1.0	3.5	9.4	1: 2.69	1.72
Half Landing 2 EM					
14	1.0	3.7	9.6	1: 2.62	5.02

Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021



1 Staircase B Plus EM & Call Point

1.4 Summary, Staircase B Plus EM & Call Point

1.4.1 Result overview (emergency lighting)

Mid stair 4 EM					
20	1.0	4.0	9.5	1: 2.35	3.32
Mid stair 2 EM					
14	1.0	4.0	9.5	1: 2.35	6.62
Mid Stair 3 EM					
19	1.0	1.8	6.6	1: 3.57	6.62
Mid Stair 1 EM					
18	1.0	1.8	6.6	1: 3.57	3.32
Mid Stair EM					
1	1.0	1.8	6.6	1: 3.57	3.32
Bottom Stair EM					
2	1.0	1.9	7.5	1: 3.92	0.12
Call Point					
1	1.0	16.6	18.9	1: 1.14	1.10
Bottom Landing EM					
18	1.0	5.5	9.9	1: 1.82	0.00

Date: 17/09/2021

Ref: TS036 - [SJQ-102-BAF-XX-XX-TS-E-036]

FORM BFES 10/2

To: Lend Lease Construction Europe Ltd

For the attention of Peter King

Contract Title: Globe & Simpson

Contract No: 5258

TECHNICAL SUBMISSION

T.S. No. TS036 Roof Terrace Light

Dear Sirs

We are pleased to submit the following for your approval by Friday 1st October 2021

Equipment: Roof Terrace Light

Manufacturer: Spurlite

Description: Light Fitting & Emergency Light Fitting

Specification References: SJQ-102-CWC-XX-XX-SP-ME-40407_iss3_revT3 M&E
Services Stage 4a Performance Specification Section 5.16

Drawing References: SJQ-102-BAF-XX-LRF-DR-E-63001 - Rev C02

Note

Attached detail documents:

Manufacturers Data: ☒

Manufacturers Leaflet: ☐

Manufacturers Drawings: ☐

Electrical Requirements: Included

For Briggs & Forrester Engineering Services Ltd

Alan Wilkinson

Approved/Approved with Comment

Date:

Comments:

OSPREY SLIM WALL MOUNTED IP65 BULKHEAD



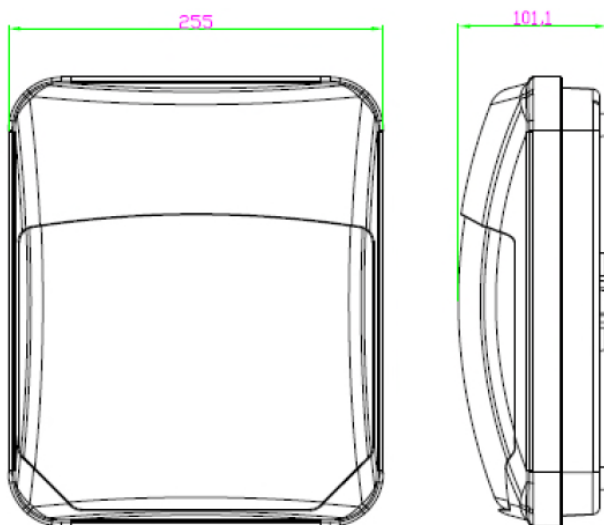
SOSP/305



DATALOGUE NUMBER

SOSP/305/ST/BK/CCT

- BLACK POLYCARBONATE BODY
- OPAL POLYCARBONATE DIFFUSER
- ADJUSTABLE CCT - 4000K/3000K
- 1500 LUMENS/ 71 LMS/W
- IP65 RATING
- 22W LED CHIPSET
- 56 000 HR LIFE
- CLASS 1 PROTECTION
- IK08 IMPACT RESISTANCE
- 120 DEGREE WIDE DISTRIBUTION
- RA80 - Macadam 3 SDCM
- emergency option available





Project: St. Johns Place Globe & Simpson

Project No: 5258

Luminaire Schedule

Document Ref: SJQ-102-BAF-XX-ZZ-SH-E-60003

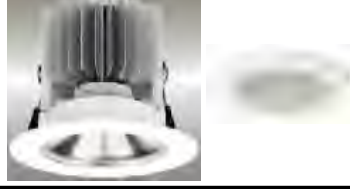
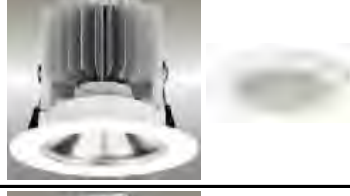
Issue Status: For Construction

Issue Date: 30rd July 2021

Suitability: A1

Engineer: RR

Revision Details				
Rev	Date	Description	By	Checked
P01	16 rd March 2021	For Review and Comment	SG	RR
C01	22 rd April 2021	For Construction	SG	RR
C0	30 rd July 2021	For Construction (Interior Lighting Update)	SG	RR

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS																
LUMINAIRE DETAILS						L2A CALCULATION										
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details CCT°K	RA	ImTOT /luminaire	WCCT /luminaire	Control Factor	Lamp Im/W _{CCT} /luminaire	Luminaire Im*/W _{CCT} /luminaire	
A1		Lobbies A & B	LED recessed downlight. 105mm overall diamter and a hole cut-out size of 92mm.	20	Spurlite Dot 9128B/40	A	37	1.00	4000	80	1035	10.00	0.90	103.50	103.50	
A1E		Lobbies A & B	As per type A1 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	20	Spurlite Dot 9128B/40	A	22	1.00	4000	80	1035	10.00	0.90	103.50	103.50	
A4		Shower Area	LED recessed downlight complete with a IP65 lense. 105mm overall diamter and a hole cut-out size of 92mm.	IP65 Lense	Spurlite Dot 9138B/40 + A921DL	A	1	1.00	4000	80	1332	14.00	0.90	95.14	95.14	
A4E		Shower Area	As per type A3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65 Lense	Spurlite Dot 9138B/40 + A921DL	A	3	1.00	4000	80	1332	14.00	0.90	95.14	95.14	
A5		Shower Area	LED recessed downlight complete with a IP65 lense. 105mm overall diamter and a hole cut-out size of 92mm.	IP65 Lense	Spurlite Dot 9158B/40 + A921DL	A	2	1.00	4000	80	1810	20.00	0.90	90.50	90.50	
A5E		Shower Area	As per type A3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65 Lense	Spurlite Dot 9158B/40 + A921DL	A	7	1.00	4000	80	1810	20.00	0.90	90.50	90.50	
B1S		Stair A & Protected Corridor	BALLISTA LED ceiling mounted, 4Ft, Single Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body.	IP20	Spurlite Ballista BAL25/840	A	5	1.00	4000	80	2500	25.00	0.90	100.00	100.00	
B1SE		Stair A & Protected Corridor	As per type B1S above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL25/M3/840	A	37	1.00	4000	80	2500	25.00	0.90	100.00	100.00	

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS																
LUMINAIRE DETAILS						L2A CALCULATION										
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details		ImTOT	WCCT	Control	Lamp	Luminaire	
									CCT°K	RA	/luminaire	/luminaire	Factor	Im/W _{CCT} /luminaire	Im ² /W _{CCT} /luminaire	
B2SE		Stair B	BALLISTA LED ceiling mounted, 4Ft, Twin Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body. Equiped with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL45/M3/840	A	1	1.00	4000	80	4500	45.00	0.90	100.00	100.00	
B3SE		Stairs A & B	BALLISTA LED ceiling mounted, 5Ft, Twin Batten luminaire constructed with a steel body with the LED's mounted behind an opal diffuser. Fabricated white powder coated steel folded body. Terminal block & LED driver mounted on the rear of the body. Equiped with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP20	Spurlite Ballista BAL60/M3/840	A	30	1.00	4000	80	6000	60.00	0.90	100.00	100.00	
C1		Plant Areas	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V380400U	A	2	1.00	4000	80	2400	16.00	0.90	150.00	150.00	
C1E		Plant Areas	As per type C1 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400U	A	7	1.00	4000	80	2400	16.00	0.90	150.00	150.00	
C2		Car Park	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V399400Z	A	26	1.00	4000	80	2620	20.00	0.90	131.00	131.00	
C2E		Car Park	As per type C2 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V399400Z	A	27	1.00	4000	80	2620	20.00	0.90	131.00	131.00	
C3		Plant Areas	Weatherproof and impact resistant high performance LED luminaire with a frosted polycarbonate diffuser.	IP65	Spurlite Futurix V380400S	A	10	1.00	4000	80	4340	27.00	0.90	160.74	160.74	
C3E		Plant Areas	As per type C3 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400S	A	55	1.00	4000	80	4340	27.00	0.90	160.74	160.74	
C3E/MW		Plant Areas	As per type C3 above c/w integral MW detector.	IP65	Spurlite Futurix VS380400S/MW/ST	A	27	1.00	4000	80	4340	27.00	0.90	160.74	160.74	

LUMINAIRES & EMERGENCY LUMINAIRES - INTERNAL AREAS																
LUMINAIRE DETAILS						L2A CALCULATION										
REF	IMAGE	LOCATION	DESCRIPTION	IP Rating	MANUFACTURER	CAT.	QTY	LOR	Lamp Details		ImTOT	WCCT	Control	Lamp	Luminaire	
									CCT°k	RA	/luminaire	/luminaire	Factor	Im/W _{CCT} /luminaire	Im [*] /W _{CCT} /luminaire	
C4E		FF Riser	As per type C4 above with a 3 hour integral emergency battery back up & self-test emergency control gear.	IP65	Spurlite Futurix V380400D	A	9	1.00	4000	80	3100	23.00	0.90	134.78	134.78	

Usage Gategories: A) OFFICE, INDUSTRIAL & STORAGE; B) OTHER AREAS; C) DISPLAY LIGHTING. * Denotes LUMINAIRE lumens for Category A & LAMP lumens for Category B & C
Control Factor obtained from Non Domestic Building Services Compliance Guide: 2013 Edition Table 42



Project: St. Johns Place Globe & Simpson

Project No: 5258

Lighting Calculations

Document Ref: SJQ-102-BAF-XX-ZZ-SH-E-60006

Issue Status: For Construction

Issue Date: 30rd July 2021

Suitability: A1

Engineer: RR

Revision Details				
Rev	Date	Description	By	Checked
P01	16 rd March 2021	For Review and Comment	AP	RR
C01	23 rd April 2021	For Construction	AP	RR
C02	30 rd July 2021	For Construction (Protecting Corridor and Stairs A & B update)	AP	RR

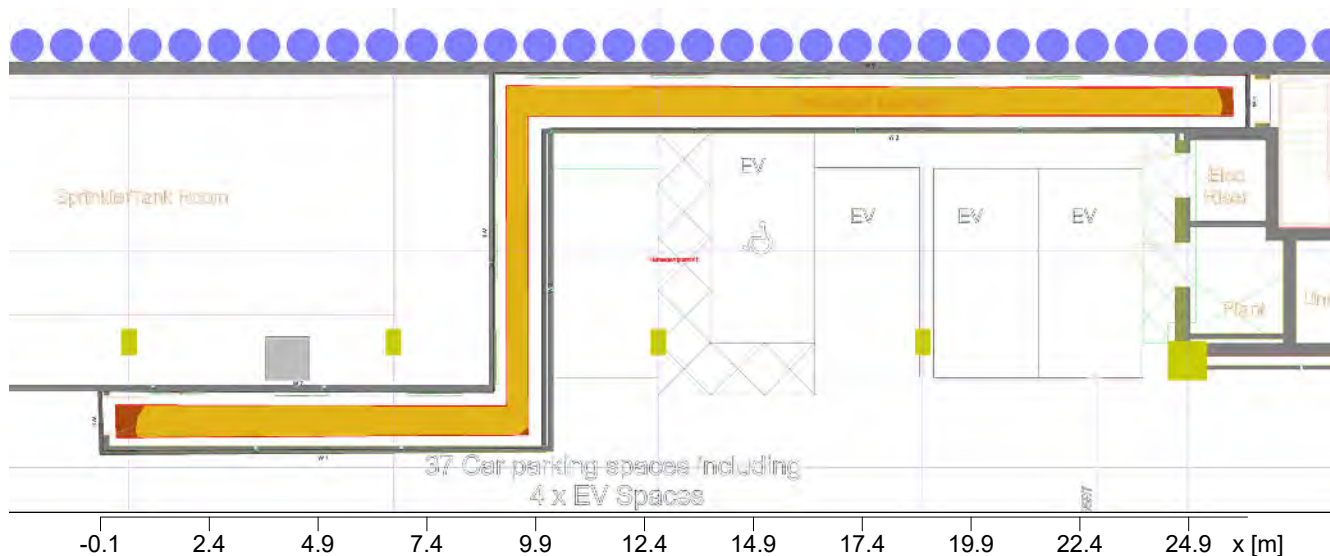
Object : Globe and Simpson
 Installation : Protected Corridor - Linear Wall Mounted
 Project number :
 Date : 02.03.2021

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1 Protected Corridor Std

1.1 Summary, Protected Corridor Std

1.1.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	1.80 m
Maintenance factor	0.80
Total luminous flux of all lamps	30000.00 lm
Total power	300.0 W
Total power per area (41.56 m²)	7.22 W/m² (5.41 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	133 lx
Emin	77 lx
Emin/Em (Uo)	0.58
Emin/Emax (Ud)	0.39
Position	0.00 m

Major surfaces

	Em	Uo
M 1.9 (Ceiling)	176 lx	0.52
M 1.1 (Wall)	184 lx	0.37
M 1.2 (Wall)	250 lx	0.33
M 1.3 (Wall)	209 lx	0.36
M 1.4 (Wall)	105 lx	0.68
M 1.5 (Wall)	123 lx	0.39
M 1.6 (Wall)	167 lx	0.40
M 1.7 (Wall)	109 lx	0.38
M 1.8 (Wall)	91 lx	0.62

-please put your own address here-

Object : Globe and Simpson
Installation : Protected Corridor - Linear Wall Mounted
Project number :
Date : 02.03.2021



1 Protected Corridor Std

1.1 Summary, Protected Corridor Std

1.1.1 Result overview, Evaluation area 1

Type No.\Make

		Spurlite Ltd	
19	12	Order No.	: SSA25-840.ltd
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm

Object : Globe and Simpson
Installation : Protected Corridor - Linear Wall Mounted
Project number :
Date : 02.03.2021



1 Protected Corridor Std

1.2 Summary, Protected Corridor Std

1.2.1 Result overview (emergency lighting)

Type No.\Make

		Spurlite Ltd	
19	7	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 362 lm

Result evaluation area

Calculation algorithm used: Direct component
Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Emergency area 1					
1	1.0	1.2	9.7	1: 8.24	0.00
Call Point					
1	1.0	5.0	23.0	1: 4.57	1.35

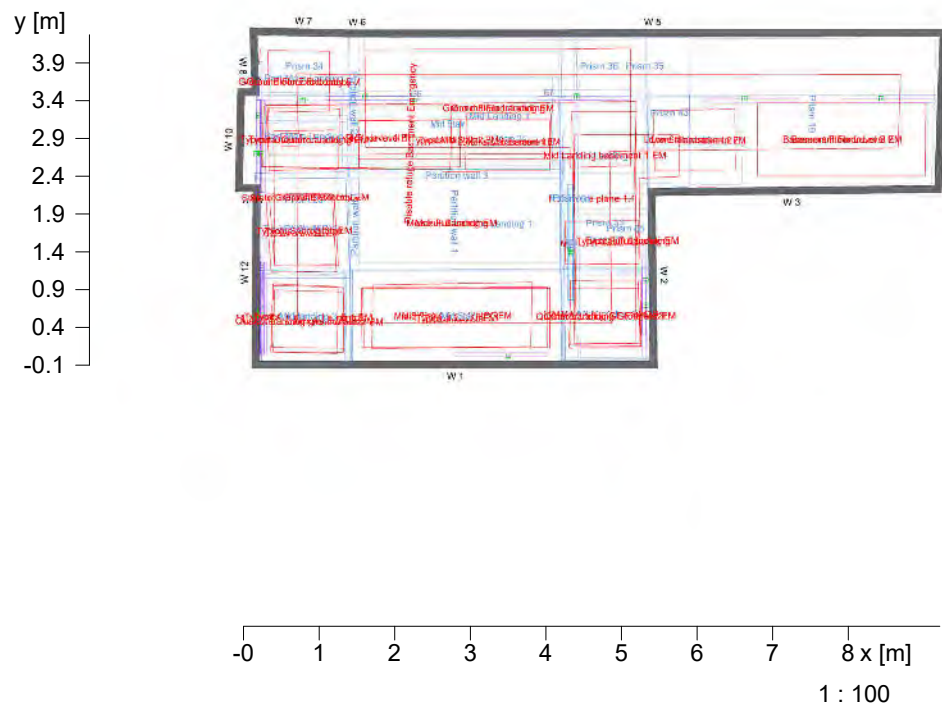
Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.1 Description, Staircase A Basement Level Std and EM Wall Mounted

1.1.1 Floor plan



Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.1 Description, Staircase A Basement Level Std and EM Wall Mounted

1.1.1 Floor plan

Wall	x	y	Length	Reflectance
1	72.59 m	55.51 m	5.17 m	50.0 %
2	72.56 m	57.79 m	2.28 m	50.0 %
3	76.35 m	57.83 m	3.79 m	50.0 %
4	76.42 m	59.79 m	1.97 m	50.0 %
5	68.83 m	59.79 m	7.59 m	50.0 %
6	68.60 m	59.79 m	0.22 m	50.0 %
7	67.40 m	59.82 m	1.21 m	50.0 %
8	67.43 m	59.01 m	0.80 m	50.0 %
9	67.23 m	59.01 m	0.19 m	50.0 %
10	67.21 m	57.84 m	1.17 m	50.0 %
11	67.44 m	57.84 m	0.23 m	50.0 %
12	67.42 m	55.51 m	2.33 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		37.50 m		
Height of ref. plane		0.75 m		

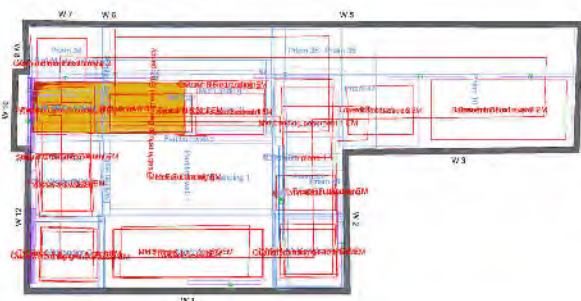
Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.1 Result overview, Basement Floor level 1



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	160 lx
Minimum illuminance	Emin	91 lx
Maximum illuminance	Emax	203 lx
Uniformity Uo	Emin/Em	1:1.76 (0.57)
Diversity Ud	Emin/Emax	1:2.24 (0.45)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.1 Result overview, Basement Floor level 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

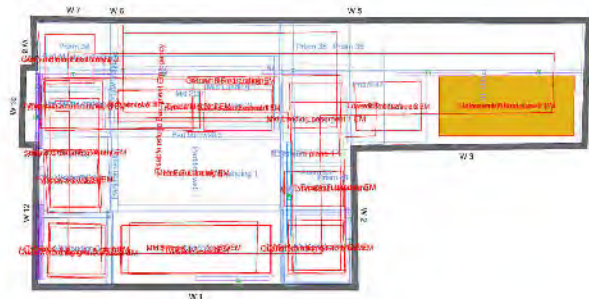


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

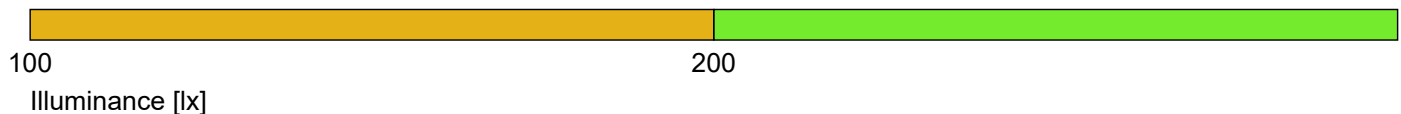


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.2 Result overview, Basement Floor Level 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	217 lx
Minimum illuminance	Emin	169 lx
Maximum illuminance	Emax	235 lx
Uniformity Uo	Emin/Em	1:1.28 (0.78)
Diversity Ud	Emin/Emax	1:1.39 (0.72)

Type No. Make

20	30	Spurlite Ltd
		Order No. : SSA25-840.Idt
		Luminaire name : Ballista 1200mm single
		Equipment : 1 x LED 25 W / 2500 lm
21	10	Order No. : SSA60-840.Idt
		Luminaire name : Ballista 1500mm twin
		Equipment : 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.2 Result overview, Basement Floor Level 2

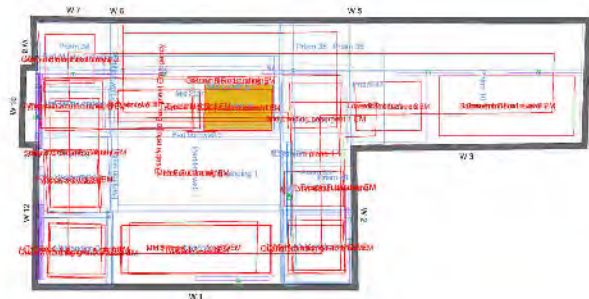
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

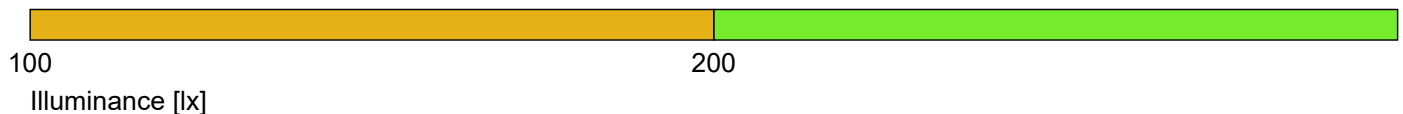


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.3 Result overview, Lower stair basement 1



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	155 lx
Minimum illuminance	Emin	138 lx
Maximum illuminance	Emax	161 lx
Uniformity Uo	Emin/Em	1:1.12 (0.89)
Diversity Ud	Emin/Emax	1:1.34 (0.75)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.3 Result overview, Lower stair basement 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

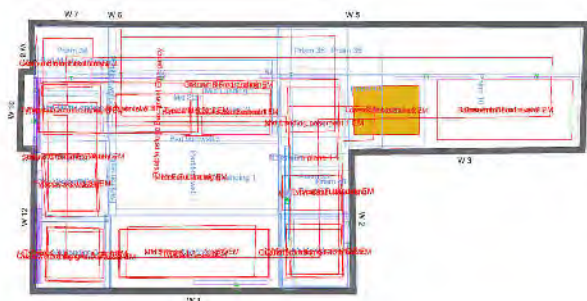


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

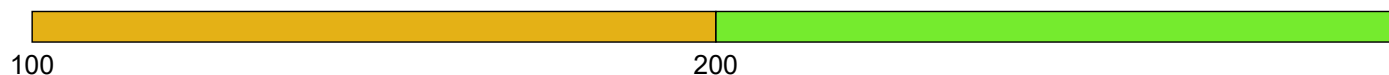


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.4 Result overview, Lower Stair basement 2



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	225 lx
Minimum illuminance	Emin	190 lx
Maximum illuminance	Emax	243 lx
Uniformity Uo	Emin/Em	1:1.19 (0.84)
Diversity Ud	Emin/Emax	1:1.28 (0.78)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.4 Result overview, Lower Stair basement 2

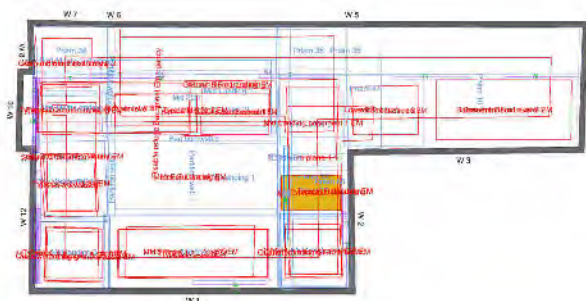
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

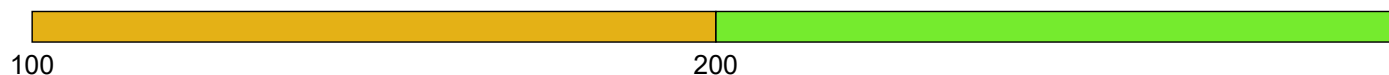


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.5 Result overview, Mid Stair basement



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	197 lx
Minimum illuminance	Emin	158 lx
Maximum illuminance	Emax	223 lx
Uniformity Uo	Emin/Em	1:1.25 (0.8)
Diversity Ud	Emin/Emax	1:1.41 (0.71)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.5 Result overview, Mid Stair basement

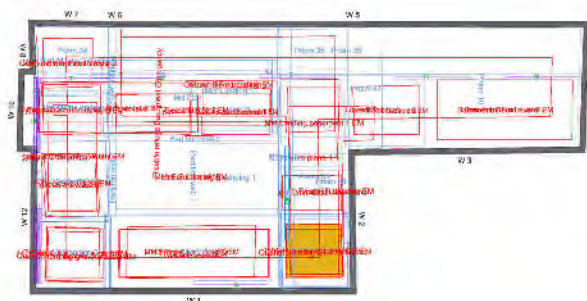
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

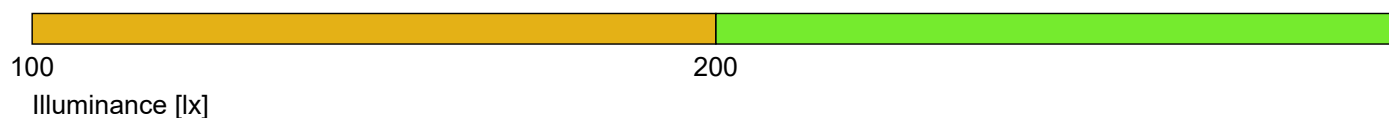


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.6 Result overview, Mid Landing basement 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	1.37 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	249 lx
Minimum illuminance	Emin	187 lx
Maximum illuminance	Emax	275 lx
Uniformity Uo	Emin/Em	1:1.33 (0.75)
Diversity Ud	Emin/Emax	1:1.47 (0.68)

Type No. Make

20	30	Spurlite Ltd
		Order No. : SSA25-840.Idt
		Luminaire name : Ballista 1200mm single
		Equipment : 1 x LED 25 W / 2500 lm
21	10	Order No. : SSA60-840.Idt
		Luminaire name : Ballista 1500mm twin
		Equipment : 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.6 Result overview, Mid Landing basement 2

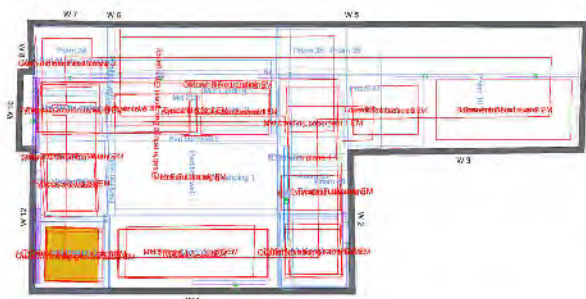
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

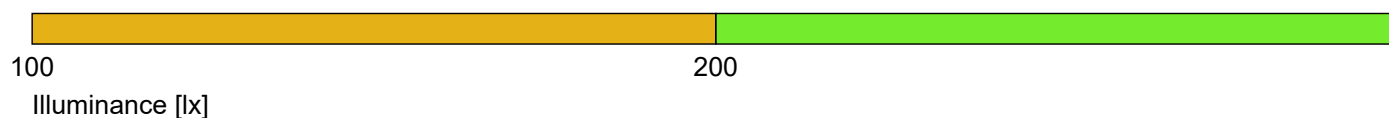


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.7 Result overview, Mid landing basement to GF



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used : Average indirect fraction
 Height of evaluation surface : 2.52 m
 Maintenance factor : 0.80

Total luminous flux of all lamps : 137076 lm
 Total power : 1370 W
 Total power per area (29.85 m²) : 45.89 W/m²

Illuminance

Average illuminance : Em : 160 lx
 Minimum illuminance : Emin : 111 lx
 Maximum illuminance : Emax : 186 lx
 Uniformity Uo : Emin/Em : 1:1.44 (0.7)
 Diversity Ud : Emin/Emax : 1:1.67 (0.6)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.7 Result overview, Mid landing basement to GF

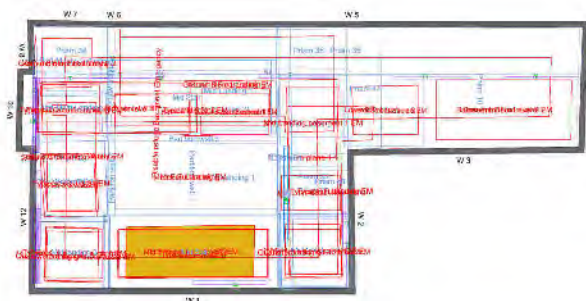
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

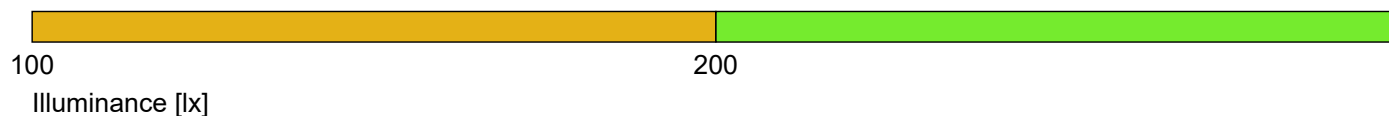


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.8 Result overview, Mid Stair basement to GF



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	258 lx
Minimum illuminance	Emin	145 lx
Maximum illuminance	Emax	324 lx
Uniformity Uo	Emin/Em	1:1.79 (0.56)
Diversity Ud	Emin/Emax	1:2.24 (0.45)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.8 Result overview, Mid Stair basement to GF

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

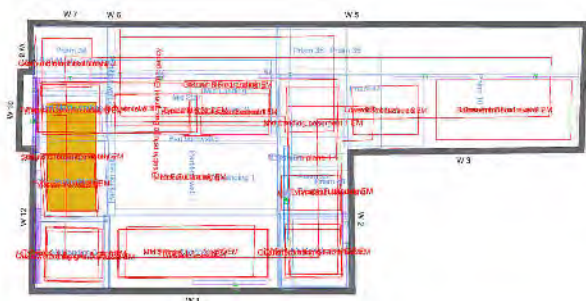


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

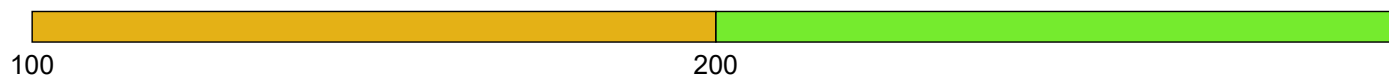


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.9 Result overview, Stair to Ground Exit lobby



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	162 lx
Minimum illuminance	Emin	124 lx
Maximum illuminance	Emax	186 lx
Uniformity Uo	Emin/Em	1:1.3 (0.77)
Diversity Ud	Emin/Emax	1:1.5 (0.67)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.9 Result overview, Stair to Ground Exit lobby

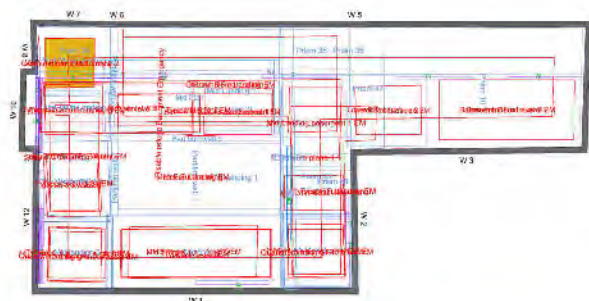
5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

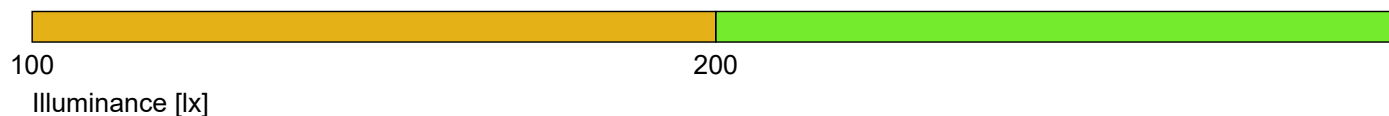


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.10 Result overview, Ground Floor Exit Lobby



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.43 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	193 lx
Minimum illuminance	Emin	155 lx
Maximum illuminance	Emax	218 lx
Uniformity Uo	Emin/Em	1:1.25 (0.8)
Diversity Ud	Emin/Emax	1:1.41 (0.71)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.10 Result overview, Ground Floor Exit Lobby

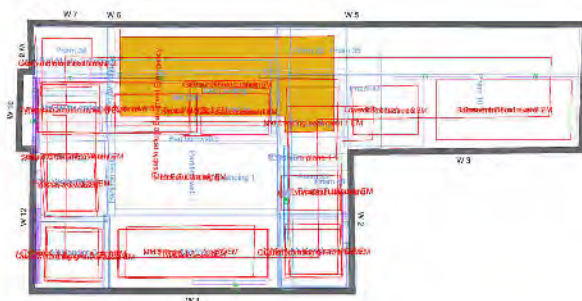
5	2		Nimbus Lighting Group,	
			Order No.	: DOT9128B/40/A920/GEN3
			Luminaire name	: Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN
			Equipment	: 1 x 10 W / 1038 lm

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

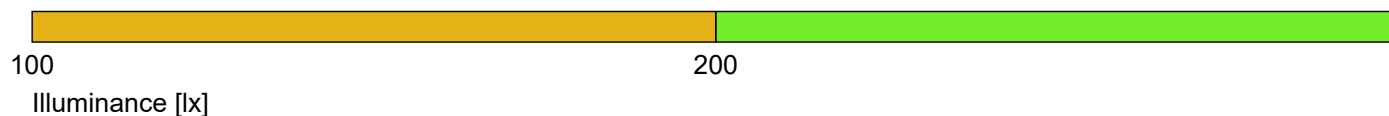


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.11 Result overview, Ground Floor Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.41 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	225 lx
Minimum illuminance	Emin	134 lx
Maximum illuminance	Emax	294 lx
Uniformity Uo	Emin/Em	1:1.68 (0.6)
Diversity Ud	Emin/Emax	1:2.19 (0.46)

Type No. Make

20	30	Spurlite Ltd
		Order No. : SSA25-840.Idt
		Luminaire name : Ballista 1200mm single
		Equipment : 1 x LED 25 W / 2500 lm
21	10	Order No. : SSA60-840.Idt
		Luminaire name : Ballista 1500mm twin
		Equipment : 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.11 Result overview, Ground Floor Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

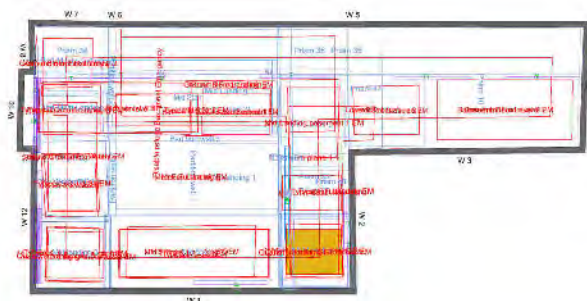


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

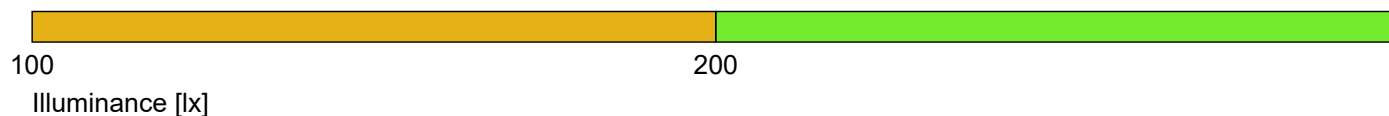


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.12 Result overview, Quarter Landing GF to Mezz



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	4.14 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	249 lx
Minimum illuminance	Emin	189 lx
Maximum illuminance	Emax	302 lx
Uniformity U _o	Emin/Em	1:1.32 (0.76)
Diversity U _d	Emin/Emax	1:1.59 (0.63)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.12 Result overview, Quarter Landing GF to Mezz

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

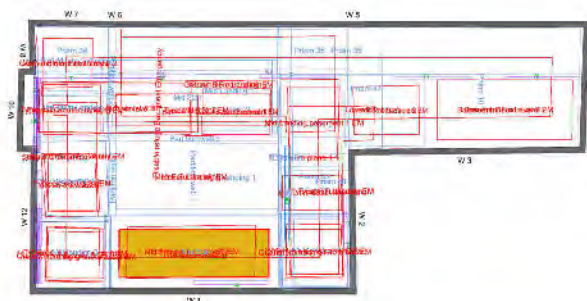


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

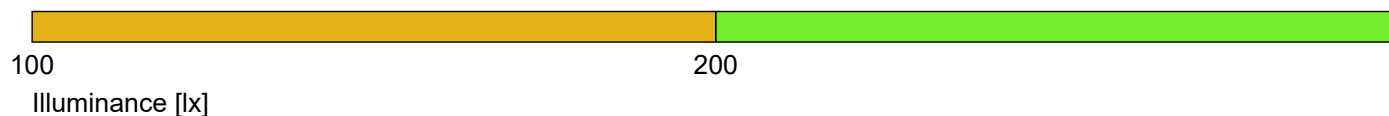


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.13 Result overview, Mid Stair to Mezz



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	153 lx
Minimum illuminance	Emin	115 lx
Maximum illuminance	Emax	225 lx
Uniformity Uo	Emin/Em	1:1.33 (0.75)
Diversity Ud	Emin/Emax	1:2.08 (0.48)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.13 Result overview, Mid Stair to Mezz

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

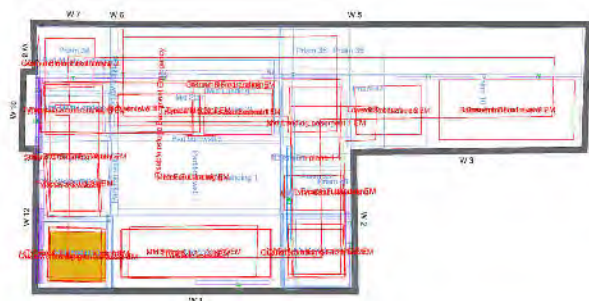


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

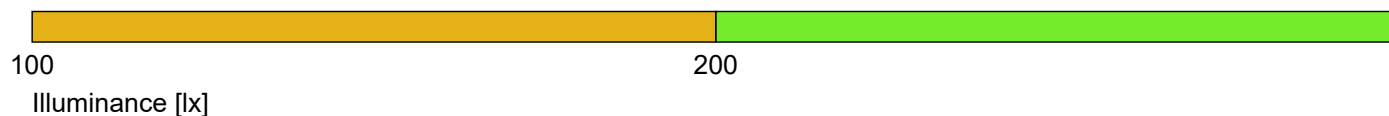


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.14 Result overview, Quarter Landing GF to Mezz 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.34 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	228 lx
Minimum illuminance	Emin	181 lx
Maximum illuminance	Emax	260 lx
Uniformity Uo	Emin/Em	1:1.26 (0.79)
Diversity Ud	Emin/Emax	1:1.44 (0.7)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.14 Result overview, Quarter Landing GF to Mezz 2

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

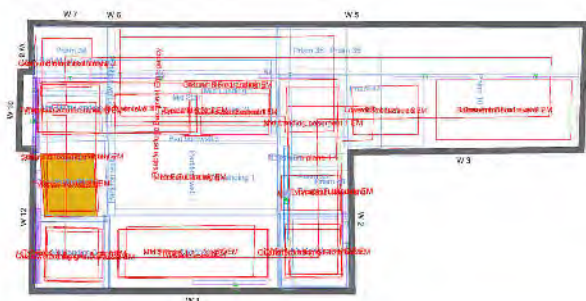


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

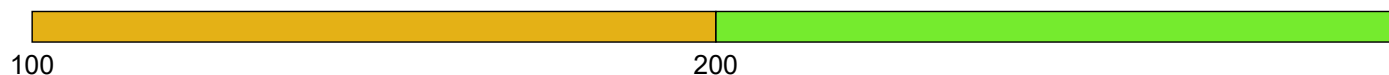


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.15 Result overview, Stair To Mezz



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	246 lx
Minimum illuminance	Emin	195 lx
Maximum illuminance	Emax	278 lx
Uniformity Uo	Emin/Em	1:1.26 (0.8)
Diversity Ud	Emin/Emax	1:1.42 (0.7)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.15 Result overview, Stair To Mezz

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

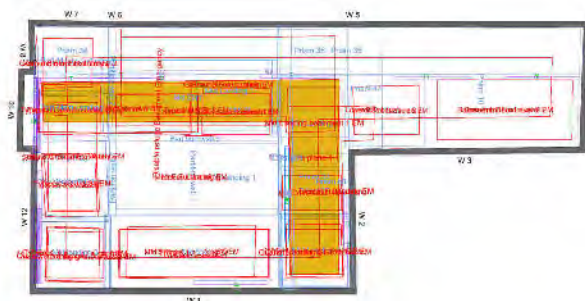


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

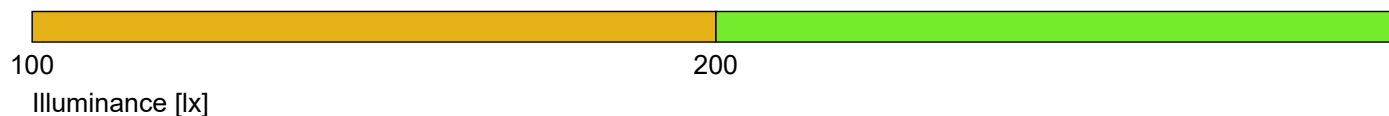


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.16 Result overview, Mez Full Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.87 m
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	219 lx
Minimum illuminance	Emin	145 lx
Maximum illuminance	Emax	279 lx
Uniformity Uo	Emin/Em	1:1.51 (0.66)
Diversity Ud	Emin/Emax	1:1.92 (0.52)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.16 Result overview, Mez Full Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

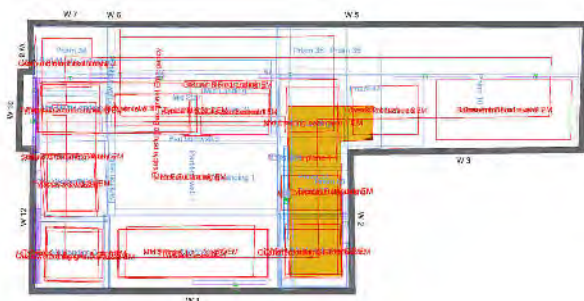


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

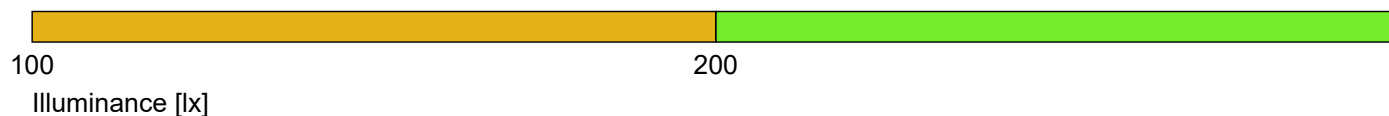


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.17 Result overview, Typical Full Landing



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used : Average indirect fraction
 Height of evaluation surface : 9.22 m
 Maintenance factor : 0.80

Total luminous flux of all lamps : 137076 lm
 Total power : 1370 W
 Total power per area (29.85 m²) : 45.89 W/m²

Illuminance

Average illuminance : Em : 221 lx
 Minimum illuminance : Emin : 137 lx
 Maximum illuminance : Emax : 281 lx
 Uniformity Uo : Emin/Em : 1:1.61 (0.62)
 Diversity Ud : Emin/Emax : 1:2.05 (0.49)

Type No.\Make

Spurlite Ltd
 20 30 Order No. : SSA25-840.Idt
 Luminaire name : Ballista 1200mm single
 Equipment : 1 x LED 25 W / 2500 lm
 21 10 Order No. : SSA60-840.Idt
 Luminaire name : Ballista 1500mm twin
 Equipment : 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.17 Result overview, Typical Full Landing

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

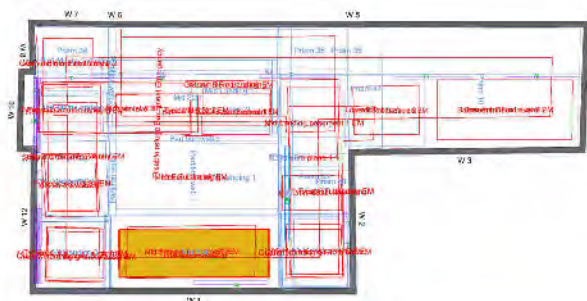


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

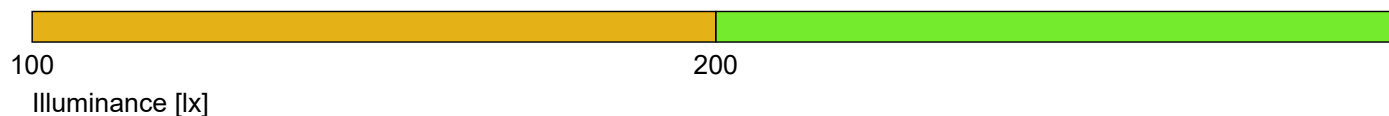


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.18 Result overview, Typical Mid Stair



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	216 lx
Minimum illuminance	Emin	158 lx
Maximum illuminance	Emax	277 lx
Uniformity Uo	Emin/Em	1:1.37 (0.73)
Diversity Ud	Emin/Emax	1:1.76 (0.57)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.18 Result overview, Typical Mid Stair

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

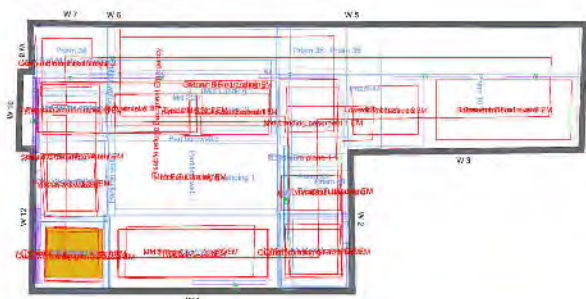


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

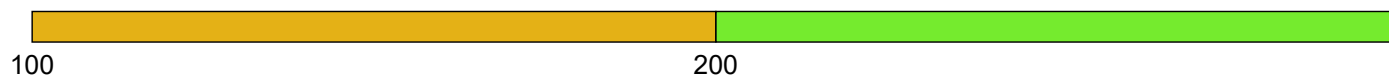


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.19 Result overview, Typical Quarter Landing 1



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	10.47 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	165 lx
Minimum illuminance	Emin	113 lx
Maximum illuminance	Emax	202 lx
Uniformity Uo	Emin/Em	1:1.46 (0.69)
Diversity Ud	Emin/Emax	1:1.78 (0.56)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.19 Result overview, Typical Quarter Landing 1

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

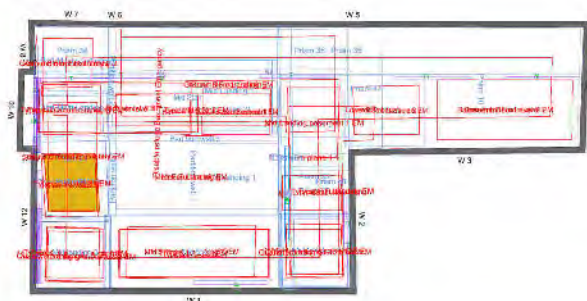


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

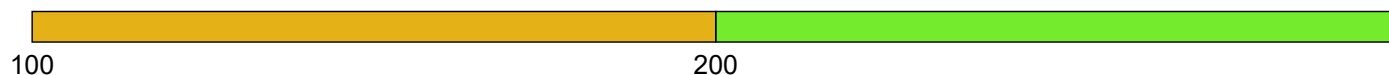


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.20 Result overview, Typical Short Stair



-0 1 2 3 4 5 6 7 8 x [m]



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m ²)	45.89 W/m ²

Illuminance

Average illuminance	Em	217 lx
Minimum illuminance	Emin	166 lx
Maximum illuminance	Emax	252 lx
Uniformity Uo	Emin/Em	1:1.31 (0.76)
Diversity Ud	Emin/Emax	1:1.52 (0.66)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.20 Result overview, Typical Short Stair

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

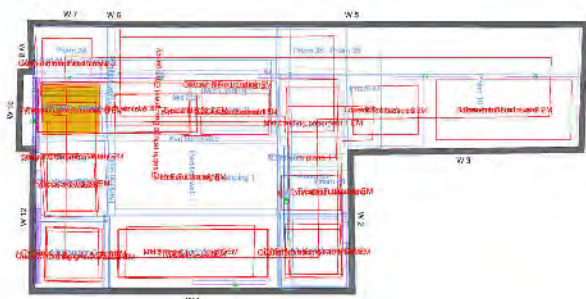


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

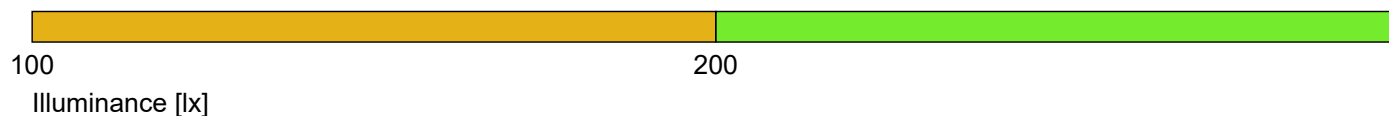


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.21 Result overview, Typical Quarter Landing 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	11.07 m
Maintenance factor	0.80

Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	202 lx
Minimum illuminance	Emin	163 lx
Maximum illuminance	Emax	245 lx
Uniformity Uo	Emin/Em	1:1.23 (0.81)
Diversity Ud	Emin/Emax	1:1.5 (0.67)

Type No. Make

20	30	Spurlite Ltd	
		Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.21 Result overview, Typical Quarter Landing 2

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm

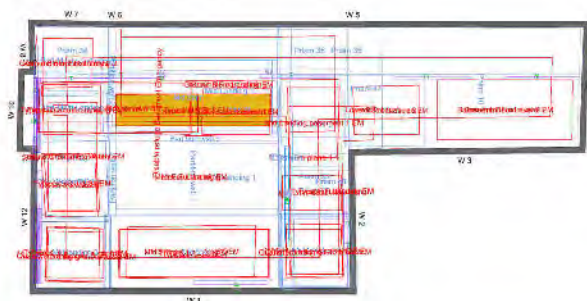


Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021

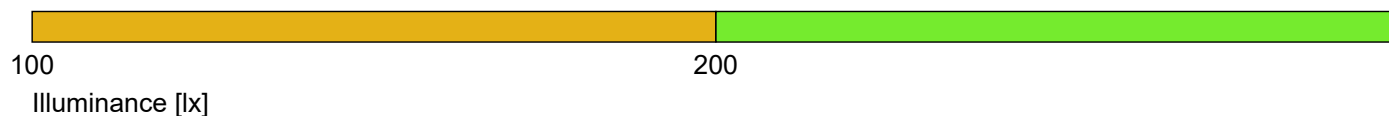


1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.22 Result overview, Typical Mid Stair 2



-0 1 2 3 4 5 6 7 8 x [m]



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	137076 lm
Total power	1370 W
Total power per area (29.85 m²)	45.89 W/m²

Illuminance

Average illuminance	Em	220 lx
Minimum illuminance	Emin	188 lx
Maximum illuminance	Emax	250 lx
Uniformity Uo	Emin/Em	1:1.17 (0.86)
Diversity Ud	Emin/Emax	1:1.33 (0.75)

Type No. Make

		Spurlite Ltd	
20	30	Order No.	: SSA25-840.Idt
		Luminaire name	: Ballista 1200mm single
		Equipment	: 1 x LED 25 W / 2500 lm
21	10	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1.2 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.2.22 Result overview, Typical Mid Stair 2

5	2	Nimbus Lighting Group,
		Order No. : DOT9128B/40/A920/GEN3
		Luminaire name : Nimbus Lighting Group Recessed LED Downlight. Product ID:
		DOT9128B/40/A920/GEN
		Equipment : 1 x 10 W / 1038 lm



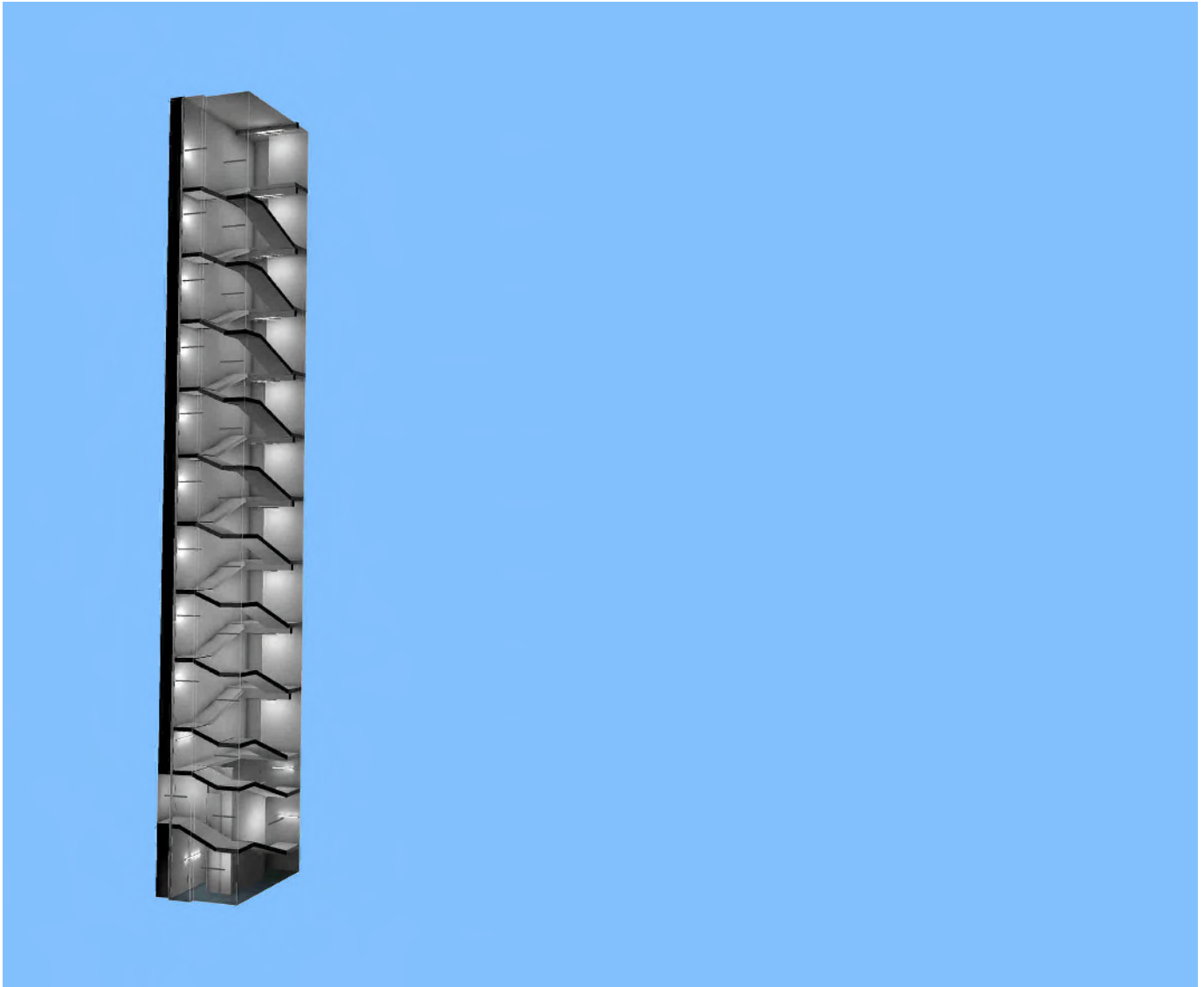
Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021

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1 Staircase A Basement Level Std and EM Wall Mounted

1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.1 3D luminance, View 1

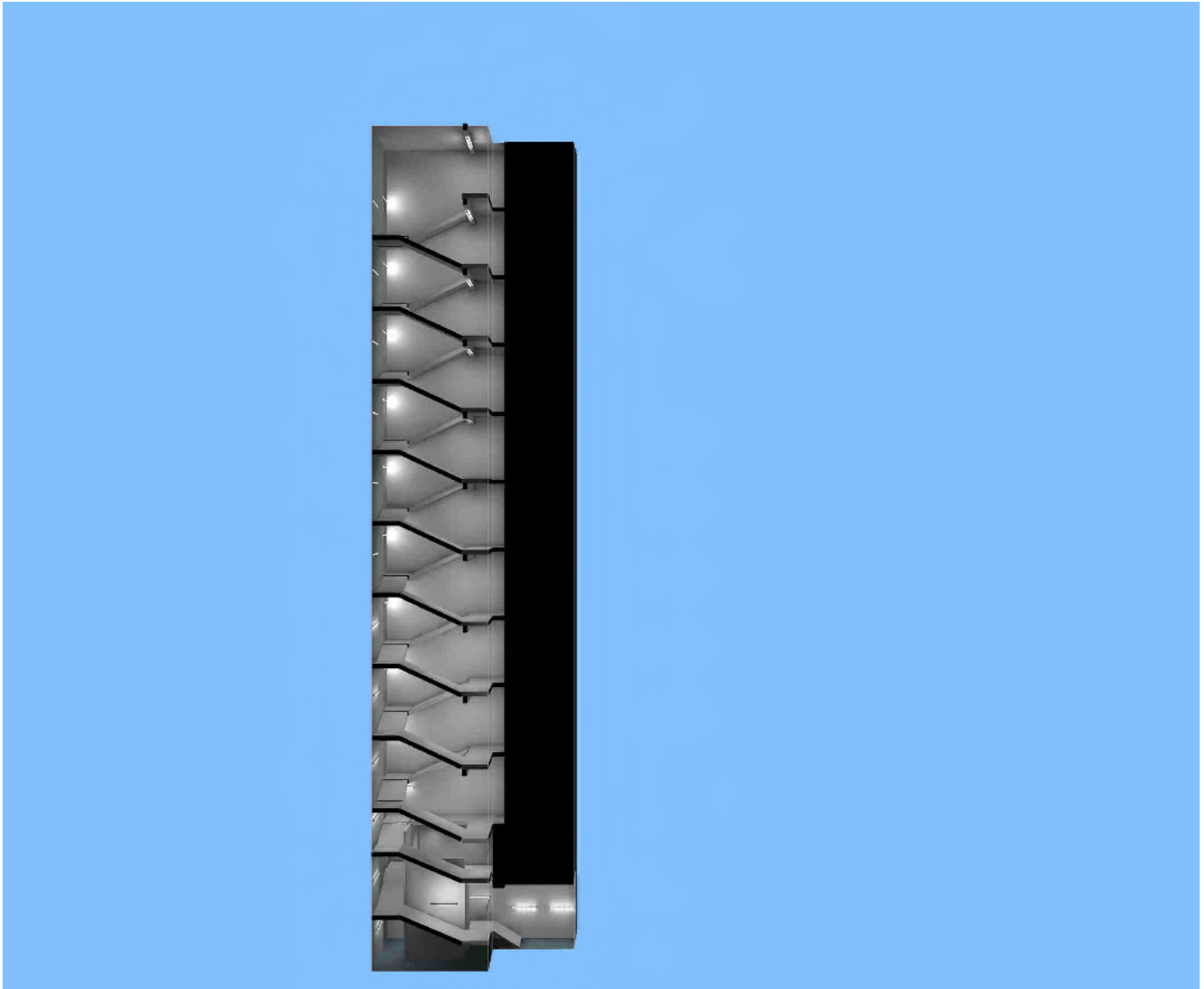


Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021

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1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.2 3D luminance, View from the front

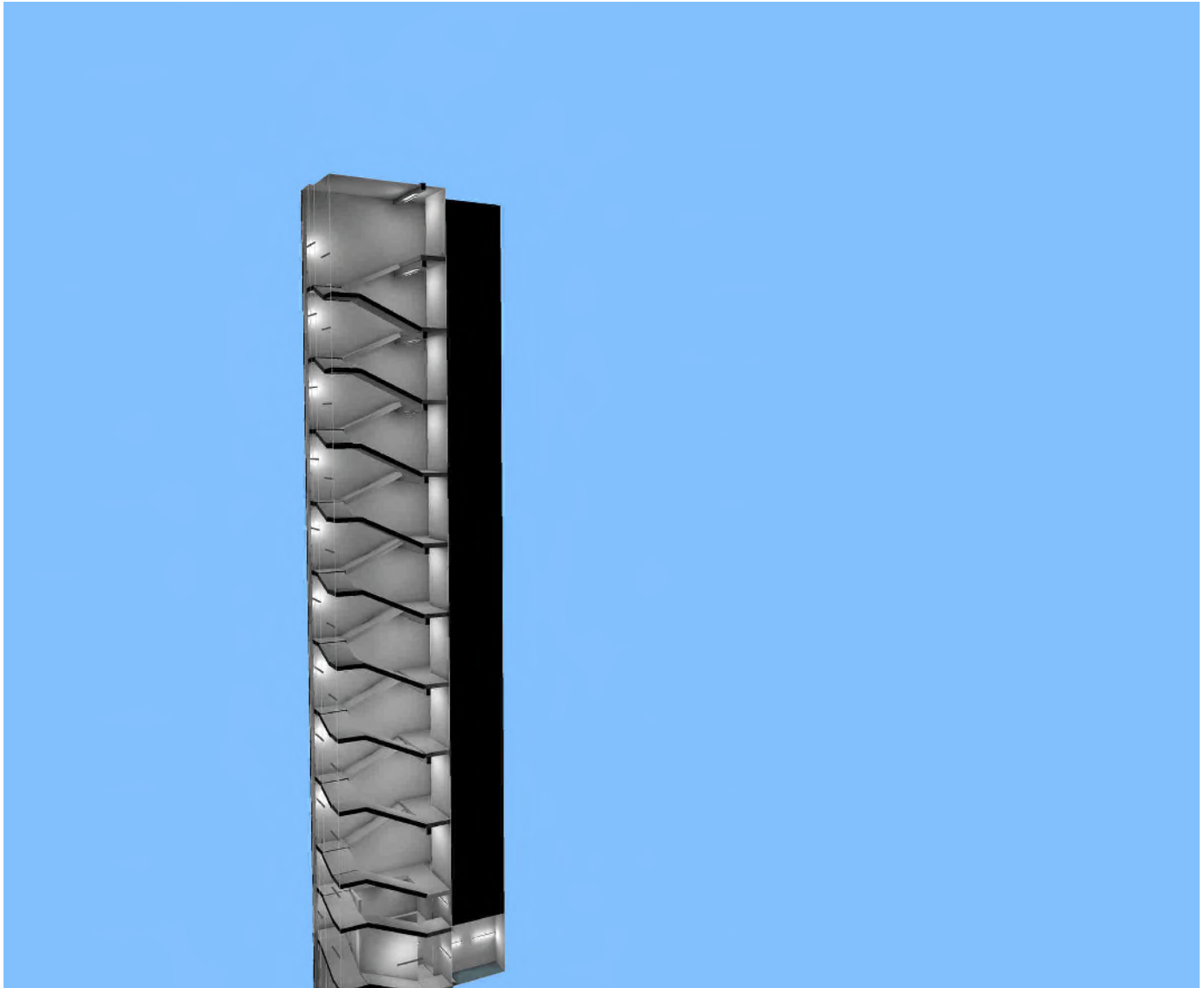


Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021

RELUX®

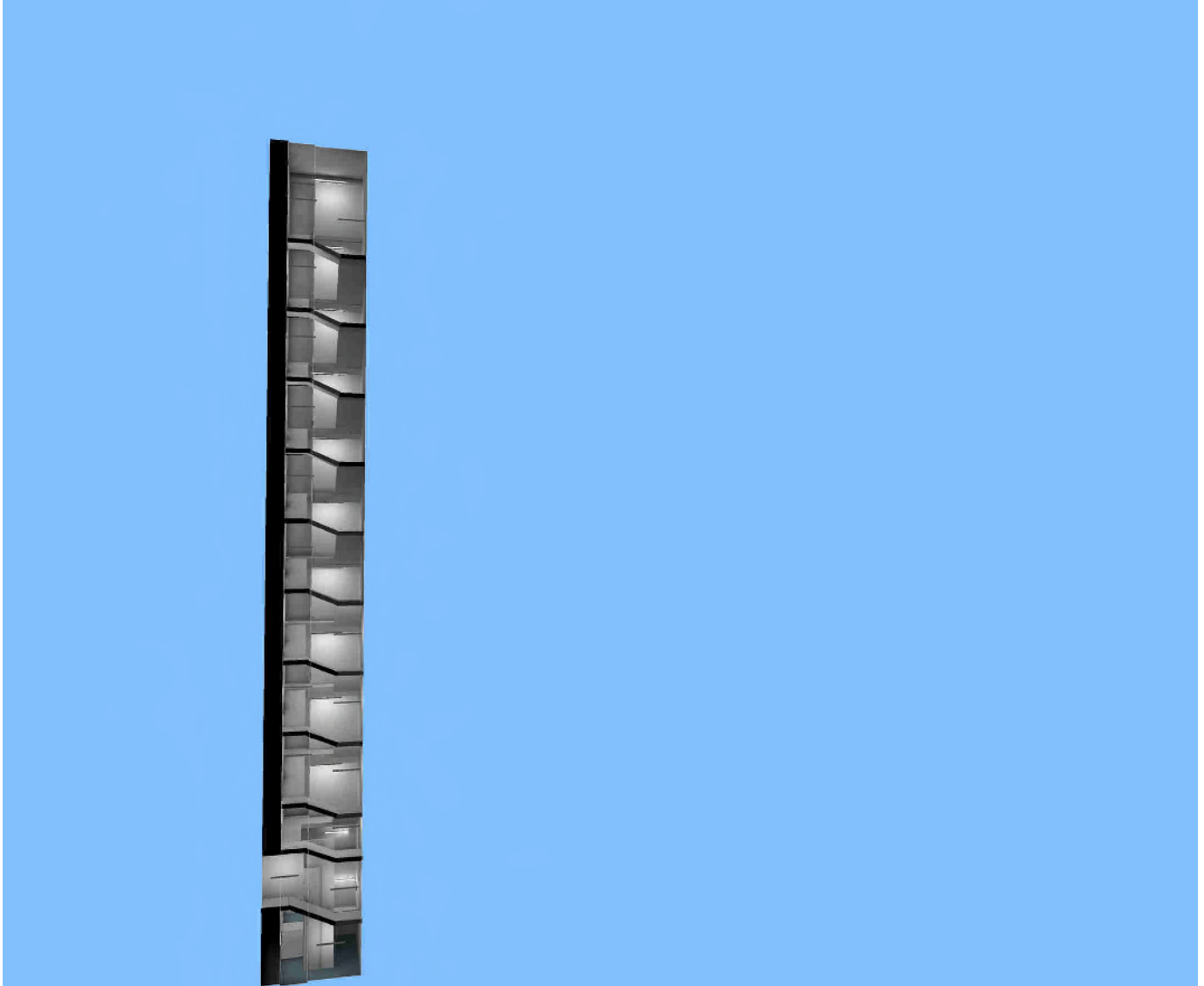
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.3 3D luminance, View 3



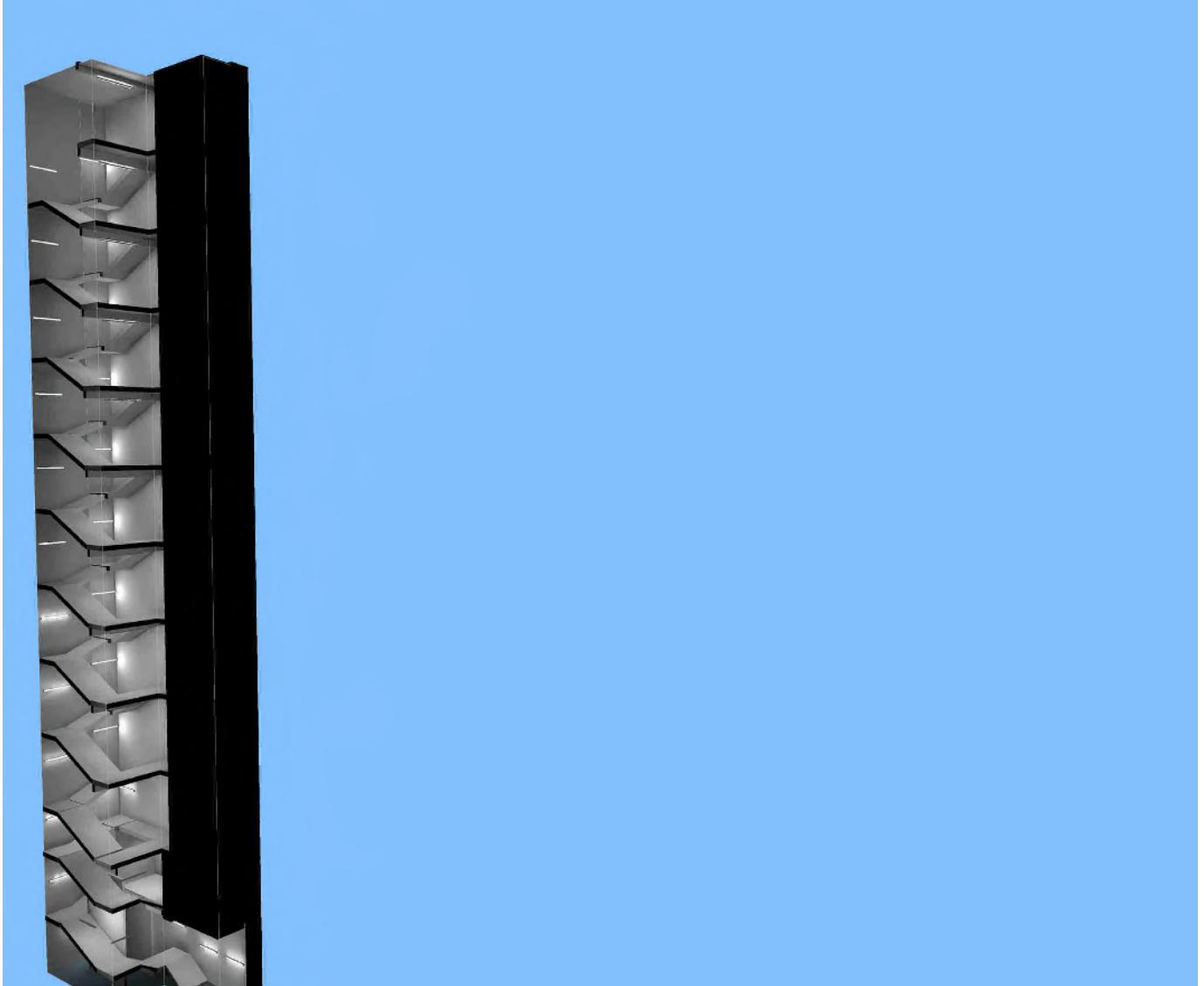
1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.4 3D luminance, View 4



1.3 Calculation results, Staircase A Basement Level Std and EM Wall Mounted

1.3.5 3D luminance, View 5



Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Type No.\Make

		Spurlite Ltd			
20	30	Order No.	: SSA25-840.Idt		
		Luminaire name	: Ballista 1200mm single		
		Equipment	: 1 x LED 25 W / 357 lm		
21	10	Order No.	: SSA60-840.Idt		
		Luminaire name	: Ballista 1500mm twin		
		Equipment	: 1 x LED 60 W / 360 lm		
5	1	Nimbus Lighting Group,			
		Order No.	: DOT9128B/40/A920/GEN3		
		Luminaire name	: Nimbus Lighting Group Recessed LED Downlight. Product ID: DOT9128B/40/A920/GEN		
		Equipment	: 1 x 10 W / 217 lm		

Result evaluation area

Calculation algorithm used: Direct component
 Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Basement Floor level 1 EM					
35	1.0	4.5	17.2	1: 3.84	0.00
Basement Floor Level 2 EM					
35	1.0	10.3	16.8	1: 1.62	0.00

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Lower stair basement 1 EM					
35	1.0	6.9	13.8	1: 2.01	0.12
Lower Stair basement 2 EM					
35	1.0	9.6	17.9	1: 1.87	0.85
Mid Landing basement 1 EM					
35	1.0	15.3	22.7	1: 1.48	0.87
Mid Landing basement 2 Em					
35	1.0	15.1	23.9	1: 1.58	1.37
Mid landing basement to GF Em					
34	1.0	9.0	15.6	1: 1.73	2.52
Mid Stair basement to GF EM					
35	1.0	9.3	28.3	1: 3.03	2.52
Disable refuge Basement Emergency					
36	1.0	5.7	17.5	1: 3.05	0.00
Disabled refuge call point basement					
37	1.0	9.8	22.4	1: 2.28	1.14
Fire alarm call point basement					
76	1.0	24.0	34.4	1: 1.43	1.14
Stair to Ground Exit lobby EM					
73	1.0	8.1	15.6	1: 1.92	2.53
Ground Floor Exit Lobby EM					
73	1.0	10.2	17.9	1: 1.76	3.43
Ground Floor Landing EM					
73	1.0	1.1	29.9	1: 19.96	3.41

Object : Globe and Simpson
 Installation : Staircase A Basement level R1
 Project number :
 Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Quarter Landing GF to Mezz EM					
74	1.0	15.1	31.2	1: 2.06	4.14
Mid Stair to Mezz EM					
73	1.0	6.3	21.7	1: 3.45	5.29
Quarter Landing GF to Mezz 2 EM					
73	1.0	12.3	20.1	1: 1.63	5.34
Stair To Mezz EM					
73	1.0	11.5	19.4	1: 1.68	5.32
Mez Full Landing EM					
73	1.0	5.2	19.6	1: 3.79	5.87
Typical Full Landing EM					
73	1.0	3.6	12.9	1: 3.63	9.22
Typical Mid Stair EM					
73	1.0	6.6	12.2	1: 1.85	10.45
Typical Mid Stair EM					
75	1.0	6.6	12.2	1: 1.85	10.45
Typical Quarter Landing 1 EM					
73	1.0	7.9	13.8	1: 1.75	10.47
Typical Short Stair EM					
73	1.0	11.3	15.9	1: 1.41	10.50
Typical Quarter Landing 2 EM					
74	1.0	8.1	15.1	1: 1.86	11.07
Typical Mid Stair 2 EM					
74	1.0	9.4	15.6	1: 1.66	11.12

Object : Globe and Simpson
Installation : Staircase A Basement level R1
Project number :
Date : 30.07.2021



1 Staircase A Basement Level Std and EM Wall Mounted

1.4 Summary, Staircase A Basement Level Std and EM Wall Mounted

1.4.1 Result overview (emergency lighting)

Fire alarm call point GF Lobby Exit

77	1.0	12.3	19.1	1: 1.55	4.41
----	-----	------	------	---------	------

Fire alarm call point GF Exit

78	1.0	5.2	15.4	1: 2.96	4.60
----	-----	-----	------	---------	------

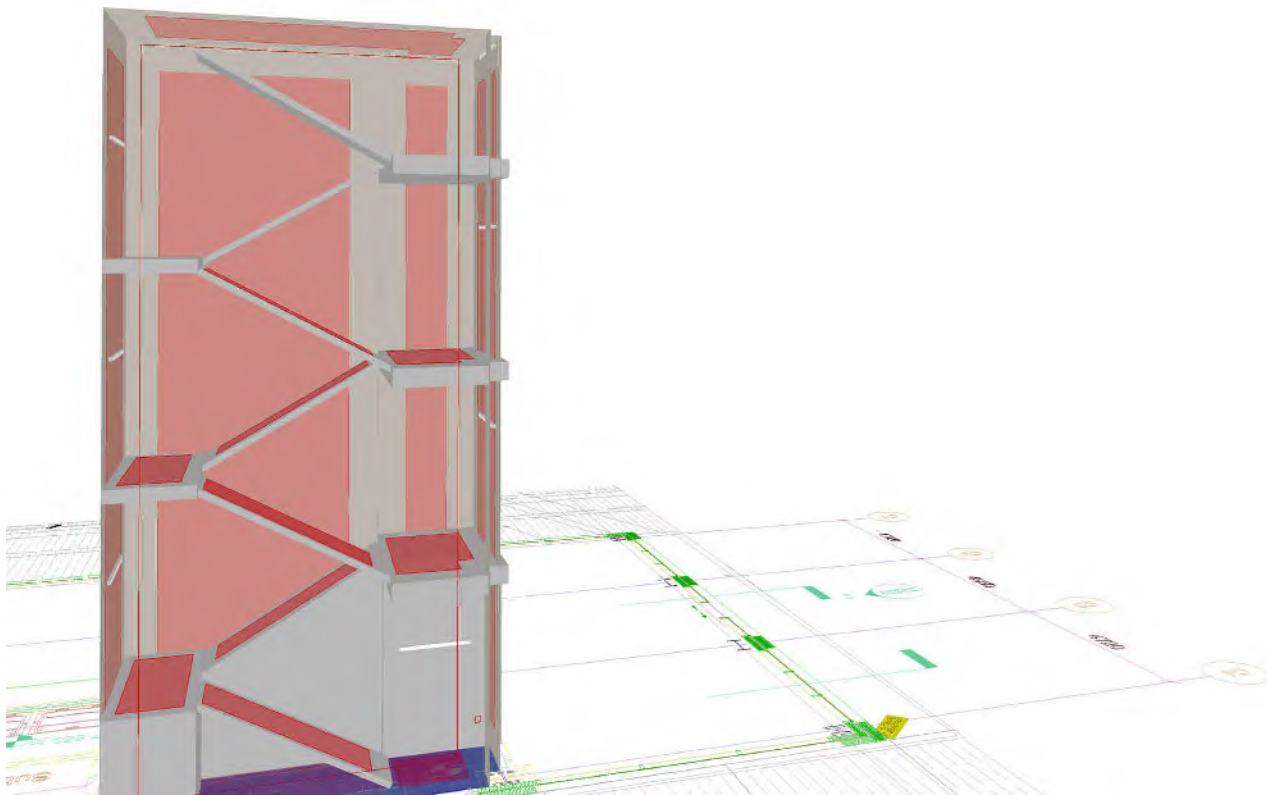
Object : Globe and Simpson Stair B
Installation : Lighting Models to Clients requirements
Project number :
Date : 30.07.2021

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1 Staircase B Plus EM & Call Point

1.1 Description, Staircase B Plus EM & Call Point

1.1.1 3D view, View 1



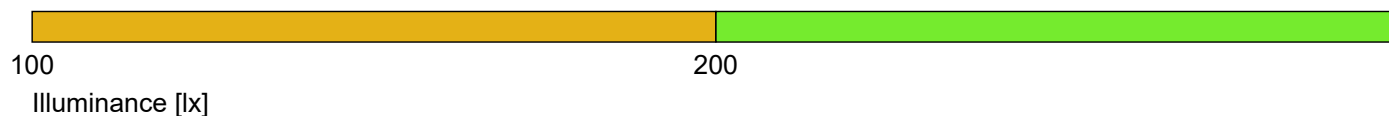
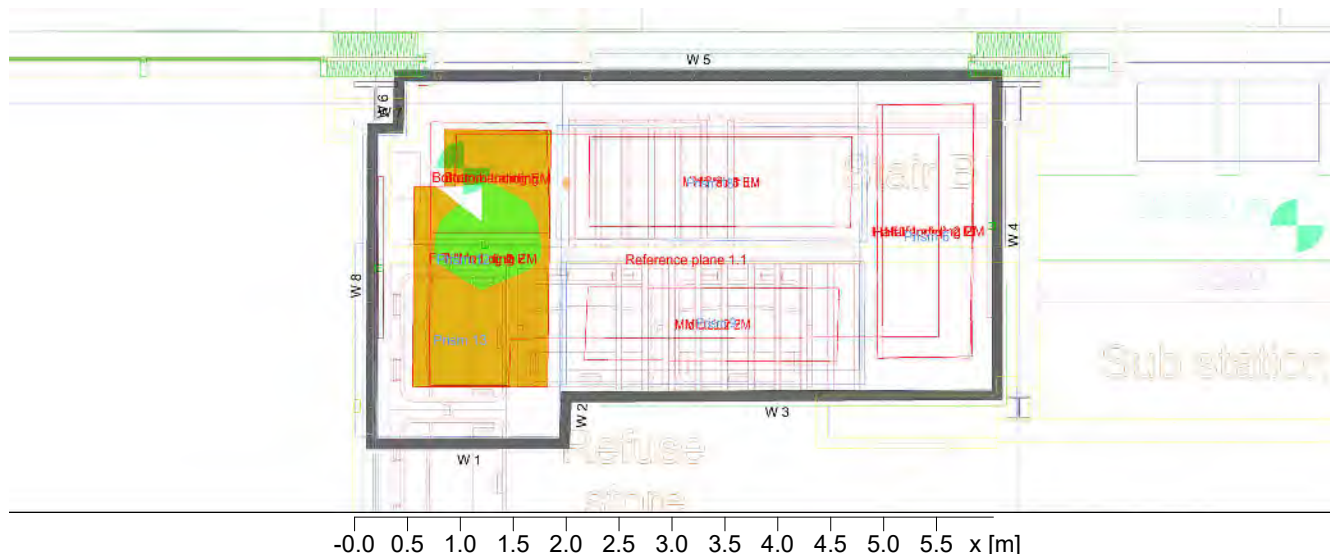
Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021

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1 Staircase B Plus EM & Call Point

1.2 Summary, Staircase B Plus EM & Call Point

1.2.1 Result overview, Full Landing 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	3.32 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

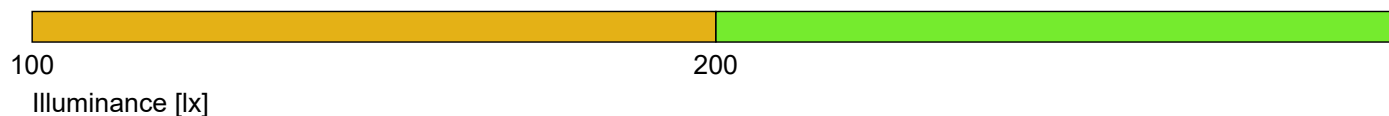
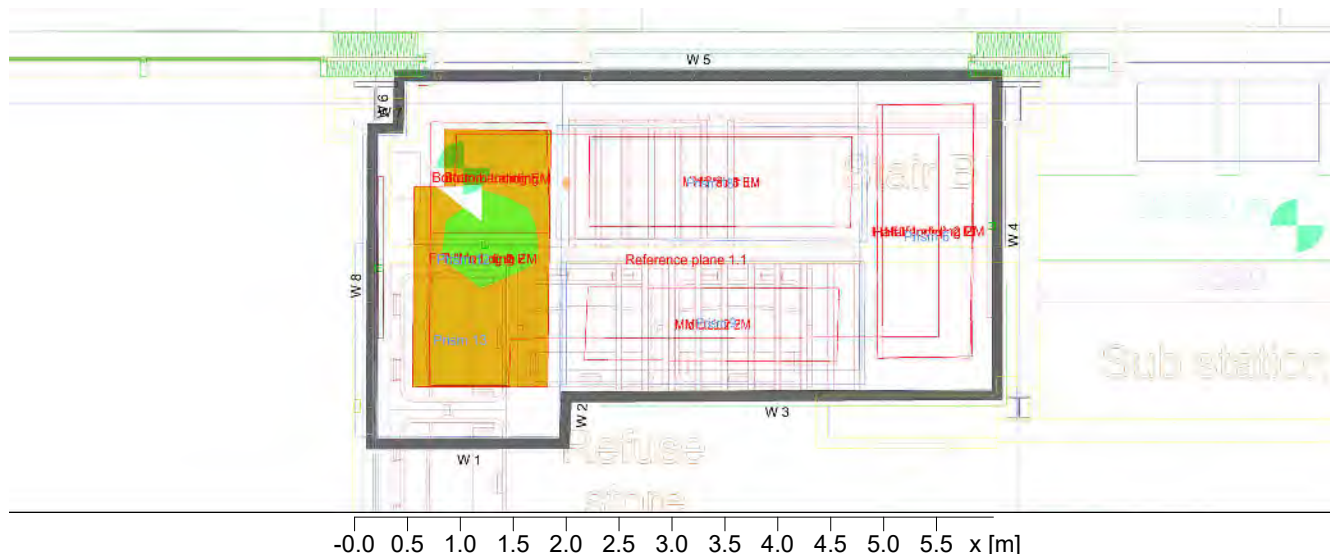
Average illuminance	Em	175 lx
Minimum illuminance	Emin	125 lx
Maximum illuminance	Emax	200 lx
Uniformity Uo	Emin/Em	1:1.39 (0.72)
Diversity Ud	Emin/Emax	1:1.59 (0.63)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.2 Result overview, Full Landing 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	6.62 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

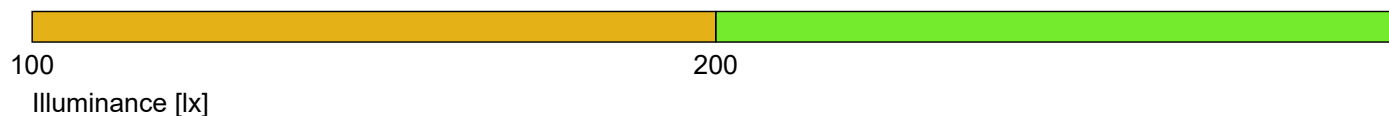
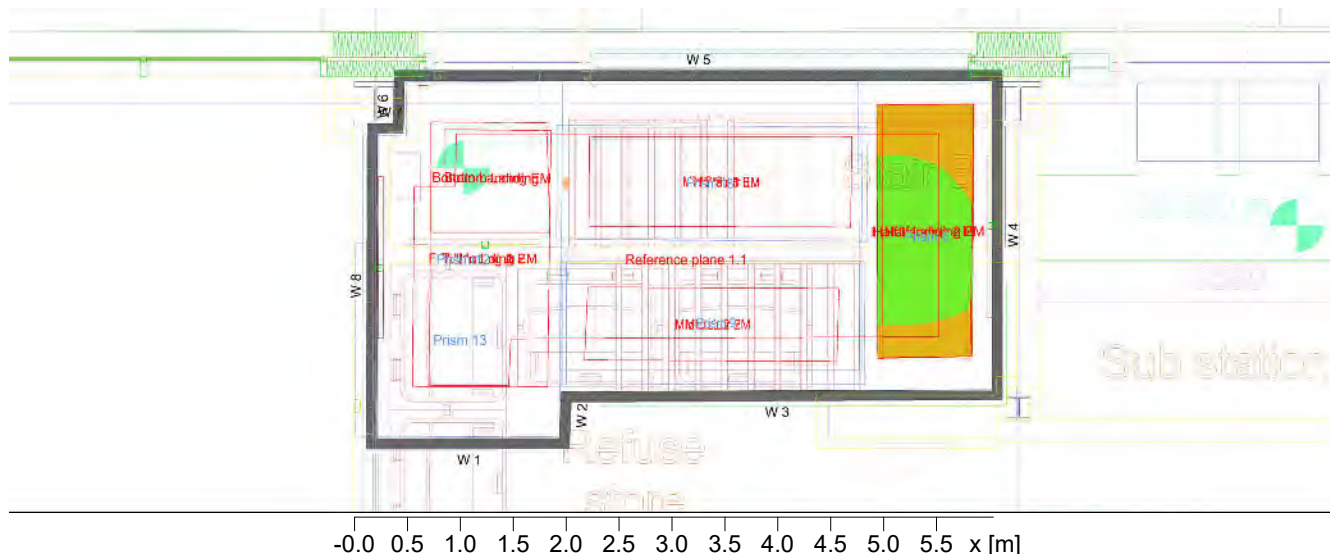
Average illuminance	Em	174 lx
Minimum illuminance	Emin	125 lx
Maximum illuminance	Emax	197 lx
Uniformity Uo	Emin/Em	1:1.39 (0.72)
Diversity Ud	Emin/Emax	1:1.58 (0.63)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.3 Result overview, Half Landing 1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	1.72 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

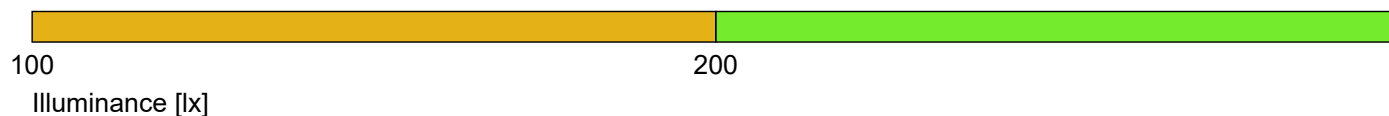
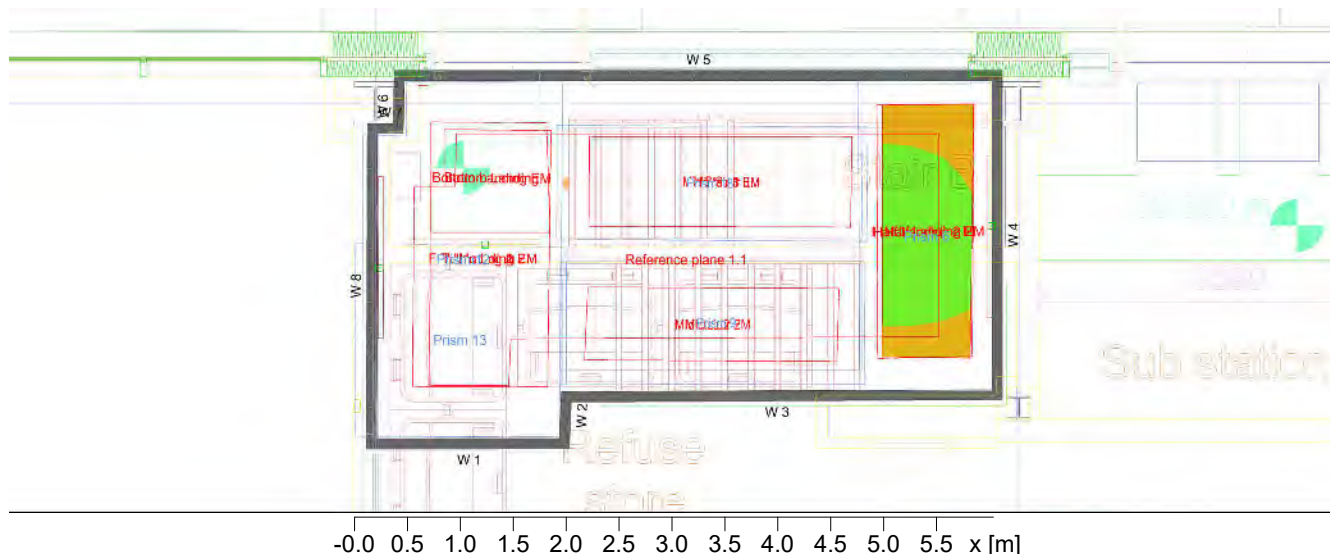
Average illuminance	Em	198 lx
Minimum illuminance	Emin	123 lx
Maximum illuminance	Emax	242 lx
Uniformity Uo	Emin/Em	1:1.61 (0.62)
Diversity Ud	Emin/Emax	1:1.97 (0.51)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.4 Result overview, Half Landing 2



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	5.02 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

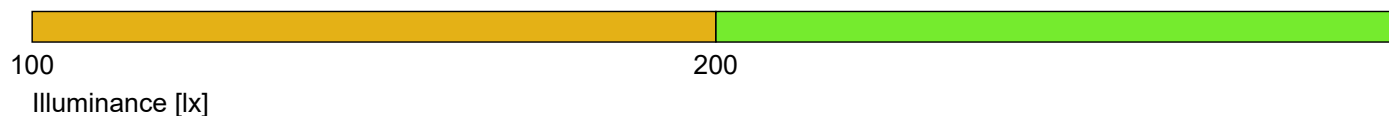
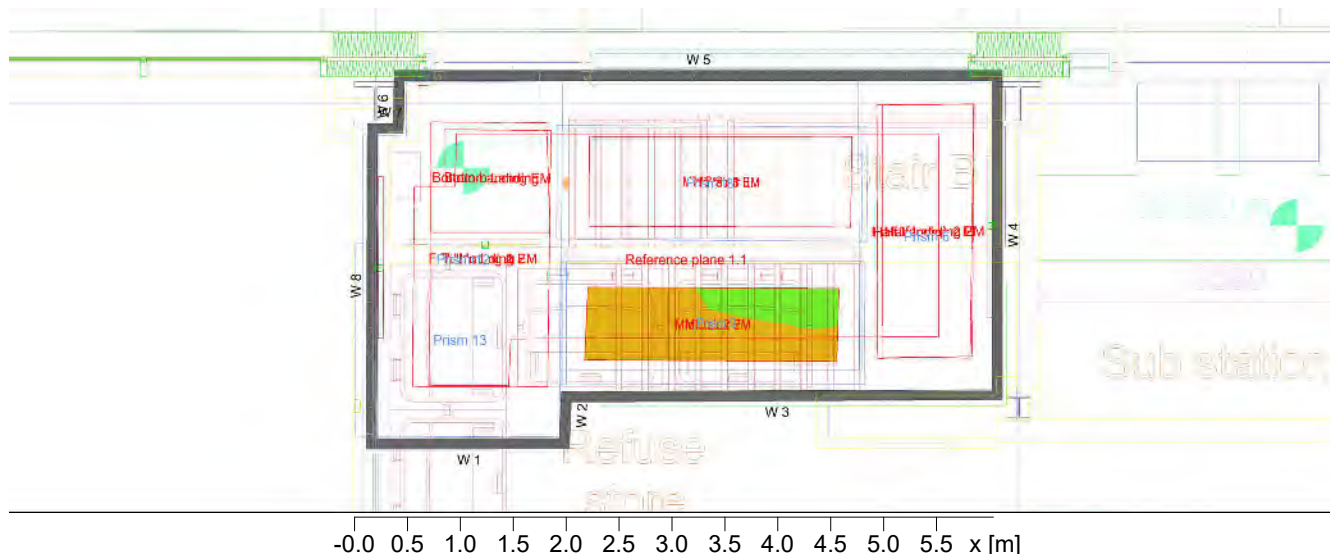
Average illuminance	Em	204 lx
Minimum illuminance	Emin	131 lx
Maximum illuminance	Emax	249 lx
Uniformity Uo	Emin/Em	1:1.55 (0.64)
Diversity Ud	Emin/Emax	1:1.9 (0.53)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.5 Result overview, Mid stair 4



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

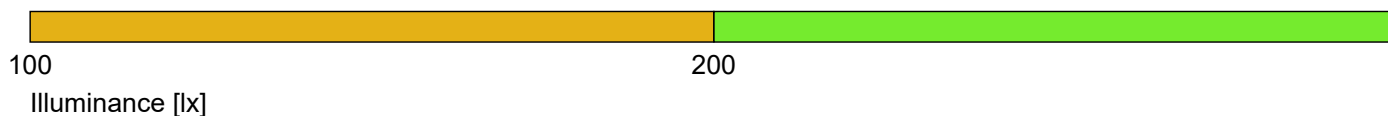
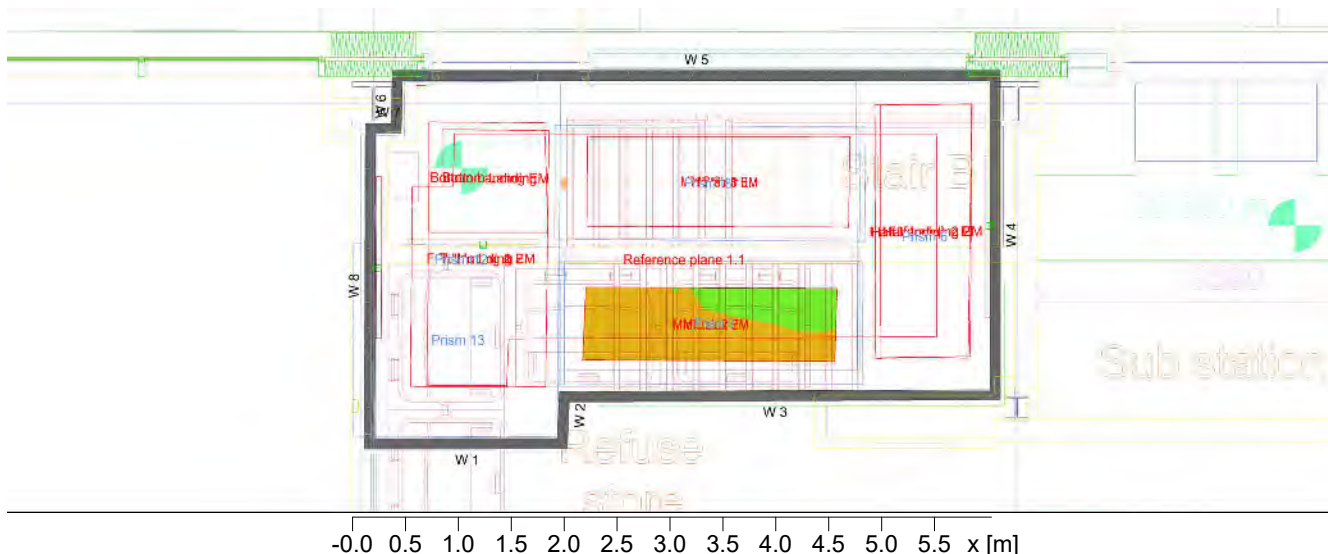
Average illuminance	Em	172 lx
Minimum illuminance	Emin	120 lx
Maximum illuminance	Emax	241 lx
Uniformity Uo	Emin/Em	1:1.44 (0.7)
Diversity Ud	Emin/Emax	1:2.01 (0.5)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.6 Result overview, Mid stair 2



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

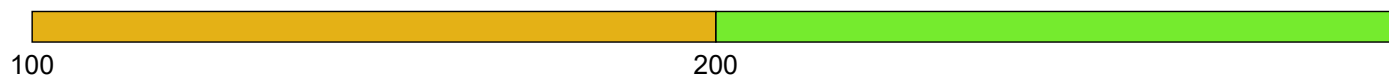
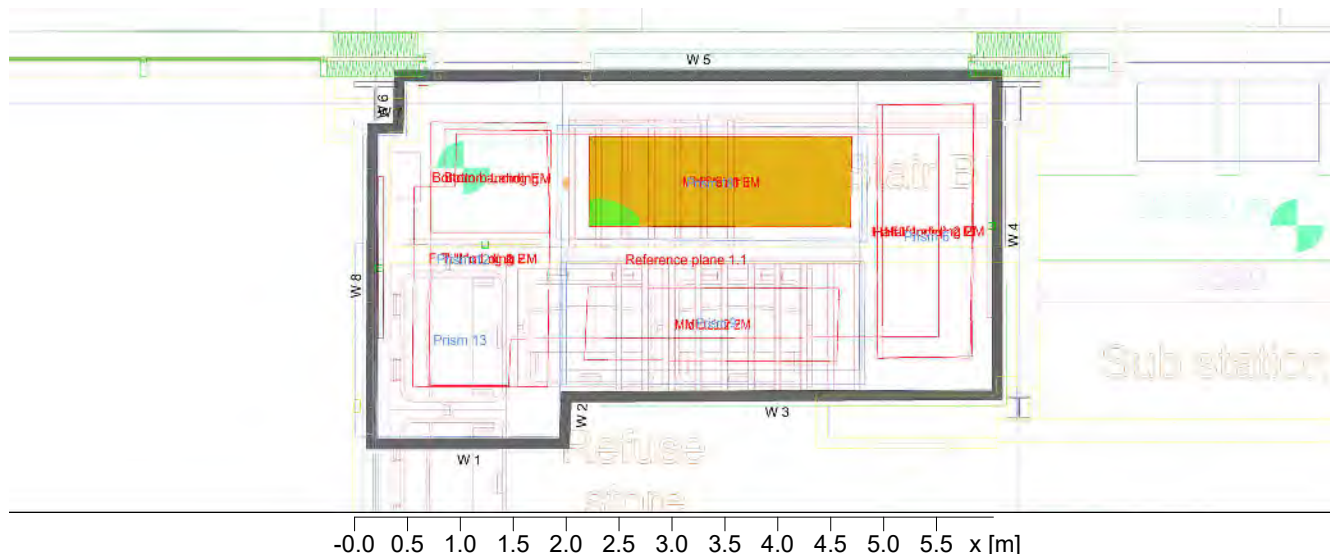
Average illuminance	Em	173 lx
Minimum illuminance	Emin	120 lx
Maximum illuminance	Emax	245 lx
Uniformity Uo	Emin/Em	1:1.44 (0.69)
Diversity Ud	Emin/Emax	1:2.04 (0.49)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.7 Result overview, Mid Stair 1



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

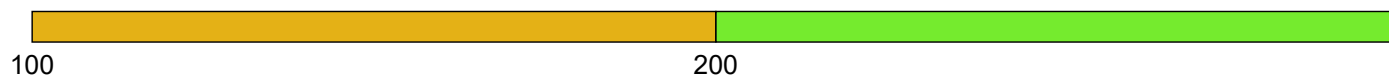
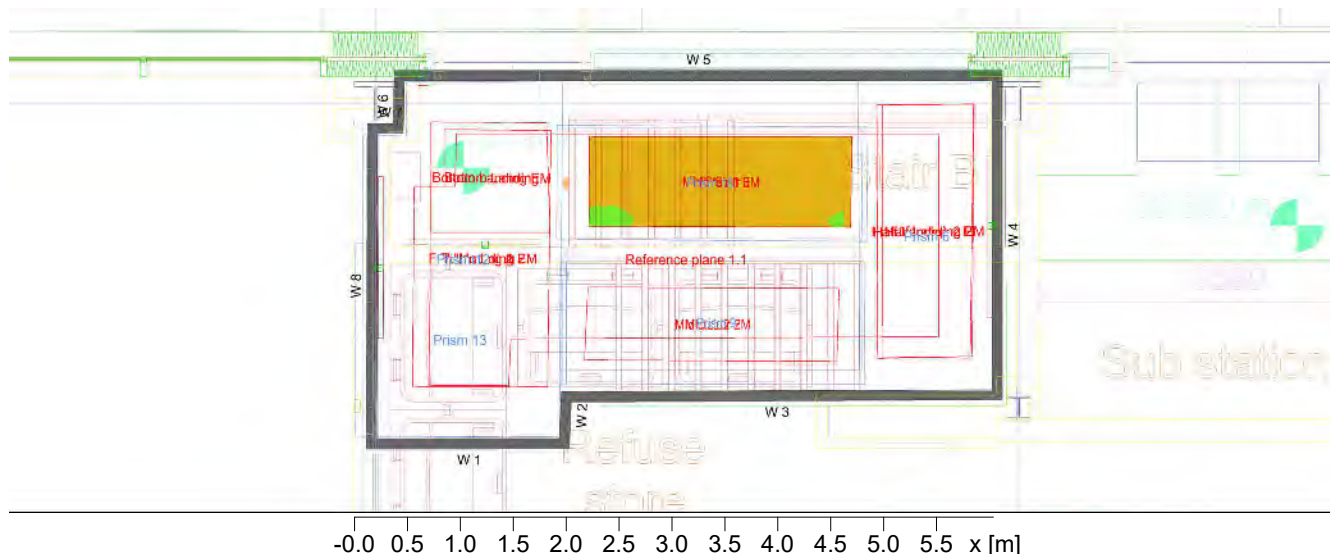
Average illuminance	Em	171 lx
Minimum illuminance	Emin	114 lx
Maximum illuminance	Emax	194 lx
Uniformity Uo	Emin/Em	1:1.5 (0.67)
Diversity Ud	Emin/Emax	1:1.7 (0.59)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.8 Result overview, Mid Stair 3



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

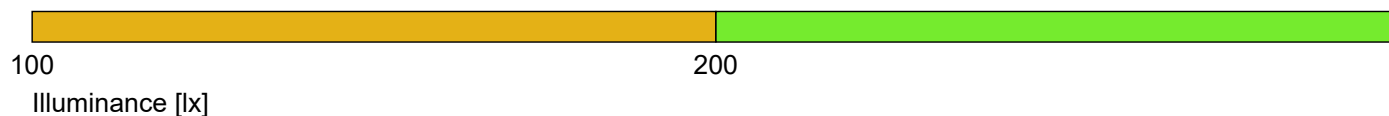
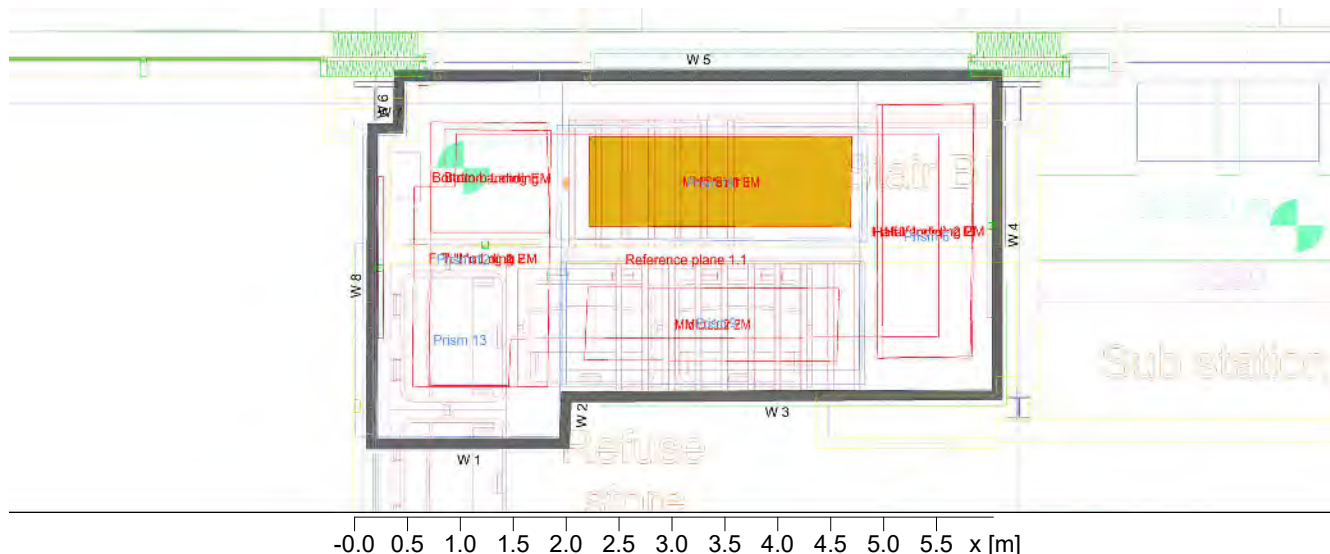
Average illuminance	Em	170 lx
Minimum illuminance	Emin	112 lx
Maximum illuminance	Emax	193 lx
Uniformity Uo	Emin/Em	1:1.52 (0.66)
Diversity Ud	Emin/Emax	1:1.72 (0.58)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.9 Result overview, Bottom Stair



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

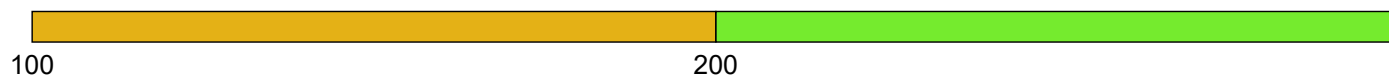
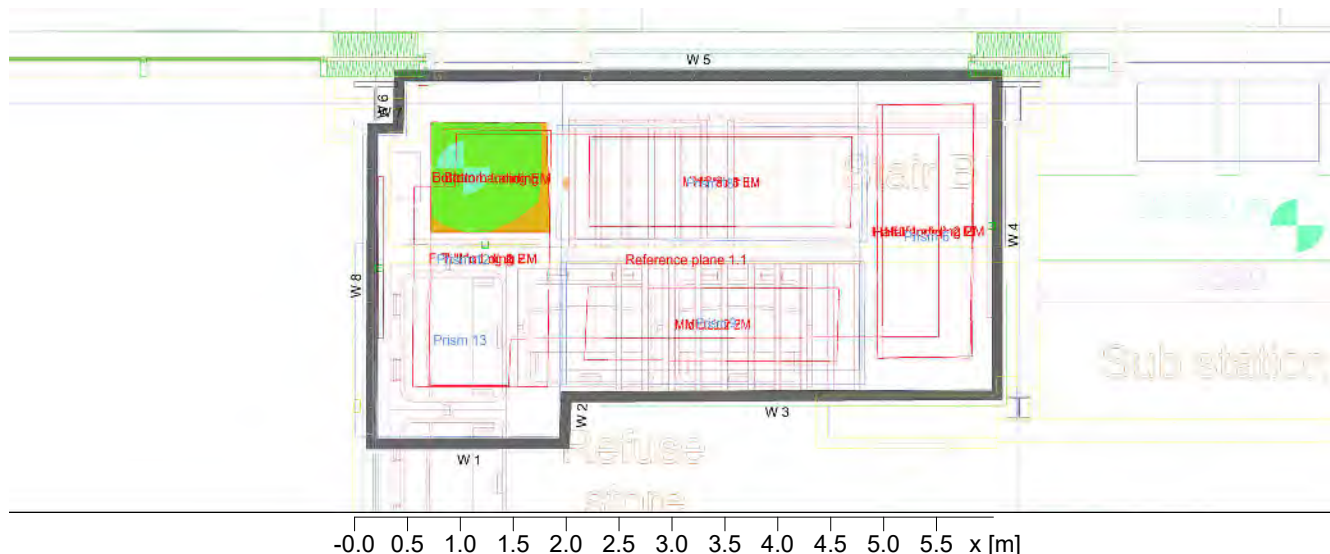
Average illuminance	Em	152 lx
Minimum illuminance	Emin	117 lx
Maximum illuminance	Emax	185 lx
Uniformity Uo	Emin/Em	1:1.28 (0.77)
Diversity Ud	Emin/Emax	1:1.79 (0.56)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

1.2 Summary, Staircase B Plus EM & Call Point

1.2.10 Result overview, Bottom Landing



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	40500 lm
Total power	405 W
Total power per area (17.62 m²)	22.98 W/m²

Illuminance

Average illuminance	Em	207 lx
Minimum illuminance	Emin	176 lx
Maximum illuminance	Emax	224 lx
Uniformity Uo	Emin/Em	1:1.18 (0.85)
Diversity Ud	Emin/Emax	1:1.27 (0.79)

Type No. Make

		Spurlite Ltd	
25	1	Order No.	: SSA45-840.Idt
		Luminaire name	: Ballista 1200mm twin
		Equipment	: 1 x LED 45 W / 4500 lm
27	6	Order No.	: SSA60-840.Idt
		Luminaire name	: Ballista 1500mm twin
		Equipment	: 1 x LED 60 W / 6000 lm

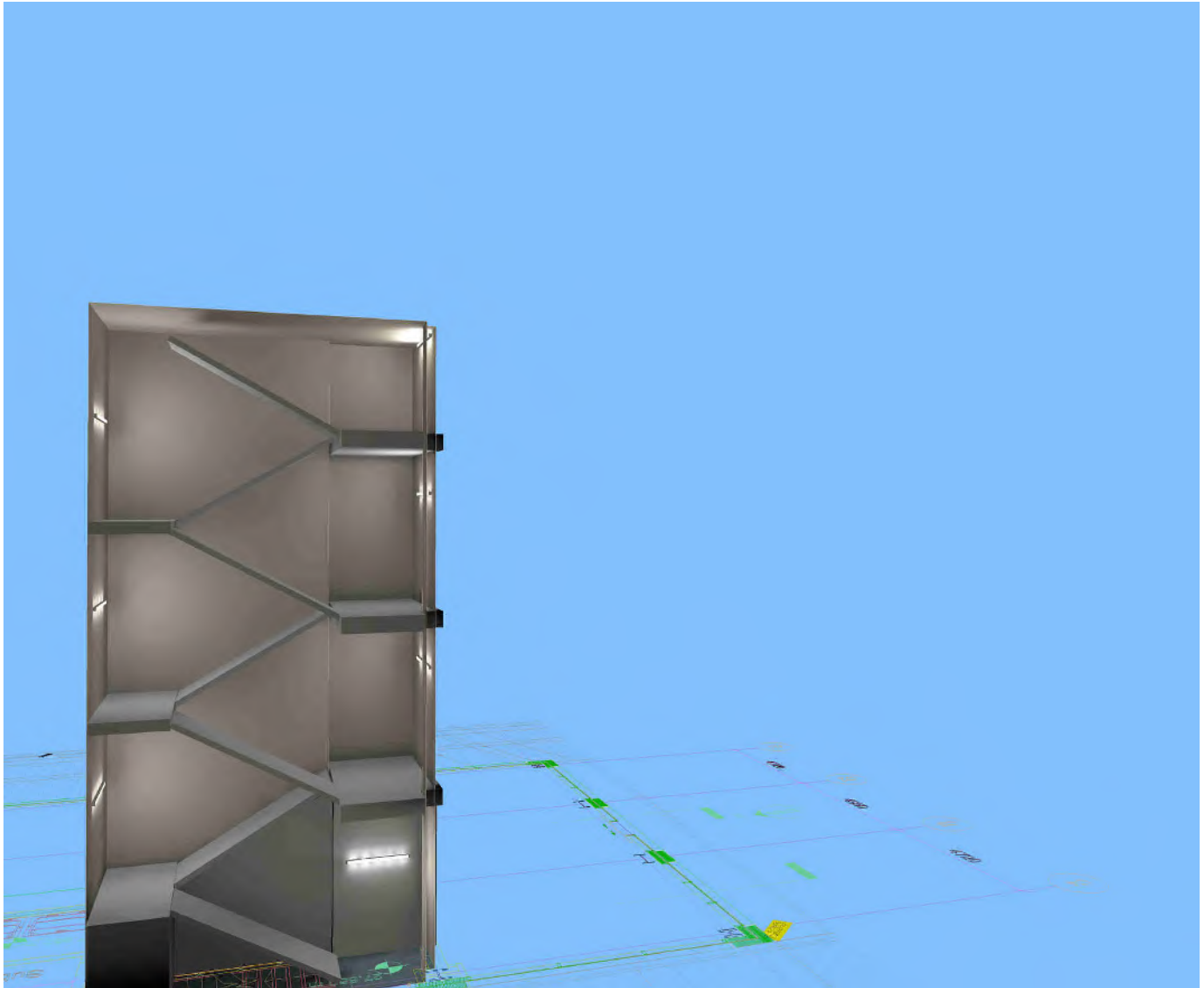
Object : Globe and Simpson Stair B
Installation : Lighting Models to Clients requirements
Project number :
Date : 30.07.2021

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1 Staircase B Plus EM & Call Point

1.3 Calculation results, Staircase B Plus EM & Call Point

1.3.1 3D luminance, View 1



Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021



1 Staircase B Plus EM & Call Point

1.4 Summary, Staircase B Plus EM & Call Point

1.4.1 Result overview (emergency lighting)

Type No.\Make

	25	1	Spurlite Ltd		
			Order No.	:	SSA45-840.Idt
			Luminaire name	:	Ballista 1200mm twin
			Equipment	:	1 x LED 45 W / 360 lm
	27	6	Order No.	:	SSA60-840.Idt
			Luminaire name	:	Ballista 1500mm twin
			Equipment	:	1 x LED 60 W / 360 lm

Result evaluation area

Calculation algorithm used: Direct component

Maintenance factor: 0.8

Emergency area:

No.	Default[lx]	Emin[lx]	Surface Emax[lx]	Diversity	Height
Full Landing 2 EM					
18	1.0	3.3	6.8	1: 2.04	6.62
Full Landing 1 EM					
13	1.0	3.3	6.9	1: 2.07	3.32
Half Landing 1 EM					
18	1.0	3.5	9.4	1: 2.69	1.72
Half Landing 2 EM					
14	1.0	3.7	9.6	1: 2.62	5.02

Object : Globe and Simpson Stair B
 Installation : Lighting Models to Clients requirements
 Project number :
 Date : 30.07.2021

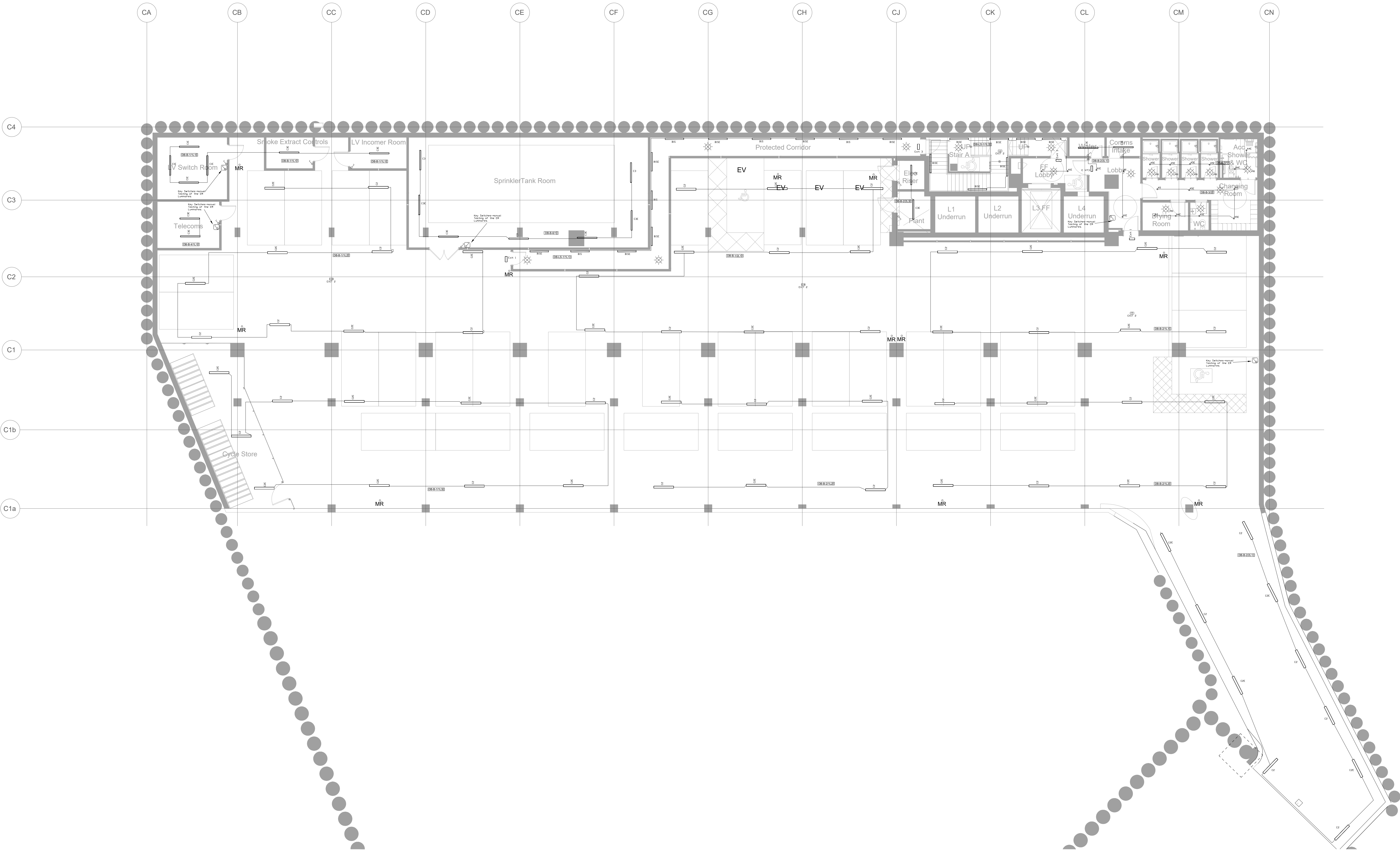


1 Staircase B Plus EM & Call Point

1.4 Summary, Staircase B Plus EM & Call Point

1.4.1 Result overview (emergency lighting)

Mld stair 4 EM					
20	1.0	4.0	9.5	1: 2.35	3.32
Mld stair 2 EM					
14	1.0	4.0	9.5	1: 2.35	6.62
Mid Stair 3 EM					
19	1.0	1.8	6.6	1: 3.57	6.62
Mid Stair 1 EM					
18	1.0	1.8	6.6	1: 3.57	3.32
Mid Stair EM					
1	1.0	1.8	6.6	1: 3.57	3.32
Bottom Stair EM					
2	1.0	1.9	7.5	1: 3.92	0.12
Call Point					
1	1.0	16.6	18.9	1: 1.14	1.10
Bottom Landing EM					
18	1.0	5.5	9.9	1: 1.82	0.00



Notes:

1. ALL DIMENSIONS ARE INDICATED IN mm
2. DO NOT SCALE FROM THIS DRAWING.
3. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
4. LIFT SHAFT LIGHTING TO BE CARRIED OUT BY THE LIFT CONTRACTOR
5. EMERGENCY LIGHTING TO BE CO-ORDINATED WITH THE FINAL LOCATION OF THE FIRE ALARM AND ACCESS CONTROL EQUIPMENT.
6. FOR THE TYPES OF LUMINAIRES USED PLEASE REFER TO THE LUMINAIRE SCHEDULE.
7. ALL SWITCHES INSTALLED EXTERNALLY AND IN THE PLANT ROOMS SHALL BE IP65 RATED.

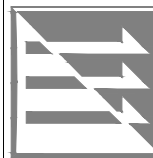
ARCHITECT / CONSULTANT		DRAWING No.	REV	DATE	BUILDING OUTLINE DRAWINGS		DO NOT SCALE OFF THIS DRAWING	
					Rev	Date	Description	Drn
					002	30.07.21	CONSTRUCTION ISSUE Protected Corridor Luminaires Change	SG RR
					001	19.04.21	CONSTRUCTION ISSUE Lighting in Cycle Store reviewed	SG RR
					002	12.03.21	DESIGN ISSUE	SG RR
					001	13.11.20	DESIGN ISSUE	JH SU
					Rev	Date	Description	Drn

Description.
**LIGHTING LAYOUT
BASEMENT FLOOR**

Project.
**GLOBE & SIMPSON
ST JOHN'S PLACE
BUILDING 102**

Client.
ALLIED LONDON

Scale.	1:100	A0
Date.	MAR 2021	
Drawn By.	SG	Checked RR
DRAWING No.	SJQ-102-BAF-XX-801-DR-E-63001	Rev. C02

**Briggs & Forrester**
ENGINEERING SERVICES LTD

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Daresbury, Warrington WA4 4GE
www.briggsandforrester.co.uk
Tel: 01928 798279

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