

Park House Court, Tenby

Installation:

Project number : Customer :

Processed by : HSR

Date : 23.06.2025

Project description: Maintenance Factor 0.79

No obstructions are considered in these lighting calculations.

Lighting levels to 15 Lux Ave with 25% uniformity.

The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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.

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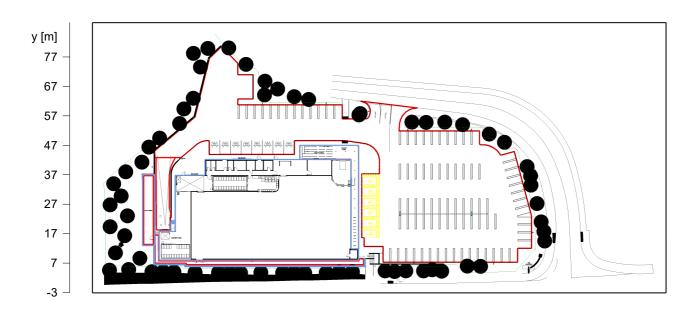
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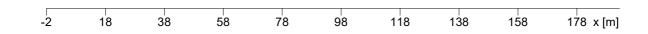
Signify

1 Exterior

1.1 Description, Exterior

1.1.1 Floor plan





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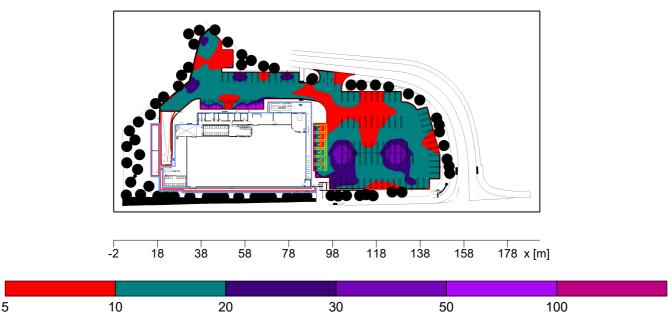
Date : 23.06.2025



1 Exterior

1.2 Summary, Exterior

1.2.1 Result overview, Car Park Area



Illuminance [lx]

General

Calculation algorithm used Average indirect fraction

Height of evaluation surface 0.00 m

Maintenance factor 0.79

Total luminous flux259860 lmTotal power2045.5 WTotal power per area (17840.07 m²)0.11 W/m²

Illuminance

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No.

Luminaire name : LL-E 3000K Equipment : 1 x LED42S/830 25.5 W / 3900 lm

5 7 x Order No. :

Luminaire name : LL-A 3000K

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1 Exterior

1.2 Summary, Exterior

1.2.1 Result overview, Car Park Area

6 9 x Order No.

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 Im

Installation

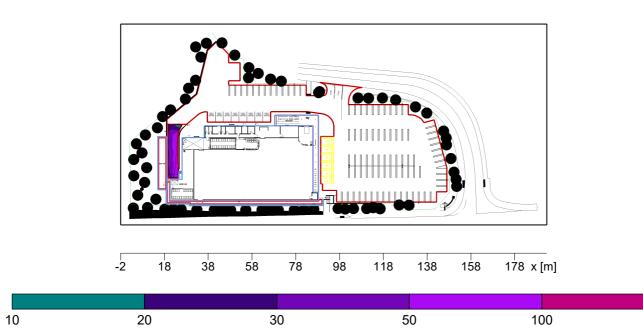
Project number

Date : 23.06.2025



1.2 Summary, Exterior

1.2.2 Result overview, Lorry Bay



Illuminance [lx]

General

Calculation algorithm used Average indirect fraction

Height of evaluation surface -0.00 m Maintenance factor 0.79

Total luminous flux259860 lmTotal power2045.5 WTotal power per area (17840.07 m²)0.11 W/m²

Illuminance

Average illuminance E_m 51 lx Minimum illuminance E_{min} 16 lx Maximum illuminance E_{max} 121 lx E_m 14.3.23 E_m

 $\begin{array}{ccc} \text{Uniformity U}_{\text{o}} & \text{E}_{\text{min}}/\overline{\mathbb{E}}_{\text{m}} & \text{1:3.22 (0.31)} \\ \text{Diversity U}_{\text{d}} & \text{E}_{\text{min}}/\text{E}_{\text{max}} & \text{1:7.63 (0.13)} \end{array}$

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No.

Luminaire name : LL-E 3000K

Equipment : 1 x LED42S/830 25.5 W / 3900 lm

5 7 x Order No.

Luminaire name : LL-A 3000K

Installation

Project number

Date : 23.06.2025



1.2 Summary, Exterior

1.2.2 Result overview, Lorry Bay

6 9 x Order No.

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 Im

Installation

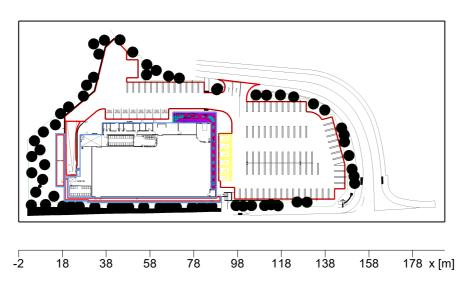
Project number

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1.2 Summary, Exterior

1.2.3 Result overview, Canopy Area



30 50 100 125

Illuminance [lx]

General

Calculation algorithm used Average indirect fraction

Height of evaluation surface 0.00 m Maintenance factor 0.79

Total luminous flux 259860 lm
Total power 2045.5 W
Total power per area (17840.07 m²) 0.11 W/m²

Illuminance

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No.

Luminaire name : LL-E 3000K

Equipment : 1 x LED42S/830 25.5 W / 3900 lm

5 7 x Order No.

Luminaire name : LL-A 3000K

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Project number

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1.2 Summary, Exterior

1.2.3 Result overview, Canopy Area

6 9 x Order No.

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 lm

Installation

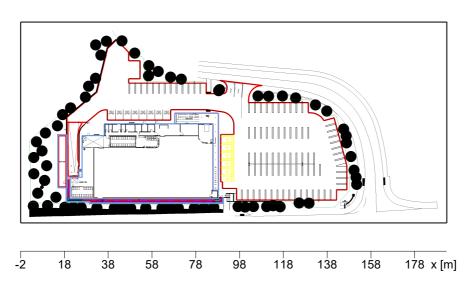
Project number

Date : 23.06.2025



1.2 Summary, Exterior

1.2.4 Result overview, Footpath



30 50 100 125

Illuminance [lx]

General

Calculation algorithm used Average indirect fraction

Height of evaluation surface 0.00 m
Maintenance factor 0.79

Total luminous flux 259860 lm
Total power 2045.5 W
Total power per area (17840.07 m²) 0.11 W/m²

Illuminance

Uniformity U_0 E_{min}/\overline{E}_m 1:3.15 (0.32) Diversity U_d E_{min}/E_{max} 1:7.12 (0.14)

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No.

Luminaire name : LL-E 3000K

Equipment : 1 x LED42S/830 25.5 W / 3900 lm

5 7 x Order No.

Luminaire name : LL-A 3000K

Installation

Project number

Date : 23.06.2025



1.2 Summary, Exterior

1.2.4 Result overview, Footpath

6 9 x Order No. :

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 lm

Installation

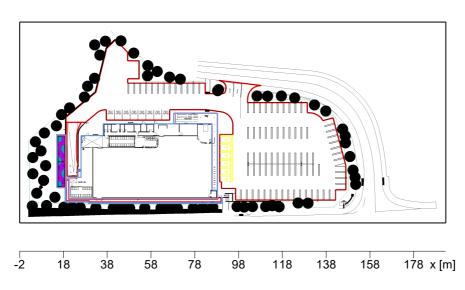
Project number

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1.2 Summary, Exterior

1.2.5 Result overview, Plant Area



30 50 100 125

Illuminance [lx]

General

Calculation algorithm used Average indirect fraction

Height of evaluation surface 0.00 m Maintenance factor 0.79

Total luminous flux 259860 lm
Total power 2045.5 W
Total power per area (17840.07 m²) 0.11 W/m²

Illuminance

Diversity U₀ E_{min}/E_{max} 1:3.91 (0.26) E_{min}/E_{max} 1:12 (0.08)

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No.

Luminaire name : LL-E 3000K

Equipment : 1 x LED42S/830 25.5 W / 3900 lm

5 7 x Order No.

Luminaire name : LL-A 3000K

Installation

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1.2 Summary, Exterior

1.2.5 Result overview, Plant Area

6 9 x Order No. :

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 Im

Installation

Project number

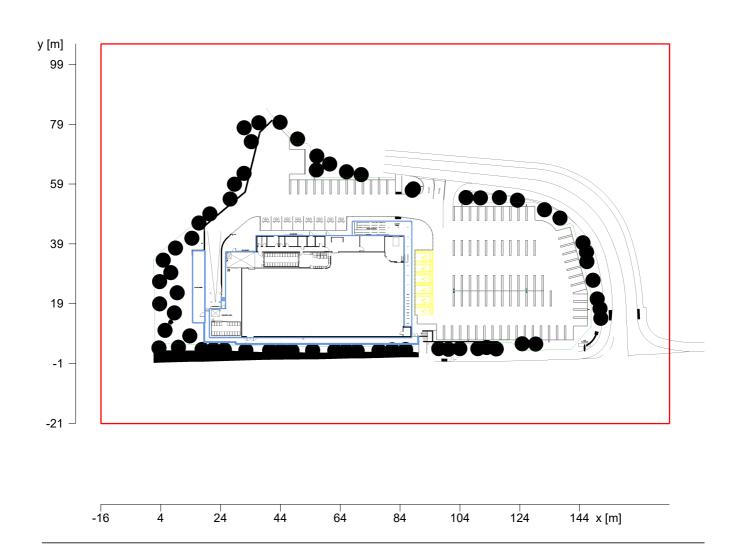
Date : 23.06.2025



2 **Exterior Spill light**

Description, Exterior Spill light

2.1.1 Floor plan



Installation

Project number

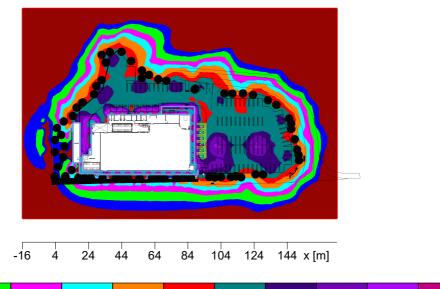
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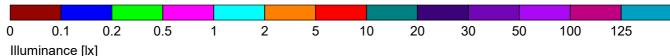


2 Exterior Spill light

2.2 Summary, Exterior Spill light

2.2.1 Result overview, Evaluation area 1





General

Calculation algorithm used

Maintenance factor

Total lamp luminous flux Luminaire luminous flux

Total power

Total power per area (24100.41 m²)

Average indirect fraction

1.00

259860.00 lm 240585.53 lm 2045.5 W

0.08 W/m² (1.17 W/m²/100lx)

Evaluation area 1 Reference plane 1.1

 $\begin{array}{ccc} & & \text{Horizontal} \\ \overline{E}_m & 7.25 \text{ lx} \\ \overline{E}_{min} & 0 \text{ lx} \\ \overline{E}_{min}/\overline{E}_m \text{ (Uo)} & 0.00 \\ \overline{E}_{min}/\overline{E}_{max} \text{ (Ud)} & 0.00 \\ Position & 0.00 \text{ m} \end{array}$

Type No.\Make

PHILIPS/2025-01-06 Eulumdat/1 B-Tilt = 0.00

2 30 x Order No. :

Luminaire name : LL-E 3000K

Equipment : 1 x LED42S/830 25.5 W / 3900 lm

SIGNIFY LIGHTING UK 3 Guildford Business Park Rd, Guildford GU2 8XG

Installation

Project number

Date : 23.06.2025



2 Exterior Spill light

2.2 Summary, Exterior Spill light

2.2.1 Result overview, Evaluation area 1

5 7 x Order No. :

Luminaire name : LL-A 3000K

Equipment : 1 x LED49-4S/830 35.4 W / 4900 lm

6 9 x Order No. :

Luminaire name : LL-C 3000K

Equipment : 1 x LED75-4S/830 51.8 W / 7500 lm

Philips Lighting

3 16 x Order No. :!

Luminaire name : LL-Canopy

Equipment : 1 x DLED-4000 33.5 W / 2260 lm

7 1 x Order No.

Luminaire name : BGP293 T25 1 xLED49-4S/730 DM30 Equipment : 1 x LED49-4S/730 30.5 W / 4900 lm

Installation

Project number

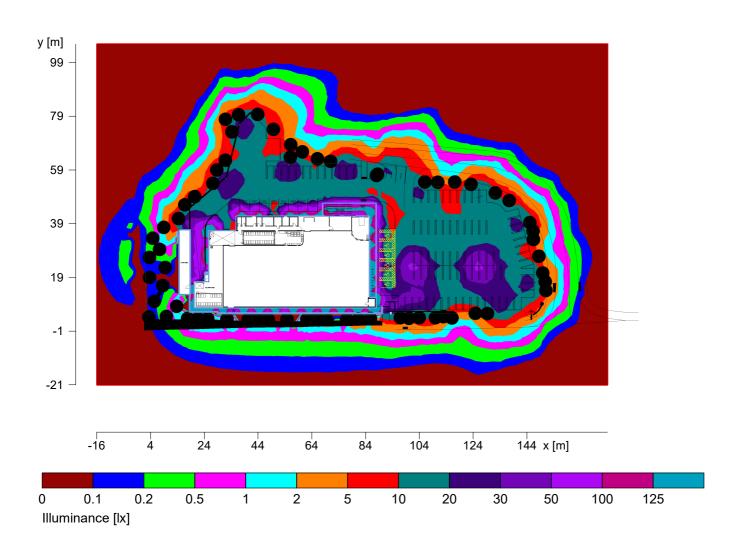
Date : 23.06.2025



2 Exterior Spill light

2.3 Calculation results, Exterior Spill light

2.3.1 Pseudo colours, Reference plane 1.1 (E)



Height reference plane Average illuminance Minimum illuminance Maximum illuminance Uniformity U_o Diversity U_d $\begin{array}{ccc} & : 0.00 \text{ m} \\ \overline{\text{E}}_{\text{m}} & : 7 \text{ lx} \\ \overline{\text{E}}_{\text{min}} & : 0 \text{ lx} \\ \overline{\text{E}}_{\text{max}} & : 140 \text{ lx} \end{array}$

E_{min}/E_m : 1 : 2857.84 (0.00) E_{min}/E_{max} : 1 : 55197.55 (0.00)

Installation

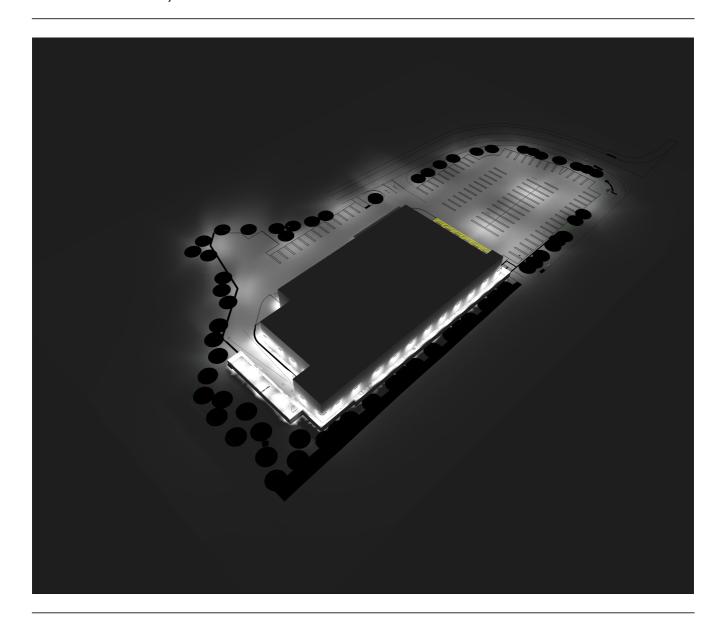
Project number

Date : 23.06.2025



2.3 Calculation results, Exterior Spill light

2.3.2 3D luminance, View 1



Luminance in the scene

 $\begin{array}{ll} \mbox{Minimum:} & : 0 \mbox{ cd/m}^2 \\ \mbox{Maximum:} & : 29.6 \mbox{ cd/m}^2 \end{array}$

Installation

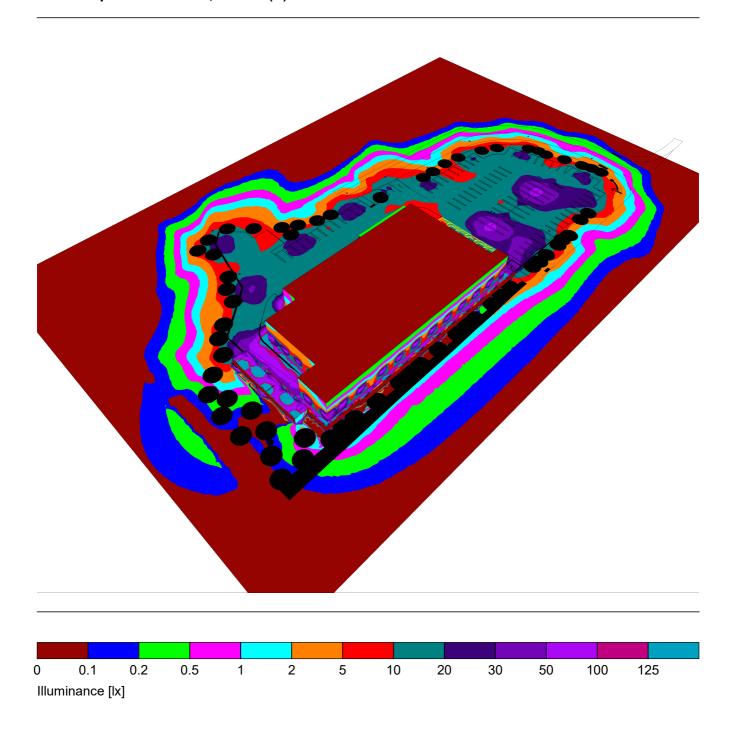
Project number

Date : 23.06.2025



2.3 Calculation results, Exterior Spill light

2.3.3 3D pseudo colours, View 1 (E)



LiAS Design Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify UK based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction, as this design does not purport to eliminate health and safety risks as a CDM Regulation risk assessment has not been undertaken.

Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principal Designer (which is not Signify UK) during the detailed design phase.

Project Specific Design Comments:

- Where 'Lighting Classes' have not been provided/specified, the calculations have been produced using Lidl Specification lighting classes
- Where column heights have not been provided/specified, these have been assumed to be 6m.
- Where wall/ceiling mounting heights have not been provided/specified, these have been assumed to be 3.25m.
- It has been assumed that luminaires on columns will be mounted post-top or on 0.5m outreach brackets.
- It has been assumed that canopy luminaires will be ceiling mounted.
- It has been assumed that LL-E/LL-E EM luminaires will be wall mounted.
- Signify has not undertaken any emergency lighting calculations. Luminaires marked as emergency fittings are for indicative purposes only. It is the responsibility of the Principal Designer to ensure emergency lighting calculations are performed and that all emergency evacuation routes are lit to a suitable standard.
- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the
 responsibility of the Principal Designer and/or Principal Contractor to ensure all Installation and Maintenance can be
 done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method
 Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by Signify do not account for the effect obstructions, such as trees, will cause.
- Signify has not been provided with utility plans showing Buried, Above Ground or Overhead utilities. Therefore, all column/luminaire locations are indicative and are subject to review/verification by the Principal Designer.
- Unless stated otherwise, Signify has not visited site. Therefore, all column/luminaire locations are indicative and are subject to an onsite verification arranged/performed by the Principal Designer.
- Signify has not produced any Private Cable Network electrical calculations or reviewed the DNO network to confirm power supplies to the proposed lighting.
- Signify has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Principal Designer before installation works commence.
- Unless stated otherwise, Signify is not supplying the new lighting columns (including brackets etc) and therefore it is the responsibility of the Principal Designers to confirm that all proposed equipment is suitable for the intended locations (e.g. raise & lower, ground condition, foundation type, saline environment, etc).
- Unless stated otherwise, luminaires will be supplied in their standard colour.

ighting Proposal Terms and Conditions of Use

These terms apply to the use of this preliminary proposal produced by Signify UK. This "Proposal" is understood to mean this document, a CAD drawing, lighting calculations, written documents, verbal conversations or any medium used to demonstrate or communicate the proposed lighting scheme using products from Signify's brands. A "Customer" is the person or organisation for whom the Proposal is intended. The "CDM Regulations' means The Construction, Design and Management Regulations 2015, the Safety, Health & Welfare at Work Act 2005, The Construction (Design & Management) Regulations (Northern Ireland) 2015.

This Proposal is for guidance only and cannot be relied upon for purposes of installation or Health and Safety.

The supply and installation of this lighting scheme are subject to a contract being agreed between Customer and Signify



PROPOSAL (NOT FOR CONSTRUCTION)

Luminaire Schedule

Symbol	Qtys Lanterns	Luminaire Type	Lumens
5° 6m L/C	7	1 X LED Luminaire and 1 x 6 m Column with 0.5m bracket. (Lantern Ref: LL-A 3000K)	4900
5° 5°	4	2 X LED Luminaires and 1 x 6 m Column with 0.5m bracket. (Lantern Ref: LL-C 3000K)	7500
5° muc	5	1 X LED Luminaire and 1 x 6 m Column with 0.5m bracket. (Lantern Ref: LL-C 3000K)	7500
5° em L/C	1	1 X Philips LumiStreet LED Luminaire mounted on 6 m Column. Luminaire BGP293 T25 1 xLED49-4S/730 DM30 (3000K)	4900
tue T	4	1 X 1300mm LED Luminaire Luminaire mounted at 3.25m. (Luminaire Ref: LL-E 3000K) with LiDL adjustable bracket.	3900
LL-E EM-EL3	26	1 X 1300mm LED Luminaire Luminaire mounted at 3.25m. (Luminaire Ref: LL-E EM-EL3 3000K) with LiDL adjustable bracket.	360
LLCANOPY	15	1 X Recessed Downlighter (Luminaire Ref: LL-CANOPY 4000K)	2260
LL-CANGPY EM-EL3	1	1 X Recessed Downlighter (Luminaire Ref: LL-CANOPY EM-EL3 4000K)	
<u> </u>	0	Columns with backplates installed	

All Lanterns installed at tilt angles indicated adjacent to the luminaire positions indicated on the drawing.

Where possible all columns should be placed 0.75m away from the curb line.

Perimeter lighting to be considered by client including any emergency lighting requirements.

Footpaths/Stairs/Ramps not considered in these proposals

Where required Lighting columns should be protected by barriers from vehicle impact damages.

These lighting values do not take into account any obstructions from trees, vehicles, objects etc.

NOTE: "Signify has not undertaken any emergency lighting calculations. Luminaires marked as emergency fittings are for indicative purposes only. It is the responsibility of the Principle Designer to ensure emergency lighting calculations are performed and that all emergency evacuation routes are lit to a suitable standard."

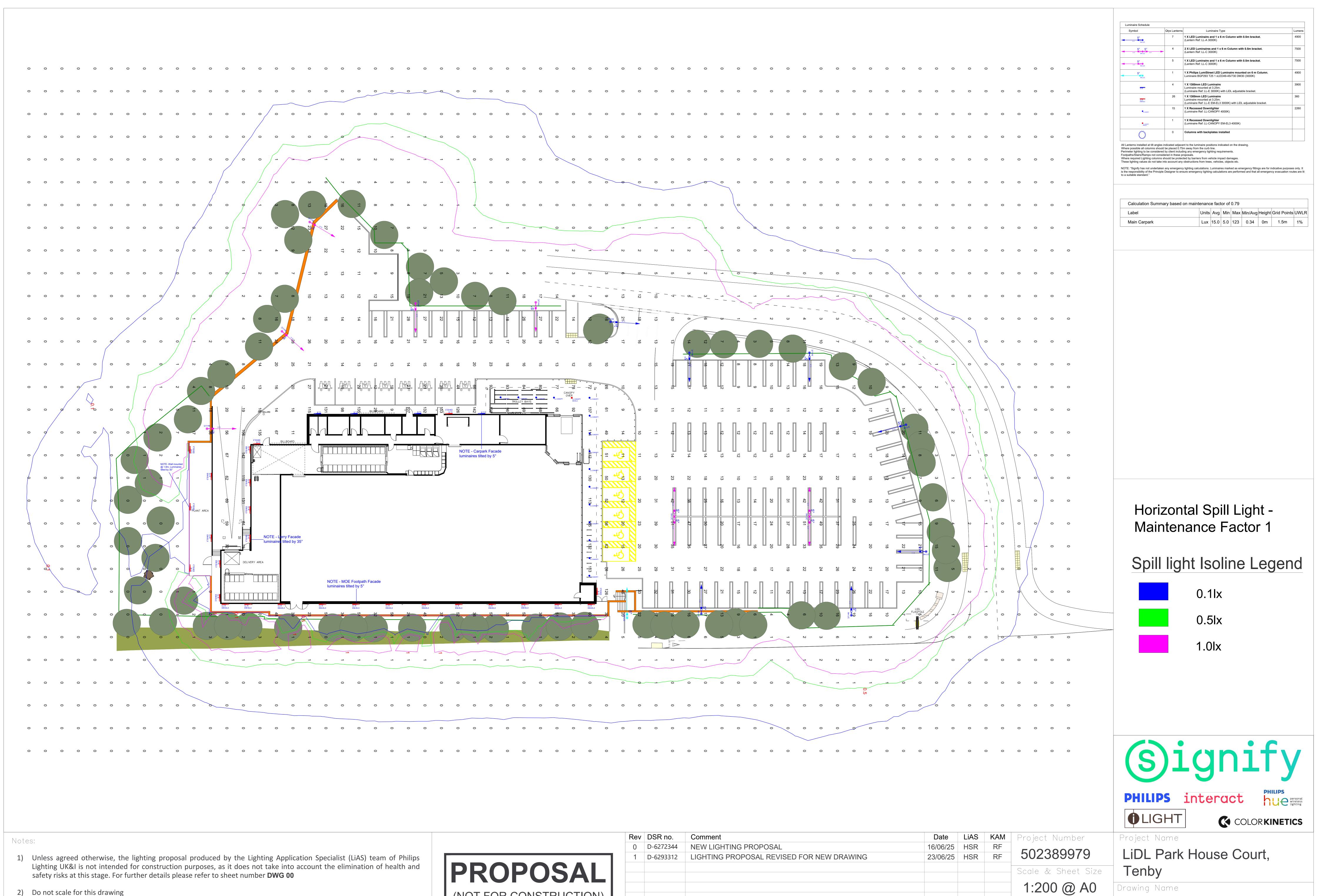
Calculation Summary based on maintenance factor of 0.79								
Label	Units	Avg	Min	Max	Min/Avg	Height	Grid Points	UWLR
Main Carpark	Lux	15.0	5.0	123	0.34	0m	1.5m	1%

Signify Contacts:

Key Account Manager, Name, Richard Fortune - 07787 004900, richard.fortune@signify.com



							COLORKINE
v	DSR no.	Comment	Date	LiAS	KAM	Project Number	Project Name
	D-6272344	NEW LIGHTING PROPOSAL	16/06/25	HSR	RF	500000070	LiDL David Have a Cavet
	D-6293312	LIGHTING PROPOSAL REVISED FOR NEW DRAWING	23/06/25	HSR	RF	502389979	LiDL Park House Court,
						Scale & Sheet Size	Tenby
						NTS @ A3	Drawing Name
						Sheet No	LIAS DESIGN NOTES &
						DWG 00	LUMINAIRE SCHEDULE
						Sheet No	LiAS DESIGN NOTES



(NOT FOR CONSTRUCTION)

PROPOSED LIGHTING LAYOUT

Sheet No

DWG 01