

RESULTS SUMMARY						
Area	Ave Em (lux)	Emin (lux)	Emax (lux)	Uo	Ud	Rg max
Unit G2 rear car park	27	8	91	0.30	0.09	50.2
Unit G1 front car park	35	11	94	0.31	0.11	48.2
Unit C front car park	20	5	99	0.26	0.05	54.2
Unit C end parking	14	2	79	0.15	0.03	56.3
G2 Walkway	32	13	74	0.39	0.17	55.7
G2 Walkway	33	11	81	0.33	0.13	56.5
Walkway between G units	35	13	77	0.37	0.17	55.3
G1 walkway	26	7	53	0.27	0.13	58.1
G1 front area	39	19	74	0.49	0.62	53.5
C Walkway	7	0	59	0.02	0.00	68.2
Area below F and C units	44	13	118	0.30	0.11	54.6
Unit F rear walkway	45	15	115	0.32	0.13	54.4
F unit road	37	11	63	0.31	0.18	48.5
G unit road	30	16	48	0.55	0.34	48.9
Entrance/Exit 1	20	11	38	0.55	0.28	52.9
Entrance/Exit 2	23	7	34	0.30	0.20	45.8
Road to unit C	7	3	36	0.46	0.09	67.1
Entry to Unit C Loading	86	3	19	0.35	0.16	62.7
Unit G1 Loading 20m	57	23	112	0.41	0.21	43.8
Unit G2 Loading 20m	56	29	115	0.51	0.25	44.2
Unit G1 Loading 35m	35	22	65	0.64	0.34	47.8
Unit G2 Loading 30m	40	27	67	0.71	0.43	46.5
F Units Loading 20m	53	12	113	0.22	0.10	45.9
Unit C Loading 20m	58	14	118	0.25	0.12	44.7

Zone E3			
ILP GN01/21	Target	Achieved	Status
Skyglow	≤ 5%	0%	Pass
Source Intensity (kcd)			
Pre Curfew	≤ 10	n/a	Pass *
Post Curfew	≤ 1	n/a	Pass *
Light Trespass into Windows (lux)			
Pre Curfew	≤ 10	n/a	Pass *
Post Curfew	≤ 2	n/a	Pass *
Building Façade (cd/m²)			
Luminance	≤ 10	n/a	Pass *

* No residential dwellings shown on plans provided at design stage, so not possible to calculate

Product Image	Type	Qty	Product Code	Product Description	Colour Temp (K)	Wattage	Lumens	CRI	Lm/W	LLF	LOR	ULOR	Upward Flux	Total Lumens	Total Wattage	Daily hours	Annual hours	Annual kWh	Annual CO ² (Tonnes)
	EX1E	32	11501	Lumo 25W CCT Asymmetric Wallpack Emergency	4000	23	3,086	80	134.2	0.8	100%	0%	0	98,752	736	12	4,380	3,224	0.75
	EX2	6	11485	Virtus 50W 4000K Asymmetric Floodlight	4000	50.2	7,761	80	154.6	0.8	100%	0%	0	46,566	301	12	4,380	1,319	0.31
	EX3	23	11489	Virtus 200W 4000K Asymmetric Floodlight	4000	199.4	30,333	80	152.1	0.8	100%	0%	0	697,659	4,586	12	4,380	20,088	4.68
	EX4	3	11701	Alto 50W 4000K NEMA Streetlight	4000	49	7,871	70	160.6	0.8	100%	0%	0	23,613	147	12	4,380	644	0.15
	EX5	13	11702	Alto 75W 4000K NEMA Streetlight	4000	76	12,199	70	160.5	0.8	100%	0%	0	158,587	988	12	4,380	4,327	1.01
	EX6	8	11485	Virtus 100W 4000K Asymmetric Floodlight	4000	102	15,461	80	151.6	0.8	100%	0%	0	123,688	816	12	4,380	3,574	0.83

Total Installation Lumens	1,148,865
Total Upward Light	0%
Total CO2 per year (tonnes)	7.73
Total Energy Consumption (kWh)	7.57
Average Luminaire Lumens Per Circuit Watt	151.7

BREEAM Compliance Status		
Hea01	Internal and External Lighting Levels	Pass **
Ene03	Energy Efficient External Lighting	Pass ***
Pol04	Reduction of Night Time Light Pollution	Pass ***

** exterior lighting only
*** lighting controls installed internally and externally by contractor



This layout is based on the original drawings provided by others and is an indicative lighting layout for the relevant areas.

Please do not use this drawing for construction as all details needs to be checked on site.

Bell Lighting cannot be held accountable for any discrepancies or cost incurred due to any inaccuracies of this drawing.

Emergency lighting (if present) is designed to BS5266 Part 1, EN 1838 and EN 50172, however no allowance has been made for any high risk areas or any additional specific points of emphasis, which may require additional emergency lighting. Risk assessments need to be undertaken by the client and if these are deemed necessary, then please provide us with all relevant information and we can amend our design accordingly.

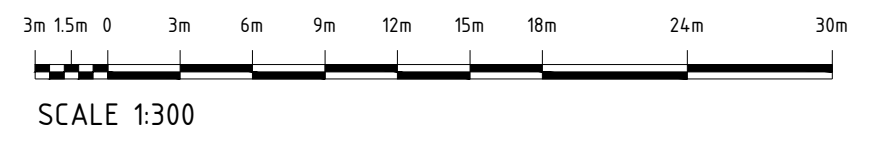
Emergency exit signs allowed assuming clear line of sight, with the appropriate viewing distances for the product and following to nearest exit or provided position layout. If this line of sight is obstructed, then additional signage may be required. Please note if all the lighting is LED based, then photoluminescent signs cannot be used, as they are not charged with LED lighting.

Any additional luminaires for the above will be subject to an additional cost.

This layout can be used ONLY in conjunction with notes and assumptions stated on the first page of Proposed Lighting Design.pdf included within our design package.

Spillage Isolines

- 1 lux
- 2 lux
- 3 lux
- 5 lux



Customer
Electric Center, Bolton

Project
LD2421
Sovereign Business Park Huyton Exterior R2
As Built Lighting Layout

Drawn Kirit M	File Name LD
Scale 1:300	Paper A0
Date 30/04/2025	Revision R2