



MJ Quinn Logistics Centre

Randles Car Park Lighting Calculation

Object

Unit 14 Randles Rd, Knowsley,
Liverpool, Prescot L34 9HX

Table of Contents

Cover	1
Table of Contents	2
Contacts	3
Images	4
Luminaire list	5

Product data sheets

MPE - LED Flood Light FLD 200W 6500K (1x FLD-200T)	6
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Site 1

Building 1

Luminaire list	8
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Site 1 - Building 1

MJ Quinn Logistics Centre

Calculation objects / Light scene 1	9
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Site 1 - Building 1 - MJ Quinn Logistics Centre

CAR PARK

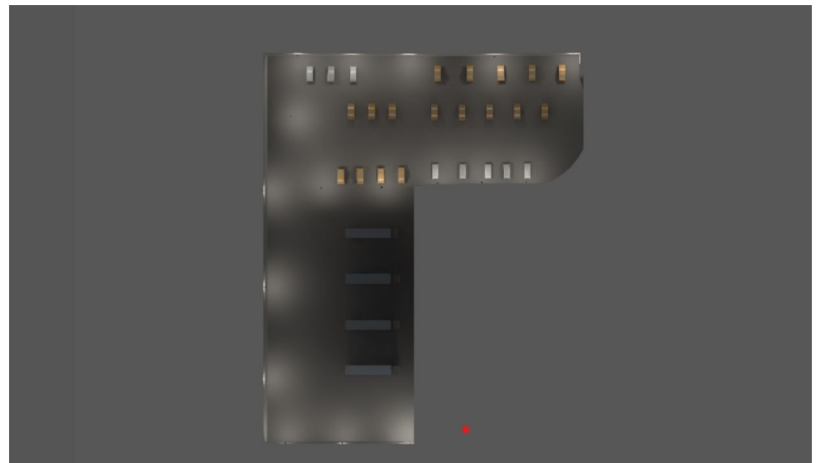
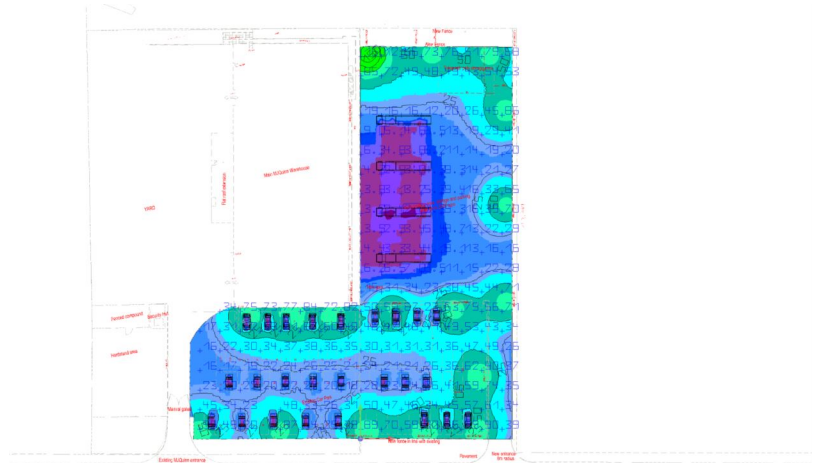
Description	11
Images	12
Summary / Light scene 1	13
Luminaire list	15
Calculation objects / Light scene 1	16
Working plane (CAR PARK) / Light scene 1 / Perpendicular illuminance (adaptive)	18

Contacts



Design Engineer
SS

Images



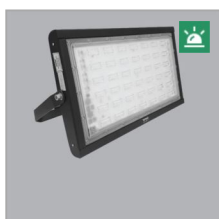
Luminaire list

Φ_{total} 312120 lm	P_{total} 3600.0 W	Luminous efficacy 86.7 lm/W	$\Phi_{Emergency\ lighting}$ 312120 lm	$P_{Emergency\ lighting}$ 3600.0 W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
18	MPE	FLD-200T	LED Flood Light FLD 200W 6500K	200.0 W	17340 lm	86.7 lm/W
				 200.0 W	17340 lm (100 %)	-

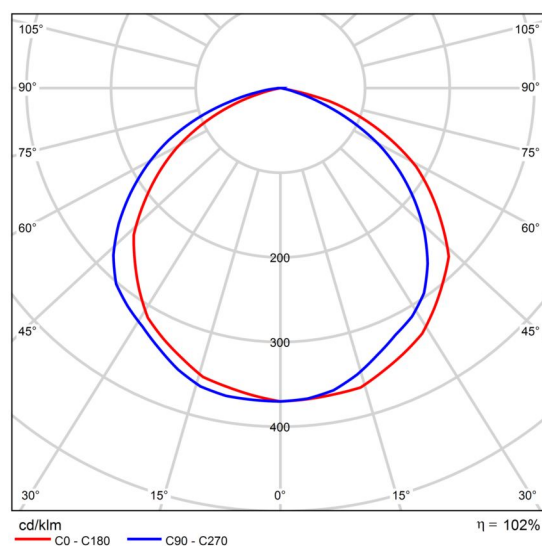
Product data sheet

MPE - LED Flood Light FLD 200W 6500K



Article No.	FLD-200T
P	200.0 W
P _{Emergency lighting}	200.0 W
Φ _{Lamp}	17000 lm
Φ _{Luminaire}	17340 lm
Φ _{Emergency lighting}	17340 lm
η	102.00 %
Luminous efficacy	86.7 lm/W
CCT	6500 K
CRI	84
ELF	100 %

- Led flood light
- Lamp body made of powder coated aluminum
- Lighting surface is protected by tempered glass
- Ingress Protection IP65
- Driver is integrated inside the lamp
- Size: 400 x 350 x 53.5 mm
- Voltage: 100-240VAC
- Power: 200W
- Power Factor (PF): >0.95
- Luminance: 16000 lm
- Luminous Efficacy: 80 lm/W
- Color Temperature (CCT): 6000-6500K
- RA >80 High Color Rendering Index
- Beam angle: 120°
- Chip LED: SMD 2835
- Life Time: 30,000 hours



Polar LDC

Product data sheet

MPE - LED Flood Light FLD 200W 6500K

- Instant Light: 0s
- European Standard CE – RoHS

y	C0°	C90°	C0°- C360°
0°-180°	6292.92	6292.92	6292.92
60°-90°	3144.58	2303.64	3253.31

Glare valuation table [cd]

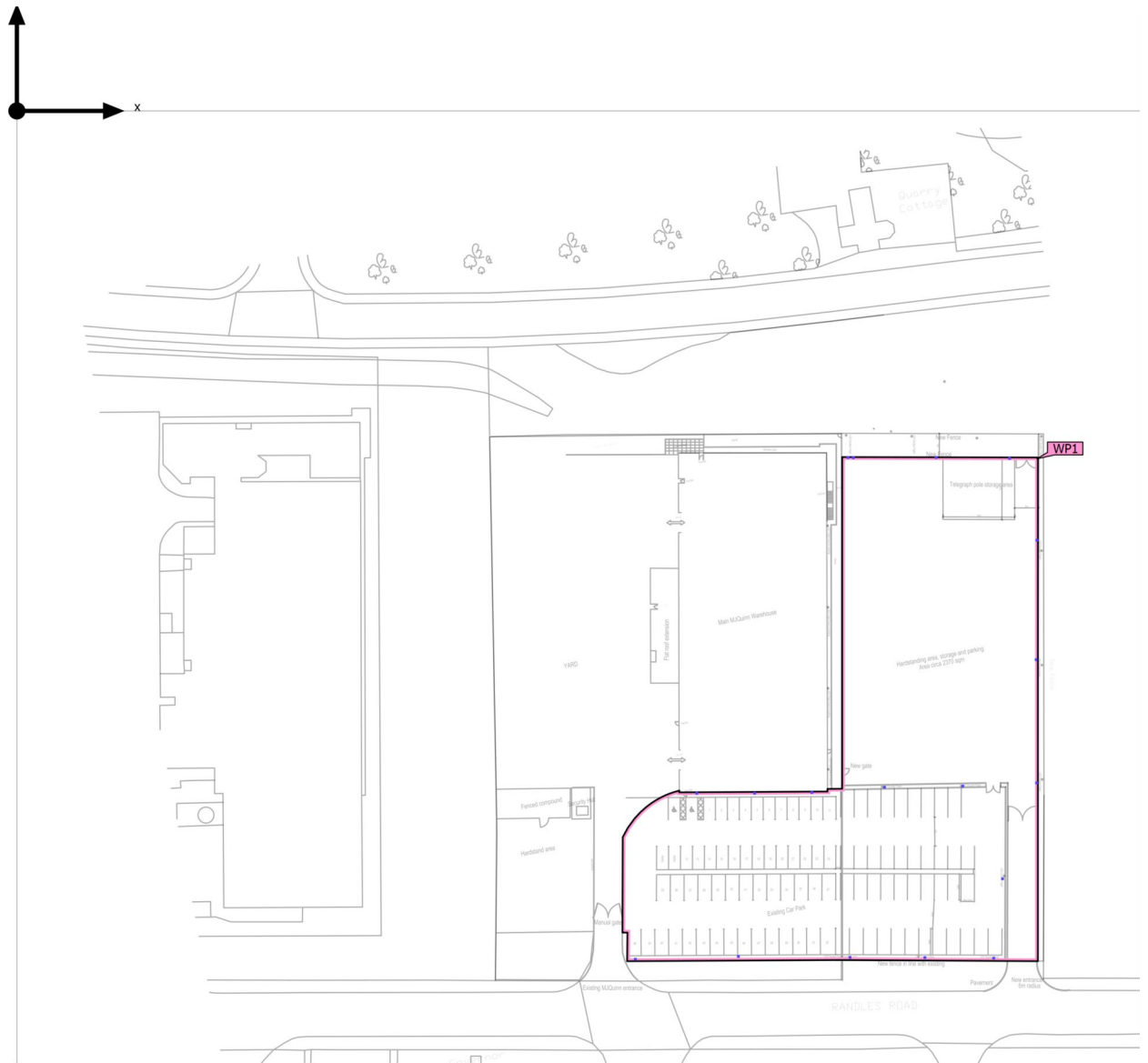
Building 1

Luminaire list

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Building 1 · MJ Quinn Logistics Centre (Light scene 1)

Calculation objects

Building 1 · MJ Quinn Logistics Centre (Light scene 1)

Calculation objects

Working planes

Properties	$\bar{E}$ (Target)	$E_{\min}$	$E_{\max}$	$U_o (g_1)$ (Target)	g_2	Index
Working plane (CAR PARK) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.350 m	33.9 lx (≥ 25.0 lx) ✓	1.42 lx	175 lx	0.042 (≥ 0.040) ✓	0.008	WP1

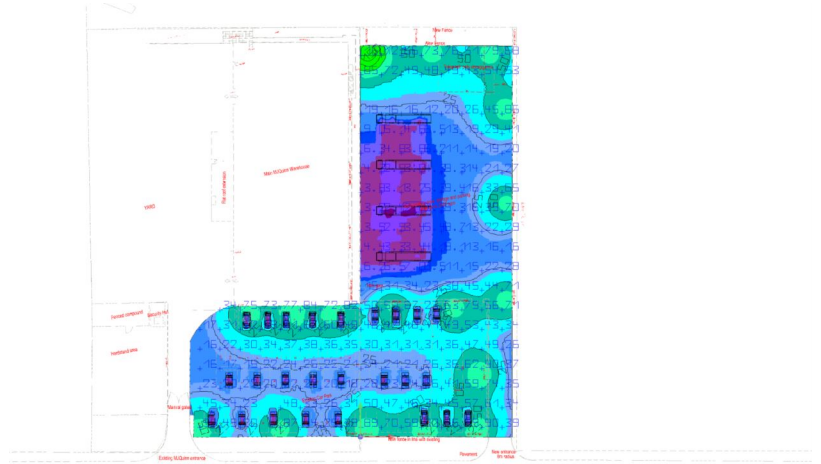


Building 1 · MJ Quinn Logistics Centre · CAR PARK

Description

Building 1 · MJ Quinn Logistics Centre · CAR PARK

Images



Building 1 · MJ Quinn Logistics Centre · CAR PARK (Light scene 1)

Summary



Ground area	5883.23 m ²	Clearance height	0.900 m
Reflection factors	Ceiling: 70.0 %, Walls: 50.0 %, Floor: 20.0 %	Mounting height	8.000 m
Maintenance factor	0.80 (fixed)	Height _{working plane}	0.000 m
		Wall zone _{Working plane}	0.350 m

Building 1 · MJ Quinn Logistics Centre · CAR PARK (Light scene 1)

Summary

Results

	Symbol	Calculated	Target	Check	Index
Working plane	$\bar{E}_{\text{perpendicular}}$	33.9 lx	≥ 25.0 lx	✓	WP1
	$U_o (g_1)$	0.042	≥ 0.040	✓	WP1
	Lighting power density	0.63 W/m ²	–		
		1.85 W/m ² /100 lx	–		
Energy estimation ⁽²⁾	Consumption	7884 kWh/a	max. 205950 kWh/a	✓	
Room	Lighting power density	0.61 W/m ²	–		
		1.81 W/m ² /100 lx	–		

(1) Based on a rectangular space of 105.439 m x 86.849 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

Utilisation profile: Places of public assembly - Public car parks (indoor) (42.4 Parking areas)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	R _{UG}	P	Φ	Luminous efficacy
18	MPE	FLD-200T	LED Flood Light FLD 200W 6500K	–	200.0 W	17340 lm	86.7 lm/W
				 –	200.0 W	17340 lm (100 %)	–

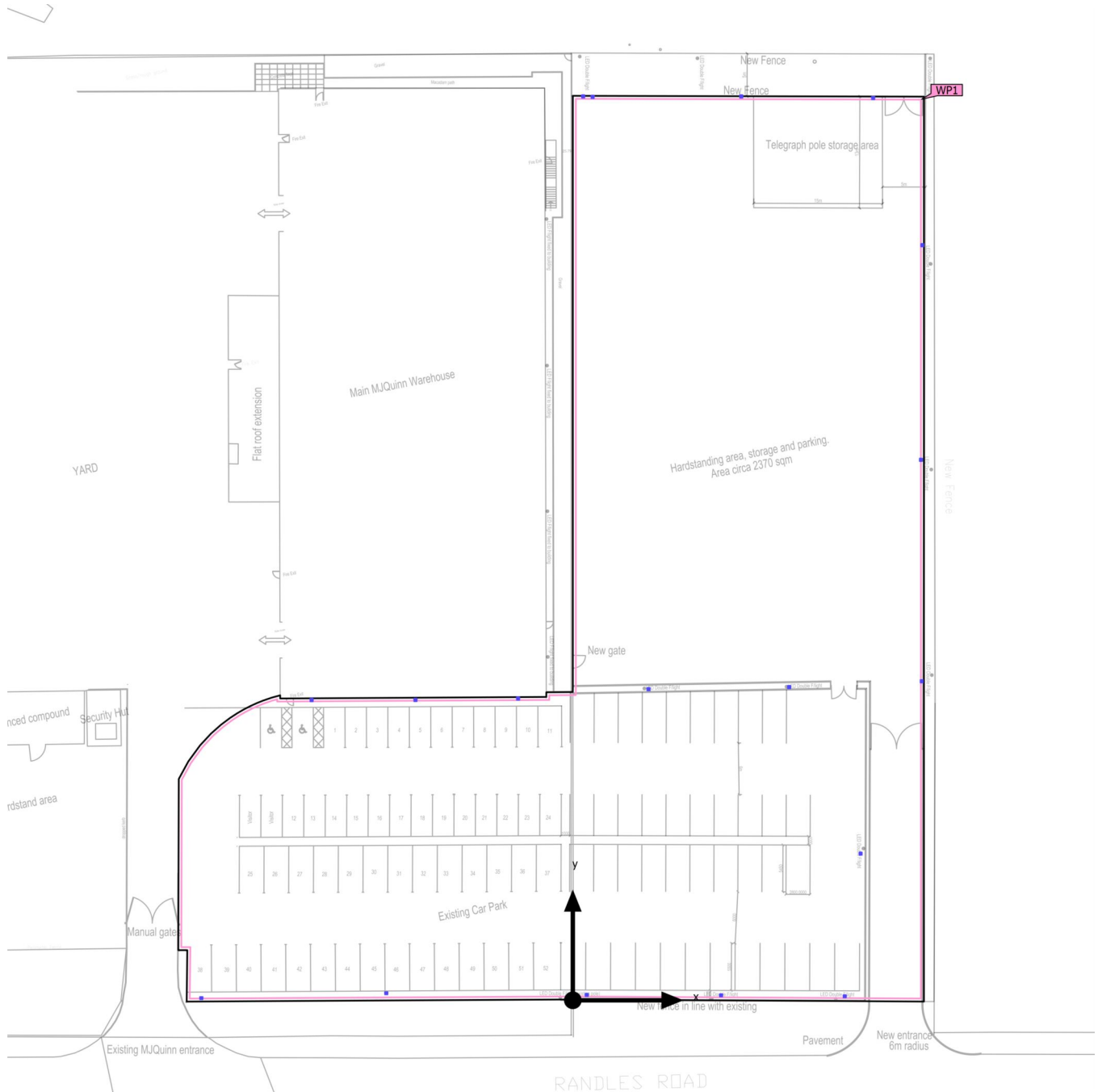
Building 1 · MJ Quinn Logistics Centre · CAR PARK

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Building 1 · MJ Quinn Logistics Centre · CAR PARK (Light scene 1)

Calculation objects

Building 1 · MJ Quinn Logistics Centre · CAR PARK (Light scene 1)

Calculation objects

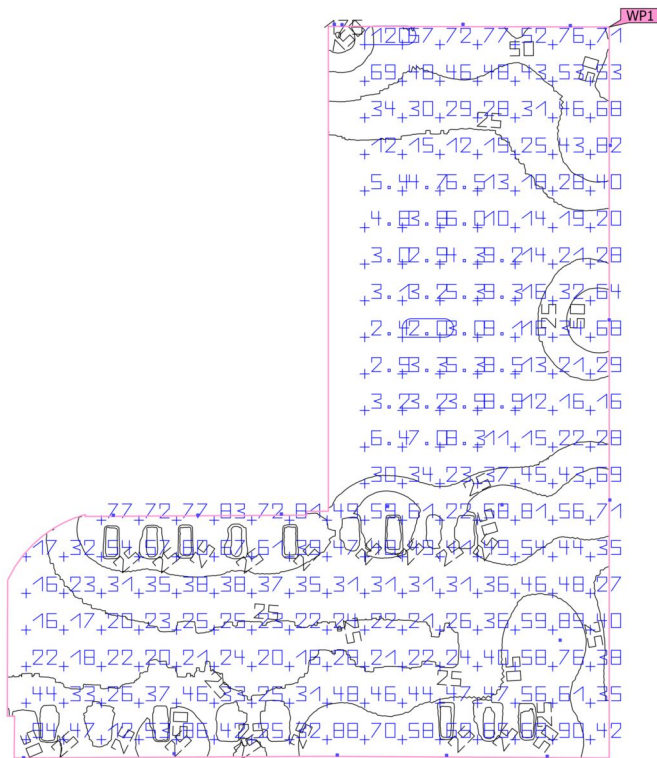
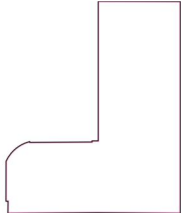
Working planes

Properties	$\bar{E}$ (Target)	E_{min}	E_{max}	$U_o (g_1)$ (Target)	g_2	Index
Working plane (CAR PARK) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.350 m	33.9 lx (≥ 25.0 lx) ✓	1.42 lx	175 lx	0.042 (≥ 0.040) ✓	0.008	WP1

(1) Based on a rectangular space of 105.439 m x 86.849 m and SHR of 0.25.

Utilisation profile: Places of public assembly - Public car parks (indoor) (42.4 Parking areas)

Building 1 · MJ Quinn Logistics Centre · CAR PARK (Light scene 1)

Working plane (CAR PARK)

Properties	$\bar{E}$ (Target)	E_{min}	E_{max}	$U_o (g_1)$ (Target)	g_2	Index
Working plane (CAR PARK)	33.9 lx	1.42 lx	175 lx	0.042	0.008	WP1
Perpendicular illuminance (adaptive)	(≥ 25.0 lx)			(≥ 0.040)		
Height: 0.000 m, Wall zone: 0.350 m	✓			✓		

Utilisation profile: Places of public assembly - Public car parks (indoor) (42.4 Parking areas)