

Carshalton Lawn Tennis Club

Outdoor LED Tennis Lighting Design

Project code: 1274a
Date: 28/04/2021

Client: Carshalton Lawn Tennis Club
Client Representative:

Lighting Consultant:
Project Consultant:
Planning Consultant:

Lighting Design Company: Luminance Pro Lighting Systems Ltd
Lighting Design Representative: Matthew Haskins
Lighting Design Software: CalcuLux Area 7.7.0.1

Design Criteria: To provide a lighting scheme suitable for Tennis Class II as defined in British Standard BS12193:2007, whilst minimising light spill and glare to neighbouring properties.

P.A. = 300 Lux maintained

Columns: 18 No. Existing 6.7 metre columns

Luminaires: 24 No. Existing (HiLux model: Match 107)

Notes: This lighting design is solely based on the use of the equipment detailed. Any deviation from this equipment will produce differing results.

The superior optics of the HiLux Match luminaire have been specifically selected to minimise the effects of nuisance overspill to adjacent dwellings.

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.

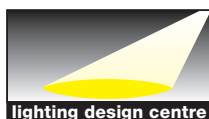
luminance pro
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HiLux

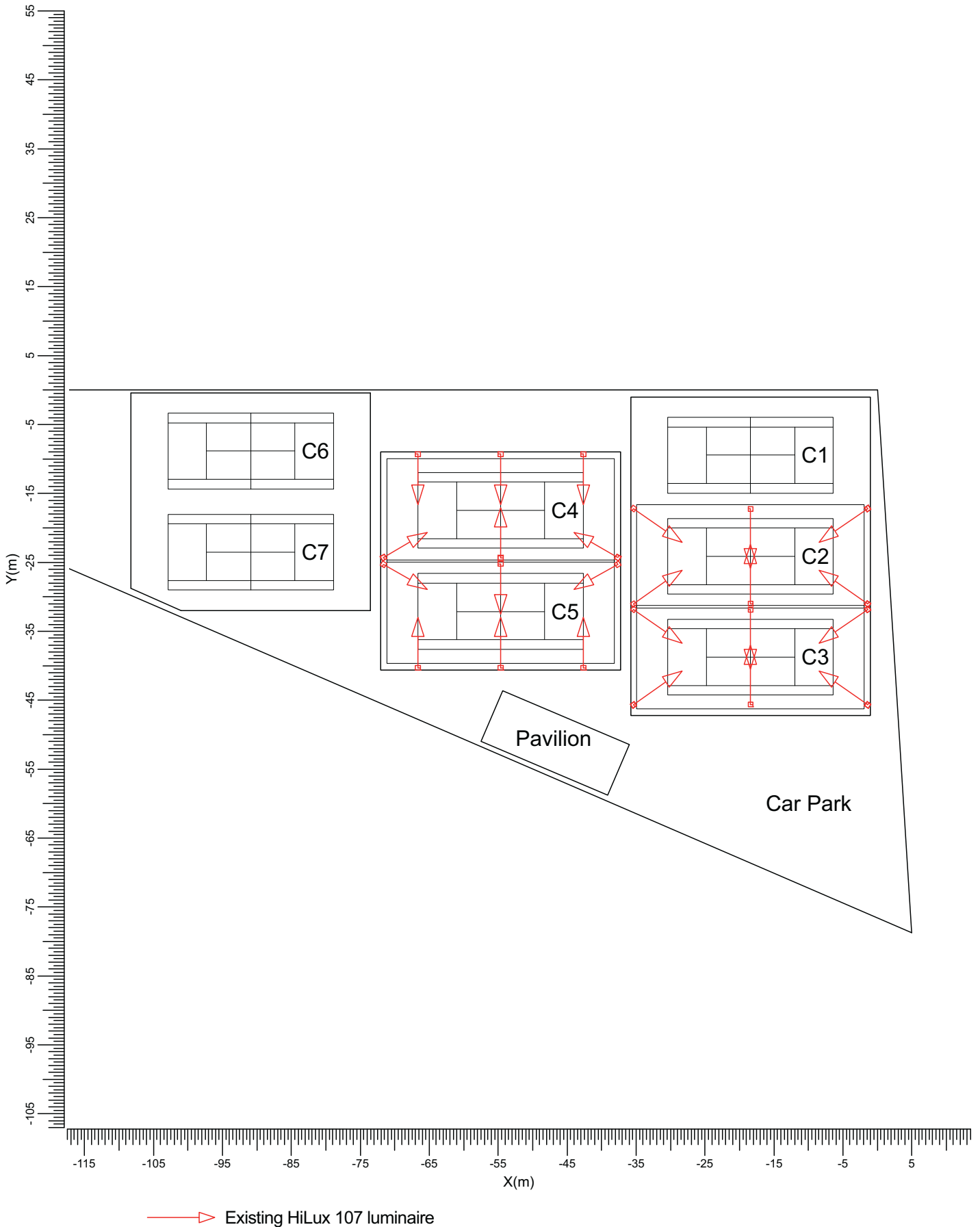


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1. Project Description

1.1 Top Project Overview



Scale
1:750

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.80.

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	24	Existing HiLux 107 luminaire	1 * 1KW Multi-vapor	1040.0	1 * 107500

The total installed power: 24.96 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	A	
Court 2	6	6.24
Court 3	6	6.24
Court 4	6	6.24
Court 5	6	6.24
All lights	24	24.96

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code	Power (kWatt)
	A	
C2	2	2.08
C3	2	2.08
E2	4	4.16
E3	4	4.16
E4	2	2.08
E5	2	2.08
L4	3	3.12
L5	3	3.12
P4	1	1.04
P5	1	1.04

2.3 Calculation Results

Switching Modes:

Code	Switching Mode
1	Court 2
2	Court 3
3	Court 4
4	Court 5
5	All lights

(II)luminance Calculations:

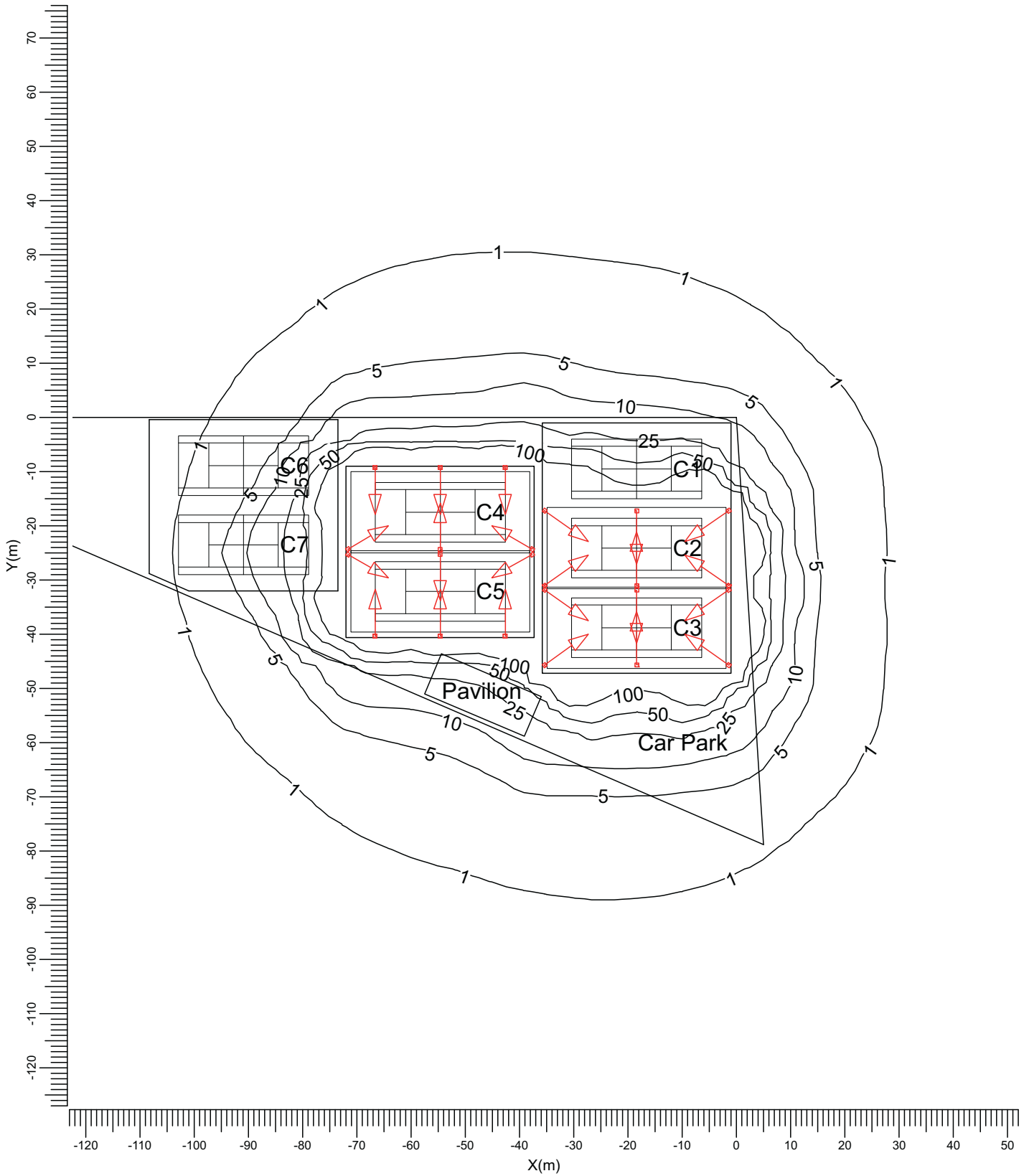
Calculation	Switching Mode	Type	Unit	Ave
PA2	1	Surface Illuminance	lux	398
PA3	2	Surface Illuminance	lux	398
PA4	3	Surface Illuminance	lux	405
PA5	4	Surface Illuminance	lux	406
Overspill	5	Horizontal Illuminance	lux	

3. Calculation Results

3.1 Overspill: Iso Contour

All lights

Grid : Overspill at Z = -1.00 m
Calculation : Horizontal Illuminance (lux)



Existing HiLux 107 luminaire

Project maintenance factor
0.80

Scale
1:1000

4. Luminaire Details

4.1 Project Luminaires

Existing HiLux 107 luminaire

Light output ratios

DLOR : 0.74

ULOR : 0.00

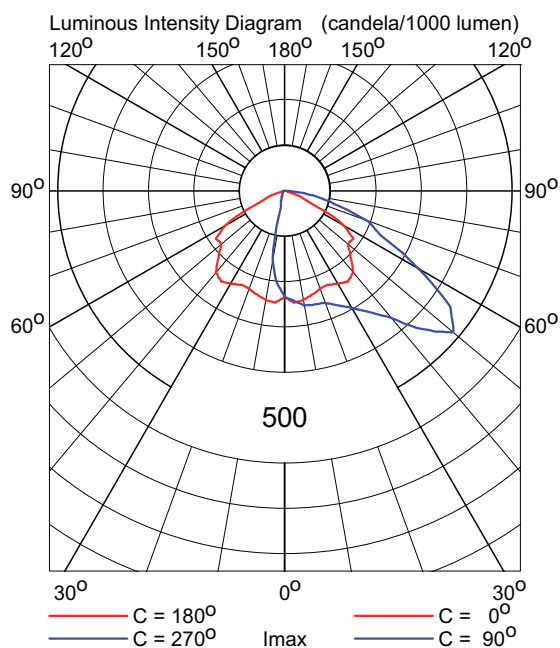
TLOR : 0.74

Ballast : Standard

Lamp flux : 107500 lm

Luminaire wattage : 1040.0 W

Measurement code : 42/25831/0



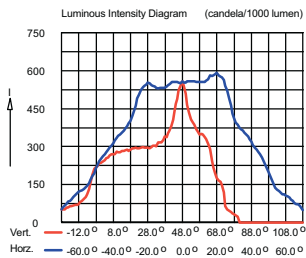
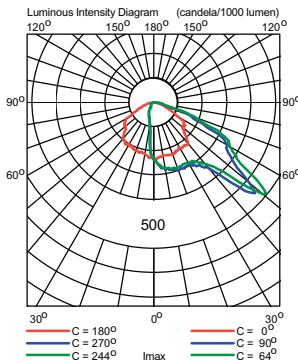


The Match is one in a range of HiLux high performance luminaires designed for use in sports lighting

Match 107/WB 17B

Box quantity	1
Net Weight	25 kg
Body colour (standard)	RAL6005
Optic	Wide beam
IP rating	IP65
Windage	0.21m ²
Mounting method	4 x M10 factory fitted

Number of lamps	1
Lamp type	MV / E40
Lamp power	1000 W
Lamp colour	4200 K
Lamp Access	Via front glass
Supply voltage	400v



HiLux™

Match®

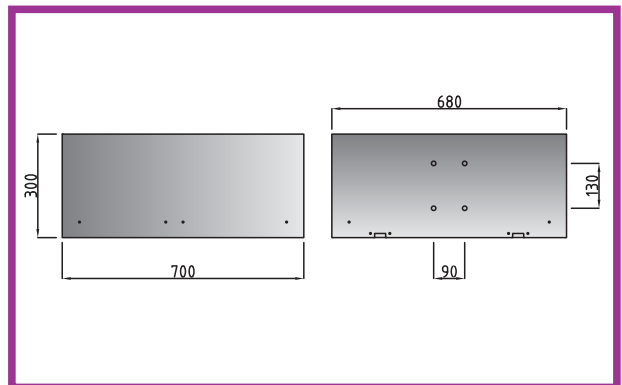
- ✓ Exceptional light control
- ✓ Flat glass asymmetric technology
- ✓ Fully shielded
- ✓ Designed for outdoor sports lighting
- ✓ Stainless steel components
- ✓ 6mm hinged safety glass
- ✓ Computer designed reflector
- ✓ Non-tarnish reflector
- ✓ Super high reflectance material
- ✓ Super low glare reflectance material
- ✓ Heavy duty mounting
- ✓ IP65 ingress protection
- ✓ Easy, one tool lamp change
- ✓ Pre flexed and tested (option)
- ✓ Powder coat finish (RAL 6005)
- ✓ UK manufactured
- ✓ 5 year limited warranty via direct install *
- ✓ 3 year limited warranty via distributor *
- ✓ 10 year limited extended warranty *

Ordering codes:

MATCH/107/WB/17B Luminaire

Options

- /C Alternative colour finish
- / Deflector (front/FD, rear/RD, side/SD)
- /LL Lamp (supplied loose)
- /LFT Lamp & flex installed and tested
- /G Lamp gear (supplied loose)



* Conditions apply

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