

The Lensbury Club

Outdoor LED Tennis & Mini Tennis Lighting Design

Project code: 6356
Date: 15/12/2023

Client: The Lensbury 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 Multiple Sports, whilst minimising light spill and glare to neighbouring properties.

Tennis to LTA minimum standards:
PPA = 400 Lux maintained at 0.7 uniformity
TPA = 300 Lux maintained at 0.6 uniformity

Mini Tennis Courts for Junior practice and play

Columns: 6 No. Existing columns to be utilised
4 No. New 6 metre nominal (HiLux model: HLC060LS)

Luminaires: 10 No. (HiLux model: Match LED)

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 LED luminaire have been specifically selected to minimise the effects of nuisance overspill to adjacent dwellings.

Please note: No account has been taken of any natural foliage or screening that may exist on-site.

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
lighting systems

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HiLux

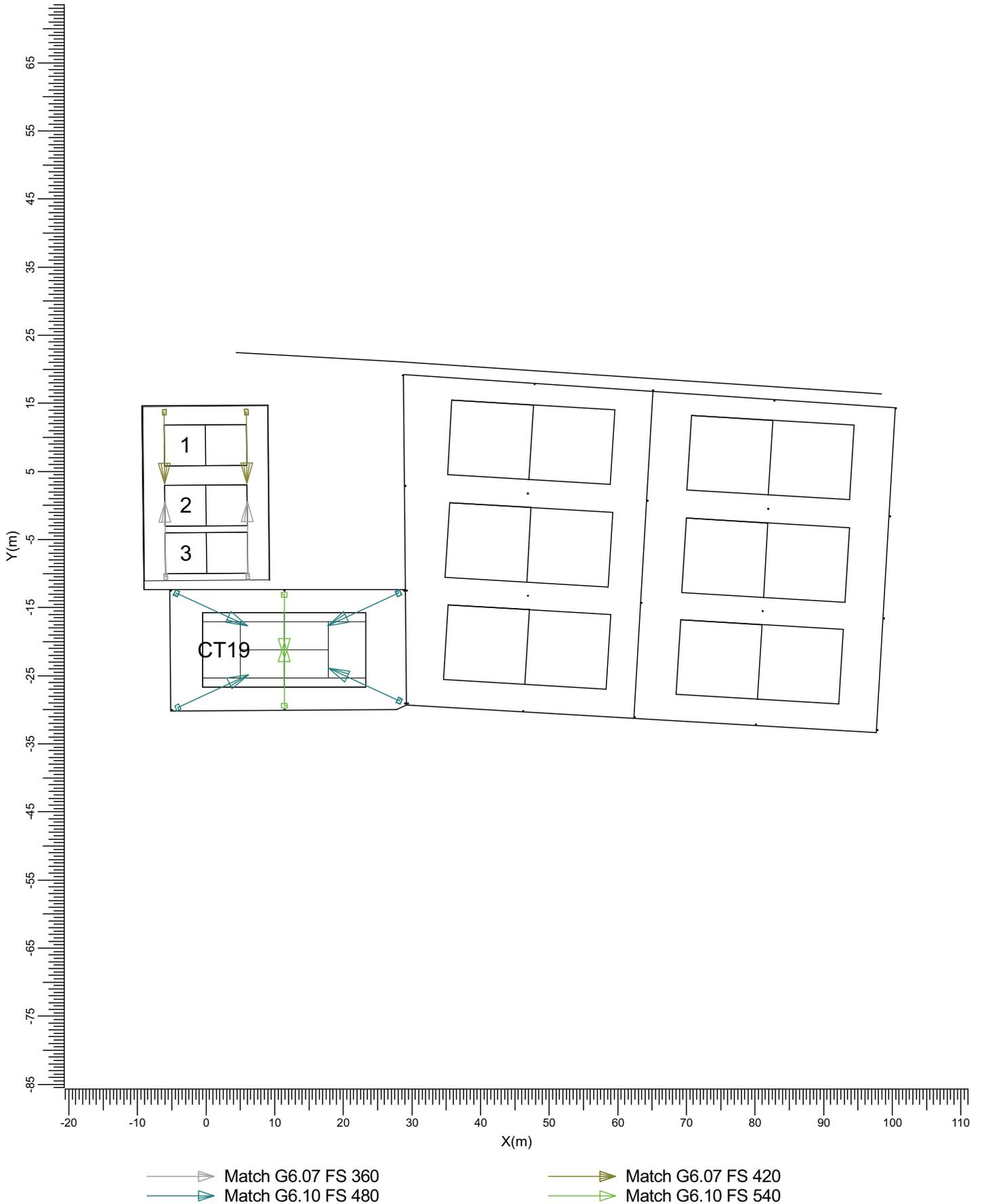


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1. Project Description

1.1 Top Project Overview



Scale
1:750

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.90.

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
R	2	Match G6.07 FS 360	1 * LED 06+00	348.0	1 * 50430
Z	2	Match G6.07 FS 420	1 * LED 07+00	406.0	1 * 58520
h	4	Match G6.10 FS 480	1 * LED 08+00	464.0	1 * 70290
i	2	Match G6.10 FS 540	1 * LED 09+00	522.0	1 * 78620

The total installed power: 4.41 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code				Power (kWatt)
	R	Z	h	i	
Court 19	0	0	4	2	2.90
KZ	2	2	0	0	1.51
All Lights	2	2	4	2	4.41

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code				Power (kWatt)
	R	Z	h	i	
CT19 P1	0	0	1	0	0.46
CT19 P2	0	0	0	1	0.52
CT19 P3	0	0	1	0	0.46
CT19 P4	0	0	1	0	0.46
CT19 P5	0	0	0	1	0.52
CT19 P6	0	0	1	0	0.46
KZ P1	0	1	0	0	0.41
KZ P2	1	0	0	0	0.35
KZ P5	1	0	0	0	0.35
KZ P6	0	1	0	0	0.41

2.3 Calculation Results

Switching Modes:

Code	Switching Mode
1	Court 19
2	KZ
3	All Lights

(II)luminance Calculations:

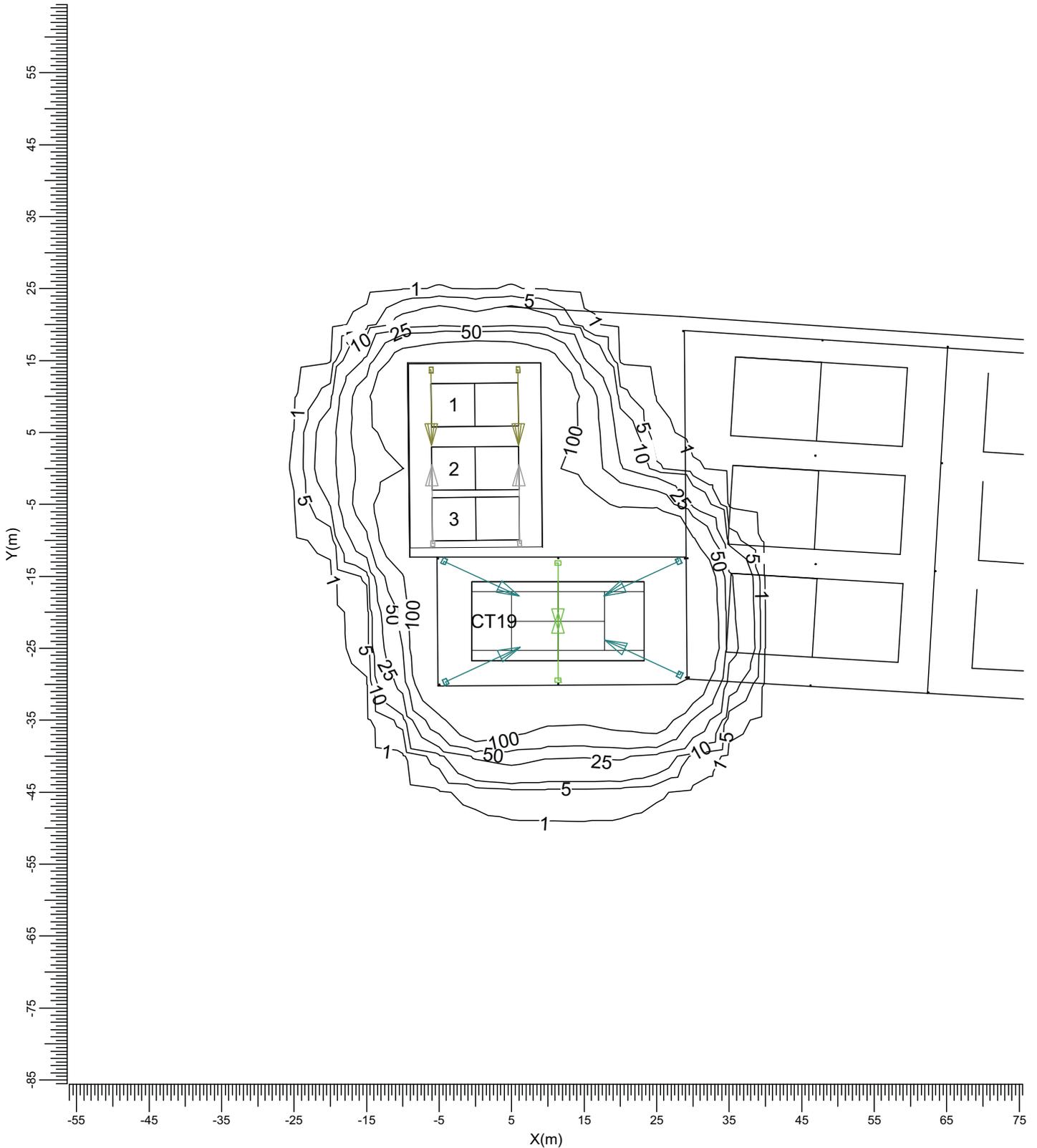
Calculation	Switching Mode	Type	Unit	Ave	Min/Ave
PPA 19	1	Surface Illuminance	lux	424	0.88
TPA 19	1	Surface Illuminance	lux	417	0.75
KZ 1	2	Surface Illuminance	lux	330	0.71
KZ 2	2	Surface Illuminance	lux	182	0.71
KZ 3	2	Surface Illuminance	lux	281	0.83
Overspill	3	Surface Illuminance	lux		
KZ PA	2	Surface Illuminance	lux	248	0.39

3. Calculation Results

3.1 Overspill: Iso Contour

All Lights

Grid : Overspill at Z = -0.00 m
Calculation : Surface Illuminance (lux)



Match G6.07 FS 360
Match G6.10 FS 480

Match G6.07 FS 420
Match G6.10 FS 540

Project maintenance factor
0.90

Scale
1:750

4. Luminaire Details

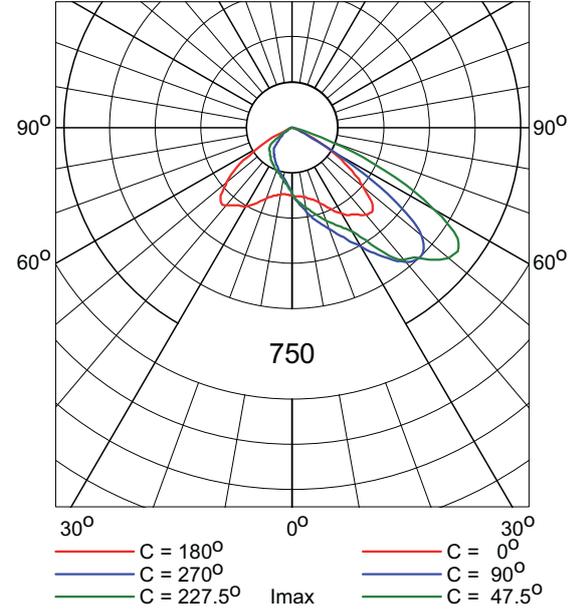
4.1 Project Luminaires

Match G6.07 FS 360

Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 50430 lm
Luminaire wattage	: 348.0 W
Measurement code	: 341.07v1.7

Luminous Intensity Diagram (candela/1000 lumen)

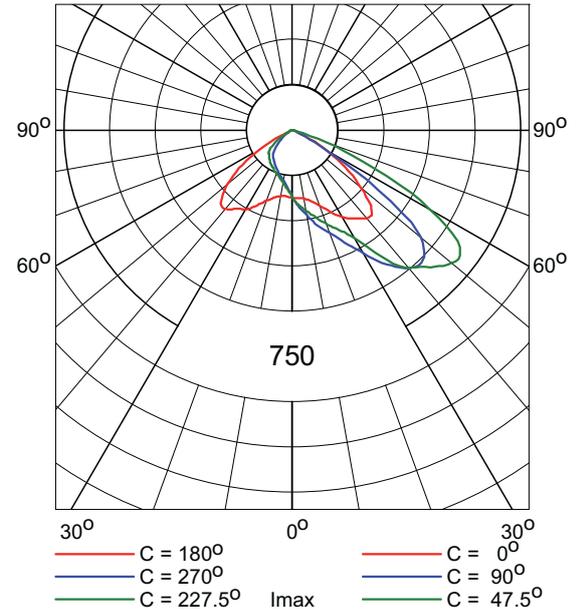


Match G6.07 FS 420

Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 58520 lm
Luminaire wattage	: 406.0 W
Measurement code	: 341.07v1.7

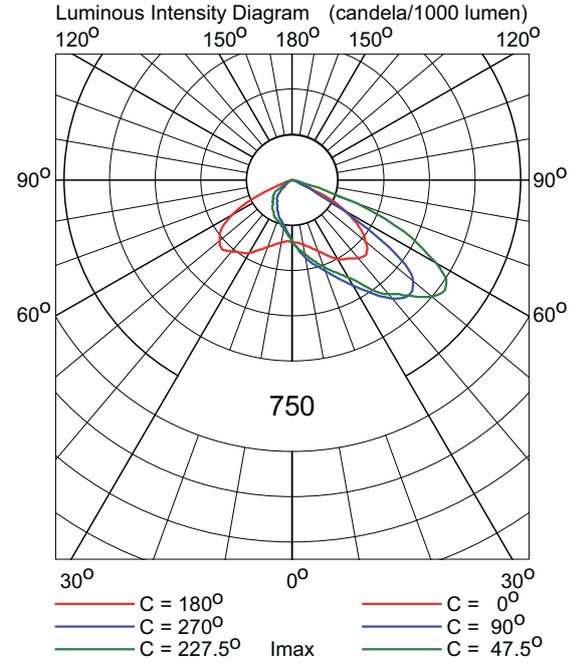
Luminous Intensity Diagram (candela/1000 lumen)



Match G6.10 FS 480

Light output ratios

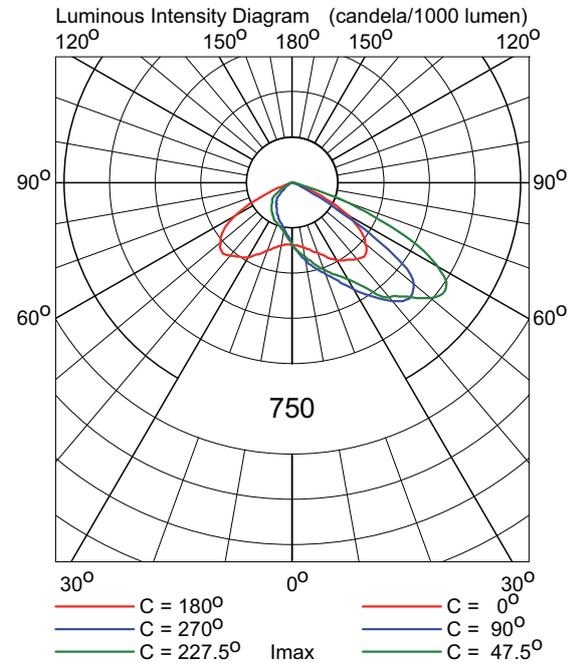
DLOR : 1.00
 ULOR : 0.00
 TLOR : 1.00
 Lamp flux : 70290 lm
 Luminaire wattage : 464.0 W
 Measurement code : 321V1.5

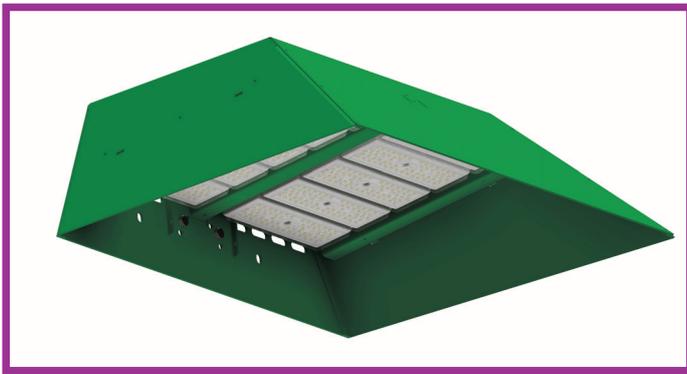


Match G6.10 FS 540

Light output ratios

DLOR : 1.00
 ULOR : 0.00
 TLOR : 1.00
 Lamp flux : 78620 lm
 Luminaire wattage : 522.0 W
 Measurement code : 321V1.5





HiLux[®]

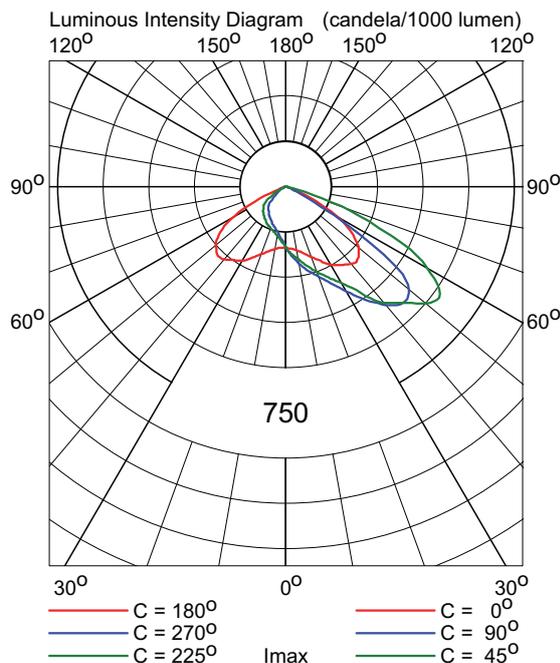
Match[®] LED

The Match LED is a new generation of HiLux high performance luminaires designed for use in sports lighting.

Match LED

Box quantity	1
Net Weight	13.0 - 19.3kg
Body colour (standard)	RAL6005
Optic	Standard**
IP rating	IP68
Windage	0.28m ²
Mounting method	4 x M10 factory fitted

Lamp type	LED
Luminaire power	360W - 600W
Lamp colour	5000 K
Supply voltage	230v



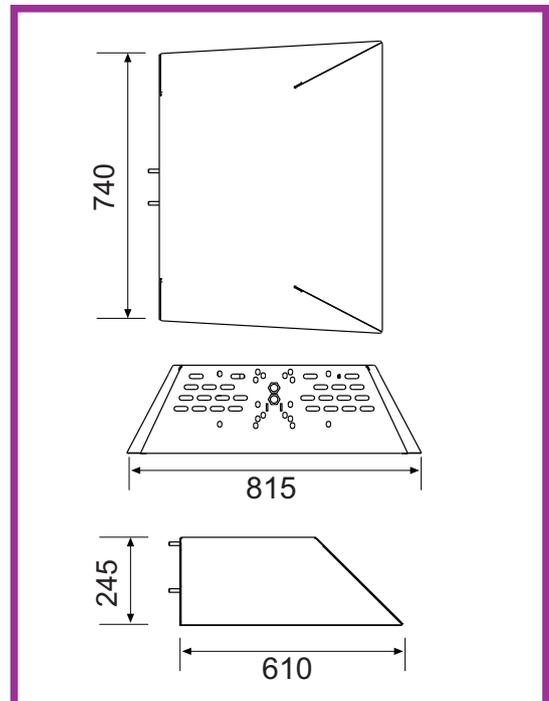
- ✓ LED low energy lighting
- ✓ Exceptional light control
- ✓ Designed for outdoor sports lighting
- ✓ Lightweight aluminium body
- ✓ Stainless steel components
- ✓ Computer designed optics
- ✓ Heavy duty mounting
- ✓ IP68 ingress protection for main elements
- ✓ Powder coat finish (RAL 6005) Green
- ✓ 5 year limited warranty via direct install*
- ✓ 5 & 10 year onsite extended warranty available*

Product code:

MATCH-FS10/LED

Options

/C - Alternative colour finish



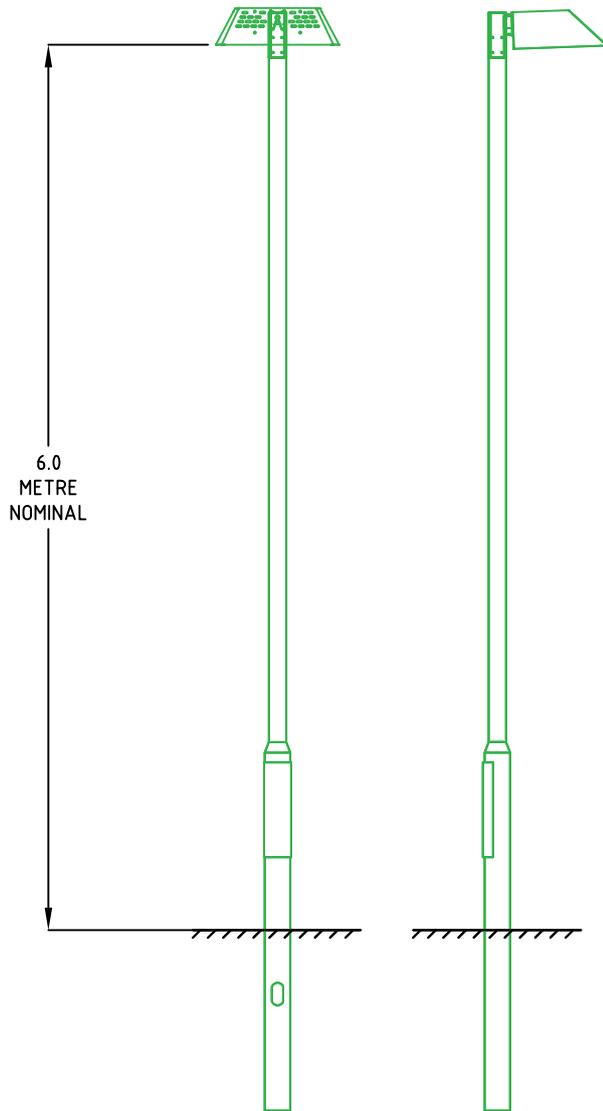
* Conditions apply
 ** Various optics available

luminance pro
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SINGLE LUMINAIRE MOUNTING



Tubular columns, corrosion protection via hot dip galvanising to BS EN 1461.

Luminaire colour:
RAL NO. 6005 - Green

Column colour:
RAL NO. 6005 - Green

luminance pro
lighting systems

PO Box 1345 Woking
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**Hilux Column
6.0m Nominal
single door**

Drawing No:
HLC060

Sheet

Date
10/11/2020

1

Scale
1:50@A4