

Arborfield Garrison

Outdoor LED Tennis Lighting Design

Project code: 5916
Date: 26/10/2021

Client: Arborfield Garrison
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 Lawn Tennis Associations minimum standard, whilst minimising light spill and glare to neighbouring properties.
PPA = 400 Lux maintained at 0.7 uniformity
TPA = 300 Lux maintained at 0.6 uniformity

Columns: 17 No. 6.7 metre nominal (HiLux model: HLC067LS)

Luminaires: 20 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.

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.

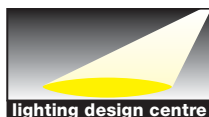
luminance pro
lighting systems

PO Box 1345, Woking, Surrey, GU24 9WL

Email: info@luminancepro.co.uk
Website: www.luminancepro.co.uk

Tel: 01276 855666

Fax: 01276 855999



HiLux

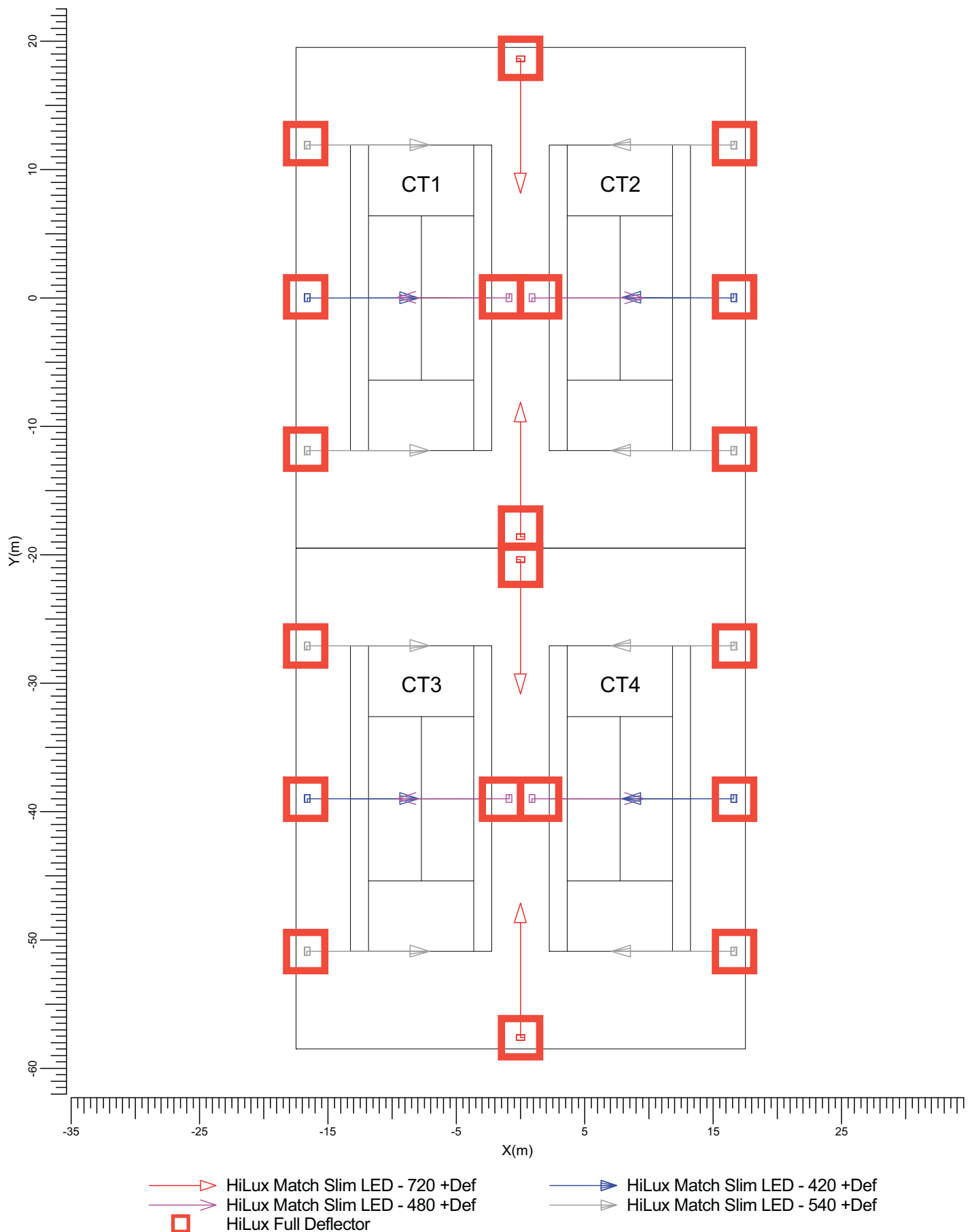


Table of Contents

1.	Project Description	3
1.1	Top Project Overview	3
2.	Summary	4
2.1	General Information	4
2.2	Project Luminaires	4
2.3	Calculation Results	4
3.	Calculation Results	6
3.1	Overspill: Iso Contour	6
4.	Luminaire Details	7
4.1	Project Luminaires	7

1. Project Description

1.1 Top Project Overview



Scale
1:400

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)
A	4	HiLux Match Slim LED - 720 +Def	1 * LED	708.0	1 * 94680
B	4	HiLux Match Slim LED - 420 +Def	1 * LED	413.0	1 * 55020
C	4	HiLux Match Slim LED - 480 +Def	1 * LED	472.0	1 * 62880
D	8	HiLux Match Slim LED - 540 +Def	1 * LED	531.0	1 * 69030

The total installed power: 10.62 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code				Power (kWatt)
	A	B	C	D	
Court 1	2	1	2	2	3.84
Court 2	2	1	2	2	3.84
Courts 1&2	2	2	2	4	5.31
Court 3	2	1	2	2	3.84
Court 4	2	1	2	2	3.84
Courts 3&4	2	2	2	4	5.31
All Lights	4	4	4	8	10.62

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code				Power (kWatt)
	A	B	C	D	
CT1 P1	0	0	0	2	1.06
CT1 P2	0	1	0	0	0.41
CT1 P3	0	0	1	0	0.47
CT1,2 P1	2	0	0	0	1.42
CT3,4 P1	2	0	0	0	1.42
CT2 P1	0	0	1	0	0.47
CT2 P2	0	0	0	2	1.06
CT2 P3	0	1	0	0	0.41
CT3 P1	0	0	0	2	1.06
CT3 P2	0	1	0	0	0.41
CT3 P3	0	0	1	0	0.47
CT4 P1	0	0	1	0	0.47
CT4 P2	0	0	0	2	1.06
CT4 P3	0	1	0	0	0.41

2.3 Calculation Results

Switching Modes:

Code	Switching Mode
1	Court 1
2	Court 2
3	Courts 1&2
4	Court 3
5	Court 4
6	Courts 3&4
7	All Lights

(II)luminance Calculations:

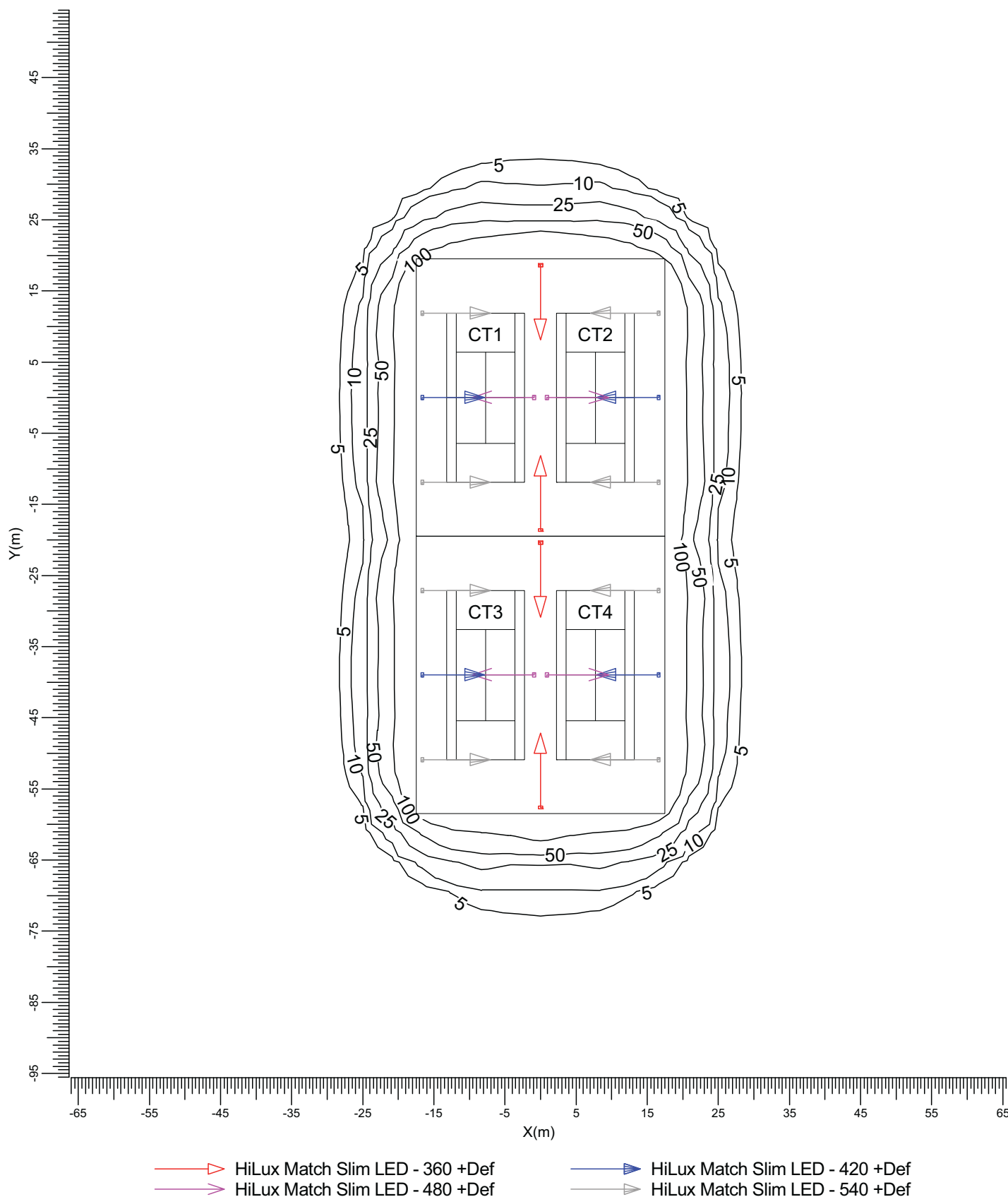
Calculation	Switching Mode	Type	Unit	Ave	Min/Ave
PPA1	1	Surface Illuminance	lux	421	0.80
PPA2	2	Surface Illuminance	lux	421	0.80
PPA3	4	Surface Illuminance	lux	421	0.80
PPA4	5	Surface Illuminance	lux	421	0.80
TPA1	1	Surface Illuminance	lux	412	0.76
TPA2	2	Surface Illuminance	lux	412	0.76
TPA3	4	Surface Illuminance	lux	412	0.76
TPA4	5	Surface Illuminance	lux	412	0.76
Overspill	7	Surface Illuminance	lux		

3. Calculation Results

3.1 Overspill: Iso Contour

All Lights

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



Project maintenance factor
0.90

Scale
1:750

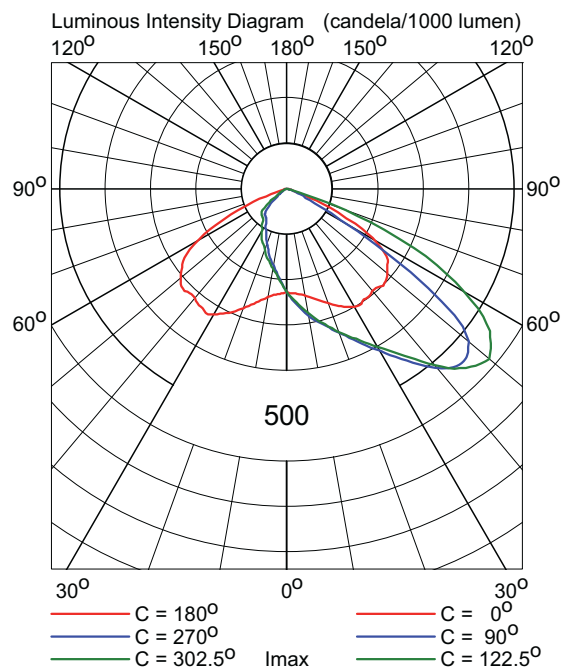
4. Luminaire Details

4.1 Project Luminaires

HiLux Match Slim LED - 720 +Def

Light output ratios

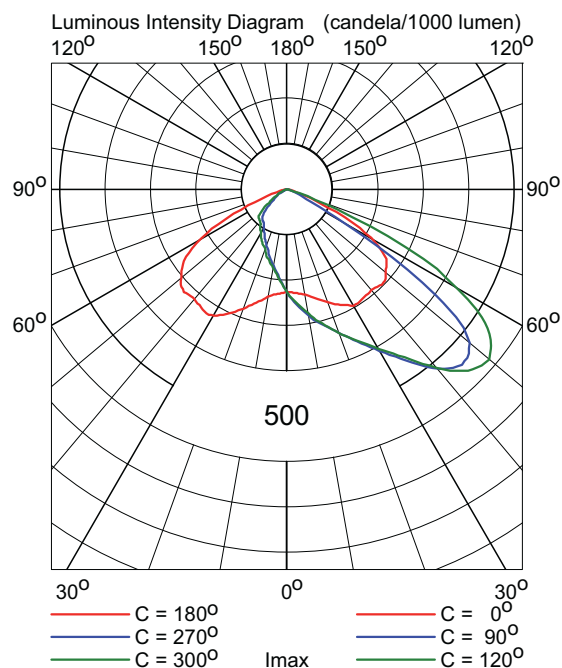
DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 94680 lm
Luminaire wattage	: 708.0 W
Measurement code	: 214v1.0



HiLux Match Slim LED - 420 +Def

Light output ratios

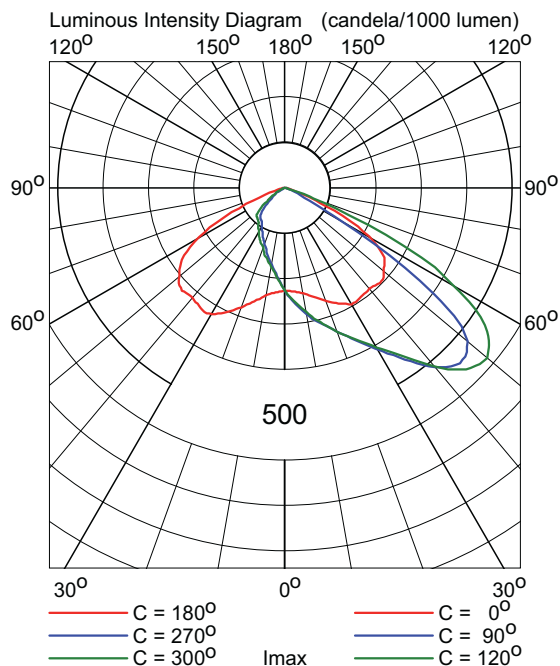
DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 55020 lm
Luminaire wattage	: 413.0 W
Measurement code	: 213v1.0



HiLux Match Slim LED - 480 +Def

Light output ratios

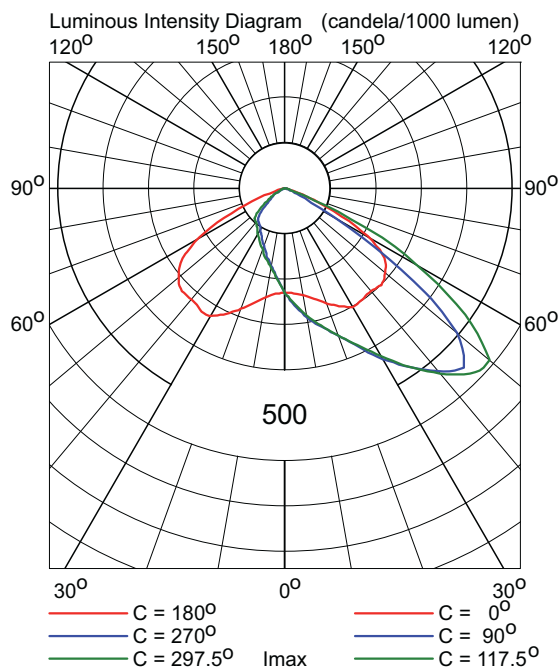
DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 62880 lm
Luminaire wattage	: 472.0 W
Measurement code	: 213v1.0



HiLux Match Slim LED - 540 +Def

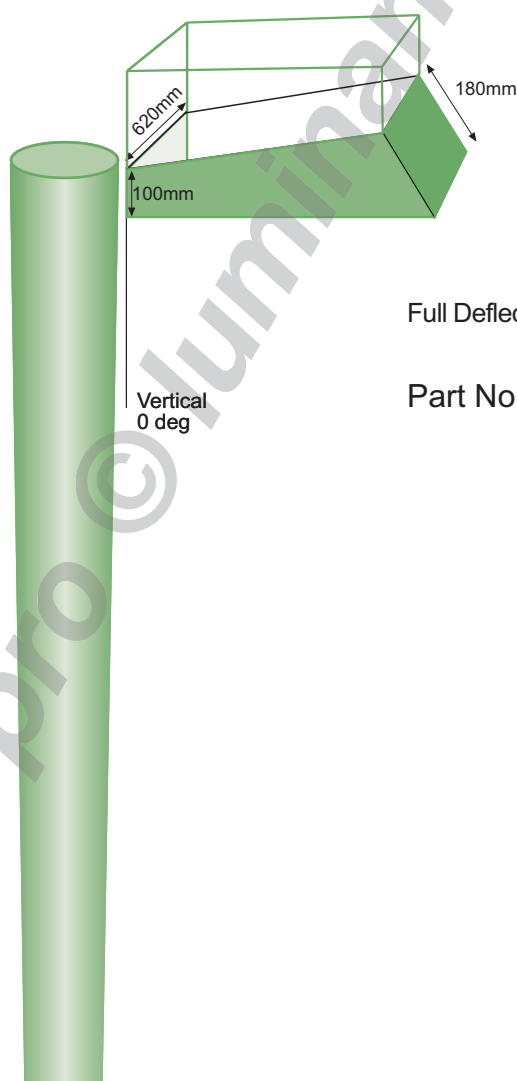
Light output ratios

DLOR	: 1.00
ULOR	: 0.00
TLOR	: 1.00
Lamp flux	: 69030 lm
Luminaire wattage	: 531.0 W
Measurement code	: 212v1.0



HiLux

Match LED Slim Gen3 Deflector



Full Deflector

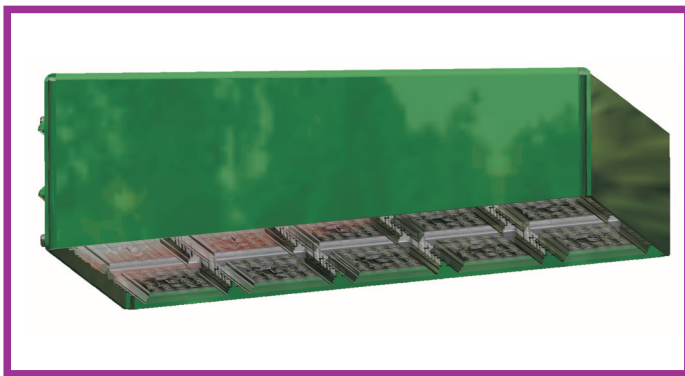
Part No: HLDFULL

*This indicative drawing is for information only.

Manufactured & Distributed in the United Kingdom by:

Luminance Pro Lighting Systems Ltd. PO Box 1345 Woking Surrey GU24 9WL

T 01276 855666 F 01276 855999 E info@luminancepro.co.uk



HiLux[®]

Match[®] Slim

LED

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

Match Slim LED

Box quantity	1
Net Weight	10.5 - 16kg
Body colour (standard)	RAL6005
Optic	Standard**
IP rating	IP68
Windage	0.035m ²
Mounting method	4 x M10 factory fitted

Lamp type	LED
Luminaire power	300W - 600W
Lamp colour	5000 K
Supply voltage	230v

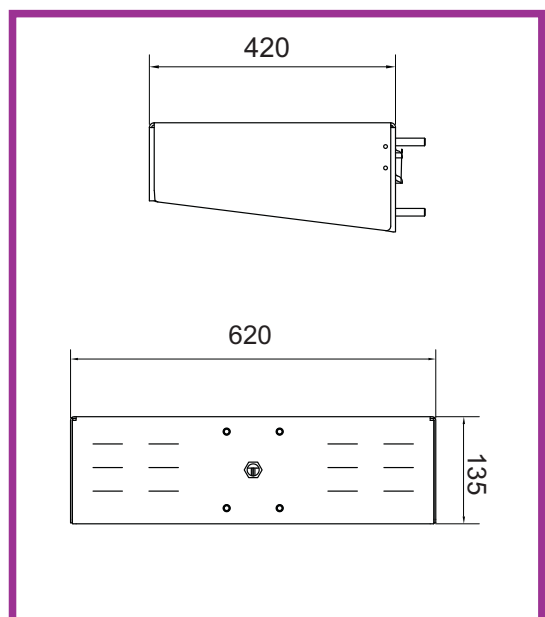
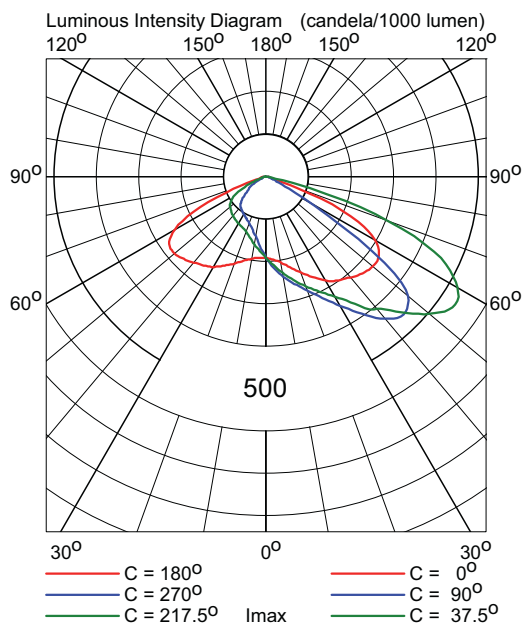
- ✓ LED low energy lighting
- ✓ Exceptional light control
- ✓ Designed for outdoor sports lighting
- ✓ Lightweight aluminium body
- ✓ Stainless steel components
- ✓ Computer designed optics
- ✓ Heavy duty mounting
- ✓ IP68 ingress protection for main elements
- ✓ Powder coat finish (RAL 6005) Green
-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

Product code:

MATCH-SLIM/LED

Options

/C - Alternative colour finish



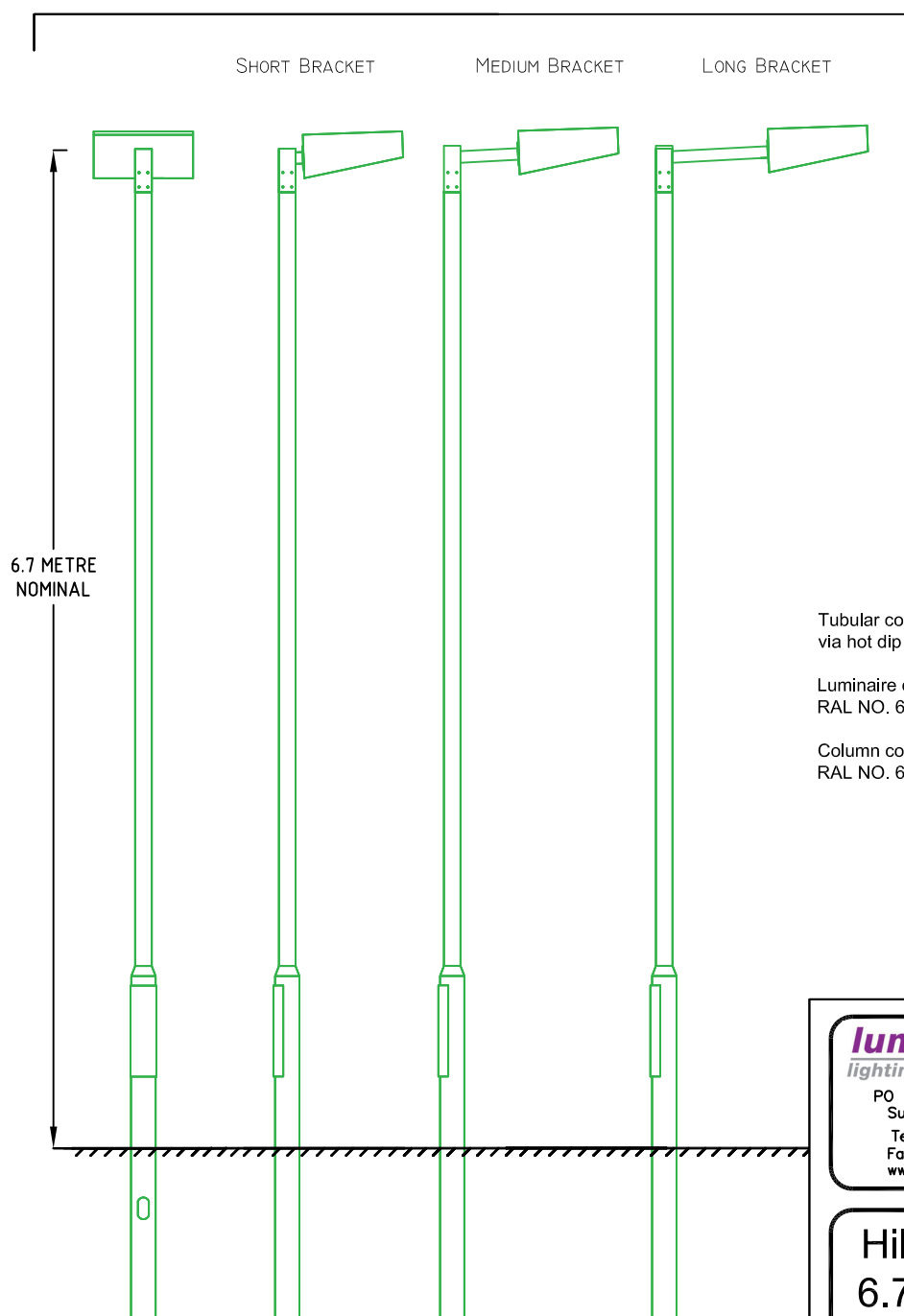
* Conditions apply
 ** Various optics available

luminance pro
 lighting systems

Tel: +44 (0)1276 855 666
 Fax: +44 (0)1276 855 999

info@luminancepro.co.uk
 www.luminancepro.co.uk

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

P0 Box 1345 Woking
Surrey GU24 9WL
Tel: 01276 855 666
Fax: 01276 855 999
www.luminancepro.co.uk

Hilux Column
6.7m Nominal
single door

Drawing No:
HLC067

Date
04/11/2015

Scale
1:50@A4

Sheet

1

TWIN LUMINAIRE MOUNTING

SHORT BRACKET

MEDIUM BRACKET

LONG BRACKET

6.7 METRE
NOMINAL

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

P0 Box 1345 Woking
Surrey GU24 9WL
Tel: 01276 855 666
Fax: 01276 855 999
www.luminancepro.co.uk

Hilux Column
6.7m Nominal
single door

Drawing No:
HLC067

Date:
04/11/2015

Scale:
1:50@A4

Sheet

1