

Sports Pitch Lighting

Installation : Hailsham Community College

Project number : 20014

Customer : Morgan Sindall

Processed by : DJE

Date : 29.06.2020

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

1 Luminaire data

1.1 Thorn, CHAMPION 264L-740 V2 VSP ANT (96633302)

1.1.1 Data sheet

Manufacturer: Thorn

96633302

CHAMPION 264L-740 V2 VSP ANT

A high performance LED floodlight with 60° asymmetrical light distribution from 264 LEDs. External control gear, to be ordered separately. Class I electrical, IP66, Impact strength: IK08. Body: die-cast aluminium, powder coated textured anthracite (close to RAL7043). Enclosure: 4mm thick, toughened flat glass. Visor: Matt (powder coated, anthracite). Luminaire fixed by single bolt through Ø22mm central hole, or twin bolts through Ø15mm holes at 200mm centres. Aiming via simple aiming device (to be ordered separately). Ideal for sports fields and stadium or area lighting. Low flicker operation (<1%) suitable for HDTV broadcasting. Complete with 4000K LED with Colour Rendering Index min.: 70.

Dimensions: 688 x 707 x 315 mm

Weight: 22.4 kg

Scx: 0.196 m²

Luminaire data

Absolute Photometry

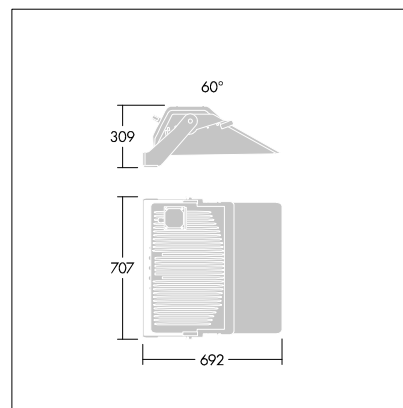
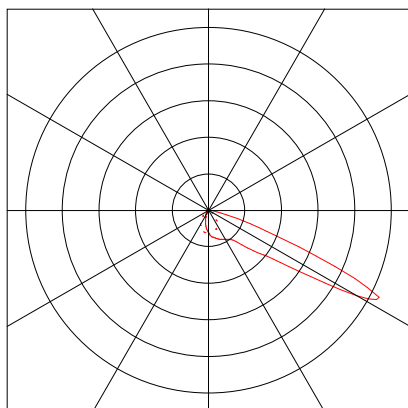
Luminaire efficacy : 117.82 lm/W
Classification : A20 ↓100.0% ↑0.0%
CIE Flux Codes : 32 63 98 100 100
UGR 4H 8H : 46.5 / 30.3
Power : 939 W
Luminous flux : 110635 lm

Equipped with

Quantity : 1
Designation :

Colour : 4000
Colour reproduction : 70

Dimensions : 688 mm x 707 mm x 315 mm



1 Luminaire data

1.2 Thorn, CHAMPION 264L-740 V2 VSR ANT (96633216)

1.2.1 Data sheet

Manufacturer: Thorn

96633216

CHAMPION 264L-740 V2 VSR ANT

A high performance LED floodlight with 60° asymmetrical light distribution from 264 LEDs. External control gear, to be ordered separately. Class I electrical, IP66, Impact strength: IK08. Body: die-cast aluminium, powder coated textured anthracite (close to RAL7043). Enclosure: 4mm thick, toughened flat glass. Visor: Specular (reflective). Luminaire fixed by single bolt through Ø22mm central hole, or twin bolts through Ø15mm holes at 200mm centres. Aiming via simple aiming device (to be ordered separately). Ideal for sports fields and stadium or area lighting. Low flicker operation (<1%) suitable for HDTV broadcasting. Complete with 4000K LED with Colour Rendering Index min.: 70.

Dimensions: 692 x 707 x 309 mm

Weight: 22.4 kg

Scx: 0.196 m²

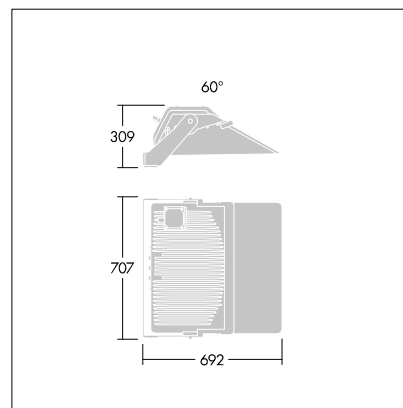
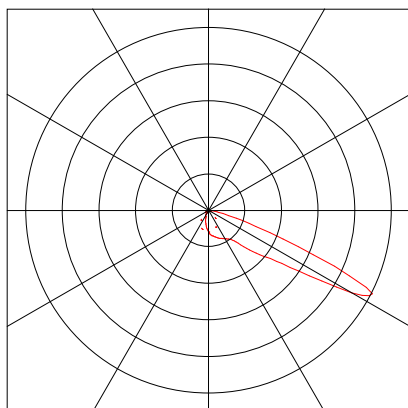
Luminaire data

Absolute Photometry
 Luminaire efficacy : 123.11 lm/W
 Classification : A20 ↓100.0% ↑0.0%
 CIE Flux Codes : 31 63 97 100 100
 UGR 4H 8H : 46.5 / 30.6
 Power : 939 W
 Luminous flux : 115601 lm

Equipped with

Quantity : 1
 Designation :
 Colour : 4000
 Colour reproduction : 70

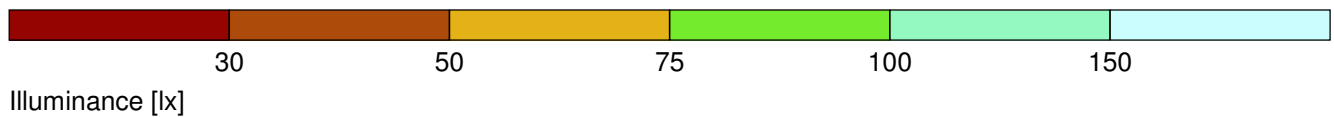
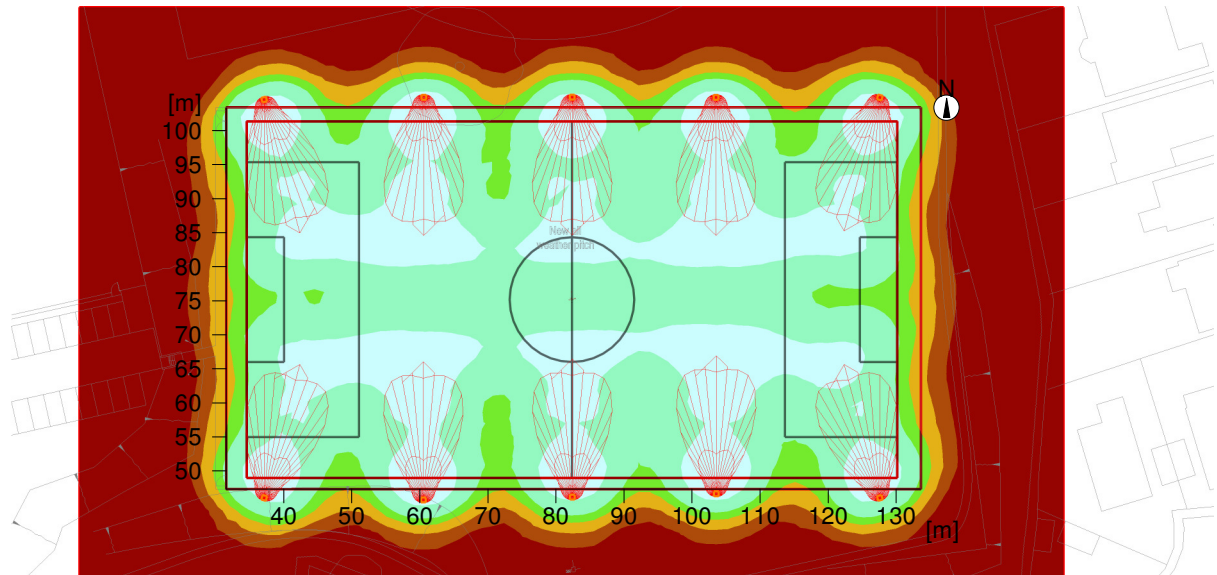
Dimensions : 692 mm x 707 mm x 309 mm



3 Pitch Ltg - Thorn (10 Columns)

3.2 Summary, Pitch Ltg - Thorn (10 Columns)

3.2.1 Result overview, Measuring area 1




General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot. centre) [m]:	11.85 m
Maintenance factor	0.80
Total luminous flux of all lamps	1156010 lm
Total power	9390 W
Total power per area (5712.00 m²)	1.64 W/m²

Illuminance

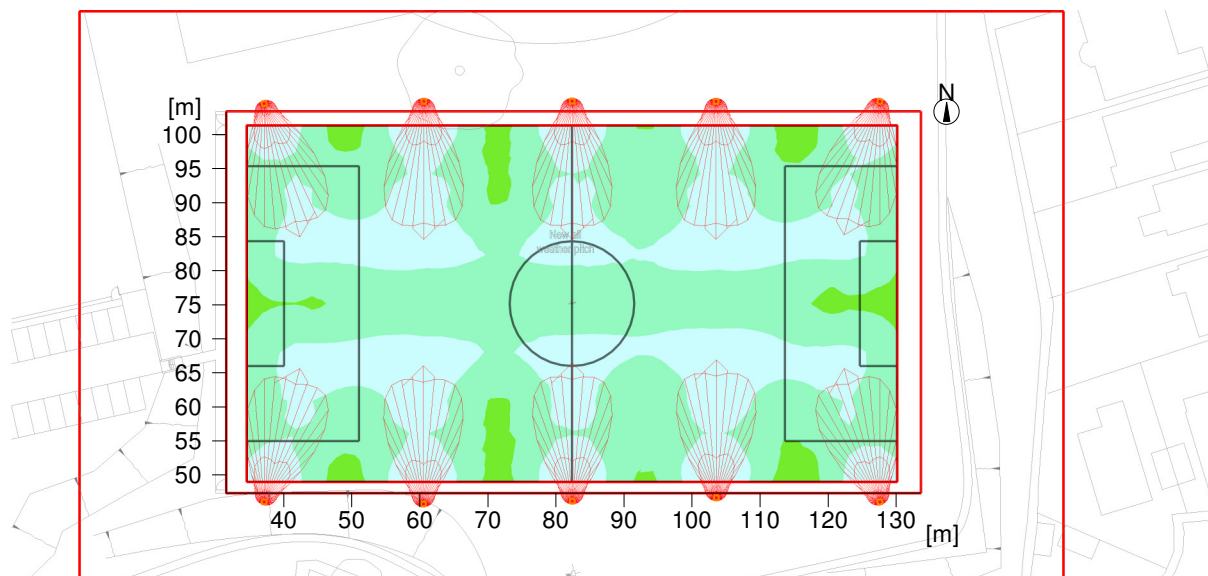
Average illuminance	Em	76 lx
Minimum illuminance	Emin	0 lx
Maximum illuminance	Emax	186 lx
Uniformity Uo	Emin/Em	1:208 (0)
Diversity Ud	Emin/Emax	1:512 (0)

Type No. Make

5 10 	Thorn	
	Order No.	: 96633216
	Luminaire name	: CHAMPION 264L-740 V2 VSR ANT
	Equipment	: 1 x CHPL_V2-740VSR 939 W / 115601 lm

3.2 Summary, Pitch Ltg - Thorn (10 Columns)

3.2.2 Result overview, Sports ground 1.1



Illuminance [lx]

General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot. centre) [m]:	11.85 m
Maintenance factor	0.80
Total luminous flux of all lamps	1156010 lm
Total power	9390 W
Total power per area (5712.00 m²)	1.64 W/m² (1.24 W/m²/100lx)

Illuminance

Average illuminance	Em	132 lx
Minimum illuminance	Emin	88 lx
Maximum illuminance	Emax	184 lx
Uniformity Uo	Emin/Em	1:1.5 (0.67)
Diversity Ud	Emin/Emax	1:2.09 (0.48)

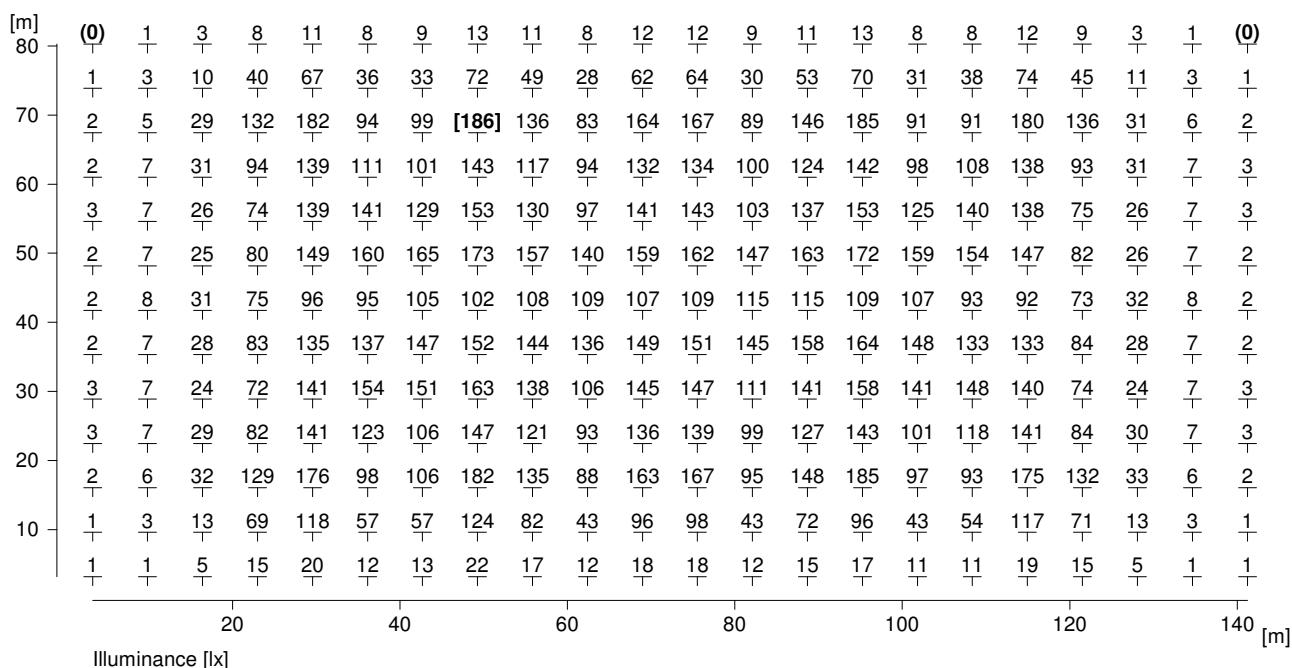
Type No. Make

<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">5</div> <div style="width: 15px; height: 15px; background-color: orange; border: 1px solid black; margin-right: 5px;"></div> <div style="margin-right: 10px;">10</div> </div>	Thorn	
	Order No.	: 96633216
	Luminaire name	: CHAMPION 264L-740 V2 VSR ANT
	Equipment	: 1 x CHPL_V2-740VSR 939 W / 115601 lm

3 Pitch Ltg - Thorn (10 Columns)

3.3 Calculation results, Pitch Ltg - Thorn (10 Columns)

3.3.2 Table, Measuring area 1 (E)

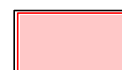


Height reference plane	:	0.00 m
Average illuminance	Em	: 76 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 186 lx
Uniformity Uo	Emin/Em	: 1 : 207.82 (0.00)
Diversity Ud	Emin/Emax	: 1 : 511.94 (0.00)

3.3 Calculation results, Pitch Ltg - Thorn (10 Columns)

3.3.3 Table, Sports ground 1.1 (E)

[m]	170	148	95	94	144	172	135	90	107	165	167	110	97	144	172	135	89	93	145	167
95	127	142	115	102	132	144	123	94	101	140	141	105	99	131	145	125	98	114	143	127
90	130	147	138	123	151	154	132	96	108	144	145	112	102	140	155	145	120	137	145	128
85	125	169	168	165	175	181	155	130	140	160	162	145	138	161	182	170	159	164	166	125
80	116	128	125	133	141	136	136	130	132	135	137	137	137	141	139	140	129	119	121	112
75	91	95	96	102	104	99	106	108	109	105	106	114	116	115	106	110	103	93	91	(88)
70	118	132	129	137	145	141	138	133	138	144	146	144	144	154	158	153	137	126	129	116
65	124	168	168	165	174	179	151	125	135	157	157	138	129	154	175	165	154	161	165	123
60	132	145	137	121	151	153	130	93	106	147	148	110	98	142	157	145	115	133	144	131
55	128	141	114	102	131	143	121	93	100	138	139	103	99	127	144	122	97	111	139	127
	173	150	95	94	146	175	135	89	109	170	171	112	97	152	[184]	142	(88)	92	149	172
	40	50			60		70		80		90		100		110		120			
	Illuminance [lx]																			



Height reference plane	:	0.00 m
Average illuminance	Em	: 132 lx
Minimum illuminance	Emin	: 88 lx
Maximum illuminance	Emax	: 184 lx
Uniformity Uo	Emin/Em	: 1 : 1.50 (0.67)
Diversity Ud	Emin/Emax	: 1 : 2.09 (0.48)