

Installation : EQUESTRIAN CENTRE

Project number : P19351

Customer : NEWHEY AND EYRE BURNLEY

Processed by : PAUL

Date : 16.05.2016

Calculations have been performed according to CIBSE standards and good design practice. Some differences between measured values and calculated results may occur due to calculation methods, testing procedures, component performance, field conditions and assumptions used to generate the calculations such as room details. These differences may typically be +/- 10%. Emergency lighting calculations are only indicative and thus no liability for non-performance will be accepted.

The information presented is for guidance only and Hilclare Ltd accepts no liability for non-performance, or to be held responsible for the subsequent use of this information.

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

1 Luminaire data

1.1 Hilclare, CORUNA (AFC200LED40)

LED by DESIGN

1.1.1 Data sheet

Manufacturer: Hilclare



AFC200LED40 Area Floods CORUNA

CORUNA IP65 LED floodlight. Black powder coated aluminium body and frame, steel adjustable bracket, clear glass lens. Ideal for lighting of paths, gardens, car parks, entrances and many commercial areas where efficiency is important.

No attachment fitted.

200W LED 4000K engine.

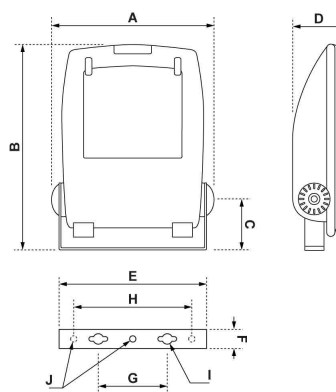
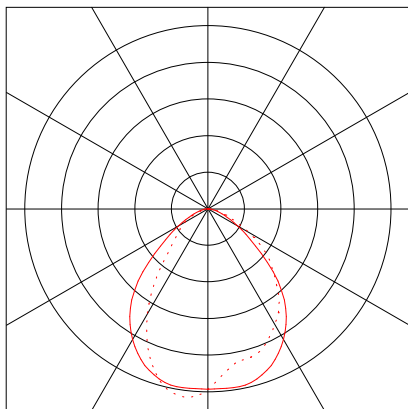
All CORUNA luminaires are c/w LED engine & driver.

Luminaire data

Absolute Photometry	
Luminaire efficacy	: 91.63 lm/W
Classification	: A50 ↓100.0% ↑0.0%
CIE Flux Codes	: 62 90 99 100 100
UGR 4H 8H (20%, 50%, 70%)	
C0 / C90	: 26.7 / 24.3
Control gear	: electronic ballast
System power	: 202 W
Length	: 625 mm
Width	: 480 mm
Height	: 160 mm

Equipped with

Quantity	: 1
Designation	: LED
Colour	: 4000K
Luminous flux	: 18510 lm
Colour reproduction	: 80



Object :
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1 Luminaire data

1.2 Hilclare, CORUNA (AFC50LED40)

LED by DESIGN

1.2.1 Data sheet

Manufacturer: Hilclare



AFC50LED40 Area Floods CORUNA

CORUNA IP65 LED floodlight. Black powder coated aluminium body and frame, steel adjustable bracket, clear glass lens. Ideal for lighting of paths, gardens, car parks, entrances and many commercial areas where efficiency is important.

No attachment fitted.

50W LED 4000K engine.

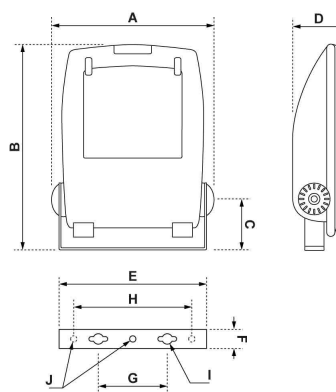
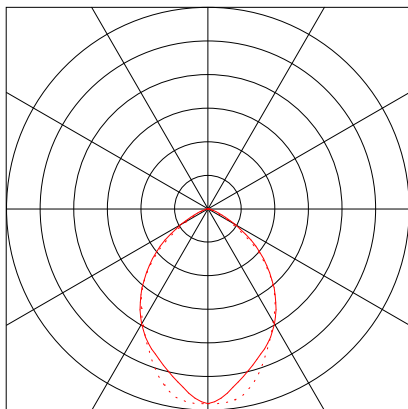
All CORUNA luminaires are c/w LED engine & driver.

Luminaire data

Absolute Photometry
Luminaire efficacy : 97.22 lm/W
Classification : A50 ↓100.0% ↑0.0%
CIE Flux Codes : 63 93 100 100 100
UGR 4H 8H (20%, 50%, 70%)
C0 / C90 : 25.0 / 24.2
Control gear : electronic ballast
System power : 50.3 W
Length : 325 mm
Width : 395 mm
Height : 110 mm

Equipped with

Quantity : 1
Designation : LED
Colour : 4000K
Luminous flux : 4890 lm
Colour reproduction : 80



Object :
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1 Luminaire data

1.3 Hilclare, ALICANTE- LED (DLA232LED40)

LED by DESIGN

1.3.1 Data sheet

Manufacturer: Hilclare

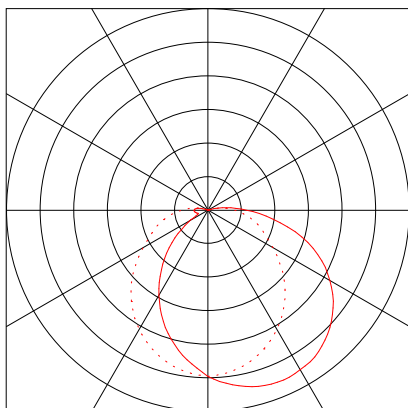
DLA232LED40 ALICANTE- LED

Luminaire data

Luminaire efficiency : 16.6%
Luminaire efficacy : 21 lm/W
Classification : A31 ↓94.6% ↑5.4%
CIE Flux Codes : 42 71 89 95 17
UGR 4H 8H (20%, 50%, 70%)
C0 / C90 : 24.0 / 20.3
Control gear :
System power : 24.5 W
Diameter : 355 mm
Height : 115 mm

Equipped with

Quantity : 1
Designation : LED
Colour : 4000K
Luminous flux : 3100 lm
Colour reproduction : 1B



2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.1.1 Luminaire data/Room elements

Product data:

Type No.\Make

1	16		Hilclare	
			Order No.	: AFC200LED40/
			Luminaire name	: CORUNA
			Equipment	: 1 x LED 200W / 18510 lm
2	14		Order No.	: AFC50LED40/
			Luminaire name	: CORUNA
			Equipment	: 1 x LED 50W / 4890 lm
4	6		Order No.	: DLA232LED40
			Luminaire name	: ALICANTE- LED
			Equipment	: 1 x LED / 3100 lm

No.	Centre point			Rotation angle			Target coordinates		
	X [m]	Y [m]	Z [m]	Z [°]	C0 [°]	C90 [°]	Xa [m]	Ya [m]	Za [m]
Hilclare CORUNA AFC200LED40									
1x									
1.1	54.53	22.91	7.87	20.00	-35.00	0.00	56.42	17.74	0.00
1.2	39.47	22.91	7.87	340.00	-35.00	0.00	37.58	17.74	0.00
1.3	24.47	22.91	7.87	340.00	-35.00	0.00	22.58	17.74	0.00
1.4	9.47	22.91	7.87	340.00	-35.00	0.00	7.58	17.74	0.00
1.5	55.53	22.91	7.87	20.00	-35.00	0.00	57.42	17.74	0.00
1.6	40.53	22.91	7.87	20.00	-35.00	0.00	42.42	17.74	0.00
1.7	25.53	22.91	7.87	20.00	-35.00	0.00	27.42	17.74	0.00
1.8	10.47	22.91	7.87	340.00	-35.00	0.00	8.58	17.74	0.00
1.9	9.47	1.59	7.87	200.00	-35.00	0.00	7.58	6.76	0.00
1.10	24.47	1.59	7.87	200.00	-35.00	0.00	22.58	6.76	0.00
1.11	39.47	1.59	7.87	200.00	-35.00	0.00	37.58	6.76	0.00
1.12	54.53	1.59	7.87	160.00	-35.00	0.00	56.42	6.76	0.00
1.13	10.47	1.59	7.87	200.00	-35.00	0.00	8.58	6.76	0.00
1.14	25.53	1.59	7.87	160.00	-35.00	0.00	27.42	6.76	0.00
1.15	40.53	1.59	7.87	160.00	-35.00	0.00	42.42	6.76	0.00
1.16	55.53	1.59	7.87	160.00	-35.00	0.00	57.42	6.76	0.00
Hilclare CORUNA AFC50LED40									
1x									
28	32.03	66.45	7.90	300.00	0.00	-30.00	34.31	62.50	0.00
25	69.00	66.43	7.91	270.00	0.00	-38.00	69.00	60.25	0.00
27	52.50	68.44	7.90	270.00	0.00	-30.00	52.50	63.88	0.00
20	56.44	47.50	7.90	180.00	0.00	-30.00	51.88	47.50	0.00
22	56.44	35.00	7.90	180.00	0.00	-30.00	51.88	35.00	0.00
31	40.06	23.94	7.90	90.00	0.00	-30.00	40.06	28.50	0.00
32	24.99	23.78	7.90	90.00	0.00	-30.00	25.00	28.35	0.00
33	10.06	23.78	7.90	90.00	0.00	-30.00	10.06	28.35	0.00
34	55.02	23.78	7.90	90.00	0.00	-30.00	55.02	28.35	0.00
24	17.29	48.75	7.90	0.00	0.00	-30.00	21.85	48.75	0.00
30	12.22	34.78	7.90	0.00	0.00	-30.00	16.78	34.78	0.00
18	85.00	66.43	7.91	270.00	0.00	-38.00	85.00	60.25	0.00
19	101.50	66.43	7.91	270.00	0.00	-38.00	101.50	60.25	0.00
29	116.43	57.23	7.91	180.00	0.00	-38.00	110.25	57.23	0.00
Hilclare ALICANTE- LED DLA232LED40									
35	89.49	52.16	2.50	270.00	0.00	90.00	89.49	57.52	0.00
36	80.63	52.10	2.50	270.00	0.00	90.00	80.63	57.47	0.00

2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.1.1 Luminaire data/Room elements

37	62.50	50.33	2.50	270.00	0.00	90.00	62.50	55.69	0.00
38	72.50	50.33	2.50	270.00	0.00	90.00	72.50	55.69	0.00
39	97.00	50.27	2.50	270.00	0.00	90.00	97.00	55.63	0.00
40	107.00	50.27	2.50	270.00	0.00	90.00	107.00	55.63	0.00

Structural elements

Virtual measuring surface

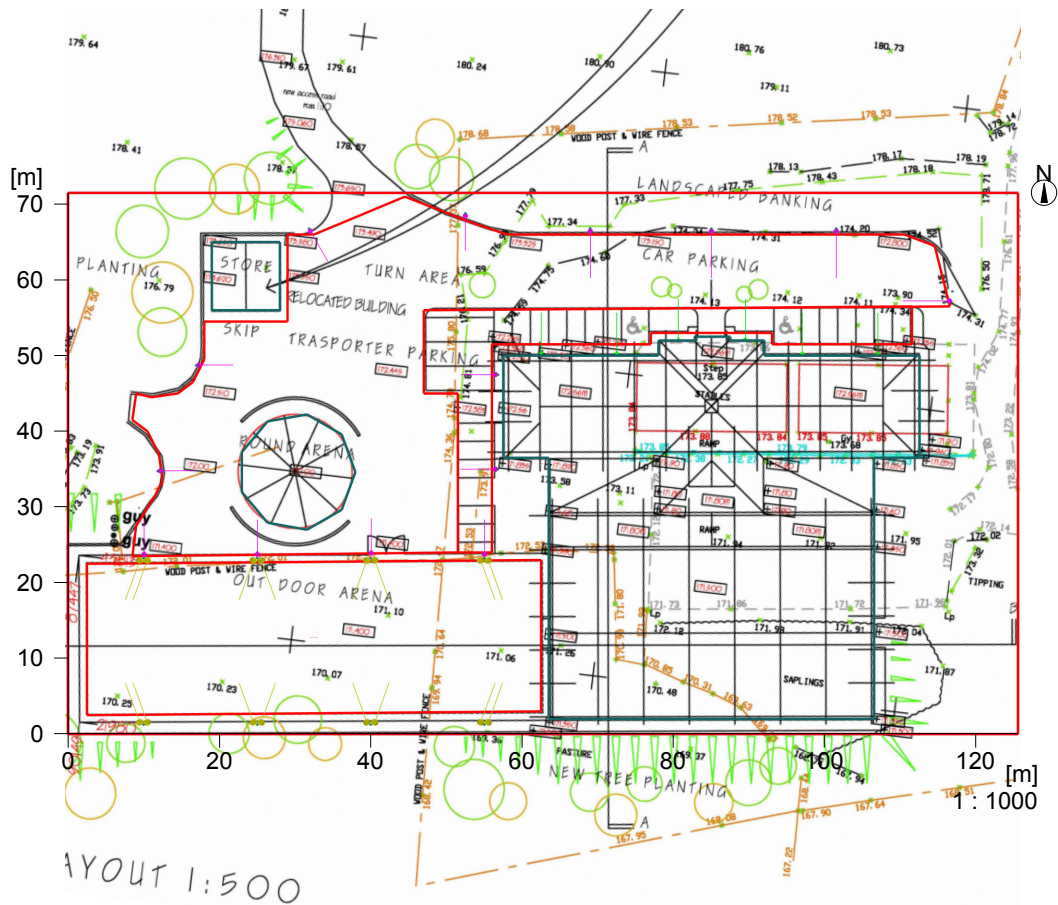
No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle L axis	Q axis
Ref. plane 1.1	0.00	71.50	0.00	125.50	71.50	270.00	0.00	0.00
OUTDOOR ARENA								
m 1	2.50	22.50	0.00	60.33	20.50	0.48	0.00	0.00
CAR PARKING								
m 3	47.00	56.00	0.00	64.83	32.57	0.44	0.00	0.00
yard								
m 4	18.00	54.50	0.00	108.00	47.50	0.00	0.00	0.00

Others

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle L axis	Q axis
MAIN BUILDING								
A 1	57.50	50.00	0.00	55.00	50.50	0.00	0.00	0.00
ROUND ARENA								
A 2	22.50	27.00	0.00	15.00	15.23	0.00	0.00	0.00
STORE								
A 2	19.00	65.00	0.00	9.00	9.00	0.00	0.00	0.00
Pi 1	10.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 9	16.92	48.71	0.00	0.10	0.10	0.00	0.00	0.00
Pi 18	11.85	34.74	0.00	0.10	0.10	0.00	0.00	0.00
Pi 10	31.85	66.79	0.00	0.10	0.10	0.00	0.00	0.00
Pi 11	52.49	68.81	0.00	0.10	0.10	0.00	0.00	0.00
Pi 12	68.98	66.82	0.00	0.10	0.10	0.00	0.00	0.00
Pi 13	85.00	66.77	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 14	101.49	66.79	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 15	116.83	58.49	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 16	56.81	47.46	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 17	56.81	35.00	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 5	10.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 2	25.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 6	25.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 3	40.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 7	40.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 4	55.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 8	55.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00

2.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.1.2 Floor plan

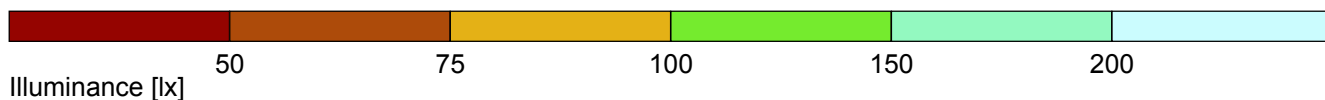
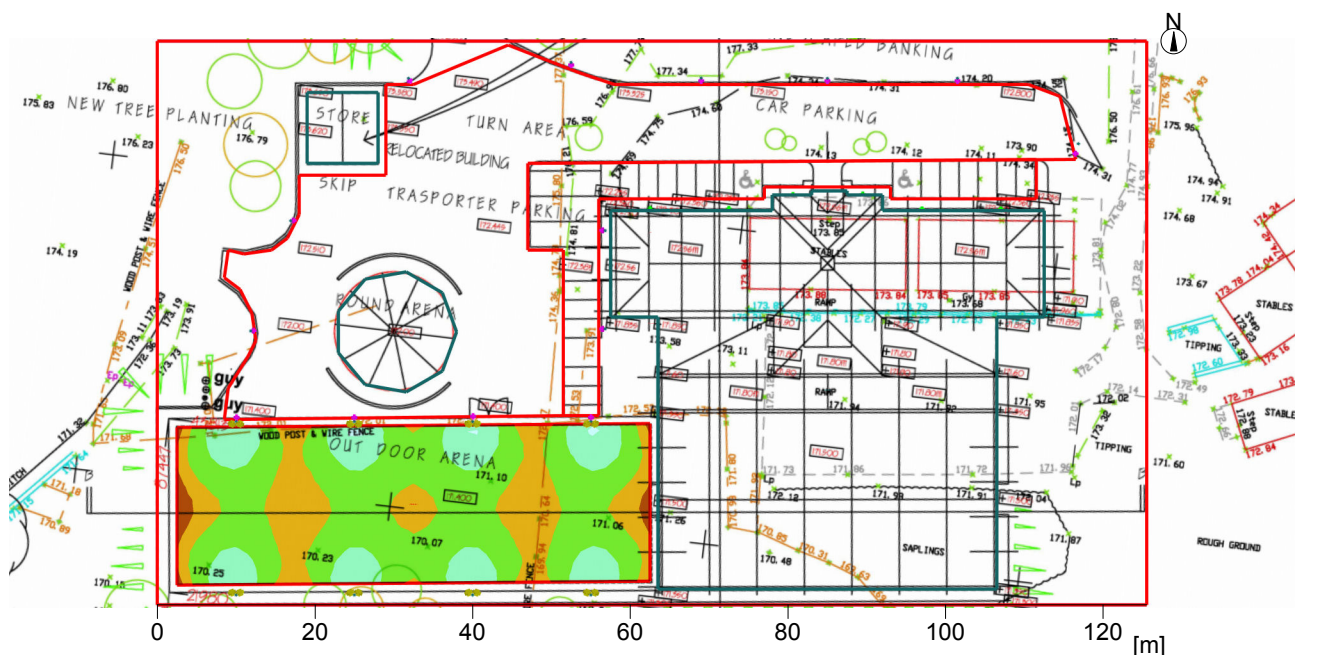


Object :
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2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.1 Result overview, OUTDOOR ARENA



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	383220 lm
Total power	4083.2 W
Total power per area (8973.25 m ²)	0.46 W/m ²

Illuminance

Average illuminance	Eav	122 lx
Minimum illuminance	Emin	65 lx
Maximum illuminance	Emax	206 lx
Uniformity Uo	Emin/Em	1:1.87 (0.53)
Diversity Ud	Emin/Emax	1:3.17 (0.32)

Type No.\Make

1	16		Hilclare
			Order No. : AFC200LED40/
			Luminaire name : CORUNA
			Equipment : 1 x LED 200W / 18510 lm
2	14		Order No. : AFC50LED40/
			Luminaire name : CORUNA
			Equipment : 1 x LED 50W / 4890 lm
4	6		Order No. : DLA232LED40
			Luminaire name : ALICANTE- LED
			Equipment : 1 x LED / 3100 lm

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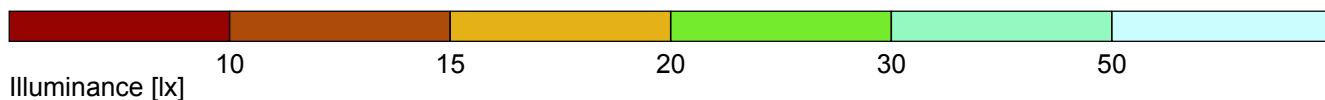
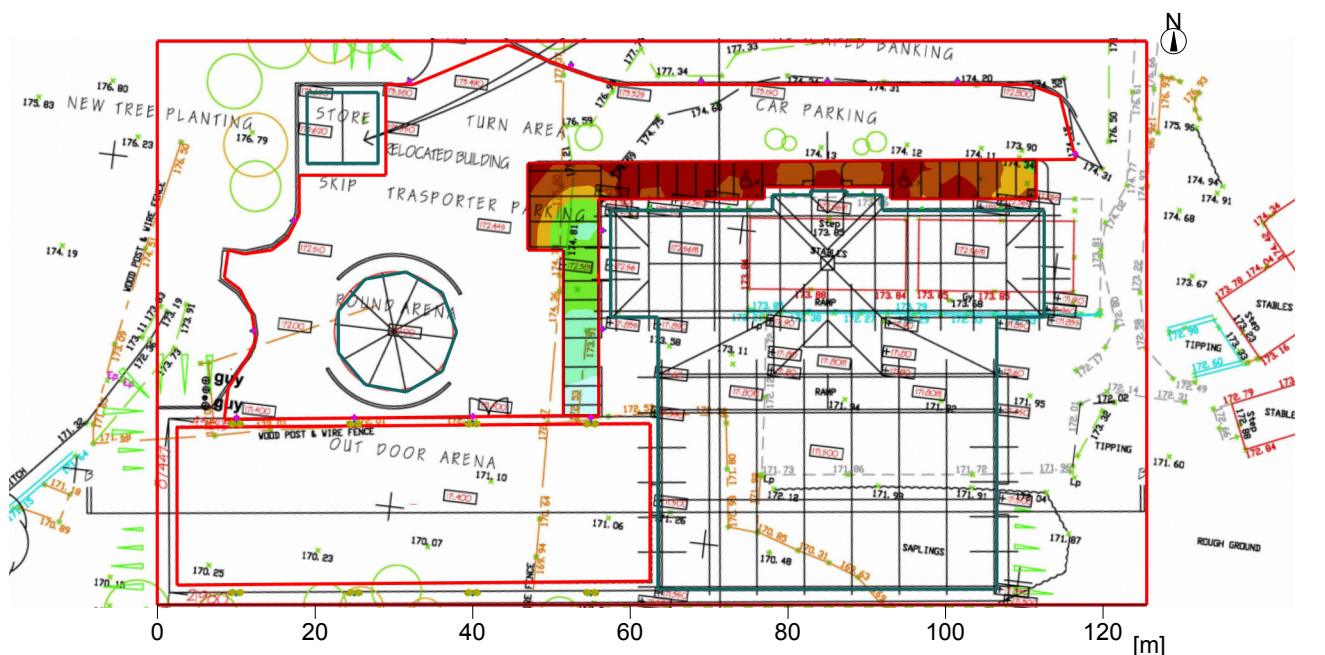
2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.1 Result overview, OUTDOOR ARENA

2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.2 Result overview, CAR PARKING



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	383220 lm
Total power	4083.2 W
Total power per area (8973.25 m ²)	0.46 W/m ²

Illuminance

Average illuminance	Eav	20 lx
Minimum illuminance	Emin	6 lx
Maximum illuminance	Emax	132 lx
Uniformity Uo	Emin/Em	1:3.48 (0.29)
Diversity Ud	Emin/Emax	1:23.1 (0.04)

Type No.\Make

1	16		Hilclare
			Order No. : AFC200LED40/
			Luminaire name : CORUNA
			Equipment : 1 x LED 200W / 18510 lm
2	14		Order No. : AFC50LED40/
			Luminaire name : CORUNA
			Equipment : 1 x LED 50W / 4890 lm
4	6		Order No. : DLA232LED40
			Luminaire name : ALICANTE- LED
			Equipment : 1 x LED / 3100 lm

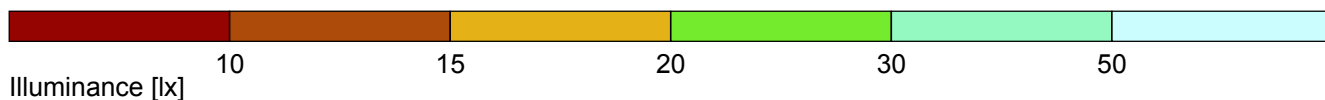
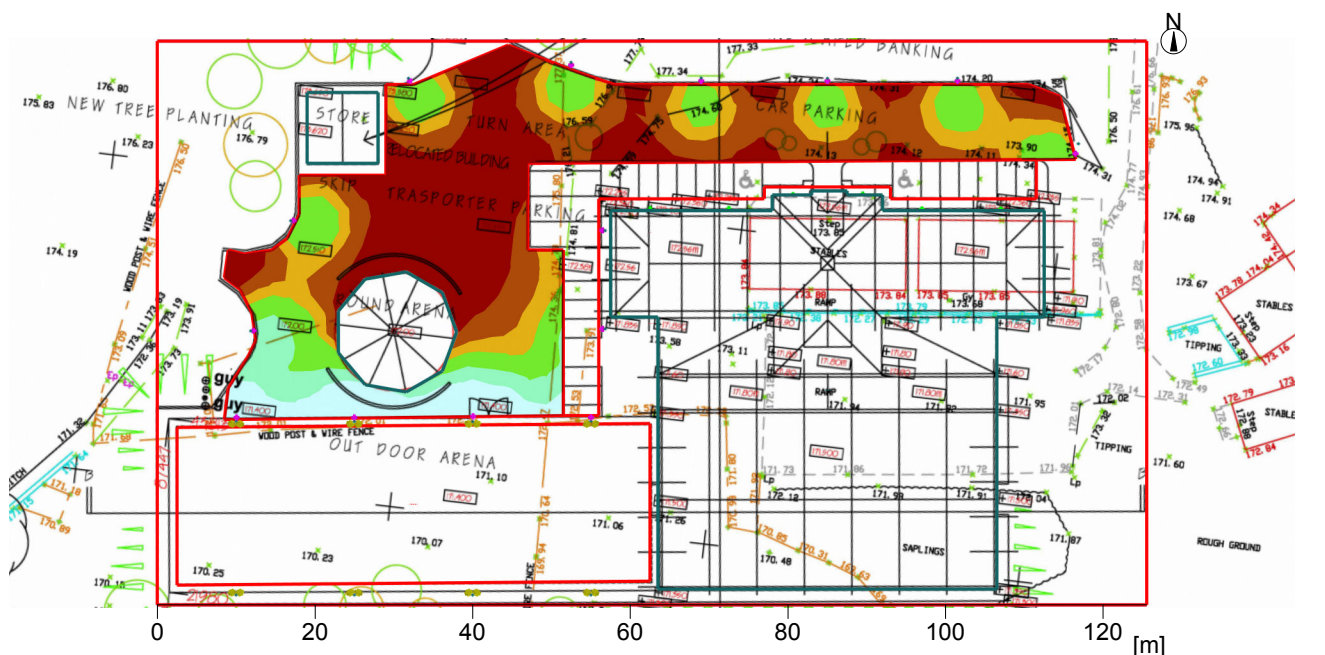
Object :
Installation : EQUESTRIAN CENTRE
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2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.2 Result overview, CAR PARKING

2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.3 Result overview, yard



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	383220 lm
Total power	4083.2 W
Total power per area (8973.25 m²)	0.46 W/m²

Illuminance

Average illuminance	Eav	21 lx
Minimum illuminance	Emin	3 lx
Maximum illuminance	Emax	133 lx
Uniformity Uo	Emin/Em	1:6.19 (0.16)
Diversity Ud	Emin/Emax	1:39.2 (0.03)

Type No.\Make

Hilclare		
1	16	Order No. : AFC200LED40/
		Luminaire name : CORUNA
		Equipment : 1 x LED 200W / 18510 lm
2	14	Order No. : AFC50LED40/
		Luminaire name : CORUNA
		Equipment : 1 x LED 50W / 4890 lm
4	6	Order No. : DLA232LED40
		Luminaire name : ALICANTE- LED
		Equipment : 1 x LED / 3100 lm

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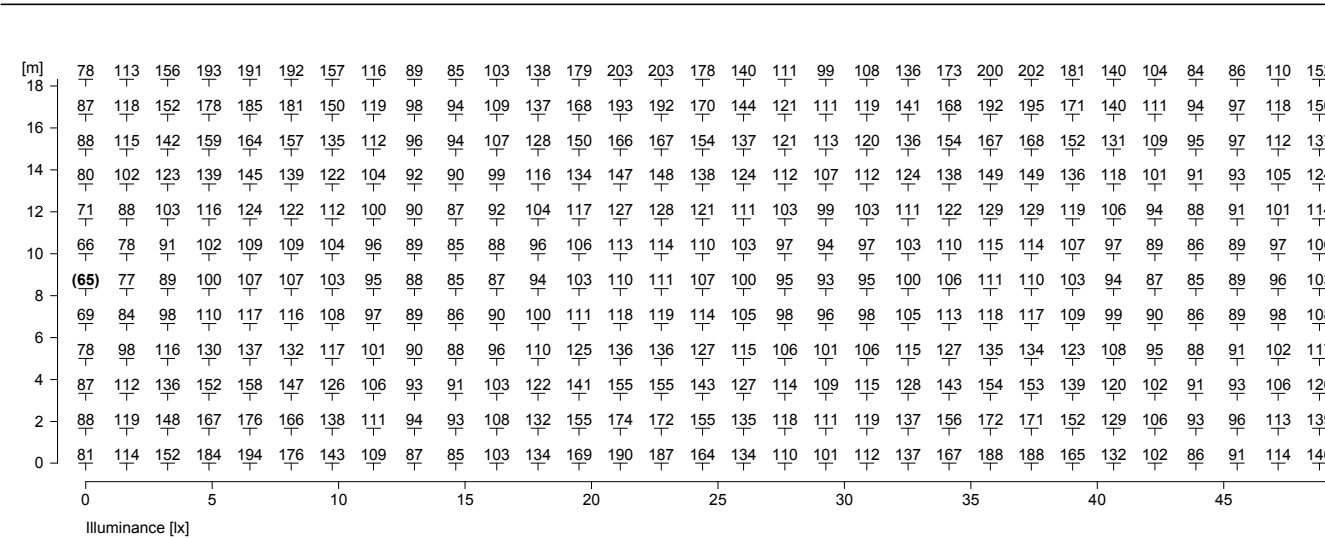
2.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS ON) LED by DESIGN

2.2.3 Result overview, yard

2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.1 Table, OUTDOOR ARENA (E)



Part1

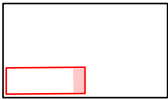
Height of the reference plane	: 0.00 m
Average illuminance	Eav : 122 lx
Minimum illuminance	Emin : 65 lx
Maximum illuminance	Emax : 206 lx
Uniformity Uo	Emin/Eav : 1 : 1.87 (0.53)
Diversity Ud	Emin/Emax : 1 : 3.17 (0.32)

2 SITE (OUTDOOR ARENA FLOODLIGHTS ON)

2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.1 Table, OUTDOOR ARENA (E)

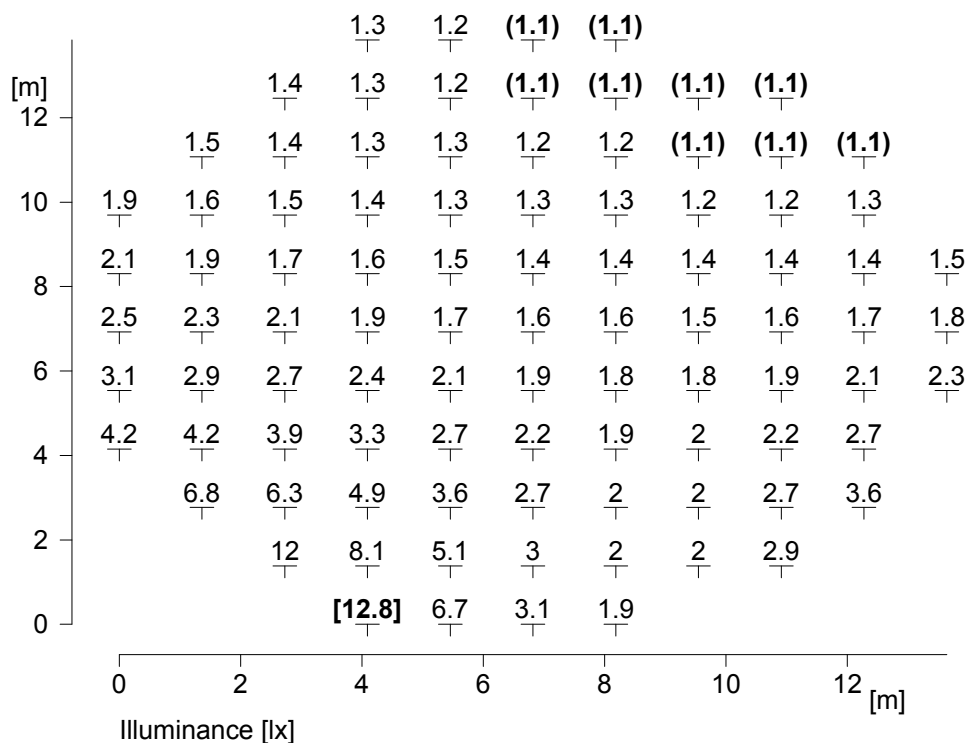
190	206	196	160	119	84
184	192	188	160	125	94
162	169	166	150	124	97
143	152	147	132	112	91
126	130	124	111	96	81
112	113	107	96	85	73
108	108	101	91	81	71
114	115	109	98	85	74
129	133	127	113	97	82
146	155	149	133	112	91
164	172	164	147	121	94
179	194	181	151	116	87
50	55 [m]				



Part2

2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.2 Table, ROUND ARENA (E)



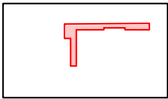
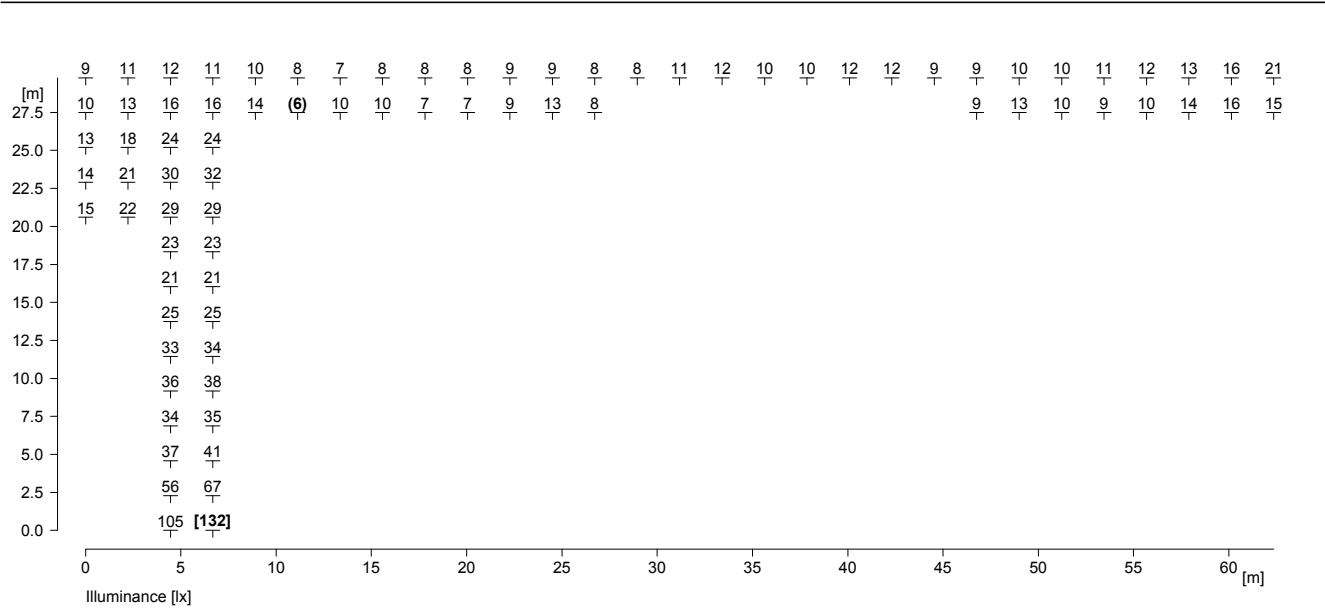
Average illuminance
 Minimum illuminance
 Maximum illuminance
 Uniformity Uo
 Diversity Ud

Eav : 2.4 lx
 Emin : 1.1 lx
 Emax : 12.8 lx
 Emin/Eav : 1 : 2.29 (0.44)
 Emin/Emax : 1 : 12.12 (0.08)



2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.3 Table, CAR PARKING (E)

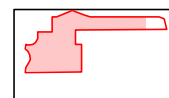
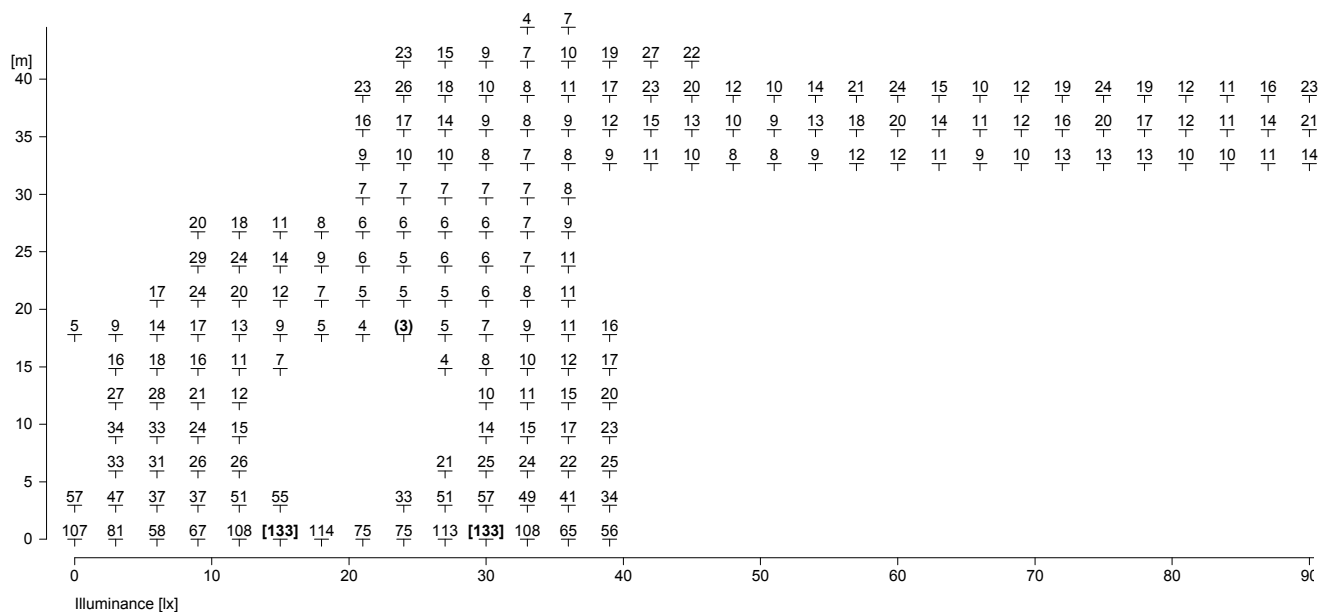


Height of the reference plane	: 0.00 m
Average illuminance	Eav : 20 lx
Minimum illuminance	Emin : 6 lx
Maximum illuminance	Emax : 132 lx
Uniformity Uo	Emin/Eav : 1 : 3.48 (0.29)
Diversity Ud	Emin/Emax : 1 : 23.08 (0.04)

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2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.4 Table, yard (E)



Part1

Height of the reference plane	: 0.00 m
Average illuminance	Eav : 21 lx
Minimum illuminance	Emin : 3 lx
Maximum illuminance	Emax : 133 lx
Uniformity Uo	Emin/Eav : 1 : 6.19 (0.16)
Diversity Ud	Emin/Emax : 1 : 39.21 (0.03)

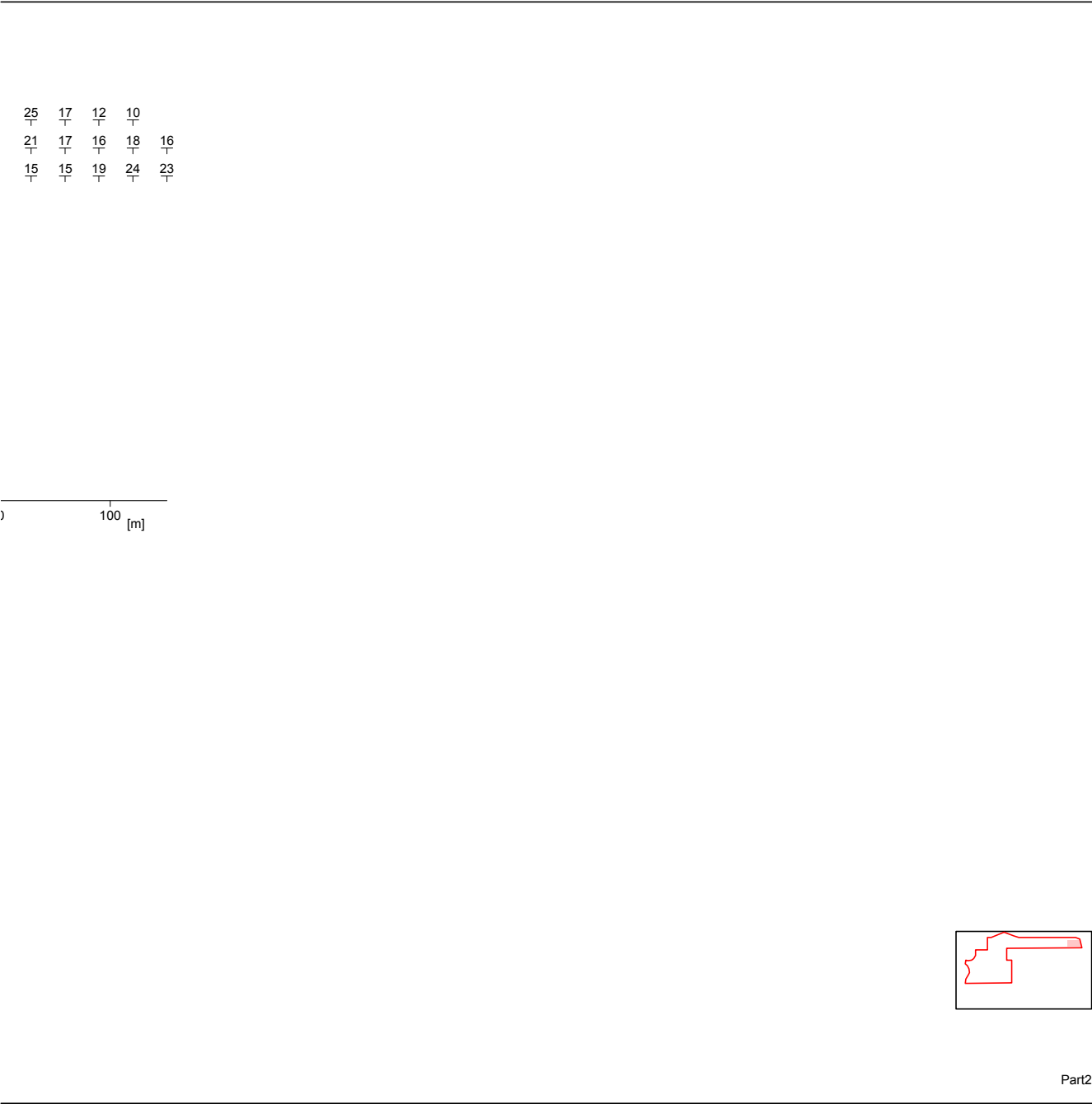
2.3

Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON)

DESIGN

2.3.4

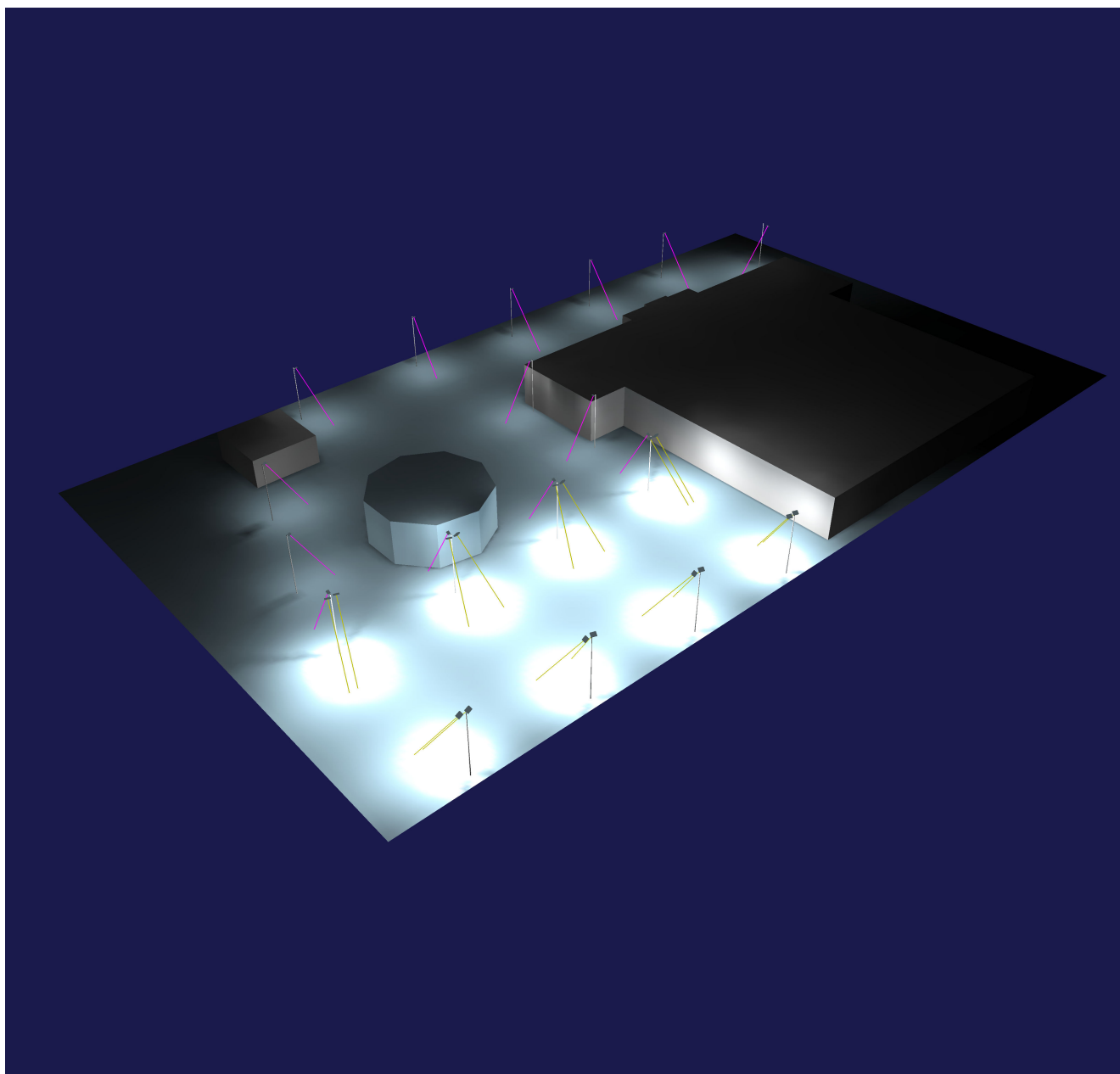
Table, yard (E)



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2.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS ON) DESIGN

2.3.5 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²

Maximum: : 56.9 cd/m²

3 SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

3.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) .ED by DESIGN

3.1.1 Luminaire data/Room elements

Product data:

Type No.\Make

1	16		Hilclare	
			Order No.	: AFC200LED40/
			Luminaire name	: CORUNA
			Equipment	: 1 x LED 200W / 18510 lm
2	13		Order No.	: AFC50LED40/
			Luminaire name	: CORUNA
			Equipment	: 1 x LED 50W / 4890 lm
4	6		Order No.	: DLA232LED40
			Luminaire name	: ALICANTE- LED
			Equipment	: 1 x LED / 3100 lm

No.	Centre point			Rotation angle			Target coordinates		
	X [m]	Y [m]	Z [m]	Z [°]	C0 [°]	C90 [°]	Xa [m]	Ya [m]	Za [m]
Hilclare CORUNA AFC200LED40									
1x									
x 1.1	54.53	22.91	7.87	20.00	-35.00	0.00	56.42	17.74	0.00
x 1.2	39.47	22.91	7.87	340.00	-35.00	0.00	37.58	17.74	0.00
x 1.3	24.47	22.91	7.87	340.00	-35.00	0.00	22.58	17.74	0.00
x 1.4	9.47	22.91	7.87	340.00	-35.00	0.00	7.58	17.74	0.00
x 1.5	55.53	22.91	7.87	20.00	-35.00	0.00	57.42	17.74	0.00
x 1.6	40.53	22.91	7.87	20.00	-35.00	0.00	42.42	17.74	0.00
x 1.7	25.53	22.91	7.87	20.00	-35.00	0.00	27.42	17.74	0.00
x 1.8	10.47	22.91	7.87	340.00	-35.00	0.00	8.58	17.74	0.00
x 1.9	9.47	1.59	7.87	200.00	-35.00	0.00	7.58	6.76	0.00
x 1.10	24.47	1.59	7.87	200.00	-35.00	0.00	22.58	6.76	0.00
x 1.11	39.47	1.59	7.87	200.00	-35.00	0.00	37.58	6.76	0.00
x 1.12	54.53	1.59	7.87	160.00	-35.00	0.00	56.42	6.76	0.00
x 1.13	10.47	1.59	7.87	200.00	-35.00	0.00	8.58	6.76	0.00
x 1.14	25.53	1.59	7.87	160.00	-35.00	0.00	27.42	6.76	0.00
x 1.15	40.53	1.59	7.87	160.00	-35.00	0.00	42.42	6.76	0.00
x 1.16	55.53	1.59	7.87	160.00	-35.00	0.00	57.42	6.76	0.00
Hilclare CORUNA AFC50LED40									
1x									
17	69.00	66.43	7.91	270.00	0.00	-38.00	69.00	60.25	0.00
28	32.03	66.45	7.90	300.00	0.00	-30.00	34.31	62.50	0.00
27	52.50	68.44	7.90	270.00	0.00	-30.00	52.50	63.88	0.00
20	56.33	42.90	7.90	180.00	0.00	-30.00	51.77	42.90	0.00
31	40.06	23.94	7.90	90.00	0.00	-30.00	40.06	28.50	0.00
32	24.99	23.78	7.90	90.00	0.00	-30.00	25.00	28.35	0.00
33	10.06	23.78	7.90	90.00	0.00	-30.00	10.06	28.35	0.00
34	55.02	23.78	7.90	90.00	0.00	-30.00	55.02	28.35	0.00
24	17.29	48.75	7.90	0.00	0.00	-30.00	21.85	48.75	0.00
30	12.22	34.78	7.90	0.00	0.00	-30.00	16.78	34.78	0.00
18	85.00	66.43	7.91	270.00	0.00	-38.00	85.00	60.25	0.00
19	101.50	66.43	7.91	270.00	0.00	-38.00	101.50	60.25	0.00
29	116.43	57.23	7.91	180.00	0.00	-38.00	110.25	57.23	0.00
Hilclare ALICANTE- LED DLA232LED40									
35	62.50	50.33	2.50	270.00	0.00	90.00	62.50	55.69	0.00
36	72.50	50.33	2.50	270.00	0.00	90.00	72.50	55.69	0.00
37	80.63	52.10	2.50	270.00	0.00	90.00	80.63	57.47	0.00

Object :
 Installation : EQUESTRIAN CENTRE
 Project number : P19351
 Date : 16.05.2016

3 SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

3.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) .ED by DESIGN

3.1.1 Luminaire data/Room elements

38	89.49	52.16	2.50	270.00	0.00	90.00	89.49	57.52	0.00
39	97.00	50.27	2.50	270.00	0.00	90.00	97.00	55.63	0.00
40	107.00	50.27	2.50	270.00	0.00	90.00	107.00	55.63	0.00

Structural elements

Virtual measuring surface

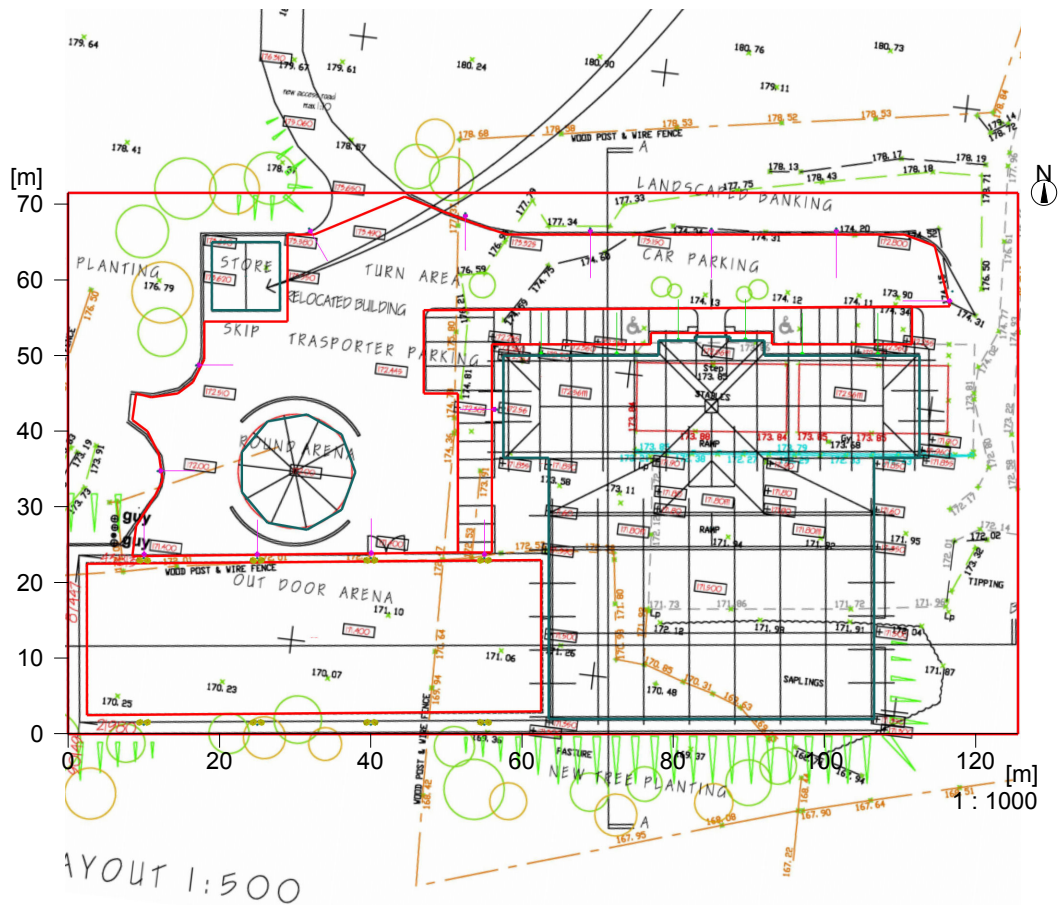
No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle L axis	Q axis
Ref. plane 1.1	0.00	71.50	0.00	125.50	71.50	270.00	0.00	0.00
OUTDOOR ARENA								
m 1	2.50	22.50	0.00	60.33	20.50	0.48	0.00	0.00
CAR PARKING								
m 3	47.00	56.00	0.00	64.83	32.57	0.44	0.00	0.00
yard								
m 4	18.00	54.50	0.00	108.00	47.50	0.00	0.00	0.00

Others

No.	xm[m]	ym[m]	zm[m]	Length	Width	z axis	Rotation angle L axis	Q axis
MAIN BUILDING								
A 1	57.50	50.00	0.00	55.00	50.50	0.00	0.00	0.00
ROUND ARENA								
A 2	22.50	27.00	0.00	15.00	15.23	0.00	0.00	0.00
STORE								
A 2	19.00	65.00	0.00	9.00	9.00	0.00	0.00	0.00
Pi 1	10.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 9	16.92	48.71	0.00	0.10	0.10	0.00	0.00	0.00
Pi 18	11.85	34.74	0.00	0.10	0.10	0.00	0.00	0.00
Pi 10	31.85	66.79	0.00	0.10	0.10	0.00	0.00	0.00
Pi 11	52.49	68.81	0.00	0.10	0.10	0.00	0.00	0.00
Pi 12	68.98	66.82	0.00	0.10	0.10	0.00	0.00	0.00
Pi 13	85.00	66.77	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 14	101.49	66.79	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 15	116.83	58.49	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 16	56.70	42.86	-0.00	0.10	0.10	0.00	0.00	0.00
Pi 5	10.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 2	25.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 6	25.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 3	40.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 7	40.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 4	55.00	1.25	0.00	0.10	0.10	0.00	0.00	0.00
Pi 8	55.00	23.25	0.00	0.10	0.10	0.00	0.00	0.00

3.1 Description, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) .ED by DESIGN

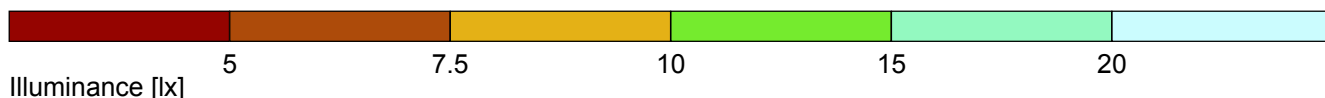
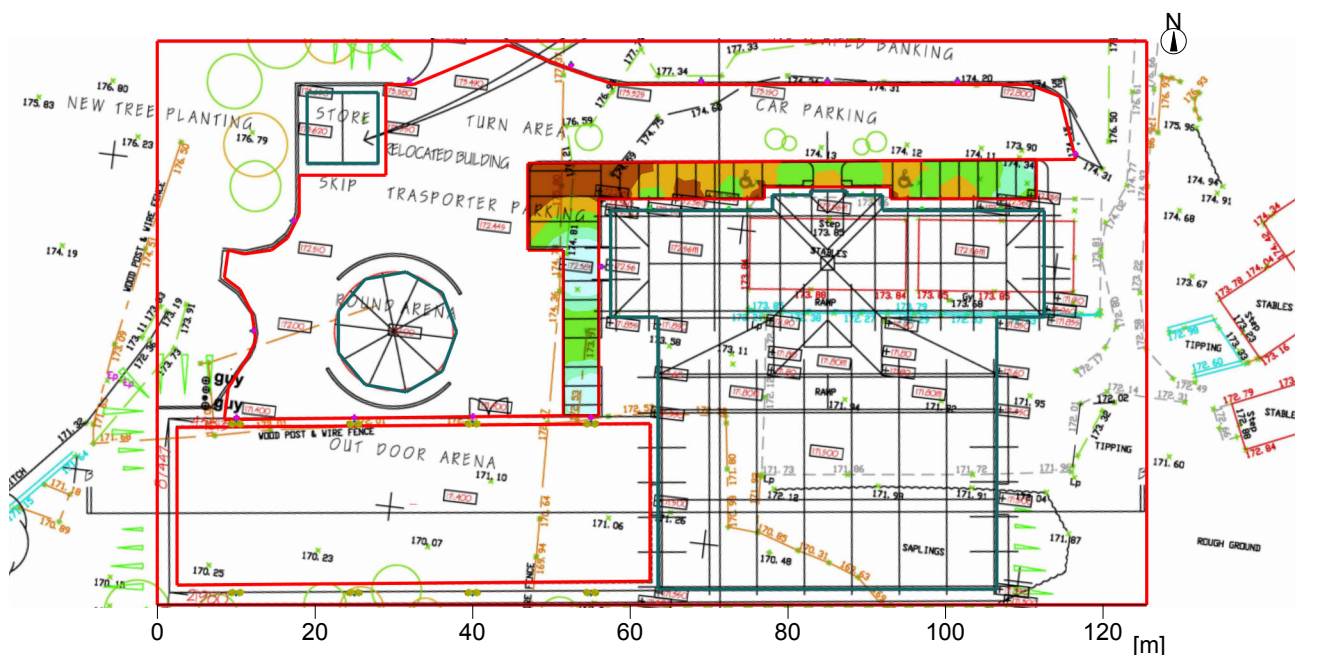
3.1.2 Floor plan



3 SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

3.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) LED by DESIGN

3.2.1 Result overview, CAR PARKING



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	82170 lm
Total power	800.9 W
Total power per area (8973.25 m²)	0.09 W/m²

Illuminance

Average illuminance	Eav	12.4 lx
Minimum illuminance	Emin	5.6 lx
Maximum illuminance	Emax	30.3 lx
Uniformity Uo	Emin/Em	1:2.21 (0.45)
Diversity Ud	Emin/Emax	1:5.37 (0.19)

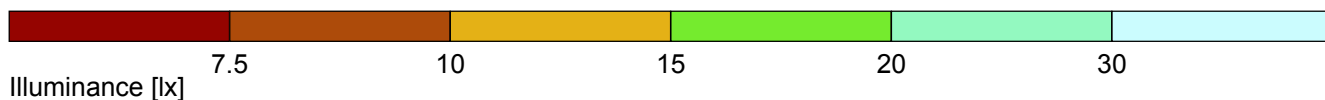
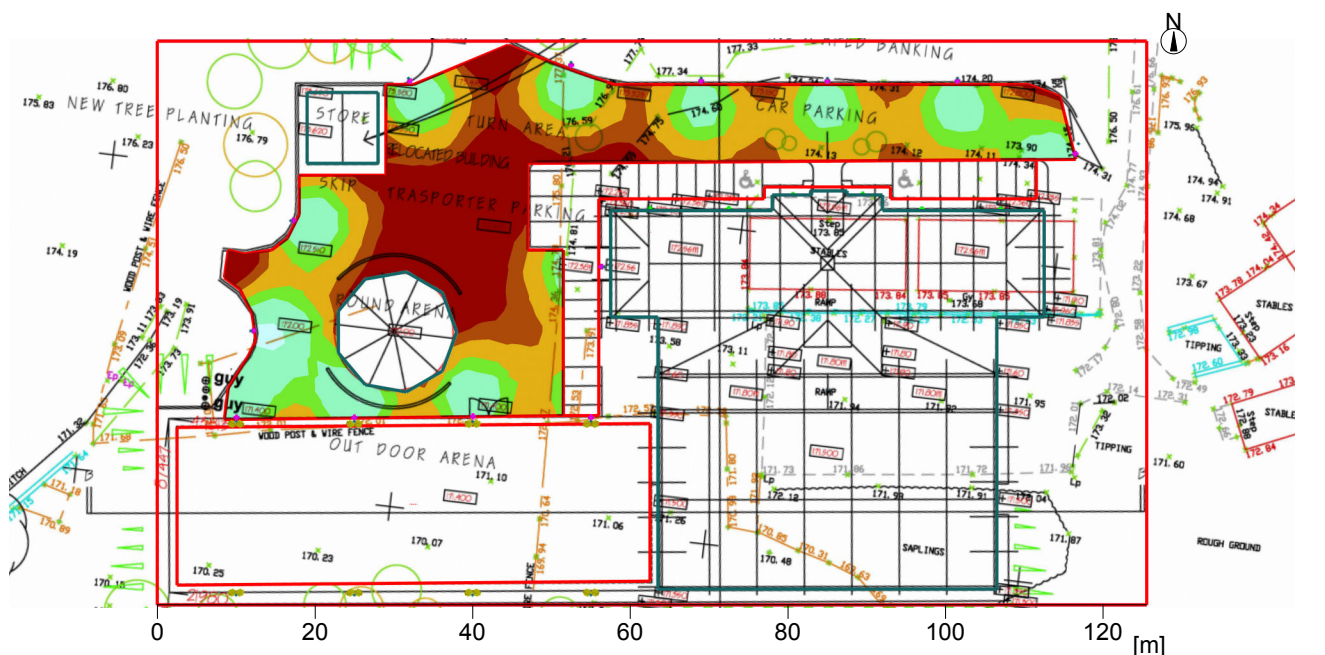
Type No.\Make

2	13	Hilclare	
		Order No.	: AFC50LED40/
		Luminaire name	: CORUNA
		Equipment	: 1 x LED 50W / 4890 lm
4	6	Hilclare	
		Order No.	: DLA232LED40
		Luminaire name	: ALICANTE- LED
		Equipment	: 1 x LED / 3100 lm

Object :
 Installation : EQUESTRIAN CENTRE
 Project number : P19351
 Date : 16.05.2016

3.2 Summary, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) LED by DESIGN

3.2.2 Result overview, yard



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	82170 lm
Total power	800.9 W
Total power per area (8973.25 m²)	0.09 W/m²

Illuminance

Average illuminance	Eav	13.5 lx
Minimum illuminance	Emin	2.9 lx
Maximum illuminance	Emax	31.7 lx
Uniformity Uo	Emin/Em	1:4.65 (0.21)
Diversity Ud	Emin/Emax	1:10.9 (0.09)

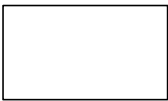
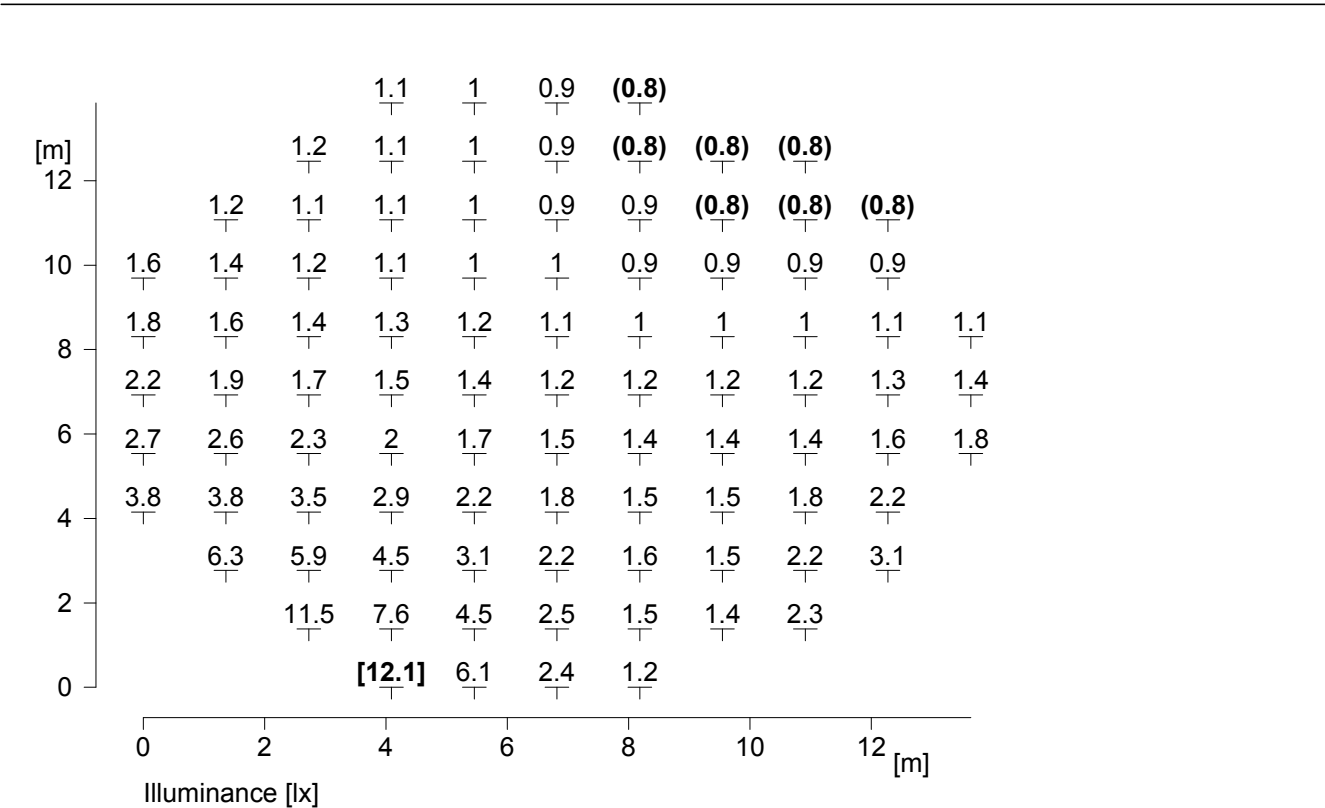
Type No.\Make

2	13	Hilclare	
		Order No.	: AFC50LED40/
		Luminaire name	: CORUNA
		Equipment	: 1 x LED 50W / 4890 lm
4	6		
		Order No.	: DLA232LED40
		Luminaire name	: ALICANTE- LED
		Equipment	: 1 x LED / 3100 lm

3 SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

3.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) DESIGN

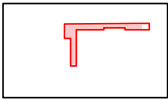
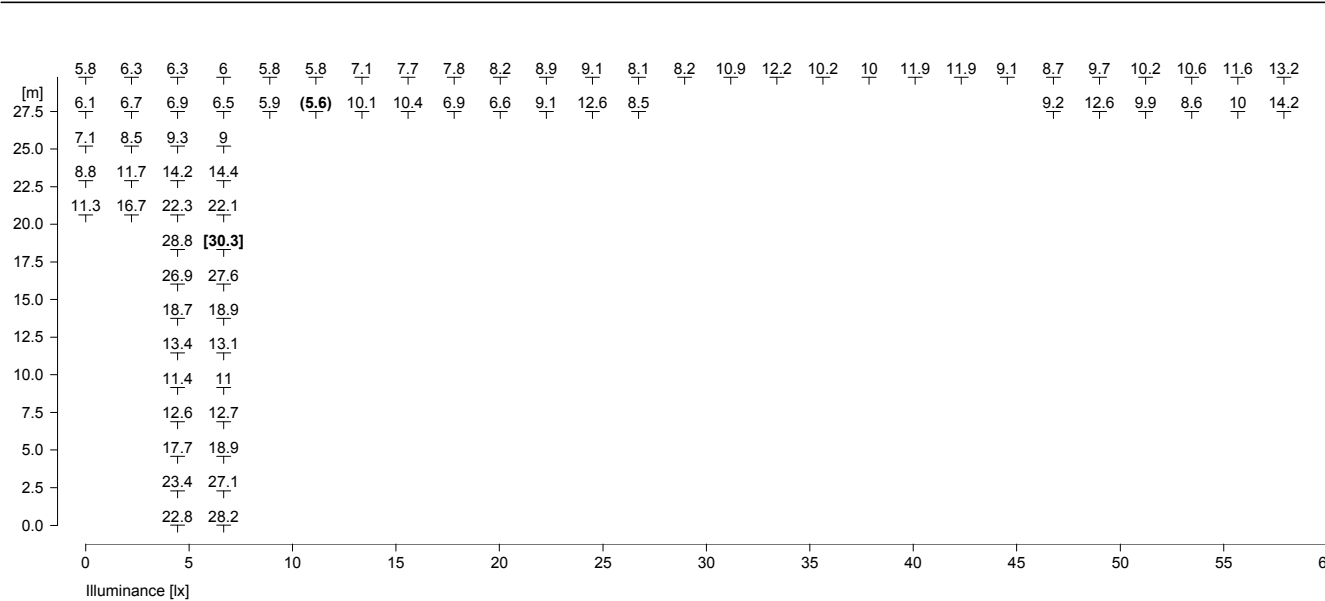
3.3.1 Table, ROUND ARENA (E)



Average illuminance	Eav	: 2 lx
Minimum illuminance	Emin	: 0.8 lx
Maximum illuminance	Emax	: 12.1 lx
Uniformity Uo	Emin/Eav	: 1 : 2.61 (0.38)
Diversity Ud	Emin/Emax	: 1 : 15.62 (0.06)

3.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) DESIGN

3.3.2 Table, CAR PARKING (E)



Part1

Height of the reference plane	: 0.00 m
Average illuminance	Eav : 12.4 lx
Minimum illuminance	Emin : 5.6 lx
Maximum illuminance	Emax : 30.3 lx
Uniformity Uo	Emin/Eav : 1 : 2.21 (0.45)
Diversity Ud	Emin/Emax : 1 : 5.37 (0.19)

3.3

Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

DESIGN

3.3.2

Table, CAR PARKING (E)

16

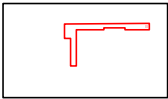
20.5

15.9

15.4

10

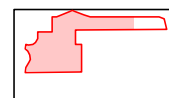
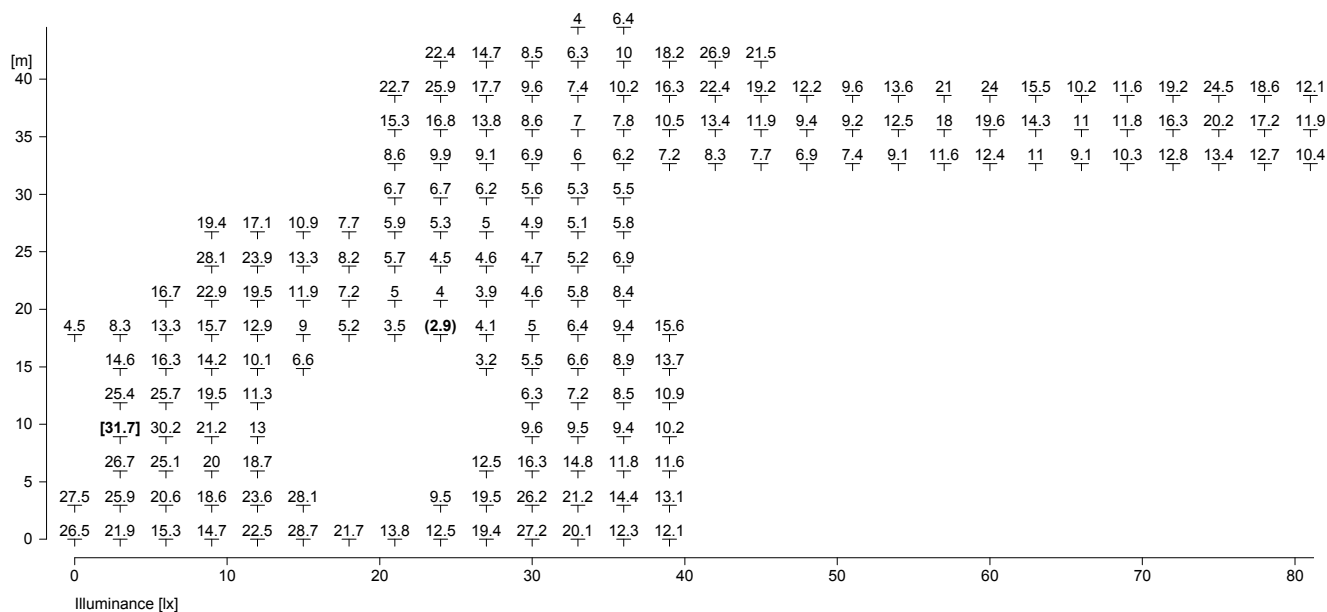
[m]



Part2

3.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) DESIGN

3.3.3 Table, yard (E)



Part1

Height of the reference plane	: 0.00 m
Average illuminance	Eav : 13.5 lx
Minimum illuminance	Emin : 2.9 lx
Maximum illuminance	Emax : 31.7 lx
Uniformity Uo	Emin/Eav : 1 : 4.65 (0.21)
Diversity Ud	Emin/Emax : 1 : 10.92 (0.09)

3.3

Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF)

DESIGN

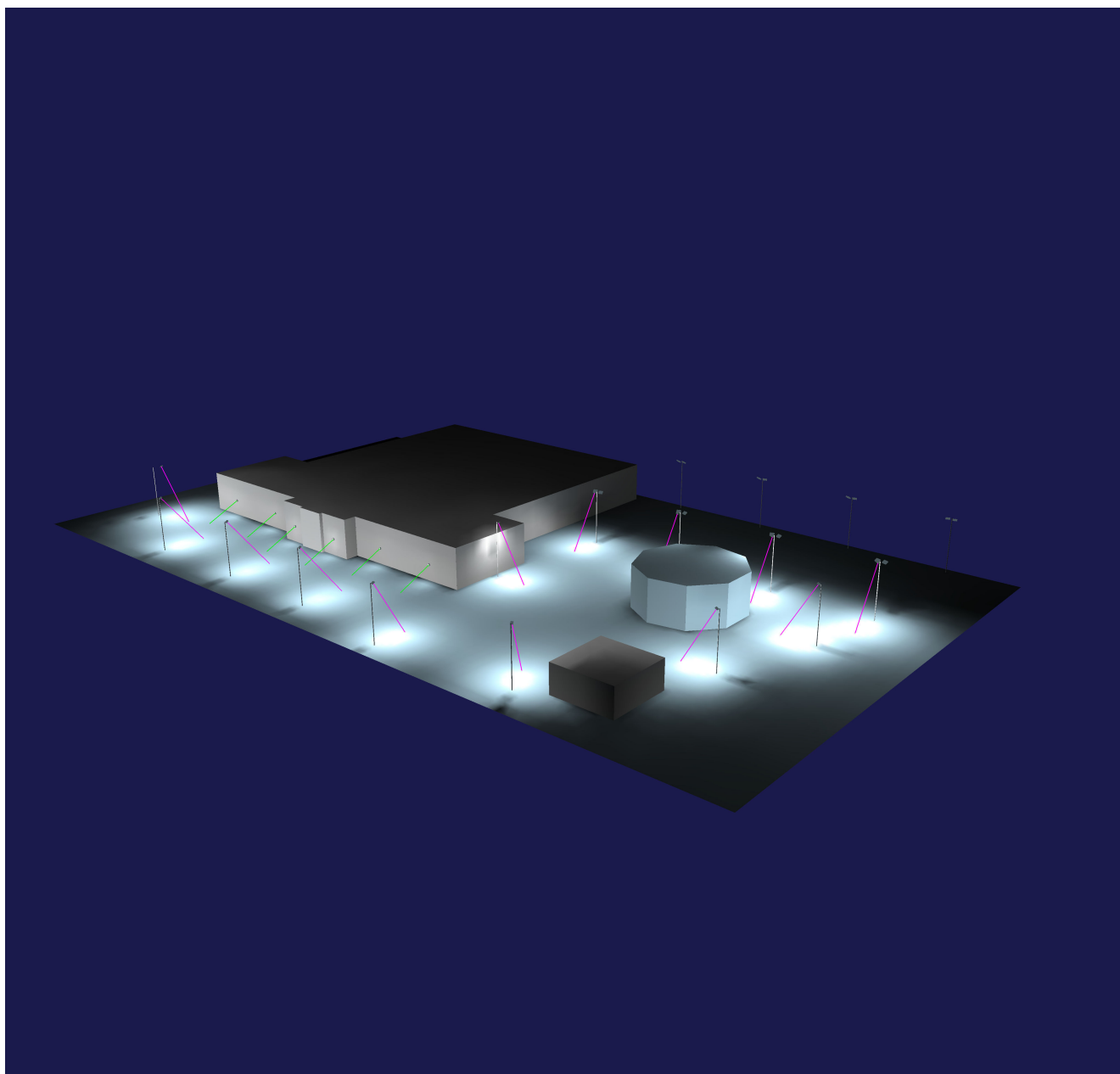
3.3.3

Table, yard (E)



3.3 Calculation results, SITE (OUTDOOR ARENA FLOODLIGHTS OFF) DESIGN

3.3.4 3D luminance, View 1



Luminance in the scene

Minimum: : 0 cd/m²

Maximum: : 10.7 cd/m²