

GLI IMPIANTI SPORTIVI OUTDOOR

DISANO PROIETTORI PROFESSIONALI



1000W
2000W

SYMMETRIC

36 CONFIGURATION

ENB
NB
MB
WB
EXB



1000W
2000W

ASYMMETRIC

5 CONFIGURATION

P1
P2
P3
P4



1000W
2000W

SYMMETRIC

10 CONFIGURATION

NB
MB
WB
ASY NB
ASY WB



1000W

ASYMMETRIC

1 CONFIGURATION



400W
1000W

ASYMMETRIC

8 CONFIGURATION

NB
WB



250W
400W
1000W

ASYMMETRIC

5 CONFIGURATION

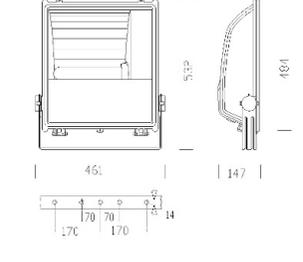
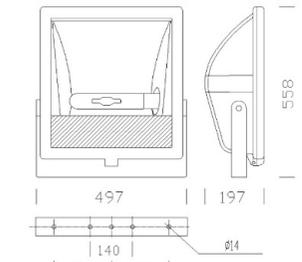
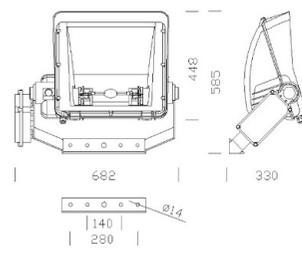
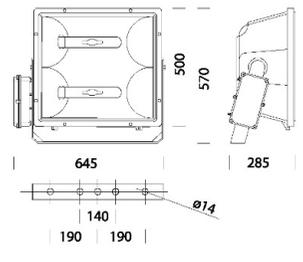
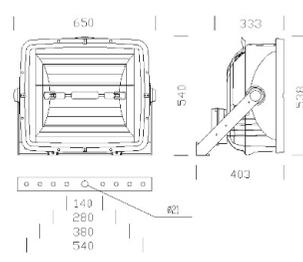
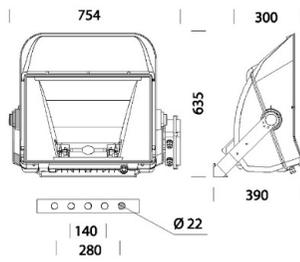
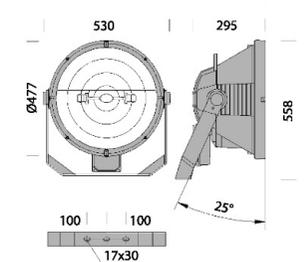


250W
400W

ASYMMETRIC

2 CONFIGURATION

DISANO PROIETTORI PROFESSIONALI



74 OPZIONI DI PROIETTORI PROFESSIONALI.....

COME SCEGLIERE LA SOLUZIONE CORRETTA??

UNI EN 12193 2007

Level	Lighting classes		
			
International and National	X		
Regional	X	X	
Local	X	X	X
Training		X	X
School sports			X

PROJECT CLASS				
				 TV
TV BROADCASTING	NO	NO	POSSIBLE	YES
CRI	≥ 65	≥ 65 - 80	≥ 65 - 80	≥ 90
CCT (°K)	≥ 3500	≥ 3500	≥ 3500	≥ 5000
Lifetime (H)	8.000 - 20.000	8.000 - 12.000	4.500 - 12.000	4.500 - 12.000

AREE SPORTIVE

1

TENNIS OUTDOOR						
UNI EN 12193	PA	GRID POINTS	Eh ave	Eh min/ave	Ra	GR
CLASS	m	N				
I	36 x 18	13 x 7	500	0,70	60	50
II			300	0,70	60	50
III			200	0,60	20	55

2

RUGBY OUTDOOR						
UNI EN 12193	PA	GRID POINTS	Eh ave	Eh min/ave	Ra	GR
CLASS	m	N				
I	144 x 69	14 x 13	500	0,70	60	50
II			200	0,60	60	50
III			75	0,50	20	55

3

HOCKEY OUTDOOR						
UNI EN 12193	PA	GRID POINTS	Eh ave	Eh min/ave	Ra	GR
CLASS	m	N				
I	80 x 50	16 x 10	750	0,70	60	50
II			500	0,70	60	50
III			300	0,70	20	55

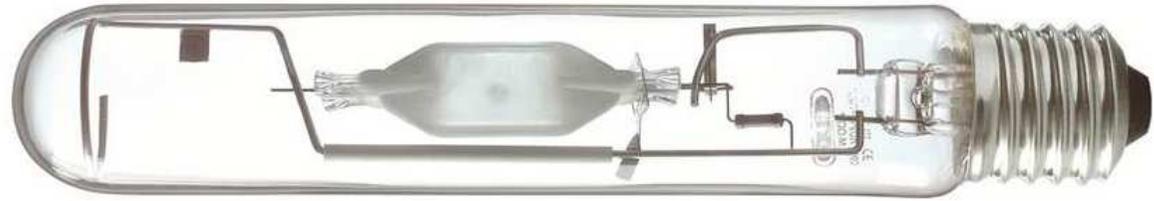
4 5

CALCETTO 5/7 OUTDOOR						
UNI EN 12193	PA	GRID POINTS	Eh ave	Eh min/ave	Ra	GR
CLASS	m	N				
I	40 x 20	14 x 7	500	0,50	60	50
II			300	0,50	60	50
III			200	0,70	20	55

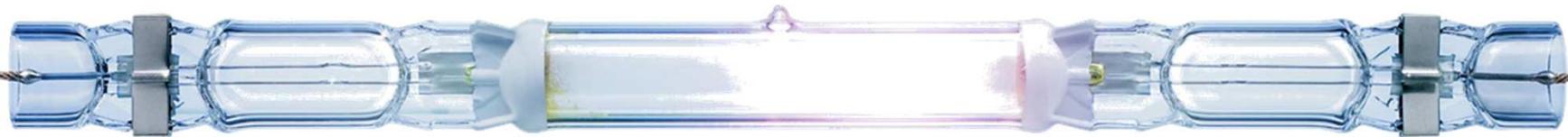
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CALCIO 11 OUTDOOR						
UNI EN 12193	PA	GRID POINTS	Eh ave	Eh min/ave	Ra	GR
CLASS	m	N				
I	105 x 65	21 x 13	500	0,70	60	50
II			200	0,60	60	50
III			75	0,50	20	55

E40 LAMPADE



E40 LAMPS							
	HPI-T Plus 250W/645	HQI-T 400W/N	HPI-T Plus 400W/645	HQI-T 1000W/N	HQI-T 1000W/D	HIT 1000W/U/LU/4K	HQI-T 2000W/D/1
Manufacturer	Philips	Osram	Philips	Osram	Osram	Venture	Osram
Ref	1	2	3	4	5	6	7
Code	-	-	-	-	-	-	986110-00
Power (W)	250	400	400	1000	1000	1000	2000
Lifetime (H)	20.000	12.000	20.000	9.000	9.000	8.000	9.000
Lumen output (lm)	20.500	40.000	32.000	110.000	85.000	90.000	180.000
CCT*	4500	3700	4500	3350	7250	4000	7450
CRI	65	65	65	65	80	65	90
CLASS							



LAMPADE ARCO LUNGO			
	MHN LA 1000W XWH 956	MHN LA 2000W XWH 956	HQI-TS 2000W/N/L
Manufacturer	Philips	Philips	Osram
Ref	12	13	14
Code	986121-00	986122-00	986122-49
Power (W)	1000	2000	2000
Lifetime (H)	15.000	13.000	8.000
Lumen output (lm)	90.000	190.000	230.000
CCT°	5600	5600	4100
CRI	90	90	65
CLASS			



LAMPADE ARCO CORTO

	HQI-TS 1000W/D/S PRO	HQI-T 2000W/D/S	MHN SB 2000W WB HO 956	HQI-TS 2000W/D/S/ HF
Manufacturer	Osram	Osram	Philips	Osram
Ref	8	9	10	11
Code	986113-00	986118-00	986119-00	986119-49
Power (W)	1000	2000	2000	2000
Lifetime (H)	8.000	4.500	4.500	4.500
Lumen output (lm)	90.000	210.000	220.000	230.000
CCT°	6100	6100	5600	6200
CRI	90	90	90	90
CLASS				

6.3.6 – Temperature di colore negli impianti sportivi

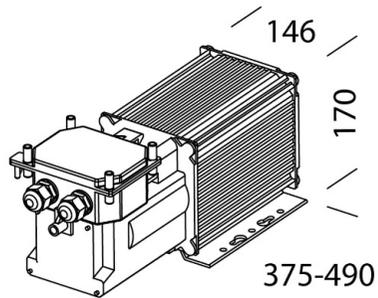
«Nel caso di installazioni all'aperto, la temperatura di colore della luce artificiale deve essere compresa tra 4000K e 6500K ... »

6.3.7 – Resa cromatica degli impianti

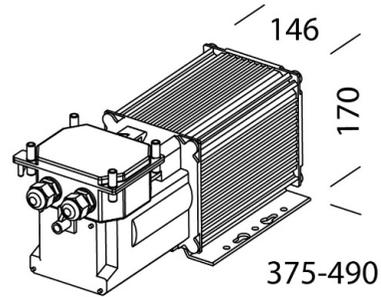
«L'indice di resa cromatica R_a generale della illuminazione deve sempre essere migliore di 65 con un valore preferito di almeno 80»

ELECTRICAL PARAMETERS

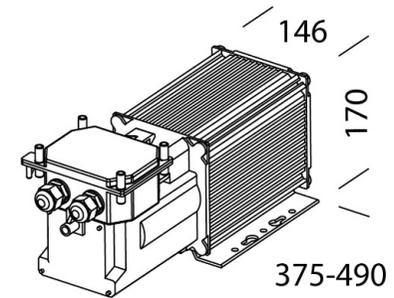
1000W / 2000W CASSETTA CABLAGGIO



14Kg
1000W
997674-00

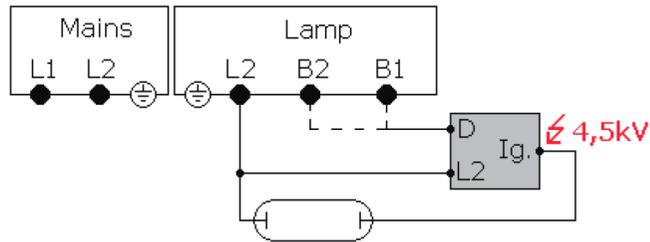


14Kg
2000W
997673-00



14 kg
2000W HO
997673-49

PARAMETRI ELETTRICI



SP 403 (EXTERNAL)

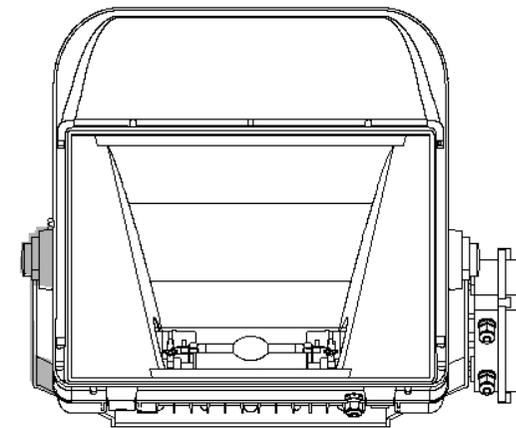
Control gear / IGNITOR : 50m

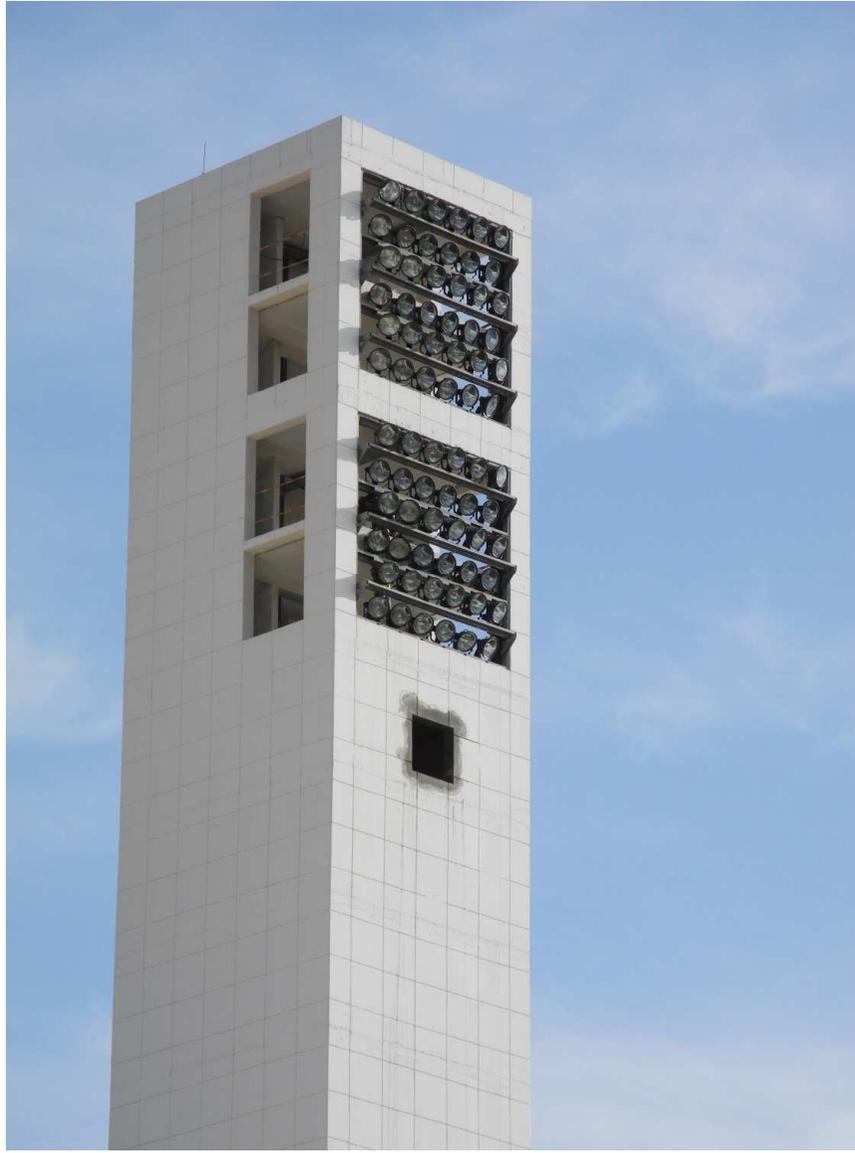
IGNITOR / lamp: 2m

POWER & VOLTAGE

$1000W = 230V - 240V$

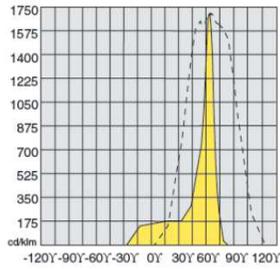
$2000W = 400V - 415V$



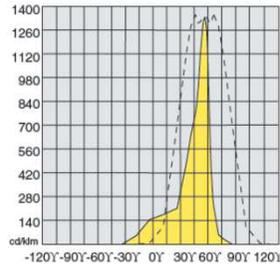




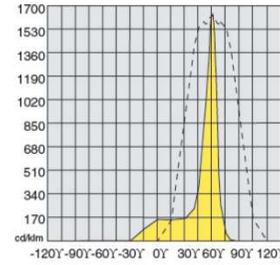
Position 1:
Asymmetry 64°
Output 78.8%



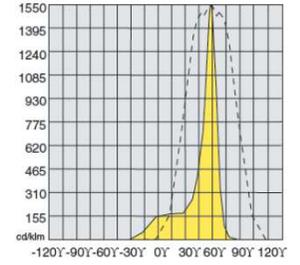
Position 2:
Asymmetry 61°
Output 75.3%



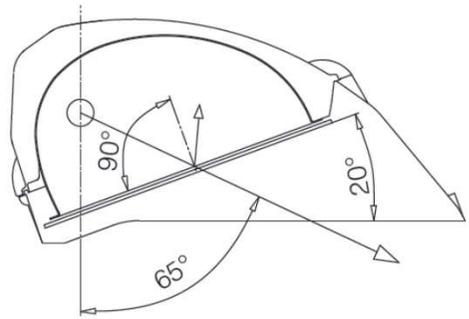
Position 3:
Asymmetry 57°
Output 77.7%



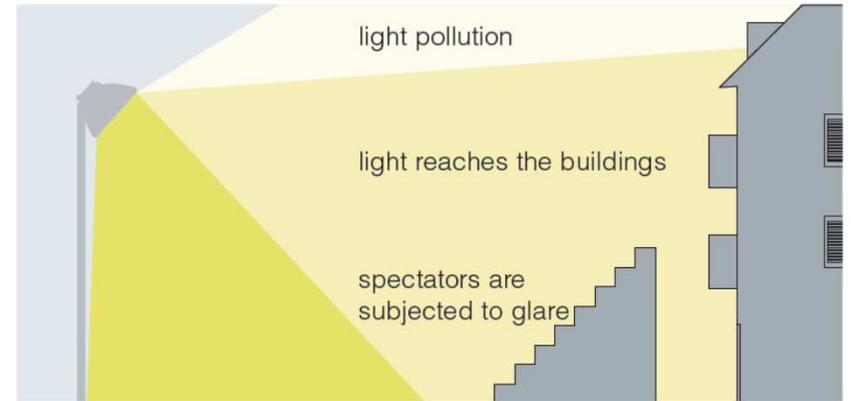
Position 4:
Asymmetry 58°
Output 75.7%



Tilted glass: 90% maximum light output

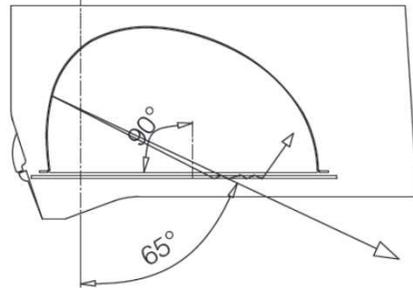


10% glass refraction

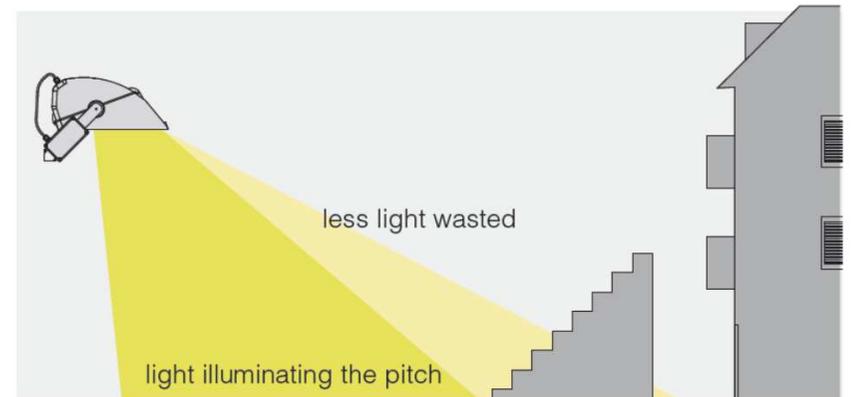


Generic floodlight

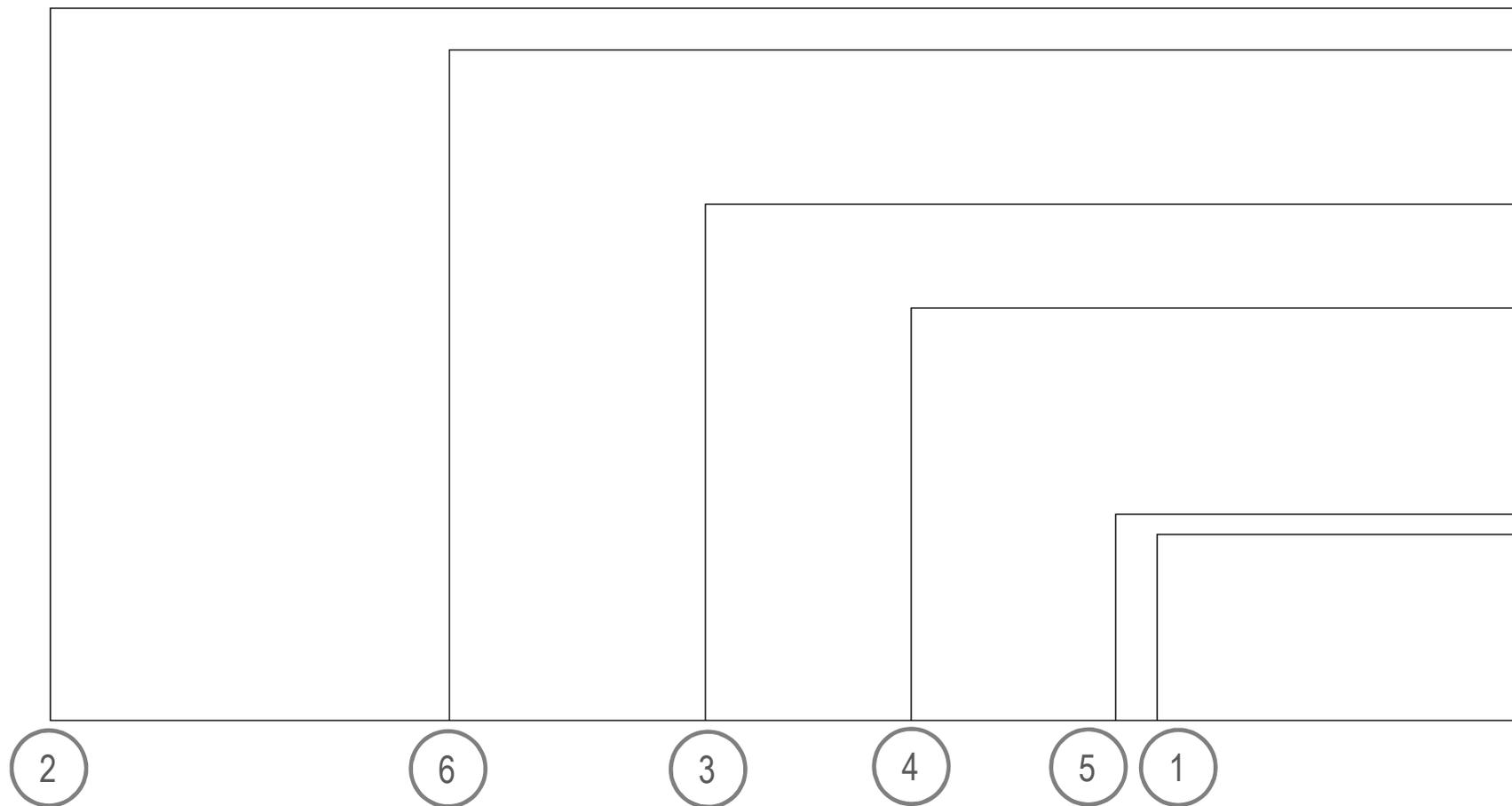
Flat glass: 70% maximum light output



30% glass refraction



SPORT AREAS





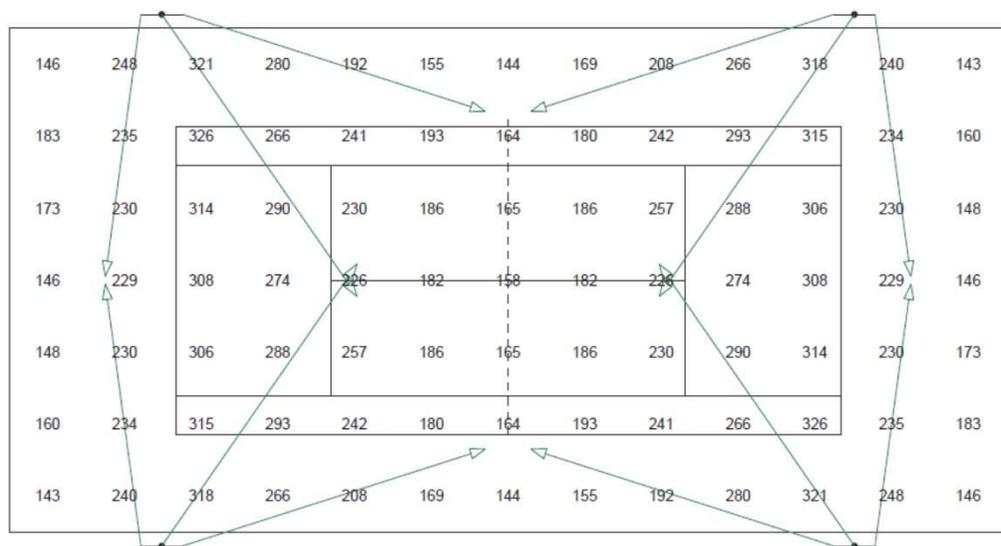
TENNIS

Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
									Item	Floodlight			€	€
1	36X18	III	200	8	4	12	4,8	ASYMM			210	0,61	170	2040
2			200	8	4	12	4,8	ASYMM			227	0,63	323	3876
9		III	200	8	6	12	4,8	ASYMM			219	0,70	170	2040
10			200	8	6	12	4,8	ASYMM			246	0,70	323	3876
3		II	300	10	4	20	8	ASYMM			312	0,70	170	3400
4			300	10	4	20	8	ASYMM			358	0,68	323	6460
5			300	12	4	8	8	ASYMM			409	0,74	964	7712
6			300	12	4	8	8	SYMM			340	0,64	803	6424
11		II	300	8	6	18	7,2	ASYMM			326	0,71	170	3060
12			300	8	6	16	6,4	ASYMM			327	0,72	323	5168
13			300	10	6	6	6	ASYMM			366	0,71	964	5784
14			300	10	6	8	6	SYMM			302	0,68	803	6424
7		I	500	15	4	16	16	SYMM			562	0,75	1409	22544
8			500	15	4	12	12	ASYMM			553	0,70	1274	15288
15		I	500	12	6	12	12	SYMM			511	0,72	1409	16908
16			500	12	6	10	10	ASYMM			507	0,70	1274	12740

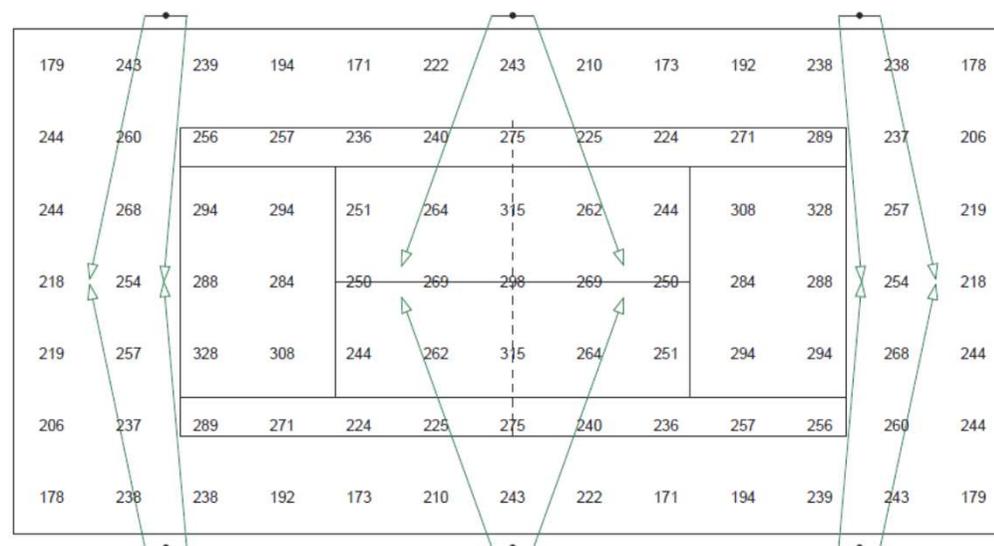
TENNIS



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
2	36X18	III	200	8	4	12	4,8	ASYMM			227	0,63	323	3876
10			200	8	6	12	4,8	ASYMM			246	0,70	323	3876



SOLUTION 2

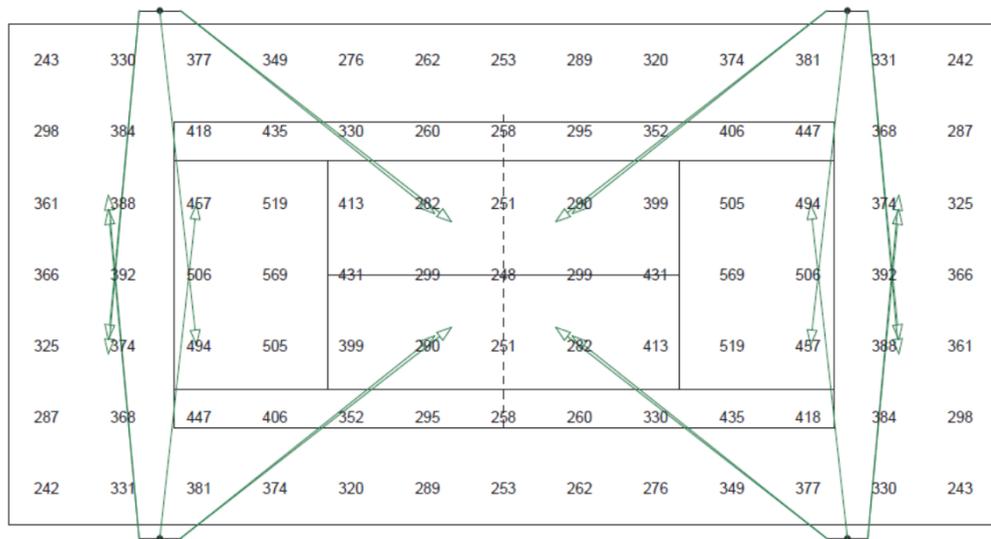


SOLUTION 10

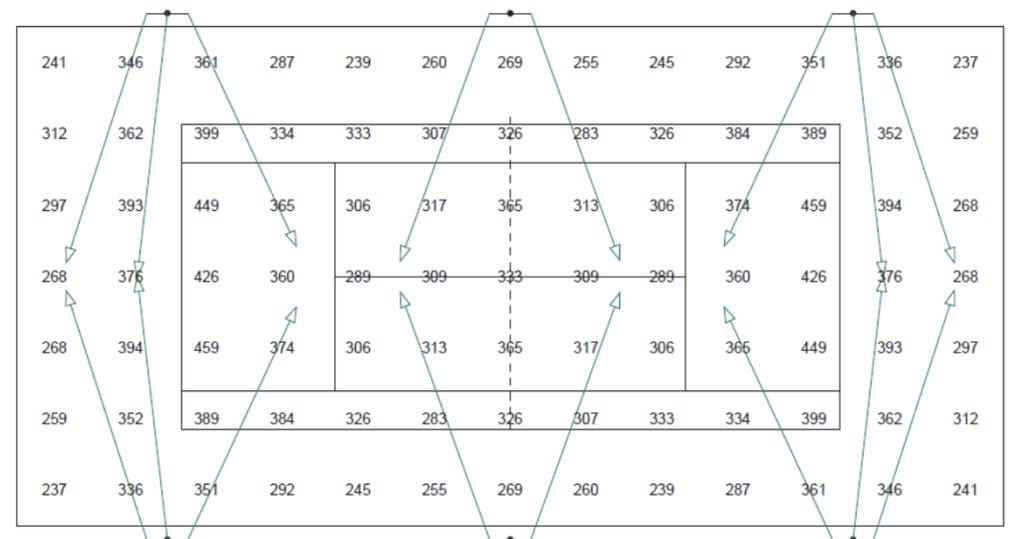
TENNIS



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
4	36X18	II	300	10	4	20	8	ASYMM			358	0,68	323	6460
12			300	8	6	16	6,4	ASYMM			327	0,72	323	5168



SOLUTION 4

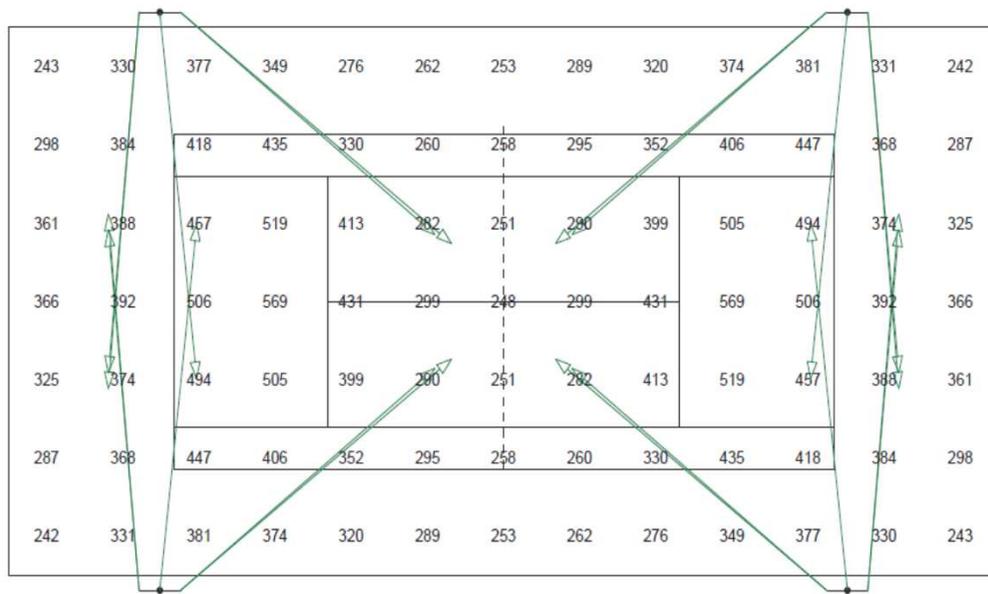


SOLUTION 12

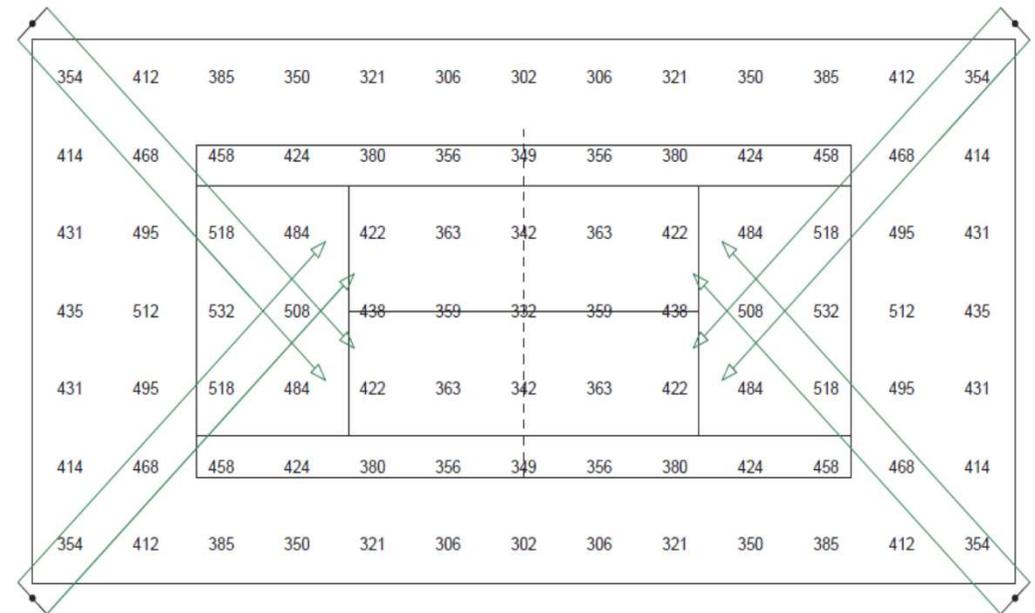
TENNIS



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
									Item	Floodlight			€	€
4	36X18	II	300	10	4	20	8	ASYMM			358	0,68	323	6460
5			300	12	4	8	8	ASYMM			409	0,74	964	7712



SOLUTION 4

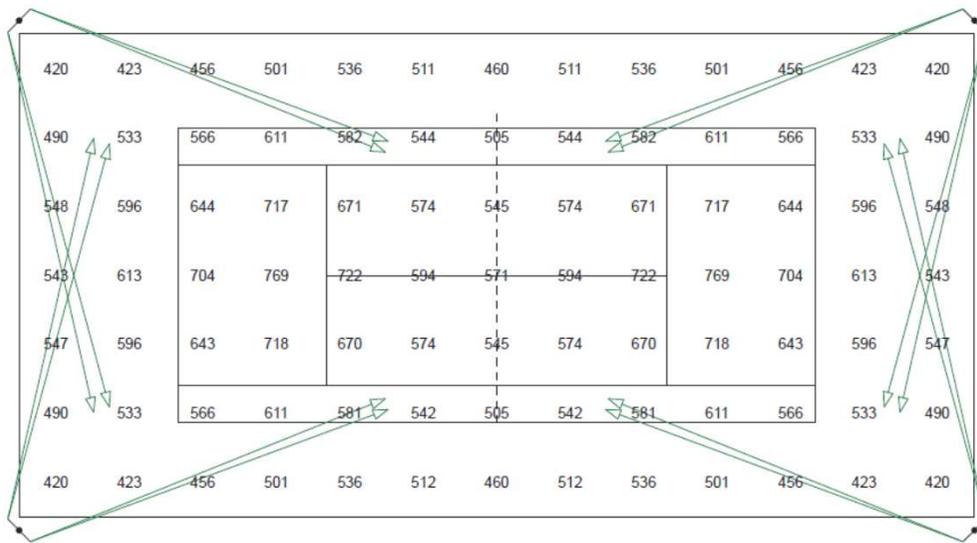


SOLUTION 5

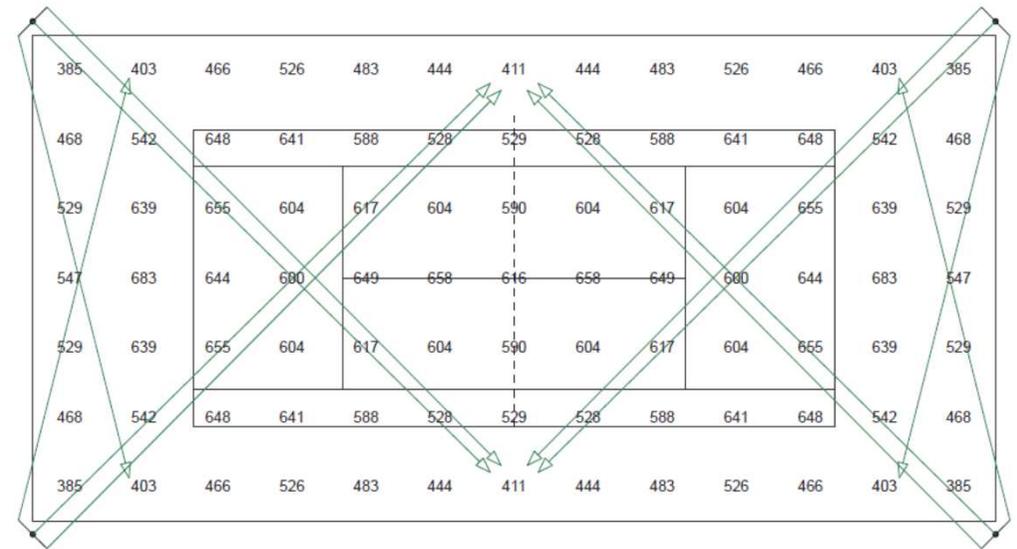
TENNIS



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
7	36X18	I	500	15	4	16	16	SYMM			562	0,75	1409	22544
8			500	15	4	12	12	ASYMM			553	0,70	1274	15288



SOLUTION 7

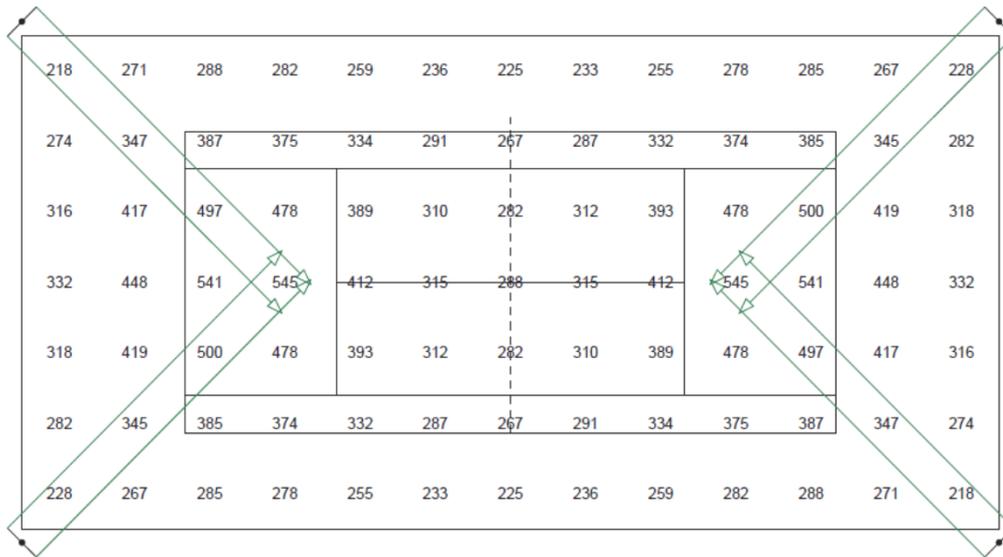


SOLUTION 8

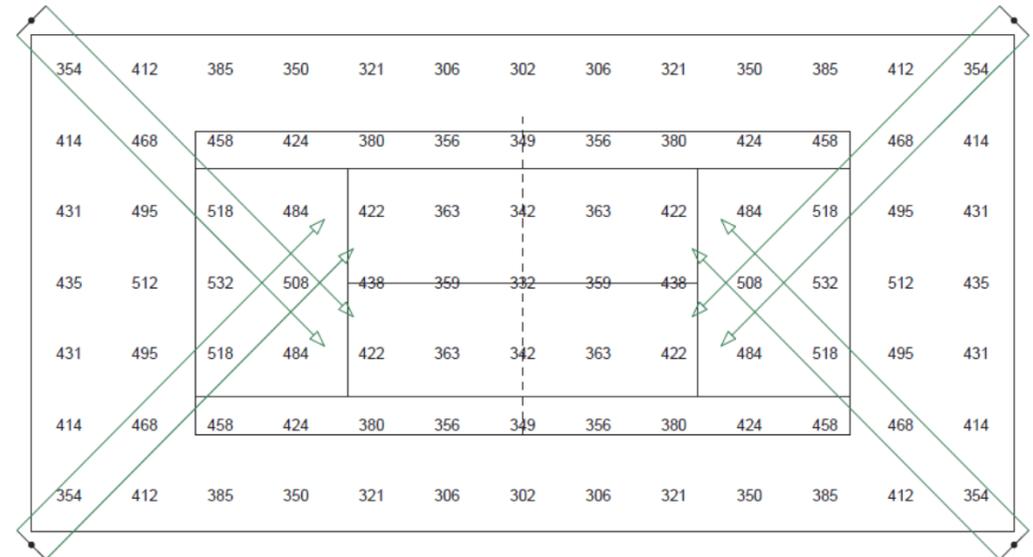
TENNIS



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
									Item	Floodlight			€	€
5	36X18	II	300	12	4	8	8	ASYMM			409	0,74	964	7712
6			300	12	4	8	8	SYMM			340	0,64	803	6424



SOLUTION 5



SOLUTION 6

RUGBY

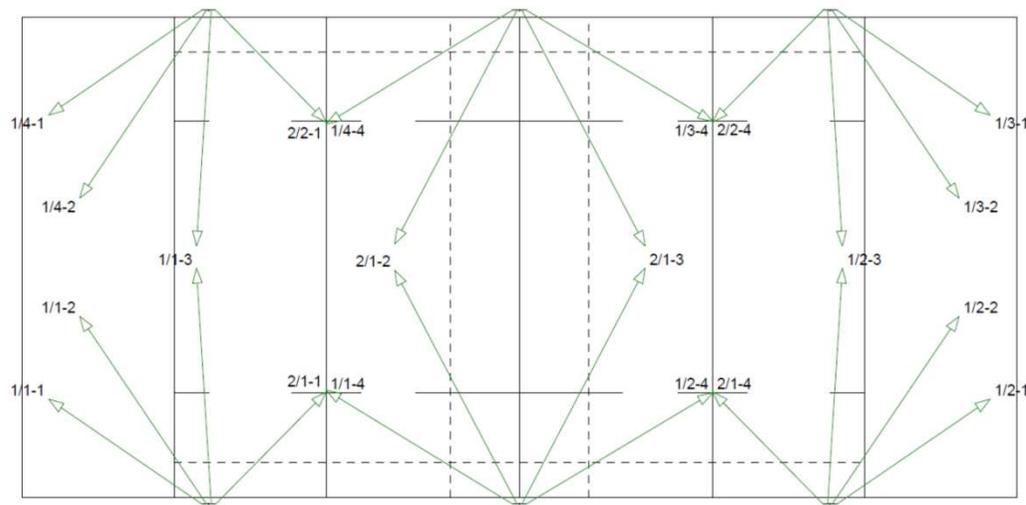


RUGBY													
Solution	Dimension	BS EN 12193 2007	Eh	H	N	N	Power	D	Type	Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
	m	CLASS	lx	m	Mast	Floodlights	kW	Distribution				€	€
1	144X69	III	75	15	6	24	24	SYMM		78	0,50	530	12720
2			75	15	6	18	18	ASYMM		84	0,50	964	17352
7		III	75	15	8	28	28	SYMM		84	0,70	530	14840
8			75	15	8	24	24	ASYMM		110	0,65	964	23136
3		II	200	15	6	28	56	SYMM		211	0,61	1513	42364
4			200	15	6	20	40	ASYMM		219	0,62	1359	27180
9		II	200	15	8	28	56	SYMM		212	0,72	1513	42364
10			200	15	8	24	48	ASYMM		258	0,70	1359	32616
5		I	500	20	6	52	104	SYMM		534	0,70	1199	62348
6			500	20	6	52	104	ASYMM		532	0,70	1359	70668
11		I	500	20	8	52	104	SYMM		523	0,70	1199	62348
12			500	20	8	48	96	ASYMM		503	0,73	1359	65232

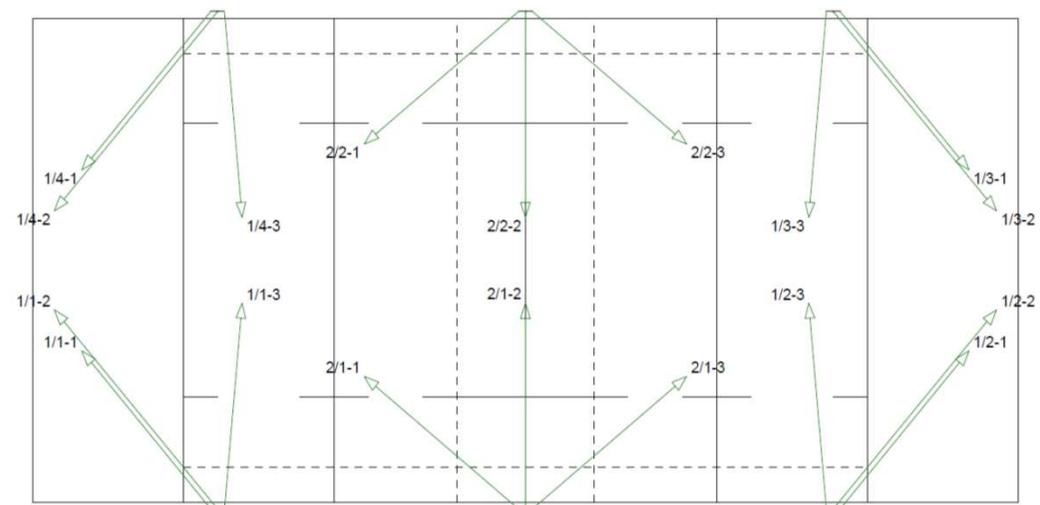
RUGBY



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
1	144X69	III	75	15	6	24	24	SYMM			78	0,50	530	12720
2			75	15	6	18	18	ASYMM			84	0,50	964	17352



SOLUTION 1

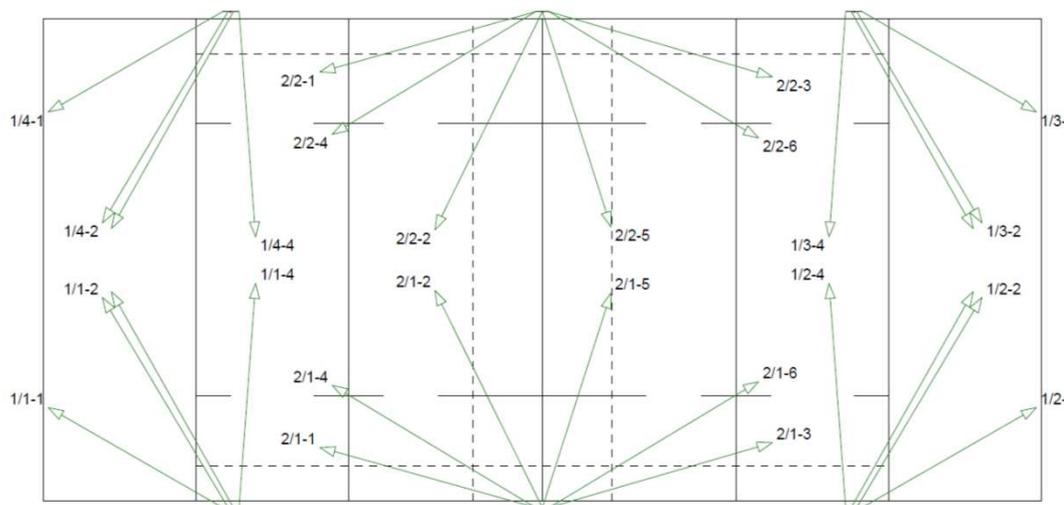


SOLUTION 2

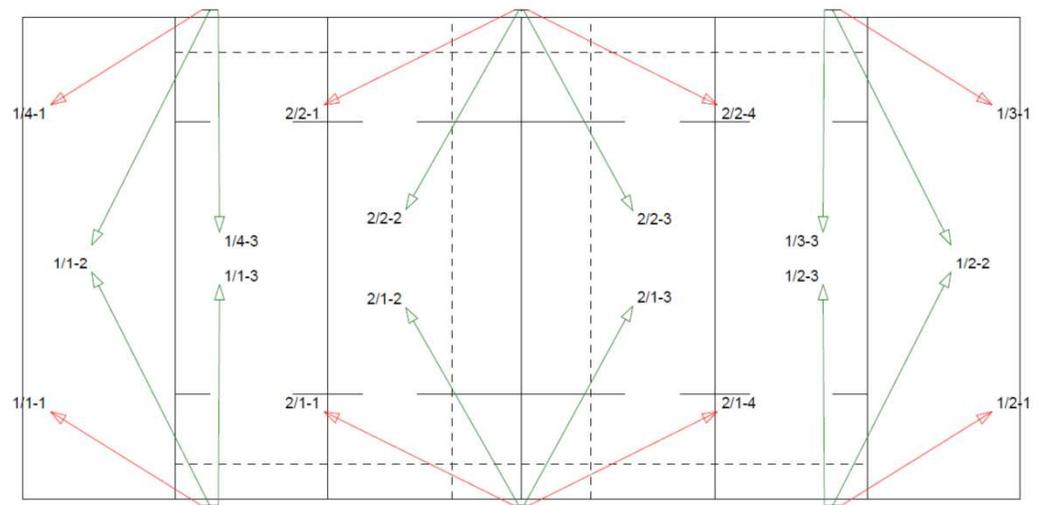
RUGBY



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
3	144X69	II	200	15	6	28	56	SYMM			211	0,61	1513	42364
4			200	15	6	20	20	ASYMM			219	0,62	1359	27180



SOLUTION 3

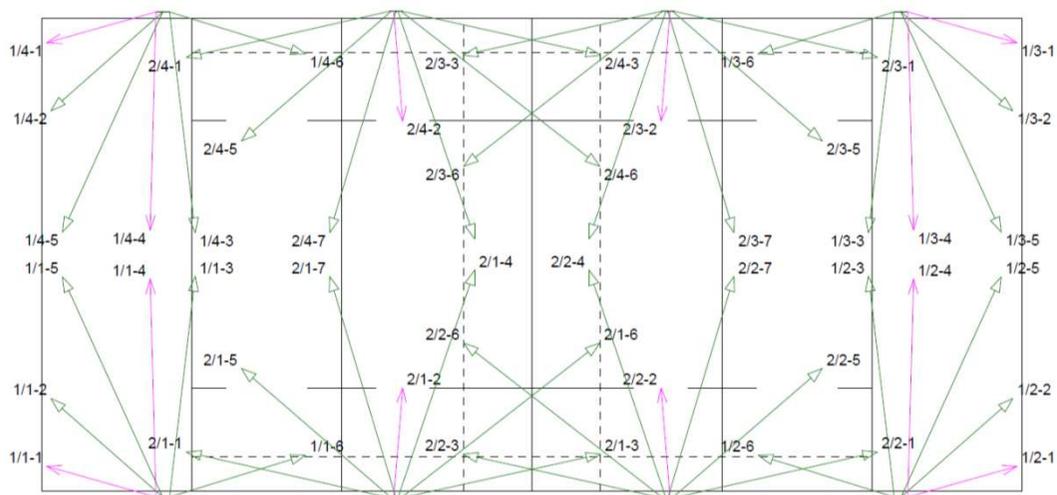


SOLUTION 4

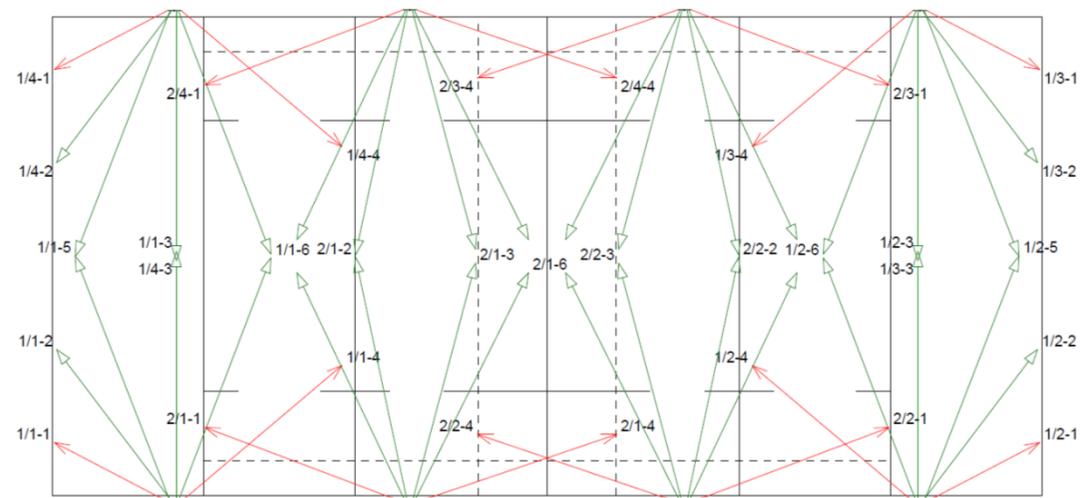
RUGBY



Solution	Dimension	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
	m							Distribution	Item	Floodlight			€	€
11	144X69	I	500	20	8	52	104	SYMM			523	0,70	1199	62348
12			500	20	8	48	96	ASYMM			503	0,73	1359	65232



SOLUTION 11



SOLUTION 12

HOCKEY

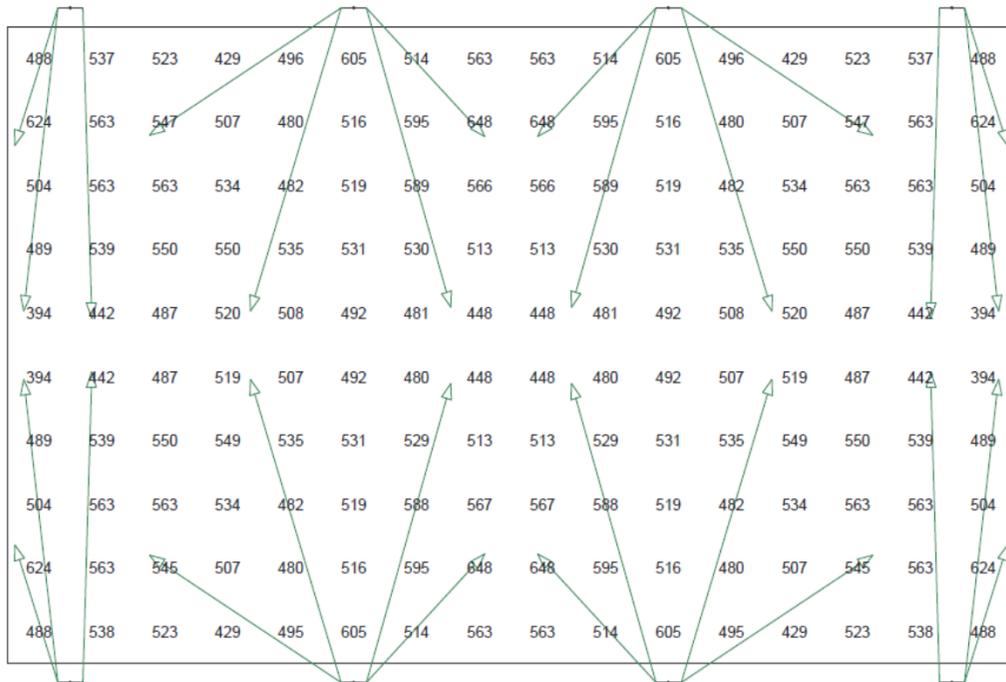


HOCKEY													
Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type	Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
												€	€
1	80x50	III	300	15	6	42	42	SYMM	3	326	0,72	803	33726
2			300	15	6	32	32	ASYMM		335	0,70	964	30848
7		III	300	15	8	40	40	SYMM	3	326	0,70	803	32120
8			300	15	8	32	32	ASYMM		339	0,80	964	30848
3		II	500	15	6	26	52	SYMM	-	509	0,73	1513	39338
4			500	15	6	24	48	ASYMM		569	0,70	1359	32616
9		II	500	15	8	28	56	SYMM	-	524	0,75	1513	42364
10			500	15	8	20	40	ASYMM		520	0,70	1359	27180
5		I	750	15	6	30	60	ASYMM	-	750	0,70	1359	40770
6			750	15	6	30	60	SYMM		790	0,70	1199	35970
11		I	750	15	8	28	56	ASYMM	-	753	0,71	1359	38052
12			750	15	8	32	64	SYMM		801	0,71	1199	38368

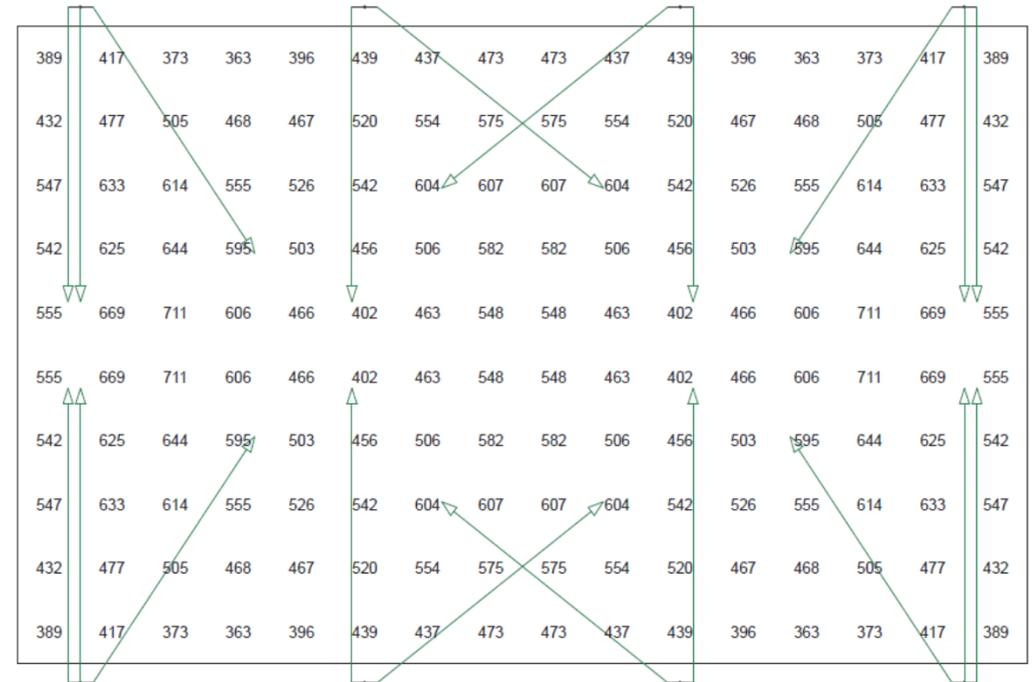
HOCKEY



Solution	Dimension	BS EN 12193 2007	Eh	H	N	N	D	Type	Lamp					Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.	
	m		CLASS	lx	m	Mast	Floodlights		Distribution	Item	Floodlight	Type	Φ			Lifetime	CCT	CRI
9	80x50	II	500	15	8	28	SYMM			LA	190000	13000	5600	90	524	0,75	1513	42364
10			500	15	8	20	ASYMM			LA	230000	8000	4100	65	520	0,70	1359	27180



SOLUTION 9



SOLUTION 10

CALCETTO 5/7

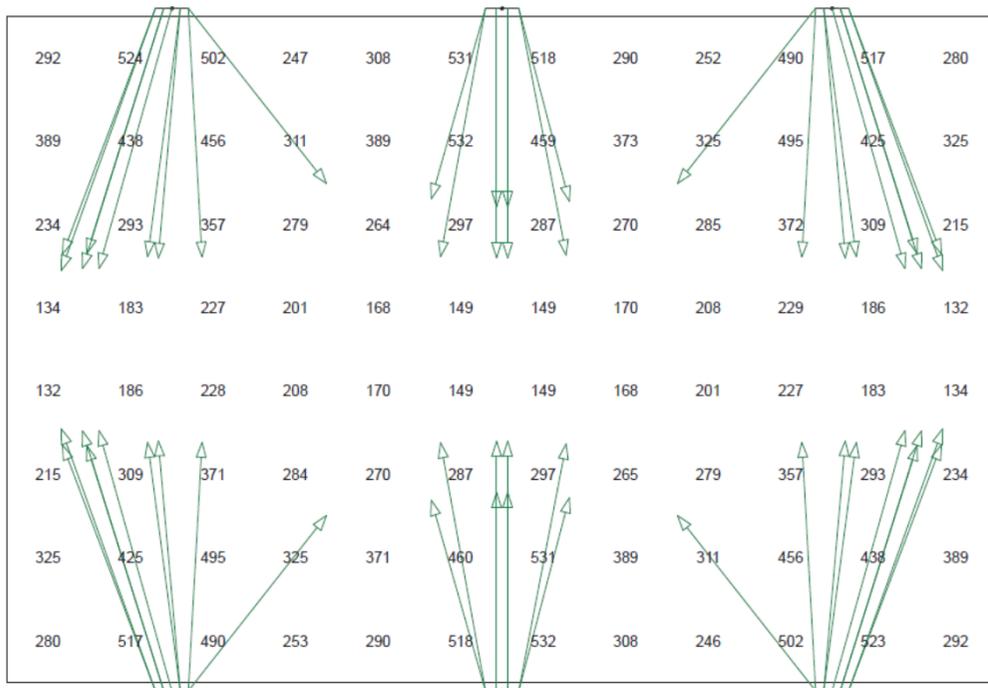


CALECTTO a 5/7														
Solution	Dimension	BS EN 12193 2007	Eh	H	N	N	Power	D	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
	m	CLASS	lx	m	Mast	Floodlights	kW	Distribution	Item	Floodlight			€	€
1	60X40	III	200	8	6	36	14,4	ASYMM			201	0,50	170	6120
2			200	8	6	32	12,8	ASYMM			204	0,50	323	10336
3		II	300	10	6	56	22,4	ASYMM			302	0,50	170	9520
4			300	10	6	52	20,8	ASYMM			318	0,50	323	16796
5			300	10	6	16	16	ASYMM			324	0,64	964	15424
6			300	10	6	26	26	SYMM			321	0,70	803	20878
7		I	500	12	6	28	28	ASYMM			513	0,78	964	26992
8			500	12	6	36	36	SYMM			503	0,72	803	28908
9	40X20	III	200	8	4	16	6,4	ASYMM			215	0,60	170	2720
10			200	8	4	12	4,8	ASYMM			201	0,55	323	3876
11		II	300	10	4	24	9,6	ASYMM			313	0,70	170	4080
12			300	10	4	20	8	ASYMM			300	0,66	323	6460
13			300	10	4	8	8	ASYMM			386	0,70	964	7712
14			300	10	4	8	8	SYMM			303	0,60	803	6424
15		I	500	12	4	12	12	ASYMM			506	0,72	964	11568
16			500	12	4	16	16	SYMM			526	0,74	803	12848

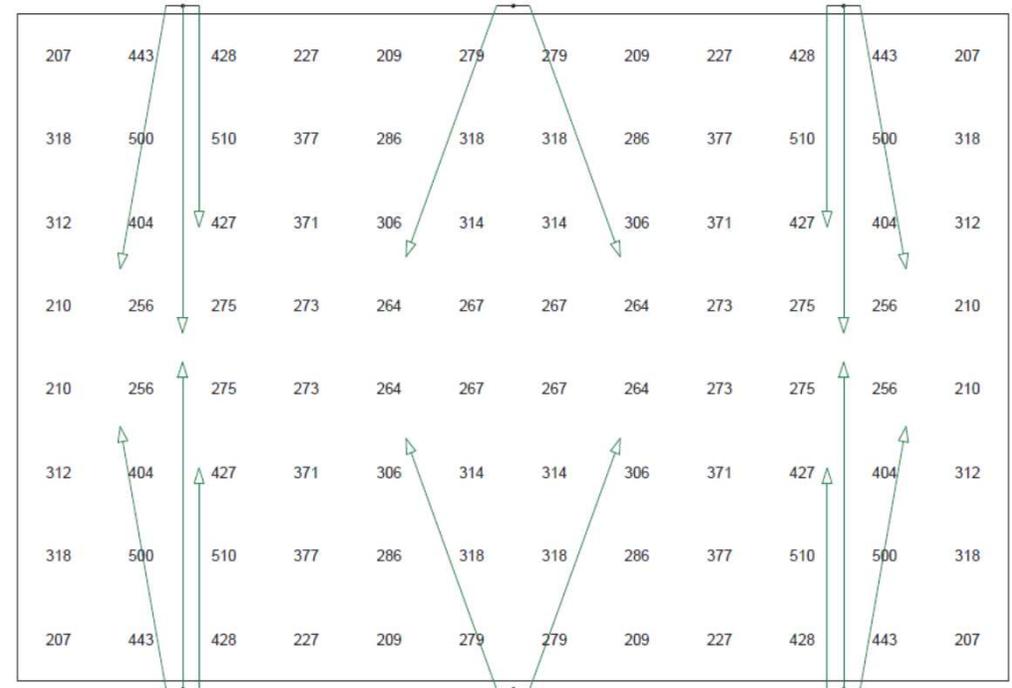
CALCETTO 7



Solution	Dimension	BS EN 12193 2007 CLASS	Eh	H	N	N	Power	D	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
	m		lx	m	Mast	Floodlights	kW	Distribution	Item	Floodlight			€	€
4	60X40	II	300	10	6	52	20,8	ASYMM			318	0,50	323	16796
5			300	10	6	16	16	ASYMM			324	0,64	964	15424



SOLUTION 4

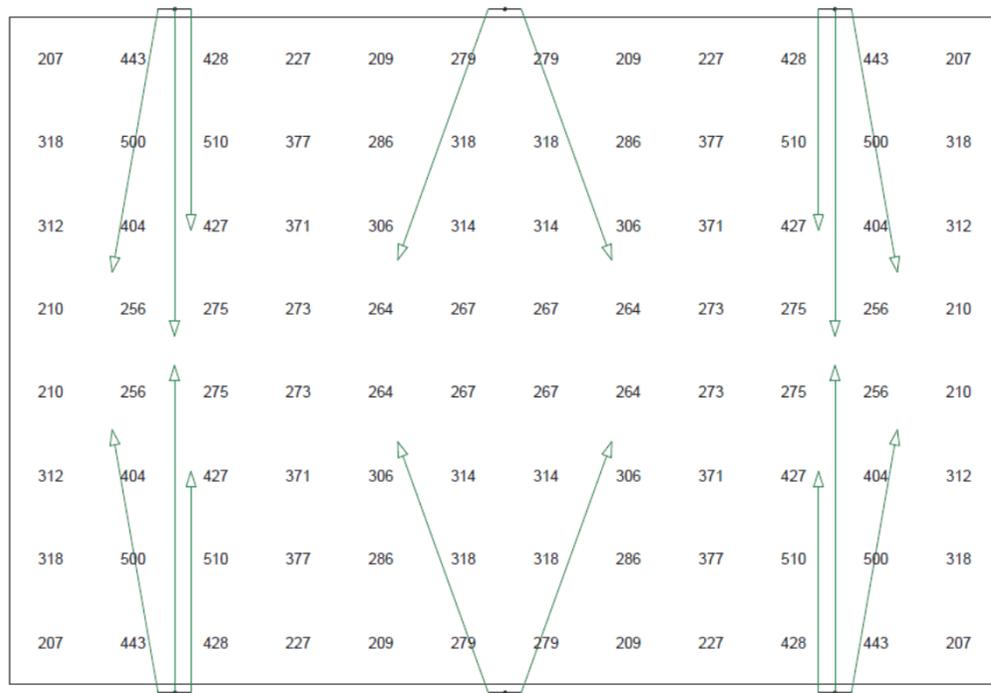


SOLUTION 5

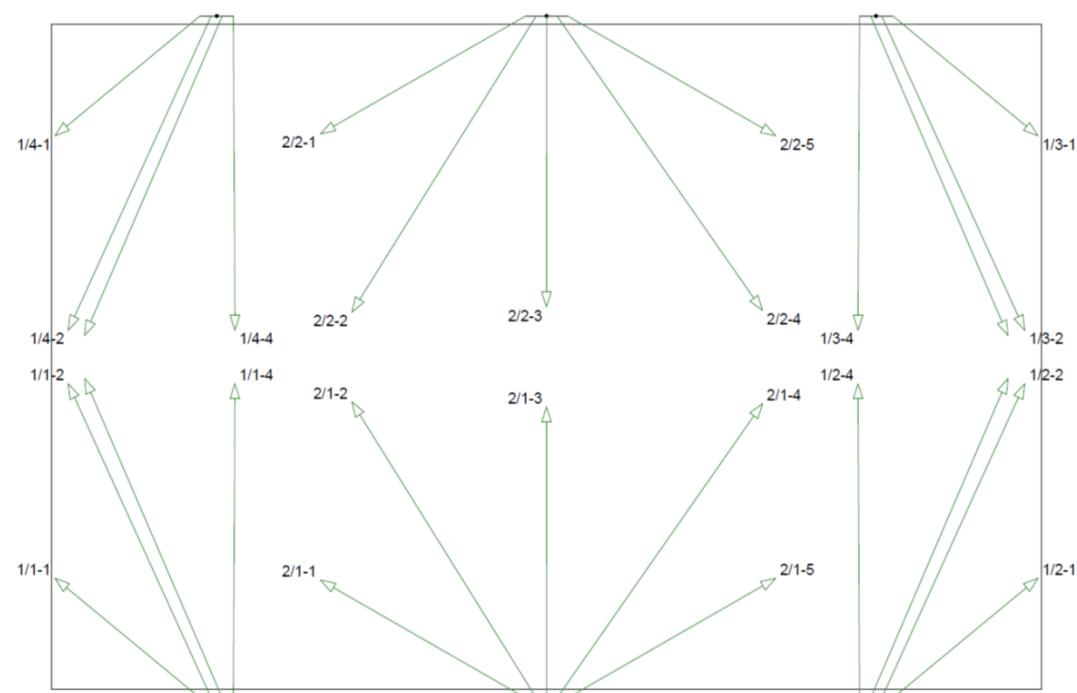
CALCETTO 7



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
									Item	Floodlight			€	€
5	60X40	II	300	10	6	16	16	ASYMM			324	0,64	964	15424
6			300	10	6	26	26	SYMM			321	0,70	803	20878



SOLUTION 5



SOLUTION 6

CALCIO 11



FOOTBALL

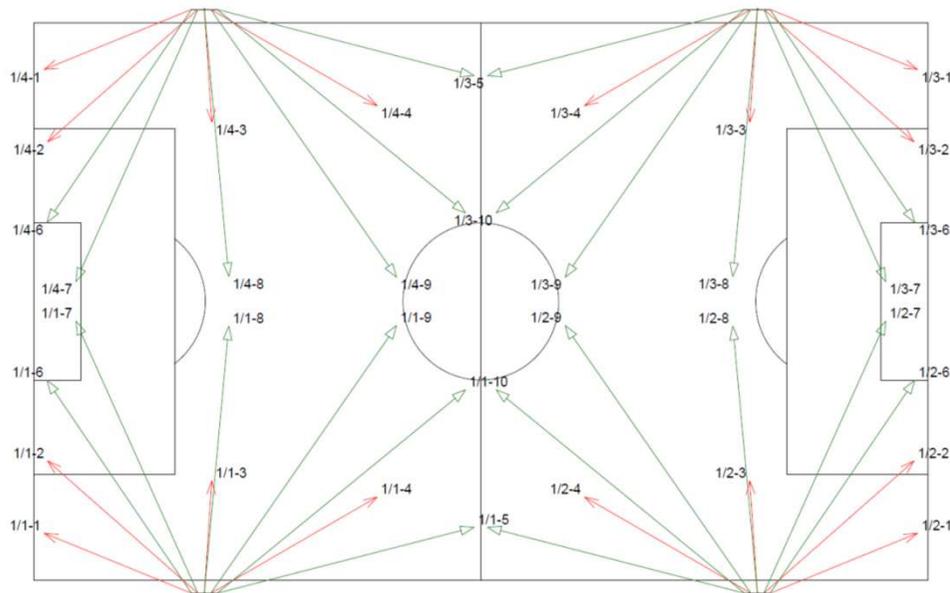
Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type	Eh ave	Eh min/ave	Floodlight G.P.	Project G.P.
												€	€
1	105X65	III	75	18	4	8	12	ASYMM		115	0,55	1359	10872
2			75	18	4	8	12	SYMM		84	0,60	1513	12104
6		III	75	15	6	6	12	ASYMM		109	0,32*	1359	8154
7			75	15	6	6	12	SYMM		81	0,33*	1513	9078
11		III	75	15	8	8	16	ASYMM		141	0,52	1359	10872
12			75	15	8	8	16	SYMM		106	0,61	1513	12104
3		II	200	18	4	16	32	ASYMM		232	0,74	1359	21744
4			200	18	4	20	40	SYMM		211	0,71	1513	30260
8		II	200	15	6	16	32	ASYMM		254	0,72	1359	21744
9			200	15	6	18	36	SYMM		207	0,70	1513	27234
13		II	200	15	8	16	32	ASYMM		252	0,70	1359	21744
14			200	15	8	20	40	SYMM		227	0,70	1513	30260
5		I	500	20	4	40	80	SYMM		553	0,71	1199	47960
10		I	500	20	6	36	72	SYMM		516	0,70	1199	43164
15		I	500	18	8	36	72	SYMM		537	0,70	1199	43164

* To reach Uniformity Levels according to UNI EN 12193 2007 are necessary more floodlights (f.i. n° 12 1000W)

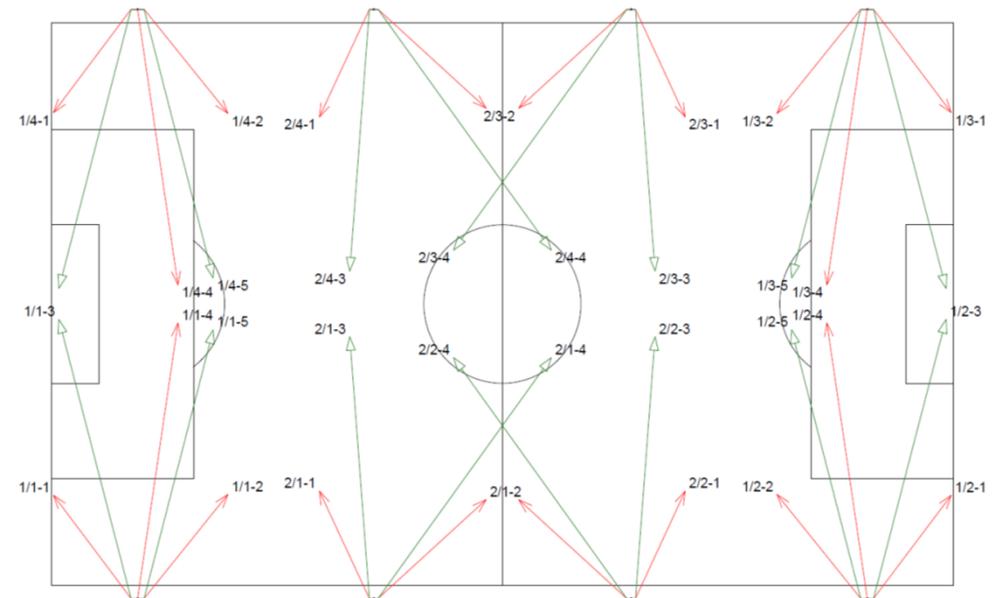
CALCIO 11



Solution	Dimension m	BS EN 12193 2007 CLASS	Eh lx	H m	N Mast	N Floodlights	Power kW	D Distribution	Type		Eh ave	Eh min/ave	Floodlight G.P. €	Project G.P. €
									Item	Floodlight				
5		I	500	20	4	40	80	SYMM			553	0,71	1199	47960
10		I	500	20	6	36	72	SYMM			516	0,70	1199	43164
15		I	500	18	8	36	72	SYMM			537	0,70	1199	43164



SOLUTION 5



SOLUTION 15

CONCLUSIONE

POTENZA e ALTEZZA

Altezza minima di installazione per ottenere un adeguato comfort di luce

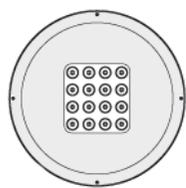
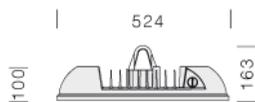
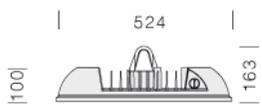
400W proiettori = $H > 8$ mt

1000W proiettori = $H > 11$ mt

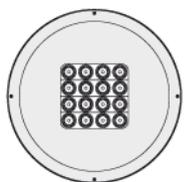
2000W proiettori = $H > 15$ mt



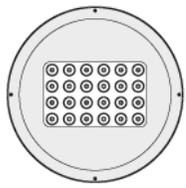
Impianti sportivi con
Tecnologia LED



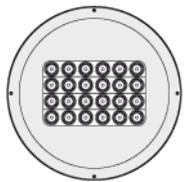
16 LED



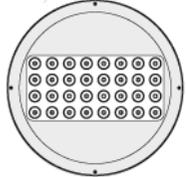
16 LED



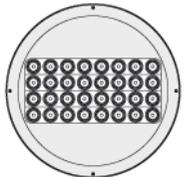
24 LED



24 LED



32 LED



32 LED



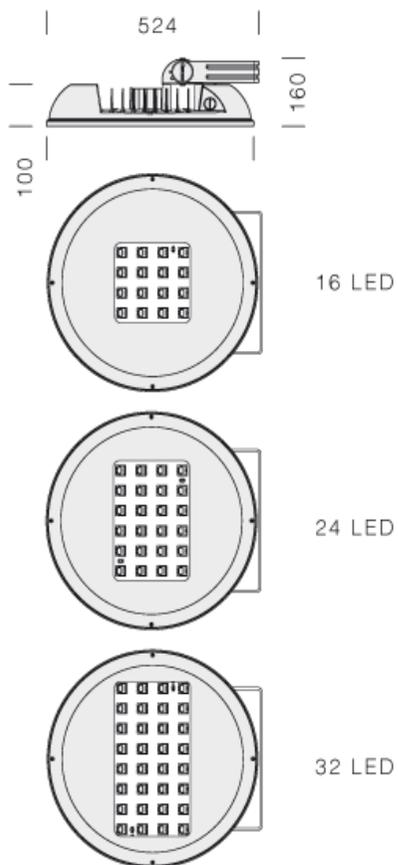
17280lm – 700mA
25920lm – 700mA
34560lm – 700mA

4000K 125W
4000K 187W
4000K 250W

17280lm – 700mA
25920lm – 700mA
34560lm – 700mA

4000K 125W
4000K 187W
4000K 250W

STANDARD DIMMABLE 1-10V



17280lm – 700mA	4000K	125W
25920lm – 700mA	4000K	187W
34560lm – 700mA	4000K	250W
48000lm – 1050mA	4000K	380W

17280lm – 700mA	4000K	125W
25920lm – 700mA	4000K	187W
34560lm – 700mA	4000K	250W

STANDARD DIMMABLE 1-10V