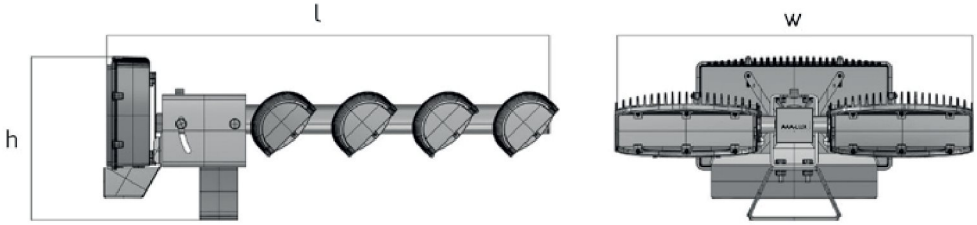
WS-series Gen7

Increased light performance & integrated RS technology

AAA-LUX' Generation 7 combines an increased light output with the ability to reduce obtrusive light in the surrounding area. The low amount of luminaires needed to meet lighting requirements, is truly a breakthrough in lighting technology.
Thanks to the integrated RS technology the luminaire is prepared for optimum reduction of obtrusive light, by mounting light shields (LS).

Mechanical Technical Information



LUMINAIRE TYPE	LUMINOUS FLUX (based on lm-79 measurements by DEKRA) [lm]			DIMENSIONS [mm]		
	ST	MP	HT	L1	W1	H1
WS 200	194000	207600	176600	900	700	320
WS 250	194250	207850	176750			
WS 270	194250	207850	176750			
WS 290	195600	209350	178050			

FEATURES

Less luminaires needed
Lowest total project cost
Re-use infrastructure

Wireless dimming
Remote monitoring
Smart City

Ease of installation

Reduced Spill light
CIE150 compliant

Specifications

All models

	Min	Typ	Max
Voltage input (VAC)	370	400 [1] / 415 [3]	460
Power Factor @ 20% - 100%	0.9	0.97	
Inrush Current		None	
Color Temperature (K)		5000 [6]	
Color Rendering Index (CRI)	70	75	
Expected lifetime (hours) lm-79	60 000		
Luminous efficacy (lm/W)	110		
Weight, including Driver (kg)		23	
Frontal surface (CW = 1) @tilt 15° (m2)		0.22 [5]	
Ingress protection (IP)		66 [2]	
Over voltage (kV)			6
Electrical Insulation Class		I	
Product Color		RAL7015 / Pantone 446 C / Uncoated	

Standard (ST)

	Min	Typ	Max
Power Consumption @ 100%		1550	1600
Current (A)		3.9	4.3
Ambient Operating Temperature (°C) [4]	-30	30	

High temperature (HT)

	Min	Typ	Max
Power Consumption @ 100%		1350	1425
Current (A)		3.4	3.9
Ambient Operating Temperature (°C) [4]	-30	40	

Maximum power (MP)

	Min	Typ	Max
Power Consumption @ 100%		1700	1750
Current (A)		4.3	4.8
Ambient Operating Temperature (°C) [4]	-30	25	

[1] 230VAC also available upon request
[2] Dali, DMX and Modbus version IP 65
[3] Australia/New Zealand
[4] Auto dimming may occur
[5] TP26 for more details
[6] 4000K available on request

Compliancy To Standards

Safety

IEC 60598-1:2014	Luminaires - Part 1: General requirements and tests
IEC 60598-2-5:2015	Luminaires – Part 2-5: Particular requirements – Floodlights
IEC 62471:2008	Photobiological safety of lamps and lamp systems
IEC 60529	Degrees of protection provided by enclosures (IP Code)
IEC 62031:2008	LED modules for general lighting - Safety specifications
IEC 61347	Lamp controlgear
EN 55015:2013 +A1:2015 (Generic emissions)	
EC 61000-3-2:2014	(Generic emissions)
EN 61000-3-3:2013	(Harmonics)
EN 61547:2009	General lighting purposes - EMC immunity requirements

Corrosion

DIN 50021 NSS
DIN 50018 SWF 2.0
NFT 30.055 2 liter SO2

Kolnes Idrettslag, 200lux - 60 x 100m spilleflate, LED

Anleggsdel : Mastehøyde 18m

Prosjektnummer	:	
Kunde	:	
Utført av	:	Marianne Langkås, Multilux AS
Dato	:	17.11.2021

Prosjektbeskrivelse:
Det forutsettes at eksisterende master og traverser kan benyttes.
Lysberegning iht. NS-EN 12193:2018, tabell A.21.
Horisontal belysningsstyrke for kl.II bør være >=200lux og en jevnhet på 0,6.
Blendingsfaktor RG maks 55

Totalt 12stk. lyskastere AAA-LUX WS290LS - avskjermet montert i 6stk. 18m høye master.

12stk. lyskastere (2stk. i hver av mastene)
Lysberegningen viser horisontal belysningsstyrke på 200lux med jevnhet 0,66.
Blendingsfaktor RG = 49,3

RG = OK, 15% refleksjon fra banedekke.

Lysberegninger er utført med VF = 0,9

Finjustering ved bestilling.

1 Armaturdata

1.1 AAA-LUX, WS2907v LS 7.0.0... (!WS2907 LS v7.0.0 200...)

1.1.1 Dataark

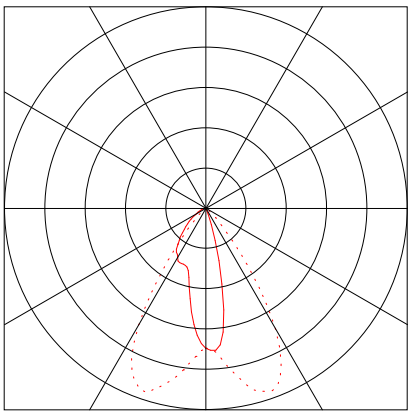
Fabrikat: AAA-LUX

!WS2907 LS v7.0.0 200917_0953.ies **WS2907v LS 7.0.0**

Armaturdata		
Armaturvirkningsgrad	:	72.1%
Armaturens lysutbytte	:	102.83 lm/W
Klassifisering	:	A60 ↓99.4% ↑0.6%
CIE Flux Codes	:	73 93 99 99 72
UGR 4H 8H	:	- / 29.8
Effekt	:	1550 W
Lysfluks	:	159393 lm

Bestykket med		
Antall	:	1
Betegnelse	:	LED SOURCE AAA-LUX
Farge	:	
Lysfluks	:	221072 lm

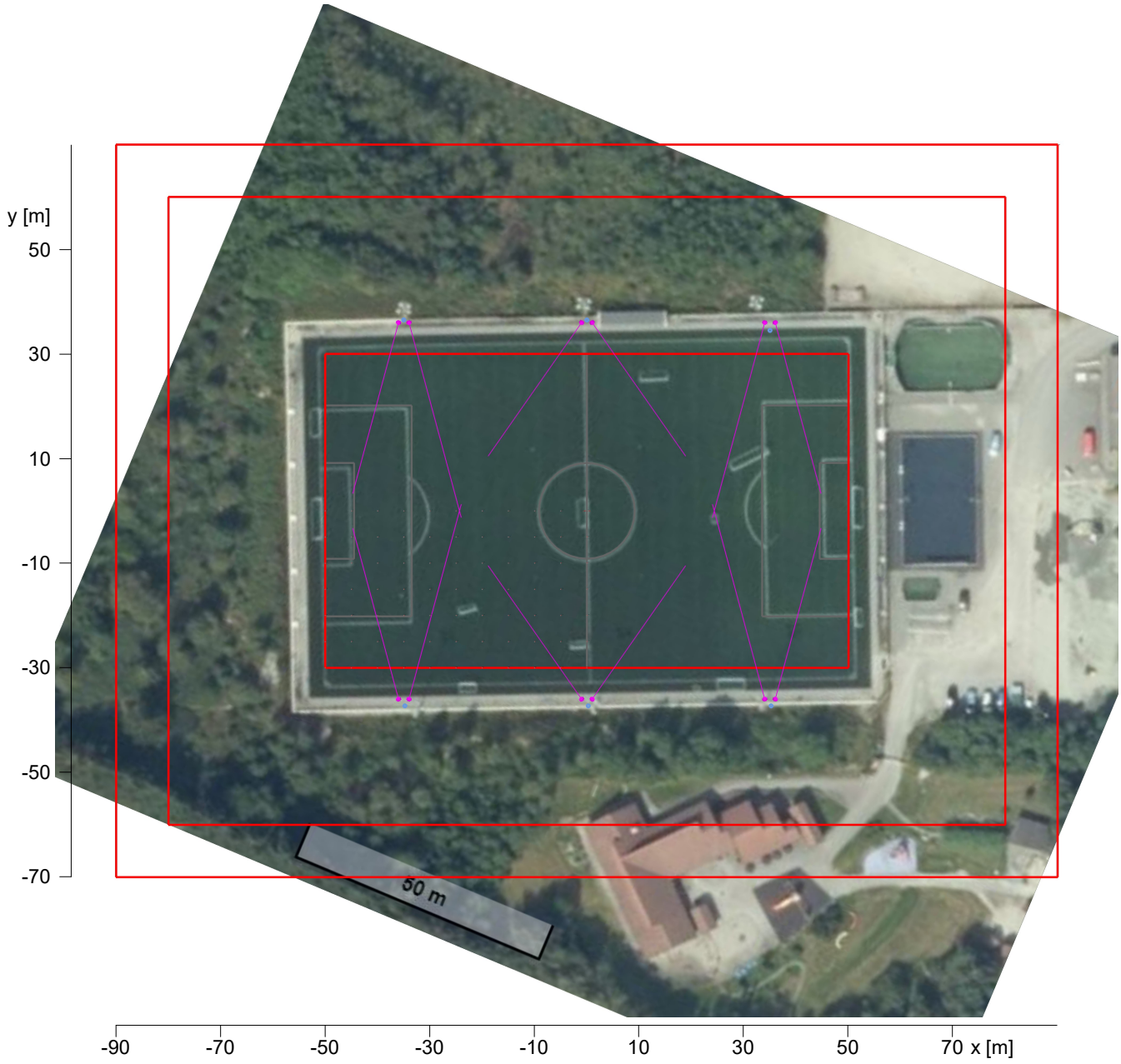
Dimensjoner : 600 mm x 600 mm x 200 mm



2 60 x 100m spilleflate, 200lux 18m WS290LS

2.1 Beskrivelse, 60 x 100m spilleflate, 200lux 18m WS290LS

2.1.2 Planvisning



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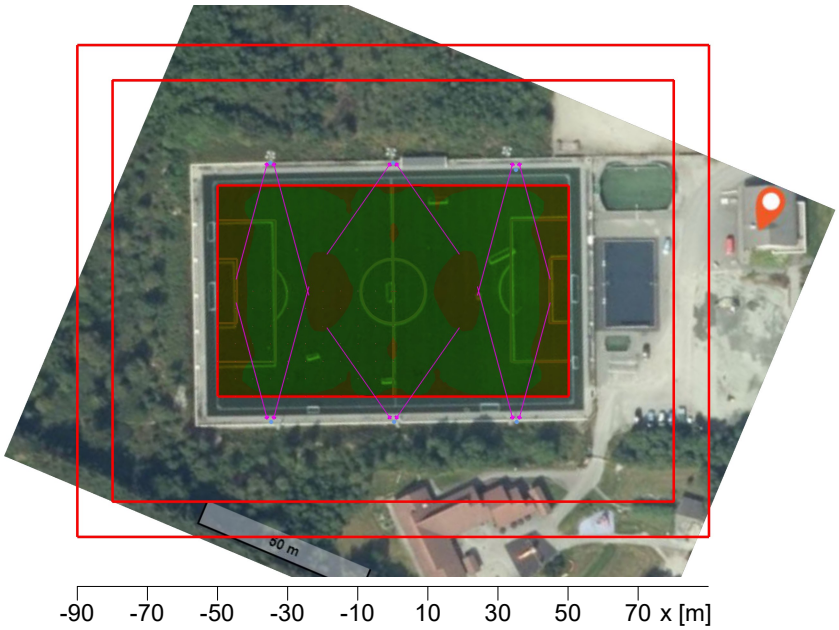
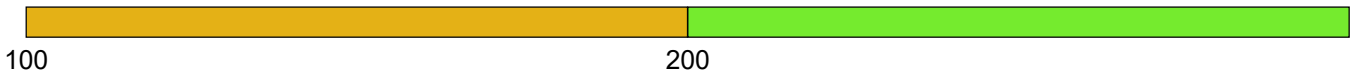
2 60 x 100m spilleflate, 200lux 18m WS290LS

2.2 Sammendrag, 60 x 100m spilleflate, 200lux 18m WS290LS

2.2.1 Resultatoversikt, Idrettsbane 1.1





Belysningsstyrke [lx]

Generell

Anvendt beregningsalgoritme	Midlere indirekteandel
Beregningsflatens høyde	0.00 m
Høyde (fot. sentrum) [m]:	18.00 m
Vedlikeholdsfaktor	0.90
Total lysfluks for alle lyskilder	2652864 lm
Totaleffekt	18600 W
Totaleffekt per areal (25200.00 m²)	0.74 W/m² (0.37 W/m²/100lx)

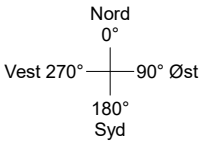
Belysningsstyrke

Gjennomsnittlig belysningsstyrke	Em	200 lx
Laveste belysningsstyrke	Emin	132 lx
Største belysningsstyrke	Emaks	255 lx
Jevnhet U1	Emin/Em	1:1.52 (0.66)
Jevnhet U2	Emin/Emax	1:1.94 (0.52)

Observatør GR

Lve = 0.37 cd/m², Ehm(MF:1.0) = 222 lx, ρ = 15 %

No.	Beskrivelse	Posisjon	Maks GR	Retning
59	GR 59	-35 m/-5 m/1.6 m	49.3	1° (-2°)



Type Ant.\Prod.

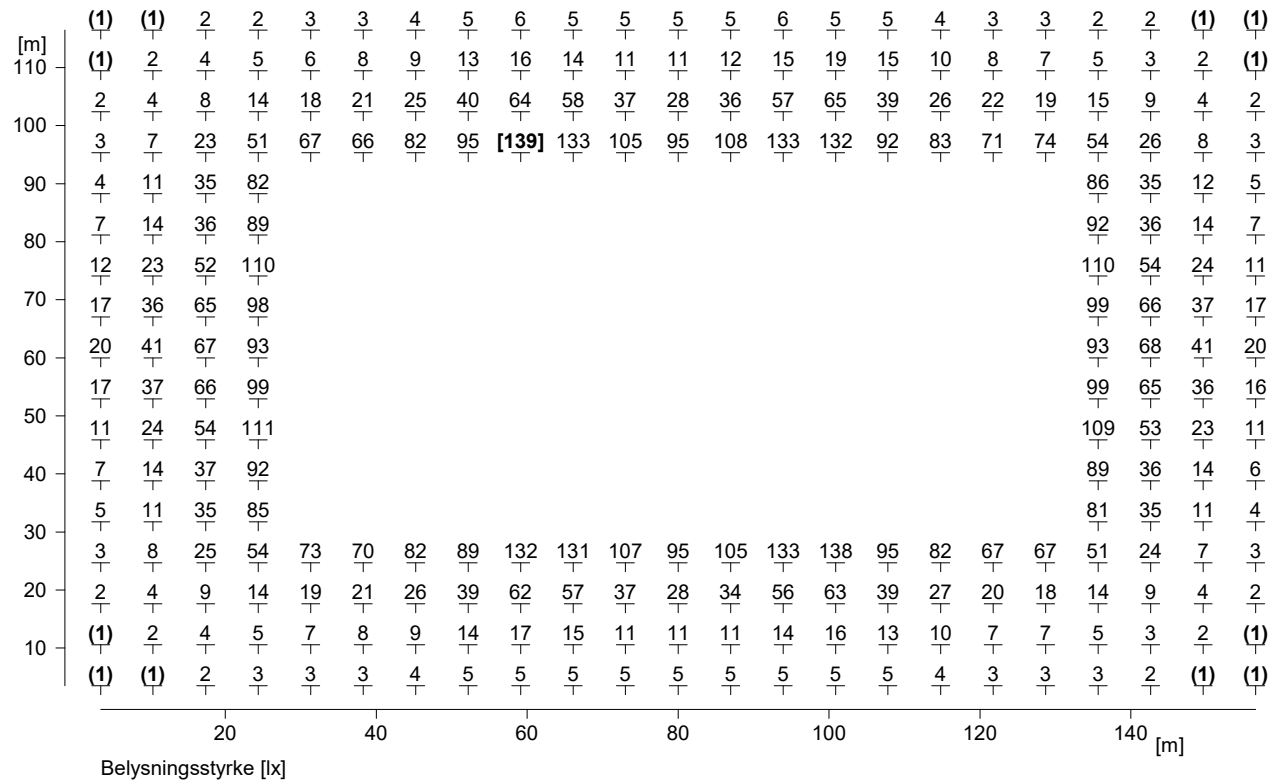
		AAA-LUX	
3	12	Bestillingsnr.	: !WS2907 LS v7.0.0 200917_0953.ies
		Armaturnavn	: WS2907v LS 7.0.0
		Bestykning	: 1 x LED SOURCE AAA-LUX 1550 W / 221072 lm

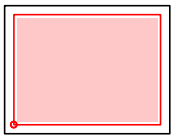
Multilux

2 60 x 100m spilleflate, 200lux 18m WS290LS

2.3 Beregningsresultat, 60 x 100m spilleflate, 200lux 18m WS290LS

2.3.1 Tabell, Strølys 30m utenfor spilleflaten (E)

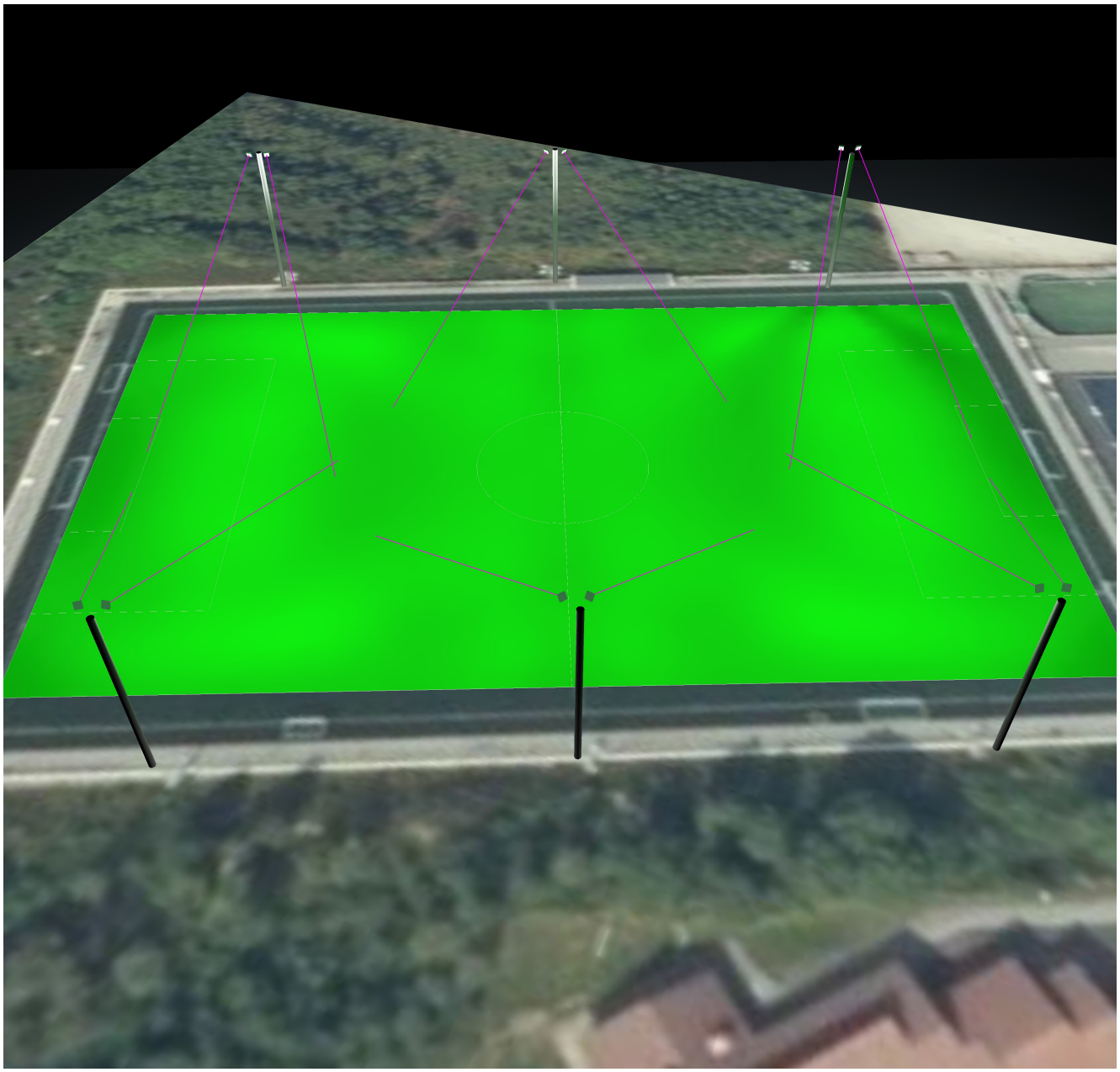




Referanseplanets høyde		: 0.00 m
Gjennomsnittlig belysningsstyrke	Em	: 32 lx
Laveste belysningsstyrke	Emin	: 1 lx
Største belysningsstyrke	Emaks	: 139 lx
Jevnhet U1	Emin/Em	: 1: 40.16 (0.02)
Jevnhet U2	Emin/Emaks	: 1: 172.38 (0.01)

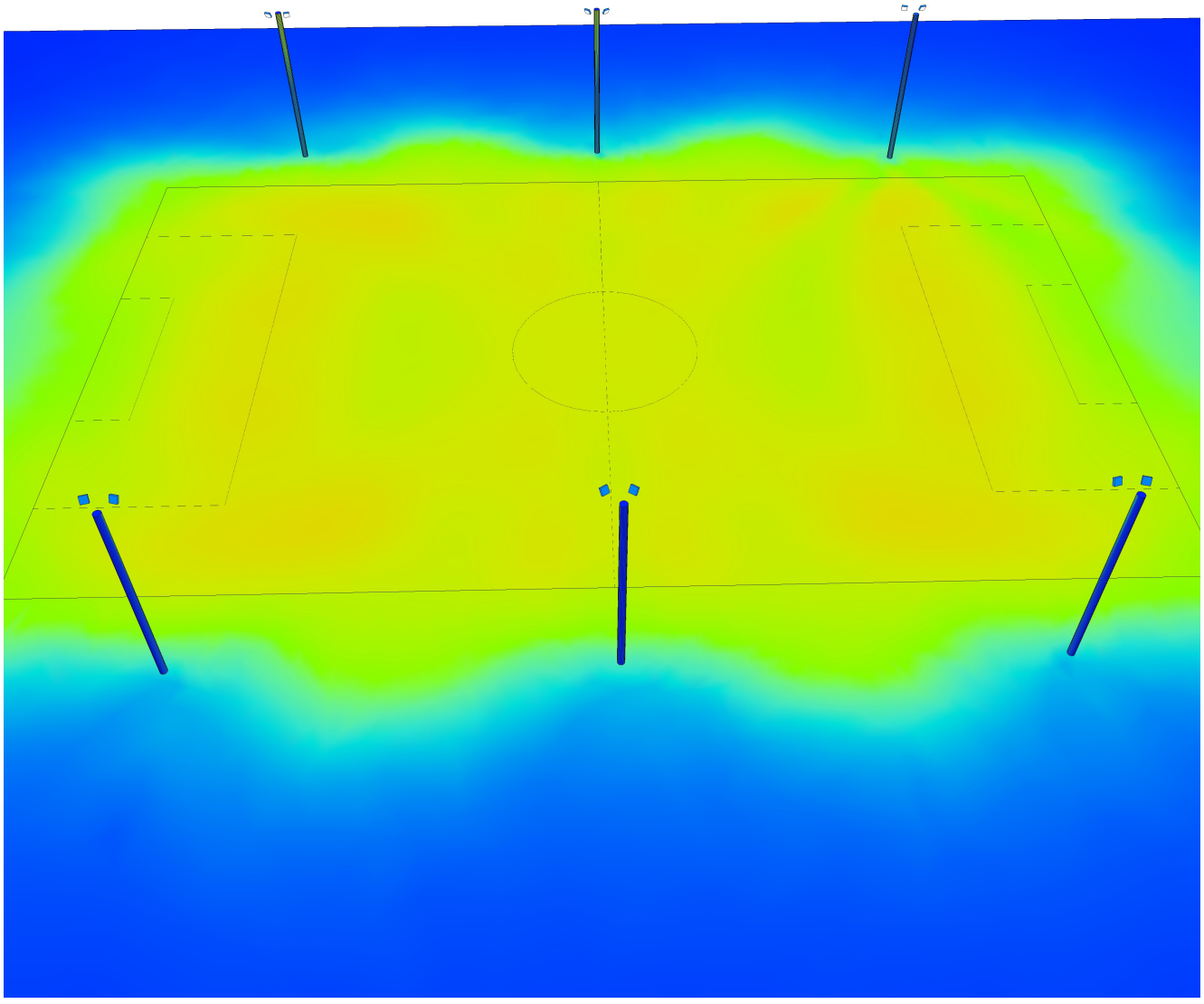
2.3 Beregningsresultat, 60 x 100m spilleflate, 200lux 18m WS290LS

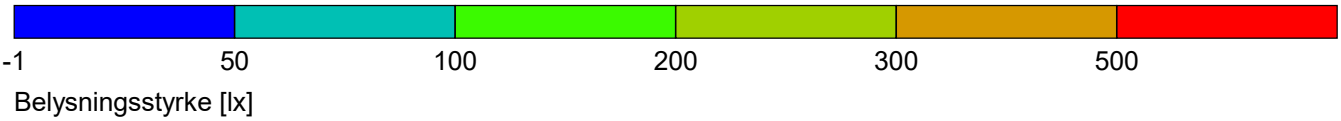
2.3.2 3D luminans, Vis 1



2.3 Beregningsresultat, 60 x 100m spilleflate, 200lux 18m WS290LS

2.3.3 3D Fargeskala, Vis 1 (E)





Belysningsstyrke [lx]