





Stadion Oostpoort Haarlem

**Lichtberechnungen
4* 800 Lux
Masten auf Dach**



Scheinwerfer

Auf 6 kleinen Masten befinden sich jeweils 6 MAXILUX und auf 6 kleinen Masten befinden sich jeweils 5 MAXILUX. Auf 2 grossen Masten befinden sich jeweils 18 MAXILUX und auf 4 grossen Masten befinden sich jeweils 15 MAXILUX.

In der folgenden Tabelle sind die verwendeten Scheinwerfer und ihre Anzahl aufgelistet.

Scheinwerfer	Anzahl	Lampe
MAXILUX 7-4202-1237	13	HIT-DE 2000 W/D
MAXILUX 7-4203-1237	65	HIT-DE 2000 W/D
MAXILUX 7-4204-1237	84	HIT-DE 2000 W/D

Ergebnisse

Alle GR-Blendungswerte liegen unter 50.

Fussball	Beleuchtungsstärke vertikal Haupt- und Nebentribüne		Vertikal hinter den Toren		Horizontal	
	E_v in Lux	E_{min}/E_{max} E_{min}/E_{av}	E_v in Lux	E_{min}/E_{max} E_{min}/E_{av}	E_h in Lux	E_{min}/E_{max} E_{min}/E_{av}
TV 4* 800 Lux	842 / 845	0,42 / 0,47 0,71 / 0,72	810 / 822	0,44 / 0,45 0,69 / 0,68	1620	0,60 0,81



PLANNING VAN DE VERLICHTING

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GEOMETRIE VAN DE INSTALLATIE

lengte van berekeningsoppervlakte	105.00 m
breedte van berekeningsoppervlakte	68.00 m
hoogte van werkvlak (Eh)	0.00 m
hoogte van referentievlak (Eh,Ev)	1.00 m

ARMATUUR- EN LAMPGEGEVENS

armatuurtype 2	7-4202-1237/HIT-DE2000 / MAXILUX TB/2000HIT-DE		
bestandsnaam/nummer	TRILUX/203043B		
aantal armaturen	13	aantal lampen per eenheid	1
rendement	0.80	lamptype	HIT-DE 2000/D
nominale lichtstroom	200000 lm	kleurtint/-temperatuur	tw
correctie factor	1.00	kleurweergave klasse/-index	1A
totale lichtstroom	200000 lm		

armatuurtype 3	7-4203-1237/HIT-DE2000 / MAXILUX B/2000HIT-DE		
bestandsnaam/nummer	TRILUX/203056B		
aantal armaturen	64	aantal lampen per eenheid	1
rendement	0.76	lamptype	HIT-DE 2000/D
nominale lichtstroom	200000 lm	kleurtint/-temperatuur	tw
correctie factor	1.00	kleurweergave klasse/-index	1A
totale lichtstroom	200000 lm		

armatuurtype 4	7-4204-1237/HIT-DE2000 / MAXILUX SB/2000HIT-DE		
bestandsnaam/nummer	TRILUX/203060B		
aantal armaturen	85	aantal lampen per eenheid	1
rendement	0.75	lamptype	HIT-DE 2000/D
nominale lichtstroom	200000 lm	kleurtint/-temperatuur	tw
correctie factor	1.00	kleurweergave klasse/-index	1A
totale lichtstroom	200000 lm		

ONTWERPGEGEVENS

	1200 lx
	0.80
aantal berekeningspunten in x-richting	21
aantal berekeningspunten in y-richting	13

OPMERKINGEN

De berekeningen worden uitgevoerd op basis van de bovenvermelde gegevens. Variaties t.o.v. de ontwerpgegevens kunnen veroorzaakt worden door berekeningsmethoden en afwijkingen van armatuurgegevens. Deze variaties liggen binnen de toleranties vermeld in nationale en internationale aanbevelingen.

TRILUX



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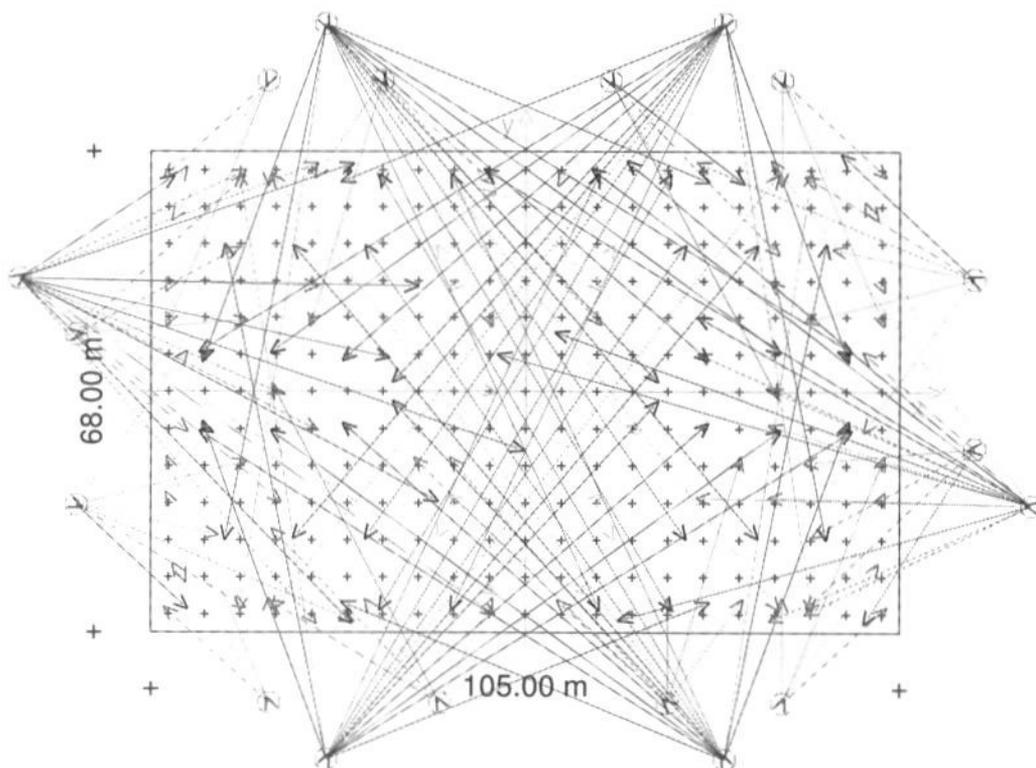
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Schaal 1 : 1000

PAAL-/ARMATUUROPSTELLING, BEREKENINGSOPPERVLAKTE MET REFERENTIEPUNTEN





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TABELLEN MET ARMATUUR KO-ORDINATEN

no	type	x (m)	y (m)	z (m)	ori.	richthoeken (°)	rot.	Xa (m)	Ya (m)	sfr
1	4	20.00	-44.00	18.00	131.4°	0.0°	-68.3°	-10.00	-10.00	1
2	4	20.00	-44.00	18.00	90.0°	0.0°	-37.9°	20.00	-30.00	1
3	4	-20.00	44.00	18.00	-48.6°	0.0°	-68.3°	10.00	10.00	1
4	4	-20.00	44.00	18.00	-90.0°	0.0°	-37.9°	-20.00	30.00	1
5	4	20.00	-44.00	18.00	135.8°	0.0°	-69.8°	-15.00	-10.00	1
6	4	20.00	-44.00	18.00	73.6°	0.0°	-63.1°	30.00	-10.00	1
7	4	20.00	-44.00	18.00	137.0°	0.0°	-48.7°	5.00	-30.00	1
8	4	20.00	-44.00	18.00	54.5°	0.0°	-43.7°	30.00	-30.00	1
9	4	-20.00	44.00	18.00	-66.2°	0.0°	-64.2°	-5.00	10.00	1
10	4	-20.00	44.00	18.00	-106.4°	0.0°	-63.1°	-30.00	10.00	1
11	4	-20.00	44.00	18.00	-43.0°	0.0°	-48.7°	-5.00	30.00	1
12	4	-20.00	44.00	18.00	-124.7°	0.0°	-41.3°	-29.00	31.00	1
13	4	36.00	-44.00	18.00	67.6°	0.0°	-63.9°	50.00	-10.00	1
14	4	36.00	-44.00	18.00	64.2°	0.0°	-60.8°	50.00	-15.00	1
15	4	36.00	-44.00	18.00	90.0°	0.0°	-37.9°	36.00	-30.00	1
16	4	36.00	-44.00	18.00	55.6°	0.0°	-52.0°	49.00	-25.00	1
17	4	36.00	-44.00	18.00	42.9°	0.0°	-46.7°	50.00	-31.00	1
18	3	-12.00	-44.00	18.00	117.6°	0.0°	-70.1°	-35.00	0.00	1
19	4	-12.00	-44.00	18.00	133.8°	0.0°	-61.6°	-35.00	-20.00	1
20	4	-12.00	-44.00	18.00	63.4°	0.0°	-41.0°	-5.00	-30.00	1
21	4	-12.00	-44.00	18.00	125.5°	0.0°	-43.7°	-22.00	-30.00	1
22	4	-12.00	-44.00	18.00	148.7°	0.0°	-56.2°	-35.00	-30.00	1
23	3	12.00	44.00	18.00	-62.4°	0.0°	-70.1°	35.00	-0.00	1
24	4	12.00	44.00	18.00	-46.2°	0.0°	-61.6°	35.00	20.00	1
25	4	12.00	44.00	18.00	-116.6°	0.0°	-41.0°	5.00	30.00	1
26	4	12.00	44.00	18.00	-60.3°	0.0°	-41.9°	20.00	30.00	1
27	3	12.00	44.00	18.00	-37.9°	0.0°	-51.7°	30.00	30.00	1
28	3	28.00	-52.00	38.00	114.9°	0.0°	-67.2°	-10.00	30.00	1
29	3	28.00	-52.00	38.00	147.8°	0.0°	-66.2°	-45.00	-6.00	1
30	3	28.00	-52.00	38.00	120.3°	0.0°	-68.2°	-20.00	30.00	1
31	4	28.00	-52.00	38.00	127.5°	0.0°	-69.8°	-35.00	30.00	1
32	4	28.00	-52.00	38.00	81.7°	0.0°	-65.4°	40.00	30.00	1
33	2	28.00	-52.00	38.00	119.1°	0.0°	-65.2°	-12.00	20.00	1
34	3	28.00	-52.00	38.00	124.8°	0.0°	-66.6°	-22.00	20.00	1
35	3	28.00	-52.00	38.00	79.9°	0.0°	-67.9°	42.00	20.00	1
36	3	28.00	-52.00	38.00	129.8°	0.0°	-62.6°	-18.00	2.00	1
37	3	28.00	-52.00	38.00	132.6°	0.0°	-60.8°	-18.00	-2.00	1
38	3	28.00	-52.00	38.00	157.5°	0.0°	-56.5°	-25.00	-30.00	1
39	3	28.00	-52.00	38.00	138.4°	0.0°	-61.8°	-25.00	-5.00	1
40	3	28.00	-52.00	38.00	143.9°	0.0°	-64.0°	-35.00	-6.00	1



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TABELLEN MET ARMATUUR KO-ORDINATEN

no	type	middenpunt van armatuur			richthoeken (°)		richtpunt			
		x (m)	y (m)	z (m)	ori.	inkl.	rot.	Xa (m)	Ya (m)	sfr
41	3	28.00	-52.00	38.00	70.1 ^o	0.0 ^o	-52.8 ^o	45.00	-5.00	1
42	2	28.00	-52.00	38.00	135.8 ^o	0.0 ^o	-54.4 ^o	-10.00	-15.00	1
43	4	63.00	-8.00	18.00	-175.0 ^o	0.0 ^o	-52.1 ^o	40.00	-10.00	1
44	4	63.00	-8.00	18.00	-151.4 ^o	0.0 ^o	-54.3 ^o	41.00	-20.00	1
45	4	63.00	-8.00	18.00	-136.3 ^o	0.0 ^o	-60.5 ^o	40.00	-30.00	1
46	4	63.00	-8.00	18.00	113.8 ^o	0.0 ^o	-64.2 ^o	48.00	26.00	1
47	4	63.00	-8.00	18.00	139.1 ^o	0.0 ^o	-47.8 ^o	48.00	5.00	1
48	3	63.00	-8.00	18.00	-122.0 ^o	0.0 ^o	-57.5 ^o	48.00	-32.00	1
49	4	-63.00	8.00	18.00	5.0 ^o	0.0 ^o	-52.1 ^o	-40.00	10.00	1
50	4	-63.00	8.00	18.00	28.6 ^o	0.0 ^o	-54.3 ^o	-41.00	20.00	1
51	4	-63.00	8.00	18.00	43.7 ^o	0.0 ^o	-60.5 ^o	-40.00	30.00	1
52	4	-63.00	8.00	18.00	-66.2 ^o	0.0 ^o	-64.2 ^o	-48.00	-26.00	1
53	4	-63.00	8.00	18.00	-40.9 ^o	0.0 ^o	-47.8 ^o	-48.00	-5.00	1
54	4	-63.00	8.00	18.00	56.9 ^o	0.0 ^o	-56.8 ^o	-48.00	31.00	1
55	4	63.00	16.00	18.00	157.2 ^o	0.0 ^o	-66.4 ^o	25.00	32.00	1
56	4	63.00	16.00	18.00	-165.4 ^o	0.0 ^o	-52.9 ^o	40.00	10.00	1
57	4	63.00	16.00	18.00	168.1 ^o	0.0 ^o	-47.2 ^o	44.00	20.00	1
58	4	63.00	16.00	18.00	148.7 ^o	0.0 ^o	-56.2 ^o	40.00	30.00	1
59	4	63.00	16.00	18.00	-125.5 ^o	0.0 ^o	-55.1 ^o	48.00	-5.00	1
60	3	63.00	16.00	18.00	136.6 ^o	0.0 ^o	-54.0 ^o	45.00	33.00	1
61	4	-63.00	-16.00	18.00	-22.8 ^o	0.0 ^o	-66.4 ^o	-25.00	-32.00	1
62	4	-63.00	-16.00	18.00	14.6 ^o	0.0 ^o	-52.9 ^o	-40.00	-10.00	1
63	4	-63.00	-16.00	18.00	-11.9 ^o	0.0 ^o	-47.2 ^o	-44.00	-20.00	1
64	4	-63.00	-16.00	18.00	-31.3 ^o	0.0 ^o	-56.2 ^o	-40.00	-30.00	1
65	4	-63.00	-16.00	18.00	54.5 ^o	0.0 ^o	-55.1 ^o	-48.00	5.00	1
66	3	-63.00	-16.00	18.00	-43.0 ^o	0.0 ^o	-48.7 ^o	-48.00	-30.00	1
67	2	71.00	-16.00	38.00	168.9 ^o	0.0 ^o	-56.3 ^o	15.00	-5.00	1
68	3	71.00	-16.00	38.00	148.3 ^o	0.0 ^o	-67.0 ^o	-5.00	31.00	1
69	3	71.00	-16.00	38.00	160.0 ^o	0.0 ^o	-61.6 ^o	5.00	8.00	1
70	2	71.00	-16.00	38.00	-169.2 ^o	0.0 ^o	-59.4 ^o	8.00	-28.00	1
71	3	71.00	-16.00	38.00	164.2 ^o	0.0 ^o	-63.7 ^o	-3.00	5.00	1
72	3	71.00	-16.00	38.00	142.4 ^o	0.0 ^o	-63.7 ^o	10.00	31.00	1
73	3	71.00	-16.00	38.00	-164.3 ^o	0.0 ^o	-57.3 ^o	14.00	-32.00	1
74	4	71.00	-16.00	38.00	178.8 ^o	0.0 ^o	-50.4 ^o	25.00	-15.00	1
75	3	71.00	-16.00	38.00	150.5 ^o	0.0 ^o	-54.3 ^o	25.00	10.00	1
76	3	71.00	-16.00	38.00	139.4 ^o	0.0 ^o	-62.7 ^o	15.00	32.00	1
77	4	71.00	-16.00	38.00	-156.0 ^o	0.0 ^o	-46.0 ^o	35.00	-32.00	1
78	4	71.00	-16.00	38.00	178.4 ^o	0.0 ^o	-43.5 ^o	35.00	-15.00	1
79	4	71.00	-16.00	38.00	163.0 ^o	0.0 ^o	-44.7 ^o	35.00	-5.00	1
80	4	71.00	-16.00	38.00	156.0 ^o	0.0 ^o	-46.0 ^o	35.00	-0.00	1



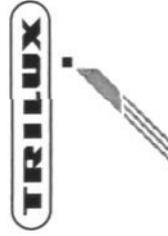
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TABELLEN MET ARMATUUR KO-ORDINATEN

no	type	midpoint van armatuur			richthoeken (°)		richtpunt			
		x (m)	y (m)	z (m)	inkl.	rot.	Xa (m)	Ya (m)	sfr	
81	4	71.00	-16.00	38.00	155.5°	0.0°	-53.1°	25.00	5.00	1
82	4	71.00	-16.00	38.00	139.3°	0.0°	-51.3°	35.00	15.00	1
83	4	71.00	-16.00	38.00	126.9°	0.0°	-57.7°	35.00	32.00	1
84	4	71.00	-16.00	38.00	-154.2°	0.0°	-42.2°	40.00	-31.00	1
85	3	-71.00	16.00	38.00	33.7°	0.0°	-33.6°	-50.00	30.00	1
86	4	-71.00	16.00	38.00	25.8°	0.0°	-42.2°	-40.00	31.00	1
87	4	-71.00	16.00	38.00	-49.5°	0.0°	-59.0°	-30.00	-32.00	1
88	4	-71.00	16.00	38.00	-40.7°	0.0°	-51.3°	-35.00	-15.00	1
89	4	-71.00	16.00	38.00	-27.1°	0.0°	-50.5°	-30.00	-5.00	1
90	4	-71.00	16.00	38.00	-24.0°	0.0°	-46.0°	-35.00	-0.00	1
91	3	-71.00	16.00	38.00	-12.2°	0.0°	-53.9°	-20.00	5.00	1
92	4	-71.00	16.00	38.00	-1.4°	0.0°	-47.2°	-30.00	15.00	1
93	4	-71.00	16.00	38.00	21.3°	0.0°	-49.2°	-30.00	32.00	1
94	3	-71.00	16.00	38.00	-46.2°	0.0°	-60.2°	-25.00	-32.00	1
95	3	-71.00	16.00	38.00	-28.1°	0.0°	-60.0°	-13.00	-15.00	1
96	3	-71.00	16.00	38.00	-1.0°	0.0°	-55.4°	-16.00	15.00	1
97	3	-71.00	16.00	38.00	19.2°	0.0°	-52.0°	-25.00	32.00	1
98	4	-71.00	16.00	38.00	-35.5°	0.0°	-64.9°	-5.00	-31.00	1
99	2	-71.00	16.00	38.00	-33.7°	0.0°	-64.4°	-5.00	-28.00	1
100	2	-71.00	16.00	38.00	-13.6°	0.0°	-60.8°	-5.00	0.00	1
101	2	-71.00	16.00	38.00	10.3°	0.0°	-60.5°	-5.00	28.00	1
102	3	-71.00	16.00	38.00	-18.9°	0.0°	-62.8°	-1.00	-8.00	1
103	4	36.00	44.00	18.00	-67.6°	0.0°	-63.9°	50.00	10.00	1
104	4	36.00	44.00	18.00	-64.2°	0.0°	-60.8°	50.00	15.00	1
105	4	36.00	44.00	18.00	-90.0°	0.0°	-37.9°	36.00	30.00	1
106	4	36.00	44.00	18.00	-55.6°	0.0°	-52.0°	49.00	25.00	1
107	4	36.00	44.00	18.00	-42.9°	0.0°	-46.7°	50.00	31.00	1
108	3	28.00	52.00	38.00	-114.9°	0.0°	-67.2°	-10.00	-30.00	1
109	3	28.00	52.00	38.00	-147.8°	0.0°	-66.2°	-45.00	6.00	1
110	3	28.00	52.00	38.00	-120.3°	0.0°	-68.2°	-20.00	-30.00	1
111	4	28.00	52.00	38.00	-127.5°	0.0°	-69.8°	-35.00	-30.00	1
112	4	28.00	52.00	38.00	-81.7°	0.0°	-65.4°	40.00	-30.00	1
113	2	28.00	52.00	38.00	-119.1°	0.0°	-65.2°	-12.00	-20.00	1
114	3	28.00	52.00	38.00	-124.8°	0.0°	-66.6°	-22.00	-20.00	1
115	3	28.00	52.00	38.00	-129.8°	0.0°	-67.9°	-32.00	-20.00	1
116	3	28.00	52.00	38.00	-79.0°	0.0°	-62.6°	42.00	-20.00	1
117	3	28.00	52.00	38.00	-132.6°	0.0°	-60.8°	-18.00	2.00	1
118	3	28.00	52.00	38.00	-157.5°	0.0°	-56.5°	-25.00	30.00	1
119	3	28.00	52.00	38.00	-138.4°	0.0°	-61.8°	-25.00	5.00	1
120	3	28.00	52.00	38.00	-143.9°	0.0°	-64.0°	-35.00	6.00	1



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TABELLEN MET ARMATUUR KO-ORDINATEN

no	type	middenpunt van armatuur			richthoeken (°)		richtpunt		sfr	
		x (m)	y (m)	z (m)	ori.	inkl.	rot.	Xa (m)		Ya (m)
121	3	28.00	52.00	38.00	-70.1°	0.0°	-52.8°	45.00	5.00	1
122	2	28.00	52.00	38.00	-135.8°	0.0°	-54.4°	-10.00	15.00	1
123	4	-36.00	-44.00	18.00	112.4°	0.0°	-63.9°	-50.00	-10.00	1
124	4	-36.00	-44.00	18.00	115.8°	0.0°	-60.8°	-50.00	-15.00	1
125	4	-36.00	-44.00	18.00	90.0°	0.0°	-37.9°	-36.00	-30.00	1
126	4	-36.00	-44.00	18.00	124.4°	0.0°	-52.0°	-49.00	-25.00	1
127	4	-36.00	-44.00	18.00	137.1°	0.0°	-46.7°	-50.00	-31.00	1
128	3	-28.00	-52.00	38.00	65.1°	0.0°	-67.2°	10.00	30.00	1
129	3	-28.00	-52.00	38.00	32.2°	0.0°	-66.2°	45.00	-6.00	1
130	3	-28.00	-52.00	38.00	59.7°	0.0°	-68.2°	20.00	30.00	1
131	4	-28.00	-52.00	38.00	52.5°	0.0°	-69.8°	35.00	30.00	1
132	4	-28.00	-52.00	38.00	98.3°	0.0°	-65.4°	-40.00	30.00	1
133	2	-28.00	-52.00	38.00	60.9°	0.0°	-65.2°	12.00	20.00	1
134	3	-28.00	-52.00	38.00	55.2°	0.0°	-66.6°	22.00	20.00	1
135	3	-28.00	-52.00	38.00	50.2°	0.0°	-67.9°	32.00	20.00	1
136	3	-28.00	-52.00	38.00	101.0°	0.0°	-62.6°	-42.00	20.00	1
137	3	-28.00	-52.00	38.00	47.4°	0.0°	-60.8°	18.00	-2.00	1
138	3	-28.00	-52.00	38.00	22.5°	0.0°	-56.5°	25.00	-30.00	1
139	3	-28.00	-52.00	38.00	41.6°	0.0°	-61.8°	25.00	-5.00	1
140	3	-28.00	-52.00	38.00	36.1°	0.0°	-64.0°	35.00	-6.00	1
141	3	-28.00	-52.00	38.00	109.9°	0.0°	-52.8°	-45.00	-5.00	1
142	2	-28.00	-52.00	38.00	44.2°	0.0°	-54.4°	10.00	-15.00	1
143	4	-36.00	44.00	18.00	-112.4°	0.0°	-63.9°	-50.00	10.00	1
144	4	-36.00	44.00	18.00	-115.8°	0.0°	-60.8°	-50.00	15.00	1
145	4	-36.00	44.00	18.00	-90.0°	0.0°	-37.9°	-36.00	30.00	1
146	4	-36.00	44.00	18.00	-124.4°	0.0°	-52.0°	-49.00	25.00	1
147	4	-36.00	44.00	18.00	-137.1°	0.0°	-46.7°	-50.00	31.00	1
148	3	-28.00	52.00	38.00	-65.1°	0.0°	-67.2°	10.00	-30.00	1
149	3	-28.00	52.00	38.00	-32.2°	0.0°	-66.2°	45.00	6.00	1
150	3	-28.00	52.00	38.00	-59.7°	0.0°	-68.2°	20.00	-30.00	1
151	4	-28.00	52.00	38.00	-52.5°	0.0°	-69.8°	35.00	-30.00	1
152	4	-28.00	52.00	38.00	-98.3°	0.0°	-65.4°	-40.00	-30.00	1
153	2	-28.00	52.00	38.00	-60.9°	0.0°	-65.2°	12.00	-20.00	1
154	3	-28.00	52.00	38.00	-55.2°	0.0°	-66.6°	22.00	-20.00	1
155	3	-28.00	52.00	38.00	-50.2°	0.0°	-67.9°	32.00	-20.00	1
156	3	-28.00	52.00	38.00	-101.0°	0.0°	-62.6°	-42.00	-20.00	1
157	3	-28.00	52.00	38.00	-47.4°	0.0°	-60.8°	18.00	2.00	1
158	3	-28.00	52.00	38.00	-22.5°	0.0°	-56.5°	25.00	30.00	1
159	3	-28.00	52.00	38.00	-41.6°	0.0°	-61.8°	25.00	5.00	1
160	3	-28.00	52.00	38.00	-36.1°	0.0°	-64.0°	35.00	6.00	1



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TABELLEN MET ARMATUUR KO-ORDINATEN

no	type	middenpunt van armatuur			richthoeken (°)			richtpunt		sfr
		x (m)	y (m)	z (m)	ori.	inkl.	rot.	Xa (m)	Ya (m)	
161	3	-28.00	52.00	38.00	-109.9°	0.0°	-52.8°	-45.00	5.00	1
162	2	-28.00	52.00	38.00	-44.2°	0.0°	-54.4°	10.00	15.00	1



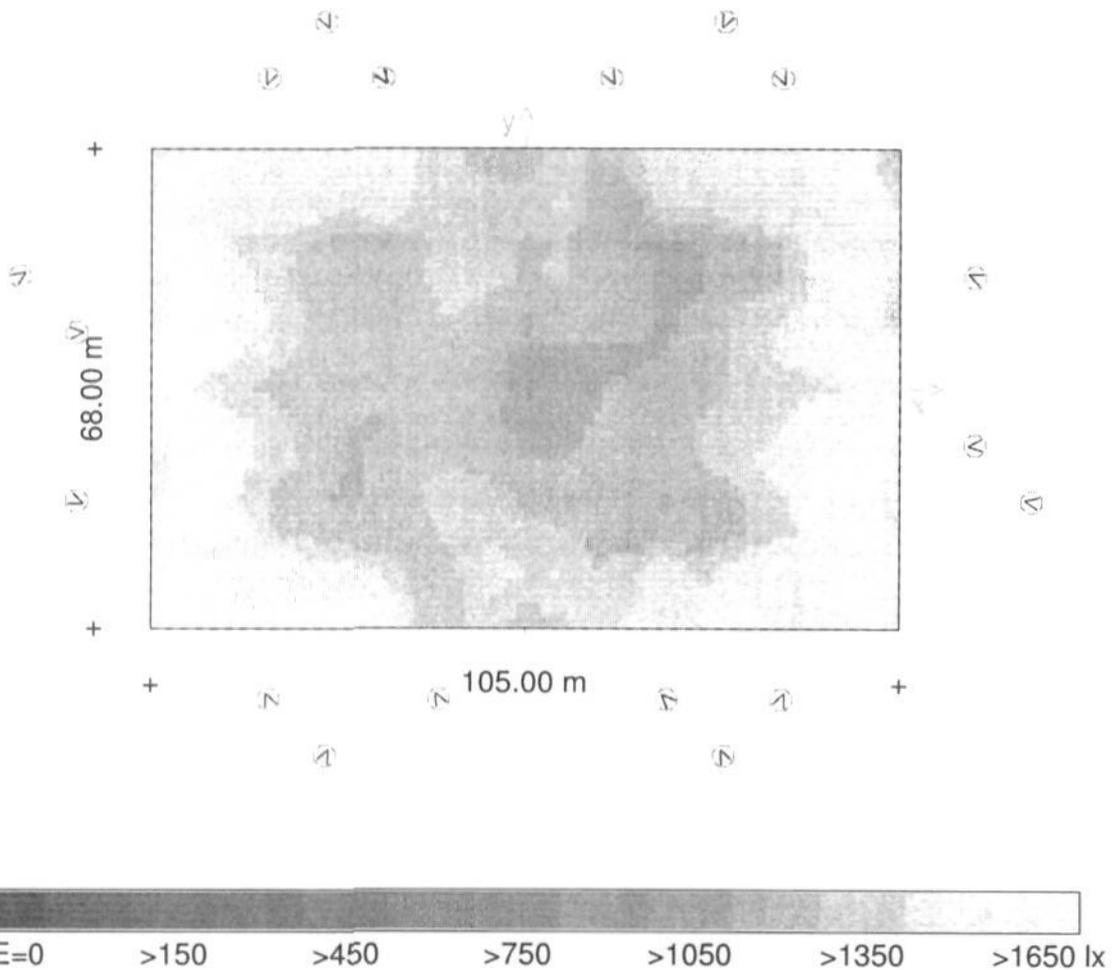
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Schaal 1 : 1000

VERLICHTINGSSTERKTE MOZAIEK - WERKVLAK - (lx)
horizontale verlichtingssterkte Eh





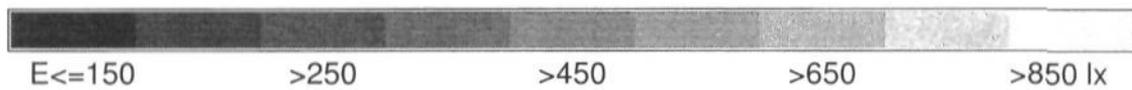
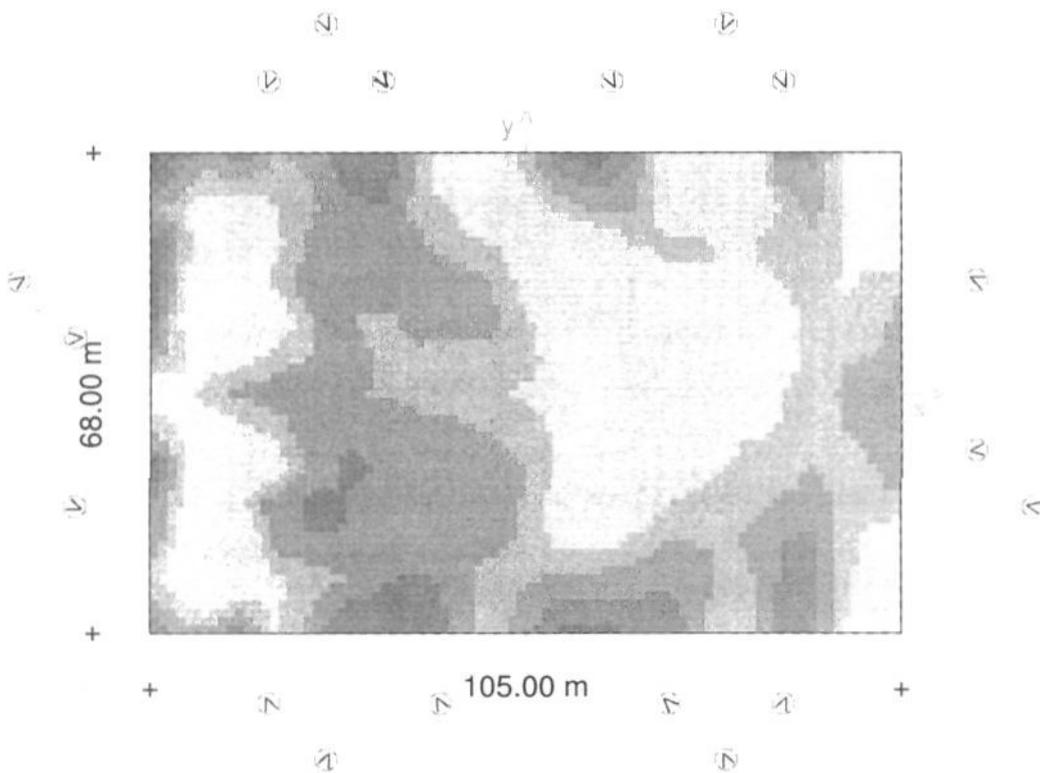
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Schaal 1 : 1000

VERLICHTINGSSTERKTE MOZAIEK - REFERENTIEVLAK - (Ix)
vertikale verlichtingssterkte Ev1





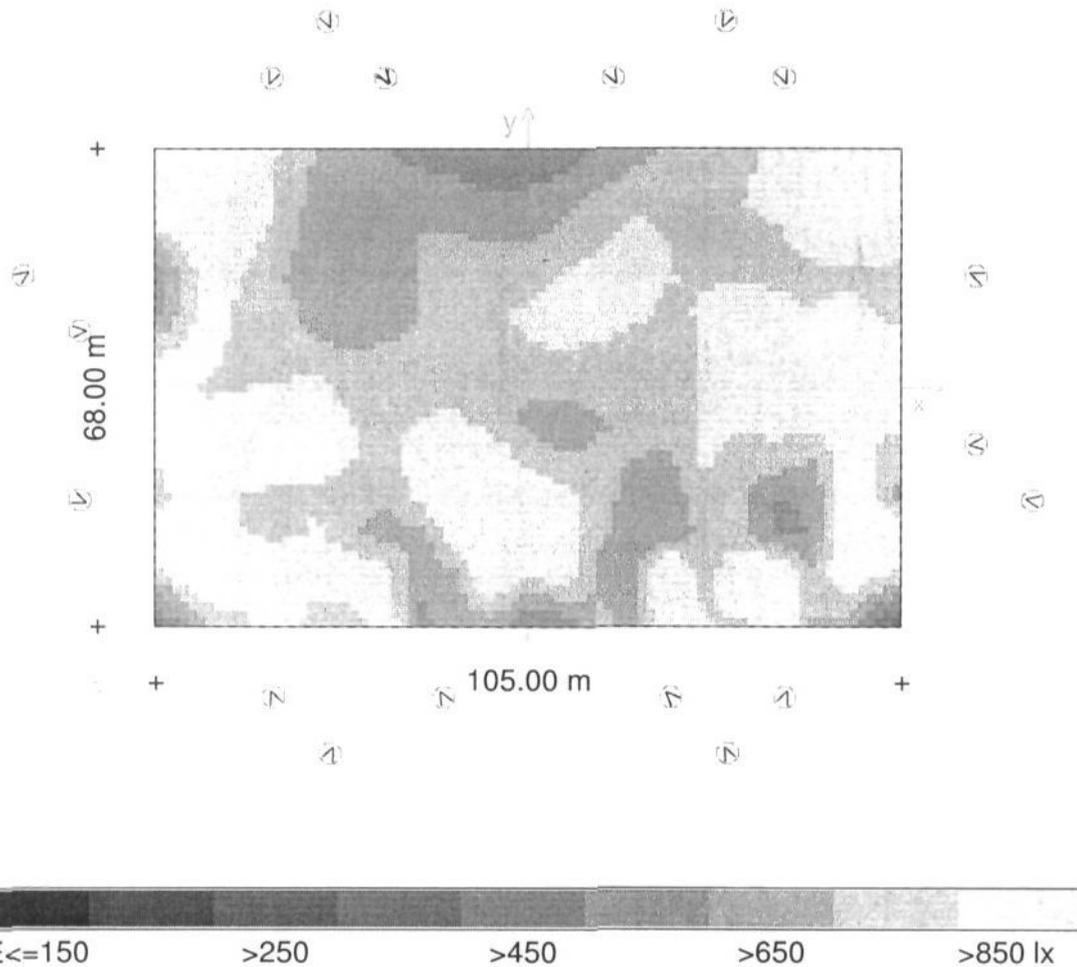
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Schaal 1 : 1000

VERLICHTINGSSTERKTE MOZAIEK - REFERENTIEVLAK - (lx)
vertikale verlichtingssterkte Ev2





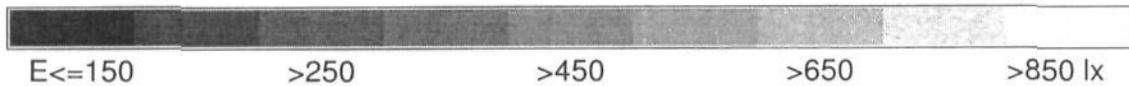
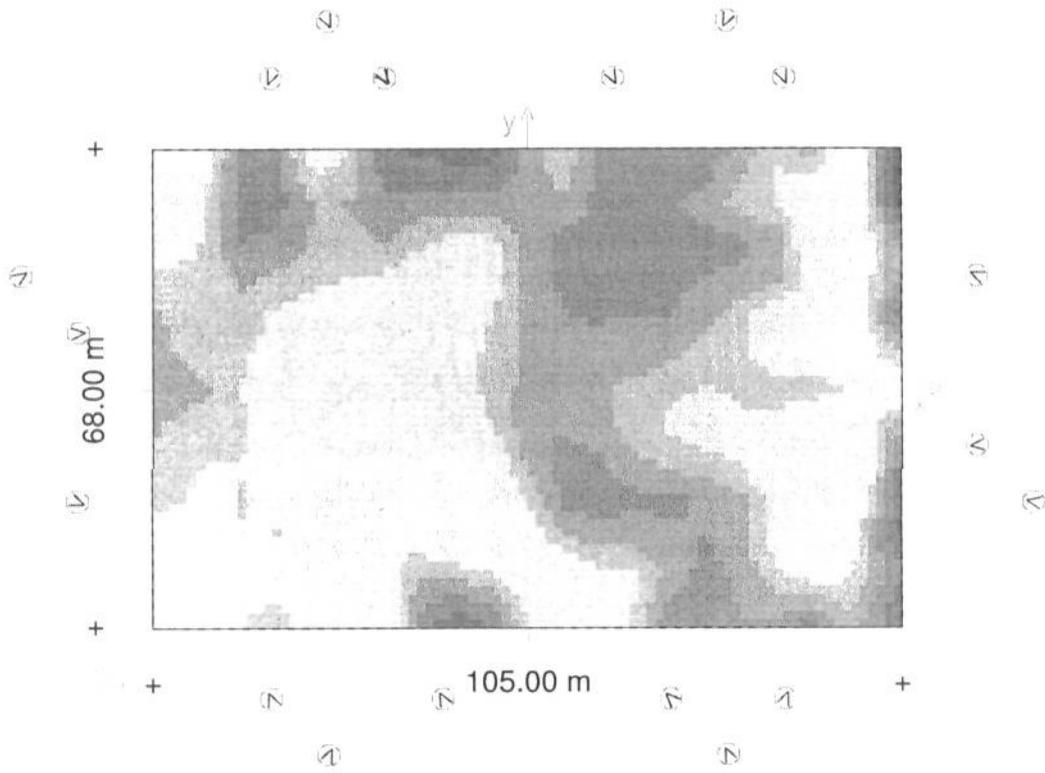
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Schaal 1 : 1000

VERLICHTINGSSTERKTE MOZAIEK - REFERENTIEVLAK - (lx)
vertikale verlichtingssterkte Ev3





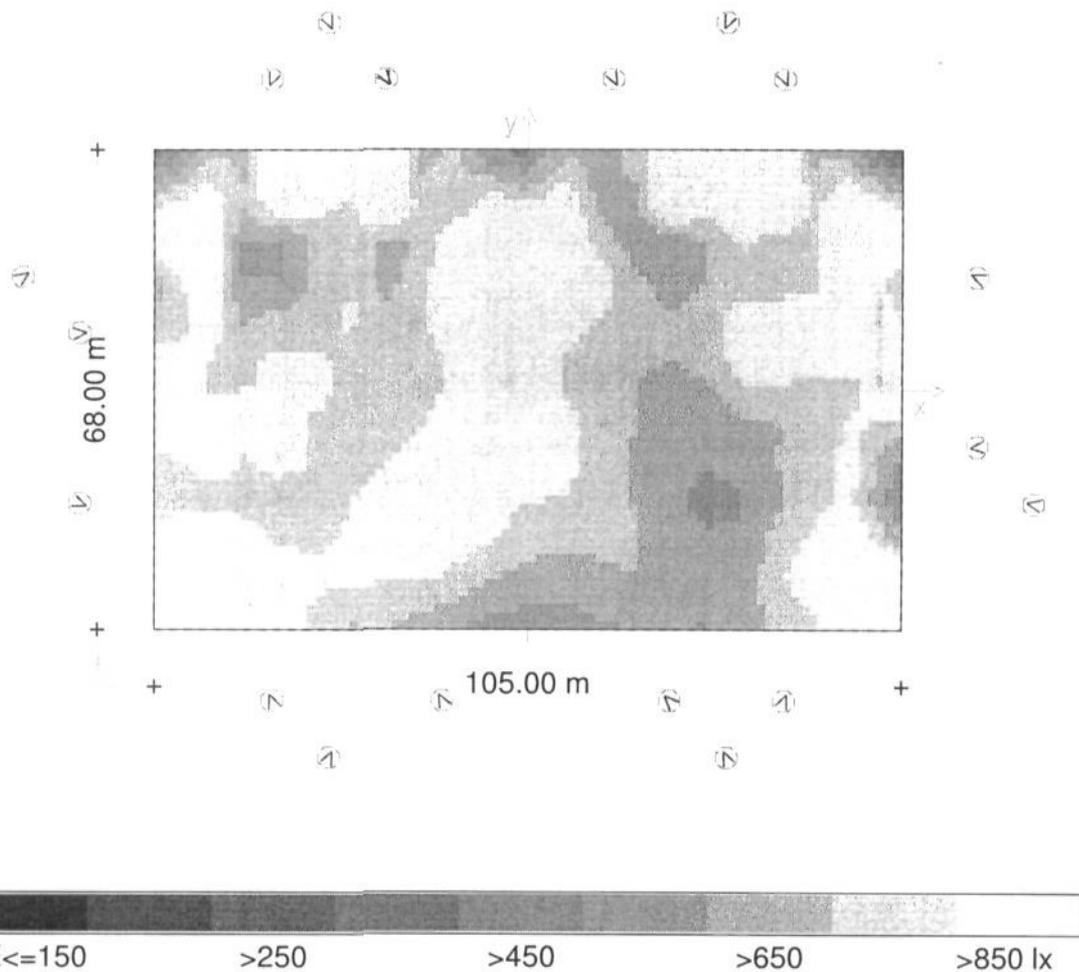
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Schaal 1 : 1000

VERLICHTINGSSTERKTE MOZAIEK - REFERENTIEVLAK - (lx)
vertikale verlichtingssterkte Ev4





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VERLICHTINGSSTERKTE VERDELING - WERKVLAK - (lx)

horizontale verlichtingssterkte Eh

31.4	1792	1917	1823	2180	1982	1966	2031	1627	1544	1462	1417
26.2	2124	2119	1859	2056	1833	1671	1919	1585	1505	1621	1580
20.9	1816	1969	1607	1558	1490	1441	1425	1475	1568	1579	1485
15.7	1645	1968	1724	1520	1439	1437	1391	1475	1578	1555	1491
10.5	1692	2026	1727	1642	1475	1461	1444	1467	1509	1411	1412
5.2	1723	1750	1669	1550	1454	1411	1386	1401	1413	1386	1331
0.0	1846	1604	1535	1441	1439	1394	1385	1390	1394	1369	1326
-5.2	1772	1771	1700	1598	1430	1348	1345	1379	1396	1367	1315
-10.5	1622	2034	1693	1591	1456	1339	1364	1449	1482	1440	1345
-15.7	1709	1971	1641	1442	1360	1337	1374	1494	1578	1590	1478
-20.9	1885	2045	1790	1499	1468	1385	1378	1430	1547	1637	1521
-26.2	2025	2200	1940	2167	1752	1763	1638	1403	1438	1745	1642
-31.4	1941	1931	1881	2175	1786	1762	1849	1439	1452	1637	1464
y / x	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0
31.4	1627	1449	1551	1855	1746	2034	2110	1820	2083	1579	
26.2	1684	1402	1425	1748	1660	1883	2083	1837	2058	1744	
20.9	1509	1431	1347	1332	1355	1449	1464	1741	2013	1849	
15.7	1507	1479	1396	1312	1342	1390	1453	1637	1971	1703	
10.5	1402	1419	1397	1332	1384	1540	1632	1705	2046	1627	
5.2	1332	1337	1326	1349	1431	1535	1681	1721	1799	1787	
0.0	1309	1343	1371	1414	1459	1529	1549	1611	1660	1878	
-5.2	1312	1354	1417	1454	1523	1528	1616	1784	1849	1756	
-10.5	1345	1398	1437	1423	1507	1555	1782	1871	2107	1737	
-15.7	1450	1431	1394	1333	1423	1481	1577	1783	2028	1648	
-20.9	1523	1470	1418	1388	1405	1491	1603	1651	1940	1737	
-26.2	1655	1505	1597	1913	1558	1825	2124	1871	2014	1825	
-31.4	1508	1588	1650	2014	1715	1867	2125	1781	1909	1708	
y / x	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	

Egem = 1620 lx , Emin/Egem = 0.81 , Emin/Emax = 0.6



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VERLICHTINGSSTERKTE VERDELING - REFERENTIEVLAK - (lx)

vertikale verlichtingssterkte Ev1

31.4	577	765	704	786	740	609	588	774	992	1016	839
26.2	780	926	949	862	771	678	652	793	862	1032	948
20.9	637	992	917	884	721	664	677	727	806	841	940
15.7	637	1036	1030	807	673	671	678	661	681	752	897
10.5	718	1162	1026	986	751	744	780	714	709	707	835
5.2	758	941	893	807	741	730	755	768	797	800	820
0.0	944	810	723	673	688	744	756	789	803	833	865
-5.2	808	980	906	820	670	659	688	704	722	759	812
-10.5	664	1081	924	919	701	638	656	671	669	687	753
-15.7	759	1015	884	685	628	651	681	674	654	666	763
-20.9	795	1090	1048	684	656	651	661	685	674	711	767
-26.2	901	1094	1007	875	795	753	659	642	662	810	761
-31.4	717	847	712	868	737	604	615	620	660	819	710
y / x	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0

31.4	624	559	674	974	1168	1257	695	652	868	917
26.2	805	734	743	939	957	1071	867	699	864	975
20.9	1046	986	857	814	837	892	795	786	859	952
15.7	1042	1106	1017	896	858	867	862	813	866	789
10.5	953	1024	1038	946	905	923	889	827	831	762
5.2	898	956	965	941	908	917	918	808	759	738
0.0	878	931	933	921	874	898	856	822	717	704
-5.2	874	925	952	918	892	859	851	783	749	725
-10.5	874	976	976	907	878	834	826	746	778	738
-15.7	945	1001	959	848	822	800	744	696	793	769
-20.9	900	919	823	742	756	743	656	630	811	935
-26.2	739	713	701	685	725	807	653	633	837	971
-31.4	589	582	602	590	751	825	642	636	862	923
y / x	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0

Egem = 810 lx , Emin/Egem = 0.69 , Emin/Emax = 0.44



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VERLICHTINGSSTERKTE VERDELING - REFERENTIEVLAK - (lx)

vertikale verlichtingssterkte Ev2

31.4	1013	1096	903	846	740	671	666	648	630	599	609
26.2	1090	1100	985	832	720	688	693	729	710	671	685
20.9	824	1021	883	811	682	672	697	757	757	755	741
15.7	693	908	851	761	674	649	685	753	786	810	811
10.5	715	929	812	798	718	695	707	755	807	841	867
5.2	846	891	796	793	771	749	760	775	787	828	838
0.0	962	821	849	861	897	792	801	814	815	772	765
-5.2	920	921	947	994	962	858	828	858	883	810	728
-10.5	950	1164	951	924	926	853	832	895	953	960	818
-15.7	868	1104	838	810	817	772	763	875	1006	1085	1008
-20.9	1050	1114	854	797	880	761	717	726	919	1082	1046
-26.2	904	1041	946	1237	969	937	892	674	737	1029	884
-31.4	627	834	853	1092	808	834	932	647	694	806	642
y / x	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0
31.4	636	690	747	782	776	811	919	1018	1414	1136	
26.2	711	791	838	820	835	850	882	1012	1192	992	
20.9	795	843	883	850	832	798	825	903	1030	929	
15.7	864	881	886	852	843	833	822	799	804	805	
10.5	889	894	868	833	860	920	910	853	930	819	
5.2	852	831	821	823	861	906	944	920	1047	1043	
0.0	759	783	789	821	855	924	910	889	875	981	
-5.2	713	743	761	785	874	880	885	873	890	877	
-10.5	758	768	751	737	869	785	799	752	928	811	
-15.7	893	787	714	682	820	772	651	654	972	802	
-20.9	916	777	675	684	770	778	631	655	1023	1002	
-26.2	938	716	730	1026	799	986	1000	770	959	870	
-31.4	689	759	722	1002	841	871	1043	752	795	608	
y / x	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	

Egem = 842 lx , Emin/Egem = 0.71 , Emin/Emax = 0.42



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VERLICHTINGSSTERKTE VERDELING - REFERENTIEVLAK - (lx)

vertikale verlichtingssterkte Ev3

31.4	934	872	635	616	877	821	594	591	557	558	677
26.2	986	848	635	613	759	746	690	701	698	697	693
20.9	953	830	647	672	759	774	748	822	911	881	719
15.7	790	820	729	781	837	851	868	973	1005	928	724
10.5	760	810	790	880	891	927	936	995	979	850	725
5.2	745	779	827	913	932	966	973	973	915	819	717
0.0	724	743	859	913	975	950	998	991	932	803	720
-5.2	757	782	837	961	987	990	1021	1044	995	844	695
-10.5	783	855	852	919	969	984	1045	1113	1100	968	726
-15.7	813	897	845	888	896	902	977	1140	1198	1118	849
-20.9	983	912	856	844	910	857	851	930	1112	1163	954
-26.2	1019	967	911	1024	994	999	900	757	769	848	966
-31.4	957	947	868	826	999	1068	967	650	565	638	871
y / x	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0
31.4	806	630	611	612	601	721	851	802	1105	592	
26.2	745	615	602	618	699	787	857	1022	1074	601	
20.9	608	578	589	603	615	631	678	1043	1090	775	
15.7	620	587	595	618	654	662	707	896	1028	761	
10.5	653	643	651	647	710	821	981	945	1096	674	
5.2	671	672	687	722	789	818	929	934	1006	822	
0.0	689	728	785	831	858	830	806	802	859	967	
-5.2	653	715	800	874	919	865	895	999	1029	783	
-10.5	612	632	729	785	816	864	1154	1159	1240	748	
-15.7	628	591	621	628	662	725	880	1084	1092	639	
-20.9	743	698	709	667	647	711	919	956	978	587	
-26.2	1040	882	862	717	613	679	832	936	874	662	
-31.4	1055	1029	842	609	572	657	689	636	767	571	
y / x	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	

Egem = 822 lx , Emin/Egem = 0.68 , Emin/Emax = 0.45



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VERLICHTINGSSTERKTE VERDELING - REFERENTIEVLAK - (lx)
 verticale verlichtingssterkte Ev4

31.4	608	794	744	1012	924	993	1021	745	772	675	622
26.2	868	955	758	937	879	843	1058	793	772	937	846
20.9	1000	1017	647	620	773	795	719	759	988	1016	994
15.7	799	967	649	649	778	838	713	809	1025	1085	1040
10.5	802	909	727	775	778	873	759	824	1017	920	958
5.2	862	853	836	863	855	838	776	802	886	901	875
0.0	963	845	850	855	875	822	811	824	875	932	923
-5.2	1028	1026	902	883	834	807	819	850	891	951	952
-10.5	805	914	838	870	848	823	845	893	933	940	923
-15.7	797	790	791	807	810	846	898	942	934	909	855
-20.9	928	1015	910	834	826	865	897	954	913	866	782
-26.2	1218	1197	1018	913	865	890	859	873	831	761	735
-31.4	1280	1185	971	956	838	784	790	759	719	654	641
y / x	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0
31.4	802	703	770	951	935	991	1021	757	805	615	
26.2	981	717	724	1004	888	1050	1118	813	986	885	
20.9	950	816	690	696	753	869	755	800	1079	1033	
15.7	977	909	772	709	745	800	793	814	1083	852	
10.5	913	853	816	750	796	895	906	935	1147	936	
5.2	847	819	769	753	791	910	965	928	906	906	
0.0	844	806	750	727	727	835	818	824	804	950	
-5.2	896	799	752	706	683	709	744	763	870	832	
-10.5	887	821	744	681	653	668	753	775	903	699	
-15.7	842	798	749	671	627	643	726	818	878	671	
-20.9	778	771	762	691	658	663	793	863	990	784	
-26.2	707	736	750	704	666	686	809	962	1062	1072	
-31.4	634	664	682	673	652	699	789	843	1129	1145	
y / x	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	

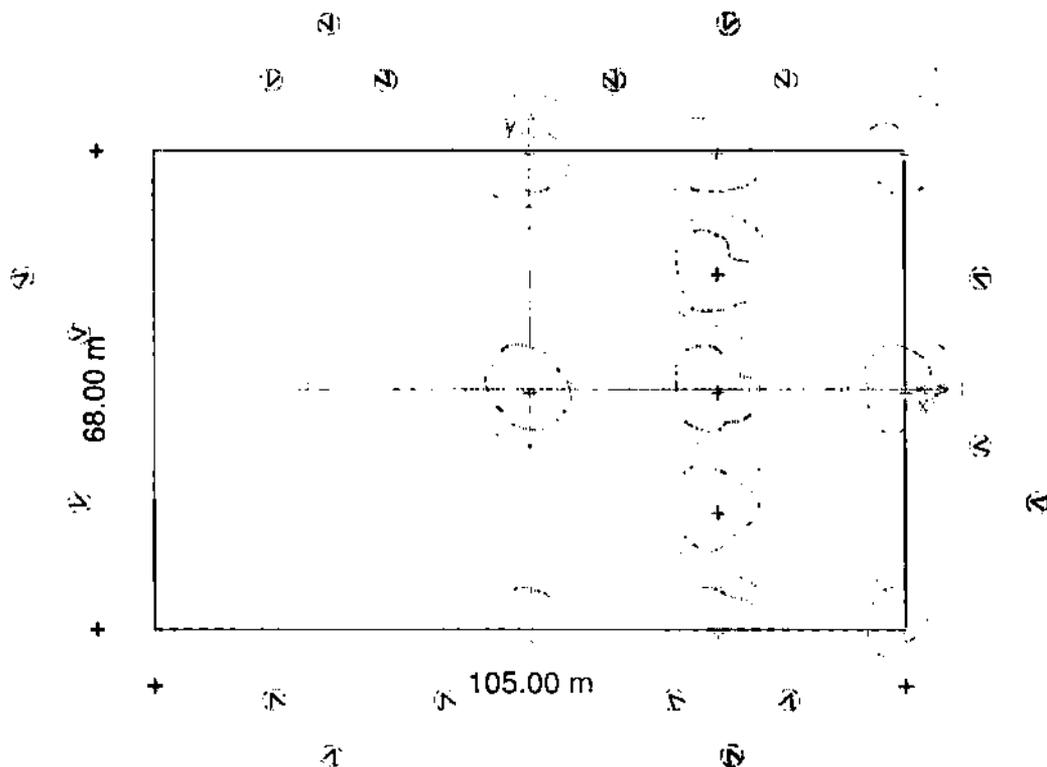
Egem = 845 lx , Emin/Egem = 0.72 , Emin/Emax = 0.47



Stadion Oostpoort, Haarlem
 TV 4' 800 Lux
 Masten auf Dach

Schaal 1 : 1000

DISTRIBUTION OF RELATIVE GLARE RATINGS
 Reference glare rating GR rel. = 50



Verblindingsfaktor (GR)	Beoordeling
90	ontoelaatbaar
70	hinderlijk
50	juist toelaatbaar
30	merkbaar
10	niet merkbaar