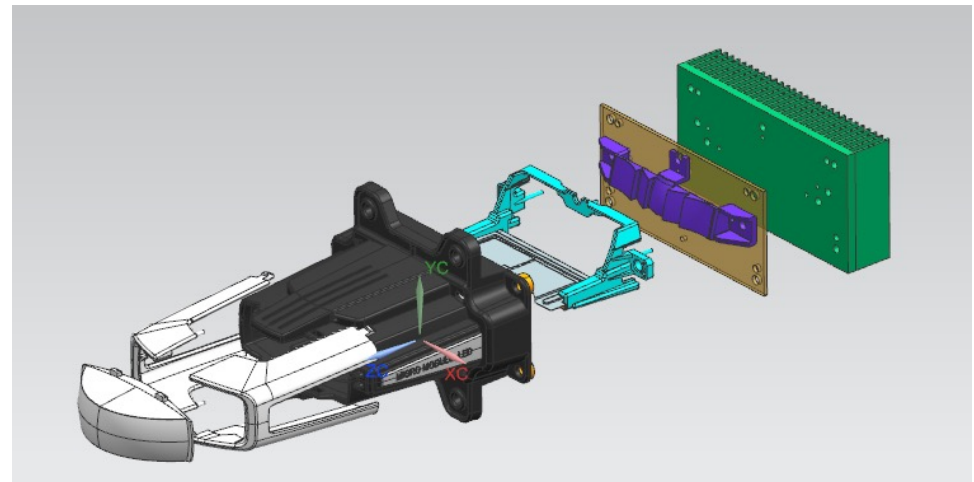


方案介绍

基本信息 (General information)

- * 名称及功能 (Code and Function) : low bream+high bream
- * 透镜芯片信息 (Lens Style) :(日亚常规颗粒NCSW170DT/NC2W170DT; 日亚小型类激光颗粒NJ2W270BT;)
- * 技术特点 (Features) :直投(direct projection)
- * 内透镜材料(Inner lens material): 硅胶 (silica gel)
- * 外透镜材料(Outer lens material): 硅胶 (silica gel)
- * 反射系数(reflection coefficient): 0.9
- * 内外透镜材料透光率(Transmittance of inner and outer lens materials) : 94%
- * 内外透镜材料折射率 (Refractive index of inner and outer lens materials) : 1.41

Optical Analysis of Automotive Modules (Low Beam)



Use:日亚NCSW170DT/NC2W170DT芯片汽车单近光

Low beam particle



NI
Conventional
3W



NI
Conventional
6W



NI
Conventional
6W

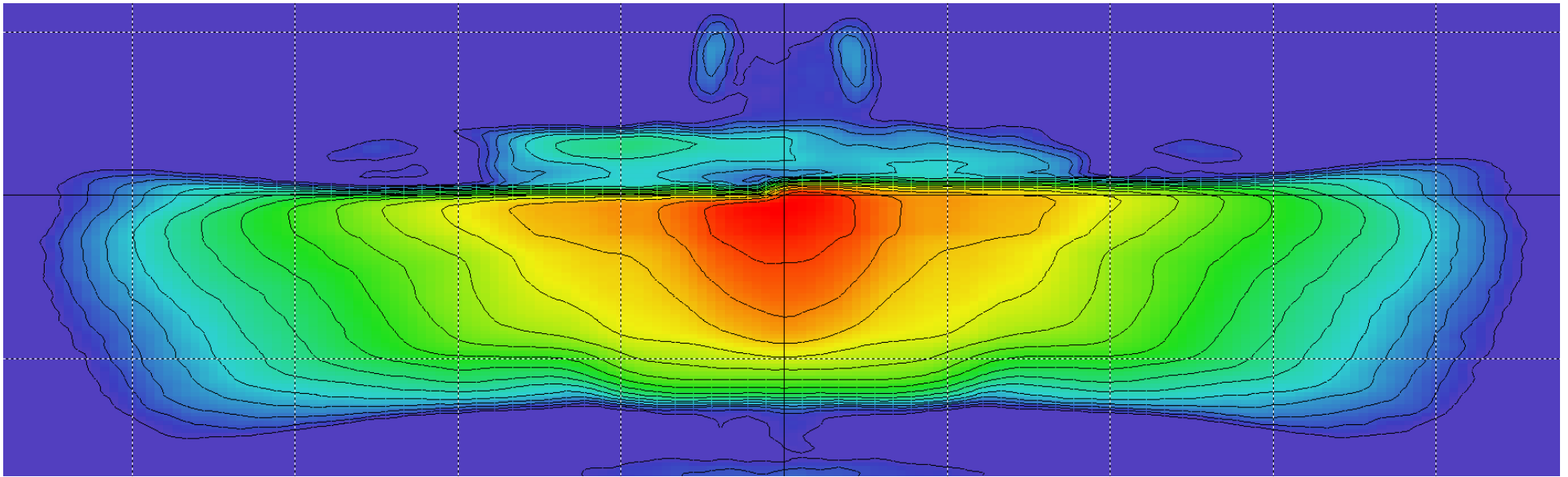


NI
Conventional
6W



NI
Conventional
3W

Single low beam 25m illuminance:

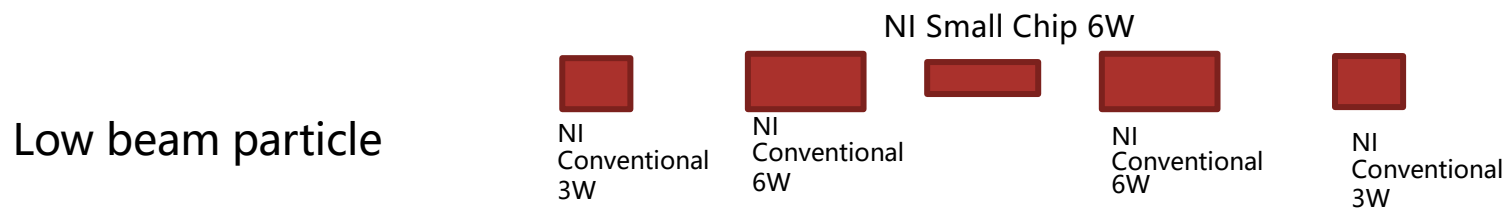


The maximum original design value is 37Lx;
Actual light distribution value: 32 Lx

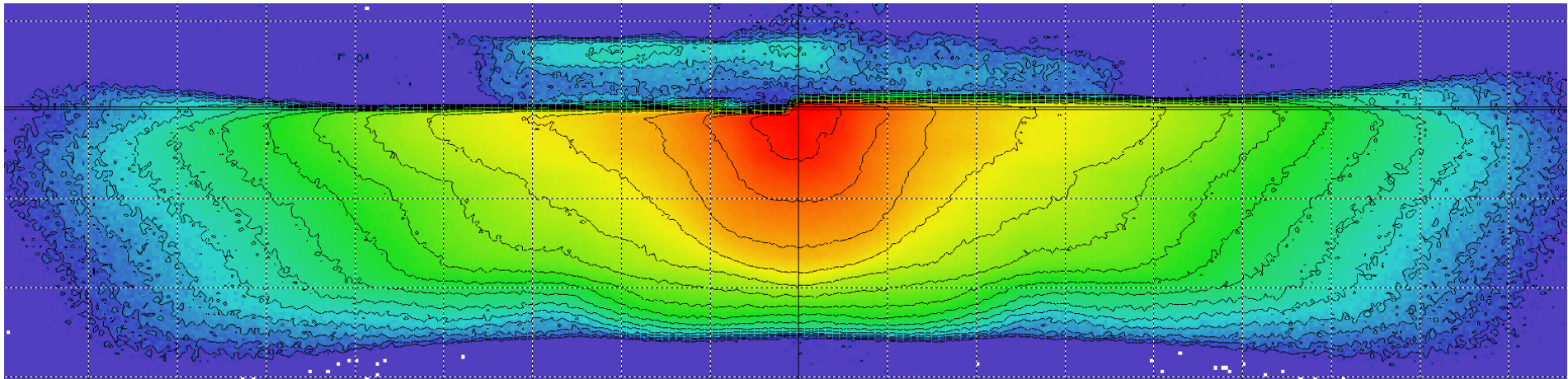
Low beam illumination:



Use: 日亚NCSW170DT/NC2W170DT; 日亚NJ2W270BT 芯片汽车单近光

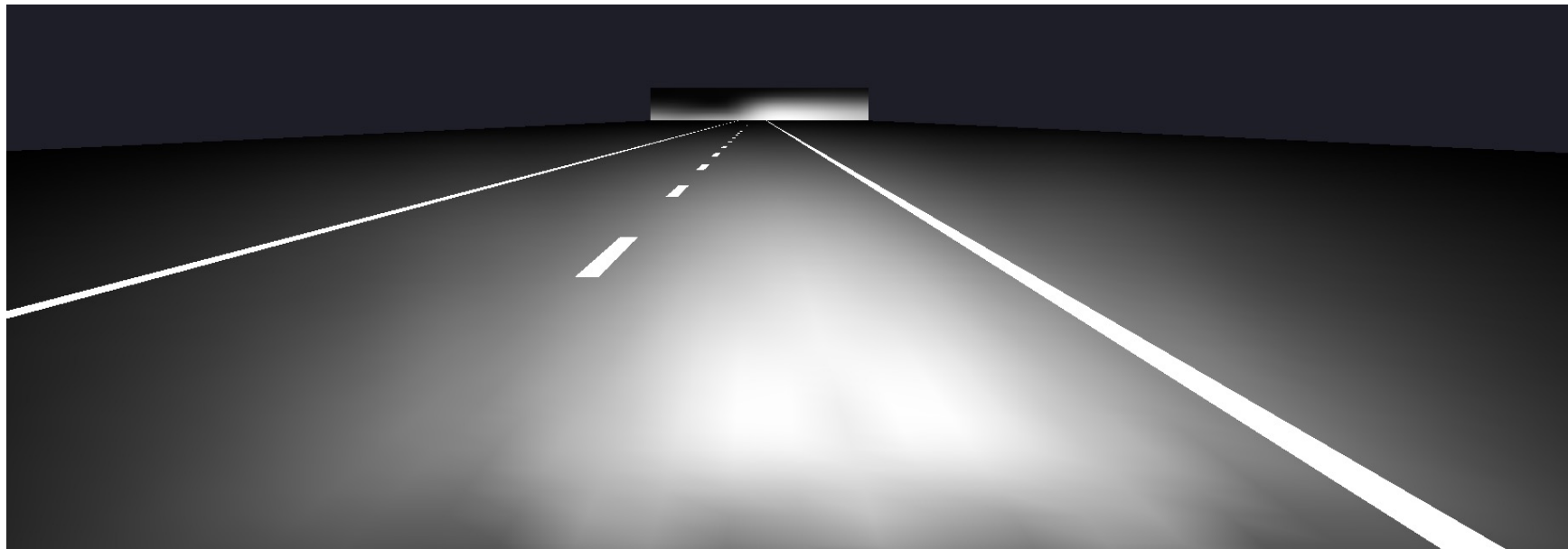


Single low beam 25m illuminance:

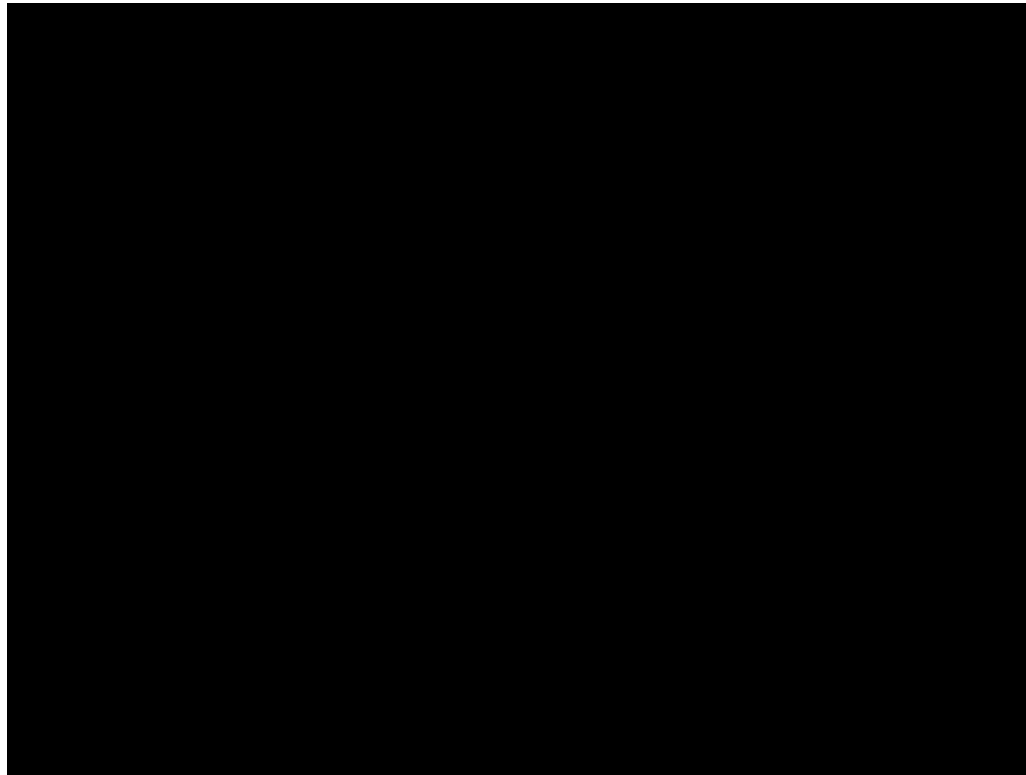


The maximum original design value is 42Lx;
Actual light distribution value: 38Lx

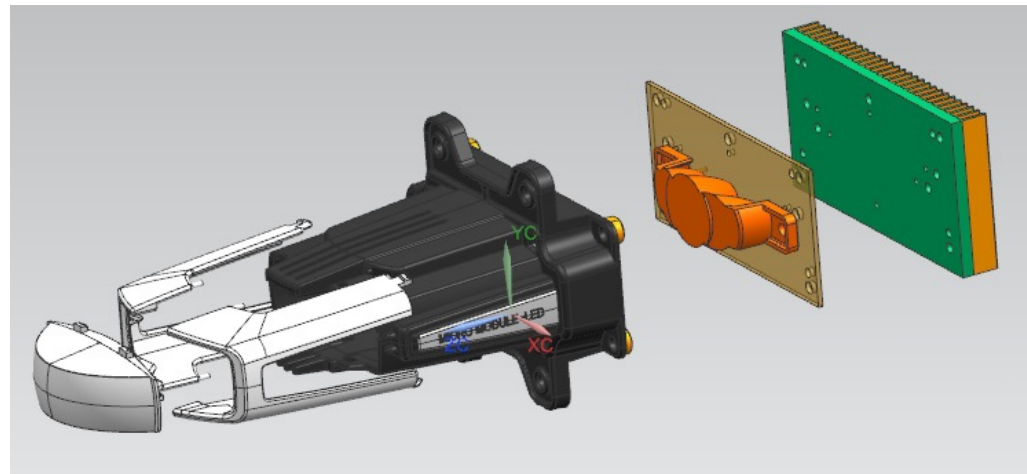
Low beam illumination:



Shooting actual videos in the low beam distribution room:



Optical analysis of automotive modules (High Beam)



Use:日亚NC2W170DT芯片汽车单远光



High beam particles



NI
Conventional
6W

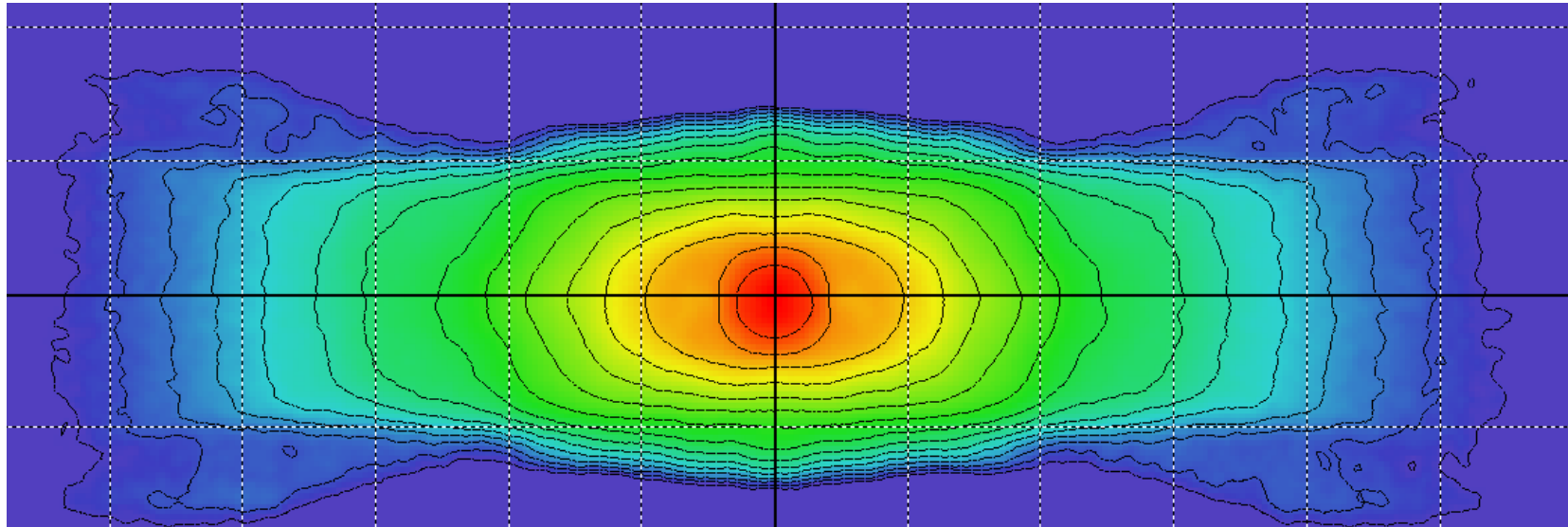


NI
Conventional
6W



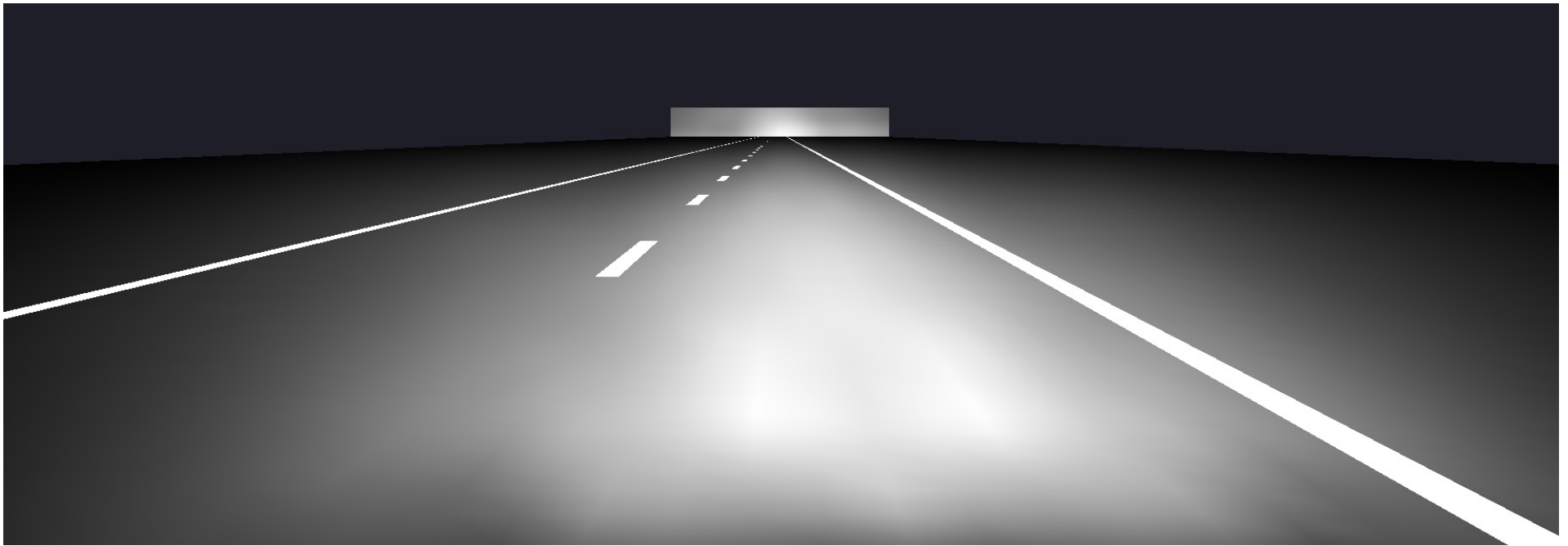
NI
Conventional
6W

Single high beam 25m illuminance:



Original design maximum value of 80 Lx
Actual light distribution value 72 Lx

High beam road lighting:



Use: 日亚NC2W170DT; 日亚NJ2W270BT; 芯片汽车单近光

High beam particles



NI
Conventional
6W

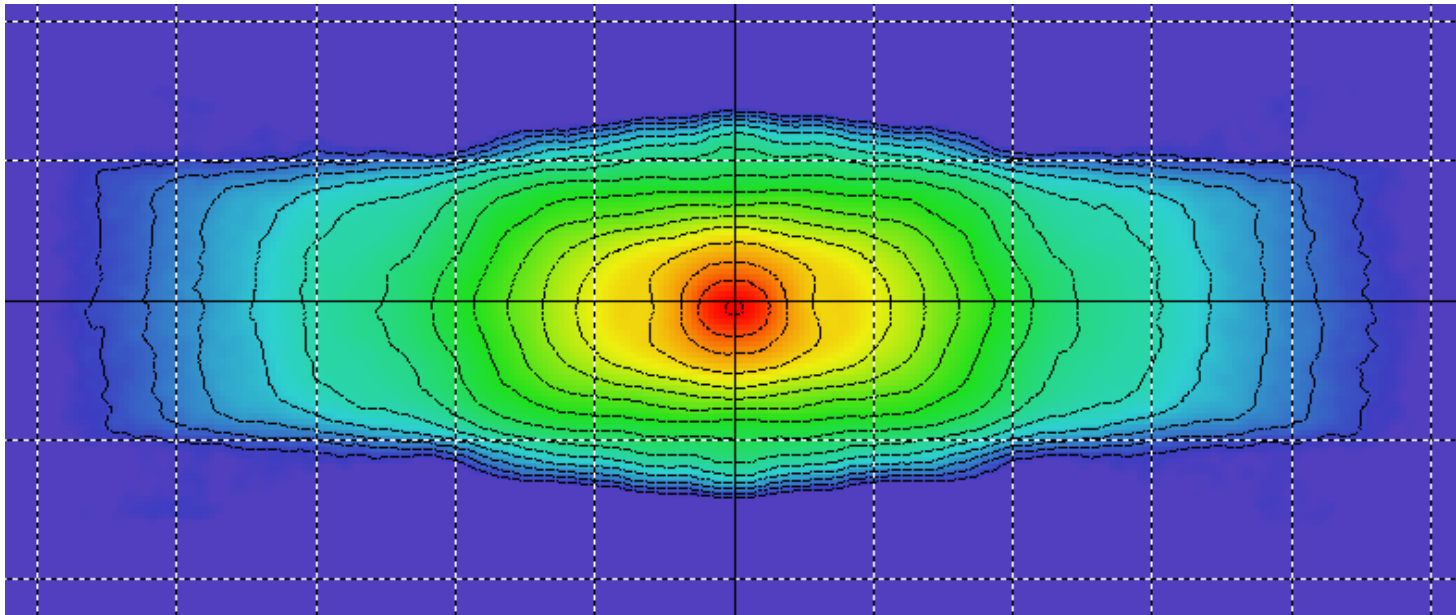


NI
Small Chip
6W



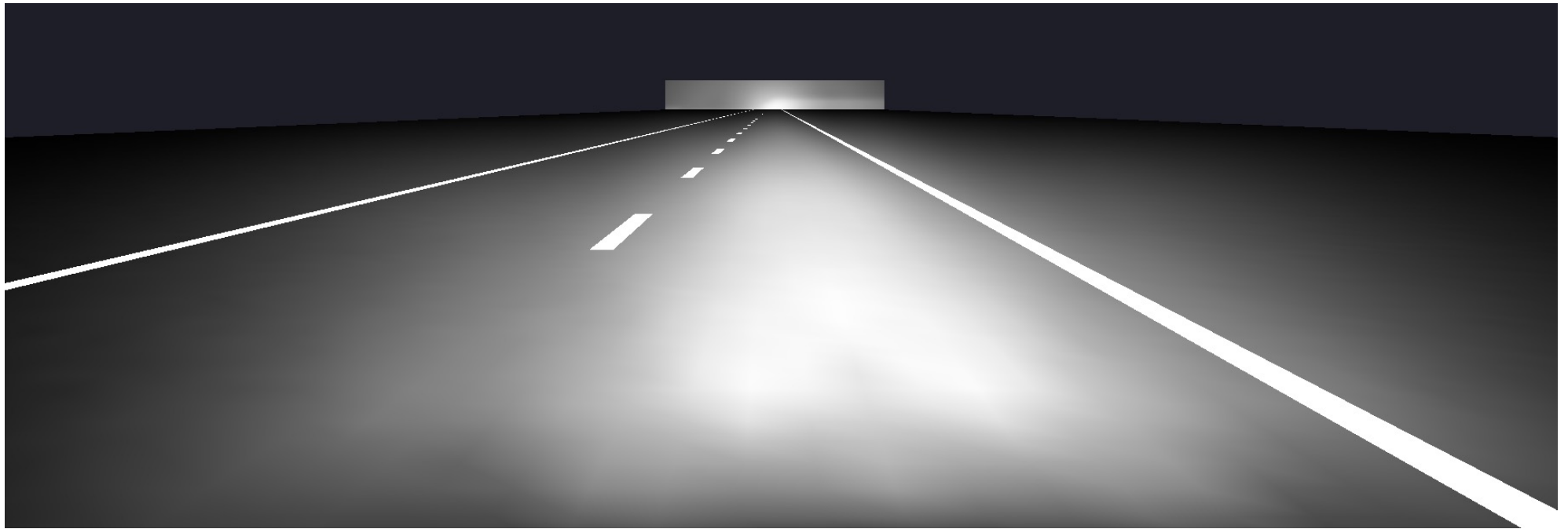
NI
Conventional
6W

Single high beam 25m illuminance:

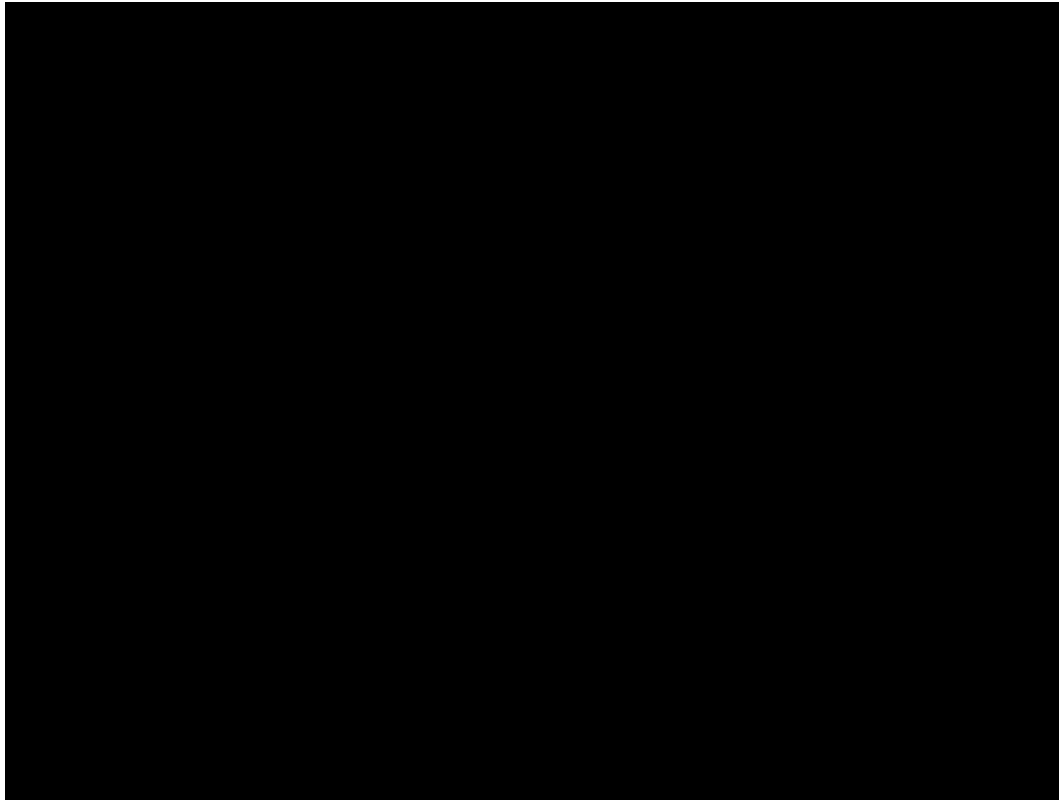


Original design maximum value of 90 Lx
Actual light distribution value 85 Lx

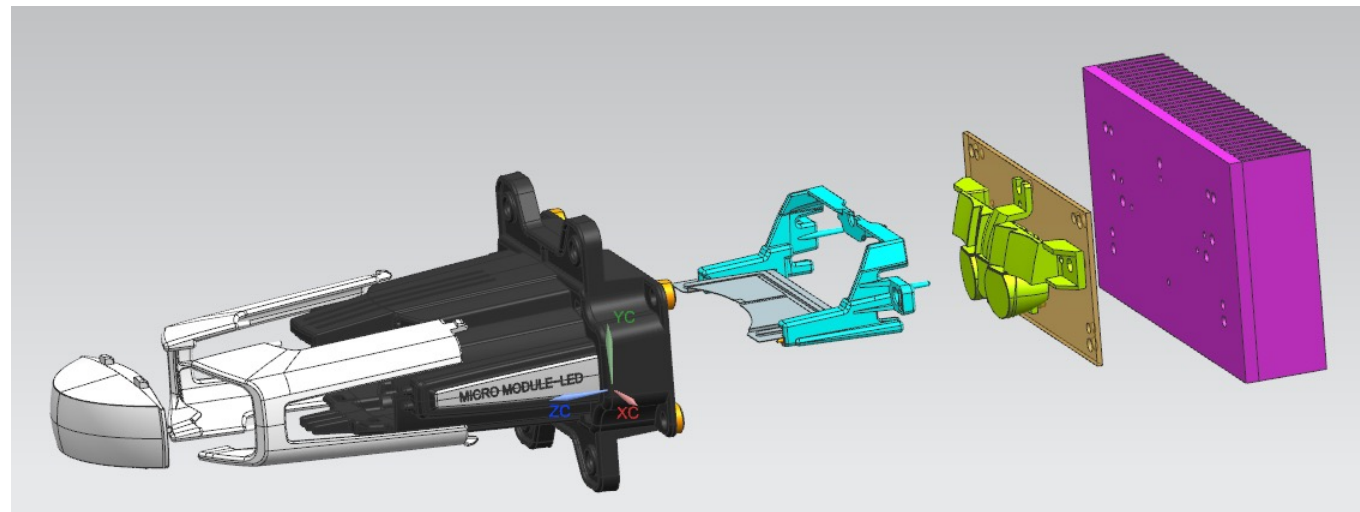
High beam road lighting:



Actual video of single high beam distribution room:

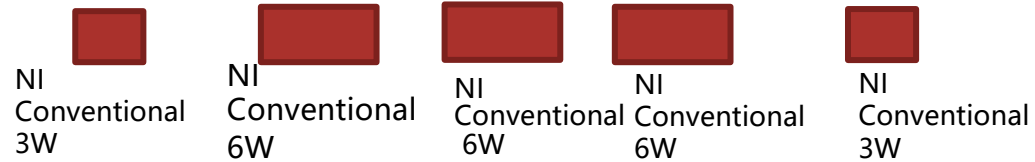


Optical analysis of automotive modules (Bi-lamp)



Use:日亚NCSW170DT/NC2W170DT芯片汽车远近光一体式

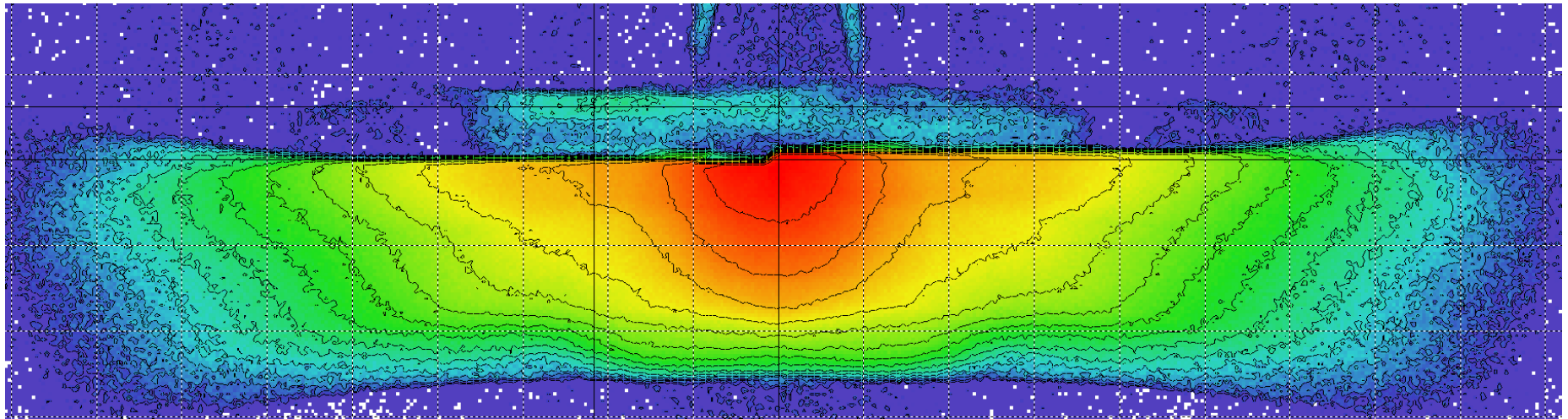
Low beam particles



High beam particles



Single low beam 25m illuminance:

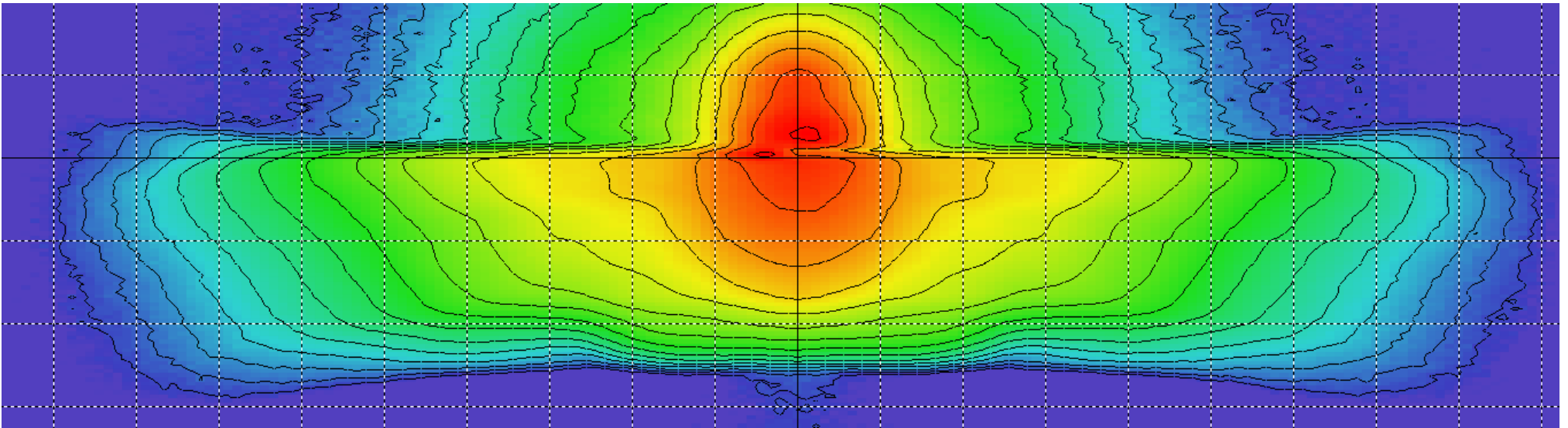


Original design maximum value 37 Lx
Actual light distribution value 32 Lx

Low beam illumination:



High beam illumination of 25m:



Original design maximum value of 82 Lx
Actual light distribution value 70 Lx

High beam road lighting:



Use:日亚NCSW170DT/NC2W170DT; 日亚NJ2W270BT 芯片汽车远近光一体式

NI Small Chip 6W

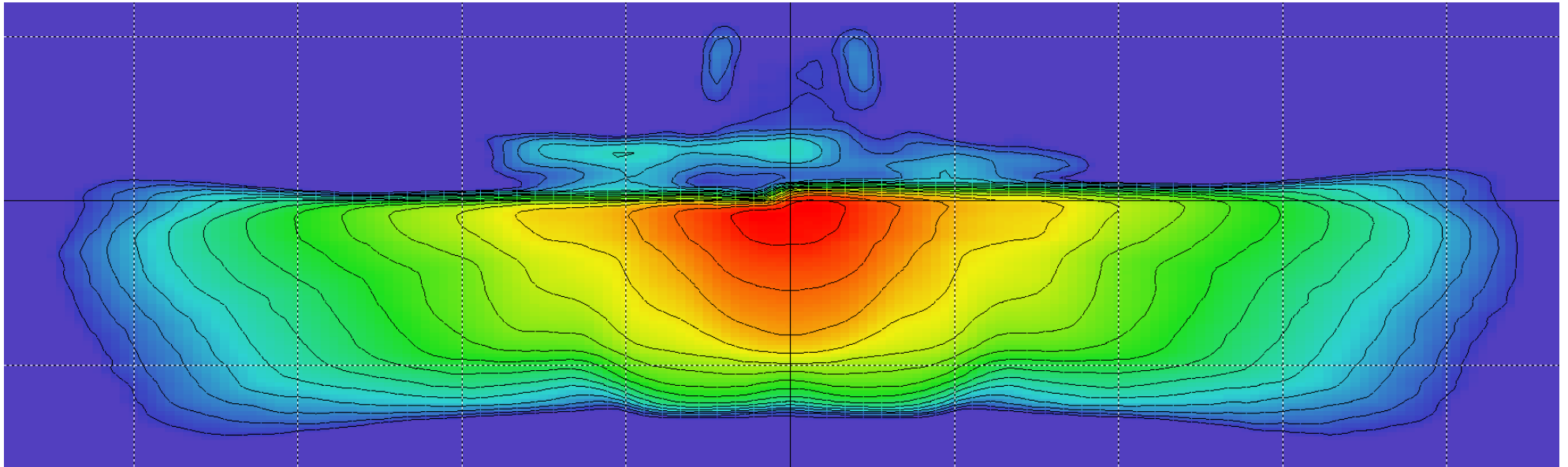
Low beam particles



High beam particles



Single low beam 25m illuminance:

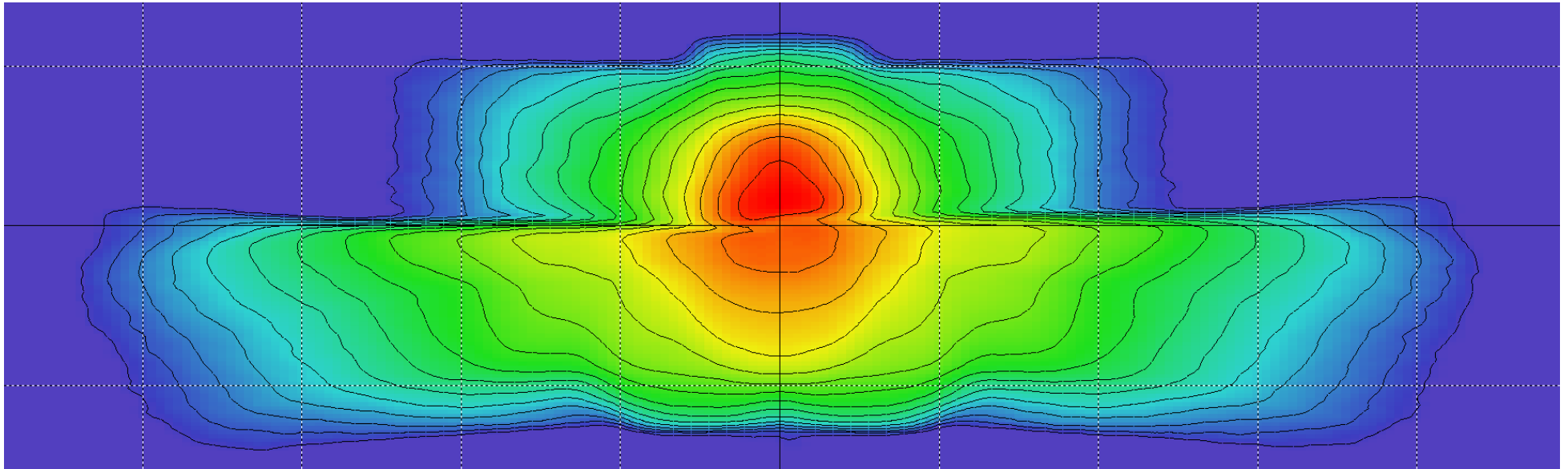


Original design maximum value 42 Lx
Actual light distribution value 37 Lx

Low beam illumination:

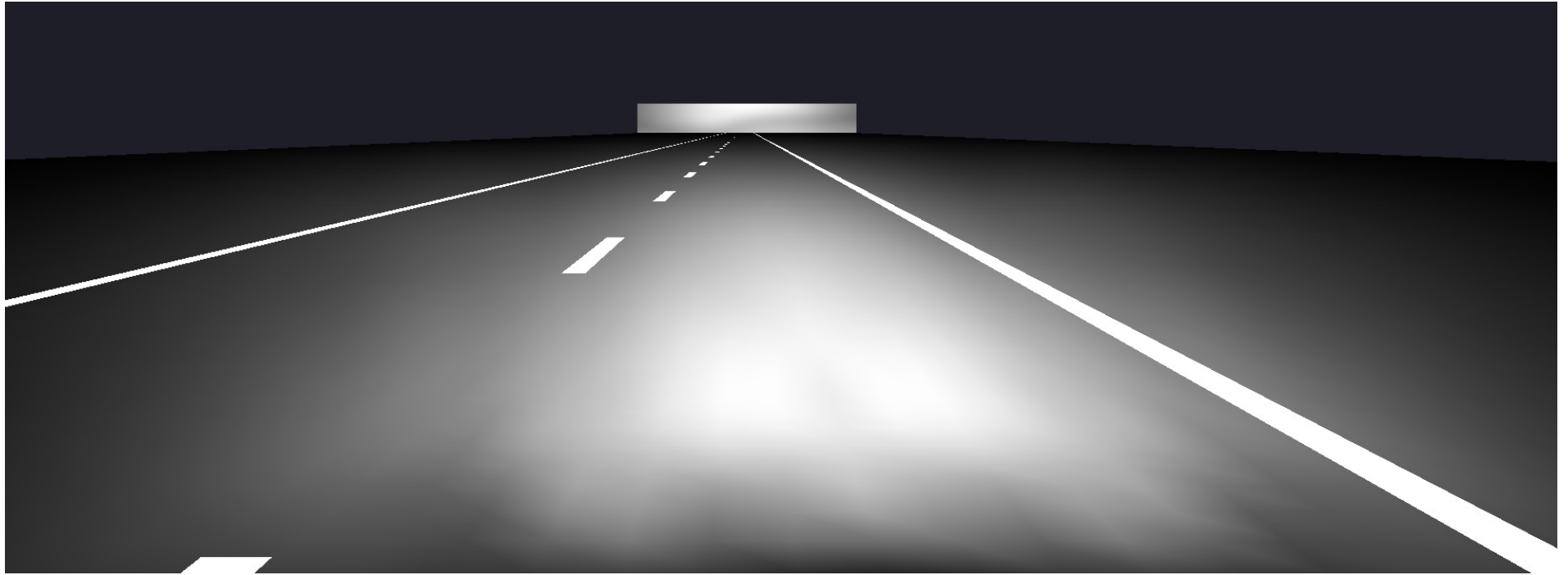


High beam illumination of 25m:



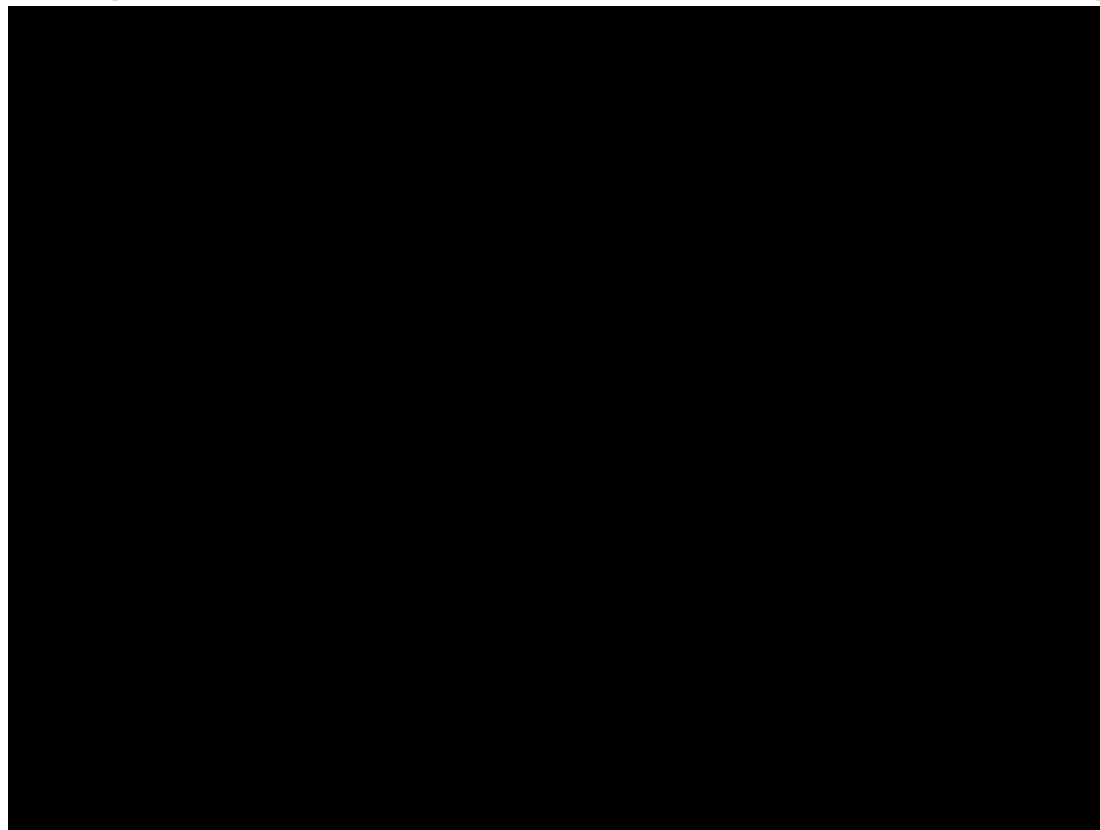
Original design maximum value 86 Lx
Actual light distribution value 70 Lx

High beam road lighting:



远近一体式配光室实际视频

Video of Bi-lamp Inner Lens Illumination Detection Experiment



C-NCAP Preliminary calculation analysis



C-NCAP Score Low Beam+Bi-lamp H=0.765 s=1.5

Evaluative items		arithmetic mean	standard deviation	Weight value	test data	Score for this item	upper limit	numerical value	lower limit
Straight lead distance		95.84	14.79	1.5	115	1.504034859	-0.670701523	-1E+33	0.833333336
Turn lead distance		95.32	23.54	1	114	0.873632457	-0.3180769	-1E+33	0.555555557
Pedestrian visibility on the left		43.19	12.05	1	55	0.92941936	-0.373863803	-1E+33	0.555555557
Pedestrian detection width at intersections		15.21	2.67	1.5	18	1.419959224	-0.586625889	-1E+33	0.833333336
Width of Bend lighting		19.82	5.51	1	26	0.965536788	-0.409981231	-1E+33	0.555555557
Lighting area	点1	182.22	22.90	1	176	0.43662084	0.118934717	-1E+33	0.555555557
	点2	44.41	13.49	0.4	46	0.243072321	-0.020850098	-1E+33	0.222222223
	点3	40.80	15.55	0.2	42	0.117945781	-0.00683467	-1E+33	0.111111111
	点4	44.41	13.49	0.4	45	0.229974498	-0.007752275	-1E+33	0.222222223
	点5	163.19	33.46	0.5	170	0.322576818	-0.04479904	-1E+33	0.277777779
Pedestrian detection width at intersections		14.9	3.21	0.5	15	0.284681167	-0.006903388	-1E+33	0.277777779
					Enter analog data	Because of the approximation error, the score may be higher than the weight score, and the score is calculated according to the maximum weight score		Note: The total score is 9 points, there is 1 point for additional points, see CNCAP description	
Dazzling				-1	The interval values from 0.26 LM to 0.63 LM are satisfied	0			
					Total score	7.327454112			

C-NCAP Score High Beam+Bi-lamp

H=0.765 s=1.5

Evaluative items		arithmetic mean	standard deviation	Weight value	test data	Score for this item	upper limit	numerical value	lower limit
Straight lead distance		95.84	14.79	1.5	105	1.220254905	-0.38692157	-1E+33	0.833333336
Turn lead distance		95.32	23.54	1	103	0.697648444	-0.142092887	-1E+33	0.555555557
Pedestrian visibility on the left		43.19	12.05	1	46	0.657994462	-0.102438905	-1E+33	0.555555557
Pedestrian detection width at intersections		15.21	2.67	1.5	15	1.247837339	-0.414504004	-1E+33	0.833333336
Width of Bend lighting		19.82	5.51	1	23	0.797861135	-0.242305578	-1E+33	0.555555557
Lighting area	点1	182.22	22.90	1	200	0.868054723	-0.312499166	-1E+33	0.555555557
	点2	44.41	13.49	0.4	60	0.389374266	-0.167152043	-1E+33	0.222222223
	点3	40.80	15.55	0.2	50	0.160656471	-0.049545359	-1E+33	0.111111111
	点4	44.41	13.49	0.4	61	0.395828431	-0.173606209	-1E+33	0.222222223
	点5	163.19	33.46	0.5	180	0.384613176	-0.106835398	-1E+33	0.277777779
Pedestrian detection width at intersections		14.9	3.21	0.5	18	0.462728263	-0.184950484	-1E+33	0.277777779
					Enter analog data	Because of the approximation error, the score may be higher than the weight score, and the score is calculated according to the maximum weight score		Note: The total score is 9 points, there is 1 point for additional points, see CNCAP description	
Dazzling				-1	The interval values from 0.26 LM to 0.63 LM are satisfied	0			
					Total score	7.282851615			

C-NCAP Score Bi-lam+Bi-lamp

H=0.765 s=1.5

Evaluative items		arithmetic mean	standard deviation	Weight value	test data	Score for this item	upper limit	numerical value	lower limit
Straight lead distance		95.84	14.79	1.5	115	1.504034859	-0.670701523	-1E+33	0.833333336
Turn lead distance		95.32	23.54	1	114	0.873632457	-0.3180769	-1E+33	0.555555557
Pedestrian visibility on the left		43.19	12.05	1	55	0.92941936	-0.373863803	-1E+33	0.555555557
Pedestrian detection width at intersections		15.21	2.67	1.5	18	1.419959224	-0.586625889	-1E+33	0.833333336
Width of Bend lighting		19.82	5.51	1	26	0.965536788	-0.409981231	-1E+33	0.555555557
Lighting area	点1	182.22	22.90	1	180	0.512650822	0.042904735	-1E+33	0.555555557
	点2	44.41	13.49	0.4	55	0.348347033	-0.12612481	-1E+33	0.222222223
	点3	40.80	15.55	0.2	47	0.145543992	-0.03443288	-1E+33	0.111111111
	点4	44.41	13.49	0.4	54	0.338411537	-0.116189314	-1E+33	0.222222223
	点5	163.19	33.46	0.5	175	0.35441129	-0.076633511	-1E+33	0.277777779
Pedestrian detection width at intersections		14.9	3.21	0.5	16	0.32547	0.061335914	-1E+33	0.277777779
					Enter analog data	Because of the approximation error, the score may be higher than the weight score, and the score is calculated according to the maximum weight score			
Dazzling				-1	The interval values from 0.26 LM to 0.63 LM are satisfied	0			
					Total score		7.71741736		

Note: The total score is 9 points, there is 1 point for additional points, see CNCAP description

C-NCAP Score Low Beam+ High Beam+Bi-lamp $H=0.765$ $s=1.5$

Evaluative items		arithmetic mean	standard deviation	Weight value	test data	Score for this item	upper limit	numerical value	lower limit
Straight lead distance		95.84	14.79	1.5	115	1.504034859	-0.670701523	-1E+33	0.833333336
Turn lead distance		95.32	23.54	1	114	0.873632457	-0.3180769	-1E+33	0.555555557
Pedestrian visibility on the left		43.19	12.05	1	55	0.92941936	-0.373863803	-1E+33	0.555555557
Pedestrian detection width at intersections		15.21	2.67	1.5	18	1.419959224	-0.586625889	-1E+33	0.833333336
Width of Bend lighting		19.82	5.51	1	26	0.965536788	-0.409981231	-1E+33	0.555555557
Lighting area	点1	182.22	22.90	1	200	0.868054723	-0.312499166	-1E+33	0.555555557
	点2	44.41	13.49	0.4	60	0.389374266	-0.167152043	-1E+33	0.222222223
	点3	40.80	15.55	0.2	50	0.160656471	-0.049545359	-1E+33	0.111111111
	点4	44.41	13.49	0.4	61	0.395828431	-0.173606209	-1E+33	0.222222223
	点5	163.19	33.46	0.5	180	0.384613176	-0.106835398	-1E+33	0.277777779
Pedestrian detection width at intersections		14.90	3.21	0.5	18	0.462728263	-0.184950484	-1E+33	0.277777779
					Enter analog data	Because of the approximation error, the score may be higher than the weight score, and the score is calculated according to the maximum weight score		Note: The total score is 9 points, there is 1 point for additional points, see CNCAP description	
Dazzling				-1	The interval values from 0.26 LM to 0.63 LM are satisfied	0			
				0	Total score	8.253838017			



Recent C-NCAP scores

First Look at the recent auto test out of vehicle lighting safety performance scores (out of 10 points) :

BYD Seal Lighting Score: 7.917

Roewe RX5 lighting score: 7.463

Lincoln Z Lighting Score: 7.029

Polar Fox Alpha S lighting score: 7.694

NIO ET7 lighting score: 8.002(The score comes from China Auto Testing and evaluation public number)



Thank you

