SEA PORT LIGHTING SOLUTIONS

SILVERSUN
LIGHTING SYSTEMS

BR TECH
BR TECHNOLOGIES INTERNATIONAL LIMITED

FLS-Series high mast · PO3

- 400/600/900/1200w optional.
- 60°×90°, 30°, 20° are optional.
- Dali, PWM or 0-10V.
- **5G vibration** testing certified
- **1000 hours salt spray test**
- **Anti-wind** speed at **56.1-61.2m/s**

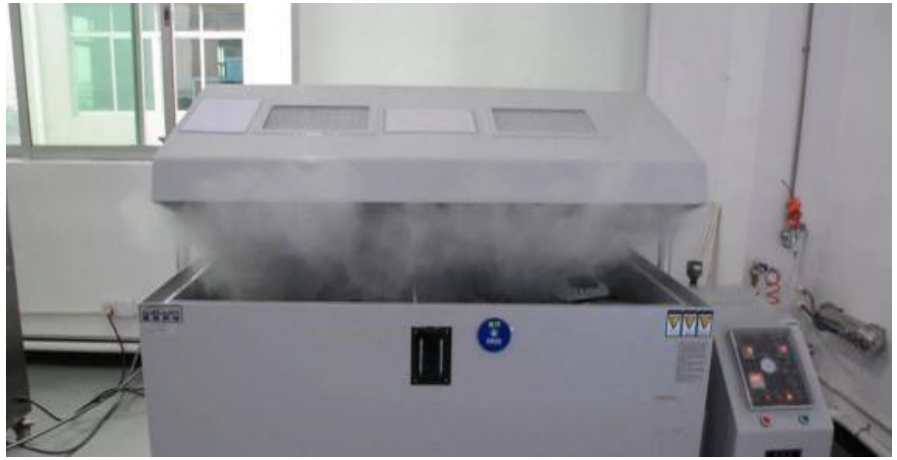
5G Vibration Testing

Test sample

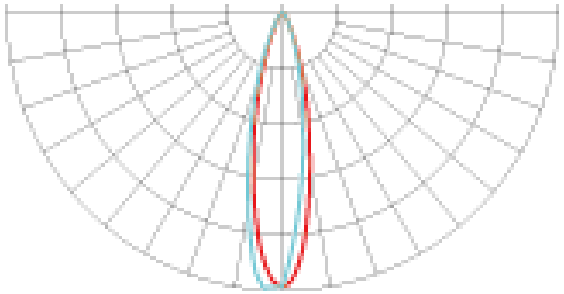
Sample setup-X

Sample setup-Y

1000hrs Salt Spray Testing

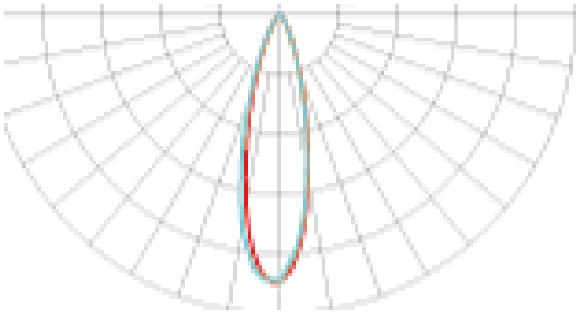


FEATURES · PROFESSIONAL LENS



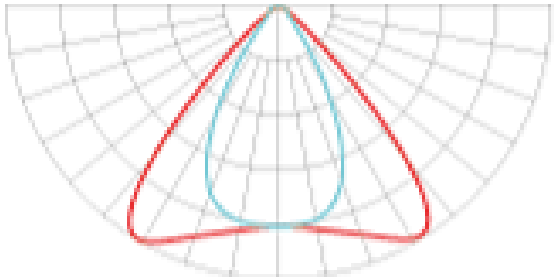
20° Distribution

Super narrow beam angle for very high mounting applications, eg, seaports, highways, football pitches etc.



30° Distribution

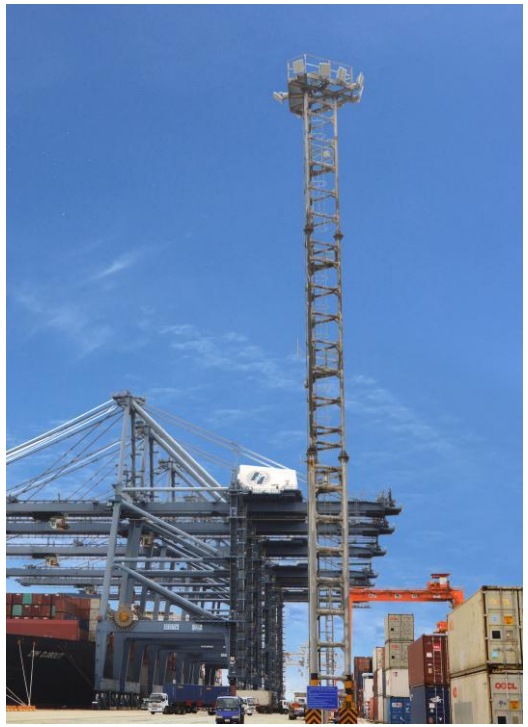
Narrow beam angle for high mounting and long-distance places, eg, seaports, airports, highways, football pitches, tennis courts, etc.

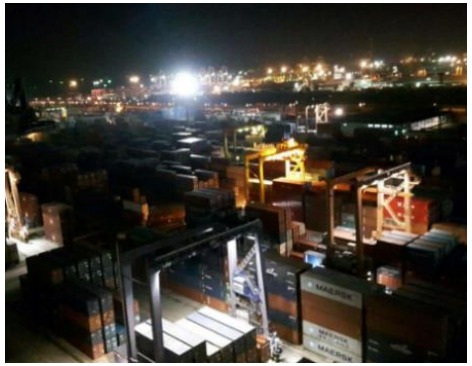


60°X90°(90°X 60°) Distribution

Wide distribution for large areas, eg, sports courts, plazas, parking areas, industrial facilities etc.

PROJECTS





Customer Projects:

Apapa Ports Nigeria

APM Terminals Middle East

SGP Terminals Dammam

Medlog Jeddah

AECOM Melbourn Bry Port

San Francisco Sea Port

Projects ·Sea Port Project ·San Francisco

Type: FLS600 High Mast Light

Power Consumption: 600W

Installation height: 35m

Beam angle: 30°

Country: San Francisco, USA

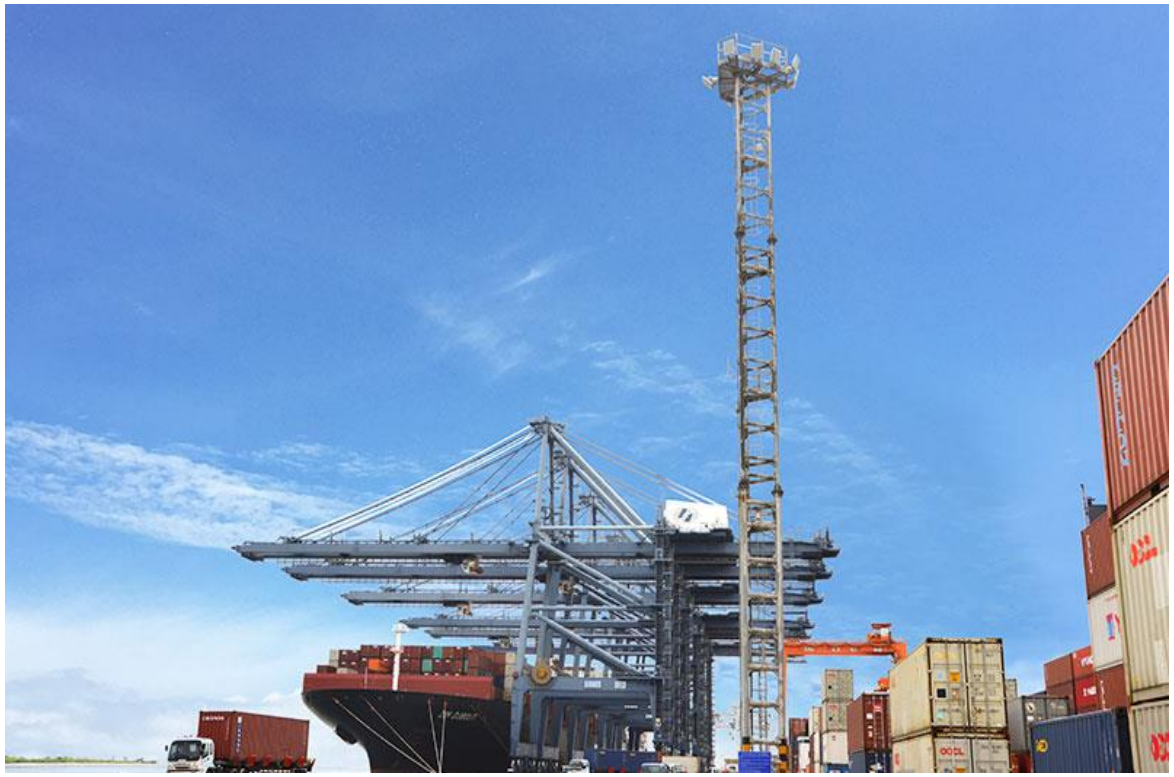
Projects ·Sea Port Project·Thailand

Type: FLS900

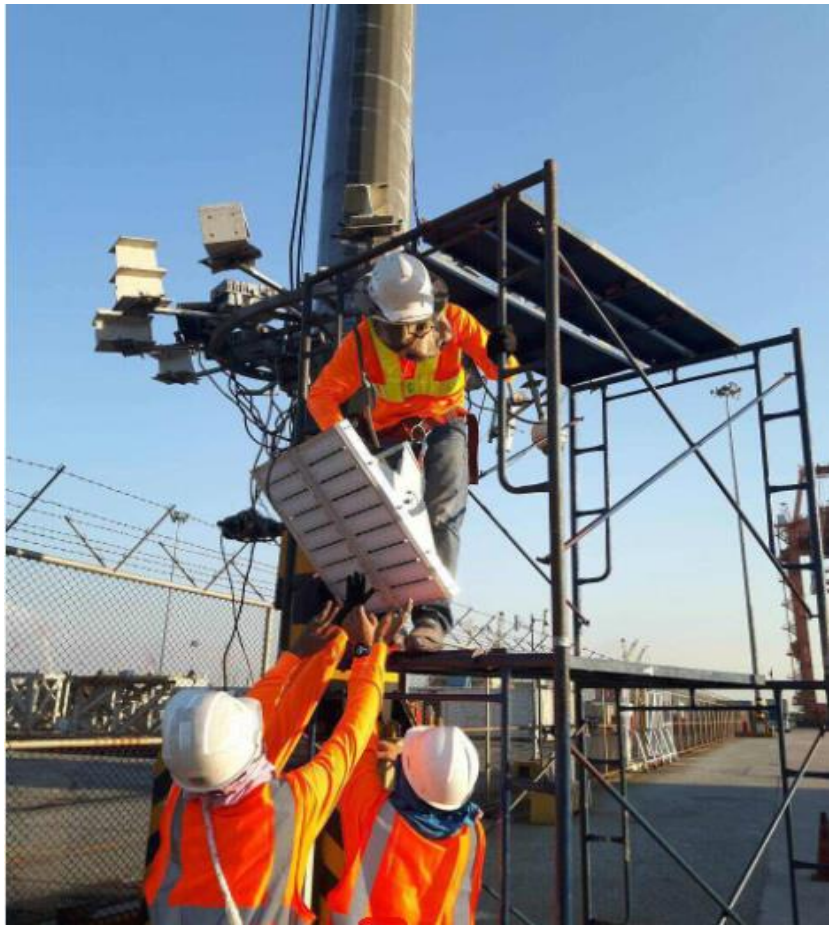
Power Consumption: 900W

Quantity: 112PCS

Country: Thailand



Projects ·Sea Port Project·Thailand

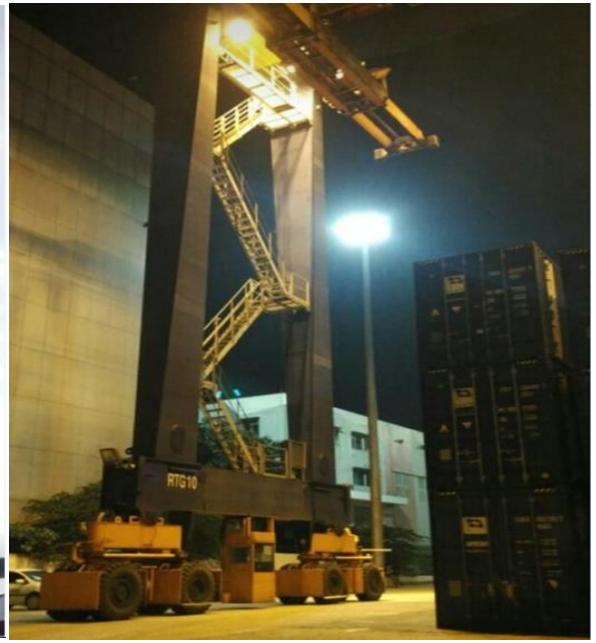


Projects ·Sea Port Project·Indonesia

Type: FLS900 and FLS1200

Quantity: 117PCS

Country: Indonesia



Projects ·Sea Port Project ·Australia

Type: FLS900

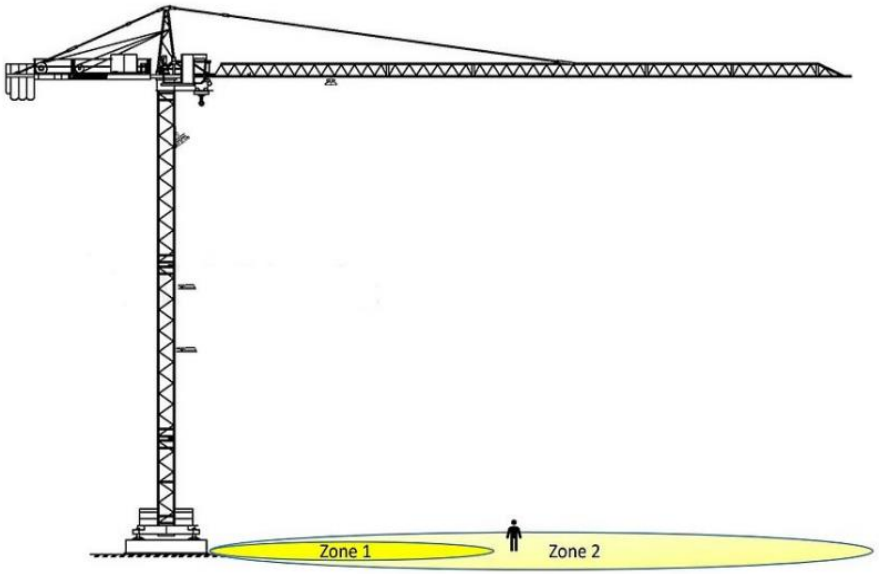
Power Consumption:900W

Quantity: 55PCS

Country: Gold coast, Australia

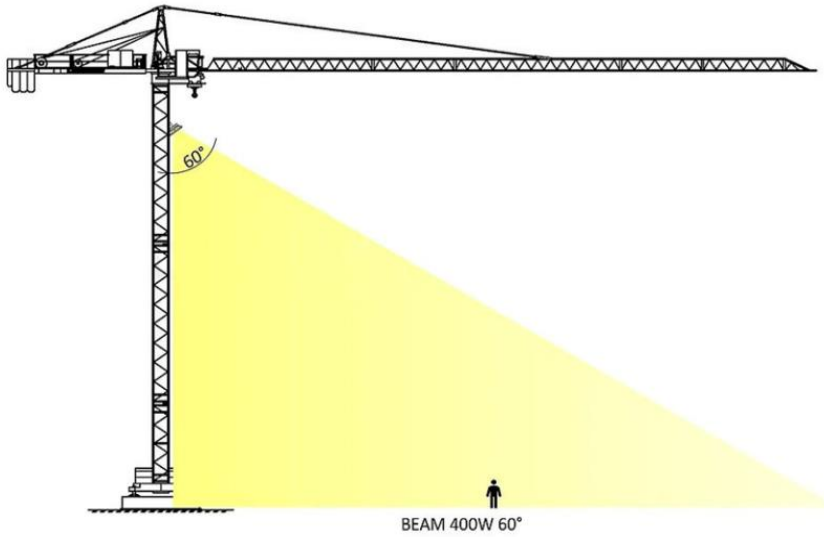
CONTAINER CRANE LIGHTING
STS & RTG

INSTALLATION OPTIONS

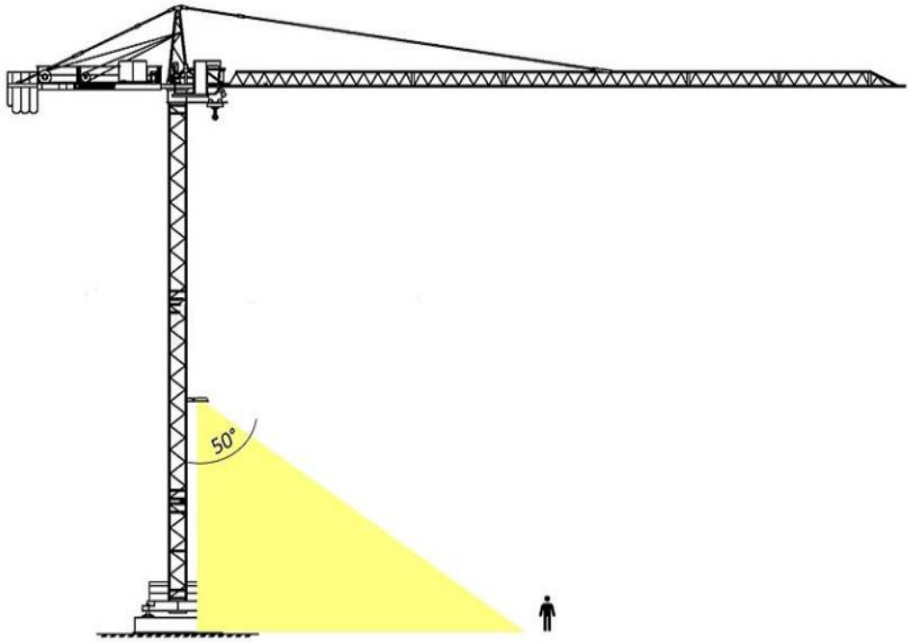


Zone 1: Loading zone
In this zone it is important to have enough light to handle loading quickly and safely.

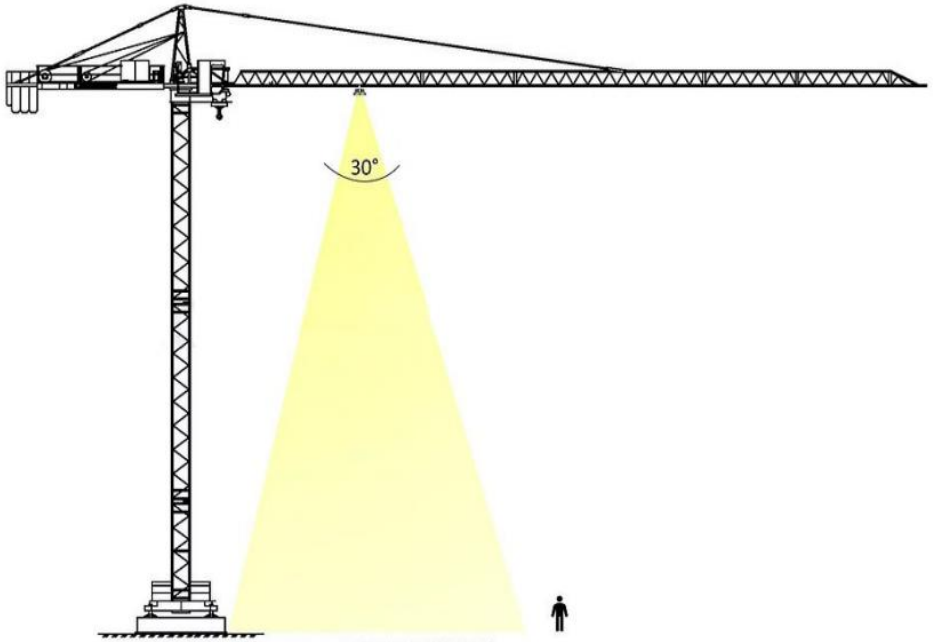
Zone 2: delivery zone boom
The crane's delivery zone is also an important source of lighting for the construction site.



INSTALLATION OPTIONS



Zone 1 with mast lighting (low position)
A deep installation position of the spotlights results in more efficiency and reduced light pollution.

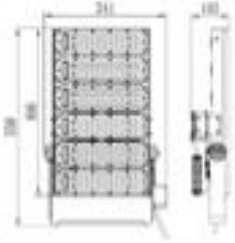


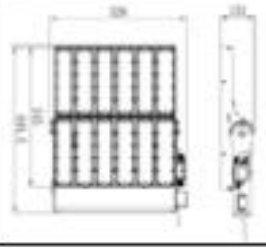
Zone 1 boom lighting
Due to the height, a powerful asymmetrical spotlight with a reduced light angle (15 - 30 °) is used to bring as much light as possible onto the floor.

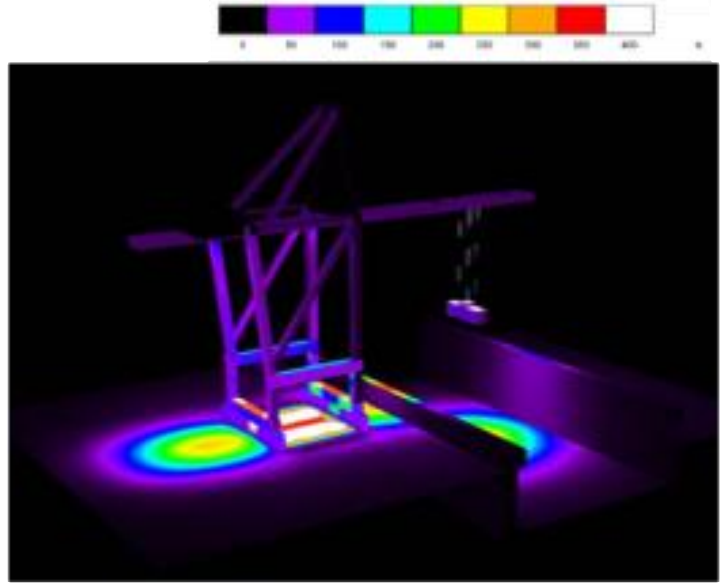
Example of STS Crane simulation and installation

SUMMARY STS CRANE T1 LIGHTING

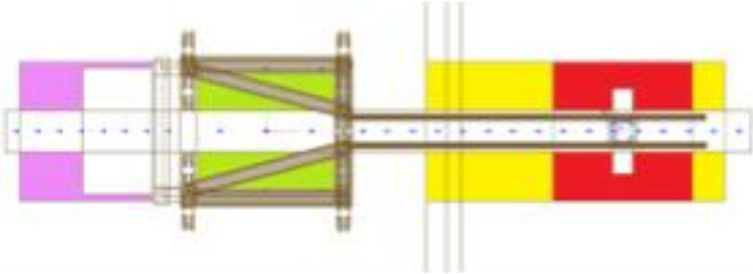
Model	Positions	Height	Units	Power	Total power
FLS300CWD3	Boom	45,2	16	300 W	4800 W
FLS600CWD3	Trolley	45	4	600 W	2400 W
FLS300CWD3	Portal Beam	13	6	300 W	1800 W
FLS300CWD3	Girder	45,2	11	300 W	3300 W
TOTAL			**37**		**12300 W**

Floodlight	Specs.
FLS300CWD3	300W, 37.000lm, 30°, 5000K
	

Floodlight	Specs.
FLS600CWD3	600W, 78.000lm, 30°, 5000K
	



Calculated Lighting Values							
No.		Designation	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	E_{min} / E_{av}
1		Calculation Surface Boom	horizontal	310	103	512	0,333
2		Calculation Surface Trolley Ground	horizontal	331	108	513	0,328
3		Calculation Surface Trolley Vessel	horizontal	225	110	326	0,490
4		Calculation Surface Portal Beam	horizontal	451	178	700	0,395
5		Calculation Surface Girder	horizontal	218	111	288	0,511



Example of STS Crane simulation and installation

BOOM LIGHTS

16 units of FLS300CWD3 (300W, 30°): The boom has sixteen flood lights.

- Height: 45,2 m
- Vertical deviation: 0°

GIRDER LIGHTS

11 units of FLS300CWD (300W, 30°): The girder has eleven flood lights.

- Height: 45,2 m
- Vertical deviation: 0°

PORTAL BEAM LIGHTS

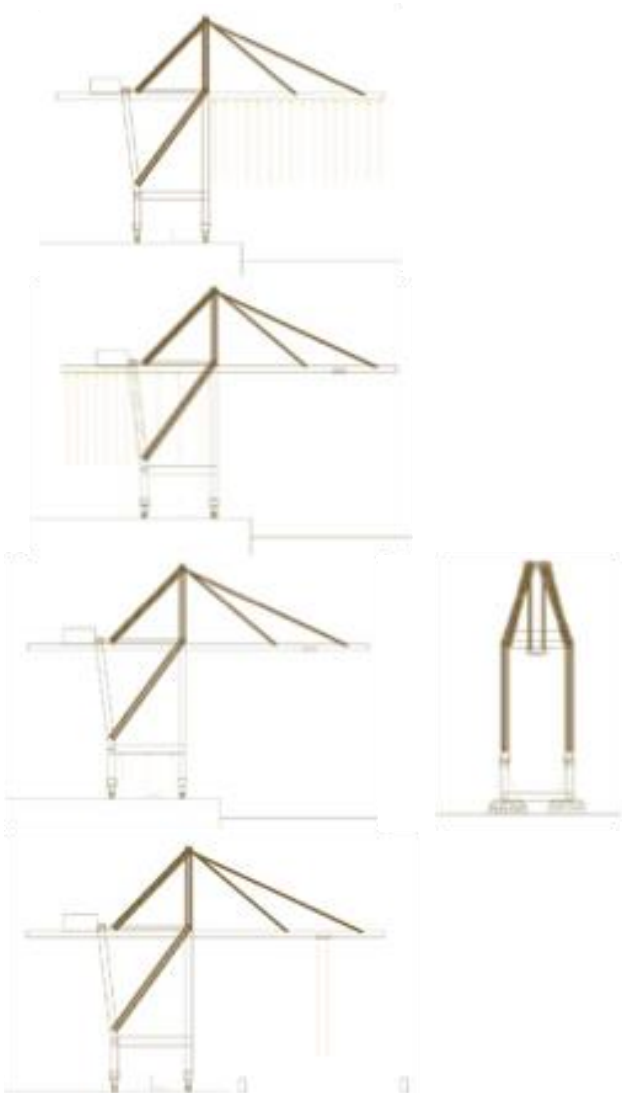
6 units of FLS300CWD (300W, 30°): Each beam has three flood lights in the inner side.

- Height: 13 m
- Vertical deviation: 12°

TROLLEY LIGHTS

4 units of FLS600CWD3 (600W, 30°): The trolley has four flood lights.

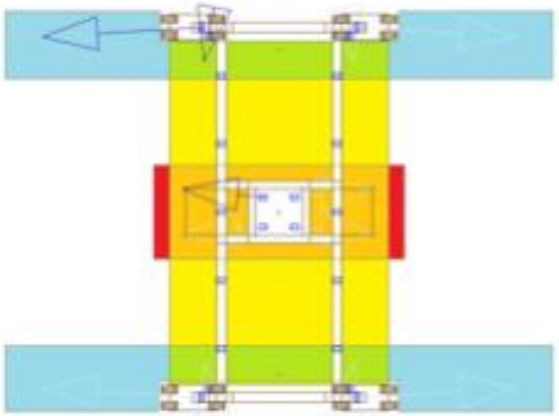
- Height: 45 m
- Vertical deviation: 0°

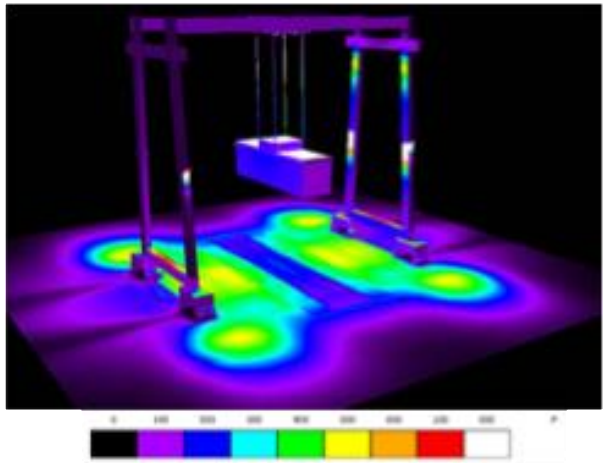


Example of RTG Crane simulation and installation

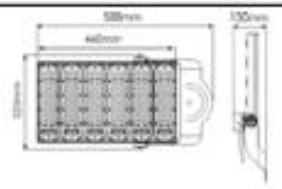
SUMMARY RTG CRANE LIGHTING

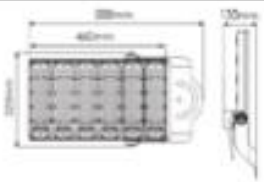
Model	Positions	Height	Units	Power	Total power
FLS300CWD3	Gantry	12	4	300 W	1200 W
FLS300CWD	Gantry	12	4	300 W	1200 W
FLS200CWD	Ginder	20	10	200 W	2000 W
FLS300CWD3	Trolley	20	4	300 W	1200 W
TOTAL			**22**		**5600 W**

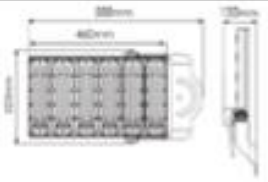




Calculated Lighting Values							
No.		Designation	Type	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	E_{min} / E_{av}
1		Calculation Surface Trolley	horizontal	240	139	398	0.577
2		Calculation Surface Girder	horizontal	380	150	527	0.394
3		Calculation Surface Gantry1	horizontal	399	189	543	0.474
4		Calculation Surface Gantry2	horizontal	401	204	540	0.509

Floodlight	Specs.
FLS200CWD	200W, 27.000lm, 60°/90°, 5000K
	

Floodlight	Specs.
FLS300CWD	300W, 37.000lm, 60°/90°, 5000K
	

Floodlight	Specs.
FLS300CWD3	300W, 37.000lm, 30°, 5000K
	

Example of STS Crane simulation and installation

GANTRY LEG LIGHTS

4 units of FLS300CWD3 (300W, 30°): Each gantry leg has one flood light in the front side.

- Height: 12 m
- Vertical deviation: 40°

4 units of FLS300CWD (300W, 60x90°): Each gantry leg has one flood light in the inner side

- Height: 12 m
- Vertical deviation: 10°

GIRDER LIGHTS

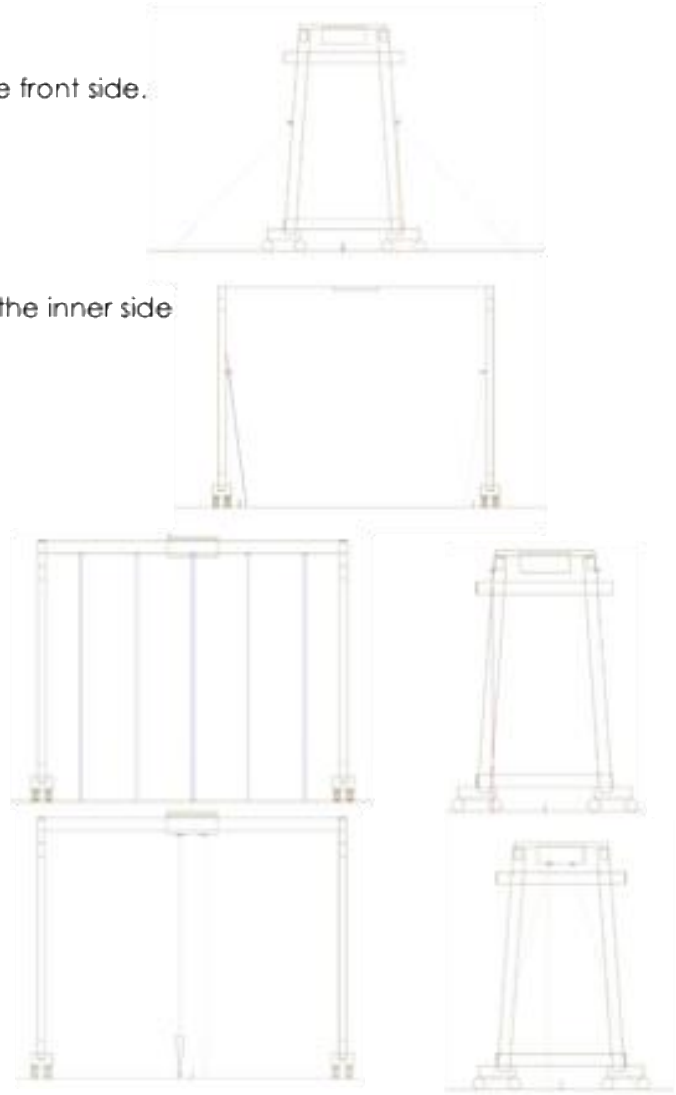
10 units of FLS200CWD (200W, 60x90°): Each girder has five flood lights.

- Height: 20 m
- Vertical deviation: 0°

TROLLEY LIGHTS

4 units of FLS300CWD3 (300W, 30°): The trolley has four flood lights.

- Height: 20 m
- Vertical deviation: 15°



FLS-Floodlight Series · PO3

- 50/100/150/200/300W optional.
- Corrosion proof extrusion aluminium desgin.
- 60°×90°, 30°, 20° are optional.
- Dali, PWM or 0-10V.
- 5G vibration testing certified.
- 1000 hours salt spray test
- Anti-wind speed at 56.1-61.2m/s

SILVERSUN LIGHTING SYSTEMS

BR TECH