

SEA PORT LIGHTING SOLUTIONS

Soluciones de iluminación para puertos marítimos



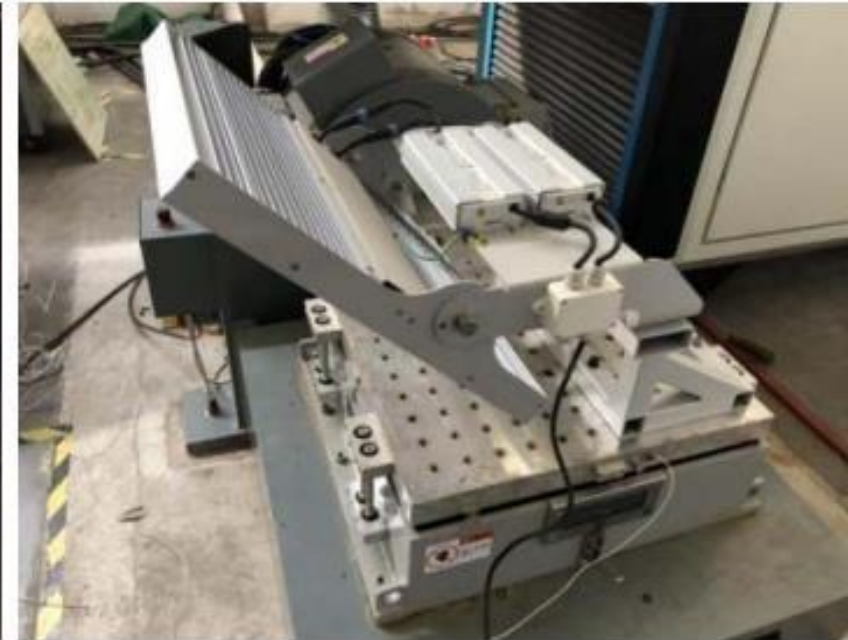
FLS-Series high mast· P03

- 400/600/900/1200w optional.
- 60°×90°, 30°, 20° are optional.
- Dali, P W M 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

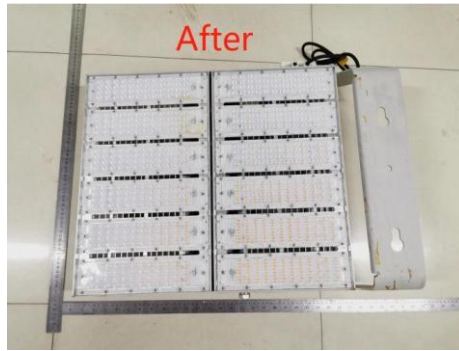


Sample setup-X



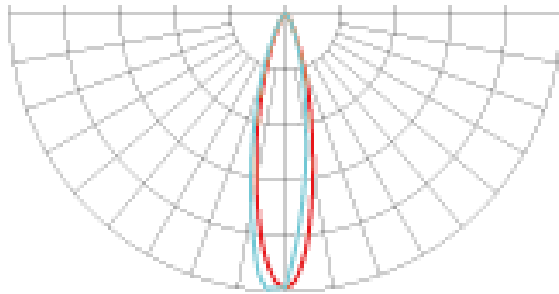
Sample setup-Y

1000hrs Salt Spray Testing



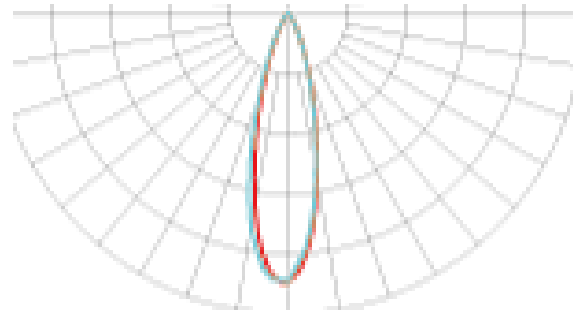
FEATURES · PROFESSIONAL LENS

CARACTERÍSTICAS · LENTE PROFESIONAL



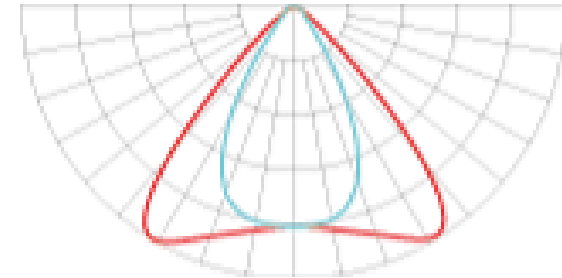
20° Distribution

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

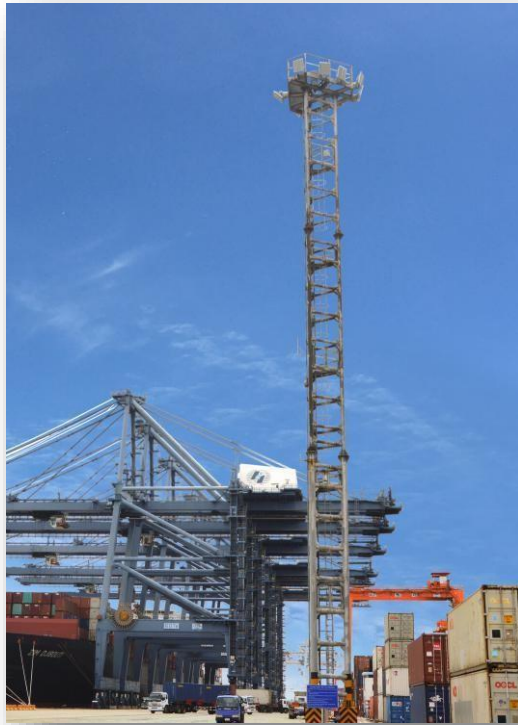
Wide distribution for large areas, eg, sports courts, plazas, parking areas, industrial facilities etc.

PROJECTS

Proyectos

Proyectos de clientes:

Puertos de Apapa, Nigeria; Terminales APM, Oriente Medio;
Terminales SGP, Dammam; Medlog, Yeda; Puerto de
Melbourne, AECOM; Puerto Marítimo de San Francisco, Puerto
de San Francisco



Customer Projects:

Apapa Ports Nigeria

APM Terminals Middle East

SGP Terminals Dammam

Medlog Jeddah

AECOM Melbourn Bry Port

San Francisco Sea Port

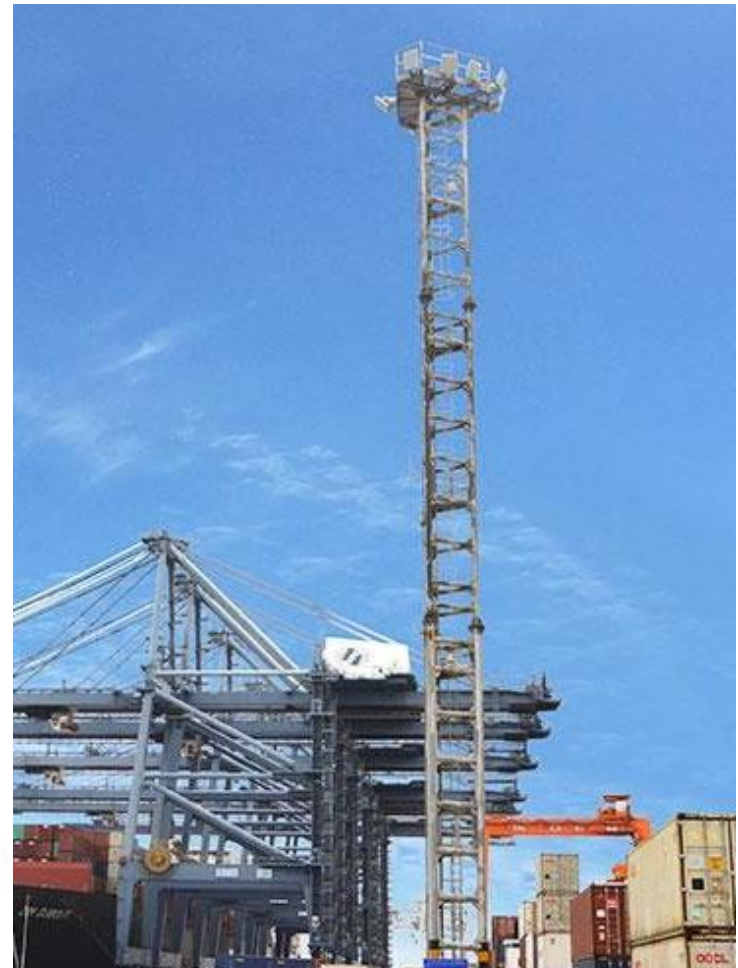


Projects · Sea Port Project · San Francisco

- 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

ILUMINACIÓN PARA
GRÚAS DE
CONTENEDORES STS
Y RTG



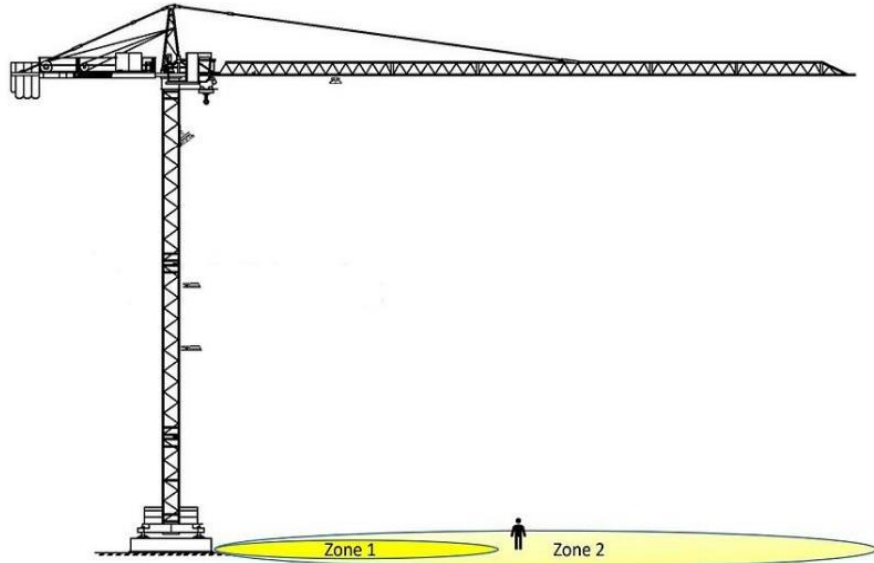
INSTALLATION OPTIONS OPCIONES DE INSTALACIÓN

Zone 1: Loading zone

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

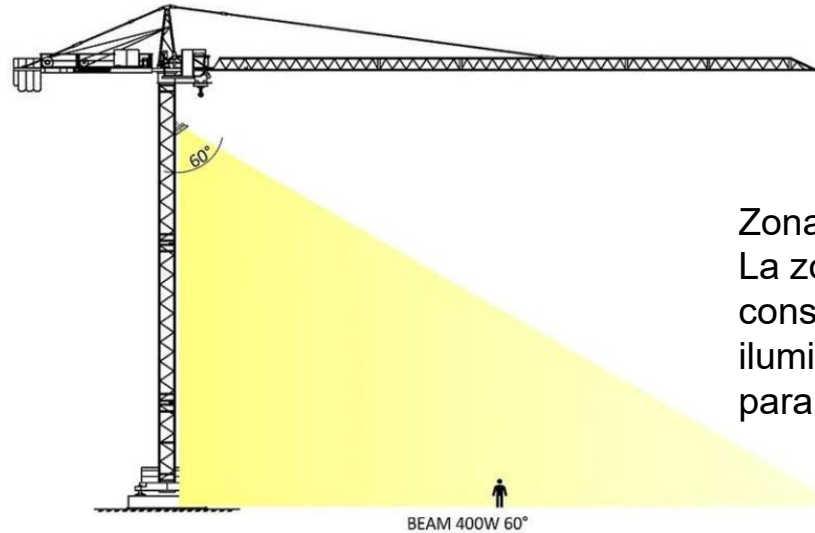
Zone 2: delivery zone boom

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



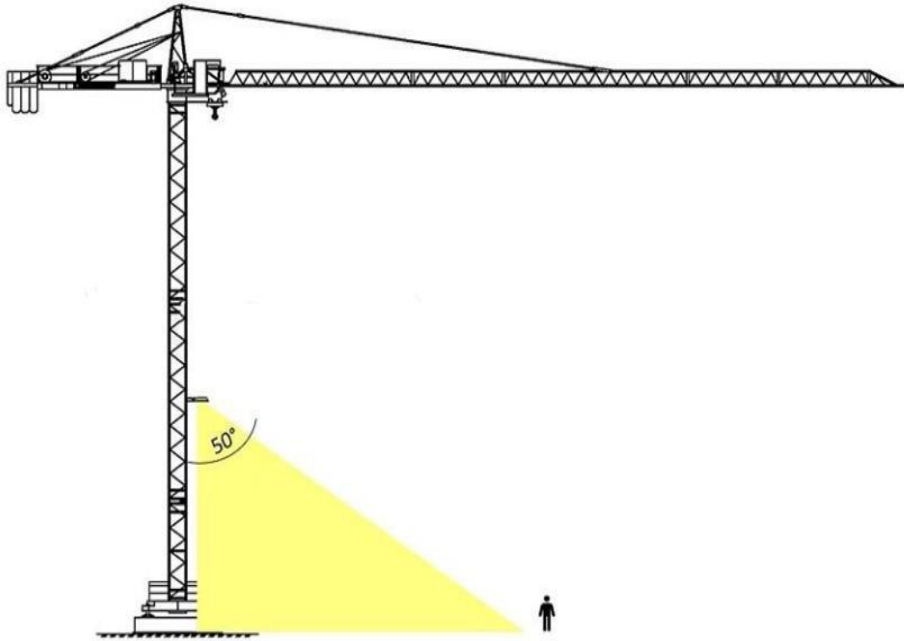
Zona 1: Zona de carga

En esta zona es importante contar con suficiente iluminación para realizar la carga de forma rápida y segura.



Zona 2: Zona de descarga de la pluma
La zona de descarga de la grúa también constituye una importante fuente de iluminación para la obra.

INSTALLATION OPTIONS OPCIONES DE INSTALACIÓN

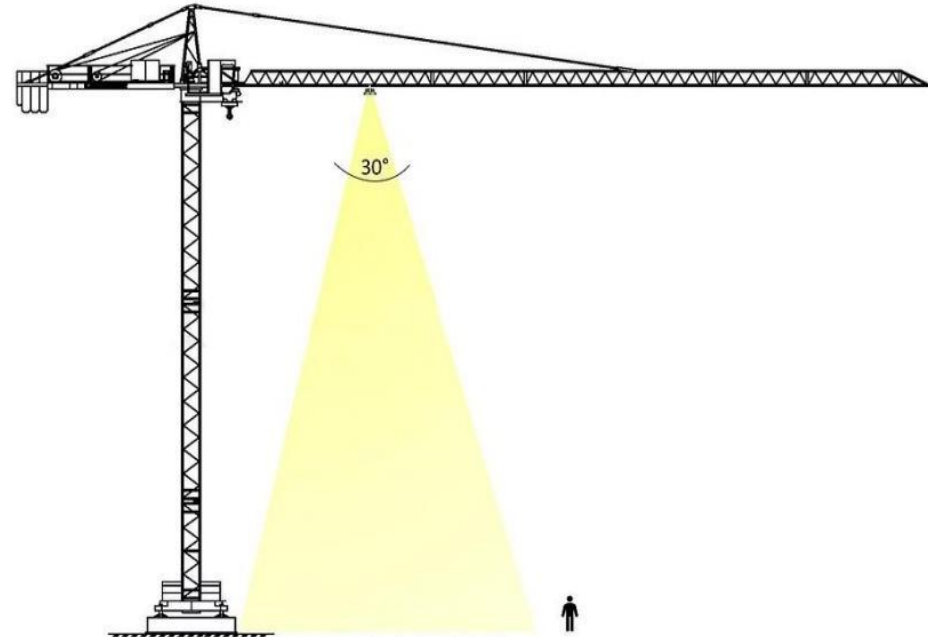


Zone 1 with mast lighting (low position)

A deep installation position of the spotlights results in more efficiency and reduced light pollution.

Zona 1 con iluminación de mástil (posición baja)

Una posición de instalación profunda de los focos resulta en una mayor eficiencia y una menor contaminación lumínica.



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.

Iluminación con brazo articulado en la zona 1.

Debido a la altura, se utiliza un potente foco asimétrico con un ángulo de luz reducido (15-30°) para iluminar el suelo con la mayor cantidad de luz posible.

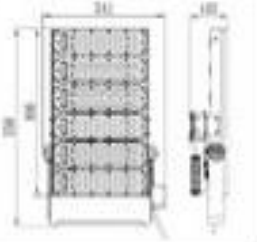



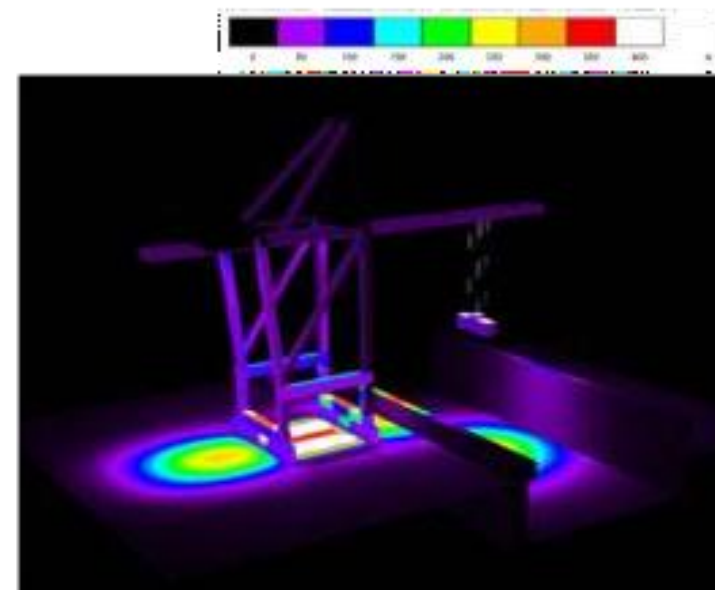
Example of STS Crane simulation and installation

Ejemplo de simulación e instalación de grúa STS

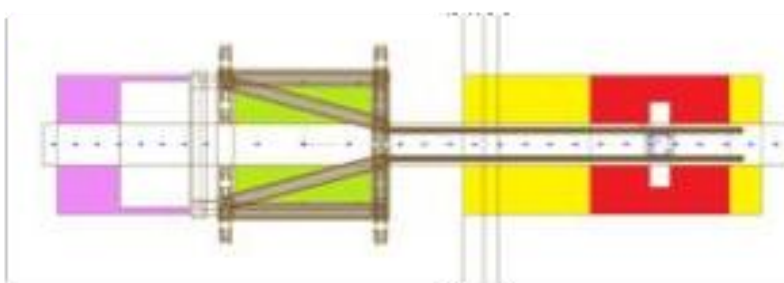
SUMMARY STS CRANE T1 LIGHTING

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

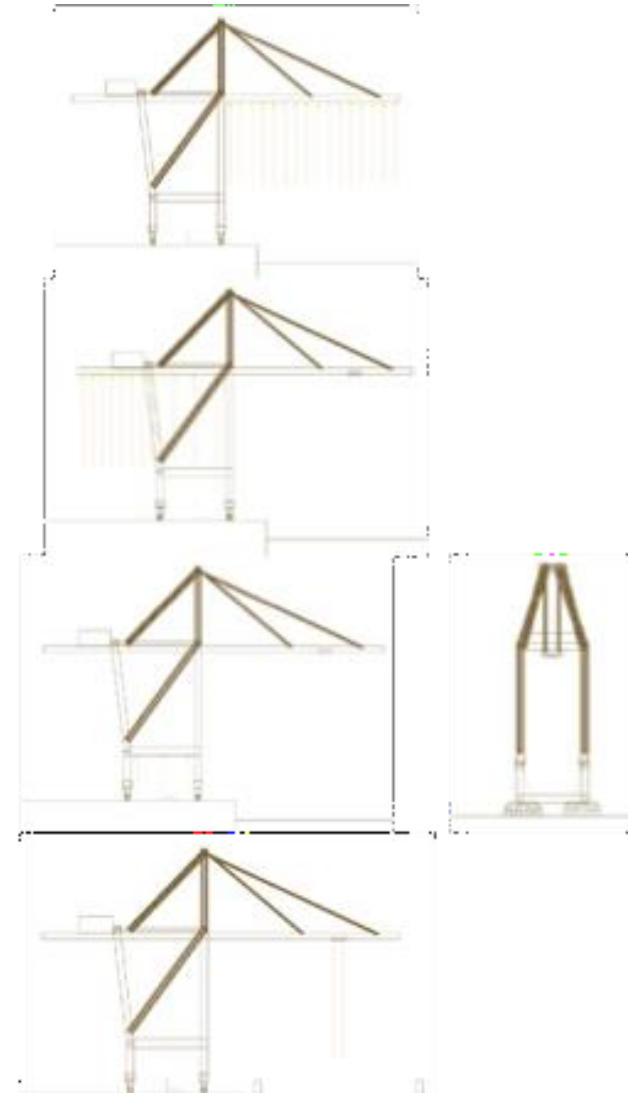
6 units of FLS300CWD (300W, 30°): Each beam has three flood lights in the inner side.

- 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°

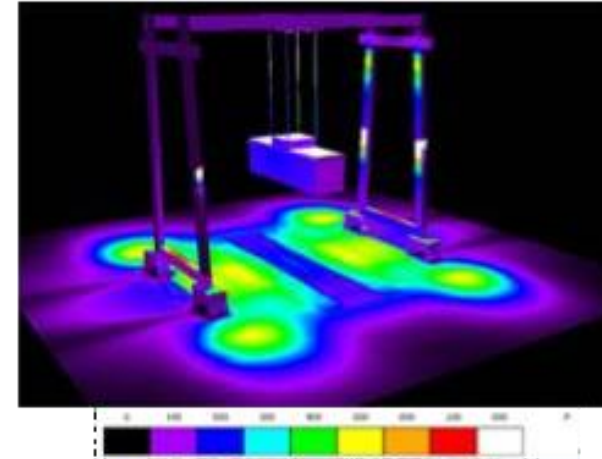
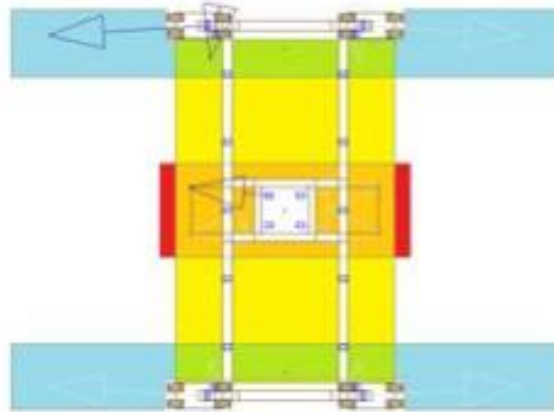


Example of RTG Crane simulation and installation


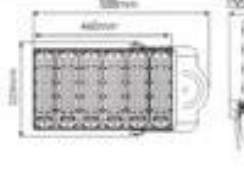
Ejemplo de simulación e instalación de grúa RTG

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	Girder	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

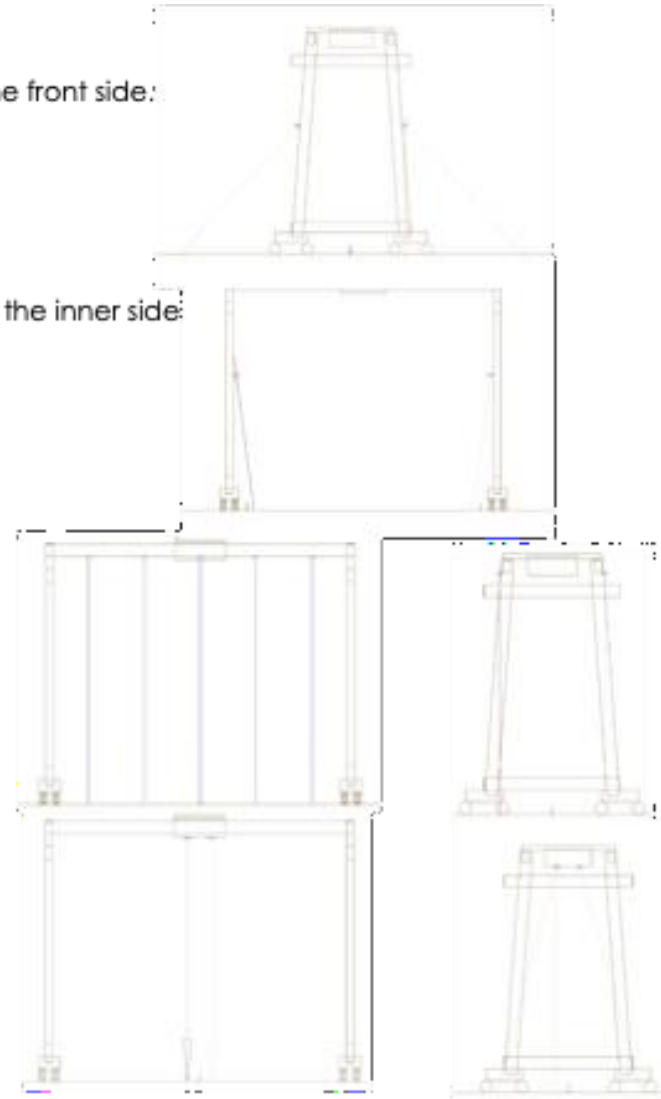
10 units of FLS200CWD (200W, 60x90°): Each girder has five flood lights.

- 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
- -wind speed at 56.1-61.2m/s



Gracias

thank you

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