



Crestone Peak Resources, LLC

## LIGHT MITIGATION PLAN

FOR

Bennett D Pad

Prepared For:



1120 Lincoln Street  
Denver, Colorado, 80203

Prepared By:



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## 1. PLAN PURPOSE

This Light Mitigation Plan was prepared by RPG Resources (RPG), on behalf of Crestone Peak Resources (Crestone) for the proposed Bennett D Pad. This plan was prepared to comply with State and local Light Mitigation Plan requirement for new oil and gas locations, and it addresses Crestone Peak Resources’ plans to adhere to maximum permissible light levels and recommended mitigation measures. Implementation of this plan will serve to avoid or minimize adverse effects to local communities and wildlife populations during the development of the Site.

## 2. SITE DESCRIPTION

Crestone Peak Resources Bennet D Pad (Site) is located in Township 3 South, Range 64 West, Section 34 in Adams County, CO. The Site is located in the Western Great Plains Range and Irrigated Region Land Resource Region (LRR) of the Central High Plains, Southern Part Major Land Resource Region (MLRA; NRCS 2006).

The area in which the Site is located is zoned A-3 Agricultural Zoning by Adams County. The land type according to the field observations is rangeland. Elevation at the Site is 5,574 feet.

The Site is not located within any Colorado Parks and Wildlife High Priority Habitats (HPHs). There are two residential buildings within 2,000 feet of the Site. The closest Residential Building Unit is located 1,791 feet east of the Site. The next closest Residential Building Unit is 1,951 feet east of the Site. The closest Building Unit is approximately 486 feet to the northeast. The next closest building is 501 feet away to the northeast.

## 3. OPERATIONAL STAGES & TIMELINE

The current estimated operation stage timelines and light levels are as follows:

<b>Table 3.1 – Bennett D Pad Operational Phase Light Levels</b>		
<b>PHASE</b>	<b>ESITMATED START</b>	<b>ESTIMATED LIGHT LEVEL</b>
Drilling Rig	July 2026	2.57 Lumens/SQFT
Completions	January 2027	1.80 Lumens/SQFT
Flowback	June 2027	N/A
Production	August 2027	N/A

The information above is subject to change based on permit approval timing, project adjustments or operational delays, weather conditions, and/or other unforeseen factors. Please refer to Appendix A for Photometric Plans.

## 4. BEST MANAGEMENT PRACTICES

The following lighting BMPs will be used to minimize and control light pollution at the Bennett D Well pad:

Construction: During pad construction, operations will occur only during daytime thus eliminating and light mitigation considerations.

Drilling and Completions: Crestone Peak Resources will direct site lighting downward at a 20-degree angle and will not shine light above a horizontal plane passing through the center point light source. Crestone will provide sufficient on-site lighting to ensure the safety of personnel on or near the site.

Drilling and Completions: Where a noise barrier is present, lighting fixtures will be placed beneath the barrier, except for those on the drilling rig.

Drilling and Completions: Crestone Peak Resources will use low-glare and no-glare lighting where feasible to minimize safety hazards.

Flowback: Flowback will be piped directly into the facility with no temporary equipment or operations anticipated. For that reason, no temporary lighting is being proposed during this phase.

Production: Crestone Peak Resources will not have permanent lighting on location.

## LITERATURE CITED

Energy and Carbon Management Commission. 2024. 400 Series: Operations and Reporting

Colorado Energy and Carbon Management Commission. 2014. Surface Use Agreement: Form 2A Attachment Guidance. Chapter 21, Article V – Guidelines and Regulations for Oil and Gas Exploration and Production in Colorado. [PDF]

## APPENDIX A

### Photometric Plans









## APPENDIX B

### Cutsheets



THE INFORMATION CONTAINED HEREIN SHALL BE CONSIDERED THE SOLE PROPERTY OF JCA COMPANIES, JCA RENTALS, LLC/C&M OILFIELD RENTALS, LLC/C-MOR ENERGY SERVICES, LLC AND RECIPIENT THEREOF AGREES NOT TO DISCLOSE SAID INFORMATION TO PARTIES OUTSIDE THE RECIPIENTS ORGANIZATION AND TO USE, MODIFY, CHANGE OR DUPLICATE SAID INFORMATION FOR ANY PURPOSES EXCEPT AS SPECIFIED BY JCA RENTALS, LLC/C&M OILFIELD RENTALS, LLC/C-MOR ENERGY SERVICES, LLC WITH THE WRITTEN PERMISSION OF JCA COMPANIES, JCA RENTALS, LLC/C&M OILFIELD RENTALS, LLC/C-MOR ENERGY SERVICES, LLC.

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## TECHNICAL INFORMATION SHEET FOR CROWN JEWEL LIGHT SYSTEM

### INTENDED USE

The C-MOR Crown Jewel system is designed to be installed on the crown handrails of most drilling rigs

### SPECIFICATIONS:

- Designed to mount to undamaged guardrails which meet OSHA 1910.29(b)(1)
- Engineered mount system (RADesign 1085035) meets API 4F 4<sup>th</sup> Edition land-based wind loads (180' @ 90 mph)
- 600 W LED instant start lights
- Dropped object report RADTM-18-1001-01
- Light and junction box retention nets: Dropsafe 7500185
- Rig light safety cables: Kennedy 250 LBS WLL
- Mount system weight: 21 lbs/ light
- Light and bracket assembly weight: 32 lbs/ light
- Junction box weight: 33 lbs/ rig
- Appleton Locking connectors + cable 3.2 lbs/ light
- Complete individual light/mount/cable weight 57 lbs.
- Typical 8 light Crown Jewel full installation: 489 lbs



## Description

The FL series is a compact LED fixture designed for high performance sport lighting applications. Compare the FL500 to 1500 WATTS metal halide.

## Certification

**CONFIDENTIAL AND PROPRIETARY**

**PATENT PENDING**

ETL / DLC



## Specifications

Part No.:	FL600
Wattage:	600 W
Efficacy:	150 LM/W
Lumens:	120,500 LM
Input Voltage:	100-277 V
Power Factor:	.92
CCT:	5000K
CRI:	80+
IP Rating:	IP66
Dimensions:	15.7" x 15.7" x 10"
Weight:	38 lbs. 17.2 kg
Lifespan:	80,000 L70 Hours
EPA Rating	1.2 ft <sup>2</sup>
Standard Colors:	Black



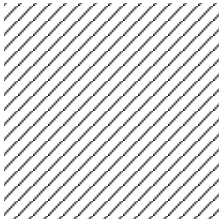
**C-MOR**<sup>TM</sup>  
ENERGY SERVICES

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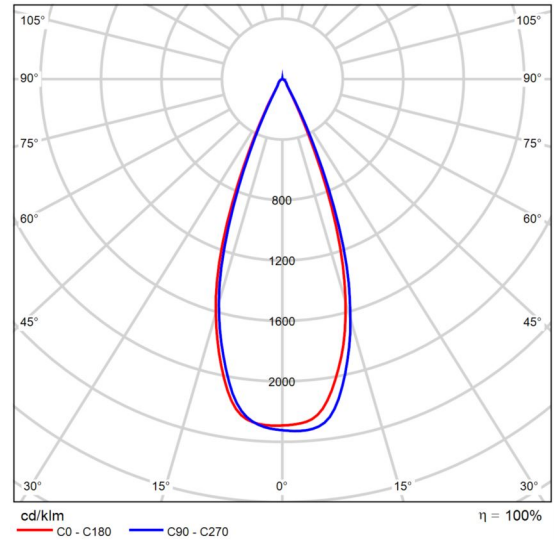
300 x 300 ft Area With 500W GEN IV 8 Pcs

## Product data sheet

LED LIGHTING DYNAMO 3 STADIUM FLOOD LIGHT 600W



P	600.0 W
$\Phi_{Lamp}$	96000 lm
$\Phi_{Luminaire}$	95951 lm
$\eta$	99.95 %
Luminous efficacy	159.9 lm/W
CCT	5000 K
CRI	100

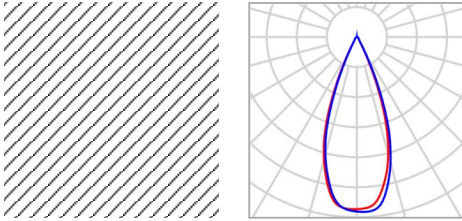


Polar LDC

300 x 300 ft Area With 500W GEN IV 8 Pcs

Site 1

## Luminaire layout plan



Manufacturer	LED LIGHTING
Article name	DYNAMO 3 STADIUM FLOOD LIGHT 600W

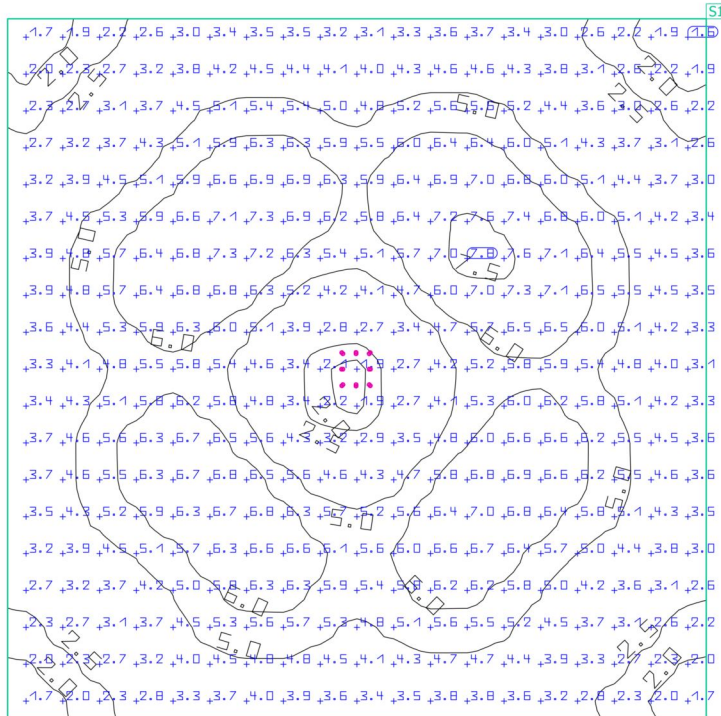
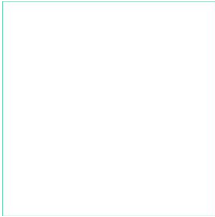
### Individual luminaires

X	Y	Mounting height	Luminaire
133.270 ft	-131.361 ft	180.400 ft	1
144.270 ft	-131.361 ft	180.400 ft	2
133.270 ft	-144.361 ft	180.400 ft	3
144.270 ft	-144.361 ft	180.400 ft	4
133.270 ft	-137.861 ft	180.400 ft	5
138.770 ft	-131.361 ft	180.400 ft	6
144.270 ft	-137.861 ft	180.400 ft	7
138.770 ft	-144.361 ft	180.400 ft	8

300 x 300 ft Area With 500W GEN IV 8 Pcs

Site 1

### Calculation surface 1



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$\bar{E}/E_{min}$	$E_{max}/E_{min}$	Index
Calculation surface 1 Perpendicular illuminance Height: 1.000 ft	4.70 fc	1.61 fc	7.78 fc	2.92	4.83	S1

Utilisation profile: DIALux preset, Default (Drive Aisles/Parking Areas)

## ENGINE

- Mitsubishi® L3E- liquid cooled, diesel engine; Final Tier 4
  - Standby - 12.2 hp @ 1800 rpm
  - Prime - 10.5 hp @ 1800 rpm
  - 3 cylinder
  - 0.95 L displacement
- Polyethylene Fuel Tank:
  - Fuel Type: Diesel
  - Fuel Capacity: 39.9 gal (151.04 L)
  - External 3.5 in. (89 mm) fill port
- Fuel Consumption:
  - Full Load: 0.59 gph (2.24 Lph)\*
  - Lights Only: 0.43 gph (1.62 Lph)\*
  - Maximum Runtime (Lights Only): 93 hours\*
- Cooling system capable of operating at 120°F (49°C) ambient
- 750-hour\*\* service interval
- Full flow filter, spin on type
- Dry type cartridge air filter
- 60 Hz engine/generator
- Wind Rating: 65 mph (105 kph)



*\*Results based on engine manufacturer and field test data after 100-hour engine break-in period and may vary based on factors including age and maintenance of equipment, environmental conditions and fuel density. Consult the Owner's Manual for fuel and maintenance recommendations.*

*\*\*To achieve maximum service interval, replacement of oil filter after 50-hour break-in period is required. Consult Owner's Manual for required oil filter model number.*

## GENERATOR

- Marathon Electric®, Brushless
- Up to 6kW power output
- 120/240 VAC – 50/25A
- +/-6% capacitor voltage regulation

## ENGINE CONTROLS

- External, illuminated control panel with sealed switches
- Four position keyed switch – (off, run, glow start)
- Digital hour meter
- Automatic low oil pressure/high temperature shutdown system

## ELECTRICAL SYSTEM

- 30A start trip breaker (assures no load condition exists before starting)
- Individual floodlight circuits with sealed 15A breakers
- Standard individually breakered convenience outlets:
  - (1) 120 VAC 20 Amp GFCI duplex outlet (NEMA 5-20R type)
  - (1) 240 VAC 30 Amp twist lock outlet (NEMA L6-30R type)
- Wiring is sized and fused to the amperage draw required
- 440CCA wet cell battery

### FLOODLIGHTS

- Four (4) 1,100 watt metal halide
  - 132,000 bare bulb lumens each
  - 70,356 fixture lumens each
  - Total bare bulb lumens (x4): 528,000
  - Total fixture lumens (x4): 281,424
- Coverage @ 0.5 ft-c: 31,863 ft<sup>2</sup> (2,960 m<sup>2</sup>)
- Efficiency: 120 lumens per watt
- Oval aluminum reflector
- Tempered glass lens
- Silicone gaskets for moisture and dust protection
- Friction disc mounting for tool less positioning
- Individual floodlight On/Off switches

### MAST

- Vertical mast; 23 ft. (7 m), 5-section with ground adjustable light fixtures
- Dual handle manual winch for ease of deployment; electric winch optional
- Distinctive angle fixture mount for common light distribution
- 359° ground rotational mast with mast fully extended
- Industrial black powder coat finish with polymer guides

### ENCLOSURE

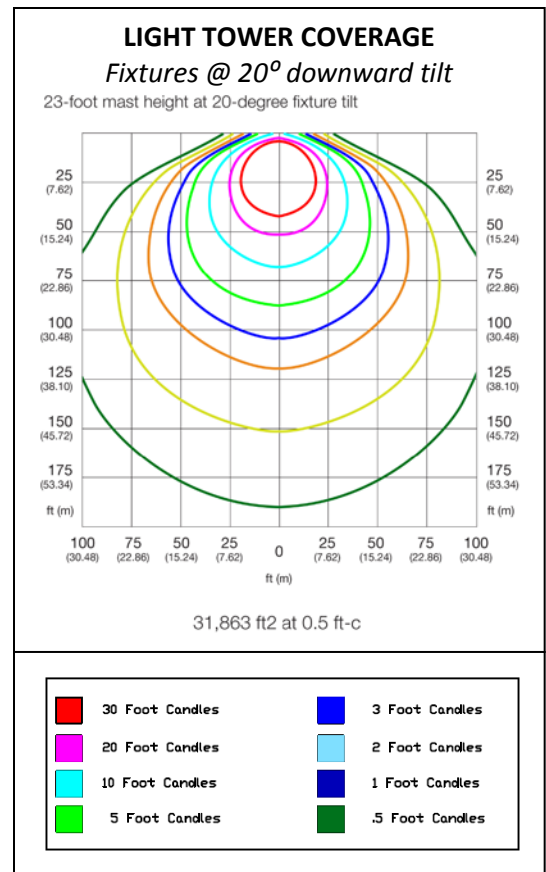
- Injection-molded hood enclosure with UV protected colorant
- Flip hood engine compartment for ease of service
- Multi-lingual operating/safety decals
- License plate holder with light
- Manual holder with operating manual
- 68 dB(A) at 23 ft. (7 m) – prime power

### TRAILER

- Tubular steel frame
- (3) 1200 lb. (544 kg) tube and sleeve leveling jacks
- All jacks transport and lock in position for storage
- Side outriggers deployed – 10 in. (25.4 cm) span
- 7800 lb. (3538 kg) safety chains with spring loaded safety hooks
- 2 in. (50.8 mm) ball hitch
- Molded polyethylene fenders
- DOT-approved LED tail, side, brake, and directional lights
- 2200 lb. (907 kg) leaf spring axle
- ST175/80D13 – 6 ply
- 47 in. (119.4 cm) track width

### WEIGHT & DIMENSIONS

- Dry weight: 1290 lbs. (585 kg)
- Operating weight: 1560 lbs. (708 kg)
- Mast stowed: 118 x 57 x 101 in (3 x 1.45 x 2.6 m)



**WARRANTY**

1 Year, Unlimited Hours / 2 Years, 2000 Hours

**CERTIFICATIONS**

CSA Approved / Listed

**OPTIONS**

Contact sales representative or factory for a list of current available options.

For more information, consult the Owner's Manual at <http://www.generacmobileproducts.com/resources-tools/manuals>