



# INSTALLATION MANUAL

## INTEGRATED SOLAR LIGHT POLE ASSEMBLY

Part Numbers: SF-SL-SH20 | SF-SL-SH-25 | SF-SL-SH30

| PRODUCT                | CONFIGURATION              | MOUNTING                 | REVISION |
|------------------------|----------------------------|--------------------------|----------|
| SF-SL-SH20 / -25 / -30 | 20 ft / 25 ft / 30 ft pole | Base plate + top adapter | Rev. 01  |

### 1. PRODUCT APPLICATION

The SF Industries Integrated Solar Light Pole Assembly combines a hot-dip galvanized carbon-steel pole with an SFSL-180-50 integrated solar LED luminaire mounted at the top. Available nominal pole heights are 20 ft, 25 ft, and 30 ft. Each assembly includes a pole-to-light mounting adapter selected as a 4 in. or 5 in. configuration to match the specified pole. The luminaire includes its solar panel, battery, LED, and control system.

### 2. SAFETY & PRE-INSTALLATION REQUIREMENTS

- Read this manual, both product data sheets, approved project drawings, and all applicable site requirements before beginning.
- Installation must be performed by qualified personnel using suitable lifting equipment, inspected rigging, and required fall protection. Establish an exclusion zone during lifting and erection.
- Verify the ordered assembly part number and pole height: SF-SL-SH20 (20 ft), SF-SL-SH-25 (25 ft), or SF-SL-SH30 (30 ft). Confirm the supplied 4 in. or 5 in. adapter matches the specified pole.
- Inspect pole, base plate, galvanized finish, cage bolt assembly, adapter, luminaire, solar panel, and hardware. Do not install damaged, incomplete, or deformed components.
- The pole data sheet states a wind rating up to 150 mph but does not provide the engineering basis or site criteria. Obtain project-engineer confirmation for the complete assembly, foundation, and site conditions.
- Foundation dimensions, concrete/reinforcement requirements, anchor layout, anchor hardware torque, and adapter-specific fastening details are not fully specified in the supplied product sheets. Do not assume these values; follow approved project documents and manufacturer direction.
- Do not drill, weld, cut, or modify the pole, adapter, or luminaire unless specifically approved in writing by the responsible engineer/manufacturer.
- Select a location with adequate structural support and unobstructed solar exposure. Confirm underground/overhead utilities and required clearances.

### 3. COMPONENTS

| COMPONENT                         | DESCRIPTION                                                                                                                     |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Solar-specific pole               | ¾ in. carbon steel; hot-dip galvanized; 20 ft, 25 ft, or 30 ft nominal height.                                                  |
| Base plate and cage bolt assembly | Solid welded base plate; custom cage bolt assembly supplied with pole.                                                          |
| Pole-to-light adapter             | Included; 4 in. or 5 in. adapter selected to match the specified pole. Confirm correct size before assembly.                    |
| SFSL-180-50 luminaire             | Integrated solar LED light with 50 W monocrystalline panel, battery, and controls.                                              |
| Luminaire mounting interface      | 1.5 in. NPT mounting connection; use the supplied adapter as the specified interface. Do not force or cross-thread connections. |

### 4. INSTALLATION PROCEDURE

- 1. Verify documents and configuration** — Confirm the part number, pole height, adapter size (4 in. or 5 in.), luminaire model, site location, approved structural drawings, and lighting layout.
- 2. Inspect components** — Check the pole, base plate, cage bolt assembly, adapter, luminaire, solar panel, and supplied hardware for damage. Verify the adapter matches the pole specification.
- 3. Prepare foundation** — Locate the foundation per approved drawings and confirm utilities and clearances. Foundation size, depth, concrete, reinforcement, and anchor geometry must be specified by the project engineer.



- 4. Set cage bolt assembly and foundation** — Position and brace the supplied cage bolt assembly to the approved anchor layout and elevation. Place and cure the foundation per project documents. Do not erect the pole until the specified concrete strength/release criteria are met.
- 5. Prepare pole and adapter** — At a safe working height, attach the included 4 in. or 5 in. adapter to the pole using the approved assembly details supplied for that configuration. The product sheets do not state adapter fastener sizes or torque; obtain these details before tightening. Do not improvise hardware or connection methods.
- 6. Mount luminaire to adapter** — Connect the SFSL-180-50 luminaire to the adapter using the approved interface details. Engage compatible threads carefully; do not cross-thread, force, or use unapproved sealants or adapters. If the supplied adapter's interface or assembly method is unclear, stop and contact SF Industries before proceeding.
- 7. Orient fixture** — Set the luminaire orientation for the intended forward light distribution and solar capture, following the approved lighting layout. Ensure the solar panel has unobstructed exposure to sunlight.
- 8. Lift and erect pole assembly** — Use a qualified lifting crew, suitable inspected rigging, and an approved lift plan. Protect the galvanized finish and solar fixture. Raise the assembly under control, keeping personnel clear of suspended loads and fall zones.
- 9. Set base plate** — Lower the base plate over the foundation anchor bolts without damaging threads or forcing misaligned anchors. Install washers and nuts in accordance with approved project/hardware instructions.
- 10. Plumb and secure** — Align and plumb the pole. Tighten foundation anchor hardware to the approved engineering/hardware requirements. No numerical anchor torque is provided in the product data sheets.
- 11. Final mechanical and lighting check** — Verify the pole is stable, adapter and luminaire are secure, fixture orientation is correct, solar panel is unobstructed, and all clearances are maintained.

## 5. TORQUE, FASTENERS & FOUNDATION

Use the approved project engineering documents, adapter assembly instructions, and applicable hardware manufacturer specifications. Do not substitute torque values from another product. If required details are unavailable, stop work and obtain written direction from the responsible engineer or SF Industries.

## 6. ORIENTATION, HEIGHT & LIGHTING NOTES

- Pole height options: 20 ft, 25 ft, and 30 ft. Recommended 15–30 ft installation height; verify the selected configuration against the project lighting design.
- 30–40 ft as a starting point for spacing, subject to mounting height, layout, and application. Confirm spacing with the project design.
- The light is identified as Type 4 distribution with a 60-degree semicircular pattern intended for forward lighting with minimal backlighting.
- Pole wind rating is stated as up to 150 mph; the engineering basis and site-specific applicability must be verified for the complete installed assembly.
- Allow the solar system to charge in accordance with product requirements before assessing normal nighttime operation. Approximately 6–7 hours charging, 12+ hours/day operation, and 3–5 days backup.

## 7. POST-INSTALLATION CHECKLIST

- Correct assembly part number and pole height installed.
- Correct 4 in. or 5 in. adapter supplied and installed for the specified pole.
- Foundation, cage bolt assembly, and anchor hardware match approved project documents.
- Pole is plumb, stable, and free of visible damage or deformation.
- Adapter and luminaire mounting interfaces are fully engaged and secured per approved instructions.
- Luminaire is oriented for the intended light distribution; solar panel receives unobstructed sunlight.
- No visible slippage, loose hardware, interference, or coating damage requiring correction.
- Installation has been inspected and accepted by the responsible qualified person/project representative.



## 8. INITIAL OPERATION, MAINTENANCE & INSPECTION

Use the supplied remote/control functions as applicable. Dusk-to-dawn sensing, proximity sensing, and remote control; default-mode notation should be confirmed against the current luminaire documentation. Inspect the pole, foundation, visible anchors, adapter, mounting connection, fixture, and solar panel periodically and after significant weather, vibration, impact, or maintenance. Check for looseness, movement, corrosion, coating damage, cracking, deformation, or panel obstruction. Restrict access and obtain qualified evaluation if movement or damage is observed.

## 9. TECHNICAL REFERENCE

Use this manual together with the Solar Specific Light Pole data sheet, SFSL-180-50 Integrated Solar Light data sheet/manual, adapter-specific assembly details, approved structural/foundation drawings, lighting design, project specifications, and governing codes. Where a dimension, fastener, torque, or connection detail is not specified, obtain direction from the responsible engineer or SF Industries before installation.

## 10. PRODUCT DATA REFERENCE

| PARAMETER             | SUPPLIED DATA                                               |
|-----------------------|-------------------------------------------------------------|
| Assembly part numbers | SF-SL-SH20 (20 ft); SF-SL-SH-25 (25 ft); SF-SL-SH30 (30 ft) |
| Luminaire             | SFSL-180-50                                                 |
| Pole material/finish  | ¼ in. carbon steel; hot-dip galvanized; ASTM A123           |
| Mounting adapter      | Included; 4 in. or 5 in. to match pole specification        |
| Luminaire output      | 5,000 lm; 50 W monocrystalline solar panel                  |
| Battery               | LiFePO <sub>4</sub> ; 35 Ah                                 |
| Enclosure             | NEMA 4X / IP65                                              |
| Luminaire weight      | 15 lb; complete assembly weight not specified               |
| Manufacturer          | SF Industries USA                                           |