The following procedure outlines how to connect to a fiber under test, configure OCC-4056 test setups, run tests, and analyze results with a T-BERD/MTS-5800 equipped with an OCC-4056 module.

Note: The OCC-4056 module is used to monitor wavelengths on a live network. Care should be exercised when unplugging fibers from the network as the fibers may be carrying traffic.

**Equipment Requirements:**
- T-BERD/MTS-5800 equipped with Fiber Optics Software Release V18.0 or greater
- OCC-4056 DWDM OSA Module
- Fiber optic cleaning and inspection tools
- 20-meter Fiber optic patch cord (Launch Cable)
- Optical Coupler to connect Launch Cable to Fiber Under Test

The following information is required to complete the test:
- Type of Connectors (SC UPC, SC APC, LC, etc.)
- DWDM Wavelengths used

**Fiber Inspection Guidelines:**
- Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (OTDR Port, Launch Cable, bulkhead connector, patch cord, etc.)
- Focus the fiber on the screen. If dirty, clean the connector.
- If it appears clean, run inspection test.
- If it fails, clean the fiber and re-run inspection test. Repeat until it passes.
Connect to Fiber Under Test (FUT):
All fibers and connectors should be inspected and clean prior to connection, as described on page 1. The OCC-4056 is typically connected to the FUT via a Monitor Port or splitter/tap to not disrupt service. The OCC-4056 can also be directly connected to the common port or common fiber via a coupler during turn up or maintenance:

1. Inspect the OCC-4056 port on top of the test set.
2. If connecting to the Common Cable, connect the Common Cable to an optical coupler with the same connector type and inspect the fiber end face in the coupler.
3. If connecting to the Monitor Port or Common Port on the Mux, inspect the Mux Port.
4. Inspect the fiber end face of the Launch Cable.
5. Connect the Launch Cable to the OCC-4056 port.
6. Inspect the other fiber end face of the Launch Cable.
7. Connect the Launch Cable to the coupler or Mux port.
Setup Test:
1. Press the ON/OFF button to turn on the test set.
2. Tap the Fiber Optics icon in the status bar at the top of the screen.
3. Tap the Home icon to display the Home screen.
4. Tap the OCC-4056C icon until it is selected and highlighted in yellow.
5. Tap the Keyboard icon to operate the OTDR.
6. Tap the SETUP icon to access setup parameters.
7. Tap the Acquisition soft key.
8. Tap Sweep.
9. Tap the TEST AUTO WDM soft key.
10. Tap the Top Menu soft key.
11. Tap the Analysis soft key. Set Signal Threshold to Auto and Mode to Permanent. If a splitter/tap is used to access the signal, set Splitter Compensation Value to the splitter loss (in dB or %).

Run Test:
1. Tap the START/STOP button to start the test. The OCC-4056 will sweep the entire DWDM wavelength range.
2. Tap the Trace/Table soft key to display results in graphical and tabular formats, as shown in Figure 8.
3. Verify that traffic is on all expected channels, at the anticipated wavelengths and power levels, and that there are no unexpected wavelengths present.
   Things to look for:
   a. Every expected channel is present.
   b. Channels are about 20 nm apart.
   c. Power levels of each channel are within roughly 3 dB of each other, or within the relative amplitude specification of the Network Equipment Manufacturer.