



Performance Verification Packet

Commercial Electrician COMELEC26

Performance verification tasks will be processed by NCCER within five business days, after submission by the administrator. Check with your administrator with any questions regarding submission or approval.

Performance Verification Form

How to fill out and file your information

Participant

- 1) Print your last name, first name, and social security number.
- 2) Print your company name, current employer, and the state where your employer's main office is located.
- 3) In the space provided for "Participant Signature," sign your name and enter the date you signed the form.

Performance Evaluator

- 1) In the space provided for "Site Code," enter the postal zip code of the location where the performance verification is being conducted.
- 2) In the column provided for "Date," enter the date the participant completed each of the tasks. This date is important because there may be times a participant does not complete a performance verification in one day.
- 3) In the space provided for "Performance Evaluator," sign your name.
- 4) In the space provided for "Date," next to your signature, list the date the participant successfully completed all of the tasks.

Administrator

- 1) In the space provided for "Administrator," sign your name. Your signature indicates that the performance evaluator is certified to conduct this performance verification and that it was conducted within the guidelines of the NCCER.
- 2) In the space provided for "Date", next to your signature, list the date that this performance verification form is being sent to the NCCER for entry into the National Registry.
- 3) In the space provided for "Accredited Assessment Center," print the name of the accredited assessment center that is conducting this performance verification.

Last Updated: May 29, 2011

NCCER

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**NCCER PERFORMANCE EVALUATOR CHECKLIST
COMMERCIAL ELECTRICIAN**

Date Completed Task To Perform

__-__-__ 1. Conduit Bending (Task#1)

- 15" rise \pm 1/2"
- 90° \pm 5°
- 90° is vertical
- Offset rise \pm 1/2"
- No dogleg in offset bend
- Offset goes over obstacle

Conduit Bending (Task#2)

- All angles are 90 degrees
 - No offsets in bends
 - Conduit / fixtures connected properly
 - Conduit Properly secured to surface
-

__-__-__ 2. Using Test Equipment

- Test leads connected properly
 - Selector switch correctly set
 - Voltage, resistance and current values recorded correctly
 - Megger zeroed on first attempt
 - Phasing Stick used correctly
-

__-__-__ 3. Identify Fittings

- Twelve (12) of fifteen (15) fittings correctly identified (spelling is not critical)
-

__-__-__ 4. Wire a Lighting Circuit

- Wired a light controlled from three locations and fed at the light fixture
 - Verified appropriate grounding of boxes and devices
-

__-__-__ 5. Safety

- Used PPE
- Practiced good safety procedures

NCCER PERFORMANCE VERIFICATION CANDIDATE SUMMARY COMMERCIAL ELECTRICIAN

Objective

The candidate will demonstrate the ability to bend EMT, use a volt OHM milliampere meter (VOM), identify common material, and wire a lighting (luminare) circuit controlled from three locations (devices). The candidate must complete these key tasks within three hours to be successful.

Scope

This Performance Verification provides a means to observe and evaluate competencies in the following areas:

- Conduit bending
- Use of test equipment
- Identifying fittings
- Wiring a lighting circuit from three locations

Materials Required

- Minimum 25' of 1/2" EMT
- Conduit bender
- Volt OHM Milliamp Meter (VOM) with leads
- Megger with leads
- Four 4" square boxes
- Three 1/2" plaster rings
- 1/2" rise square to round ring (?)
- Keyless fitting
- 60-watt light (?)
- Two 3-way 120V switches
- 4-way 120V switch

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NCCER PERFORMANCE VERIFICATION CANDIDATE SUMMARY
COMMERCIAL ELECTRICIAN

Materials Required (continued)

- Resistor or other device of known value
- Fittings – 15 different common boxes or fittings, such as:
 - 4" sq. x 1-1/2"-deep 4-11/16" x 4-11/16" x 1-1/2" box
 - 4" sq. box x 2/18" pp. (?)
 - 1/2' rise, 4" sq. plus 1 gang
 - 1/2' rise, 4" sq. plus 2 gang
 - EMT connectors
 - EMT couplings
 - EMT/Flex coupling
 - LB conduit fitting
 - GUAT fitting
 - Union
 - Spring nut
- (A) Single phase 480-120/240 or three phase 480-120/208
- Wire – 12/3 MC
- Black tape
- Wire nuts
- Ground screws
- MC connectors
- MC anti-short fittings
- Box mounting screws
- 3 wire start/stop station
- Starter
- Hazardous location seal and packing kit (1") also; 2 conduit nipples
- Personal safety equipment

Time Required

Based on job specifications.

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NCCER PERFORMANCE VERIFICATION CANDIDATE SUMMARY
COMMERCIAL ELECTRICIAN

Tasks

- **Conduit Bending/Hand Bending**

Note: You will be given “take up” for the conduit bender by the evaluator.

Task#1

- Make a 90° bend with a fifteen inch (15") vertical rise.
- Make a six inch (6") offset at a 30° angle to go over a horizontal obstacle that is thirty inches (30") from the back of the 90° vertical rise.

Task#2

Follow Instructions on Task Sheet “A,” Conduit Bending

- **Using Test Equipment**

Perform the following:

- Use VOM to measure and then record voltage : minimum of 480 volts. Phase to phase and phase to ground
- Use VOM to measure and then record value of a device provided by the evaluator.
- Properly check zero on the megger provided by the evaluator.
- Use clamp-on meter to measure current flow
- Use “phasing stick”

- **Identify Fittings**

Correctly identify fittings provided by the evaluator by writing their proper name.

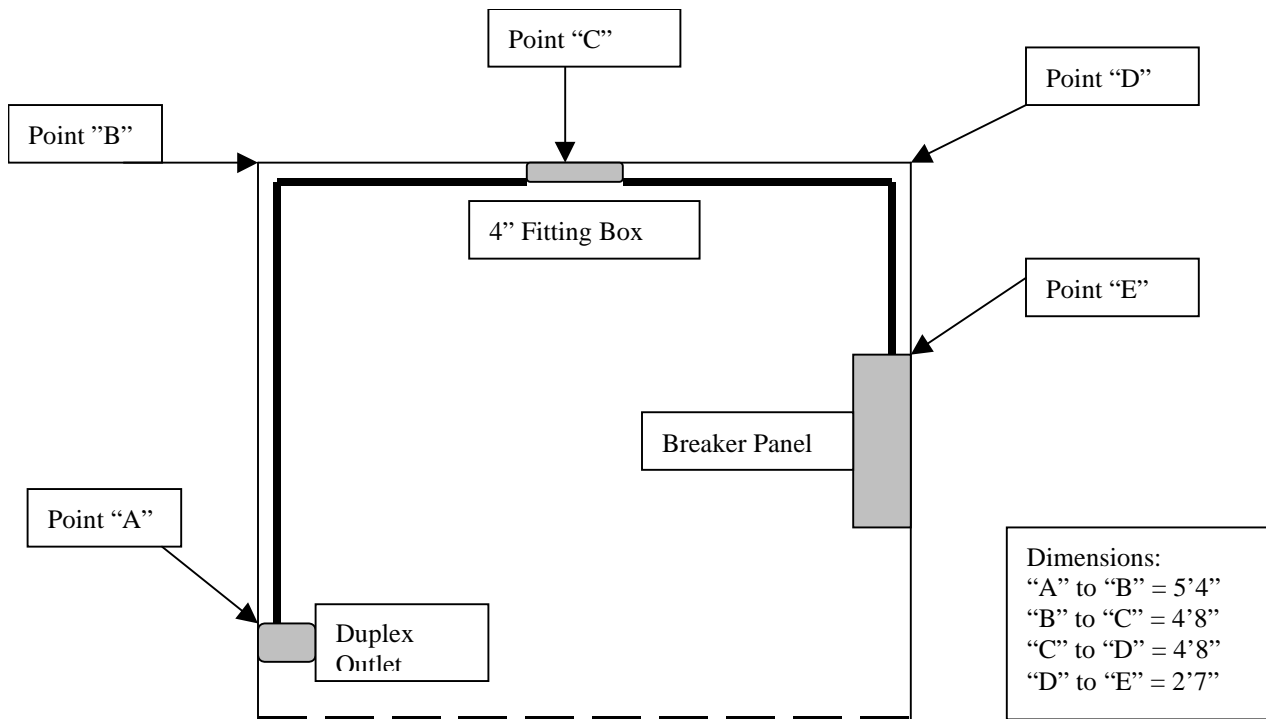
- **Wire a lighting circuit controlled from three locations**

Perform the following:

- Wire a light controlled from three locations and feed at the light fixture
- Verify appropriate grounding of boxes and devices

- **Perform Tasks Safely**

- Use appropriate PPE while performing tasks
- Practice good safety procedures



Task: Measure, cut, bend, connect and secure conduit to fixtures as shown in the diagram. Performance Evaluator will provide "take-up" of conduit bender you will be using. All angles are to be 90 degrees. Assume that conduit is to be attached to wall surface with conduit straps.

Note: Based on your work site your evaluator may ask you to lay this "job" out on a flat surface. In this case you will be required to maintain dimensions but instead of using straps you would only need to locate where straps would be placed. All other requirements of this task must be met.

Task Sheet "A" Conduit Bending

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**PERFORMANCE VERIFICATION FORM
INDUSTRIAL ELECTRICIAN – COMELEC26 - CRAFT**

Candidate information				
Last Name	First Name	Social Security Number		
Employer/Company Name	State	Code		
Evaluator				
Last Name	First Name	Social Security Number		
Task Number	TASK	DATE (MM/DD/YY)	START TIME	END TIME
01	Conduit Bending (Module 26204-05)			
02	Using Test Equipment (Module 26106-05)			
03	Identify Fittings (Module 26205-05)			
04	Wire a Lighting Circuit Controlled From Three Locations (Module 26111-05)			
05	Safety (Modules 00101-04 and 26101-05)			

Consent/Release: I, the undersigned, do hereby authorize the National Center for Construction Education and Research (NCCER) to release the information and results attained through the administration of the National Craft Assessment and Certification Program (NCACP) to the organization referenced below, and acknowledge that the employer noted above is my present employer.

Accredited Assessment Center: _____

Participant: _____ **Date:** _____

Performance Evaluator: _____ **Date:** _____

Administrator: _____ **Date:** _____