



NOTHING WORKS HARDER FOR
THE COMFORT OF YOUR CREW

HERE'S PROOF

carhartt **FR** 



THE ALL NEW 4.7 OZ FR LONG SLEEVE SHIRT FROM CARHARTT

Nothing tests a crew's resolve and the effectiveness of their gear like the extreme heat and humidity found in the electric utility and oil and gas industries. Enter Carhartt's new FR Lightweight, long-sleeve shirt. At just 4.7 ounces it's the lightest, most breathable Carhartt FR shirt ever created with all of the toughness and protective properties of substantially heavier shirts (Meets CAT 2 arc flash protection rating, NFPA 2112 certified for protection against short-duration thermal exposure to fire). Carhartt's 4.7oz Long Sleeve FR shirt is available in four colors for both men and women.

Comfort & protection woven in

The FR Force Lightweight Long Sleeve Shirt's innovative weave design features yarns produced from fibers optimized to deliver more FR protection per ounce. Built with Carhartt Force technology to wick sweat and fight odors. Engineered with 10% stretch for increased mobility, wrinkle resistance, anti-static properties, and long-lasting color wash after wash.

To prove the new 4.7oz shirt is the lightest, most breathable FR shirt, Carhartt engineers sent samples of their FR shirts and some competitors to Kansas State University to evaluate the thermal and evaporative resistance properties of the garment. The evaluation was conducted as a blind test. Sample 3 data (highlighted) represents the performance of the 4.7 oz FR shirt as compared to the others.

DESCRIPTION OF SHIRT SAMPLES

Sample	Sample Description	Shell Material
SAMPLE 1	CARHARTT FR	6 OZ. LW TWILL - 88% CTN/12% NYLON WITH WICKING
SAMPLE 2	CARHARTT FR	7 OZ. 3/1 LH TWILL - 88% CTN/12% NYLON
SAMPLE 3	CARHARTT 4.7OZ LONG SLEEVE FR SHIRT	4.7 OZ. STELLAR WEAVE - 50% LENZING FR, 38% ARAMID, 10% POLYAMIDE, 2% ANTISTAT WITH MOISTURE MANAGEMENT AND ANTI-MICROBIAL
SAMPLE 4	COMPETITOR FR	5.3 OZ. 74% META-ARAMID, 20% MODACRYLIC, 5% PARA-ARAMID 1% ANTISTAT
SAMPLE 5	COMPETITOR FR	6.5 OZ. SAUK II TWILL - 88% COTTON/ 12% NYLON WITH MOISTURE MANAGEMENT

EVAPORATIVE RESISTANCE TEST RESULTS

Ensemble Code and Description	Total Local Evaporative Resistance Values for Torso and Arms ^a	Total Local Evaporative Resistance Values for Torso ^b	Total Evaporative Resistance - R_{et} ($m^2 \cdot Pa/W$)	Intrinsic Evaporative Resistance of Clothing - R_{cl} ($m^2 \cdot Pa/W$) ^c	Moisture Permeability Index - I^m
SAMPLE 1: CARHARTT FR	30.55	35.03	27.97	17.23	0.36
SAMPLE 2: CARHARTT FR	31.40	34.40	28.46	17.72	0.36
SAMPLE 3: CARHARTT 4.7OZ LONG SLEEVE SHIRT	29.25	32.40	27.33	16.59	0.37
SAMPLE 4: COMPETITOR FR	31.00	34.43	27.97	17.23	0.36
SAMPLE 5: COMPETITOR FR	30.23	35.47	27.93	17.19	0.36

The Kansas State University testing reported the following findings:

- Lower evaporative resistance values coupled with higher moisture permeability index are desirable for comfort
- Carhartt's 4.7oz FR Long Sleeve Shirt led the field in moisture transfer through the garment as indicated by lower resistance values
- Not only did Carhartt's 4.7oz FR Long Sleeve Shirt yield the best results for reduced heat stress and hot weather comfort, it also outperformed the others, which can be substantiated with the data.

KEEP YOUR CREW COOL,
PROTECTED AND SAFE. LEARN
MORE ABOUT THE NEW 4.7 OZ
LONG SLEEVE FR SHIRT AT
[CARHARTT.COM/COMPANYGEAR](https://carhartt.com/companygear)
OR CALL 866-698-1125