Abbreviations  $\sim$ M\_29899 = non\_confirmable  $\sim$ M 29900 = CoAP POSTCode ~M 29901 = messageid 28772  $\sim$ M 29902 = token 28773  $\sim$ M 29905 = partial iv 28771  $\sim$ M 29906 = IDri 28767  $\sim$ M 29907 = idcontext 28770  $\sim$ M\_29904 = aeadEncrypt(HKDF(msecret\_28768,msalt\_28769, (IDri\_28767,idcontext\_28770,AES\_CCM,label\_key, alg key length(AES CCM,label key))),aeadNonce( IDri 28767, partial iv 28771, HKDF (msecret 28768, msalt\_28769,(emptyId,idcontext\_28770,AES\_CCM,label\_iv, alg key length(AES CCM,label iv)))),((CoAP GETCode, isLightBulbTurnedOn),msg1(a\_28758,a\_28759)),(encrypt0, oscore version one, AES CCM, IDri 28767, partial iv 28771))  $\sim$ X 1 = (a 28761,a 28762,a 28763,a 28764,( $\sim$ M 29905, $\sim$ M 29701, ~M 29702),~M 29904) = (a 28761,a 28762,a 28763, a 28764,(partial iv 28771,IDri 28767,idcontext 28770), aeadEncrypt(HKDF(msecret 28768,msalt 28769,(IDri 28767, idcontext 28770,AES CCM,label key,alg key length( AES CCM, label key))), aeadNonce(IDri 28767, partial iv 28771, HKDF(msecret 28768,msalt 28769,(emptyld,idcontext 28770, AES CCM, label iv, alg key length (AES CCM, label iv)))), ((CoAP\_GETCode,isLightBulbTurnedOn),msg1(a\_28758, a 28759)),(encrypt0,oscore version one,AES CCM, IDri 28767, partial iv 28771)))  $\sim$ X 2 = (a 28761,a 28762,a 28763,a 28764,( $\sim$ M 29905, $\sim$ M 29701, ~M 29702),~M 29904) = (a 28761,a 28762,a 28763, a\_28764,(partial iv 28771,IDri 28767,idcontext 28770), aeadEncrypt(HKDF(msecret\_28768,msalt\_28769,(IDri\_28767, idcontext 28770,AES CCM,label key,alg key length(

AES CCM, label key)), aeadNonce(IDri 28767, partial iv 28771,

A trace has been found.

