

CURRENT TRANSFORMER CHARACTERISTICS TEST

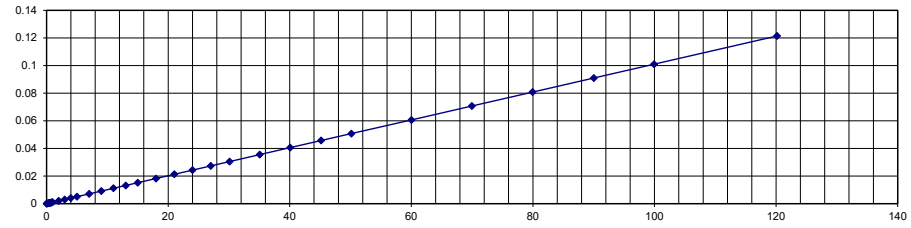
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 4, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	1
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000759434	0.000759434	3.06531E-05	0.000783635	-0.000758839	104.0394759	24.77510145	97.52248986
0.1A	0.099950293	0.099950293	0.000108383	0.000983549	-0.000661128	116.3935713	922.1989523	7.780104771
0.2A	0.199903307	0.199903307	0.000206691	0.000988721	-0.000561786	136.7918184	967.1592082	3.284079183
0.3A	0.300260544	0.300260544	0.000305917	0.001085223	-0.000433585	170.5551853	981.511291	1.848870901
0.4A	0.40072331	0.40072331	0.000414941	0.001016069	-0.000352272	217.7900027	965.735502	3.426449786
0.5A	0.502924849	0.502924849	0.000518785	0.000999723	-0.000256649	302.1379148	969.4284981	3.057150189
0.6A	0.602122841	0.602122841	0.000617955	0.001008012	-0.000152488	505.249782	974.3791487	2.562085129
0.7A	0.690896192	0.690896192	0.00070744	0.000962058	-9.47522E-05	846.6208786	976.6145868	2.338541325
0.8A	0.800168714	0.800168714	0.000812566	0.000984443	2.82863E-05	-2772.654345	984.742468	1.525753204
0.9A	0.901060326	0.901060326	0.000911889	0.001033633	0.000171931	-430.3796529	988.1255049	1.187449507
1A	1.00018794	1.00018794	0.00101435	0.001004219	0.000244973	-314.0656113	986.0381739	1.396182612
2A	2.00415579	2.00415579	0.002022554	0.001009114	0.001262988	-60.14038144	990.9036186	0.909638143
3A	2.98331473	2.98331473	0.003010637	0.001017512	0.002276125	-32.27029334	990.9247347	0.907526529
4A	3.99826615	0.39982662	0.004043363	0.001012017	0.003286879	-23.01526174	988.8468004	1.115319962
5A	5.00202431	0.050020243	0.005059183	0.001009218	0.0042887	-17.96543091	988.7020135	1.12979865
7A	7.00874396	0.03504372	0.007084401	0.001009994	0.006319352	-12.10645295	989.3206312	1.067936882
9A	9.00927636	0.045046382	0.009104926	0.001013959	0.008375604	-8.707696777	989.4947742	1.050522581
11A	11.02103245	0.022042065	0.011144764	0.001010774	0.010380334	-7.364214282	988.8977776	1.110222243
13A	13.03046525	0.026060931	0.013175846	0.00101279	0.012437685	-5.934874797	988.966139	1.1033861
15A	15.01406005	0.03002812	0.01518481	0.00101098	0.014419484	-5.307582914	988.7552283	1.124477371
18A	18.02693295	0.036053866	0.018230765	0.001012065	0.017484986	-4.265253466	988.8193473	1.118065272
21A	21.02819835	0.042056397	0.021268239	0.001011061	0.020501353	-3.740660483	988.7136472	1.128635275
24A	23.9994904	0.047998981	0.024272396	0.001019447	0.023706767	-2.385941385	988.7565365	1.124346347
27A	27.010167	0.027010167	0.027341621	0.001014104	0.026631682	-2.665768117	987.8773279	1.21226721
30A	30.1165033	0.030116503	0.030491768	0.001018954	0.029297909	-1.884057279	987.6929079	1.230709208
35A	35.0669665	0.035066967	0.035536065	0.001011374	0.034706388	-2.390557455	986.7993796	1.320062042
40A	40.0834361	0.040083436	0.040609592	0.00100793	0.039641845	-2.441226863	987.0435513	1.295644875
45A	45.1584976	0.045158498	0.045724897	0.001013852	0.045024589	-1.55538955	987.6128971	1.238710292
50A	50.1352938	0.050135294	0.05077063	0.000998472	0.049299253	-2.98458286	987.4861412	1.251385882
60A	60.0415908	0.030020795	0.060661791	0.00101397	0.060120964	-0.899564192	989.7761046	1.022389537
70A	69.9669744	0.034983487	0.070725836	0.001009319	0.069859583	-1.2399914	989.2703736	1.072962641
80A	79.9584192	0.03997921	0.080810394	0.001012989	0.080237536	-0.71395253	989.45711	1.054289003
90A	90.0325098	0.045016255	0.091015334	0.001011433	0.090302411	-0.7894839	989.2015569	1.079844308
100A	99.9306464	0.049965323	0.101026635	0.001010658	0.10023628	-0.788492123	989.1514886	1.084851139
120A	120.1552076	0.030038802	0.121466751	0.001010915	0.120707317	-0.629153619	989.2024493	1.079755068

CURRENT TRANSFORMER CHARACTERISTICS TEST

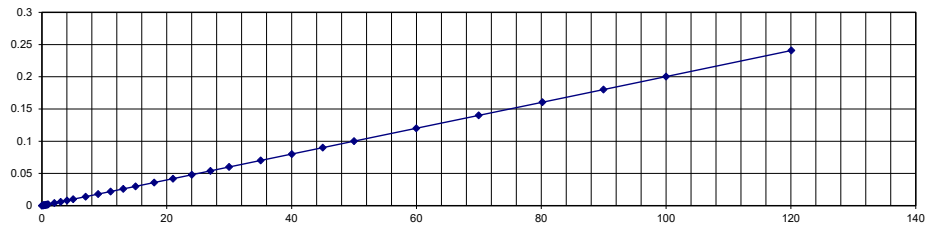
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	2
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000702262	0.000702262	2.38322E-05	0.001901976	-0.000700926	103.4001047	58.93380803	94.1066192
0.1A	0.200957983	0.200957983	0.000404714	0.006290697	0.000561904	27.97459603	993.0870102	0.691298977
0.2A	0.201158556	0.201158556	0.000405975	0.00199121	-0.000301713	234.5569926	990.9886679	0.901133214
0.3A	0.300975253	0.300975253	0.000604732	0.002031909	-9.07073E-05	766.6841675	995.4012419	0.459875814
0.4A	0.401571357	0.401571357	0.000809134	0.001907794	6.38537E-05	-1167.167909	992.595877	0.740412302
0.5A	0.500937561	0.500937561	0.000998704	0.002085043	0.000342215	-191.8354525	1003.175371	-0.31753707
0.6A	0.600130255	0.600130255	0.001205525	0.001997417	0.000496449	-142.8297724	995.6331138	0.436688616
0.7A	0.701901197	0.701901197	0.001408804	0.001960895	0.000674093	-108.9924539	996.4498352	0.355016484
0.8A	0.801365024	0.801365024	0.001603842	0.002005032	0.000904501	-77.31791758	999.3066999	0.069333012
0.9A	0.903802913	0.903802913	0.001809233	0.001949095	0.001059336	-70.78933707	999.1004731	0.08995269
1A	1.00268565	1.00268565	0.002001965	0.00200411	0.00130723	-53.14556058	1001.701408	-0.170140825
2A	2.00317357	2.00317357	0.004007053	0.002009285	0.003322685	-20.59683751	999.8239529	0.01760471
3A	3.00480665	3.00480665	0.006019619	0.001983918	0.005259028	-14.46256169	998.3378648	0.166213517
4A	4.00998334	0.040099833	0.008013807	0.002005973	0.007341657	-9.155293629	1000.768647	-0.076864717
5A	5.00993828	0.050099383	0.01001969	0.001981205	0.009223453	-8.632735719	1000.018669	-0.001866924
7A	7.00795554	0.035039778	0.013978171	0.001996996	0.013292599	-5.157551971	1002.699908	-0.269990825
9A	9.00720576	0.045036029	0.017970666	0.001989444	0.017217071	-4.377024207	1002.434257	-0.243425699
11A	11.0178377	0.022035675	0.021970706	0.001991876	0.0212439	-3.421248195	1002.957083	-0.295708292
13A	13.0227931	0.026045586	0.025964328	0.001996034	0.025291674	-2.659586824	1003.129617	-0.312961694
15A	15.0018243	0.030003649	0.029914541	0.001996408	0.029247497	-2.280687791	1002.978739	-0.297873867
18A	17.99984805	0.035999696	0.035899819	0.001998076	0.035262806	-1.806471124	1002.782109	-0.278210874
21A	21.0008992	0.042001798	0.041896148	0.002000162	0.041302942	-1.436230426	1002.521726	-0.252172588
24A	24.0089412	0.048017882	0.04791272	0.002037955	0.048226884	0.651431005	1002.194883	-0.219488271
27A	27.0102442	0.027010244	0.054029241	0.002009556	0.053576345	-0.845326873	999.8380099	0.016199006
30A	29.9989358	0.029998936	0.060035185	0.002002283	0.059364084	-1.130482414	999.3784795	0.062152053
35A	35.0436781	0.035043678	0.070136184	0.002000824	0.069413971	-1.040443586	999.3038116	0.069618843
40A	40.0272183	0.040027218	0.080107371	0.001996672	0.079218958	-1.121465795	999.3392056	0.066079437
45A	45.0024155	0.045002416	0.090041207	0.002007892	0.089657711	-0.427733991	999.596005	0.040399503
50A	49.9971402	0.04999714	0.100070073	0.002006442	0.099614104	-0.457735256	999.2426047	0.075739527
60A	59.988547	0.029994274	0.120117252	0.001999483	0.119243822	-0.732473773	998.8331568	0.116684321
70A	69.9755208	0.03498776	0.140086037	0.002000547	0.139287027	-0.573642766	999.0363394	0.096366064
80A	80.1881508	0.040094075	0.160516879	0.002007241	0.160254675	-0.163617352	999.1242205	0.087577955
90A	89.9641144	0.044982057	0.180139593	0.002011484	0.180257342	0.065322969	998.8266644	0.117333561
100A	99.995589	0.049997795	0.200317546	0.002017468	0.201035642	0.357198203	998.3707468	0.162925319
120A	120.076624	0.030019156	0.240830392	0.002005639	0.24012813	-0.292452884	997.1882951	0.281170493

CURRENT TRANSFORMER CHARACTERISTICS TEST

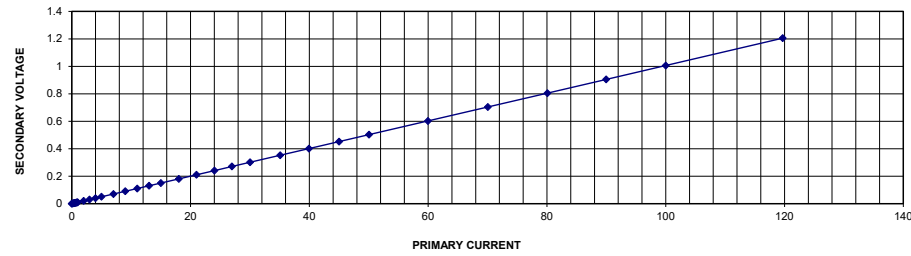
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	10
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000762766	0.000762766	2.43403E-05	0.009736604	-0.00075534	103.2224266	313.376364	68.6623636
0.1A	0.100292903	0.100292903	0.000993426	0.009903956	0.00023053	-330.9311562	1009.566132	-0.956613178
0.2A	0.200691017	0.200691017	0.001987764	0.00995909	0.001235934	-60.83099311	1009.631887	-0.963188668
0.3A	0.300542771	0.300542771	0.002982197	0.009967517	0.002232899	-33.55719662	1007.789831	-0.778983105
0.4A	0.399757316	0.399757316	0.00397112	0.009988315	0.003230136	-22.9397174	1006.661502	-0.666150181
0.5A	0.501867388	0.501867388	0.004991027	0.009960081	0.004235873	-17.82758051	1005.539297	-0.553929671
0.6A	0.60062759	0.60062759	0.005974687	0.010073029	0.005287372	-12.99916441	1005.287173	-0.528717263
0.7A	0.710161026	0.710161026	0.00707802	0.010003439	0.006341286	-11.61806003	1003.332871	-0.33287128
0.8A	0.800784523	0.800784523	0.007984567	0.010038074	0.007275568	-9.744930845	1002.915439	-0.291543935
0.9A	0.906898108	0.906898108	0.009049743	0.009957864	0.008268002	-9.455015832	1002.125848	-0.212584829
1A	1.00117644	1.00117644	0.009988554	0.010035612	0.009284652	-7.581345194	1002.323747	-0.232374687
2A	2.00161288	2.00161288	0.020028546	0.010046315	0.019346066	-3.527742274	999.380048	0.061995515
3A	2.99896841	2.99896841	0.030048293	0.010076546	0.029456478	-2.009117191	998.0495098	0.195049017
4A	3.99690336	0.039969034	0.040104031	0.01007417	0.039502716	-1.522211266	996.6338246	0.336617535
5A	4.99960765	0.049996077	0.050205444	0.00990016	0.048734151	-3.01901843	995.8297869	0.41702131
7A	7.00877592	0.03504388	0.070096532	0.010033016	0.069556398	-0.776541102	999.8748483	0.01251517
9A	9.00526388	0.045026319	0.090127329	0.00998833	0.089184777	-1.056852999	999.1712869	0.082871312
11A	11.02816035	0.022056321	0.110332685	0.010017373	0.109710431	-0.567178601	999.537023	0.046297704
13A	13.01104835	0.026022097	0.130196014	0.00999737	0.129313497	-0.682463061	999.3430636	0.065693639
15A	14.9944573	0.029988915	0.150024887	0.010013479	0.149383917	-0.429075862	999.4646622	0.053533785
18A	18.03500495	0.03607001	0.180471347	0.01003744	0.180262515	-0.115848819	999.327885	0.0672115
21A	21.01277685	0.042025554	0.210360554	0.010013706	0.209652998	-0.337488881	998.8933976	0.110660243
24A	24.0218373	0.048043675	0.2404924	0.01026329	0.245780308	2.151477577	998.8605586	0.113944141
27A	26.9652304	0.02696523	0.270701296	0.010090617	0.271333035	0.232827865	996.1249096	0.387509042
30A	30.0291284	0.030029128	0.301617916	0.010064739	0.301472582	-0.048207982	995.6016141	0.439838594
35A	35.0795851	0.035079585	0.352449446	0.010001147	0.350073317	-0.678751741	995.3082775	0.469172251
40A	39.9509897	0.03995099	0.401169079	0.010057768	0.401055009	-0.028442534	995.8641329	0.413586711
45A	45.0074801	0.04500748	0.452026085	0.010062229	0.452112812	0.019182511	995.6832491	0.431675088
50A	50.0631819	0.050063182	0.502897715	0.010057749	0.502760131	-0.027365788	995.4943204	0.450567965
60A	59.968584	0.029984292	0.602523759	0.010075254	0.603435966	0.151168791	995.2899467	0.471005327
70A	70.04845	0.035024225	0.704080972	0.01004462	0.702847287	-0.175526723	994.8919625	0.510803749
80A	80.0885706	0.040044285	0.804930167	0.010080195	0.806545613	0.200291924	994.975389	0.502461104
90A	89.969195	0.044984598	0.904528784	0.010117566	0.909506468	0.547295088	994.6526478	0.534735222
100A	100.0031824	0.050001591	1.00604831	0.010109291	1.010198468	0.410826022	994.0196848	0.59803152
120A	119.6887496	0.029922187	1.20505543	0.010068243	1.204292664	-0.063337296	993.2219433	0.677805667

CURRENT TRANSFORMER CHARACTERISTICS TEST

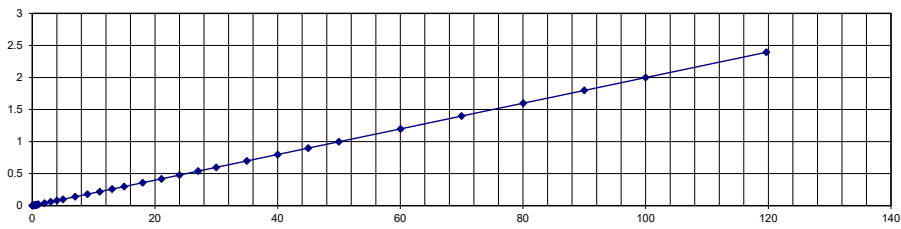
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	20
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000744412	0.000744412	2.58214E-05	0.019316444	-0.000730033	103.5370244	576.5846103	42.34153897
0.1A	0.100135118	0.100135118	0.001945696	0.019567211	0.001214953	-60.14585766	1029.298487	-2.929848665
0.2A	0.200190785	0.200190785	0.003903507	0.019689454	0.003197235	-22.09008509	1025.697132	-2.569713232
0.3A	0.30022188	0.30022188	0.005873064	0.019784024	0.005195184	-13.04823601	1022.368769	-2.236876893
0.4A	0.400975034	0.400975034	0.007866367	0.019864887	0.007220911	-8.938704579	1019.466867	-1.946686658
0.5A	0.500410721	0.500410721	0.009841646	0.019891349	0.009209432	-6.86485353	1016.924874	-1.69248745
0.6A	0.60025098	0.60025098	0.011827603	0.01978111	0.011129218	-6.275239078	1015.000199	-1.500019886
0.7A	0.70015191	0.70015191	0.01380105	0.019874432	0.013167992	-4.807553767	1014.437584	-1.44375841
0.8A	0.800242163	0.800242163	0.015793004	0.019956167	0.015225354	-3.728322467	1013.413481	-1.341348097
0.9A	0.900540698	0.900540698	0.017794578	0.019895856	0.017172616	-3.621826962	1012.151766	-1.215176641
1A	1.00071897	1.00071897	0.019787711	0.019926108	0.019196022	-3.082351807	1011.455014	-1.145501373
2A	2.00128079	2.00128079	0.039725014	0.019945603	0.03917234	-1.41087855	1007.567071	-0.7567071
3A	2.99938594	2.99938594	0.059632823	0.019856866	0.058813993	-1.392235697	1005.951353	-0.595135335
4A	4.00337828	0.040033783	0.079568965	0.019894896	0.078902384	-0.84481661	1006.266276	-0.626627609
5A	5.00486025	0.050048603	0.099493345	0.019728598	0.097994464	-1.529556436	1006.069355	-0.606935471
7A	6.99863534	0.034993177	0.138827732	0.019920013	0.138668496	-0.114831793	1008.24745	-0.824745016
9A	9.00564058	0.045028203	0.178807303	0.01984962	0.17801413	-0.445567667	1007.301204	-0.730120402
11A	11.00702425	0.022014049	0.218534008	0.019848486	0.217728357	-0.3700257	1007.351153	-0.735115333
13A	13.00131185	0.026002624	0.258117598	0.01994621	0.258582481	0.179781513	1007.394455	-0.739445514
15A	14.98485155	0.029969703	0.297681697	0.019900397	0.297460087	-0.074500795	1006.770097	-0.677009712
18A	18.0142571	0.036028514	0.357968071	0.019859785	0.357014858	-0.266995463	1006.472843	-0.647284266
21A	21.06986795	0.042139736	0.418651845	0.019885765	0.418246039	-0.097025552	1006.557989	-0.655798854
24A	23.9986925	0.047997385	0.476893763	0.020487568	0.49093043	2.859196711	1006.458644	-0.645864391
27A	27.035769	0.027035769	0.539116074	0.019914477	0.537658796	-0.271041456	1002.966534	-0.29665337
30A	29.9946677	0.029994668	0.598040995	0.020011321	0.599488526	0.241460959	1003.097378	-0.309737796
35A	34.9957802	0.03499578	0.698119865	0.019977275	0.698375924	0.036664911	1002.57225	-0.257225025
40A	39.9961595	0.03999616	0.798013819	0.019958201	0.797506983	-0.063552604	1002.392654	-0.239265406
45A	45.0008855	0.045000886	0.897899147	0.020000173	0.899281063	0.153669	1002.359467	-0.235946655
50A	50.0019269	0.050001927	0.997920838	0.019905492	0.994568567	-0.337057849	1002.122112	-0.212211222
60A	60.0452314	0.030022616	1.19783776	0.020159705	1.209749769	0.98466715	1002.560337	-0.256033672
70A	69.989273	0.034994637	1.39830671	0.019954679	1.395869093	-0.174630769	1001.057529	-0.105752907
80A	80.0478816	0.040023941	1.59902302	0.019962412	1.59720441	-0.113862045	1001.209871	-0.120987126
90A	90.0119604	0.04500598	1.79793007	0.020076128	1.806347233	0.46597703	1001.284331	-0.128433138
100A	99.9992348	0.049999617	1.99843587	0.020059392	2.00517941	0.336306056	1000.775019	-0.077501912
120A	119.690466	0.029922617	2.39342999	0.019996831	2.392685578	-0.031111999	1000.158488	-0.015848803

CURRENT TRANSFORMER CHARACTERISTICS TEST

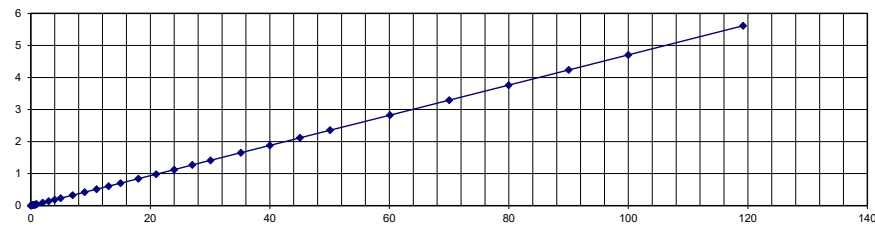
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	47
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000756985	0.000756985	2.30401E-05	0.044596767	-0.000723226	103.1857402	1544.190217	-54.41902174
0.1A	0.100117051	0.100117051	0.004454178	0.045942636	0.003842656	-15.91402879	1056.424226	-5.642422573
0.2A	0.200033879	0.200033879	0.00904462	0.046365969	0.00851778	-6.185184399	1039.467883	-3.946788269
0.3A	0.300334946	0.300334946	0.013695177	0.046483002	0.013203485	-3.723952796	1030.709057	-3.070905746
0.4A	0.400054068	0.400054068	0.018330421	0.046529813	0.017857456	-2.648553522	1025.756125	-2.575612455
0.5A	0.500124809	0.500124809	0.022986694	0.046570852	0.022534254	-2.007787343	1022.585785	-2.258578525
0.6A	0.600482402	0.600482402	0.027660432	0.046636436	0.027247374	-1.515954651	1020.326537	-2.032653691
0.7A	0.700191488	0.700191488	0.032310509	0.046706448	0.031946473	-1.139518042	1018.52312	-1.85231203
0.8A	0.800567988	0.800567988	0.036998738	0.046696662	0.036626868	-1.015294962	1016.972393	-1.697239325
0.9A	0.900734729	0.900734729	0.041676191	0.046663287	0.041274258	-0.973809479	1015.796587	-1.579658678
1A	1.00007768	1.00007768	0.046311859	0.046824039	0.046070692	-0.523472352	1014.937678	-1.493767839
2A	2.0033435	2.0033435	0.093147917	0.046910256	0.093079211	-0.073814843	1009.316337	-0.931633661
3A	2.99956574	2.99956574	0.140022117	0.046910854	0.139955206	-0.047808942	1006.838011	-0.683801103
4A	4.00637444	0.040063744	0.187252373	0.046927922	0.187253843	0.000785219	1005.59259	-0.559258963
5A	5.00304501	0.05003045	0.234024052	0.04599768	0.229371479	-2.028400735	1004.781831	-0.478183101
7A	7.00405936	0.035020297	0.32606607	0.046731075	0.326550235	0.148266772	1009.583088	-0.958308824
9A	9.00986682	0.045049334	0.419799608	0.047523796	0.427426086	1.784280059	1008.72829	-0.872828957
11A	11.0049305	0.022009861	0.514612607	0.046709206	0.513274579	-0.260684694	1005.089511	-0.508951095
13A	13.00948475	0.02601897	0.608243744	0.04679503	0.608022245	-0.036429367	1005.264401	-0.526440145
15A	15.0285778	0.030057156	0.702727264	0.046842892	0.703225066	0.070788372	1005.145513	-0.514551347
18A	18.0102828	0.036020566	0.84239895	0.04677686	0.841707488	-0.082149976	1004.848465	-0.484846473
21A	20.996608	0.041993216	0.982089865	0.046883714	0.98364198	0.157792649	1004.837349	-0.483734857
24A	23.99790105	0.047995802	1.12280163	0.04864511	1.16662354	3.756302579	1004.541959	-0.454195934
27A	27.0347646	0.027034765	1.27053019	0.047210779	1.275575303	0.395516703	1000.081656	-0.008165583
30A	30.0781355	0.030078136	1.4142101	0.046960567	1.411729307	-0.175727219	999.6197655	0.038023452
35A	35.1608661	0.035160866	1.65289801	0.046803825	1.644906029	-0.485862459	999.7959322	0.020406782
40A	39.9966303	0.03999663	1.87923027	0.047042716	1.880793137	0.08309619	1000.325322	-0.032532155
45A	45.0479562	0.045047956	2.11685836	0.047104034	2.121183478	0.203901158	1000.186872	-0.018687193
50A	50.0926702	0.05009267	2.35448474	0.046895496	2.34836362	-0.260654696	999.9451088	0.005489125
60A	60.1058214	0.030052911	2.82405643	0.047284661	2.841326404	0.607813815	1000.324772	-0.032477248
70A	70.035948	0.035017974	3.2935991	0.04708664	3.297000511	0.103166841	999.4202257	0.057977427
80A	79.956855	0.039978428	3.76074128	0.047178135	3.771458312	0.284161492	999.2636837	0.073631627
90A	90.0071904	0.045003595	4.23489736	0.0471721	4.245071188	0.239662129	998.9233715	0.10766285
100A	99.9853362	0.049992668	4.70558745	0.047334278	4.731976723	0.557679685	998.6661286	0.133387142
120A	119.2055668	0.029801392	5.61536319	0.047106552	5.614606205	-0.01348242	997.7380714	0.226192856

CURRENT TRANSFORMER CHARACTERISTICS TEST

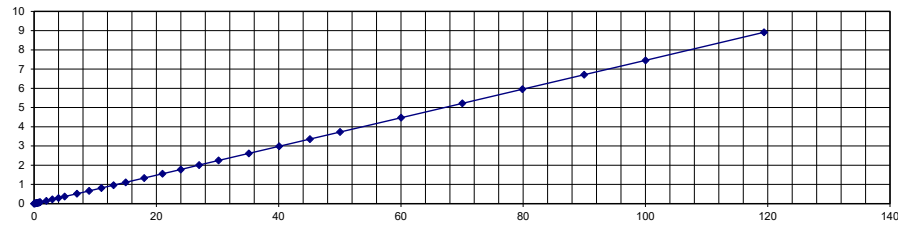
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	75
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000722099	0.000722099	3.71048E-05	0.069907554	-0.000671619	105.5246902	1459.57768	-45.957768
0.1A	0.099697606	0.099697606	0.00695624	0.072411397	0.006497144	-7.066125017	1074.908281	-7.490828128
0.2A	0.200661436	0.200661436	0.014267172	0.073431276	0.014012726	-1.815820704	1054.841652	-5.484165173
0.3A	0.301004127	0.301004127	0.021635464	0.073453875	0.021387821	-1.157871011	1043.440035	-4.344003513
0.4A	0.40002061	0.40002061	0.028908609	0.073592842	0.028716555	-0.668791698	1037.806633	-3.78066328
0.5A	0.500550458	0.500550458	0.036306886	0.073632478	0.036134672	-0.476588963	1033.99902	-3.99902037
0.6A	0.599879285	0.599879285	0.043620714	0.073737377	0.043511426	-0.251168908	1031.412436	-3.141243609
0.7A	0.700380858	0.700380858	0.051031436	0.073775656	0.050948959	-0.161882232	1029.337377	-2.933737653
0.8A	0.799532563	0.799532563	0.058346418	0.073869361	0.058338861	-0.012954399	1027.739907	-2.773990727
0.9A	0.900082874	0.900082874	0.065774005	0.073831966	0.065732789	-0.06270242	1026.335789	-2.633578942
1A	1.00000195	1.00000195	0.073151227	0.073977294	0.073255339	0.14212209	1025.275301	-2.527530058
2A	2.00041	2.00041	0.147158707	0.073991459	0.147291155	0.089922666	1019.516637	-1.951663655
3A	2.99526541	2.99526541	0.22076951	0.076007015	0.226939084	2.718603609	1017.554035	-1.75540352
4A	3.99953695	0.03999537	0.297101192	0.074578464	0.297557222	0.153257825	1009.64008	-0.964007997
5A	5.00929535	0.050092954	0.372407422	0.071887672	0.359384481	-3.623679305	1008.833683	-0.883368337
7A	7.00441242	0.035022062	0.515831743	0.073707343	0.515554529	-0.05377005	1018.415285	-1.841528488
9A	9.00128572	0.045006429	0.663015968	0.075506527	0.678933723	2.344522661	1018.220468	-1.822046766
11A	11.0171256	0.022034251	0.815225036	0.074361818	0.818531387	0.403937018	1013.56605	-1.356605049
13A	13.002922	0.026005844	0.962892466	0.073785701	0.958707611	-0.436510034	1012.801724	-1.280172442
15A	15.0001177	0.030000235	1.11025695	0.073983016	1.10903185	-0.110465745	1013.286904	-1.328690399
18A	18.00670275	0.036013406	1.33269318	0.074150034	1.334475523	0.133561307	1013.363561	-1.336356073
21A	21.00036085	0.042000722	1.55467303	0.074127732	1.555987026	0.084447746	1013.092164	-1.309216366
24A	24.0029378	0.048005876	1.77724725	0.077338604	1.855631599	4.224133139	1012.926218	-1.292621778
27A	26.998815	0.026998815	2.00894421	0.07490851	2.021718918	0.631873575	1007.947914	-0.79479136
30A	30.1696427	0.030169643	2.24646619	0.074342225	2.242156281	-0.19221632	1007.236705	-0.723670473
35A	35.1311451	0.035131145	2.61531532	0.074346126	2.611142436	-0.159810664	1007.463942	-0.746394224
40A	40.0872211	0.040087221	2.98378037	0.074720325	2.99460808	0.361573535	1007.628314	-0.762831364
45A	45.1341819	0.045134182	3.36089092	0.074242983	3.350174198	-0.319885522	1007.192356	-0.719235556
50A	50.0539488	0.050053949	3.72614909	0.074446854	3.725636901	-0.013747694	1007.486837	-0.748683677
60A	60.042408	0.030021204	4.46975845	0.074614852	4.47933326	0.213755253	1007.477395	-0.747739512
70A	70.0675162	0.035033758	5.21778041	0.074787499	5.239452199	0.413627003	1007.145434	-0.71454339
80A	79.8712584	0.039935629	5.95097777	0.074749199	5.969590529	0.3117929	1006.61515	-0.66151499
90A	89.9852134	0.044992607	6.70698781	0.074550493	6.707719889	0.01091398	1006.247692	-0.624769214
100A	100.0164504	0.050008225	7.45482147	0.075331403	7.533657431	1.046450041	1006.225811	-0.622581107
120A	119.3987744	0.029849694	8.91491913	0.074665081	8.914197031	-0.008100548	1004.485621	-0.448562117

CURRENT TRANSFORMER CHARACTERISTICS TEST

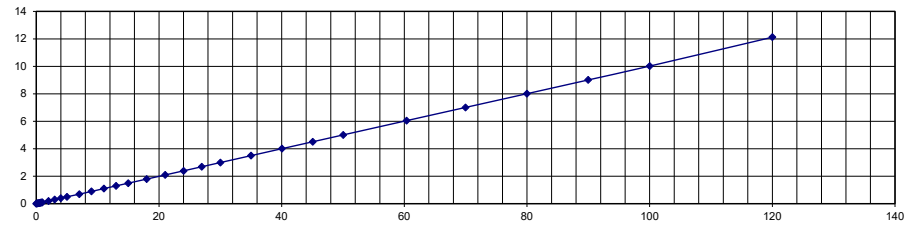
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	100
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000712557	0.000712557	4.03611E-05	0.092397205	-0.000646718	106.2409086	1765.453775	-76.54537748
0.1A	0.100395254	0.100395254	0.009250764	0.097252054	0.009051088	-2.206096642	1085.264493	-8.526449317
0.2A	0.200158263	0.200158263	0.018952921	0.098300608	0.018963122	0.053793208	1056.081328	-5.608132821
0.3A	0.300067747	0.300067747	0.028774084	0.098411896	0.028817679	0.151278039	1042.8403	-4.284029987
0.4A	0.399984365	0.399984365	0.038607068	0.098687343	0.038760838	0.396713628	1036.039214	-3.603921428
0.5A	0.501427647	0.501427647	0.048618236	0.098691973	0.048774327	0.320026808	1031.357135	-3.135713515
0.6A	0.600356638	0.600356638	0.058381733	0.098766147	0.058582355	0.342460676	1028.329587	-2.832958708
0.7A	0.700495593	0.700495593	0.068272072	0.099022929	0.0686652568	0.554234621	1026.035349	-2.603534865
0.8A	0.799776778	0.799776778	0.078103186	0.098988416	0.078456079	0.449797528	1024.000199	-2.400019898
0.9A	0.90014121	0.90014121	0.088038102	0.098810643	0.088230975	0.218600711	1022.445044	-2.244504433
1A	1.00010787	1.00010787	0.097915872	0.099108684	0.098406818	0.49889403	1021.395051	-2.139505128
2A	2.00054365	2.00054365	0.197067745	0.099375624	0.198092717	0.517420199	1015.155296	-1.515529596
3A	3.00050033	3.00050033	0.296439064	0.102741125	0.307562222	3.616555475	1012.181151	-1.2181151
4A	4.00271625	0.040027163	0.399407855	0.100072937	0.399851015	0.110831279	1002.162626	-0.216262647
5A	5.00213831	0.050021383	0.499422956	0.096087414	0.479929977	-4.061629765	1001.583578	-0.158357759
7A	7.00377168	0.035018858	0.69175473	0.099069279	0.693146056	0.200726215	1012.464588	-1.246458842
9A	9.00376476	0.045018824	0.889892603	0.102299764	0.920370455	3.31147652	1011.781054	-1.178105421
11A	11.02313185	0.022046264	1.09647338	0.099766117	1.099022503	0.231944574	1005.325989	-0.532598885
13A	12.99864795	0.025997296	1.29356295	0.099294532	1.289982103	-0.277588922	1004.871696	-0.487169565
15A	14.9854626	0.029970925	1.49084278	0.099238518	1.486422538	-0.297374504	1005.167198	-0.516719811
18A	18.00232185	0.036004644	1.79023142	0.099594151	1.792213402	0.11058848	1005.586297	-0.558629733
21A	21.00654165	0.042013083	2.08943414	0.100099706	2.102036089	0.599511562	1005.369887	-0.536988689
24A	24.01488205	0.048029764	2.39056813	0.100517452	2.413202205	0.937926992	1004.567983	-0.456798318
27A	26.9967896	0.02699679	2.69030188	0.10061999	2.715704153	0.93538441	1003.485512	-0.348551219
30A	30.0145622	0.030014562	2.99395013	0.100552671	3.017331834	0.774913231	1002.507086	-0.250708585
35A	35.0043686	0.035004369	3.49568849	0.100743129	3.525737075	0.852263928	1001.35835	-0.135835044
40A	40.0620214	0.040062021	4.00521226	0.100213644	4.014048609	0.220135575	1000.247148	-0.024714795
45A	45.0764758	0.045076476	4.50772901	0.100482947	4.528704562	0.463168925	999.9819355	0.001806453
50A	50.0358421	0.050035842	5.00606075	0.100537501	5.029765966	0.471298597	999.5052917	0.049470834
60A	60.389405	0.030194703	6.04698209	0.100104249	6.044523498	-0.040674696	998.6701482	0.13298518
70A	69.9751738	0.034987587	7.00655828	0.099877777	6.988252268	-0.261954076	998.7096518	0.129034822
80A	80.0042434	0.040002122	8.00823946	0.100294992	8.023312416	0.187864497	999.0241151	0.09758849
90A	89.9798612	0.044989931	9.00874397	0.100579167	9.049386911	0.449123699	998.8058435	0.119415648
100A	100.0174014	0.050008701	10.0183114	0.105161963	10.51731369	4.744579306	998.3459029	0.165409712
120A	120.0198276	0.030004957	12.1218058	0.10099836	12.12109324	-0.005878651	990.1150833	0.988491665

CURRENT TRANSFORMER CHARACTERISTICS TEST

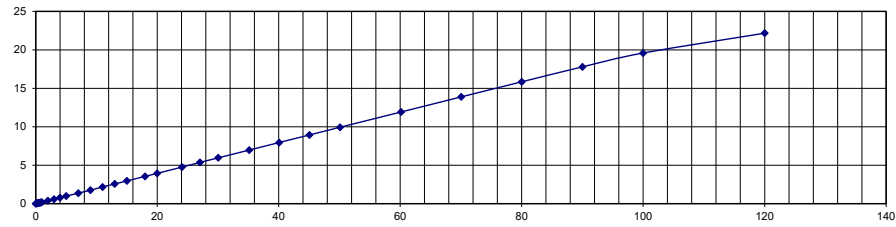
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	200
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000703925	0.000703925	6.72815E-05	0.173906597	-0.000581507	111.5701892	2092.475493	-109.2475493
0.1A	0.100513695	0.100513695	0.017424859	0.19234758	0.018629641	6.467018823	1153.681588	-15.36815879
0.2A	0.200841677	0.200841677	0.036722704	0.192958447	0.038050174	3.488735965	1093.828383	-9.382838331
0.3A	0.298215199	0.298215199	0.055511747	0.192557529	0.056719657	2.129614543	1074.421954	-7.44219542
0.4A	0.399772767	0.399772767	0.075067421	0.195218827	0.077339246	2.937479889	1065.103235	-6.510323532
0.5A	0.501967087	0.501967087	0.095017677	0.191493377	0.095419448	0.421058219	1056.576217	-5.657621704
0.6A	0.604467939	0.604467939	0.114645911	0.194317699	0.116754895	1.806334184	1054.495418	-5.449541763
0.7A	0.702963357	0.702963357	0.133785314	0.197096975	0.137848027	2.947240447	1050.882696	-5.088269654
0.8A	0.801041747	0.801041747	0.153116268	0.192580659	0.153561223	0.289757579	1046.318275	-4.631827495
0.9A	0.897216358	0.897216358	0.171637638	0.192113324	0.171663217	0.014900563	1045.4774	-4.547740048
1A	1.00265083	1.00265083	0.191892996	0.195044056	0.19485716	1.521198329	1045.010345	-4.501034524
2A	1.99777623	1.99777623	0.38598629	0.196632697	0.392124203	1.565298098	1035.153984	-3.515398436
3A	3.00725965	3.00725965	0.584483737	0.20311296	0.610109483	4.200188136	1029.031078	-2.903107807
4A	3.99663839	0.039966384	0.785439381	0.1976407	0.789194484	0.475814662	1017.682201	-1.768220099
5A	4.99598837	0.049959884	0.983663117	0.190585746	0.952146354	-3.310075506	1016.524516	-1.652451609
7A	7.010176	0.03505088	1.36685246	0.19567135	1.370986678	0.301550565	1025.739969	-2.573996904
9A	9.01229312	0.045061466	1.75860942	0.205347722	1.849949937	4.937458831	1024.934021	-2.493402088
11A	11.00676745	0.022013535	2.16817018	0.197188808	2.169707427	0.070850434	1015.304753	-1.530475343
13A	13.01166775	0.026023336	2.56351408	0.196683434	2.558475566	-0.196934242	1015.143069	-1.514306877
15A	14.99912985	0.02999826	2.95441495	0.197711729	2.964799972	0.350277321	1015.370563	-1.537056262
18A	17.99894065	0.035997881	3.54751273	0.197301041	3.550505803	0.084299915	1014.735789	-1.473578926
21A	19.999575	0.03999915	3.94223997	0.199024259	3.979696671	0.941194872	1014.630015	-1.463001503
24A	24.08484985	0.0481697	4.75530877	0.205307292	4.944091369	3.818347694	1012.966813	-1.296681309
27A	27.0394604	0.02703946	5.36191186	0.198258234	5.360091747	-0.033956747	1008.575341	-0.857534051
30A	30.0620883	0.030062088	5.96117273	0.198119983	5.955196486	-0.100353434	1008.596451	-0.859645112
35A	35.1574879	0.035157488	6.97067321	0.19882446	6.98946461	0.268853209	1008.725753	-0.872575262
40A	40.0642527	0.040064253	7.94625807	0.198295695	7.943864914	-0.030125841	1008.380356	-0.838035581
45A	45.0505143	0.045050514	8.93501228	0.198378701	8.93635856	0.015065193	1008.404082	-0.840408246
50A	50.0966147	0.050096615	9.93605112	0.197627768	9.899778229	-0.36640105	1008.380776	-0.838077612
60A	60.1526468	0.030076323	11.9234023	0.198156157	11.91891341	-0.037661939	1008.984605	-0.898460501
70A	70.049553	0.035024777	13.8845352	0.196827254	13.78695723	-0.707755687	1009.029859	-0.902985935
80A	80.0070846	0.040003542	15.8444488	0.194589945	15.56787028	-1.776589312	1009.906821	-0.990682112
90A	90.0171162	0.045008558	17.7923003	0.180032859	16.20533484	-9.79285821	1011.865972	-1.186597216
100A	99.9914604	0.04999573	19.58801	0.128927851	12.8909802	-51.95128448	1020.945572	-2.094557232
120A	120.0169008	0.030004225	22.169847	0.184722709	22.16914308	-0.003175245	1082.703916	-8.270391582

CURRENT TRANSFORMER CHARACTERISTICS TEST

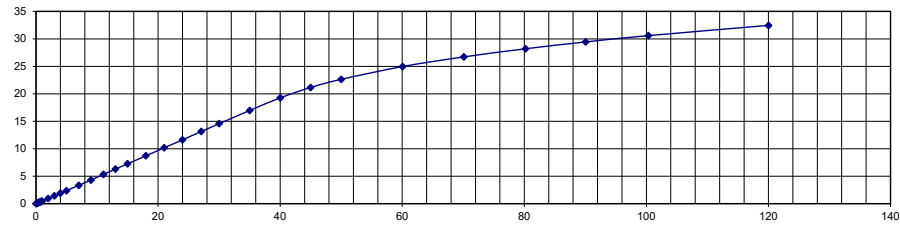
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	500
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR	Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000695151	0.000695151	7.30091E-05	0.402537365	-0.000415327	117.5787129	4760.714978	-376.0714978
0.1A	0.10150781	0.10150781	0.040653871	0.452072832	0.045193772	10.04541308	1248.439654	-24.84396535
0.2A	0.205146037	0.205146037	0.087505898	0.457510127	0.093161239	6.070486672	1172.184055	-17.21840553
0.3A	0.30199301	0.30199301	0.131814369	0.457022709	0.137322513	4.011100362	1145.523862	-14.55238617
0.4A	0.402472796	0.402472796	0.177735913	0.45974607	0.184340135	3.582628587	1132.221365	-13.22213649
0.5A	0.499739559	0.499739559	0.222453925	0.461067533	0.229718535	3.162396008	1123.242845	-12.32428446
0.6A	0.602967977	0.602967977	0.270049197	0.460760358	0.27712859	2.554551777	1116.403944	-11.64039436
0.7A	0.70036368	0.70036368	0.314925276	0.462327214	0.323102039	2.530705953	1111.952157	-11.19521572
0.8A	0.800334838	0.800334838	0.361144663	0.463461828	0.370229496	2.453838324	1108.052977	-10.80529771
0.9A	0.900901979	0.900901979	0.407753694	0.463910373	0.417242622	2.274199184	1104.713449	-10.47134487
1A	1.00038066	1.00038066	0.453902886	0.473412061	0.47289712	4.016567832	1101.976536	-10.1976536
2A	2.0028228	2.0028228	0.927268373	0.48116687	0.961774413	3.587747784	1078.588647	-7.858864717
3A	3.00104546	3.00104546	1.40880246	0.48667284	1.459832167	3.49558726	1065.105132	-6.510513191
4A	4.00072171	0.040007217	1.89531774	0.477400974	1.909253291	0.729895358	1055.42243	-5.542243012
5A	4.99978513	0.049997851	2.37227159	0.481671554	2.407559123	1.465697473	1053.79695	-5.379694953
7A	7.0098429	0.035049215	3.34045924	0.482359153	3.380566731	1.186413228	1049.233413	-4.923341319
9A	9.005005	0.045025025	4.30284394	0.505193173	4.548571899	5.402310105	1046.401534	-4.640153414
11A	11.03817715	0.022076354	5.32998863	0.485953397	5.363344536	0.621923616	1035.478489	-3.547848938
13A	13.0028718	0.026005744	6.28473867	0.484433218	6.298327874	0.215758909	1034.479911	-3.4479911
15A	15.01649955	0.030032999	7.26020684	0.484879699	7.280500628	0.278741662	1034.16472	-3.416472016
18A	18.0057492	0.036011498	8.70963331	0.486073995	8.751431291	0.477613085	1033.668615	-3.366861492
21A	21.00679	0.04201358	10.1683612	0.486222358	10.21327582	0.439767016	1032.948653	-3.294865253
24A	24.0117164	0.048023433	11.6294236	0.492199501	11.81785969	1.594502668	1032.369154	-3.23691537
27A	27.0911862	0.027091186	13.1451371	0.484085795	13.11376327	-0.239243564	1030.464193	-3.046419348
30A	30.0049416	0.030004942	14.5556447	0.482128534	14.46554335	-0.622868789	1030.697788	-3.069778833
35A	35.010457	0.035010457	16.9689465	0.456941914	15.99705008	-6.07547276	1031.60373	-3.160372979
40A	40.019407	0.040019407	19.2577457	0.380778382	15.2378299	-26.38115684	1039.047031	-3.904703135
45A	45.0019501	0.04500195	21.1549904	0.295881256	13.31453836	-58.88639794	1063.624924	-6.36249237
50A	50.0141963	0.050014196	22.6380201	0.231534999	11.57934173	-95.50351501	1104.650408	-10.46504085
60A	60.0609016	0.030030451	24.964184	0.174712075	10.49266956	-137.9202342	1202.941414	-20.2941414
70A	70.1102202	0.03505511	26.7199213	0.146187502	10.24854281	-160.719224	1311.946807	-31.19468074
80A	80.2290298	0.040114515	28.1991648	0.126669622	10.16188571	-177.4993303	1422.54266	-42.25426598
90A	90.0717228	0.045035861	29.445935	0.111573755	10.04894521	-193.0251322	1529.442397	-52.94423967
100A	100.3373018	0.050168651	30.5913042	0.094596875	9.490900032	-222.3224783	1639.964435	-63.99644347
120A	120.007792	0.030001948	32.4520711	0.270416367	32.45137595	-0.00214213	1849.00051	-84.90005096

CURRENT TRANSFORMER CHARACTERISTICS TEST

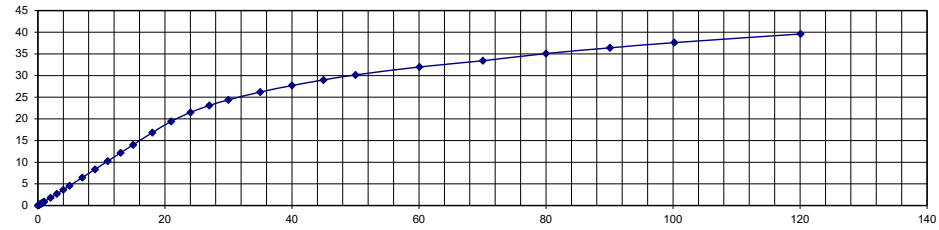
PRIMARY CURRENT VERSUS OUTPUT VOLTAGE

CT PRIMARY CURRENT VERSUS SECONDARY VOLTAGE

PRODUCT:	CR8450-1000
Lot #:	31261
TURNS/RATIO:	1000
DATE:	June 3, 2020
TESTER:	lb

TEST SETUP

FULL SCALE PRIMARY CURRENT(Amps):	100
Burden (Ohms):	1000
MEASUREMENT CT TURNS RATIO:	1000
FREQUENCY(Hz):	60



Input Current R	Primary Current	MEASURED CURRENT	Secondary Voltage	Slope	Normalized Output	% Linear Error Affected by Core and DCR		Equivalent Turns Ratio	% Absolute Error Affected by turns ratio
0A	0.000720282	0.000720282	0.000318018	0.776120226	-0.000161256	297.2126506	2264.90698	-126.490698	
0.1A	0.101086131	0.101086131	0.078213984	0.874623659	0.08769204	10.8083427	1292.430406	-29.24304064	
0.2A	0.200249217	0.200249217	0.164944365	0.886107399	0.176722031	6.664514938	1214.040971	-21.40409707	
0.3A	0.300552572	0.300552572	0.25382391	0.892675784	0.267575721	5.139409199	1184.09874	-18.40987399	
0.4A	0.399935893	0.399935893	0.342540994	0.894884277	0.357176061	4.0974378	1167.556293	-16.75562925	
0.5A	0.500009476	0.500009476	0.43209527	0.897571256	0.448073852	3.566059865	1157.174148	-15.71741482	
0.6A	0.600003263	0.600003263	0.521846819	0.900073554	0.539326787	3.241071797	1149.768938	-14.97689382	
0.7A	0.700725858	0.700725858	0.612504563	0.900714877	0.630433923	2.843971385	1144.033694	-14.40336943	
0.8A	0.801036536	0.801036536	0.702855883	0.904686292	0.723966492	2.915964864	1139.688171	-13.96881713	
0.9A	0.900730013	0.900730013	0.793047205	0.904734606	0.814201332	2.598144474	1135.783604	-13.57836045	
1A	1.00025713	1.00025713	0.883092832	0.90612661	0.905639321	2.489566036	1132.674951	-13.26749508	
2A	1.99915844	1.99915844	1.78822389	0.907866785	1.814249264	1.434498254	1117.957573	-11.7957573	
3A	3.00311787	3.00311787	2.69968531	0.944430416	2.835515579	4.790319953	1112.39552	-11.23955295	
4A	4.00606222	4.00606222	3.64689646	0.926471841	3.71078356	1.721660634	1098.485319	-9.848531866	
5A	5.00559983	0.050055998	4.57293991	0.951771358	4.763466269	3.999741949	1094.613078	-9.461307791	
7A	7.00230774	0.035011539	6.47334931	0.938779869	6.57290526	1.514641491	1081.713253	-8.171325301	
9A	9.00086504	0.045004325	8.34955467	0.95268564	8.574274589	2.620862164	1078.005402	-7.800540217	
11A	11.0188936	0.022037787	10.2721015	0.944422145	10.40576685	1.284531431	1072.701005	-7.270100476	
13A	13.02852045	0.026057041	12.1700376	0.93984529	12.2440733	0.604665581	1070.54069	-7.054069003	
15A	15.00614115	0.030012282	14.0286951	0.932109429	13.98664538	-0.300641942	1069.674766	-6.967476612	
18A	18.0165835	0.036033167	16.8347568	0.870519552	15.68306792	-7.343517749	1070.20159	-7.020159032	
21A	20.9964867	0.041992973	19.4288208	0.681414623	14.30659278	-35.80326983	1080.68765	-8.068765038	
24A	24.03491225	0.048069825	21.4992484	0.535925385	12.88019932	-66.91704734	1117.941977	-11.79419765	
27A	26.9992486	0.026999249	23.0879115	0.43630199	11.77910562	-96.00733918	1169.410607	-16.94106069	
30A	29.9935533	0.029993553	24.3943326	0.360654682	10.81659516	-125.526908	1229.529571	-22.95295711	
35A	35.0076127	0.035007613	26.2026766	0.298839215	10.46092722	-150.4813965	1336.031934	-33.60319342	
40A	40.0160173	0.040016017	27.6993843	0.260501247	10.42350211	-165.7397101	1444.653674	-44.46536741	
45A	44.9608516	0.044960852	28.9875198	0.229827076	10.33250077	-180.546989	1551.041687	-55.10416866	
50A	50.0111643	0.050011164	30.1482184	0.182664706	9.134554364	-230.0458588	1658.843108	-65.88431076	
60A	60.0859934	0.030042997	31.9885341	0.143775148	8.638152306	-270.3168567	1878.360328	-87.83603279	
70A	70.0841956	0.035042098	33.4260271	0.166969764	11.70122131	-185.6627202	2096.69535	-109.669535	
80A	80.0021338	0.040001067	35.0820229	0.130551811	10.4437032	-235.9155485	2280.431035	-128.0431035	
90A	90.0622738	0.045031137	36.3953924	0.119081157	10.72399952	-239.3826374	2474.551526	-147.4551526	
100A	100.2233524	0.050111676	37.6053854	0.100448925	10.06660768	-273.56562	2665.132968	-166.5132968	
120A	120.0943088	0.030023577	39.6014016	0.329752525	39.60068132	-0.001818862	3032.577231	-203.2577231	