

LM-80 Test Report

Model : PC35H11.V0

Signed for and on behalf of Lextar Reliability Test Lab.



Cody Chen
Technical Manager



Applicant:	Lextar Electronics Corp.
Dept:	PIAP3
Date of samples received:	2013/1/20
Date of test started:	2013/2/4
RA No:	1406121
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Report No.:	2015_LM80_001

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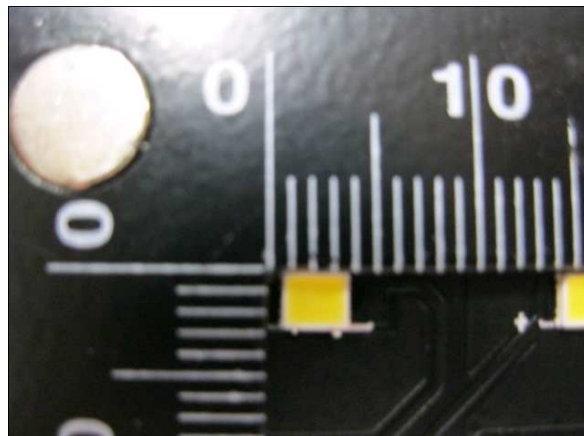
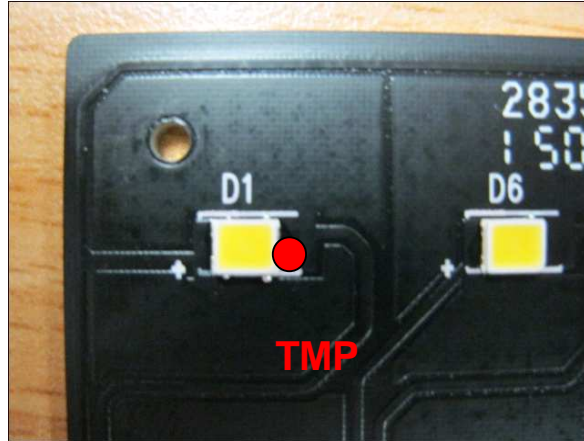
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LM-80 Test Report Contents

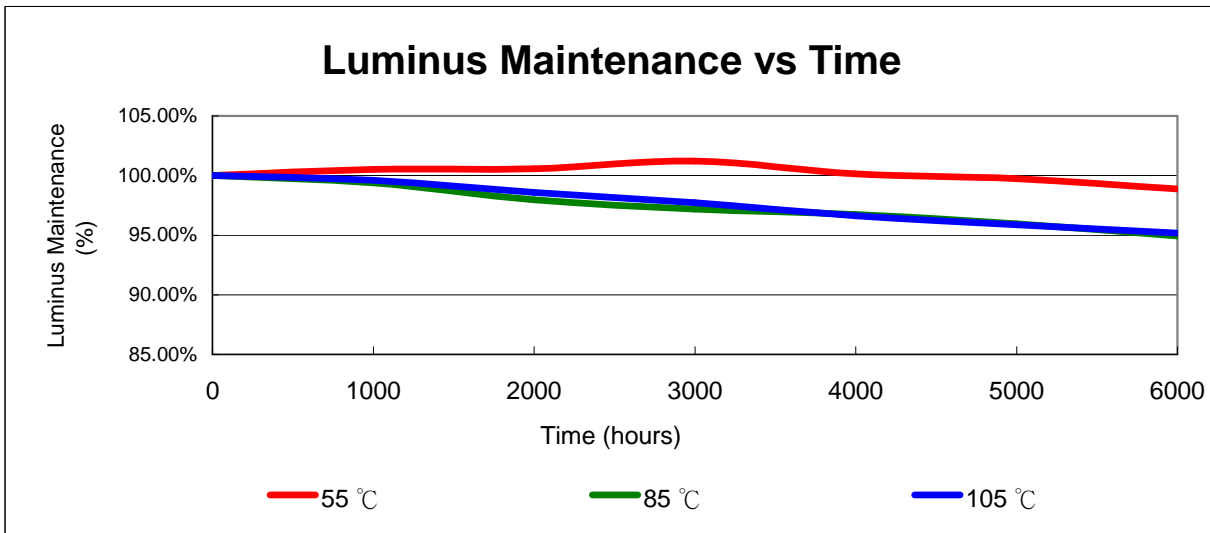
s/n	Contents	Description																								
1	Description of LED Light Sources Tested	Model : Type: LED package																								
2	Number of LED Light Sources Tested and Sampling Method	30 units per test and no sampling action or method employed. (Normally random sampling by applicant)																								
3	Description of auxiliary equipment	The LED light sources are mounted onto active temperature control plate in a thermal chamber which provides water-cooling to each plate. The LED light sources are connected in series strings and driven by a constant current source. The LED light sources are periodically removed from the thermal chamber, allowed to cool to room temperature, and then re-tested.																								
4	Operating Cycle	LED light sources are driven at constant current.																								
5	Ambient Conditions including airflow, temperature, and relative humidity	The thermal chamber has minimal airflow. The case temperature within the thermal chamber was characterized by mounting several thermocouples to the active temperature control plates at the designated thermal measurement point. The active thermal control plates were mounted in the thermal chamber and driven at the specified stress condition. The thermocouple readings were monitored. After the thermocouples reached thermal equilibrium, the thermocouple readings were data-logged. The relative humidity within the oven was also characterized.																								
6	1. Drive current of the LED light source during lifetime test. 2. Case and ambient temperature.	<table border="1"> <thead> <tr> <th>Test Temp.</th> <th>If</th> <th>Ts</th> <th>Ta</th> <th>$\Delta[Ts-Ta]$</th> <th>R.H.</th> </tr> </thead> <tbody> <tr> <td>55 °C</td> <td>120 mA</td> <td>55.7 °C</td> <td>55.4 °C</td> <td>.3 °C</td> <td>< 60%</td> </tr> <tr> <td>85 °C</td> <td>120 mA</td> <td>85.8 °C</td> <td>85.2 °C</td> <td>.6 °C</td> <td>< 60%</td> </tr> <tr> <td>105 °C</td> <td>120 mA</td> <td>105.7 °C</td> <td>105.3 °C</td> <td>.4 °C</td> <td>< 60%</td> </tr> </tbody> </table>	Test Temp.	If	Ts	Ta	$\Delta[Ts-Ta]$	R.H.	55 °C	120 mA	55.7 °C	55.4 °C	.3 °C	< 60%	85 °C	120 mA	85.8 °C	85.2 °C	.6 °C	< 60%	105 °C	120 mA	105.7 °C	105.3 °C	.4 °C	< 60%
Test Temp.	If	Ts	Ta	$\Delta[Ts-Ta]$	R.H.																					
55 °C	120 mA	55.7 °C	55.4 °C	.3 °C	< 60%																					
85 °C	120 mA	85.8 °C	85.2 °C	.6 °C	< 60%																					
105 °C	120 mA	105.7 °C	105.3 °C	.4 °C	< 60%																					
7	Summary Of LM-80 Test	Data Summary of Lumen and Color Maintenance																								
8	Contents Of Test	Test Data of each testing temperature																								
9	Observation of LED light source failures including the failure conditions and time of failure	None																								
10	LED light source monitoring interval	Units were tested at 0, 500, 1000 hours, then at 1000-hour intervals.																								
11	Photometric measurement uncertainty	3.7%																								
12	Version of IES LM-80 followed	2008																								

Photograph , TMD_{LED} and Dimension

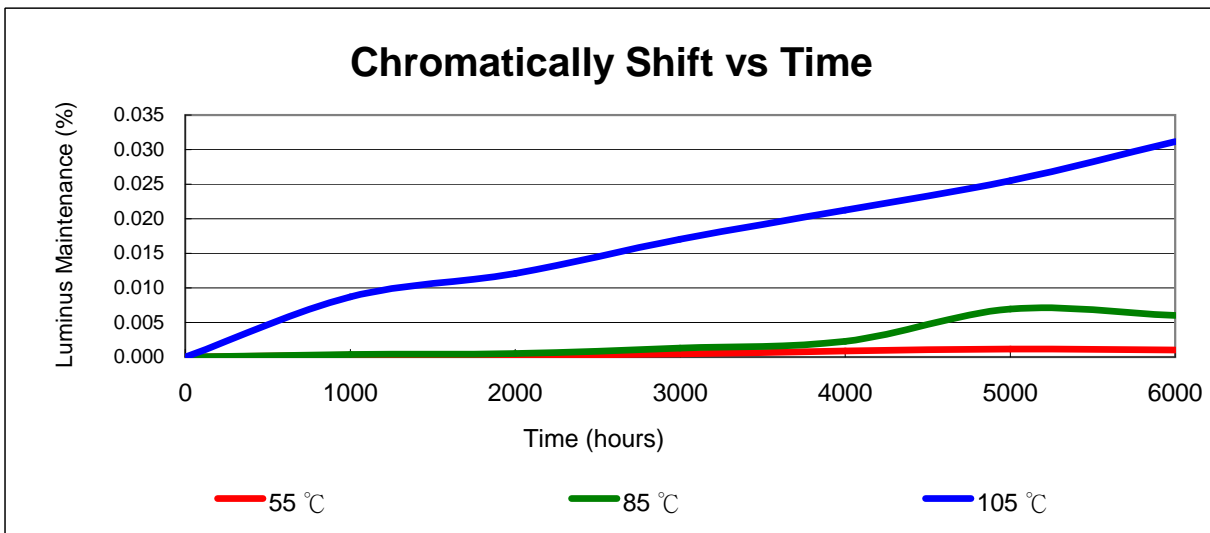


SUMMARY OF LM-80 TEST

Temp(°C)	Luminus Maintenance (%)						
	0	1000	2000	3000	4000	5000	6000
55 °C	100.00%	100.52%	100.57%	101.23%	100.13%	99.75%	98.88%
85 °C	100.00%	99.39%	97.97%	97.20%	96.72%	95.96%	94.92%
105 °C	100.00%	99.61%	98.59%	97.73%	96.64%	95.86%	95.18%



Temp(°C)	Chromatically Shift($\Delta u'v'$)						
	0	1000	2000	3000	4000	5000	6000
55 °C	0.0000	0.0003	0.0003	0.0004	0.0009	0.0012	0.0010
85 °C	0.0000	0.0004	0.0005	0.0013	0.0023	0.0069	0.0060
105 °C	0.0000	0.0087	0.0121	0.0170	0.0213	0.0255	0.0312



Initial Values

55 °C

Sample	VF	Φ	u'	v'	CCT
1	3.22	59.6	0.2528	0.5251	2927
2	3.21	59.6	0.2535	0.5242	2917
3	3.24	57.6	0.2537	0.5263	2900
4	3.23	55.5	0.2515	0.5251	2959
5	3.21	55.4	0.253	0.526	2919
6	3.22	58.5	0.252	0.5241	2953
7	3.23	59.6	0.2518	0.5241	2958
8	3.22	58.6	0.2516	0.5253	2955
9	3.21	58.6	0.2518	0.5239	2958
10	3.20	58.1	0.2518	0.5249	2953
11	3.22	58.8	0.2535	0.5252	2911
12	3.22	59.2	0.2522	0.5253	2941
13	3.22	58.8	0.252	0.5242	2953
14	3.21	59.5	0.2533	0.5246	2918
15	3.21	57.3	0.2512	0.5238	2975
16	3.23	59.5	0.2528	0.5257	2924
17	3.21	59.8	0.2529	0.5252	2924
18	3.21	59.4	0.252	0.5246	2950
19	3.26	59.9	0.2525	0.5252	2935
20	3.23	56.7	0.2524	0.525	2937
21	3.22	59.9	0.2533	0.5258	2913
22	3.24	58.9	0.2527	0.5246	2932
23	3.23	58.9	0.2536	0.5251	2908
24	3.22	59.3	0.253	0.5243	2927
25	3.24	58.1	0.2527	0.5251	2931
Quantity	25	25	25	25	25
Median	3.22	58.87	0.25	0.53	2932
Average	3.22	58.60	0.25	0.52	2935
Max	3.26	59.91	0.25	0.53	2975
Min	3.20	55.37	0.25	0.52	2900
Std Dev	0.01	1.26	0.00	0.00	19

Initial Values**85 °C**

Sample	VF	Φ	u'	v'	CCT
1	3.21	58.6	0.2535	0.5249	2911
2	3.21	59.1	0.2533	0.5265	2908
3	3.28	58.3	0.2518	0.5243	2957
4	3.25	56.6	0.2542	0.5259	2890
5	3.22	56.5	0.2533	0.5264	2908
6	3.22	58.2	0.2513	0.5247	2967
7	3.22	59.3	0.2521	0.5239	2951
8	3.21	58.5	0.2522	0.5247	2944
9	3.21	58.3	0.2519	0.5249	2951
10	3.22	57.8	0.2530	0.5259	2918
11	3.23	58.7	0.2523	0.5225	2955
12	3.23	59.2	0.2520	0.5241	2953
13	3.22	58.4	0.2520	0.5245	2951
14	3.22	58.8	0.2526	0.5240	2938
15	3.22	56.9	0.2528	0.5251	2927
16	3.24	59.7	0.2536	0.5256	2905
17	3.21	59.9	0.2526	0.5244	2936
18	3.24	58.5	0.2527	0.5267	2921
19	3.24	59.1	0.2528	0.5264	2919
20	3.21	58.0	0.2520	0.5242	2953
21	3.21	59.3	0.2541	0.5262	2890
22	3.25	59.3	0.2529	0.5258	2922
23	3.23	59.2	0.2518	0.5242	2958
24	3.21	58.5	0.2516	0.5241	2962
25	3.21	57.1	0.2523	0.5247	2942
Quantity	25	25	25	25	25
Median	3.22	58.55	0.25	0.52	2938
Average	3.22	58.48	0.25	0.52	2933
Max	3.28	59.87	0.25	0.53	2967
Min	3.21	56.45	0.25	0.52	2890
Std Dev	0.02	0.92	0.00	0.00	23

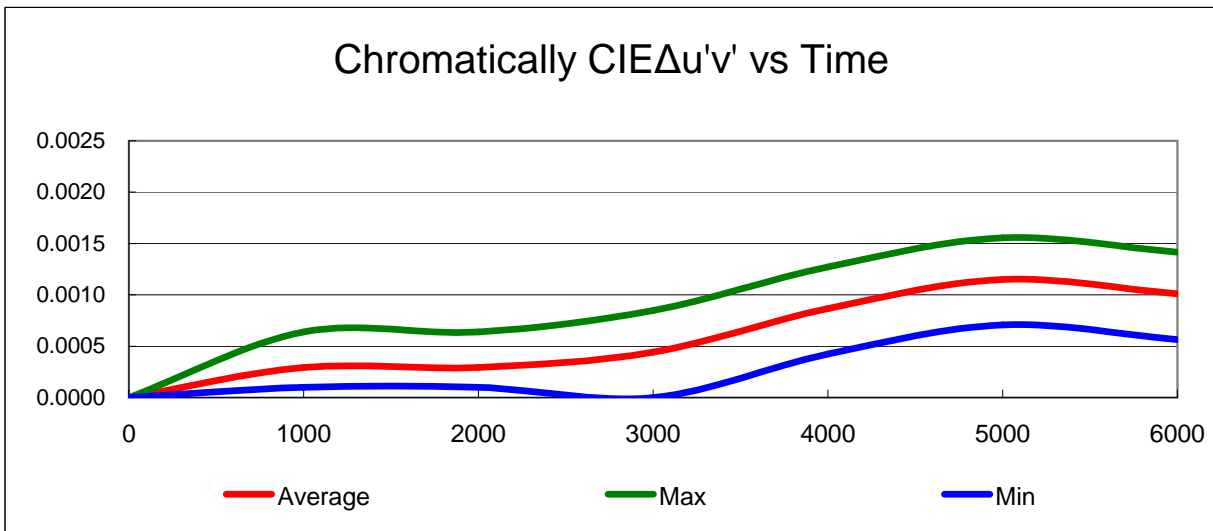
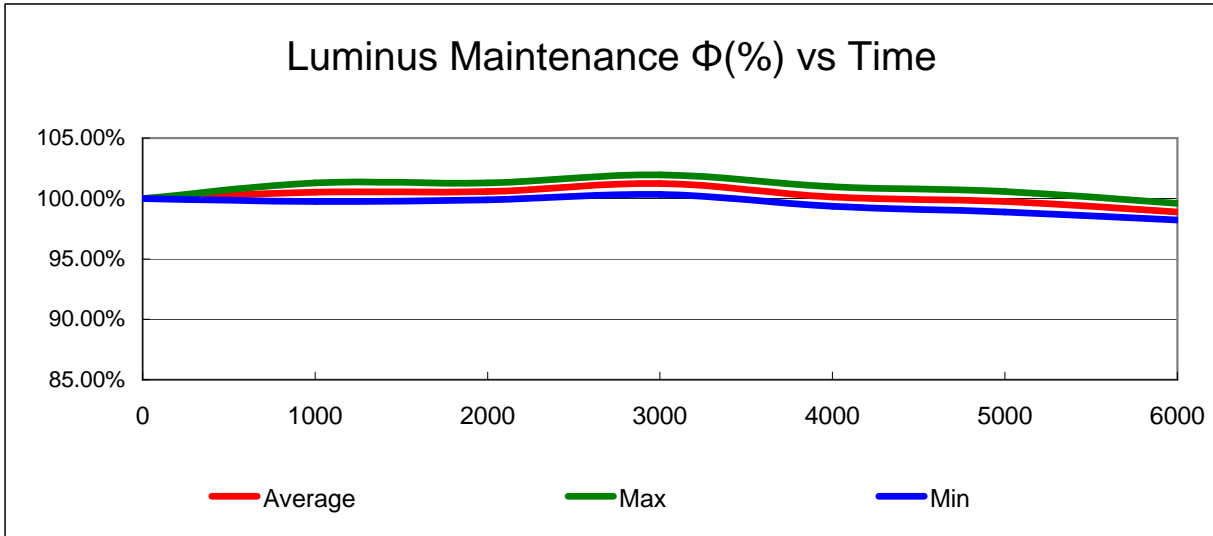
Initial Values

105 °C

Sample	VF	Φ	u'	v'	CCT
1	3.22	58.7	0.2526	0.5257	2928
2	3.21	59.8	0.2526	0.5261	2926
3	3.31	58.2	0.2524	0.5241	2943
4	3.25	55.9	0.2530	0.5252	2921
5	3.24	55.0	0.2519	0.5252	2948
6	3.22	59.2	0.2535	0.5247	2913
7	3.23	59.0	0.2525	0.5252	2935
8	3.21	59.0	0.2514	0.5253	2960
9	3.22	58.3	0.2529	0.5249	2927
10	3.27	57.3	0.2521	0.5256	2941
11	3.27	60.1	0.2538	0.5262	2897
12	3.25	58.8	0.2512	0.5241	2973
13	3.24	58.5	0.2527	0.5239	2936
14	3.23	60.2	0.2524	0.5247	2939
15	3.24	57.8	0.2530	0.5261	2917
16	3.24	57.9	0.2525	0.5266	2926
17	3.23	58.1	0.2533	0.5258	2912
18	3.22	59.3	0.2524	0.5247	2939
19	3.25	59.1	0.2524	0.5246	2939
20	3.23	57.0	0.2541	0.5260	2892
21	3.22	60.0	0.2529	0.5252	2926
22	3.22	58.9	0.2534	0.5258	2908
23	3.22	58.5	0.2536	0.5260	2904
24	3.20	58.5	0.2525	0.5251	2936
25	3.21	56.5	0.2536	0.5260	2903
Quantity	25	25	25	25	25
Median	3.23	58.53	0.25	0.53	2927
Average	3.23	58.39	0.25	0.53	2928
Max	3.31	60.17	0.25	0.53	2973
Min	3.20	55.04	0.25	0.52	2892
Std Dev	0.02	1.28	0.00	0.00	19

Contents Of Test 55 °C Test Data

Model name	PC35H11.V0
CCT	3000 K
Case Temperature [Ts]	55.7 °C
Ambient Temperature [TA]	55.4 °C
Drive Current [IF]	120 mA
Failures observed	0



Φ (%)	0	1000	2000	3000	4000	5000	6000
1	100.00%	99.85%	100.57%	100.64%	99.63%	99.58%	98.88%
2	100.00%	100.69%	101.24%	101.90%	100.97%	99.75%	99.55%
3	100.00%	100.00%	100.05%	101.05%	99.95%	98.88%	98.36%
4	100.00%	100.71%	101.29%	101.95%	100.67%	99.93%	99.60%
5	100.00%	100.89%	100.75%	101.59%	99.77%	99.57%	99.06%
6	100.00%	101.30%	100.57%	101.40%	100.81%	99.92%	98.88%
7	100.00%	101.20%	101.08%	101.57%	100.30%	100.59%	99.38%
8	100.00%	101.04%	100.31%	101.57%	100.30%	100.35%	98.62%
9	100.00%	100.52%	101.08%	101.06%	99.96%	100.09%	99.39%
10	100.00%	101.04%	100.91%	101.92%	99.79%	100.27%	99.22%
11	100.00%	100.35%	100.57%	101.05%	99.62%	99.24%	98.88%
12	100.00%	99.76%	100.48%	100.97%	99.54%	99.67%	98.80%
13	100.00%	100.35%	100.23%	100.71%	99.79%	99.75%	98.54%
14	100.00%	99.77%	100.06%	101.22%	100.13%	99.08%	98.38%
15	100.00%	101.05%	100.92%	101.05%	100.74%	99.92%	99.23%
16	100.00%	100.35%	99.90%	100.88%	99.96%	98.99%	98.21%
17	100.00%	100.69%	100.90%	100.72%	100.30%	99.92%	99.22%
18	100.00%	101.20%	101.08%	101.06%	100.30%	100.25%	99.38%
19	100.00%	100.36%	100.74%	101.06%	100.46%	100.08%	99.05%
20	100.00%	100.79%	100.66%	101.49%	100.75%	100.54%	98.96%
21	100.00%	100.36%	100.57%	100.72%	99.46%	99.25%	98.88%
22	100.00%	100.01%	100.06%	101.39%	99.96%	99.41%	98.37%
23	100.00%	100.69%	100.23%	101.31%	99.36%	99.58%	98.54%
24	100.00%	100.35%	99.89%	101.05%	100.13%	99.08%	98.21%
25	100.00%	100.87%	100.23%	101.74%	100.47%	100.44%	98.53%
26	100.00%	100.35%	100.57%	101.23%	100.64%	100.09%	98.88%
27	100.00%	100.69%	100.23%	101.39%	100.30%	99.75%	98.55%
28	100.00%	100.53%	100.74%	101.74%	100.30%	99.75%	99.05%
29	100.00%	99.99%	100.39%	100.34%	99.42%	99.58%	98.71%
30	100.00%	99.97%	100.84%	101.04%	100.13%	99.20%	99.16%
Quantity	30.00	30.0	30	30	30	30	30
Median	100.00%	100.53%	100.57%	101.14%	100.13%	99.75%	98.88%
Average	100.00%	100.52%	100.57%	101.23%	100.13%	99.75%	98.88%
Max	100.00%	101.30%	101.29%	101.95%	100.97%	100.59%	99.60%
Min	100.00%	99.76%	99.89%	100.34%	99.36%	98.88%	98.21%
Std Dev	0.00%	0.44%	0.40%	0.41%	0.45%	0.47%	0.39%

Δu'v' Data

55 °C

Δu'v'	0	1000	2000	3000	4000	5000	6000
1	0.0000	0.0002	0.0004	0.0001	0.0006	0.0011	0.0011
2	0.0000	0.0001	0.0005	0.0007	0.0013	0.0008	0.0013
3	0.0000	0.0001	0.0001	0.0006	0.0010	0.0007	0.0008
4	0.0000	0.0001	0.0005	0.0007	0.0010	0.0010	0.0013
5	0.0000	0.0005	0.0004	0.0007	0.0006	0.0010	0.0011
6	0.0000	0.0006	0.0001	0.0003	0.0011	0.0010	0.0007
7	0.0000	0.0004	0.0002	0.0003	0.0006	0.0014	0.0010
8	0.0000	0.0005	0.0002	0.0006	0.0008	0.0015	0.0006
9	0.0000	0.0001	0.0005	0.0001	0.0006	0.0013	0.0013
10	0.0000	0.0005	0.0004	0.0008	0.0004	0.0014	0.0011
11	0.0000	0.0004	0.0005	0.0006	0.0007	0.0010	0.0013
12	0.0000	0.0001	0.0005	0.0006	0.0007	0.0014	0.0013
13	0.0000	0.0002	0.0001	0.0001	0.0007	0.0013	0.0008
14	0.0000	0.0002	0.0001	0.0007	0.0011	0.0008	0.0008
15	0.0000	0.0005	0.0004	0.0001	0.0012	0.0011	0.0011
16	0.0000	0.0004	0.0001	0.0004	0.0010	0.0008	0.0007
17	0.0000	0.0005	0.0006	0.0001	0.0011	0.0014	0.0014
18	0.0000	0.0005	0.0004	0.0000	0.0007	0.0013	0.0011
19	0.0000	0.0001	0.0004	0.0003	0.0011	0.0014	0.0011
20	0.0000	0.0001	0.0001	0.0003	0.0010	0.0014	0.0007
21	0.0000	0.0004	0.0005	0.0003	0.0006	0.0010	0.0013
22	0.0000	0.0001	0.0001	0.0007	0.0008	0.0010	0.0007
23	0.0000	0.0006	0.0002	0.0008	0.0005	0.0013	0.0010
24	0.0000	0.0004	0.0001	0.0006	0.0011	0.0008	0.0007
25	0.0000	0.0004	0.0002	0.0007	0.0010	0.0016	0.0006
26	0.0000	0.0001	0.0001	0.0003	0.0011	0.0013	0.0008
27	0.0000	0.0005	0.0001	0.0007	0.0011	0.0013	0.0008
28	0.0000	0.0001	0.0001	0.0006	0.0007	0.0008	0.0008
29	0.0000	0.0002	0.0005	0.0001	0.0007	0.0014	0.0013
30	0.0000	0.0001	0.0006	0.0004	0.0010	0.0008	0.0013
Quantity	30	30	30	30	30	30	30
Median	0.0000	0.0003	0.0003	0.0005	0.0009	0.0012	0.0011
Average	0.0000	0.0003	0.0003	0.0004	0.0009	0.0012	0.0010
Max	0.0000	0.0006	0.0006	0.0008	0.0013	0.0016	0.0014
Min	0.0000	0.0001	0.0001	0.0000	0.0004	0.0007	0.0006
Std Dev	0.0000	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

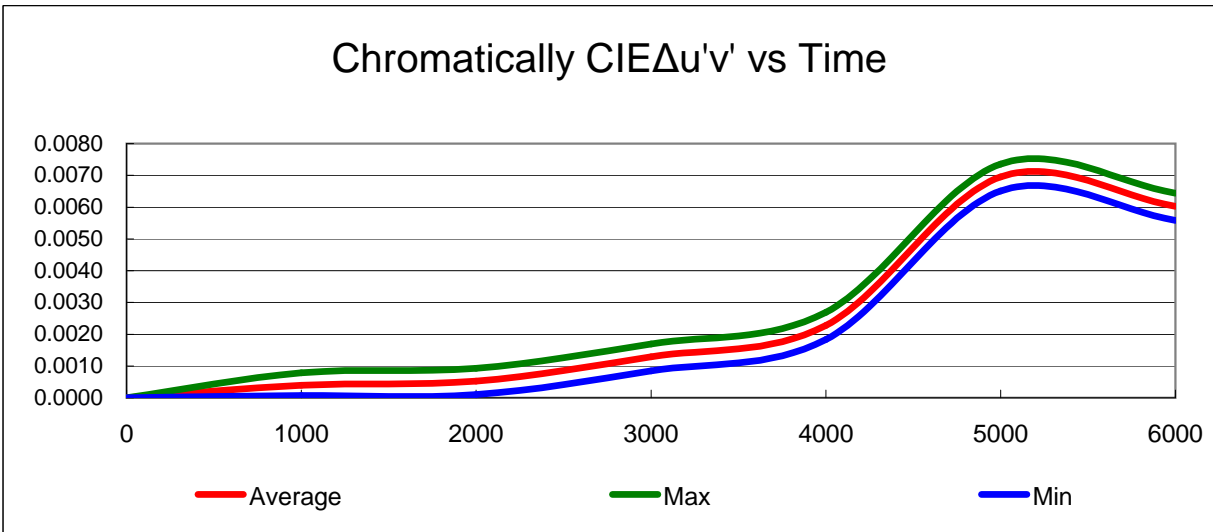
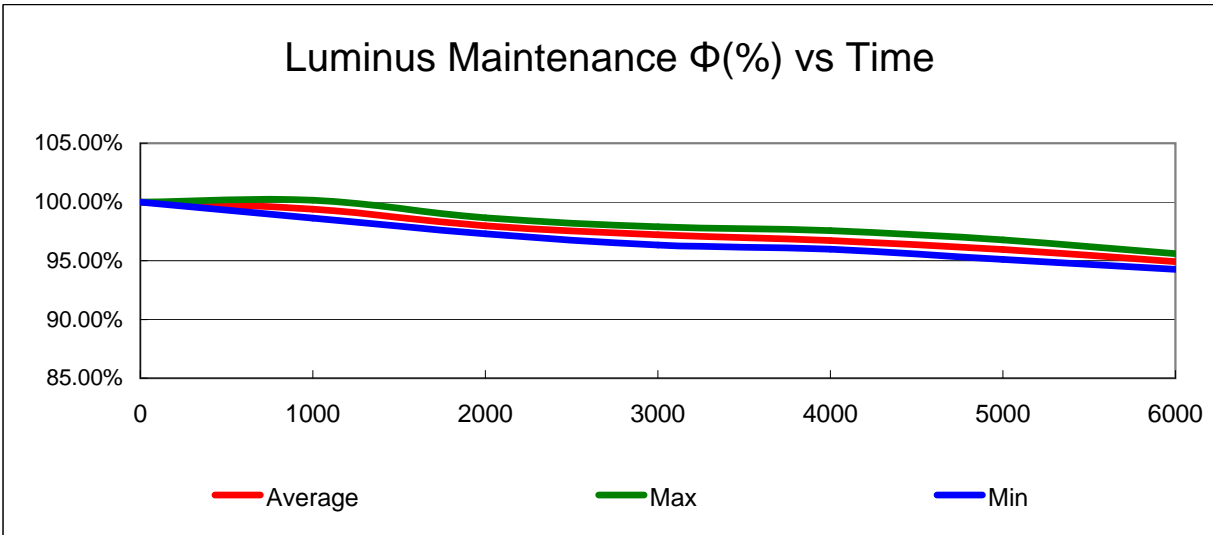
CCT Data

55 °C

CCT	0	1000	2000	3000	4000	5000	6000
1	2927	2949	2942	2953	2954	2956	2954
2	2917	2939	2932	2944	2944	2946	2944
3	2900	2923	2916	2927	2928	2930	2928
4	2959	2981	2974	2986	2986	2988	2986
5	2919	2941	2934	2945	2946	2948	2946
6	2953	2975	2968	2979	2980	2982	2980
7	2958	2980	2973	2984	2985	2987	2985
8	2955	2977	2970	2982	2982	2984	2982
9	2958	2980	2973	2984	2985	2987	2985
10	2953	2975	2968	2980	2981	2983	2981
11	2911	2933	2926	2938	2939	2941	2938
12	2941	2963	2956	2968	2968	2970	2968
13	2953	2975	2968	2979	2980	2982	2980
14	2918	2940	2933	2944	2945	2947	2945
15	2975	2997	2990	3002	3002	3004	3002
16	2924	2946	2939	2951	2952	2953	2951
17	2924	2946	2939	2951	2952	2953	2951
18	2950	2972	2965	2977	2977	2979	2977
19	2935	2957	2950	2961	2962	2964	2962
20	2937	2959	2952	2964	2964	2966	2964
21	2913	2935	2928	2940	2940	2942	2940
22	2932	2954	2947	2959	2960	2962	2959
23	2908	2930	2923	2935	2935	2937	2935
24	2927	2949	2942	2954	2955	2957	2955
25	2931	2953	2946	2957	2958	2960	2958
26	2939	2961	2954	2966	2966	2968	2966
27	2910	2932	2925	2936	2937	2939	2937
28	2957	2980	2973	2984	2985	2987	2985
29	2956	2978	2971	2983	2983	2985	2983
30	2950	2972	2965	2977	2977	2979	2977
Quantity	30	30	30	30	30	30	30
Median	2936	2958	2951	2963	2963	2965	2963
Average	2936	2958	2951	2963	2964	2966	2963
Max	2975	2997	2990	3002	3002	3004	3002
Min	2900	2923	2916	2927	2928	2930	2928
Std Dev	19	19	19	19	19	19	19

85 °C Test Data

Model name	PC35H11.V0
CCT	3000 K
Case Temperature [Ts]	85.8 °C
Ambient Temperature [TA]	85.2 °C
Drive Current [IF]	120 mA
Failures observed	0



Φ (%)	0	1000	2000	3000	4000	5000	6000
1	100.00%	98.71%	97.97%	96.60%	96.21%	95.80%	94.93%
2	100.00%	99.56%	98.64%	97.86%	97.56%	95.95%	95.58%
3	100.00%	98.88%	97.46%	97.03%	96.56%	95.12%	94.42%
4	100.00%	99.57%	98.66%	97.89%	97.24%	96.12%	95.61%
5	100.00%	99.75%	98.14%	97.55%	96.37%	95.78%	95.10%
6	100.00%	100.16%	97.96%	97.36%	97.40%	96.12%	94.90%
7	100.00%	100.06%	98.46%	97.52%	96.87%	96.78%	95.40%
8	100.00%	99.90%	97.71%	97.53%	96.89%	96.55%	94.66%
9	100.00%	99.39%	98.48%	97.02%	96.54%	96.30%	95.43%
10	100.00%	99.91%	98.31%	97.88%	96.37%	96.47%	95.26%
11	100.00%	99.22%	97.97%	97.03%	96.22%	95.46%	94.94%
12	100.00%	98.63%	97.89%	96.95%	96.14%	95.89%	94.86%
13	100.00%	99.22%	97.63%	96.69%	96.38%	95.97%	94.59%
14	100.00%	98.63%	97.46%	97.20%	96.73%	95.29%	94.43%
15	100.00%	99.92%	98.31%	97.01%	97.33%	96.13%	95.26%
16	100.00%	99.23%	97.30%	96.87%	96.56%	95.22%	94.27%
17	100.00%	99.56%	98.30%	96.70%	96.89%	96.13%	95.26%
18	100.00%	100.07%	98.47%	97.01%	96.88%	96.46%	95.42%
19	100.00%	99.22%	98.14%	97.02%	97.06%	96.30%	95.09%
20	100.00%	99.65%	98.04%	97.44%	97.31%	96.72%	94.98%
21	100.00%	99.22%	97.97%	96.70%	96.06%	95.47%	94.94%
22	100.00%	98.89%	97.46%	97.37%	96.56%	95.63%	94.42%
23	100.00%	99.56%	97.63%	97.29%	95.97%	95.80%	94.60%
24	100.00%	99.22%	97.29%	97.03%	96.73%	95.29%	94.25%
25	100.00%	99.74%	97.61%	97.71%	97.06%	96.65%	94.56%
26	100.00%	99.22%	97.96%	97.19%	97.23%	96.29%	94.91%
27	100.00%	99.56%	97.63%	97.37%	96.90%	95.97%	94.59%
28	100.00%	99.39%	98.13%	97.70%	96.88%	95.95%	95.08%
29	100.00%	98.87%	97.80%	96.33%	96.04%	95.81%	94.77%
30	100.00%	98.84%	98.25%	97.01%	96.73%	95.41%	95.21%
Quantity	30.00	30.0	30	30	30	30	30
Median	100.00%	99.39%	97.97%	97.11%	96.73%	95.96%	94.93%
Average	100.00%	99.39%	97.97%	97.20%	96.72%	95.96%	94.92%
Max	100.00%	100.16%	98.66%	97.89%	97.56%	96.78%	95.61%
Min	100.00%	98.63%	97.29%	96.33%	95.97%	95.12%	94.25%
Std Dev	0.00%	0.44%	0.39%	0.40%	0.44%	0.46%	0.39%

Δu'v' Data

85 °C

Δu'v'	0	1000	2000	3000	4000	5000	6000
1	0.0000	0.0001	0.0006	0.0009	0.0020	0.0069	0.0062
2	0.0000	0.0002	0.0008	0.0016	0.0027	0.0066	0.0063
3	0.0000	0.0002	0.0004	0.0014	0.0024	0.0065	0.0059
4	0.0000	0.0002	0.0008	0.0016	0.0024	0.0068	0.0063
5	0.0000	0.0006	0.0006	0.0016	0.0020	0.0068	0.0062
6	0.0000	0.0007	0.0002	0.0011	0.0025	0.0068	0.0057
7	0.0000	0.0005	0.0005	0.0011	0.0020	0.0072	0.0060
8	0.0000	0.0006	0.0002	0.0014	0.0023	0.0073	0.0057
9	0.0000	0.0002	0.0008	0.0010	0.0020	0.0071	0.0063
10	0.0000	0.0006	0.0006	0.0017	0.0018	0.0072	0.0062
11	0.0000	0.0005	0.0008	0.0014	0.0021	0.0068	0.0063
12	0.0000	0.0001	0.0008	0.0014	0.0021	0.0072	0.0063
13	0.0000	0.0004	0.0004	0.0010	0.0021	0.0071	0.0059
14	0.0000	0.0001	0.0004	0.0016	0.0025	0.0066	0.0059
15	0.0000	0.0006	0.0006	0.0010	0.0026	0.0069	0.0062
16	0.0000	0.0005	0.0002	0.0013	0.0024	0.0066	0.0057
17	0.0000	0.0006	0.0009	0.0010	0.0025	0.0072	0.0064
18	0.0000	0.0006	0.0006	0.0008	0.0021	0.0071	0.0062
19	0.0000	0.0002	0.0006	0.0011	0.0025	0.0072	0.0062
20	0.0000	0.0002	0.0002	0.0011	0.0024	0.0072	0.0057
21	0.0000	0.0005	0.0008	0.0011	0.0020	0.0068	0.0063
22	0.0000	0.0001	0.0002	0.0016	0.0023	0.0068	0.0057
23	0.0000	0.0008	0.0005	0.0016	0.0019	0.0071	0.0060
24	0.0000	0.0005	0.0002	0.0014	0.0025	0.0066	0.0057
25	0.0000	0.0005	0.0001	0.0016	0.0024	0.0074	0.0056
26	0.0000	0.0001	0.0004	0.0011	0.0025	0.0071	0.0059
27	0.0000	0.0006	0.0004	0.0016	0.0025	0.0071	0.0059
28	0.0000	0.0001	0.0004	0.0014	0.0021	0.0066	0.0059
29	0.0000	0.0004	0.0008	0.0010	0.0021	0.0072	0.0063
30	0.0000	0.0001	0.0009	0.0013	0.0024	0.0066	0.0064
Quantity	30	30	30	30	30	30	30
Median	0.0000	0.0004	0.0006	0.0013	0.0023	0.0070	0.0061
Average	0.0000	0.0004	0.0005	0.0013	0.0023	0.0069	0.0060
Max	0.0000	0.0008	0.0009	0.0017	0.0027	0.0074	0.0064
Min	0.0000	0.0001	0.0001	0.0008	0.0018	0.0065	0.0056
Std Dev	0.0000	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

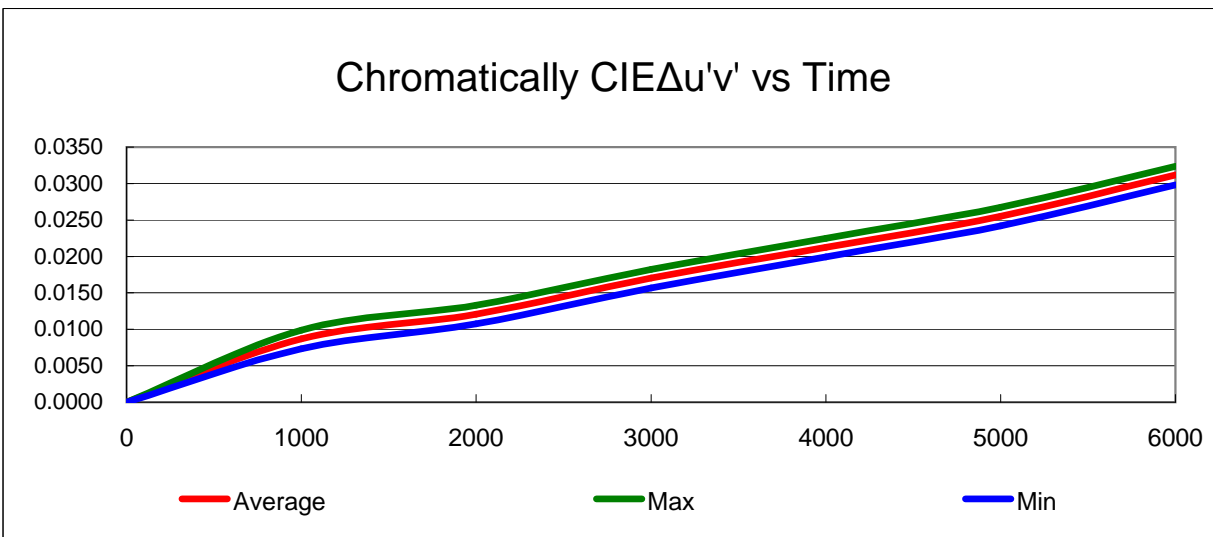
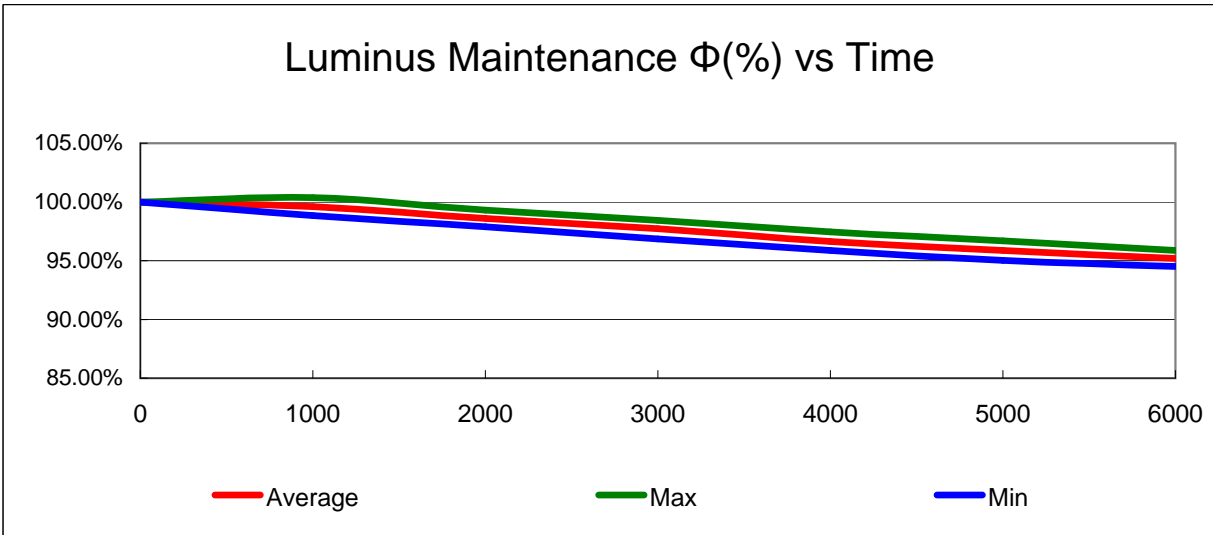
CCT Data

85 °C

CCT	0	1000	2000	3000	4000	5000	6000
1	2911	2938	2935	2943	2946	2950	2955
2	2908	2935	2932	2940	2943	2947	2952
3	2957	2984	2980	2989	2992	2995	3000
4	2890	2917	2913	2922	2925	2928	2933
5	2908	2935	2932	2940	2943	2947	2952
6	2967	2994	2991	2999	3002	3006	3011
7	2951	2978	2974	2983	2986	2989	2994
8	2944	2971	2968	2976	2979	2983	2988
9	2951	2978	2974	2983	2986	2989	2994
10	2918	2945	2941	2950	2953	2956	2961
11	2955	2981	2978	2987	2990	2993	2998
12	2953	2980	2976	2985	2988	2991	2996
13	2951	2978	2974	2983	2986	2989	2994
14	2938	2965	2961	2970	2973	2976	2981
15	2927	2954	2951	2959	2962	2966	2971
16	2905	2932	2928	2937	2940	2943	2948
17	2936	2963	2960	2968	2971	2975	2980
18	2921	2948	2944	2953	2956	2959	2964
19	2919	2946	2943	2951	2954	2958	2963
20	2953	2980	2976	2985	2988	2991	2996
21	2890	2917	2913	2922	2925	2928	2933
22	2922	2949	2945	2954	2957	2960	2965
23	2958	2984	2981	2989	2993	2996	3001
24	2962	2989	2985	2994	2997	3000	3005
25	2942	2969	2965	2974	2977	2980	2985
26	2952	2979	2976	2984	2987	2991	2996
27	2916	2943	2939	2948	2951	2954	2959
28	2946	2973	2969	2978	2981	2984	2989
29	2903	2930	2926	2935	2938	2941	2946
30	2928	2955	2952	2960	2963	2966	2972
Quantity	30	30	30	30	30	30	30
Median	2937	2964	2960	2969	2972	2975	2980
Average	2933	2960	2956	2965	2968	2971	2976
Max	2967	2994	2991	2999	3002	3006	3011
Min	2890	2917	2913	2922	2925	2928	2933
Std Dev	22	22	22	22	22	22	22

105 °C Test Data

Model name	PC35H11.V0
CCT	3000 K
Case Temperature [Ts]	105.7 °C
Ambient Temperature [TA]	105.3 °C
Drive Current [IF]	120 mA
Failures observed	0



Φ (%)	0	1000	2000	3000	4000	5000	6000
1	100.00%	98.93%	98.59%	97.13%	96.13%	95.70%	95.19%
2	100.00%	99.78%	99.25%	98.39%	97.46%	95.85%	95.83%
3	100.00%	99.10%	98.08%	97.56%	96.47%	95.01%	94.68%
4	100.00%	99.79%	99.30%	98.43%	97.16%	96.02%	95.88%
5	100.00%	99.98%	98.77%	98.09%	96.27%	95.68%	95.36%
6	100.00%	100.37%	98.58%	97.89%	97.30%	96.01%	95.16%
7	100.00%	100.29%	99.09%	98.05%	96.79%	96.69%	95.66%
8	100.00%	100.12%	98.33%	98.06%	96.80%	96.45%	94.92%
9	100.00%	99.61%	99.10%	97.55%	96.46%	96.20%	95.69%
10	100.00%	100.14%	98.93%	98.42%	96.28%	96.38%	95.52%
11	100.00%	99.45%	98.59%	97.57%	96.15%	95.37%	95.20%
12	100.00%	98.85%	98.51%	97.48%	96.05%	95.79%	95.12%
13	100.00%	99.44%	98.25%	97.22%	96.30%	95.87%	94.85%
14	100.00%	98.87%	98.09%	97.73%	96.65%	95.21%	94.70%
15	100.00%	100.13%	98.93%	97.55%	97.23%	96.03%	95.52%
16	100.00%	99.44%	97.90%	97.39%	96.47%	95.10%	94.51%
17	100.00%	99.79%	98.93%	97.21%	96.81%	96.04%	95.53%
18	100.00%	100.29%	99.09%	97.55%	96.79%	96.35%	95.67%
19	100.00%	99.44%	98.76%	97.56%	96.97%	96.20%	95.35%
20	100.00%	99.88%	98.67%	97.98%	97.23%	96.63%	95.25%
21	100.00%	99.45%	98.59%	97.23%	95.98%	95.37%	95.20%
22	100.00%	99.11%	98.08%	97.90%	96.47%	95.53%	94.68%
23	100.00%	99.79%	98.25%	97.82%	95.88%	95.70%	94.85%
24	100.00%	99.44%	97.91%	97.56%	96.65%	95.19%	94.51%
25	100.00%	99.97%	98.23%	98.25%	96.98%	96.56%	94.82%
26	100.00%	99.44%	98.59%	97.72%	97.14%	96.19%	95.17%
27	100.00%	99.78%	98.25%	97.90%	96.81%	95.87%	94.85%
28	100.00%	99.61%	98.76%	98.24%	96.80%	95.85%	95.34%
29	100.00%	99.09%	98.42%	96.86%	95.95%	95.71%	95.03%
30	100.00%	99.08%	98.86%	97.55%	96.64%	95.33%	95.46%
Quantity	30.00	30.0	30	30	30	30	30
Median	100.00%	99.61%	98.59%	97.64%	96.65%	95.86%	95.19%
Average	100.00%	99.61%	98.59%	97.73%	96.64%	95.86%	95.18%
Max	100.00%	100.37%	99.30%	98.43%	97.46%	96.69%	95.88%
Min	100.00%	98.85%	97.90%	96.86%	95.88%	95.01%	94.51%
Std Dev	0.00%	0.44%	0.39%	0.40%	0.44%	0.46%	0.39%

Δu'v' Data

105 °C

Δu'v'	0	1000	2000	3000	4000	5000	6000
1	0.0000	0.0074	0.0124	0.0159	0.0204	0.0255	0.0315
2	0.0000	0.0082	0.0129	0.0178	0.0225	0.0246	0.0320
3	0.0000	0.0082	0.0116	0.0174	0.0216	0.0242	0.0307
4	0.0000	0.0082	0.0129	0.0178	0.0216	0.0250	0.0320
5	0.0000	0.0095	0.0124	0.0178	0.0204	0.0250	0.0315
6	0.0000	0.0097	0.0112	0.0165	0.0221	0.0250	0.0303
7	0.0000	0.0091	0.0120	0.0165	0.0204	0.0263	0.0311
8	0.0000	0.0095	0.0110	0.0174	0.0212	0.0265	0.0301
9	0.0000	0.0082	0.0129	0.0161	0.0204	0.0259	0.0320
10	0.0000	0.0095	0.0124	0.0182	0.0199	0.0263	0.0315
11	0.0000	0.0091	0.0129	0.0174	0.0208	0.0250	0.0320
12	0.0000	0.0078	0.0129	0.0174	0.0208	0.0263	0.0320
13	0.0000	0.0086	0.0116	0.0161	0.0208	0.0259	0.0307
14	0.0000	0.0076	0.0116	0.0178	0.0221	0.0246	0.0307
15	0.0000	0.0095	0.0124	0.0161	0.0223	0.0255	0.0315
16	0.0000	0.0091	0.0112	0.0170	0.0216	0.0244	0.0303
17	0.0000	0.0095	0.0133	0.0161	0.0221	0.0263	0.0324
18	0.0000	0.0095	0.0124	0.0157	0.0208	0.0259	0.0315
19	0.0000	0.0082	0.0124	0.0165	0.0221	0.0263	0.0315
20	0.0000	0.0082	0.0112	0.0165	0.0216	0.0263	0.0303
21	0.0000	0.0091	0.0129	0.0165	0.0204	0.0250	0.0320
22	0.0000	0.0078	0.0112	0.0178	0.0212	0.0250	0.0303
23	0.0000	0.0099	0.0120	0.0180	0.0202	0.0259	0.0311
24	0.0000	0.0091	0.0112	0.0174	0.0221	0.0246	0.0303
25	0.0000	0.0091	0.0107	0.0178	0.0216	0.0267	0.0298
26	0.0000	0.0078	0.0116	0.0165	0.0221	0.0259	0.0307
27	0.0000	0.0095	0.0116	0.0178	0.0221	0.0259	0.0307
28	0.0000	0.0078	0.0116	0.0174	0.0208	0.0246	0.0307
29	0.0000	0.0086	0.0129	0.0161	0.0208	0.0263	0.0320
30	0.0000	0.0078	0.0131	0.0170	0.0216	0.0246	0.0322
Quantity	30	30	30	30	30	30	30
Median	0.0000	0.0088	0.0122	0.0172	0.0214	0.0257	0.0313
Average	0.0000	0.0087	0.0121	0.0170	0.0213	0.0255	0.0312
Max	0.0000	0.0099	0.0133	0.0182	0.0225	0.0267	0.0324
Min	0.0000	0.0074	0.0107	0.0157	0.0199	0.0242	0.0298
Std Dev	0.0000	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007

CCT Data

105 °C

CCT	0	1000	2000	3000	4000	5000	6000
1	2928	2962	2960	2967	2966	2968	2989
2	2926	2960	2958	2965	2963	2966	2987
3	2943	2977	2975	2982	2980	2983	3004
4	2921	2955	2953	2960	2958	2961	2982
5	2948	2982	2980	2987	2986	2989	3009
6	2913	2947	2945	2952	2950	2953	2974
7	2935	2969	2967	2973	2972	2975	2996
8	2960	2994	2992	2999	2997	3000	3021
9	2927	2960	2959	2965	2964	2967	2987
10	2941	2975	2973	2980	2978	2981	3002
11	2897	2931	2929	2936	2935	2937	2958
12	2973	3007	3005	3012	3011	3013	3034
13	2936	2970	2968	2975	2974	2976	2997
14	2939	2973	2972	2978	2977	2980	3000
15	2917	2951	2949	2956	2954	2957	2978
16	2926	2960	2958	2965	2963	2966	2987
17	2912	2946	2944	2951	2950	2952	2973
18	2939	2973	2972	2978	2977	2980	3000
19	2939	2973	2972	2978	2977	2980	3000
20	2892	2926	2924	2931	2930	2933	2953
21	2926	2960	2958	2965	2963	2966	2987
22	2908	2942	2940	2947	2946	2948	2969
23	2904	2938	2936	2943	2942	2945	2965
24	2936	2970	2968	2975	2974	2976	2997
25	2903	2937	2936	2942	2941	2944	2964
26	2910	2944	2942	2949	2947	2950	2971
27	2912	2946	2944	2951	2950	2952	2973
28	2882	2916	2914	2921	2919	2922	2943
29	2941	2975	2973	2980	2979	2981	3002
30	2918	2952	2950	2957	2955	2958	2979
Quantity	30	30	30	30	30	30	30
Median	2926	2960	2958	2965	2963	2966	2987
Average	2925	2959	2957	2964	2963	2965	2986
Max	2973	3007	3005	3012	3011	3013	3034
Min	2882	2916	2914	2921	2919	2922	2943
Std Dev	20	20	20	20	20	20	20

End of Report