TM-21 Inputs

Instructions
Yellow fields are completed by the user. Fields not used should be left blank. Cyan fields are calculated based on user entries. First, enter a description of the LED light source tested. Then complete the fields labeled "LM-80 Testing Details". Test duration must be at least 6,000 hours. If only one case temperature data set is to be used (no interpolation), complete only "Tested case temperature 1". For only two case temperature data sets, complete 1 and 2. Next, further to the right, in the corresponding box(es) for each tested case temperature, enter the test data along with the time (in hours) at which each measurement was taken. Data entered must be normalized then averaged measured data (per TM-21 sections 5.2.1 and 5.2.2). If case temperatures have different test durations, enter data up to the lowest of the test durations for all of the case temperatures. Enter drive current, *in-situ* temperature data and the percentage of initial lumens to project to in the fields labeled "*In-Situ* Inputs". Results can be tailored to estimate lumen maintenance at a specific time by entering a value (t) in the yellow field. A complete TM-21 report will appear on the next tab labeled "Report".

LM-80 Test Inputs

Description of LED Light Source Tested (manufacturer, model, catalog number)
Manufacturer：Cree Model：CXA 1512

LM-80 Testing Details	
Total number of units tested per case temperature:	25
Number of failures:	0
Number of units measured:	25
Test duration (hours):	6048
Tested drive current (mA):	375
Tested case temperature 1 (T_c, ^{0}C):	85
Tested case temperature 2 (T_c, ^{0}C):	
Tested case temperature 3 (T_c, ^{0}C):	

Test Data for 85^{0}C Case Temperature		Tested Case Temperature 2		Tested Case Temperature 3	
Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)	Time (hours)	Lumen Maintenance (%)
0	100.00%				
168	99.60%				
1008	99.70%				
1512	99.50%				
2016	99.50%				
2520	99.20%				
3024	99.00%				
3528	98.80%				
4032	98.80%				
4536	98.40%				
5040	98.10%				
5544	97.80%				
6048	97.40%				

In-Situ Inputs

Drive current for each LED package/array/module (mA):	375
In-situ case temperature (T_c, ^{0}C):	85
Percentage of initial lumens to project to (e.g. for L_{70}, enter 70):	70

Results

Time (t) at which to estimate lumen maintenance (hours):	100,000
Lumen maintenance at time (t) (%):	49.98%
Reported L70 (hours):	53,000