

STATE OF CALIFORNIA
INSTITUTIONAL TUNING PAF ACCEPTANCE DOCUMENT

CEC-NRCA-LTI-05-A (Revised 04/16)

CERTIFICATE OF ACCEPTANCE		NRCA-LTI-05-A
Institutional Tuning PAF Acceptance Document		(Page 1 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

<i>Note: Submit one Certificate of Acceptance for each system that must demonstrate compliance.</i>	Enforcement Agency Use: Checked by/Date
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A. Institutional Tuning Power Adjustment Factor	
Intent:	Test the reduction in lighting power due to the institutional tuning as per Sections 140.6(a)2J and 130.4(a).
NA7.7.6.2 Acceptance tests for Institutional Tuning Power Adjustment Factor in accordance with Sections 140.6(a)2J	
Instrumentation to perform test includes, but not limited to:	
01	Digital multimeter with clamp-on feature
02	Light meter

B. NA7.7.6.2.1 Construction Inspection	
Prior to Functional testing, verify the followings:	
01	The controls or the methods of controlling the maximum output of luminaires is such that the maximum light output of the controlled lighting system can be limited. Further, Check the box if the controls or the method of controlling are manual controls Check the box if the controls or the method of controlling are occupancy sensing controls Check the box if the controls or the method of controlling are automatic daylighting controls Check the box if the controls or the method of controlling are type other than the above - , (fill in the following space) _____
02	The controls or the methods of controlling the maximum output of luminaires is such that the normal operation of the controlled lighting does not override the maximum light output. Further, Check the box if the controls or the method of controlling are manual controls Check the box if the controls or the method of controlling are occupancy sensing controls Check the box if the controls or the method of controlling are automatic daylighting controls Check the box if the controls or the method of controlling are type other than the above - (fill in the following space) _____
03	The controls are not readily accessible to unauthorized personnel.



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C. NA7.7.6.2.2 Functional Test	
Fill out Section I (Observation of the systems during Institutional Tuning), if acceptance testing is performed during tuning of the lighting system. Alternatively, fill out Section II (Verification of systems already tuned), if acceptance testing is performed after the lighting system has been tuned,.	
01	For buildings with up to seven (7) enclosed areas claiming the Institutional Tuning PAF (power adjustment factor), all areas shall be tested.
02	For buildings with more than seven (7) areas claiming this PAF, random sampling may be done on seven of the larger enclosed areas with tuned dimming systems. If any of the areas in the sample group of seven areas fails the acceptance test, another group of seven areas must be tested. If any tested system fails, it shall be tuned until it passes the test.
03	The acceptance test technician shall either observe the first seven (7) systems being successfully tuned or shall verify systems that have already been tuned using the sampling protocol described in NA7.7.6.2
04	If the acceptance test technician is observing the tuning of the system, the party responsible for the tuning shall certify that the remainder of the system is tuned in a similar manner. The party shall submit a separate institutional tuning PAF acceptance form to demonstrate that the remainder of the system meets the requirements of NA7.7.6.2.

Not to be used for compliance contact
ATTCP for valid compliance document.

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I. Observation of the systems during Institutional Tuning		Tested Space Number						
Step 1: Determination of maximum power or light output prior to Institutional Tuning		1	2	3	4	5	6	7
(a)	Set all lighting controls to provide maximum output of the tested system without applying the limits specified for institutional tuning.							
(b)	Measure the full light output at a location where the illuminance is due to the controlled lighting. Fill out this row with the measured light output level.	fc	fc	fc	fc	fc	fc	fc
	Alternatively, measure the current draw of the controlled lighting with full light output at a location where the illuminance is due to the controlled lighting. Fill out this row with the measured current draw.	A	A	A	A	A	A	A
Step 2: Institutional Tuning and Post-tuning Measurement								
(a)	Apply the limits specified for institutional tuning to the lighting system. Do not alter any other control settings.							
(b)	Verify the light reduction after institutional tuning by measuring the light output at the same location as in Step 1. Fill out this row with the measured light output level.	fc	fc	fc	fc	fc	fc	fc
	Alternatively, verify the power reduction after institutional tuning by measuring the current draw of the same circuit as in Step 1. Fill out this row with the measured current draw.	A	A	A	A	A	A	A
(c)	Calculate ((Line 2b / Line 1b) x 100%). (Maximum output)	%	%	%	%	%	%	%
	Calculate ((Line 2b / Line 1b) x 100%). (Maximum power draw)	%	%	%	%	%	%	%
	Is the calculation result of the above line equal to 85% or less? (Y – passes the test; N – fails the test.)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N

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II. Verification of systems already tuned		Tested Space Number						
		1	2	3	4	5	6	7
Step 1: Measurement of tuned lighting system								
(a)	Set all lighting controls except Institutional Tuning controls to provide maximum output of tested system. Controls set to maximum light output include but not limited to: manual dimmers, multilevel occupancy sensing, and automatic daylighting controls.							
(b)	Measure full light output at location where most of the illuminance is due to the controlled lighting. Fill out this row with the measured light output level.	fc	fc	fc	fc	fc	fc	fc
	Alternatively, measure current draw of the controlled lighting with full light output at location where most of the illuminance is due to the controlled lighting. Fill out this row with the measured current draw.	A	A	A	A	A	A	A
Step 2: Measurement of lighting system with Institutional Tuning overridden								
(a)	Reset Institutional Tuning controls to allow full light output. Set all lighting controls to provide maximum output of tested system including but not limited to: Institution Tuning control, manual dimmers, multilevel occupancy sensing, and automatic daylighting controls.							
(b)	Measure full light output at the same location as in Step 1. Fill out this row with the measured light output level.	fc	fc	fc	fc	fc	fc	fc
	Alternatively, measure the power draw of the same circuit with full light output at the same location as in Step 1. Fill out this row with the measured current draw.	A	A	A	A	A	A	A
(c)	Calculate ((Line 1b / Line 2b) x 100%). (Maximum output)	%	%	%	%	%	%	%
	Calculate ((Line 1b / Line 2b) x 100%). (Maximum power draw)	%	%	%	%	%	%	%
	Is the calculation result of the above line equal to 85% or less? (Y – passes the test; N – fails the test.)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Step 3: Restore Institutional Tuning settings								
(a)	If tested system passed the test in Step 2, restore Institutional Tuning settings.							



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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
1. I certify that this Certificate of Acceptance documentation is accurate and complete.		
Documentation Author Name:	Documentation Author Signature:	
Documentation Author Company Name:	Date Signed:	
Address:	CEA/ATT Certification Identification (If applicable):	
City/State/Zip:	Phone:	
FIELD TECHNICIAN'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building. 		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	Date Signed:
RESPONSIBLE PERSON'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I will ensure that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Acceptance Person Name:	Responsible Acceptance Person Signature:	
Responsible Acceptance Person Company Name:	Position with Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed: