

**NOT REGISTERED - CAN BE USED FOR SUBMISSION TO BUILDING DEPARTMENTS PRIOR TO DECEMBER 31, 2023****CERTIFICATE OF COMPLIANCE**

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies in low-rise multifamily mixed-use buildings. It is also used to document compliance with requirements in §160.5, §170.2(e) and §180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Details

Field Name	Data Entry	Field Name	Data Entry
Project Name:		Enforcement Agency:	
Dwelling Address:		Permit Number:	
City and Zip Code:		Date Permit Issued:	

A. GENERAL INFORMATION

Field	Field Name	Data Entry
01	Project Location (city)	
02	Climate Zone	
03	Occupancy Types Within Project (select all that apply):	<input type="checkbox"/> Office <input type="checkbox"/> Retail <input type="checkbox"/> Warehouse <input type="checkbox"/> Low-Rise Residential, Multifamily/ MF Mixed-use < 4 stories (includes dormitory, senior living) <input type="checkbox"/> Healthcare Facilities <input type="checkbox"/> Relocatable <input type="checkbox"/> Auditorium <input type="checkbox"/> Commercial/ Industrial

Registration Number:
CA Building Energy Efficiency Standards - 2022 Low-Rise Multifamily Compliance

Registration Date/Time:

HERS Provider:

January 2022



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		<input type="checkbox"/> Grocery Store <input type="checkbox"/> Classroom <input type="checkbox"/> Library <input type="checkbox"/> Gymnasium <input type="checkbox"/> Hotel/ Motel <input type="checkbox"/> Parking Garage <input type="checkbox"/> School <input type="checkbox"/> Support Areas <input type="checkbox"/> Theater <input type="checkbox"/> Sports Arena <input type="checkbox"/> Religious Facility <input type="checkbox"/> Data Center <input type="checkbox"/> Convention Center <input type="checkbox"/> Restaurant/ Commercial Kitchen <input type="checkbox"/> Financial Institution <input type="checkbox"/> Medical Clinic <input type="checkbox"/> All Others
04	Total Conditioned Floor Area (ft ²)	
05	Total Unconditioned Floor Area (ft ²)	
06	# of Stories (Habitable Above Grade)	

Note:

Field 03: when "High-Rise Residential Multifamily/ MF Mixed-use < 4 stories (includes dormitory, senior living)" is checked, Triggers Table T.

Field 03: when "Healthcare Facilities" is checked, do not populate Table I. Instead show "This Section Does Not Apply"



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Field 04: Table D checks if Conditioned and Unconditioned Floor Area entered here match what's entered in Table B, I and L. If "Rated Power Reduction" is chosen in Table B, this greys out and goes blank. Don't grey this out if Rated Power Reduction is chosen in Table B. column 02. It just remains as user-entry all the time.

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6/§170.2(e) or §141.0(b)2/§180.2(b)4 for alterations.

01	02	03	04	05
Scope of Work My Project Consists of (check all that apply):	Conditioned Spaces Calculation Method	Conditioned Spaces Area (ft ²)	Unconditioned Spaces Calculation Method	Unconditioned Spaces Area (ft ²)
<input type="checkbox"/> New Lighting System				
<input type="checkbox"/> New Lighting System- Parking Garage				
<input type="checkbox"/> New Lighting System- Parking Garage				
<input type="checkbox"/> New Lighting System- Parking Garage				
<input type="checkbox"/> Altered Lighting System				
<input type="checkbox"/> Altered Lighting System				
<input type="checkbox"/> Altered Lighting System				
Total Area of Work (ft²)				



“ALERT! The Rated Power Reduction Method for alterations may only be used for one-for-one luminaire alterations within a building or tenant space of 5,000 ft² or less per §141.0(b)2liii/§180.2(b)4.”

This message will show up If user selects "Rated Power Reduction" in column 02 AND column 03 > 5000 OR if user selects "Rated Power Reduction" in column 04 AND column 05 > 5000 OR if user selects "Rated Power Reduction" in columns 02 and 04 AND column 03 + column 05 > 5000.

Note:

Filed 01: If “New Lighting System- Parking Garage” is selected, only drop down choice is "Complete Building" and the user will be able to add Parking Garage

Field 03: If “Altered Lighting System” is checked, the only choice in the dropdown is "Complete Building" if column 02 is "Complete Building" Calculation Method dropdown for Conditioned and unconditioned Spaces:

Triggers Tables F, H, and I if "Complete Building" is checked.

Triggers Table F, Table H, and Table I if “Area Category” is checked.

Triggers Table F, Table H, and Table K if “Tailored” is checked.

Triggers Table F, Table H, Table I, and Table K if “Area Category + Tailored” is checked.

Triggers Table Q if “Rated Power Reduction” is checked. This option only used for alterations.



C. COMPLIANCE RESULTS

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1/§170.2(e).
If any cell on this table says, "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Allowed Lighting Power per §140.6(b)/§170.2(e) (Watts)				Adjusted Lighting Power per §140.6(a)/§170.2(e) (Watts)				Compliance Results																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
09	05 Must be >= 08 \$ 140.6/§ 170.2(e)			08	Total Adjusted (Watts) *Includes Adjustments			07	Adjustments PAF Lighting Control Credits \$ 140.6(a)2/ \$ 170.2(e)1B (-) (See Table P)			06	Total Designed (Watts)			05	Total Allowed (Watts)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



Field Name	Data Entry
Controls Compliance (See Table H for Details)	
Rated Power Reduction Compliance (See Table Q for Details)	

Note:

Fields 01 to 09: should default to blank and grey. The background color of a cell will change to white when a relevant table is triggered. Same for Unconditioned Areas.

Fields 09: should default to blank.

1. Will change to "DOES NOT COMPLY" if 08>05.

2. Will change to COMPLIES if 08<=05. Same for Unconditioned Areas.

Controls Compliance: should default to grey and blank.

1. Will change to "Does Not Comply" if Table H is triggered but the conditions below are not met, OR if ANY of the notes in Table D rows 17, OR 18, OR 19 have been triggered

2. Will change to "Complies" if H.01-H.10 has been completed

*3. Will change to "Complies with Exceptional Conditions" if H.01-H.10 have been completed AND a choice with a * has been chosen AND notes have been entered for every notes row that is triggered.*

Rated Power Reduction Compliance: should default to "NOT APPLICABLE".

1. Will change to "Does Not Comply" when Table Q is triggered but has not been completed and/or Percent Power Reduction <0.4

2. Will change to "Complies" if Table Q.01 and Q.03- Q19 have been completed or greyed out/not triggered, and Percent Power Reduction >= 0.4.

3. Will change to "Complies" if Q01 and Q.02b (all spaces are excepted) are checked

**D. EXCEPTIONAL CONDITIONS**

This table is full-out with uneditable comments because of selections made or data entered in tables throughout the form.

- The conditioned and/or unconditioned floor area entered in Table A. does not match the total areas entered in Table B or Table I.*
- Table H. indicates a control requiring a note describing the compliance approach, but no notes have been entered.*
- Track Lighting has been included in this project, details are provided in Table G.*
- Track lighting has been indicated on Table F, however Table G has not been completed to calculate the allowance.*
- If the user changes radio button in Table U, a note saying "Selections made in Table U have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation." should show up in Table D.*
- If the user changes radio button in Table V, a note saying "Selections made in Table V have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation." should show up in Table D.*
- Table H. indicates multi-level, daylighting or demand response controls are not required in one or more spaces because the project is an alteration where the lighting power does not exceed 80% of the allowance from §140.6. However, Total Adjusted Power > 0.8 x*
- Table H. indicates multi-level, daylighting or demand response controls are not required in one or more spaces because the project includes an alteration where the lighting power does not exceed 80% of the allowance from §140.6. However, alteration lighting power documented in Table R. exceeds .8*
- Table H. indicates multi-level, daylighting or demand response controls are not required in one or more spaces because the project includes an alteration where the lighting power does not exceed 80% of the allowance from §140.6. However, Table R. has not been completed to demonstrate compliance.*

Data Entry



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E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Data Entry

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Excluded per §140.6(a)3/ §170.2(e)2C/	Excluded per Exception 2 to § 141.0(b)2I / §180.2(b)4Biv	Design Watts	Field Inspector
		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail



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		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
--	--	--------------------------	--	--	--	--	--------------------------	--------------------------	--	--

Total Designed Watts*Enter the sum of field 10 above.***Data Entry****Designed Wattage: Unconditioned Spaces**

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire	How Wattage is Determined	Total Number Luminaires	Excluded per §140.6(a)3/ §170.2(e)2C/	Excluded per Exception 2 to § 141.0(b)2I / §180.2(b)4Biv	Design Watts	Field Inspector (Pass/Fail)
		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
		<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Pass <input type="checkbox"/> Fail

**Total Designed Watts**

Enter the sum of field 09 above.

Data Entry

Note:

Field 01: if the user changes the fixture name, dropdown list for "luminaire name or item tag" in Table J, K, N, O, P, Q, and R should be updated if exists. Same for Unconditioned Areas.

Field 03: if this box is checked, Table G will be triggered. If this box is unchecked, the fixture in this row will be removed from Table G. If this fixture was the only fixture in Table G, Table G will be removed. Same for Unconditioned Areas.

Field 04: If this is checked in either Conditioned or Unconditioned Space, the Design Watts for that luminaire in field 09 should be multiplied by 0.75.

Field 05: If F03 Track is checked, G05 Track Wattage will be pulled. If the user changes this field, Watts per luminaire in Table J, K, N, O, P, Q, and R should be updated. Same for Unconditioned Areas.

Field 08: if this box is checked by the user, column 08 for this row should say "exempt" and not be included in the total. Same for Unconditioned Areas.

FOOTNOTE:

¹ Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B/§170.2(e)2D is adjusted to be 75%/80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

² Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)/§160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

**G. MODULAR LIGHTING SYSTEMS**

This table calculates wattage for modular lighting systems/ track lighting fixtures indicated on Table F and transfers the wattage to Table F.

01	02	03	03	03	03	04
Name or Item Tag	Complete Track Description	Calculation Method per §130.0(c)6	Calculation Method per §130.0(c)6	Calculation Method per §130.0(c)6	Calculation Method per §130.0(c)6	Track Wattage
		<input type="checkbox"/> Installed Luminaires vs Default 30 W/ft	<input type="checkbox"/> Current Limiter	<input type="checkbox"/> Overcurrent Protection Panel	<input type="checkbox"/> Power supplied by driver, power supply or transformer ¹	

<i>Use this table if method (i) is Checked</i>	Number of luminaires in system	x	Rated Watts per luminaire	=	Total Watts	OR	Linear ft of track or busway	x	Default W/ft	=	Total Watts	Track Wattage
		x		=		OR		x	30	=		

<i>Use this table if method (ii) is Checked</i>	VA of current limiter											Track Wattage

<i>Use this table if method (iii) is Checked</i>	Voltage of branch circuit	x	Sum of Ampere ratings for all devices on panel	Track Wattage
		x		



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<i>Use this table if method (iv) is Checked</i>	Maximum rated input wattage per manufacturer	Track Wattage

¹FOOTNOTE: For power-over-Ethernet lighting systems, power provided to installed non-lighting devices may be subtracted from the total power rating of the power-over-Ethernet system.

Note:

Once the track wattage is calculated in Table G, that value will fill-out the track "watts per luminaire" in Table F. The Table G options will have to be repeated for each track fixture type user input in Table F.

Field 01: fill-out from Table F

Field 02: fill -out from Table F

**H. INDOOR LIGHTING CONTROLS (Not Including PAFs)**

*This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03
Mandatory Demand Response '§110.12(c)	Shut-off Controls '§130.1(c)/§160.5(b)4C	Field Inspector
		<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Area Level Controls

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls §130.1(a)/ §160.5(b)4A	Multi-Level Controls §130.1(b)/ §160.5(b)4B	Shut-Off Controls §130.1(c)/ §160.5(b)4C	Primary/Skylit Daylighting §130.1(d)/ §160.5(b)4D	Secondary Daylighting §130.1(d)/§ 160.5(b)4D	Interlocked Systems §140.6(a)1/ §170.2(e)2A	Field Inspector
							<input type="checkbox"/>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail



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							<input type="checkbox"/>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
							<input type="checkbox"/>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Field	Field Name	Data Entry
13	Plan Sheet Showing Daylit Zones	

Note:

*If the user does not select any * control but does complete at least 1 line on this table, Controls Compliance in Table C. should say "COMPLIES"*

Field 01:

- If the user choose "Required: $\geq 4,000$ watts subject to multilevel" OR "Required: Using as PAF (Table P), NRCA-LTI-04-A changes to "Yes"*
- If user choose " NA: $\leq 80\%$ LP (alt only)", AND only "Altered Lighting System" is selected in Table B field 01 AND Table C field 08 \geq Table C column 05*0.8 then trigger note in Table D row 17.*
- If choose " NA: $\leq 80\%$ LP (alt only)", AND "New Lighting System" AND "Altered Lighting System" are chosen in Table B field 01, trigger Table R.*

Field 02:

- if the user choose "See Area Level Controls" and all column 08 are any of the "NA" choices, NRCA-LTI-02-E changes to "No.".*



- b. if select EMCS: Triggers NRCA-LTI-02 to move from "No" to "Yes" in Table T.

Field 05:

- a. see Table I column 02. If both "Area Category" and "Complete Building" have been chosen on Table B, List needs to combine.
b. This dropdown will customize based on whether complete building or area category is chosen in Table B (same as Table I column 02)

Filed 07:

- a. If user choose "NA: $\leq 80\%$ LP (alt only)", AND only "Altered Lighting System" is selected in Table B field 01 AND Table C field 08 \geq Table C column 05*0.8 then trigger note in Table D row 17.
b. If choose "NA: $\leq 80\%$ LP (alt only)", AND "New Lighting System" AND "Altered Lighting System" are chosen in Table B field 01, trigger Table R.

Field 09:

- a. if all columns 09 and 10 are any of the "NA" choices, NRCA-LTI-03-A changes to "No."
b. If user choose "NA: $\leq 80\%$ LP (alt only)", AND only "Altered Lighting System" is selected in Table B field 01 AND Table C field 08 \geq Table C column 05*0.8 then trigger note in Table D row 17.
c. If user choose "NA: $\leq 80\%$ LP (alt only)", AND "New Lighting System" AND "Altered Lighting System" are chosen in Table B field 01, trigger Table R.

Filed 10:

- a. If user choose "NA: $\leq 80\%$ LP (alt only)", AND only "Altered Lighting System" is selected in Table B field 01 AND Table C field 08 \geq Table C column 05*0.8 then trigger note in Table D row 17.
b. If user choose "NA: $\leq 80\%$ LP (alt only)", AND "New Lighting System" AND "Altered Lighting System" are chosen in Table B field 01, trigger Table R.

Filed 11: if user checks the box, NRCA-LTI-04-E changes to "Yes"

**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft ²)	Area (ft ²)	Allowed Wattage (watts)	Additional Allowance/ Adjustment
					<input type="checkbox"/> Area Category (Triggers Table J) <input type="checkbox"/> PAF (Triggers Table F)
					<input type="checkbox"/> Area Category (Triggers Table J) .. PAF (Triggers Table F)
					<input type="checkbox"/> Area Category (Triggers Table J) <input type="checkbox"/> PAF (Triggers Table F)

Continue with Table I - Conditioned Spaces



Totals Allowed Wattage(watts) *(Enter the sum of 05 above)*

Field Name	Data Entry
Totals Allowed Wattage(watts)	

Continue with Table I - Unconditioned Spaces

Unconditioned Spaces

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft ²)	Area (ft ²)	Allowed Wattage (watts)	Additional Allowance/ Adjustment
					<input type="checkbox"/> Area Category (Triggers Table J) <input type="checkbox"/> PAF (Triggers Table F)
					<input type="checkbox"/> Area Category (Triggers Table J) <input type="checkbox"/> PAF (Triggers Table F)



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					<input type="checkbox"/> Area Category (Triggers Table J) <input type="checkbox"/> PAF (Triggers Table F)
--	--	--	--	--	---

Totals Allowed Wattage(watts) (Enter the sum of 05 above)

Field Name	Data Entry
Total Allowed Wattage(watts)	

Note:

Field 02: This dropdown will customize based on whether complete building or area category is chosen in Table B (same as Table I column 02)

Field 03: fill -out from Table 140.6-B and Table 140.6-C

Field 05: calculated as $LPD \times 04$ (LPD is determined based on 02 selection)



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J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

All areas indicated in Table I as using an additional allowance using the Area Category Method have been included in this table to calculate the additional allowance per Table 140.6-C / 170.2-M.

Conditioned Spaces

01	02	03	04	05	06	07	08	09	10
Area Description	Primary Function Area	Applicable Qualifying Lighting System from Table 140.6-C	Allowed Density (W/ft ²) or (W/lf)	Ltg Area, Length or ATM/ Mirror (ft ² , lf or #)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	Number of Luminaires	Total Design Watts



Field Name	Data Entry
Total Design Watts <i>(sum of column 10 for space)</i>	
Calculated Allowance (Watts) <i>(sum of column 06 for space)</i>	
Total Additional Allowance for this area <i>(Total Design Watts or Calculated Allowance, whichever is less)</i>	

Field	Field Name	Data Entry
10	Total Additional Allowance (Watts) CONDITIONED SPACES	

Continue with Table J - Unconditioned Spaces



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Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10
Area Description	Primary Function Area	Applicable Qualifying Lighting System from Table 140.6-C	Allowed Density (W/ft ²) or (W/lf)	Ltg Area, Length or ATM/ Mirror (ft ² , lf or #)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	Number of Luminaires	Total Design Watts



Continue with Table J - Unconditioned Spaces

Field Name	Data Entry
Total Design Watts (sum of column 10 for space)	
Calculated Allowance (Watts) (sum of column 06 for space)	
Total Additional Allowance for this area (Total Design Watts or Calculated Allowance, whichever is less)	

Field	Field Name	Data Entry
10	Total Additional Allowance (Watts) UNCONDITIONED SPACES	

Notes:

Field 01: dropdown list from Table I

Field 02: dropdown list from Table I

Field 03: dropdown list. Customize based on Function Area in 02 Filed 04: dropdown list

Field 06: calculated as 04×05 (if Field 03 is "ATM/ Ticket Machine", calculated as $100 + ((J05 - 1) * 50)$). Same for Unconditioned Spaces.

Field 07: dropdown list from Table F

Field 08: from Table F based on 07

Field 10: calculated as 08×09

Field 11: sum of Total Additional Allowance for whole table

**K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE**

This table includes areas using the Tailored Method per §140.6(c)3/§170.2(e)4B. If additional Tailored Method "use it or lose it" allowances are used it is also indicated. Lighting that qualifies for one of the additional allowances shall not qualify for another additional allowance.

Conditioned Spaces

Field	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	01
General Lighting Power Allowance Table K	<input type="checkbox"/> Wall Display Lighting Table L	<input type="checkbox"/> Floor Display & Task Lighting Table M	<input type="checkbox"/> Decorative & Special Effects Table N	<input type="checkbox"/> Very Valuable Merchandise Table O	Total Allowed Watts using Tailored Method

Calculated General Lighting Power Allowance

02	03	04	05	06	07	08	09
Area Description	Primary Function Area per Table 140.6-D/ 170.2-N	Illuminance Value (LUX)	Room Configuration	Allowed Density (W/ft ²)	Area (ft ²)	Extra Allowance (Watts)	Power Adjustment (See Table P)
							<input type="checkbox"/> PAF



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							<input type="checkbox"/> PAF
							<input type="checkbox"/> PAF

Select option if Room Configuration is selected above

Room Configuration	Data Entry
If field 05 = Rectangular	<input type="checkbox"/> Room Length (ft)
Non-Rectangular	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Perimeter (ft)
Room Height (ft)	
Room Cavity Ratio (RCR)	
Total General Power Allowance (Watts) CONDITIONED SPACES	

Continue with Table K - Unconditioned Spaces



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Unconditioned Spaces

Field	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	Additional "Use it or lose it" Allowances	01
General Lighting Power Allowance Table K (below)	<input type="checkbox"/> Wall Display Lighting Table L	<input type="checkbox"/> Floor Display & Task Lighting Table M	<input type="checkbox"/> Decorative & Special Effects Table N	<input type="checkbox"/> Very Valuable Merchandise Table O	Total Allowed Watts using Tailored Method

Calculated General Lighting Power Allowance

02	03	04	05	06	07	08	09
Area Description	Primary Function Area per Table 140.6-D/ 170.2-N	Illuminance Value (LUX)	Room Configuration	Allowed Density (W/ft ²)	Area (ft ²)	Extra Allowance (Watts)	Power Adjustment (See Table P)
							<input type="checkbox"/> PAF
							<input type="checkbox"/> PAF



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							<input type="checkbox"/> PAF
--	--	--	--	--	--	--	------------------------------

Select option if Room Configuration is selected above

Room Configuration	Data Entry
Rectangular	<input type="checkbox"/> Room Length (ft)
Non-Rectangular	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Perimeter (ft)
Room Height (ft)	
Room Cavity Ratio (RCR)	
Total General Power Allowance (Watts) UNCONDITIONED SPACES	

Notes:

Field 03: dropdown list

IF field 05 = Rectangular: "Room Length (ft)" ELSE IF field 05 = Non-Rectangular: "Not Applicable"

IF field 05 = Rectangular: "Room Width (ft)" ELSE IF field 05 = Non-Rectangular: "Perimeter (ft)"

Field 04: dropdown list.

If L03 = "Auditorium Area": lux = 300; if L03 = "Convention Area": lux = 300; if L03 = "Conference Area": lux = 300; if L03 = "MF Conference Area": lux = 300; if L03 = "Multipurpose Area": lux = 300; if L03 = "MF Multipurpose Area": lux = 300; if L03 = "Meeting Center Area": lux = 300; if L03 = "MF Meeting Center Area": lux = 300; if L03 = "Dining Areas": lux = 200; if L03 = "MF Dining Areas": lux = 200; if L03 = "Exhibit, Museum Areas": lux = 150; if L03 = "Hotel Ballroom/Events": lux = 400; if L03 = "Hotel Lobby": lux = 200; if L03 = "Main Entry Lobby": lux = 200; if L03 = "MF Main Entry Lobby": lux = 200; if L03 = "Religious Worship Area": lux = 300; if L03 = "Retail Sales – Grocery": lux = 600; if L03 = "Retail Merchandise Sales": lux = 500; if L03 = "Showroom Area": lux = 500; if L03 = "Motion Picture Theater": lux = 200; if L03 = "Performance Theater": lux = 200;

Filed 06: This value will be determined based on illuminance value and room cavity ratio



*if L04 = 150: if (rcr <= 2.0) { lpd = 0.35; } else if (rcr <= 3.5) { lpd = 0.40; } else if (rcr <= 7.0) { lpd = 0.50; } else if (rcr > 7.0) { lpd = 0.65; }
else if L04 = 200: if (rcr <= 2.0) { lpd = 0.40; } else if (rcr <= 3.5) { lpd = 0.50; } else if (rcr <= 7.0) { lpd = 0.65; } else if (rcr > 7.0) { lpd = 0.85; }
else if L04 = 300: if (rcr <= 2.0) { lpd = 0.55; } else if (rcr <= 3.5) { lpd = 0.70; } else if (rcr <= 7.0) { lpd = 0.85; } else if (rcr > 7.0) { lpd = 1.20; }
else if L04 = 400: if (rcr <= 2.0) { lpd = 0.65; } else if (rcr <= 3.5) { lpd = 0.80; } else if (rcr <= 7.0) { lpd = 1.05; } else if (rcr > 7.0) { lpd = 1.25; }
else if L04 = 500: if (rcr <= 2.0) { lpd = 0.80; } else if (rcr <= 3.5) { lpd = 0.90; } else if (rcr <= 7.0) { lpd = 1.25; } else if (rcr > 7.0) { lpd = 1.55; }
else if L04 = 600: if (rcr <= 2.0) { lpd = 0.90; } else if (rcr <= 3.5) { lpd = 1.05; } else if (rcr <= 7.0) { lpd = 1.40; } else if (rcr > 7.0) { lpd = 2.00; }*

*Field 05 & 06: Room Cavity Ratio (RCR): IF 05="Rectangular"; RCR = (5*Height*(Length+Width))/(Length*Width); ELSE: RCR = 2.5*Height*Width/07*

Field 09: Triggers Table P



INDOOR LIGHTING

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	11
Area Description	Calculated Allowance (Watts) Wall Display Length (lf)	Calculated Allowance (Watts) Wall Display Density (W/Lf)	Calculated Allowance (Watts) Extra Allowance (Watts)	Design Watts Luminaire Name or Item Tag	Design Watts Mounting Height (Ft)	Design Watts Mounting Height Factor	Design Watts Watts Per Luminaire	Design Watts # Of Luminaires	Design Watts Total Design Watts	Additional Allowance (Watts)

Field Name	Data Entry
Total Design Watts for this Area	



INDOOR LIGHTING

Continue with Table L - Conditioned Spaces

Field Name	Data Entry
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	

Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	11
Area Description	Calculated Allowance (Watts) Wall Display Length (lf)	Calculated Allowance (Watts) Wall Display Density (W/Lf)	Calculated Allowance (Watts) Extra Allowance (Watts)	Design Watts Luminaire Name or Item Tag	Design Watts Mounting Height (Ft)	Design Watts Mounting Height Factor	Design Watts Watts Per Luminaire	Design Watts # Of Luminaires	Design Watts Total Design Watts	Additional Allowance (Watts)



INDOOR LIGHTING

--	--	--	--	--	--	--	--	--	--	--

Field Name	Data Entry
Total Design Watts for this Area	

Field Name	Data Entry
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	

Note:

Field 01: dropdown from Table K

Field 03: fill based on Primary Function (in Table K) of the area

if L03 = "Auditorium Area": = 3.00; if L03 = "Convention Area": = 2.00; if L03 = "Conference Area": = 2.00; if L03 = "MF Conference Area": = 2.00; if L03 = "Multipurpose Area": = 2.00; if L03 = "MF Multipurpose Area": = 2.00; if L03 = "Meeting Center Area": = 2.00; if L03 = "MF Meeting Center Area": = 2.00; if L03 = "Dining Areas": = 1.25; if L03 = "MF Dining Areas": = 1.25; if L03 = "Exhibit, Museum Areas": = 11.20 if L03 = "Hotel BALLroom/Events": = 1.80; if L03 = "Lobby": = 3.40; if L03 = "Main Entry Lobby": = 3.40; if L03 = "Main Entry Lobby": = 3.50; if L03 = "Religious Worship Area": = 1.30; if L03 = "Retail Sales - Grocery": = 6.60; if L03 = "Retail Merchandise Sales": = 11.50 if L03 = "Showroom Area": = 11.50; if L03 = "Motion Picture Theater": = 2.00; if L03 = "Performance Theater": = 7.30;

Field 05: dropdown list from Table F

Field 06: dropdown list



Field 07:

Conditioned Spaces: If filed 06 is <10'7" adjustment factor is 1.00, If filed 06 is 10'7" to 14' adjustment factor is 0.85, If filed 06 is >14' to 18' adjustment factor is 0.75; If filed 06 is >18' adjustment factor is 0.70

Unconditioned Spaces: if (col06 == "> 16 feet"): "0.77"; else if (col06 == "12 to 16 feet"): "0.87"; else: "1";

Filed 08: fill out from Table F based on 05

Filed 11: L.11 = The smaller of: L.10 or (The following equation should be expanded depending on the # of luminaires per area. The example below is for three luminaires in one area.)

$(L.04 + (Fixture1DesignWatts(1-MHFactor1)) + (Fixture2DesignWatts(1-MHFactor2)) + (Fixture3Watts(1-MHFactor3)))$



M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	11
Area Description	Calculated Allowance (Watts) Area (ft ²)	Calculated Allowance (Watts) Allowed Density (W/ft ²)	Calculated Allowance (Watts) Extra Allowance (Watts)	Design Watts Luminaire Name or Item Tag	Design Watts Mounting Height (Ft)	Design Watts Mounting Height Factor	Design Watts Watts Per Luminaire	Design Watts # Of Luminaires	Design Watts Total Design Watts	Additional Allowance (Watts)

Field Name	Data Entry
Total Design Watts for this Area	



INDOOR LIGHTING

Field Name	Data Entry
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	

Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	11
Area Description	Calculated Allowance (Watts) Area (ft ²)	Calculated Allowance (Watts) Allowed Density (W/ft ²)	Calculated Allowance (Watts) Extra Allowance (Watts)	Design Watts Luminaire Name or Item Tag	Design Watts Mounting Height (Ft)	Design Watts Mounting Height Factor	Design Watts Watts Per Luminaire	Design Watts # Of Luminaires	Design Watts Total Design Watts	Additional Allowance (Watts)



Field Name	Data Entry
Total Design Watts for this Area	

Field Name	Data Entry
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	

Notes:

Field 01: dropdown from Table K

Field 03: fill based on Primary Function (in Table K) of the area

if L03 = "Auditorium Area": = 0.20 if L03 = "Convention Area": = 0.30; if L03 = "Conference Area": = 0.30; if L03 = "MF Conference Area": = 0.25; if L03 = "Multipurpose Area": = 0.30; if L03 = "MF Multipurpose Area": = 0.25; if L03 = "Meeting Center Area": = 0.30; if L03 = "MF Meeting Center Area": = 0.25;

if L03 = "Dining Areas": = 0.45; if L03 = "MF Dining Areas": = 0.25; if L03 = "Exhibit, Museum Areas": = 0.70 if L03 = "Hotel Ballroom/Events": = 0.12; if L03 = "Lobby": = 0.20; if L03 = "Main Entry Lobby": = 0.20; if L03 = "MF Main Entry Lobby": = 0.25; if L03 = "Religious Worship Area": = 0.40; if L03 = "Retail Sales - Grocery": = 0.60; if L03 = "Retail Merchandise Sales": = 0.70 if L03 = "Showroom Area": = 0.70; if L03 = "Motion Picture Theater": = 0.20; if L03 = "Performance Theater": = 0.20;

Field 05: dropdown list from Table F

Field 06: dropdown list

Field 07: If col06 is <10'7" adjustment factor is 1.00; If col06 is 10'7" to 14' adjustment factor is 0.85; If col 06 is >14' to 18' adjustment factor is 0.75; If col 06 is >18' adjustment factor is 0.70

Field 08: fill out from Table F based on 05

Field 11: M.11 = The smaller of: M.10 or (The following equation should be expanded depending on the # of luminaires per area. The example below is for three luminaires in one area.)

(M.04 + (Fixture1DesignWatts(1-MHFactor1)) + (Fixture2DesignWatts(1-MHFactor2)) + (Fixture3Watts(1-MHFactor3)))



INDOOR LIGHTING

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE/SPECIAL EFFECTS

Conditioned Spaces

01	02	03	04	05	06	07	08	09
Area Description	Calculated Allowance (Watts) Area (ft ²)	Calculated Allowance (Watts) Allowed Density (W/ft ²)	Calculated Allowance (Watts) Extra Allowance (Watts)	DESIGN WATTS Luminaire Name or Item Tag	DESIGN WATTS Watts per Luminaire	DESIGN WATTS # of Luminaires	DESIGN WATTS Total Design Watts	Additional Allowance (Watts)

Field Name	Data Entry
Total Design Watts for this Area	



INDOOR LIGHTING

Field Name	Data Entry
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	

Unconditioned Spaces

01	02	03	04	05	06	07	08	09
Area Description	Calculated Allowance (Watts) Area (ft ²)	Calculated Allowance (Watts) Allowed Density (W/ft ²)	Calculated Allowance (Watts) Extra Allowance (Watts)	DESIGN WATTS Luminaire Name or Item Tag	DESIGN WATTS Watts per Luminaire	DESIGN WATTS # of Luminaires	DESIGN WATTS Total Design Watts	Additional Allowance (Watts)



Field Name	Data Entry
Total Design Watts for this Area	

Field Name	Data Entry
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	
Total Additional Allowance (Watts) UNCONDITIONED SPACES	

Note:

Field 01: dropdown from Table K

Field 03: fill out based on Primary Function (in Table K) of the area

Lpd = 0.35; for all Primary Function areas

Field 05: dropdown list from Table F

Field 08: fill out from Table F based on 05

**O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE**

This category includes case lighting in retail merchandise sales, museums, and religious settings, where lighting of small art objects, artifacts, or valuable collections is required. The display case shall contain jewelry, coins, fine china, fine crystal, precious stones, silver, small art objects or artifacts, and/or valuable collections the display of which involves customer inspection of very fine detail from outside of a locked case. Lighting in this category must comply with the applicable requirements in §140.6(c)3J/§170.2(e)4B.

Conditioned Spaces

01	02	03	04	05	06	07	08
Area Description	Description of Display Case	QUALIFYING FLOOR AREA Area (ft ²)	QUALIFYING FLOOR AREA Allowed Density (W/ft ²)	QUALIFYING FLOOR AREA Extra Allowance (Watts)	QUALIFYING DISPLAY CASE AREA Area of Display Case (ft ²)	QUALIFYING DISPLAY CASE AREA Allowed Density (W/ft ²)	QUALIFYING DISPLAY CASE AREA Extra Allowance (Watts)



INDOOR LIGHTING

Continue with Table O - Conditioned Spaces

09	10	11	12	13
DESIGN WATTS Luminaire Name or Item Tag	DESIGN WATTS Watts per Luminaire	DESIGN WATTS # of Luminaires	DESIGN WATTS Total Design Watts	Additional Allowance (Watts)

Field Name	Data Entry
Total Design Watts for this Area	

Field Name	Data Entry
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	

Continue with Table Q - Unconditioned Spaces



INDOOR LIGHTING

Unconditioned Spaces

01	02	03	04	05	06	07	08
Area Description	Description of Display Case	QUALIFYING FLOOR AREA Area (ft ²)	QUALIFYING FLOOR AREA Allowed Density (W/ft ²)	QUALIFYING FLOOR AREA Extra Allowance (Watts)	QUALIFYING DISPLAY CASE AREA Area of Display Case (ft ²)	QUALIFYING DISPLAY CASE AREA Allowed Density (W/ft ²)	QUALIFYING DISPLAY CASE AREA Extra Allowance (Watts)



INDOOR LIGHTING

Continue with Table O - Unconditioned Spaces

09	10	11	12	13
DESIGN WATTS Luminaire Name or Item Tag	DESIGN WATTS Watts per Luminaire	DESIGN WATTS # of Luminaires	DESIGN WATTS Total Design Watts	Additional Allowance (Watts)

Field Name	Data Entry
Total Design Watts for this Area	

Field Name	Data Entry
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	
Total Additional Allowance (Watts) CONDITIONED SPACES	

**Notes:***Field 01: dropdown from Table K**Field 04: fill based on Primary Function (in Table K) of the area**Lpd = 0.50; for all Primary Function areas**Field 07: fill based on Primary Function (in Table K) of the area**Lpd = 0.70; for all Primary Function areas**Field 09: fill from Table F**Field 10: fill from Table F Table F***P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))***This table includes all areas indicated in Table I or Table K as using a PAF credit described in §140.6(a)2/§170.2(e)2B.***Conditioned Spaces**

01	02	02	02	02	02	02	02	02	02
Area Description	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 1	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 2A	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 2B	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 3A*	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 3B*	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 4*	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 5*	PAF per §140.6(a) 2/§170.2 (e)2B ¹ 6*	PAF per §140.6(a)2 /§170.2 (e)2B ¹ 7*
	Pick up to one from (1, 2A,2B)	Pick up to one from (1, 2A,2B)	Pick up to one from (1, 2A,2B)	Pick up to one from (3A, 3B,4)	Pick up to one from (3A, 3B,4)	Pick up to one from (3A, 3B,4)	Pick up to one from (5, 6,7)	Pick up to one from (5, 6,7)	Pick up to one from (5, 6,7)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



INDOOR LIGHTING

Continue with Table P - Conditioned Spaces

03	04	05	06	07
Luminaire Name or Item Tag	Watts per Luminaire	Number of Luminaires	Lighting Controlled (Watts)	Additional Control Credit Allowance (Watts)

Field	Field Name	Data Entry
08	All spaces applying PAF 5, 6, or 7 include a daylight design meeting requirement in §140.3(d). See Table S.	<input type="checkbox"/>

Field	Field Name	Data Entry
09	Total Power Adjustment (Watts) CONDITIONED SPACES	

Continue with Table O - Unconditioned Spaces



INDOOR LIGHTING

Unconditioned Spaces

01	02	02	02	02	02	02	02	02	02
Area Description	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 1	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 2A	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 2B	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 3A*	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 3B*	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 4*	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 5*	PAF per \$140.6(a) 2/\$170.2 (e)2B ¹ 6*	PAF per \$140.6(a)2 /\$170.2 (e)2B ¹ 7*
	Pick up to one from (1, 2A,2B)	Pick up to one from (1, 2A, B)	Pick up to one from (1, 2A, B)	Pick up to one from (3A, 3B,4)	Pick up to one from (3A, 3B,4)	Pick up to one from (3A, 3B,4)	Pick up to one from (5, 6,7)	Pick up to one from (5, 6,7)	Pick up to one from (5, 6,7)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Continue with Table P - Conditioned Spaces

03	04	05	06	07
Luminaire Name or Item Tag	Watts per Luminaire	Number of Luminaires	Lighting Controlled (Watts)	Additional Control Credit Allowance (Watts)



INDOOR LIGHTING

Field	Field Name	Data Entry
08	All spaces applying PAF 5, 6, or 7 include a daylight design meeting requirement in §140.3(d). See Table S.	<input type="checkbox"/>

Field	Field Name	Data Entry
09	Total Power Adjustment (Watts) CONDITIONED SPACES	

Notes:

Field 01: fill from Table I or Table K

Field 02: *Can be used in conjunction with other PAF'S

Field 02.3A: if checked, NRCA-LTI-05-A changes to "Yes" in Table V. Same for Unconditioned Spaces

Field 02.3B: if checked, NRCA-LTI-05-A changes to "Yes" in Table V. Same for Unconditioned Spaces

Field 02.5: If 5*, 6* OR 7* are checked NRCA-ENV-03 moves to "Yes in Table V. Same for Unconditioned Spaces

Field 03: pull down from Table F

Field 04: fill from Table F based on 03 selection

Field 07: PAF x col06. For instance, if user choose 2A and 3A, PAF = 0.3 + 0.1 = 0.4

Field 08: field 08 will be greyed out unless ANY space under Conditioned Areas selects "5", "6" or "7" in field 02.



If this column is un-greyed, Table S. expands for user input.

PAF Calculation: if PAF1 is checked: PAF += 0.10; if PAF2A is checked: PAF += 0.30; if PAF2B is checked: PAF += 0.20; if PAF3A is checked: PAF += 0.10; if PAF3B is checked: PAF += 0.05; if PAF4 is checked: PAF += 0.05; if PAF5 is checked: PAF += 0.05; if PAF6 is checked: PAF += 0.05; if PAF7 is checked: PAF += 0.10

¹ FOOTNOTES: PAFs outlined in Table 140.6-A/170.2-L include 1) Daylight continuous dimming plus OFF; 2A) Occupant sensors in offices with one sensor per $\leq 125 \text{ ft}^2$; 2B) Occupant sensors in offices with one sensor per 126 - 250 ft^2 ; 3A) Institutional tuning, non-daylit areas; 3B) Institutional tuning, daylit areas; 4) Demand response; 5) Clerestory fenestration; 6) Horizontal slats; 7) Light shelves.

² Luminaires that qualify for PAF 5, 6, or 7 can be used in conjunction with PAF 1.

**Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS**

Indoor lighting alterations complying prescriptively with §141.0(b)2l(iii)/§180.2(b)4biv are documented in this table. Any control options having a * will include a note in the Notes section of this table detailing how compliance is achieved, otherwise the compliance status in Table C will say "DOES NOT COMPLY".

Field	Field Name	Data Entry
01	Alteration scope includes a one-for-one luminaire alteration within a building or tenant space of 5,000 ft ² or less per §141.0(b)2l(iii)/§180.2(b)4biv.	<input type="checkbox"/>

Field	Field Name	Data Entry	Field Name	Data Entry
02	At least one complete floor or complete tenant space includes a one-for-one luminaire alteration of 50 or less luminaires, per annum. These spaces do not need to comply with Part 6 requirements and therefore do not need to be included in tables below per Exception 6 to §141.0(b)2l/§180.2(b)4biv.	<input type="checkbox"/>	Applicable Spaces	

Or

Field	Field Name	Data Entry	Field Name	Data Entry
02	At least one complete floor or complete tenant space includes a one-for-one luminaire alteration of 50 or less luminaires, per annum. These spaces do not need to comply with Part 6 requirements and therefore do not need to be included in tables below per Exception 6 to §141.0(b)2l/§180.2(b)4biv.	<input type="checkbox"/>	Exception 6 applies to all spaces within the permit application	<input type="checkbox"/>



INDOOR LIGHTING

Fixture Schedule (Include all luminaires being altered in the project)

03	04	05	06	07	08
Pre-alteration Luminaire Information Name or Item Tag	Pre-alteration Luminaire Information Complete Luminaire Description	Pre-alteration Luminaire Information Watts per luminaire ¹	Pre-alteration Luminaire Information How Wattage is Determined	Pre-alteration Luminaire Information Total number of Luminaires	Pre-alteration Luminaire Information Total Watts

Continue with Table Q - Fixture Schedule



INDOOR LIGHTING

09	10	11	12	13	14
Post-alteration Luminaire Information Name or Item Tag	Post-alteration Luminaire Information Complete Luminaire Description	Post-alteration Luminaire Information Watts per luminaire ¹	Post-alteration Luminaire Information How Wattage is Determined	Post-alteration Luminaire Information Total number of Luminaires	Post-alteration Luminaire Information Total Watts

Field Name	Data Entry
Percent Power Reduction ²	
Total Pre-alteration Wattage	
Total Post-alteration Wattage	

¹ FOOTNOTE: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)/§160.5(b)1

² Must be at least 40% to comply with §141.0(b)2I(iii)/§180.2(b)4biv



INDOOR LIGHTING

Continue with Table Q - Mandatory Controls

Mandatory Controls

15	16	17	18	19
Area Description	Primary Function Area	Manual Area Controls §130.1(a)/§160.5(b)4A	Shut-Off Controls §130.1(c)/§160.5(b)4C	* NOTES: Controls with a * require a note in the space below explaining how compliance is achieved



INDOOR LIGHTING

R. 80% LIGHTING POWER FOR ALTERATIONS- CONTROLS EXCEPTIONS

Indoor lighting alteration spaces complying prescriptively with §141.0(b)2l(ii)/§180.2(b)4Bivb are included in this table to document the power reduction. If the Percent of Indoor Lighting Power Allowance exceeds 80%, the compliance status in Table C for Controls will say "DOES NOT COMPLY".

01	02	03	04	05	06	07	08	09
Area Description	Complete Building or Area Category Primary Function Area	CALCULATED ALLOWANCE (Watts) Area (ft ²)	CALCULATED ALLOWANCE (Watts) Allowed Density (W/ft ²)	CALCULATED ALLOWANCE (Watts) Allowance (Watts)	DESIGN WATTS Luminaire Name or Item Tag	DESIGN WATTS Watts per Luminaire	DESIGN WATTS # of Luminaires	Total Design Watts



INDOOR LIGHTING

Field Name	Data Entry
Total Allowance (Watts) for all Areas	
Total Design Watts for all Areas	

Field Name	Data Entry
Percent of Indoor Lighting Power Allowance	
Percent of Indoor Lighting Power Allowance	
Percent of Indoor Lighting Power Allowance	

Note:

Field 01: Clicking this box will allowed to fill out the other rows in the fixture table for user input.

Field 02: (Or) If this is checked, all columns in the fixture table grey out & all Mandatory Controls fields AND Table C says "Complies with Exceptional Conditions" & Exceptional condition note in Table D should be triggered.

Table "Mandatory Controls": The Mandatory Controls Table is displayed and required if Table Q triggers, unless Exception 6 applies to all spaces, as indicated above.

Field 12: drop down list

Field 16: use Area Category List

Field 17: drop down list

Field 18: drop down list

Selecting "Whole Building: Auto Time Switch" will triggers NRCA-LTI-02 to move from "No" to "Yes" in Table T.

Selecting "Whole Building: EMCS" will triggers NRCA-LTI-02 to move from "No" to "Yes" in Table S.

Selecting "Whole Building: Occ Sensor" will triggers NRCA-LTI-02 to move from "No" to "Yes" in Table T.

*Selecting "Occ Sensor" will triggers NRCA-LTI-02 to move from "No" to "Yes" in Table T. Filed 19: grey unless a choice with a * is selected in field 17 or 18.*

Selecting "Auto Time Switch" will triggers NRCA-LTI-02 to move from "No" to "Yes" in Table T.

Selecting "EMCS" Triggers NRCA-LTI-02 to move from "No" to "Yes" in Table S.



Table "R. 80% LIGHTING POWER FOR ALTERATIONS- CONTROLS EXCEPTIONS": If table triggered, but column 01-04 & 06 -08 aren't completed, trigger Table D row 19 note.

Field 02: Same list as Table I field 02

Field 04: fill out based on Primary Function (in 02) "Same allowed density as in Table I field 03, based on same Function Area list."
Percent of Indoor Lighting Power Allowance: If > .8, trigger note in Table D row 18.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This table documents clerestories, horizontal slats or light shelves meet the requirements in §140.3(d)/§170.2(e)2B if a Power Adjustment Factor was claimed on Table P. These features must be documented on the architectural plans or where appropriate within the construction documents. This PAF also must be verified in the field with an acceptance test per Table U.

Field	Field Name	Data Entry
01	Compliance Strategy	<input type="checkbox"/> Clerestories <input type="checkbox"/> Horizontal Slats <input type="checkbox"/> Light Shelves

Clerestory Fenestration

Field	Yes	Not Applicable	Requirement
02	<input type="checkbox"/>		Installed on East, West or South façade
03	<input type="checkbox"/>		Head height \geq 10ft above finished floor
04	<input type="checkbox"/>		Glazing height \geq 0.10 x head height
05	<input type="checkbox"/>	<input type="checkbox"/>	Operable shading on clerestory is controlled separately from other shading

Continue with Table S

**Interior and Exterior Horizontal Slats**

Field	Yes	Not Applicable	Requirement
06	<input type="checkbox"/>		Installed on East or West façade with 20-30% WWR
07	<input type="checkbox"/>		Exterior slats level or sloped downward from fenestration. Interior slats level or sloped upward from fenestration. Slats are permanently mounted and not adjustable.
08	<input type="checkbox"/>		Slats have a Projection Factor per Table 140.3-E/170.2-N Daylighting Devices and extend the entire height of the vertical fenestration and beyond each side of the window jamb by a distance \geq their horizontal projection. Slats do not need to extend beyond the jamb if they are located entirely within the fenestration rough opening or a fin is located at the jamb and extends vertically the entire height of the jamb and horizontally the entire depth of the projection.
09	<input type="checkbox"/>	<input type="checkbox"/>	Slats have a minimum Distance Factor of 0.3 calculated per §140.3(d)/§170.2(e)2Bxii
10	<input type="checkbox"/>		Slats have a minimum Visible Reflectance of 0.50 tested in accordance with ASTM E903, and are either opaque or have a maximum Visible Transmittance of 0.03 tested in accordance with ASTM E1175

Field	Field Name	Data Entry
11	Location of slat design in construction documents:	

Continue with Table S



Interior and Exterior Light Shelves

Field	Yes	Not Applicable	Requirement
12	<input type="checkbox"/>	<input type="checkbox"/>	Where there is vertical fenestration area below the light shelf, both interior and exterior light shelves shall be installed.
13	<input type="checkbox"/>		Light shelves installed adjacent to clerestory fenestration on south façade with > 30% WWR and with a head height \leq 1ft below the finished ceiling.
14	<input type="checkbox"/>		Exterior shelves level or sloped downward from fenestration. Interior shelves level or sloped upward from fenestration.
15	<input type="checkbox"/>		Shelves have a Projection Factor per Table 140.3-D Daylighting Devices and extend beyond each side of the window jamb by a distance \geq their horizontal projection.
16	<input type="checkbox"/>	<input type="checkbox"/>	Shelves have a minimum Distance Factor of 0.3 calculated per §140.3(d)/§170.2(e)2Bxii
17	<input type="checkbox"/>		Shelves have a top surface with a minimum Visible Reflectance of 0.50 tested in accordance with ASTM E903, or an exterior light shelf installed > 2ft below the clerestory sill.

Field	Field Name	Data Entry
18	Location of slat design in construction documents:	

Note:

Field 01: User should be able to choose more than one.

Selecting "Clerestories" will allow to fill out Clerestory Fenestration table

Selecting "Horizontal Slats" will allow to fill out Interior and Exterior Horizontal Slats table

Selecting "Light Shelves" will allow to fill out Interior and Exterior Light Shelves table

**T. DWELLING UNIT LIGHTING**

This table documents compliance with mandatory requirements for dwelling unit indoor lighting per §160.5(a) and §180.2(b)4A for alterations. Lighting systems in common use areas providing shared provisions for living, eating, cooking, or sanitation to dwelling units that would otherwise lack these provisions may document compliance with §160.5(a) in this table or may document compliance with lighting for nonresidential occupancies in other tables of this form.

01	Indicate lighting and electrical components included in multifamily dwelling units	<input type="checkbox"/> Luminaires	<input type="checkbox"/> Blank Electrical Boxes
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Luminaires

Field	Yes	Not Applicable	Requirement
02	<input type="checkbox"/>		All installed luminaires shall meet the requirements in TABLE 160.5-A except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers, and non-removable lighting attached to ceiling fans; lighting internal to drawers, cabinetry, and linen closets with an efficacy of 45 lumens per watt or greater.
03	<input type="checkbox"/>	<input type="checkbox"/>	Screw based luminaires shall contain lamps that comply with Reference Joint Appendix JA8.
04	<input type="checkbox"/>	<input type="checkbox"/>	<p>Recessed Downlight Luminaires other than those marked for use in fire-rated installations and other than recessed luminaires installed in non-insulated ceilings shall meet all of the following requirements:</p> <ul style="list-style-type: none"> - Shall not contain screw base lamp sockets; and - Have a label that certifies the luminaire is airtight with air leakage less than 2.0 cfm at 75 Pascals when tested in accordance with ASTM E283. An exhaust fan housing with integral light shall not be required to be certified airtight; and - Be sealed with a gasket or caulk between the luminaire housing and ceiling, and have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk, or be installed per manufacturer's instructions to maintain airtightness between the luminaire housing and ceiling; and - Meet the clearance and installation requirements of California Electrical Code Section 410.116 for recessed luminaires.



INDOOR LIGHTING

05	<input type="checkbox"/>	<input type="checkbox"/>	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, shall not be installed in enclosed or recessed luminaires.
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Lighting Controls

Field	Yes	Not Applicable	Requirement
06	<input type="checkbox"/>		Lighting shall have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF. Ceiling fans may provide control of integrated lighting via a remote control.
07	<input type="checkbox"/>		Lighting controls shall comply with the applicable requirements of Section 110.9.
08	<input type="checkbox"/>	<input type="checkbox"/>	No controls shall bypass a dimmer, occupant sensor or vacancy sensor function where that dimmer or sensor has been installed to comply with Section 160.5(a)2.
09	<input type="checkbox"/>	<input type="checkbox"/>	An Energy Management Control System (EMCS) or a multiscene programmable controller may be used to comply with dimming, occupancy, and lighting control requirements in Section 160.5(a)2 if it provides the functionality of the specified controls in accordance with Section 110.9, and the physical controls specified in in Section 160.5(a)2A.
10	<input type="checkbox"/>		In bathrooms, garages, laundry rooms, utility rooms, and walk-in closets, at least one installed luminaire shall be controlled by an occupancy or vacancy sensor providing automatic-off functionality.
11	<input type="checkbox"/>	<input type="checkbox"/>	For lighting internal to drawers and cabinetry with opaque fronts or doors, controls that turn light off when the drawer or door is closed shall be provided.
12	<input type="checkbox"/>		Lighting in habitable spaces, including but not limited to living rooms, dining rooms, kitchens, and bedrooms, shall have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down OR luminaires must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Forward phase cut dimmers controlling LED light sources shall comply with NEMA SSL 7A. Ceiling fans may provide control of integrated lighting via a remote control. Lighting internal to drawers and cabinetry with opaque fronts or doors or with automatic off controls does not need to provide dimming controls.



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13	<input type="checkbox"/>		Integrated lighting of exhaust fans shall be controlled independently from the fans. The following shall be controlled separately from ceiling-installed lighting such that one can be turned on without turning on the other: - Undercabinet lighting - Undershelf lighting - Interior lighting of display cabinets - Switched outlets
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Blank Electrical Boxes

Field	Yes	Not Applicable	Requirement
14	<input type="checkbox"/>		The number of electrical boxes that are more than 5 feet above the finished floor and do not contain a luminaire or other device shall be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, low voltage wiring or fan speed control.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Yes	No	Form/Title	Field Inspector
•	○	LMCI-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Note:

LMCI-LTI-01-E: Always Yes

**V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Yes	No	Form/Title	Field Inspector
<input type="radio"/>	<input type="radio"/>	LMCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<input type="radio"/>	<input type="radio"/>	LMCA-LTI-03-A - Must be submitted for automatic daylight controls.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<input type="radio"/>	<input type="radio"/>	LMCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<input type="radio"/>	<input type="radio"/>	LMCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<input type="radio"/>	<input type="radio"/>	LMCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Notes:

LMCA-LTI-03-A: should start as "No" and move to "Yes" if Table H column 09 OR Table H column 10 says "included" for any row in Table H.

LMCA-ENV-03-F: Starts as "No", moves to "Yes" if 5, 6* OR 7* are checked in Table P for any row.*

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Installation documentation is accurate and complete

SIGNATORY	Entry
Documentation Author Name	
Documentation Author Signature	
Company	
Date Signed	
CEA/HERS Certification Identification (if applicable)	
Address	
City/State/Zip	
Phone	

Responsible Person's Declaration Statement

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.



INDOOR LIGHTING

5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

SIGNATORY	Entry
Responsible Designer Name	
Responsible Designer Signature	
Company	
Date Signed	
License	
Address	
City/State/Zip	
Phone	
Date Signed	

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300