Lighting Summary — LGT-SUM

2015 Washington State Energy Code Compliance Forms for Commercial Buildings including R2, R3, R4 over 3 stories and all R1 — Revised July 2016

Project Info

Compliance forms do not require a password to use. *Instructional and calculating cells are write-protected.*

Project Title:	**Kunpeng LLC Retail Shell Building**	Date	8/8/2016
Applicant Information. Provide contact information for individual who can respond to inquiries about compliance form information provided.		For Building Department Use	
Company Name:	**RGU Architecture and Planning**		
Company Address:	**1600 N. 20th Ave #C, Pasco, Washington**		
Applicant Name:	**Rick Giberson**		
Applicant Phone:	**509-591-0980**		
Applicant Email:	**rick@rguarchitecture.com**		

Project Description

☑ New Building ☐ Addition ☐ Alteration ☐ Plans Included

Include PROJ-SUM form (included in envelope forms workbook) with lighting compliance forms.

Building Additions

Refer to Section C502.2.6 for additional requirements.

Compliance Method	Interior lighting	Exterior lighting
Lighting systems in addition area comply with all applicable provisions as a stand alone new construction project	☐	☑
Lighting systems in addition are combined with existing building lighting systems to demonstrate compliance	☐	☐

Addition is combined with existing:
*For **interior** lighting projects, include new + existing interior lighting fixture wattage in Proposed Lighting Wattage table in LTG-INT-BLD or LTG-INT-SPACE form.*
*For **exterior** lighting projects, include new + existing exterior lighting fixture wattage in Proposed Tradable and Proposed Non-Tradable Lighting Wattage tables in LTG-EXT form.*

Interior and Exterior Lighting Alterations

Select all Lighting Power and Lighting Control elements that apply to the scope of the retrofit project. If project includes a combination of spaces where less than 50% of the existing fixtures are replaced in some spaces, and 50% or more of the fixtures are replaced in others, then provide separate lighting power compliance forms for the two retrofit conditions. Spaces undergoing the same type of retrofit may be combined into one lighting power compliance form.

Refer to Section C503.6 for additional requirements.

All alteration lighting controls shall be commissioned per C408.3.

Lighting Power	Interior lighting	Parking garage	Exterior lighting
50% or more of existing are replaced	☐	☐	☐
Less than 50% of existing are replaced	☐	☐	☐
Lamp and/or ballast replacement only – existing total wattage not increased	☐	☐	☐

***50% or more replaced** - Total lighting power of new + existing-to-remain fixtures shall comply with total LPA per Sections C405.4.2 and C405.5.2. Include new + existing-to-remain fixtures in Proposed Lighting Wattage table in LTG-INT-BLD, LTG-INT-SPACE or LTG-EXT form.*

***Less than 50% replaced** - Total lighting power of new + existing-to-remain fixtures shall not exceed the total lighting power prior to alteration. Include new + existing-to-remain fixtures in the Proposed Lighting Wattage table in LTG-INT-BLD, LTG-INT-SPACE or LTG-EXT form.*

***50% threshold** applies to number of luminaires for interior spaces and parking garages, and total installed wattage for exterior luminaires.*

Lighting Controls	Interior lighting	Parking garage	Exterior lighting
New wiring installed to serve added fixtures and/or fixtures relocated to new circuit(s)	☐	☐	☐
New or moved lighting panel	☐	☐	☐
Interior space is reconfigured - luminaires unchanged or relocated only	☐		

***New wiring or circuit** - For interior lighting, provide required manual controls per C405.2.3, occupancy sensor controls per C405.2.1, daylight responsive controls per C405.2.4 and application specific lighting controls per C405.2.5. For exterior lighting, provide required controls per C405.2.7.*

***New or moved panel** - Provide all applicable lighting controls as noted for New Wiring and automatic time switch controls per C405.2.2.*

***Reconfigured interior space** - Provide all required lighting controls that apply to a new interior space. Application specific lighting control provisions per C405.2.5 do not apply to reconfigured spaces.*

☐ ***No changes are being made to the interior or exterior lighting systems and existing space uses and configuration are not changed.***

Change of Space Use

☐ Existing interior lighting systems in areas under-going a change in space use are upgraded to comply with LPAs for the new space types per Tables C405.4.2(1) or C405.4.2(2).

Identify interior spaces requiring LPD upgrade to the current Code in Proposed Lighting Wattage table in LTG-INT-BLD or LTG-INT-SPACE form.

Lighting Summary, cont. LGT-SUM

2015 Washington State Energy Code Compliance Forms for Commercial Buildings including R2, R3, R4 over 3 stories and all R1 Revised July 2016

Project Title:	Kunpeng LLC Retail Shell Building	Date	8/8/2016

Interior Lighting System Description	
Interior Lighting Power Allowance Method	☐ Building Area Method ☐ Space-by-space Method *Select method used in project.*
Interior Lighting Controls	☐ All C405.2.1 - C405.2.8 Controls ☐ C405.2 Exception 5 Luminaire Level Lighting Control (LLLC) ☐ Additional Efficiency Package Option C406.4 Enhanced digital lighting controls *To comply with C406.4, no less than 90% of the total installed interior lighting power shall comply with the required controls per C406.4.*
Dwelling Unit Interior Lighting	*Permanently installed interior lighting fixtures in dwelling units comply with:* ◉ ○ C405.2 thru C405.5 Commercial Lighting Controls and LPA ○ C406.3 High Efficacy Lighting ○
Exterior Lighting System Description	LED HIGH PERFORMANCE, HIGH EFFICACY, LONG LIFE, 126 LUMENS PER WATT AREA LUMENAIRES WITH LED HIGH PERFORMANCE, HIGH EFFICACY WALL MOUNTED LUMENAIRES.

Exterior Lighting — LTG-EXT

2015 Washington State Energy Code Compliance Forms for Commercial Buildings including R2, R3, R4 over 3 stories and all R1 — Revised July 2016

Project Title:	**Kunpeng LLC Retail Shell Building**	Date	8/8/2016
Exterior Lighting Zone *Table C405.5.2(1) Specified by jurisdiction.*	○ Zone 1 ○ Zone 2 ◉ Zone 3 ○ Zone 4 *Zone selection required to enable LTG-EXT form*	For Building Department Use	
Calculation Area	◉ ○ Addition - stand alone ○ Addition + existing ○ Alteration with < 50% ext. wattage replaced ○ Alteration with ≥ 50% ext. wattage replaced		
Building Grounds *Applies to luminaires > 100 Watts*	☑ Efficacy > 80 lumens/watt ☐ Exemption ☐ Controlled by motion sensor		

Tradable Maximum Allowed Lighting Wattage NOTE 1

Base Site Allowance: 750

Tradable Surfaces	Surface Description	Area (ft^2), perimeter (lf) or # of items	Allowed Watts per ft^2 or per lf	Allowed Watts x ft^2 (or x lf)
Uncovered Parking and drives	Parking Lot	24380	0.08 W/ft2	1950

Total Allowed Tradable + Site Allowance Watts: 2701

Tradable Proposed Lighting Wattage NOTE 2

Tradable Surface	Fixture Description NOTE 3, 4	Number of Fixtures	Watts per Fixture NOTE 5	Watts Proposed
Uncovered Parking and drives	S03A	6	68	408
Uncovered Parking and drives	S30A	7	36	252
Uncovered Parking and drives	S20A	6	13	78
Uncovered Parking and drives	S04A	1	68	68

Total proposed tradable watts may not exceed the sum of total allowed tradable watts plus the base site allowance. Any base site allowance not needed to make tradable watts comply can be applied to individual non-tradable categories.

Total Proposed Tradable Watts: 806

Non-Tradable Maximum Allowed Lighting Wattage NOTE 1

Site Allowance Remaining: 750

Non-Tradable Surfaces	Surface Description	Area (ft^2), perimeter (lf) or # of items	Allowed Watts per ft^2 or per lf	Allowed Watts x ft^2 (or x lf)

Non-Tradable Proposed Lighting Wattage NOTE 2

Non-Tradable Surface	Fixture Description NOTE 3, 4	Number of Fixtures	Watts per Fixture NOTE 5	Watts Proposed

Non-tradable proposed watts may not exceed allowed watts for any individual surface unless the total excess watts for all non-tradable surfaces are less than the remaining site allowance.

Non-Tradable Watts Exceeding LPA: 0

Remaining Site Allowance: 750

Exterior Lighting — COMPLIES WITH MAX. ALLOWANCE

Note 1 *- List all unique exterior sufaces per Table C405.5.2(2) that occur in the project scope. Select exterior surface categories from drop down menu.*

Note 2 *- List all proposed lighting fixtures including existing-to-remain fixtures.*

Note 3 *- For proposed Fixture Description, indicate fixture type, lamp type, number of lamps in the fixture, and ballast type (if applicable).*

Note 4 *- Existing-to-remain fixtures shall be included in the Tradable and Non-Tradable Proposed Lighting Wattage tables in the same manner as new fixtures. Identify as existing in fixture description.*

Note 5 *- For proposed Watts/Fixture enter the luminaire wattage for installed lamp and ballast using manufacturer or other approved source. For luminaires with screw-in lamps, enter the manufacturer's listed maximum input wattage of the fixture (not the lamp wattage). For low voltage lighting, enter the wattage of the transformer.*