

Title 24 2013 Compliance Software:

CBECC-Com

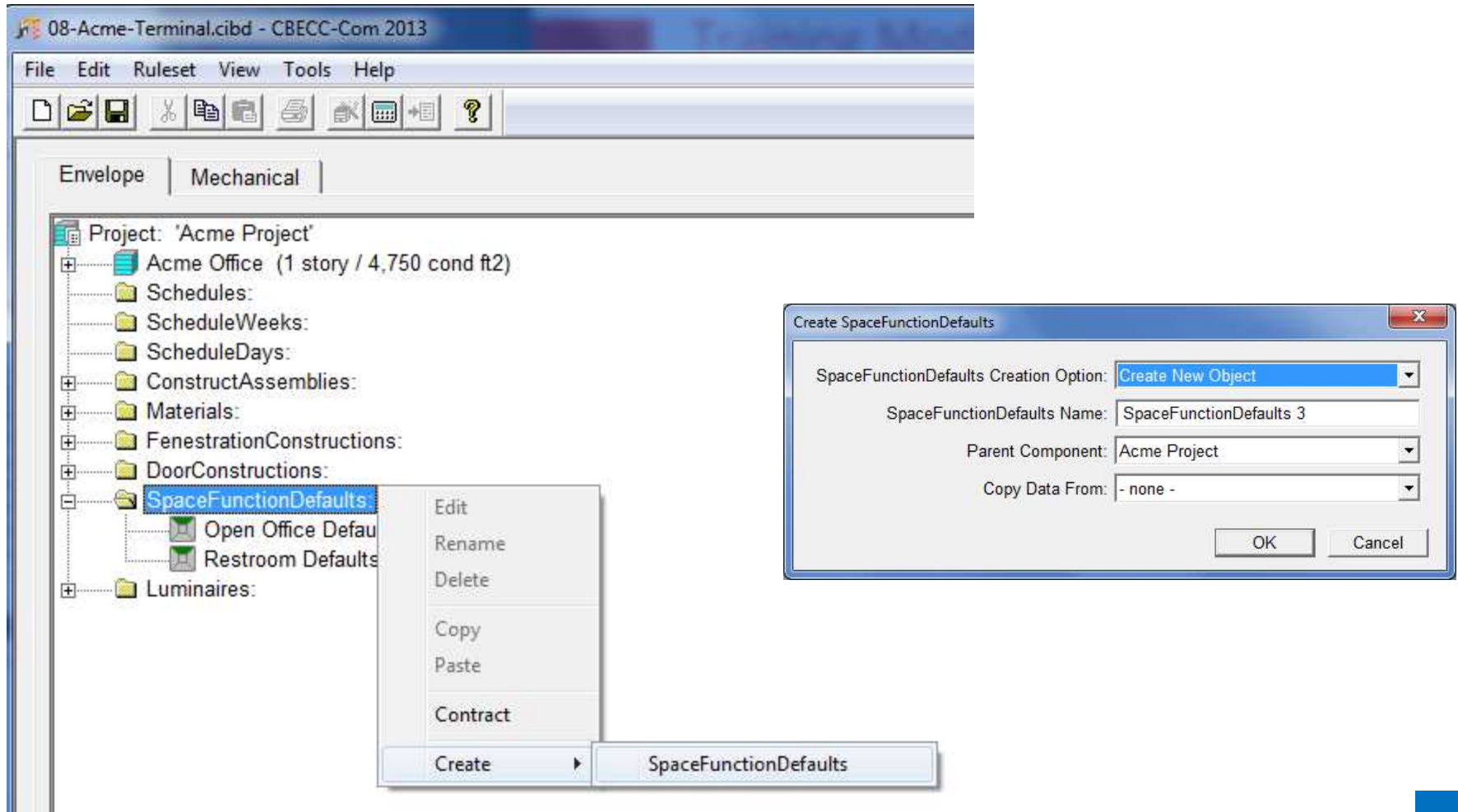
**“California Building Energy Code Compliance
for Commercial Buildings”**

Defining Lighting and Internal Loads

- Objective: **Create and Assign Internal Loads**
 1. Create Space Function Defaults
 2. Assign to Spaces
 3. Assign Space Functions to spaces.
 4. Develop Luminaires Descriptions
 5. Assign Lighting Systems

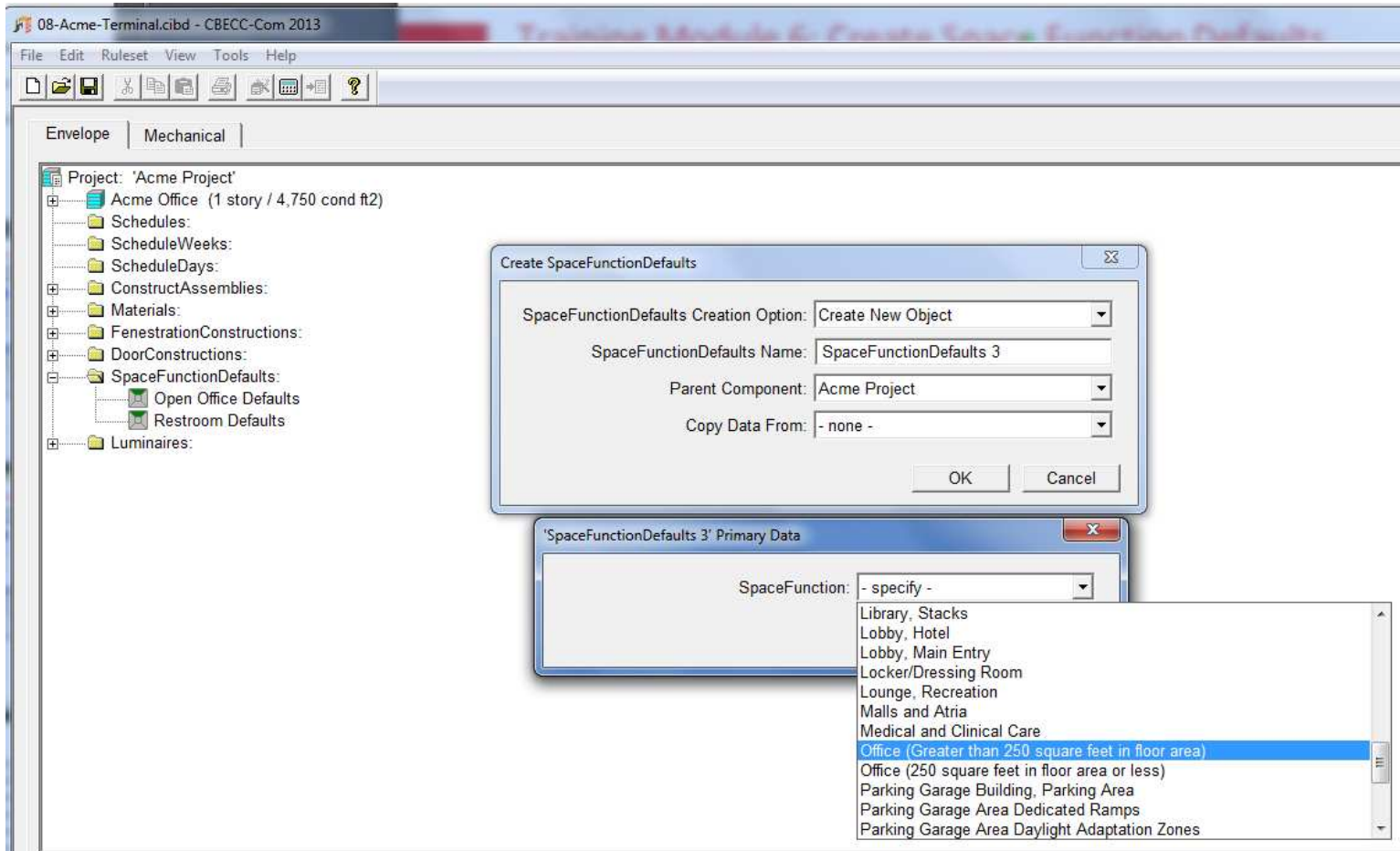
Training Module 6: Create Space Function Defaults

- ❖ Right-click on SpaceFunctionDefaults then select **Create > SpaceFunctionDefaults**
- ❖ A new dialog box opens – fill in the SpaceFunctionDefaultsName and then click **OK**



Training Module 6: Create Space Function Defaults

- ❖ After specifying the SpaceFunctionDefaults Name a new dialog box opens as shown below
- ❖ Next select the SpaceFunction from the drop-down menu that best represents the space function for which the defaults are being created



Training Module 6: Create Space Function Defaults

❖ Typical view of the SpaceFunctionDefaults Screen

Building Model Data

Space Function Defaults | Ventilation and Exhaust

Currently Active Space Function Defaults:

Name:

Function: Schedule Group:

Schedules:

Occupancy: people/1,000 ft2 Sensible Rate: Btu/h-person Latent Rate: Btu/h-person

Hot Water Use: gal/h-person SHW: DHW Recirc:

Electric Use

IntLPDReg: W/ft2 Fraction to Space: Radiant Fraction:

IntLPDNonReg: W/ft2

RecptPwrDens: W/ft2

ProcElecPwrDens: W/ft2 RadFrac: LatFrac: LostFrac:

RefrigtPwrDens: W/ft2

Natural Gas Use

GasEqpPwrDens: Btu/h-ft2

ProcGasPwrDens: Btu/h-ft2 RadFrac: LatFrac: LostFrac:

Training Module 6: Assign to Spaces

❖ Assign SpaceFunctionDefault to Spaces as shown below

Double-click on Space name to open Space Data dialog box

Assign SpaceFunctionDefault by selecting from drop-down

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File Edit Ruleset View Tools Help

Envelope Mechanical

Mens RestRm (DirectlyConditioned, 135 ft2)

Open Office North (DirectlyConditioned, 2,080 ft2)

Open Office North LightingSystem

Surface 24 (PolyLo)

Sub S

Surface 25 (PolyLo)

Sub S

Surface 19 (PolyLo)

Surface 20 (PolyLo)

Surface 23 (PolyLo)

Surface 28 (PolyLo)

Surface 18 (PolyLo)

PolyLo

Open Office South

Private Office (Dire

Womens RestRm

Shading Surface 2

Shading Surface 1

Schedules:

ScheduleWeeks:

ScheduleDays:

ConstructAssemblies:

Materials:

FenestrationConstructions:

Fixed Window

Lobby Window

DoorConstructions:

Exterior Door

SpaceFunctionDefaults:

Open Office Defaults

Restroom Defaults

Luminaires:

Building Model Data

Space Data | Ventilation and Exhaust | Daylighting | Process Loa

Currently Active Space: Open Office North

Space Name: Open Office North

Conditioning Type: DirectlyConditioned

Thermal Zone Ref: Open Office North Zn

Supply Plenum Space: - none -

Return Plenum Space: - none -

Occupancy Class: Nonresidential

Function Defaults: Open Office Defaults

Function: Office (Greater than 250 square feet in floor area)

Schedule Group: Office

Occupancy: 10.00 people/1,000 ft2

Hot Water Use: 0.18 gal/h-person

Electric Use

Ltg. Specification: AreaCategoryMethod

IntLPDReg*: 0.00 Watts/ft2

NonR

Multiplier: 1

FIR-to-Clg Ht: 12.0 ft

Space Area: 2,080.0 ft2

Volume: 24,960 ft3

Space Status

Envelope: New

Lighting: New

Overall: New

Sensible 250.0 Btu/h-person

Latent 200.0 Btu/h-person

SHW FluidSeg Ref: DHW Supply

DHW RecircSys Ref: - none -

Fraction to Space 0.00

Radiant Fraction 0.00

Schedule Name* - none -

compliance analysis - none -

OK

For Help, press F1

Input is optional Value from user NUM

Training Module 6: Assign to Spaces

❖ Assign SpaceFunction to Spaces as shown below

Double-click on Space name to open Space Data dialog box

Assign SpaceFunction by selecting from drop-down

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File Edit Ruleset View Tools Help

Envelope Mechanical

Mens RestRm (DirectlyConditioned, 135 ft2)

Open Office North (DirectlyConditioned, 2,080 ft2)

Surface 24 (PolyLo)

Sub S

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Sub S

PolyLo

Surface 19 (PolyLo)

Surface 20 (PolyLo)

Surface 23 (PolyLo)

Surface 28 (PolyLo)

Surface 18 (PolyLo)

PolyLoop 32

Open Office South

Private Office (Dir

Womens RestRm

Shading Surface 2

Shading Surface 1

Schedules:

ScheduleWeeks:

ScheduleDays:

ConstructAssemblies:

Materials:

FenestrationConstructions:

Fixed Window

Lobby Window

DoorConstructions:

Exterior Door

SpaceFunctionDefaults:

Open Office Defaults

Restroom Defaults

Luminaires:

Building Model Data

Space Data Ventilation and Exhaust Daylighting Process Loads

Currently Active Space: Conference

Space Name: Conference

Conditioning Type: DirectlyConditioned

Thermal Zone Ref:

Supply Plenum Space: - none -

Return Plenum Space: - none -

Occupancy Class: Nonresidential

Function Defaults: - none -

Function: Convention, Conference, Multipurpose and Meeting Center Areas

Multiplier: 1

Fir-to-Clg Ht: 12.0 ft

Space Area: 480.0 ft2

Volume: 5,760 ft3

Space Status

Envelope: New

Lighting: New

Overall: New

Occupancy: 67.00 people/1,000 ft2

Hot Water Use: 0.09 gal/h-person

Sensible 245.0 Btu/h-person

Latent 155.0 Btu/h-pe

SHW FluidSeg Ref: - none -

DHW RecircSys Ref: - none -

Electric Use

Ltg. Specification: AreaCategoryMethod

IntLPDReg*: 0.00 Watts/ft2

NonReg. Lighting: 0.00 W/ft2

Plug Loads: 1.00 W/ft2

Fraction to Space 0.00

Radiant Fraction 0.00

Schedule Name*

- none -

- none -

- none -

* Schedules will be defaulted for compliance analysis

OK

For Help, press F1

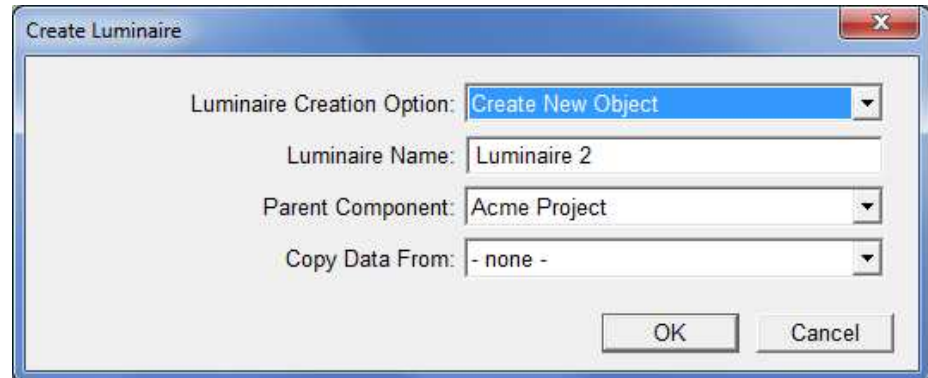
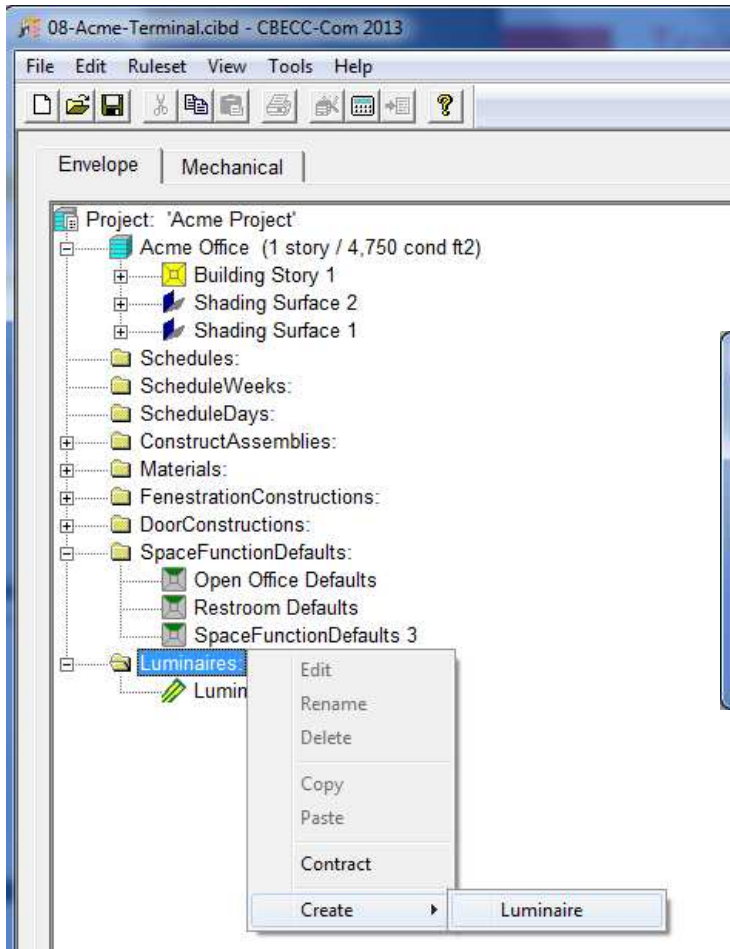
Input is optional Value from user NUM

Training Module 6: Assign Space Function type to Spaces

Space Name	Space Function Type
Conference West	Convention, Conference, Multipurpose and Meeting Center Areas
Lobby	Lobby, Main Entry
Men RR	Corridors, Restrooms, Stairs, and Support Areas
Open Office North	Office (Greater than 250 square feet in floor area)
Open Office South	Office (Greater than 250 square feet in floor area)
Private Office North	Office (Greater than 250 square feet in floor area)
Women RR	Corridors, Restrooms, Stairs, and Support Areas

Training Module 6: Develop Luminaire Descriptions

- ❖ Right-click on Luminaires then select Create > Luminaire
- ❖ A new dialog box opens – fill in the Luminaire Name and then click OK



Training Module 6: Develop Luminaire Descriptions

❖ Typical view of the Luminaire Data Screen

Building Model Data

Luminaire Data

Currently Active Luminaire: Luminaire 1

Luminaire Name: Luminaire 1

Fixture Type: NotInCeiling

Lamp Type: LinearFluorescent

Luminaire Power: 80.0 W

Fraction of Heat to Space: 1.00

Radiant Fraction of Space Heat: 0.54

Min. Dimming Power Fraction: 0.20

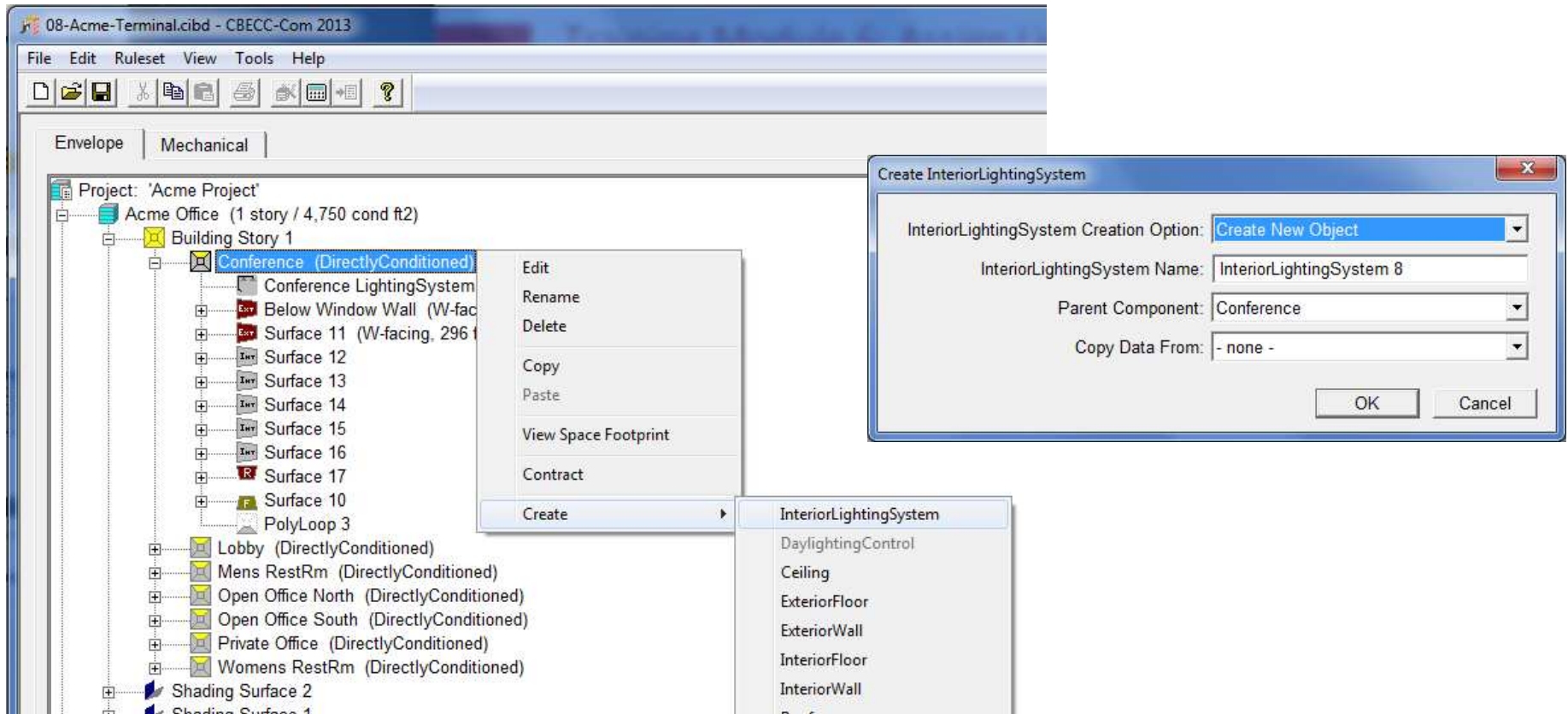
Min. Dimming Light Fraction: 0.20

*Only valid for luminaires in spaces with plenum returns

OK

Training Module 6: Assign Lighting Systems

- ❖ Right-click on Space Name (Conference) then select **Create > InteriorLightingSystem**
- ❖ A new dialog box opens – fill in the InteriorLightingSystem Name and then click OK



Training Module 6: Assign Lighting Systems

❖ Typical view of the Interior Lighting System Data Screen

Building Model Data

Interior Lighting System Data

Currently Active Interior Lighting System: Private Office LightingSystem

Parent Space Name: Private Office

Parent Space IntLtgSpecMthd: AreaCategoryMethod

Lighting System Name: Private Office LightingSystem Status: New

Lighting System Power: 320.0 W Regulated?

Luminaires

Luminaire Mounting Height: 12 ft Fraction Heat to Space: 1.00 Radiant Fraction of Space Heat: 0.54

Assigned Luminaire 1: Luminaire 1 Quantity: 4

Assigned Luminaire 2: - none - Quantity: 0

- none -
- create new Luminaire (and apply only here)
Luminaire 1

Controls/Credits

Assigned Daylit Zone: - none - Ref: MinDimPwrFrac: 0.20 Ref: MindimLtgFrac: 0.20

Lighting Controls: - none specified - Power Adjustment Factor: 0.00 frac

Allowance Type: - none specified - Allowance Area: 0.0 ft2

OK

Training Module 6: Lighting Fixture Schedule

Space	Fixture Type	Fixture Power (watts)	Fixture Count	Mounting Height
Conference	Suspended Fluorescent	80 W	4	12
Lobby	Suspended Fluorescent	80 W	4	12
Restroom	Suspended Fluorescent	80 W	1	12
Open Office North	Suspended Fluorescent	80 W	16	12
Open Office South	Suspended Fluorescent	80 W	10	12
Private Office	Suspended Fluorescent	80 W	4	12
Restroom 2	Suspended Fluorescent	80 W	1	12