



SS Credit Light Pollution Reduction

Rating Systems

Building Design and Construction

- New Construction
- Core and Shell
- Schools - New Construction
- Retail - New Construction
- Data Centers - New Construction
- Warehouses and Distribution Centers - New Construction
- Hospitality - New Construction
- Healthcare

- The project is using IP units.
- The project is using SI units.

All Projects

Classify the project under one of the following lighting zones:

- LZ0: No ambient lighting
- LZ1: Low ambient lighting
- LZ2: Moderate ambient lighting
- LZ3: Moderately high ambient lighting
- LZ4: High ambient lighting

Upload: Site lighting plan

Provide a site lighting plan depicting the project boundary, the property line (if different from the project boundary), the lighting boundary, any additional properties included in the lighting boundary (if applicable), the location and label of all exterior luminaires within the project boundary (both exempt and nonexempt), and any relevant project site conditions.

This lighting zone typically includes light commercial and high density or mixed use residential.

Projects that are part of a multitenant complex may provide the lighting master plan for the site and surrounding buildings.

Uplight

Select one of the following options for uplight compliance:

- Option 1. BUG rating method
- Option 2. Calculation method

Option 2. Calculation Method

see attached documentation

Table: Lumens emitted above horizontal

Luminaire Description		Quantity of Installed Luminaires	Lumens per Luminaire	Lumens Above Horizontal	Total Luminaire Lumens	Total Luminaire Lumens Above Horizontal		
							+	-
Luminaire Lumens	Total				0	0		
	Percentage above horizontal (%)							
	Lighting zone allowable percentage above horizontal (%)						1.5	

Project teams must use either the BUG method (Option 1) or the calculation method (Option 2) to demonstrate compliance. Project teams may use different options for uplight and light trespass.

Percentage of total lumens emitted above horizontal must be less than or equal to the percentage allowed by lighting zone.

Light Trespass

Select one of the following options for light trespass compliance:

- Option 1. BUG rating method
- Option 2. Calculation method

see attached documentation

Project teams must use either the BUG method (Option 1) or the calculation method (Option 2) to demonstrate compliance. Project teams may use different options for uplight and light trespass.

Option 2. Calculation Method

Upload: Vertical illuminance calculations

Provide the greatest vertical illuminance value for each of the vertical calculation planes at the lighting boundary. Also provide the calculation grid for the one vertical plane that has the greatest vertical illuminance (worst case scenario) with the point of the greatest illuminance highlighted.

Internally Illuminated Exterior Signage

For projects with internally illuminated exterior signage

Table: Internally illuminated signage

Sign Description	Nighttime Luminance ¹ (cd/sq m)	Daytime Luminance ² (cd/sq m)		
			+	-

Notes:

- 1 Each sign must not exceed a luminance of 200 cd/sq m (nits) during nighttime hours.
- 2 Each sign must not exceed a luminance of 2,000 cd/sq m (nits) during daytime hours.

Special Circumstances

Describe the circumstances limiting the project team's ability to provide the submittals required in this form. Be sure to reference what additional documentation has been provided, if any. Non-standard documentation will be considered upon its merits. (Optional)

For option 2: Calculation Method please see attached documentation.

Upload: Special circumstances

Provide any additional documentation that supports the claim to special circumstances. (Optional)

Summary

Name

Amber Hepner

Date

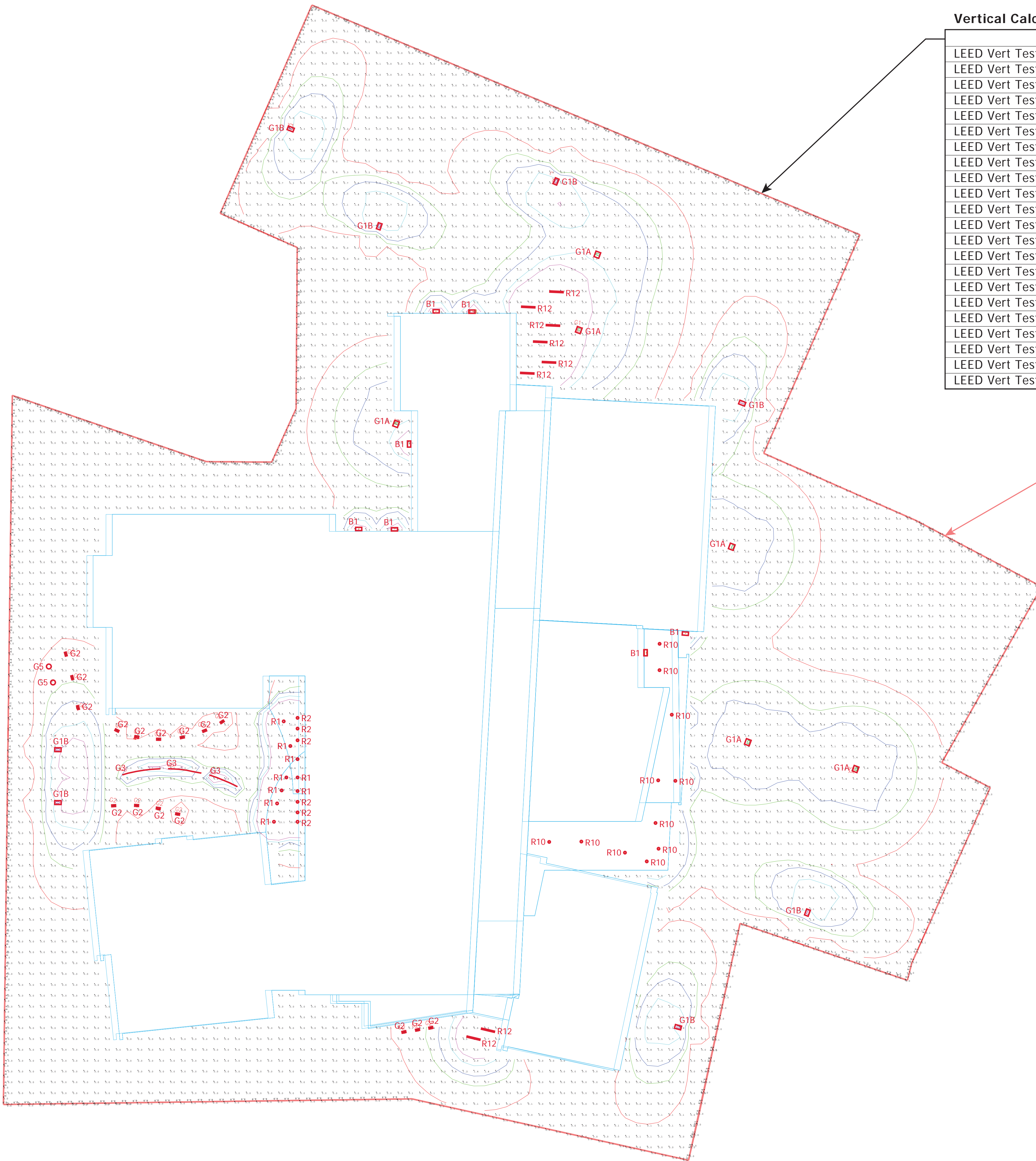
September 17, 2014

SAVE FORM

CHECK FORM

Incomplete. Please complete the highlighted fields and/or address any omissions in the Special Circumstances section.

Fixture	Quantity	Initial lamp lumens per luminaire	Fixture efficiency	Fixture Lumens per luminaire	Total Fixture Lumens	% fixture lumens above 90deg	fixture lumens above 90deg per luminaire	Est. % uplight not blocked by surfaces	final fixture lumens above 90deg per luminaire	Total lumens above 90 deg		
B1	Bega wall fixture - Exit Doors	7	465	100%	465	3255	0.0%	0	100%	0	0	
G1A	Cree Edge Area Light Type V	6	4122	100%	4122	24732	0.0%	0	100%	0	0	
G1B	Cree Edge Area Light Type II	8	2885	100%	2885	23080	0.0%	0	100%	0	0	
G2	BK iLume recessed step light	16	11	100%	11	176	0.0%	0	100%	0	0	
G3	iLigght Tech LED Strip per 1ft	48	83	100%	83	3984	0.0%	0	100%	0	0	
G5	BK Flag Light (exempt)	0	750	100%	750	0	100.0%	750	100%	750	0	EXEMPT
R10	Lightolier Recessed LED DL	11	1500	100%	1500	16500	0.0%	0	100%	0	0	
R12	Axis Linear Recessed	8	2518	100%	2518	20144	0.0%	0	100%	0	0	
Totals					91871						0	
									Percentage total fixture lumens above 90		0.00%	



Vertical Calculation at Lighting Boundary

	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.02	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.03	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.03	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.02	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.02	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.05	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.02	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.01	0.1	0.0	N.A.	N.A.
LEED Vert Test Surface_1_Surface	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.

Project Boundary and Lighting Boundary

Fixture Type	Description	Fixture (Manufacturers and Models)	Lamp	Voltage	Fixture Input W	Location	Notes
B1	WALL MOUNTED FULL CUT-OFF LED DOWNLIGHT	BEGA: 2380LED-finish INTENSE: GARDCO: LIGMAN:	3000K LED		15 W	EGRESS DOORS	
G1A	POST-TOP ROUND LED AREA LIGHT, TYPE 5 SHORT, 3500K, 0-10V DRIVER, 12 FT. POLE	CREE: ARE-EDR-5S-R3-04-D-UL-BK-350-35K-DIM POLE: VALMONT: DS340-R400V120-P2-FP-BK-DT12AC	3500K LED		47 W	SITE	
G1B	POST-TOP ROUND LED AREA LIGHT, TYPE 2 SHORT W/BACKSPILL CONTROL, 3500K, 0-10V DRIVER, 12 FT. POLE	CREE: ARE-EDR-2SB-R3-04-D-UL-BK-350-35K-DIM POLE: VALMONT: DS340-R400V120-P2-FP-BK-DT12AC	3500K LED		47 W	SITE	ORIENT FIXTURE ACCORDING TO AIMING ARROWS ON SITE LIGHTING PLAN
G2	WALL RECESSED LED STEPLIGHT	BK: material-MI-LED-e40-I-finish-1-B HADCO: DESIGNPLAN:	3000K LED		3 W	PER LANDSCAPE PLAN	LOCATE PER LANDSCAPE ARCHITECT'S DETAILS
G3	LINEAR LED STRIP, REMOTE DRIVER	ILIGHT-TECH: T-24-color-S-length-channel-00 TRAXON:	3000K LED			PER LANDSCAPE PLAN	LOCATE PER LANDSCAPE ARCHITECT'S DETAILS
G5	RECESSED EXTERIOR IN-GRADE LED NARROW BEAM ADJUSTABLE ACCENT LIGHT	B-K LIGHTING: CO2-LED-TR-X22-SP-FINISH-D15 LUMIERE: HADCO: WEEF:	3000K LED		15 W	PER LANDSCAPE PLAN	FOR FLAG LIGHTING
R1	6" RECESSED LED DOWNLIGHT WITH INTEGRAL 0-10V DIMMING	LIGHTOLIER: C6L-20-N-2-VB-Z10V+C6L-1520-DL-30K-W-CCL-P-VB GOTHAM: EDISON PRICE: PORTFOLIO:	3500K LED		33 W	TYPICAL DOWNLIGHT	
R2	6" RECESSED LED LENSED WALLWASHER WITH INTEGRAL 0-10V DIMMING	LIGHTOLIER: C6L-20-N-2-VB-Z10V+C6L-1520-LW-30K-W-CCL-P-VB GOTHAM: EDISON PRICE: PORTFOLIO:	3500K LED		33 W	TYPICAL WALLWASHER	
R10	6" RECESSED LED DOWNLIGHT, EXTERIOR RATED	LIGHTOLIER: C6L-15-N-U-VB-Z10V-EM+C6L-1520-DL-30K-W-CCL-P-VB GOTHAM:	3500K LED		21 W	EXTERIOR CANOPIES	
R12	48" RECESSED LINEAR 1-LAMP T5 FLUORESCENT DOWNLIGHT, WET LOCATION RATED	AXIS: WBR-F-4-T5-1-CC-277-T-1 A-LIGHT: ALW:	FP28/835/PM/ECO		30 W / 4FT	EXTERIOR CANOPIES	