

Center Harbor Energy Committee Minutes of Meeting – 11 August 2016

Attendees: Annette Nichols, Bernie Volz, Chris Williams, and Selectmen Representative Richard Drenkhahn.

Annette called the meeting to order at 7:04 p.m.

Approval of Minutes. The minutes of the meeting of July 7th were approved as is.

Library Lighting Upgrades Project. Annette was unable to attend the Library Trustee meeting of July 25th – and no other CHEC member was able to attend. The next meeting of the Library Trustees will be Monday, August 22nd at 5 PM and Annette plans to attend (others indicated they would be unable or unlikely to attend). Annette had forwarded a copy of our July minutes to the Trustees. The main question that is still unresolved is how much money the Library can commit to the lighting project.

Annette discussed some RFP options. She is developing two RFPs – one for purchasing just the materials and another for the installation of those materials. She is proposing not to include the specific list of materials in the materials RFP to see if anyone proposes an alternate solution. After some discussion of this, the timing of the RFPs, and also the period of time the material quote would need to be valid for, the committee recommend she move forward as Annette proposed.

Next, there was a discussion about what the Energy Committee feels comfortable with recommending to the selectmen. Our recommendations currently are:

1. Use the Elliptar lighting as this will be far more consistent and better lighting. We recommend against the Axis option.
2. Provide up to 60% of the cost of the project from the Town' Energy Conservation & Improvements Expendable Trust Fund.

Annette will work on the RFPs and circulate them to the committee for review. She will also provide a copy of these draft minutes to the Library Trustees at their next meeting.

Attached are datasheets provide to Annette on the various lighting fixtures and the renderings from Richard Lilly of Charron Inc. that Annette showed the committee in July.

The parts list for the two options (also from Richard Lilly) are as follows:

Option 1: Elliptar

- (1) 12' run: STAQ-RxxL-X-99-M-0K-0-35-ZX (Color: Black)
- (2) 15' runs: STAQ-RxxL-X-99-M-0K-0-35-ZX (Color: Black)
- (2) 18' runs: STAQ-RxxL-X-99-M-0K-0-35-ZX (Color: Black)
- (6) Two-Way Cantilever Arms
- (2) One-Way Cantilever Arms
- (4) S104-5072-Z-02-M-V0-0-35-ZX

Center Harbor Energy Committee Meeting Minutes – August 11, 2016

Option 2: Axis

- (1) 12' run: SCDI-B4-500-400-80-35-0.5P-S#-BLK-UNV-D-2
- (2) 15' runs: SCDI-B4-500-400-80-35-0.5P-S#-BLK-UNV-D-2
- (2) 18' runs: SCDI-B4-500-400-80-35-0.5P-S#-BLK-UNV-D-2
- (6) Two-Way Cantilever Arms (by Elliptipar)
- (2) One-Way Cantilever Arms (by Elliptipar)

Insulating Town Highway Garage. Bernie emailed Jeff Haines that the plan to start looking at this project at the September meeting and that the committee would pick several dates (and time) in September to meet with Jeff to walk through the facility. Jeff indicated that would be fine.

PAREI Meeting and C-PACE. Annette announced that the next PAREI Meeting will be Tuesday, October 18 at 5:30pm in the Meredith Community Center (light refreshments will be served). At this meeting, Scott Maslansky from the Jordan Institute will present on C-PACE. Annette started to describe the C-PACE program and Chris Williams stated he had just been to Scott's first presentation about the program and provided additional details.

C-PACE (Property Assessed Clean Energy financing for Commercial building) is a program whereby owners of commercial (non-municipal) buildings can obtain financing for energy efficiency or renewal-energy projects through a voluntary special assessment/lien. More details are at <http://jordaninstitute.org/c-pace.html>. Funding is being provided by various private sources – no public money is used for funding the projects.

This was approved (unanimously) by the New Hampshire House and Senate. It does require towns to adopt the program through a warrant article. The town would have some minimal responsibilities, including:

- To file the lien
- To collect the payment of the special assessment
- To forward the collected funds to the appropriate destinations

For more details, we'll have to attend the meeting. The selectmen should consider attending to learn more about the program to see if they would support a town warrant article regarding the program.

The meeting adjourned at 8:00 pm.

Next meeting scheduled for September 1st, 2016 at 7:00 pm.

Respectfully submitted, Bernie Volz, August 12th, 2016.

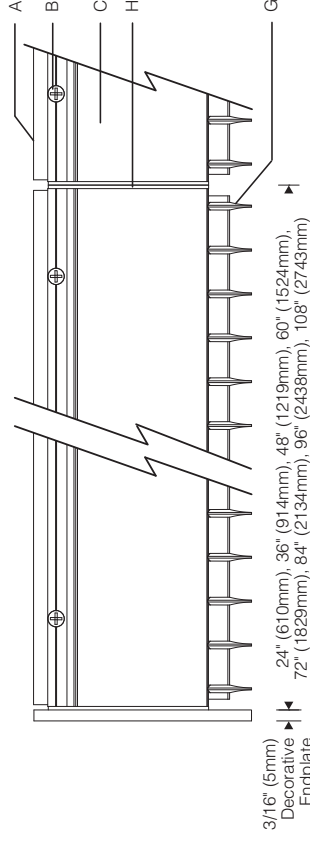
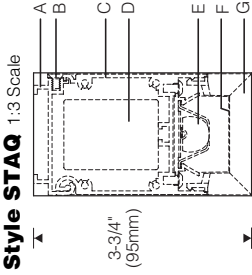
Stack Lighting

Small bi-asymmetric, integral driver

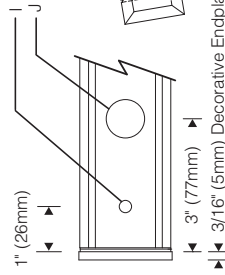
Solid State (LED)

Style STAQ

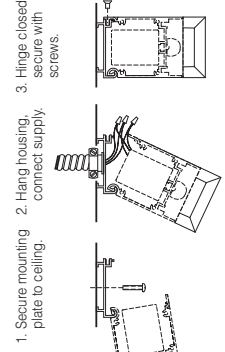
Style STAQ 1:3 Scale



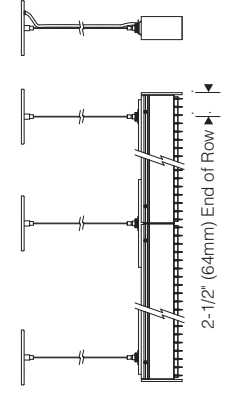
Top View 1:4 Scale, S Mount



Surface Mount 1:2 Scale



Cable Mount 1:16 Scale



Specifications

A Extruded aluminum mounting plate	D High efficiency constant current electronic driver	F Elliptical distribution holographic diffuser	H Aluminum reveal plate
B Closure screws	E Field serviceable light engine with fraqtir™ bi-asymmetric optics	G Snap-in specular parabolic cross-baffle with 30° shielding	I Mounting hole, (3) 9/32" (7mm) diameter
C Extruded aluminum housing			J Knockout, (2) 7/8" (22mm) diameter

Finish:

Painted surfaces – 6 stage pretreatment and electrostatically applied thermoset powder coat for stable, long lasting and corrosion resistant finish. Extruded aluminum mounting plate, housing, aluminum reveal plates. All luminaire hardware is stainless steel; all mounting hardware is zinc or cadmium plated.

Optic Assembly:

Light engine – extruded aluminum heat sink, precision formed bi-asymmetric optical light bar of high temperature water-clear acrylic, elliptical distribution holographic diffuser maximizes distribution without sacrificing bi-asymmetric throw. Light engines are removable for replacement or upgrade.

Cross-baffle – injection molded high-impact polycarbonate with specular metalized finish.

Mounting:

S mount – mounting plate fastens flush to ceiling. Unit hinges on plate for hands-free access to wiring.

X mount – cables or pendant stem ordered separately. Pendant stem – 11/16" O.D. aluminum, internally threaded, 5" dia. aluminum canopy. Cable – 1/16" dia. 7x7 aircraft cable,

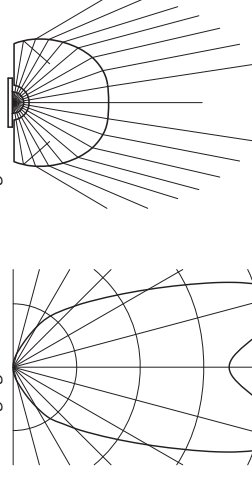
12/15 U.S. Patent 8,465,190; D693,960; foreign patents pending

Features

- **fraqtir** technology – precise asymmetric optical control
- Bi-asymmetric distribution – evenly light both sides of aisle
- Serviceability – removable light engine
- Achieve IES recommended illuminance while meeting or exceeding energy code requirements

Performance

fraqtir technology uses multiple refractive surfaces and total internal reflection to drive light to the bottom shelves. Specular parabolic baffle shields brightness of LEDs and lens while maximizing light delivered to the target.



For photometric and lumen maintenance reports, visit thelightingquotient.com

L90(10k) > 60,000 hrs.
@ 25°C per TM-21



Standard:
UL listed or CSA certified for dry location.
5 year warranty, maximum ambient temperature 45°C (113°F).

elliptipar®
with fraqtir™ LED

To Order

To form a Catalog Number

S T A Q - R - X - 99 - M - 0K - 0 - 35 - ZX

1

2

3

4

5

6

7

8

9

1 Style

STAQ = Solid state (LED) Stack Light with fraqtir optics

2 Length and Light Output

- R02L = 2ft fixture @ 350mA, 13.6 input watts, 900 lumens
- R03L = 3ft fixture @ 350mA, 20.4 input watts, 1350 lumens
- R04L = 4ft fixture @ 350mA, 27.2 input watts, 1800 lumens
- R05L = 5ft fixture @ 350mA, 34.0 input watts, 2250 lumens
- R06L = 6ft fixture @ 350mA, 40.8 input watts, 2700 lumens
- R07L = 7ft fixture @ 350mA, 47.6 input watts, 3150 lumens
- R08L = 8ft fixture @ 350mA, 54.4 input watts, 3600 lumens
- R09L = 9ft fixture @ 350mA, 61.2 input watts, 4050 lumens

Based on 3000K/80+ CRI. [Click here](#) for scaled performance table.
Note: J code is discontinued.

3 Mounting

- S = Ceiling (surface) mount
- X = For use with pendant stem, cable or cantilever hangers (ordered separately). For shelf-supported bridge or cantilever, consult factory.

4 Finish

- 02 = Semigloss white
- 99 = Custom RAL or computer matched color to be specified, consult factory

5 Voltage/Driver

Electronic Driver
Electronic Dimming Driver*
8 = 120-277V
M = 120-277V

*Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document [MA-1303](#)

6 Option (See Accessories Section for specifications)

- 00 = No options
- OK = Modular through wire harness with quick connectors

7 Destination Requirement

- 0 = UL listed or CSA certified for U.S.
- J = UL listed or CSA certified for Canada



Project:

Center Harbor Library

8 Color Temperature

- 27 = 2700K, 80+ CRI
- 30 = 3000K, 80+ CRI
- 35 = 3500K, 80+ CRI
- 40 = 4000K, 80+ CRI
- 2H = 2700K, 90+ CRI
- 3H = 3000K, 90+ CRI
- 4L = 4000K, 70+ CRI

Note: Additional CCT and CRI options are available; consult factory.

9 Dimming** (dimming controls by others)

- 00 = Non-dimming
- TE = LightTech line voltage dimming 100-10% power (trailing edge, reverse phase, ELV dimming controls by others)
- ZX = 0-10V analog dimming 120-277V input, dimming range 100%-5%, 0-10V controls by others
- EL = eldoLED SOLOdrive 0-10V analog gamma corrected dimming 100%-0.1% power (controls by others)
- L3 = Lutron A-Series 3D 120-277V input, dimming range 100%-1%, Lutron EcoBus bus dimming (controls by others)
- LH = Lutron A-Series 3D 120-277V input, dimming range 100%-1%, Lutron 3-wire dimming (controls by others)

**Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document [MA-1303](#)

Example

STAQ-R09L-X-02-8-00-0-30-EL

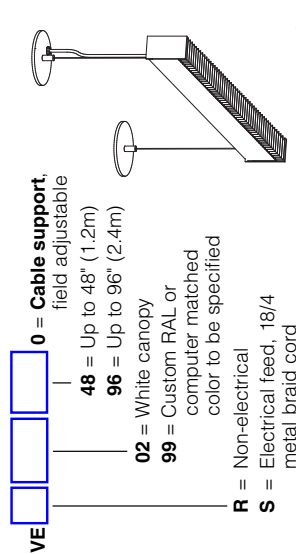
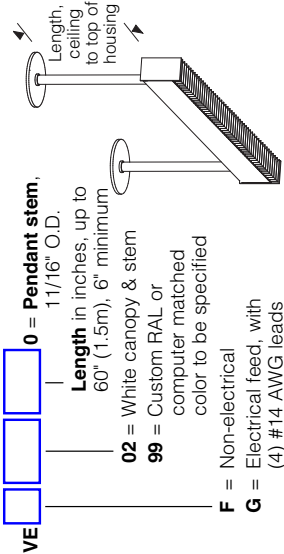
fraqtir STAQ LED stack light, 9ft (2743mm) long driven at 350mA (400 lumens per foot), X mount for use with cable hangers (ordered separately), semigloss white housing, 120-277V eldoLED electronic dimming driver (0-10V controls by others), UL listed or CSA certified for U.S., dry location, 3000K/80+ CRI.

Style STAQ

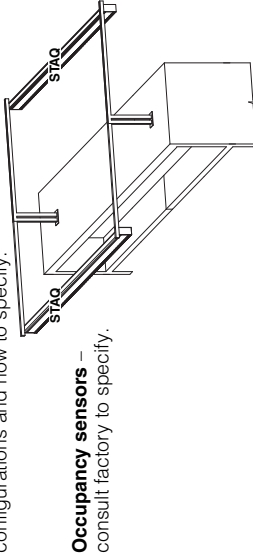
Type:

Hangers

Order separately. See Accessories Section for specifications.
Singles – order one non-electrical and one electrical feed hanger for each module (**X** mount). **Rows** – order one non-electrical hanger for each module (**X** mount) plus one electrical feed for each row. **Electrical feed(s)** must be located at an end of row. **Note:** For each single or row with dimming (voltage/driver code **M**), order one additional electrical feed and subtract one non-electrical hanger.



Cantilever for Stack Mounting – consult factory for available configurations and how to specify.



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elliptipar from The Lighting Quotient
114 Boston Post Road, West Haven, Connecticut 06516, USA
Voice 203.931.4455 • Fax 203.931.4464 • [thelightingquotient.com](#)

Lighting the Ceiling

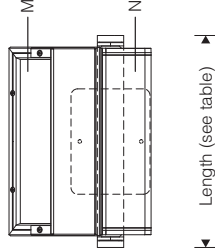
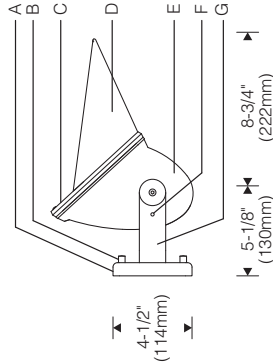
Large indoor, integral driver

Solid State (LED)

Style S104

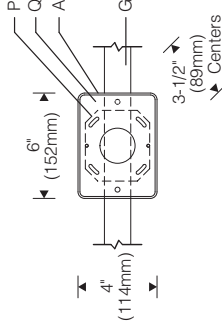
Z Mount

1:10 Scale



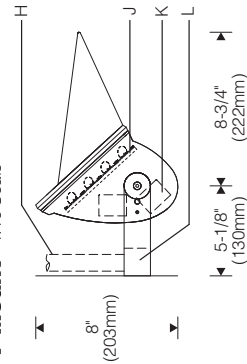
Mounting Plate

(Z mount)



Y Mount

1:10 Scale



# of LEDs	Length	Mounting*
36	12-1/16** (308mm)	8-7/8** (225mm)
72	17-13/16' (452mm)	14-5/8" (370mm)
108	24-7/8** (632mm)	21-11/16** (550mm)

*Mounting dimensions shown for Y mount only.

**For mounting codes 1, 2, 3, 4:
Length = 17-13/16"

Specifications

- A** Aluminum canopy (Z mount)
- B** Chrome cap nuts
- C** Milled extruded aluminum door frame w/ silicone gasket
- D** Solid cutoff visor (included)
- E** Die-cast end plates with aiming marks
- F** Locking set screw
- G** Aluminum yoke
- H** Conduit (by others)
- J** Field serviceable light engine with **fraqtir™** asymmetric optic

- K** Integral drivers
- L** Integral splice compartment with conduit entry and removable cover (Y mount)
- M** Micro-prismatic tempered glass lens
- N** Extruded aluminum housing
- O** Aluminum reveal plate (black)
- P** Outlet box (by others)
- Q** Aluminum mounting plate

Optic Assembly:

Two-piece extruded aluminum heat sink housing and light engine. Exterior heat sink anodized for maximum emissivity. Removable interior extrusion treated to maximize thermal conductivity. Precision formed asymmetric optical light bar of high temperature, water-clear acrylic. Tempered micro-prismatic glass lens with elliptical distribution holographic diffuser; maximizes lateral distribution without disturbing asymmetric forward throw.

Finish:

Painted surfaces – 6 stage pretreatment and electrostatically applied thermoset polyester powder coating for a durable abrasion, fade and corrosion resistant finish. Formed aluminum visor.

Extruded aluminum heat sink/housing, canopy, yoke, door frame and decorative end plates are finished in semigloss white. All luminaire hardware is stainless steel; mounting hardware is zinc or electroplated steel.

Mounting:

Z mount – wall plate mounts to recessed outlet box (by others). Canopy conceals mounting plate and hardware.

5/16

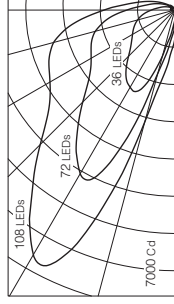
U.S. Patent 8,465,190; foreign patents pending

Features

- Maintains over 90% of initial light output after 36,000 hours
- 2700K through 4000K at 70+, 80+ or 90+ CRI
- All aluminum and stainless steel construction
- Fully adjustable and lockable aiming with aiming index
- Universal voltage drivers and light engines are serviceable for replacement or upgrade

Performance

fraqtir technology uses a combination of refraction and total internal reflection, creating a distribution of light ideal for illuminating surfaces uniformly. Glare is minimized while light delivered to the target is maximized, resulting in high application efficiency.



L90(10k) > 60,000 hrs
@ 25°C per TM-21



For photometric and lumen maintenance reports, visit thelightingquotient.com

elliptipar®
with fraqtir™ LED



D.L.C. for interior wall washing only.

To Order

To form a Catalog Number

S 1 0 4 - 5072 - Z - 02 - M - V 0 - 0 - 35 - ZX 1 2 3 4 5 6 7 8 9 10

1 Source

S = Solid State (LED)

2 Style

104 = Large surface, integral driver

3 Drive Current/Length/No. of LEDs

Solid State LED with **fracqir** optics. Choose drive current code/number of LEDs in options below.

Lumen/Wattage Options				
LAMP CODE	FIXTURE LENGTH	INPUT WATTS	LUMENS	NUMBER OF LEDs
5036	12-1/16"	56W	3812	36 LEDs
5072	17-13/16"	110W	7569	72 LEDs
5108	24-7/8"	165W	11365	108 LEDs

Based on 4000K, 70+ CRI. [Click here](#) for scaled performance table.

4 Mounting

Z = External yoke on wall plate
Y = External yoke with integral splice compartment
X = External yoke for use with cantilever or pendant (order separately). For use in natatorium, consult factory.

Cluster pendant assemblies (order VPC pendant separately):

- One-way assembly, **single** housing
- Two-way assembly, **two (2)** housings at 180°
- Three-way assembly, **three (3)** housings at 120°
- Four-way assembly, **four (4)** housings at 90°

5 Finish

02 = Solid visor; semigloss white finish
99 = Custom RAL or computer matched color to be specified; consult sales representative

6 Voltage/Driver

Electronic Driver

M = 120-277V
K = 347V

*Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document [MA-1303](#)

The external shapes of the housings are trademarks of Sylvan R. Shemitz Designs, LLC dba **The Lighting Quotient**, makers of **elliptipar**, **tambiant** and **fracqir**.

elliptipar[®]
with **fracqir**[™] LED

5/16

Project:

Center Harbor Library

35 - ZX 10

7 Option (see Accessories Section for specifications)

V0 = Cutoff visor included, no other options
VP = Natatorium (pool) use

VX = For modification not listed, include detailed description. Consult factory prior to specification

Note: Cutoff visor included unless specified otherwise.

8 Destination Requirement

0 = UL listed or CSA certified for U.S.
J = UL listed or CSA certified for Canada

9 Color Temperature

27 = 2700K, 80+ CRI
30 = 3000K, 80+ CRI
35 = 3500K, 80+ CRI
40 = 4000K, 70+ CRI

Additional CCT and CRI options are available; consult factory.

10 Dimming**

00 = Non-dimming
TE = Trailing Edge Dimming
120-277V input, dimming range 100-10%, line voltage trailing edge/reverse phase/ELV dimming (controls by others)

ZX = 0-10V analog dimming
120-277V input, dimming range 100%-5%, 0-10V controls by others

EL = eLdLED SOLOdrive
120-277V input, dimming range 100%-0.1%, 0-10V controls by others

ED = eLdLED SOLOdrive
120-277V input, dimming range 100%-0.1%, DALI controls by others

**Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document [MA-1303](#)

Note: Number of drivers varies with number of LEDs, drive current and driver type.

elliptipar from **The Lighting Quotient**
114 Boston Post Road, West Haven, Connecticut 06516, USA
Voice 203.931.4455 • Fax 203.931.4464 • thelightingquotient.com

Style S104

Type:

Accessories

Order separately. See Accessories Section for specifications.

VC ☐ ☐ 36" = Cantilever, 36"
Note: Use 1-way VPC for use in natatorium (pool).
0 = U.S.
J = Canada
02 = Semigloss white
99 = Custom color
L = 12 and 17 inch fixtures
X = 24 inch fixtures
2-1/4" (57mm)

VD ☐ ☐ ☐ = Uplight pendant (2-way only)
0 = U.S.
J = Canada
Length, inches
02 = Semigloss white
99 = Custom color
C = 12 inch fixtures
D = 17 inch fixtures
F = 24 inch fixtures
2-1/4" (57mm)
Note: For sloped ceiling, consult factory.

VPC ☐ ☐ ☐ ☐ ☐ = Cluster pendant
1.9" O.D. alum. stem (17" & 24" fixtures only)
0 = U.S., J = Canada
0 = No option
P = Natatorium (pool)
F = Surface conduit feed
Q = Natatorium w/ surface conduit feed
C = Canopy (±5°)
S = Pivot up to 45°
Length in inches (36" min. up to 120" max.)
02 = Semigloss white
99 = Custom color
1 = 1-way, 2 = 2-way
3 = 3-way, 4 = 4-way
AE ☐ V ☐ ☐ 000 = External vertical blade baffle, black
2 = 25° shielding
4 = 45°
C = 12 inch fixtures
D = 17 inch fixtures
F = 24 inch fixtures

Length (ceiling to bottom of stem)



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PENDANT MOUNT DIRECT / INDIRECT

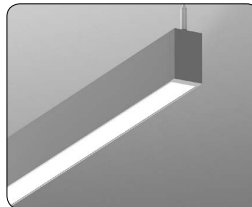
ÉCLAIRAGE I.800.263.AXIS
axis [T] 514.948.6272
LIGHTING [F] 514.948.6271
www.axislighting.com

PROJECT INFORMATION

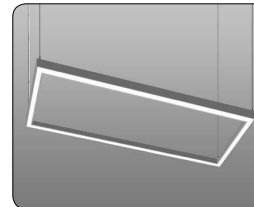
Project: Center Harbor Library

Type:

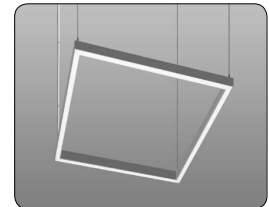
Notes:



Linear version shown

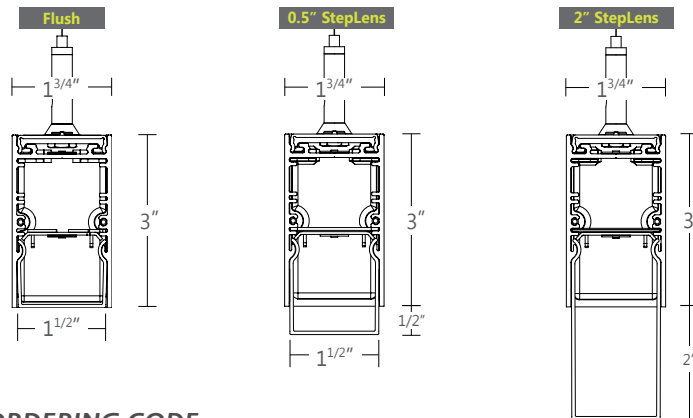


2'x6' ceiling kit shown



4'x4' ceiling kit shown

DIMENSIONS -SECTION VIEWS



PERFORMANCE PER LINEAR FOOT AT 3500K

LENS	NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY
	UPLIGHT	DOWNLIGHT		
FLUSH	750 lm/ft	500 lm/ft	11.9 W/ft	105 lm/W
0.5"	750 lm/ft	500 lm/ft	11.33 W/ft	110 lm/W
2"	750 lm/ft	500 lm/ft	11.25 W/ft	111 lm/W

Please consult factory for custom lumen output and wattage.



GEOMETRIC
LIGHTING



CONTROL
SENSORS



StepLens



ORDERING CODE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----

PRODUCT SPECIFICATIONS

1 PRODUCT ID	2 VERSION	3 NOM. LUMENS/FT UP	4 NOM. LUMENS/FT DOWN	5 CRI	6 COLOR TEMP.	7 SHIELDING (for down only)
SCDI pendant direct/indirect	B4 B4 version	300 300 lm/ft 500 500 lm/ft 750 750 lm/ft	300 300 lm/ft 400 400 lm/ft 500 500 lm/ft	80 80 CRI 90 90 CRI ⁽¹⁾	30 3000 K 35 3500 K 40 4000 K	FL flush 0.5M 0.5" StepLens, lum. end cap 0.5P 0.5" StepLens, opaque end cap 2M 2" StepLens, lum. end cap 2P 2" StepLens, opaque end cap +BL(##) Blank (for flush option only)
Applies to both UP & DOWN.		Please consult factory for other lumen packages.		Applies to both UP & DOWN. (1) Please consult factory.		All lens options use spotless lens. Standard Flush lens on UP

8 LINEAR LENGTH or CEILING KIT (select one)		9 FINISH		10 VOLTAGE		11 DRIVER		12 CIRCUITS			
2	2'*	L	L shape 2' ⁽²⁾	AP	aluminum paint	120	120 V	D	dimming (0-10V) standard	1	1 circuit ⁽⁶⁾
3	3'	U	U shape 2' ⁽²⁾	W	white	277	277 V	LT	lutron ⁽⁴⁾	2	2 circuits ⁽⁷⁾
4	4'	2x2	2'x2' ⁽²⁾	BLK	black	347	347 V ⁽³⁾	BI	bi-level dimming	+E(#)	emergency section ⁽⁸⁾
5	5'	2x4	2'x4' ⁽²⁾	C	custom	UNV	universal	O	other ⁽⁵⁾	+NL(#)	night light section ⁽⁸⁾
8	8'	2x6	2'x6' ⁽²⁾							+GTD(#)	generator transfer device ⁽⁸⁾
12	12'	2x8	2'x8' ⁽²⁾								
S#	System Run	2x10	2'x10' ⁽²⁾								
		2x12	2'x12' ⁽²⁾								
		4x4	4'x4' ⁽²⁾								
		K#	Other kits ⁽²⁾								
*Consult factory (2) Available as kit; See page 2 for more details; Sculpt accommodates any length. Metric lengths also available, please consult factory.						Applies to both UP & DOWN. (3) Consult factory		Applies to both UP & DOWN. (4) Specify system (5) Please consult factory		(6) Control UP & DOWN lights together (7) Control UP & DOWN lights separately. Minimum 3 ft length. (8) Specify quantity	

13 MOUNTING/SUSPENSION	14 BATTERY (OPTIONAL)	15 OTHER	16 IC CONTROLS (OPTIONAL)	17 CUSTOM (OPTIONAL)
CA# drywall+cable length (36" std.) TB/ CT9# TG 9/16+cable length (36" std.) CT15# TB/TG15/16+cable length 36"std.) CTS(##) ST+cable length (36" std.) +SM seismic option	B# battery pack	F fuse ⁽⁹⁾ FW# flex whip (6' std) ⁽¹⁰⁾	DS# daylight sensor OS# occupancy sensor DOS# daylight & occupancy sensor IN# enlightened integral ⁽¹¹⁾ INR# enlightened remote ⁽¹²⁾	C custom
Specify length	Please consult factory	(9) Requires 120V or 277V (10) Specify quantity	(11) For flush option only; Please consult factory. (12) Please consult factory. Applies to both UP & DOWN. Specify quantity. Requires 8" blank. See pages 4-5 for more details.	Please specify

FILE NAME:SCDI-B4.SPEC

January 25, 2016

Product design and development is an ongoing process at Axis Lighting. We reserve the right to change specifications. Contact Axis for the latest product information.



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Geometric Lighting



The Ceiling is Your Canvas.

Developed by Axis, Geometric Lighting lets you choose from a palette of light forms to create an infinite number of lighting configurations, regardless of ceiling or mounting type. Sculpt is the first luminaire family engineered by Axis to provide Geometric Lighting, in addition to standard linear lighting.

Geometric Lighting Benefits

- Freedom from traditional illuminated ceiling footprints.
- Drag and drop design enabling never-before-seen patterns.
- Traces of light resulting in a smaller footprint (negative space).
- A cleaner ceiling appearance through patent-pending technology.
- No performance trade-offs.

An Exclusive Palette of Geometric Lighting Ceiling Kits RECESSED • PENDANT • SURFACE



Ceiling Kit Features

- UL-listed
- Easy to specify – No complex shop drawings required
- Metric versions also available
- Illuminated corners and hairline joints
- Integrated driver
- Compatible with StepLens option – Choice of 0.5" or 2" heights
- Integrated MiniFlange (patent pending) enables use of a single T-bar in recessed applications.
- T-Aligner (patent pending) offers a foolproof solution for aligning cut T-bars.
- Improved lighting control possibilities, including low-energy and layered illumination, through the use of sensors and multiple drivers to put light where you need it, when you need it.



PENDANT MOUNT DIRECT / INDIRECT

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● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 3000K, 3500K and 4000K color temperature with a great color consistency (within 3.0-step MacAdam ellipse).
LED life	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal Management	Aluminum housing acting as the heat spreader to maximize life.

● CONSTRUCTION

Housing	Extruded Aluminum (0.080" nominal) up to
End Cap	Die Cast Aluminum
Interior Brackets	Die Formed Sheet Steel (20 gauge)
Reflectors	White Powder Coated Sheet Steel (22 ga)
Lenses	Extruded Acrylic (0.060" nominal) - injection moulded
Hanger	Die Cast Aluminum
Suspension	Sliding Aircraft Cable along product length
Cable Grips	Quick Connecting / Release

● ELECTRICAL

Lutron driver	L3D - Hi-Lume A-Series EcoSystem 3-Wire Control (1%) LDE1 - EcoSystem H-Series (1%) LDE5 - EcoSystem 5-Series (5%) LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
----------------------	---

Other drivers DALI - Digital Addressable Lighting Interface
DMX - Digital Multiplex
ELV - Electronic Low Voltage dimming
LV - line voltage - Advance Mark 10
redwood - Building Intelligence Platform
Xitanium SR - For wireless sensor

Emergency Integral emergency battery pack or emergency circuit optional.

Input Voltage 120V, 277V, 347V, UNV.

i Incorporating these components may have limitations or effect the length of the luminaire, please contact factory for more details.

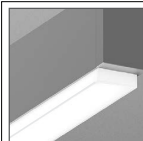
● WARRANTY

Axis lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

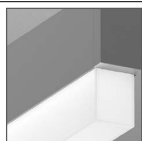
● SHIELDING - Frosted acrylic Spotless lens



FL flush



0.5M 0.5" StepLens,
lum. end cap



2M 2" StepLens,
lum. end cap



0.5P 0.5" StepLens,
opaque end cap



2P 2" StepLens,
opaque end cap



● WEIGHT

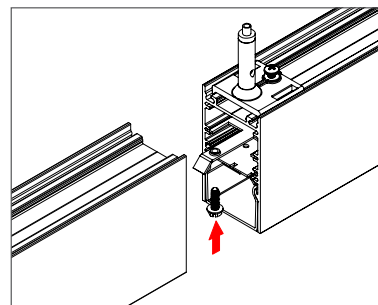
4 ft	8 lbs / 3.6 kg
8 ft	16 lbs / 7.3 kg
12 ft	24 lbs / 10.9 kg

● FINISH

Aluminum paint, Powder Coated and custom finishes are also available.

● JOINERS

In order to allow very long runs of SCULPT luminaires, Axis has developed an effective joining system. Special care has been taken to maximize the performance of the joiner for each SCULPT option.



NOTE: Mount each system segment individually. Do not assemble system prior to mounting.

i Allow a minimum of 6" between end of long runs and vertical wall

● APPROVALS

Certified to UL and CUL standards
Suitable for damp locations.

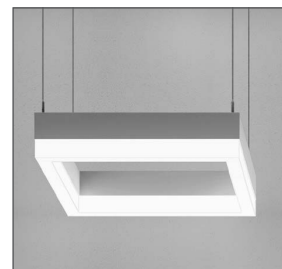
● SYSTEM (S#)

SCULPT linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of SCULPT that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. For more information on systems and joining.

● CORNERS

Lit Corners - In addition Axis offers 0.5" and 2" StepLens corners

i For custom corner, please consult factory. Specifications sheets for all corners are available at: www.axislighting.com



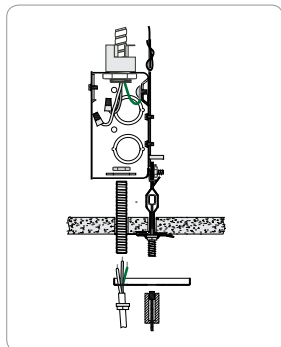
● OTHER MOUNTING OPTIONS

SCULPT LED is also available with surface recessed and recessed vertical mounted options.

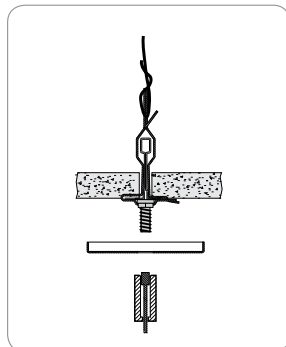
i Specification sheets and Installation sheets for all mounting for SCULPT luminaires are available for download at www.axislighting.com

● MOUNTING OPTIONS

GT TILE CEILING - ON GRID

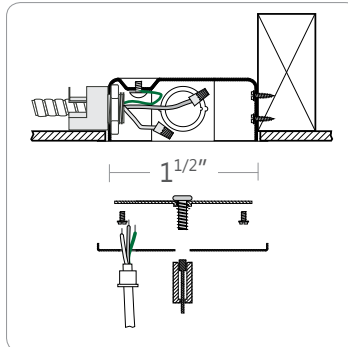


Power feed

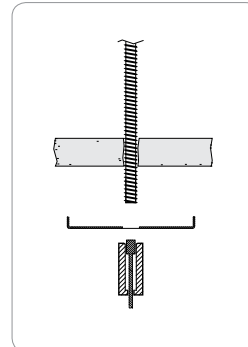


Non power feed

CA DRYWALL CEILING

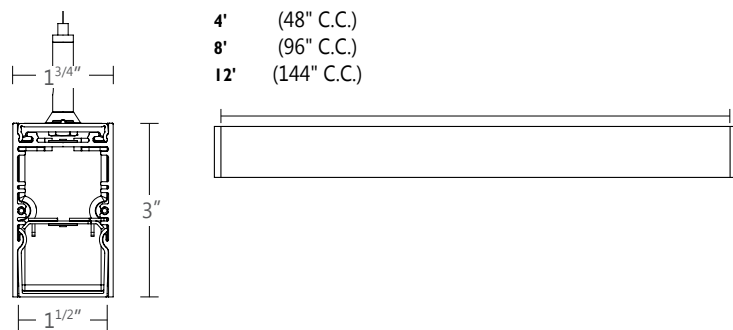


Power feed



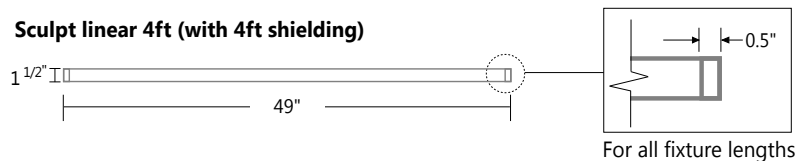
Non power feed

● MOUNTING SPACING END TO END

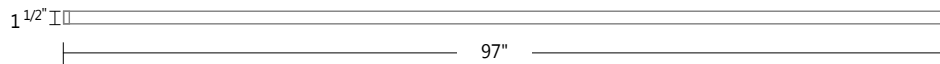


● LENGTHS

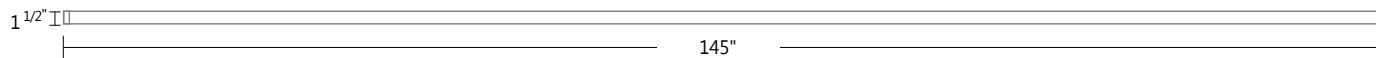
Sculpt linear 4ft (with 4ft shielding)



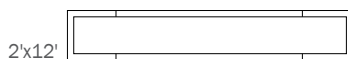
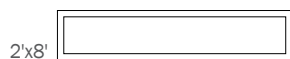
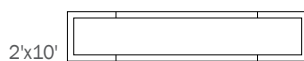
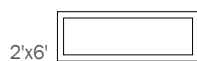
Sculpt linear 8ft Continuous (with 8ft shielding)



Sculpt linear 12ft (with 4ft shielding)



Sculpt Kits Continuous





PENDANT MOUNT DIRECT / INDIRECT

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● INTEGRATED CONTROLS

SCULPT luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

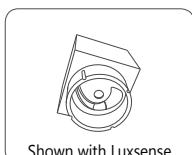
- Consult factory for other options.



The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

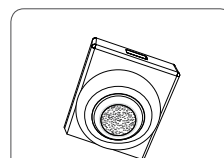
With daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



Shown with Luxsense
EC-DIR-WH, FD-301
Luxsense, Micro Luxsense

● OCCUPANCY (OS):

When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.

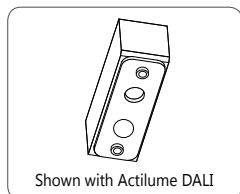


Shown with FS-205

FS-205,
FS-155 - Line Voltage
FS-505, FS-505C

● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

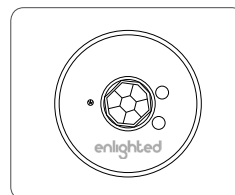
A combination of Daylight & Occupancy sensor from Philips, ACTILUME along with 0-10V or DALI ballasts can be used in one form factor.



Actilume 1-10V
Actilume DALI

● ENLIGHTED INTEGRAL (IN)/ ENLIGHTED REMOTE (INR):

A combination of Daylight, Occupancy & Temperature autonomously control illumination levels, monitor occupancy and environmental conditions. Data is transmitted wirelessly to the Enlighted networked management system.



● INSTALLATION EXAMPLE

Sensor location option



Use in flush lens. For StepLens use remote sensors only.

* Incorporating IC controls may effect the length of the luminaire, please contact factory for more details.



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● INTEGRATED CONTROL OPTIONS

SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight, IR
	Wattstopper	FD-301	Daylight
	Philips	Luxsense LRL1200/00	Daylight
	Philips	Micro Luxsense	Daylight
Occupancy Sensor (OS)	Wattstopper	FS-205v2	PIR Occupancy & Ambient light level
	Wattstopper	FS-155	PIR Occupancy & Ambient light level
	Wattstopper	FS-505	Ultrasonic Occupancy (Staircase)
	Wattstopper	FS-505C	Ultrasonic Occupancy (Open Area)
Daylight & Occupancy Sensors (DOS)	Philips	Actilume, LR11655	Daylight & PIR Occupancy
Enlighted sensor (IN, INR)	Enlighted integral / remote	SU-3E-00	Daylight, Occupancy & temperature



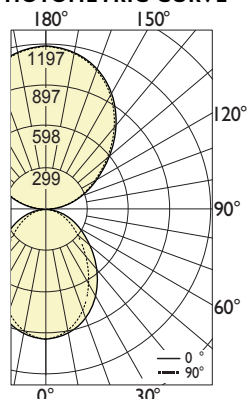
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● PHOTOMETRIC DATA

Uplight 60%
750 lm/ft
Downlight 40% with Flush lens
500 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 750 lm/ft
Lumen/ft down: 500 lm/ft
Total Lumens: 5004 lm (for 4ft)
Input Watts: 47.6 W
Efficacy: 105 lm/W

CRI:80 shown (for CRI:90 use 0.8 multiplier on watts and efficacy)

IES FILE:SCDI-B4-750-500-80-35-F-4-W-UNV-D-1.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	943	943	943	943	943
5	932	938	934	938	940
15	884	887	872	860	859
25	788	780	750	723	715
35	656	641	599	559	544
45	508	491	446	408	392
55	361	346	310	279	266
65	227	216	193	174	167
75	110	105	96	88	86
85	21	21	23	24	23
90	0	1	3	4	4
95	37	40	45	47	47
105	171	171	172	170	168
115	334	332	328	327	322
125	514	514	507	503	497
135	705	705	698	691	686
145	885	883	877	870	866
155	1030	1031	1027	1019	1017
165	1132	1131	1133	1131	1130
175	1185	1191	1187	1183	1181
180	1193	1193	1193	1193	1193

ZONAL LUMENS

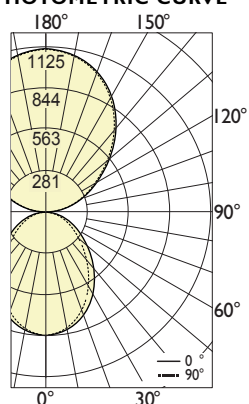
Zone	Lumens
0	
0-10	89
10-20	245
20-30	345
30-40	375
40-50	346
50-60	280
60-70	194
70-80	103
80-90	27
90	51
90-100	181
100-110	326
110-120	454
120-130	537
130-140	548
140-150	472
150-160	319
160-170	113
170-180	109
180	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14871	13045	11453
55	13026	11161	9585
65	11088	9429	8163
75	8767	7698	6843
85	4868	5504	5504

Uplight 60%
750 lm/ft
Downlight 40% with 0.5" StepLens
500 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 750 lm/ft
Lumen/ft down: 500 lm/ft
Total Lumens: 5005 lm (for 4ft)
Input Watts: 45.3 W
Efficacy: 110 lm/W

CRI:80 shown (for CRI:90 use 0.8 multiplier on watts and efficacy)

IES FILE:SCDI-B4-750-500-80-35-0.5M-4-W-UNV-D-1.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	857	857	857	857	857
5	848	852	850	856	859
15	801	808	802	795	795
25	711	716	699	677	669
35	589	590	565	539	529
45	447	455	437	418	410
55	314	328	323	313	308
65	195	215	225	222	218
75	96	122	141	142	140
85	23	49	74	82	82
90	9	34	61	73	74
95	46	70	95	105	106
105	168	184	204	209	208
115	318	329	343	347	344
125	485	492	503	505	501
135	663	667	673	674	670
145	831	830	834	835	831
155	968	969	971	967	963
165	1064	1064	1068	1067	1065
175	1112	1119	1118	1113	1111
180	1121	1121	1121	1121	1121

ZONAL LUMENS

Zone	Lumens
0	
0-10	81
10-20	225
20-30	320
30-40	352
40-50	336
50-60	286
60-70	216
70-80	139
80-90	73
90-100	97
100-110	209
110-120	335
120-130	446
130-140	517
140-150	520
150-160	446
160-170	300
170-180	106
180	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	12950	10432	9167
55	11175	8818	7722
65	9360	7428	6426
75	7358	6114	5200
85	4808	4909	4288

i All IES files are available for download at: www.axislighting.com

FILE NAME:SCDI-B4.SPEC

January 25, 2016

Product design and development is an ongoing process at Axis Lighting. We reserve the right to change specifications. Contact Axis for the latest product information.



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PENDANT MOUNT DIRECT / INDIRECT

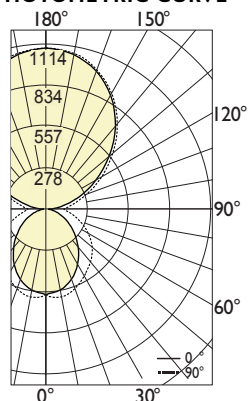
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● PHOTOMETRIC DATA

Uplight 60%
750 lm/ft
Downlight 40% with 2" StepLens
500 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 750 lm/ft
Lumen/ft down: 500 lm/ft
Total Lumens: 5005 lm (for 4ft)
Input Watts: 45 W
Efficacy: 111 lm/W

CRI:80 shown (for CRI:90 use 0.8 multiplier on watts and efficacy)

IES FILE:SCDI-B4-750-500-80-35-2M-4-W-UNV-D-1.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	587	587	587	587	587
5	577	588	596	605	609
15	542	573	588	598	602
25	478	521	542	554	557
35	391	445	477	497	503
45	300	363	408	439	448
55	213	283	341	372	378
65	138	210	270	296	296
75	74	144	201	217	213
85	27	91	140	149	144
90	16	72	120	129	125
95	51	100	145	153	148
105	169	208	241	243	237
115	318	347	370	372	366
125	482	505	523	525	520
135	658	675	688	689	684
145	824	834	843	847	843
155	957	967	974	974	970
165	1051	1057	1064	1067	1064
175	1099	1109	1108	1104	1100
180	1109	1109	1109	1109	1109

ZONAL LUMENS

Zone	Lumens
0	
0-10	57
10-20	164
20-30	246
30-40	292
40-50	306
50-60	289
60-70	246
70-80	187
80-90	129
90-100	139
100-110	238
110-120	355
120-130	460
130-140	525
140-150	525
150-160	447
160-170	299
170-180	105
180	

LUMINANCE DATA (CD/M²)

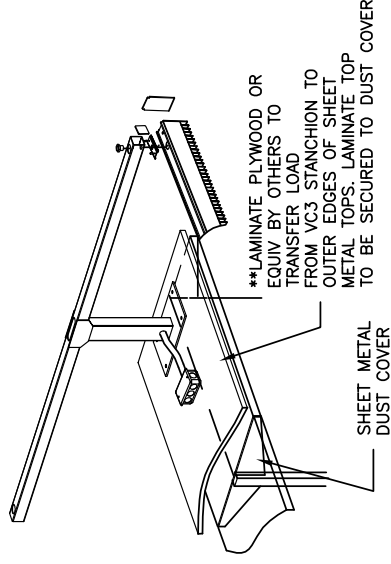
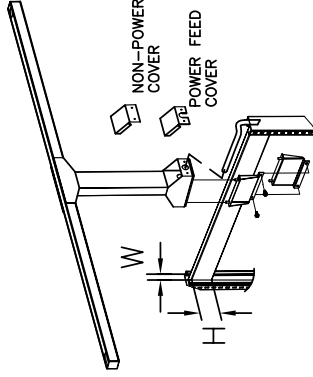
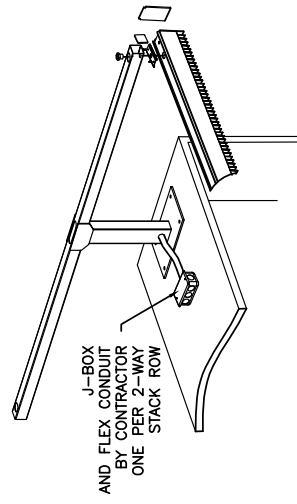
Vertical Angle	Horizontal Angles		
	0	45	90
45	8407	6111	5675
55	7247	5199	4758
65	6182	4331	3811
75	5137	3523	2897
85	4376	2797	2140

i All IES files are available for download at: www.axislighting.com

1.) STACK DIMENSIONS AND INFORMATION

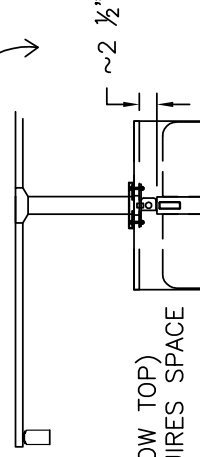
- A.) AISLE WIDTH (36"MIN 42"MAX) _____
 B.) STACK HEIGHT (66" MIN) _____
 C.) STACK SHELF DEPTH _____
 D.) SHELVING UNIT WIDTH (TYP 36") _____
 E.) STACK MANUFACTURER/MODEL _____
 F.) ROW LENGTHS - .dwg AUTOCAD PREFERRED
 G.) IDENTIFY CONTROL GEAR & EM LOCATIONS AS F

2.) STACK TOP CONFIGURATION



WITH TOP CONFIRM:

- ☐ SHEET METAL
☐ LAMINATE/WOOD
☐ POWER FEED AIR
☐ POWER FEED BELT



(BELOW TOP)
REQUIRES SPACE

WITHOUT TOP CONFIRM:

SPANNER DIMENSIONS
HEIGHT X WIDTH

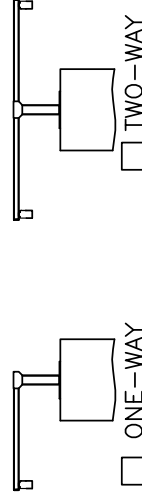
SPANNER REQUIRES
FULL PROFILE
TUBING.

SHEETMETAL 'U'
LACKS STRENGTH
REQ

WITH SHEET METAL DUST COVER CONFIRM:

****LAMINATE TOP TO TRANSFER LOAD TO EDGES
OF COVER BY CONTRACTOR**

3.) CANTILEVER ARM CONFIGURATION

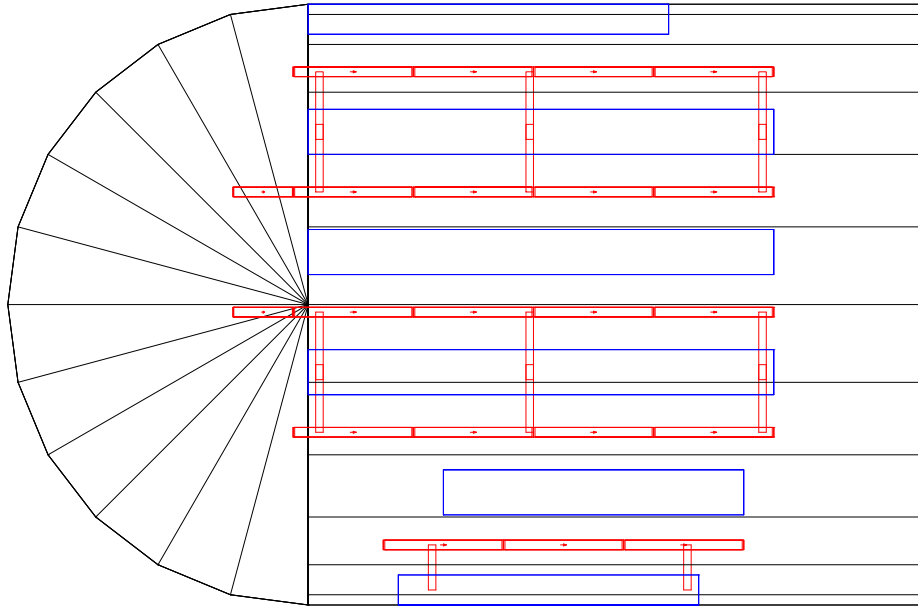


FURNITURE REP CONTACT:	
FIRM:	
NAME:	
PHONE:	

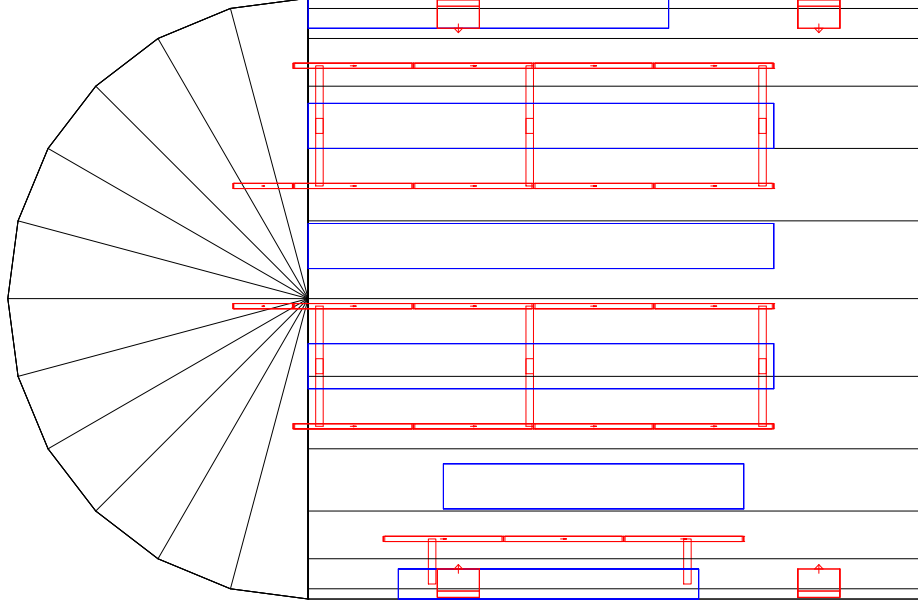
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TITLE: STAQ LIGHT STACK MOUNT WORKSHEET		DR. BY: <i>CRL</i>	SCALE: NTS
DRAWING NUMBER:		DATE: 07-01-14	
APS-A-5140A			
REVISIONS			
A	FIRST SUBMITTAL		
B			
C			
D			

AXIS LIGHTING UP/DOWN



ELLIPTIPAR STAQ WITH S104 UPLIGHT



Luminaire Schedule

Symbol	Label	Description	Tag
	B	BBDILED-B3-MF-640-400-80-35-SO	AXIS
	B-2'	BBDILED-B3-MF-640-400-80-35-SO	AXIS
	A	STAQ-R04J-X-02-T-00-0-30-TE - 350mA	ELLIPTIPAR
	A-2'	STAQ-R02J-X-02-T-00-0-30-TE - 350mA	ELLIPTIPAR
	C	S104-5072-X-02-I-V0-0-35-00 500mA	ELLIPTIPAR

Subject:

Scale:

025/10/16

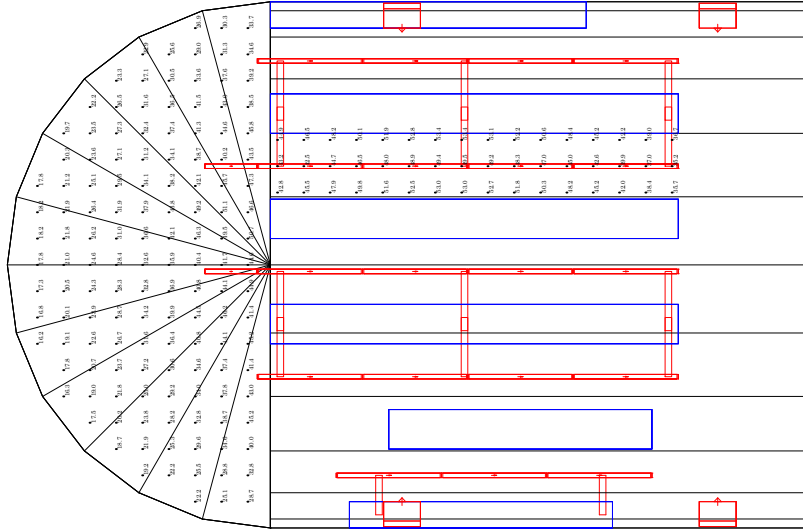
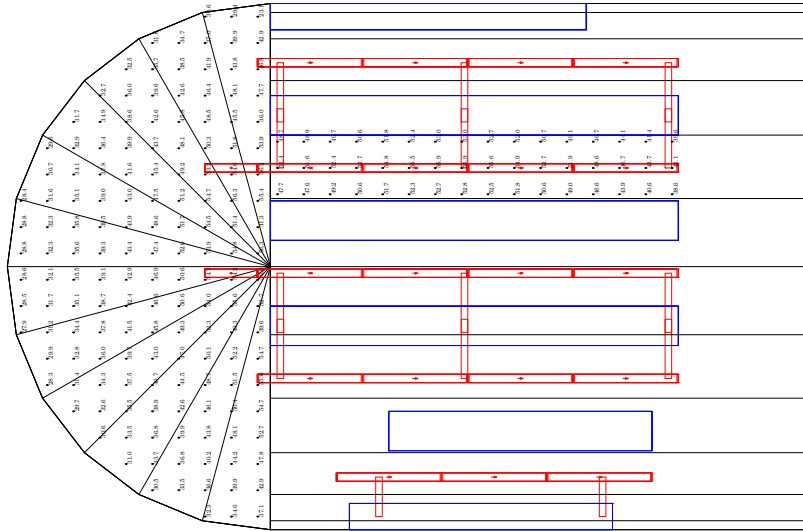
Drawn By: RL

Center Harbor Library



ELLIPTIPAR STAQ WITH S104 UPLIGHT

AXIS LIGHTING UP/DOWN



Luminaire Schedule			
Symbol	Label	Description	Tag
	B	BBDLED-B3-MF-640-400-80-35-SO	AXIS
	B-2'	BBDLED-B3-MF-640-400-80-35-SO	AXIS
	A	STAQ-R04J-X-02-T-00-0-30-TE - 350mA	ELLIPTIPAR
	A-2'	STAQ-R02J-X-02-T-00-0-30-TE - 350mA	ELLIPTIPAR
	C	S104-5072-X-02-1-V0-0-35-00 500mA	ELLIPTIPAR



Center Harbor Library

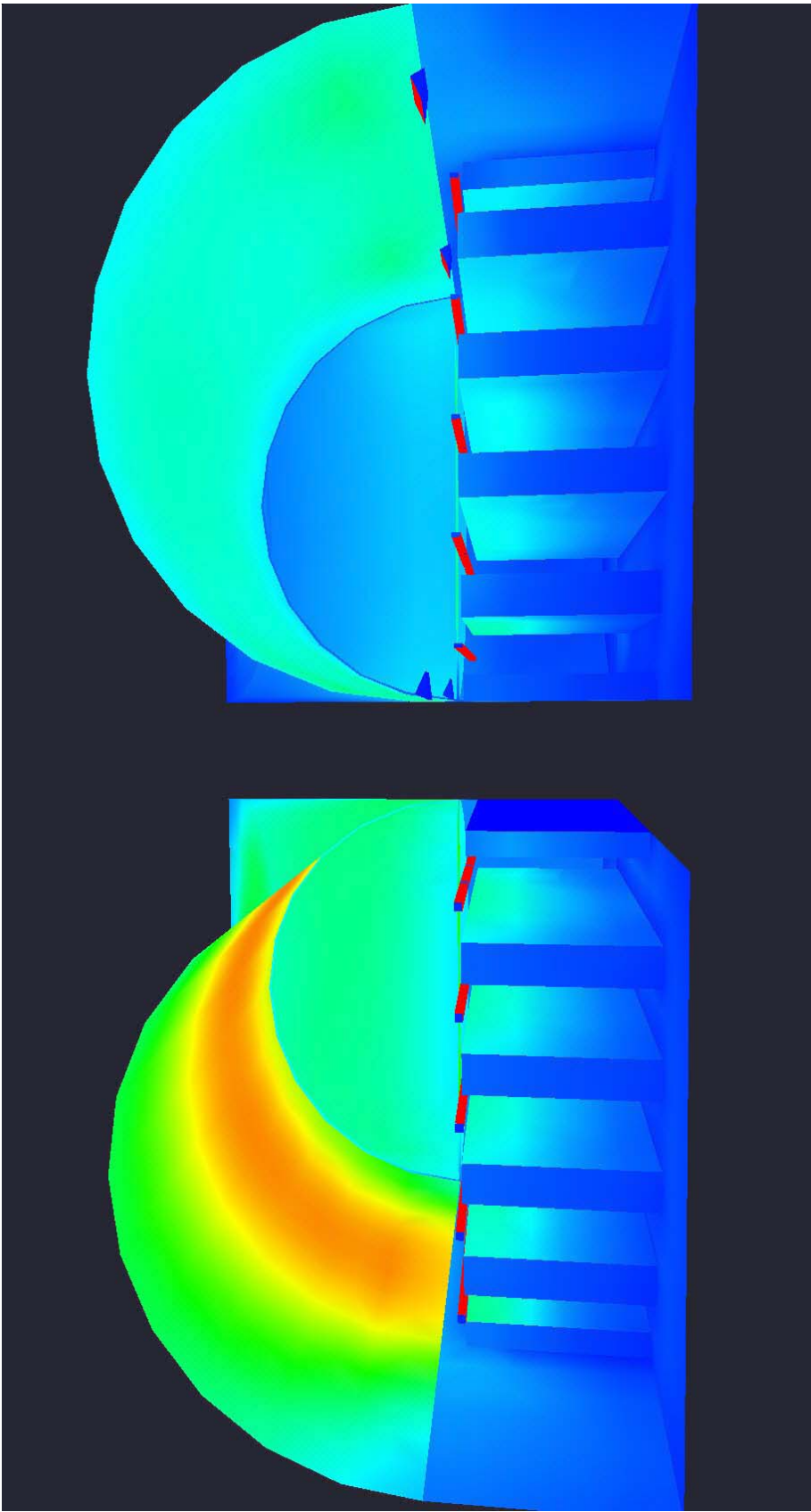
Subject:

Scale:

025/10/16

Drawn By: RL

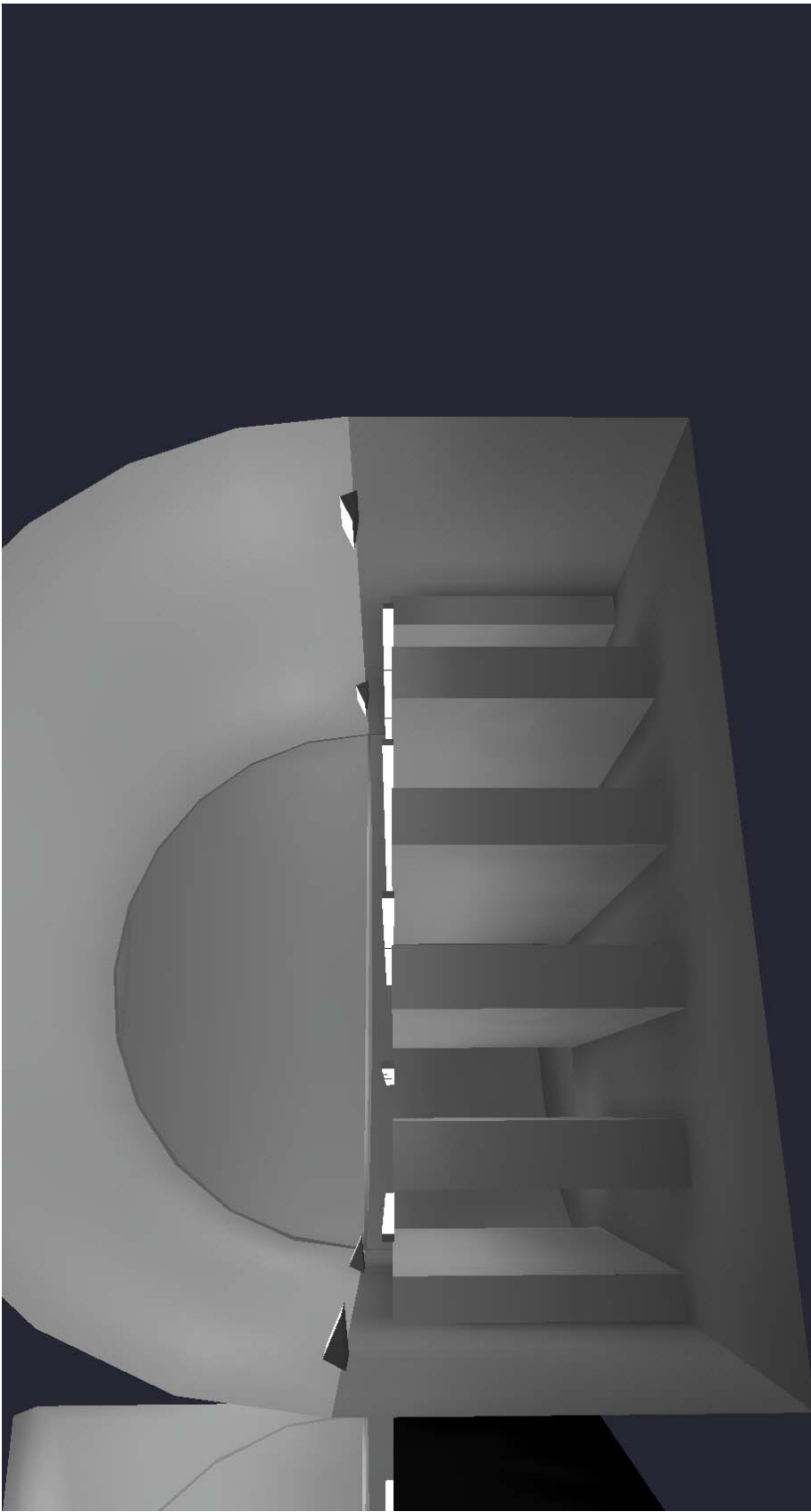
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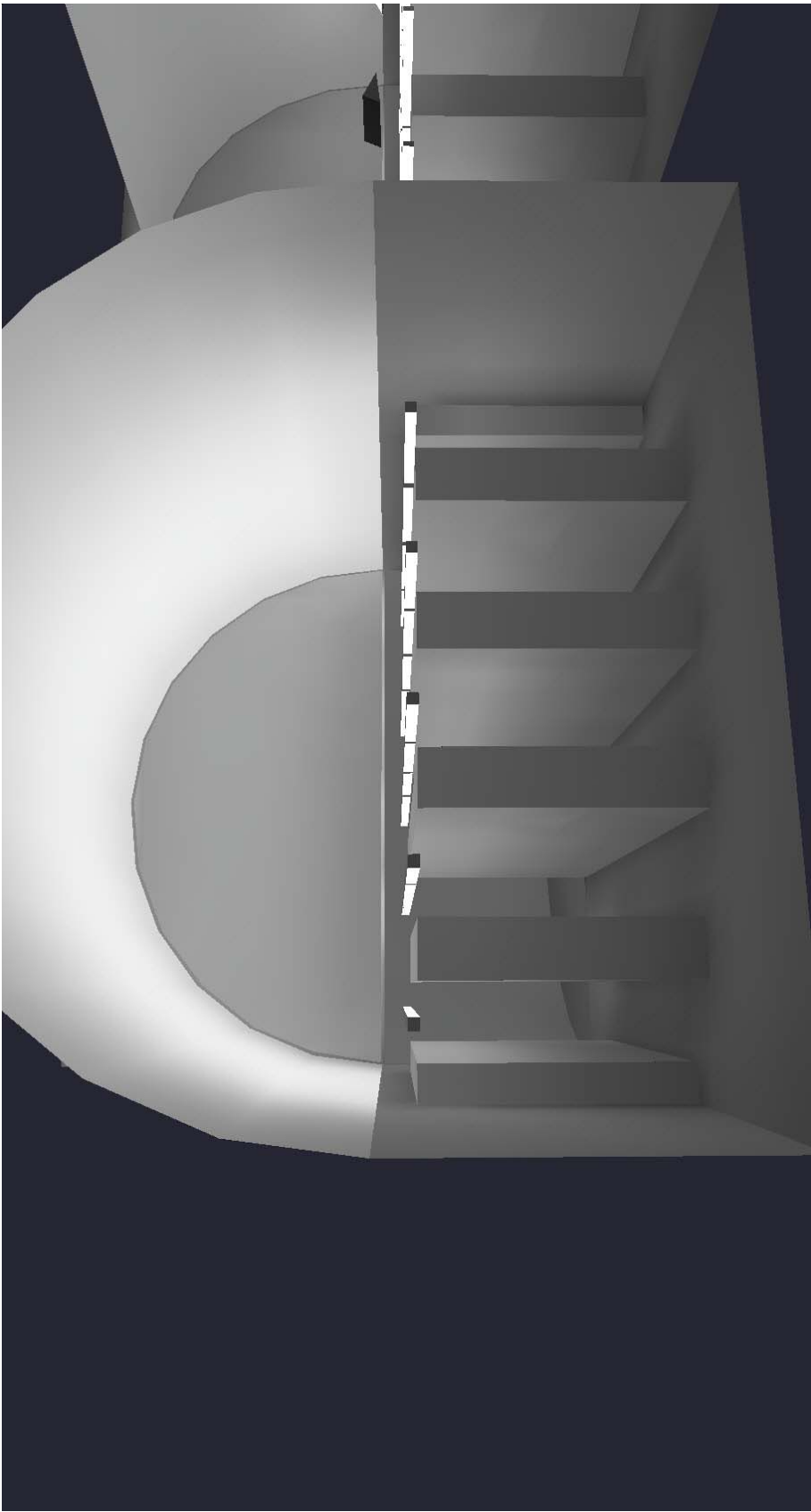
Ceiling Uniformity

Axis (left)

Elliptipar (right)



Elliptipar Rendering



Axis Rendering