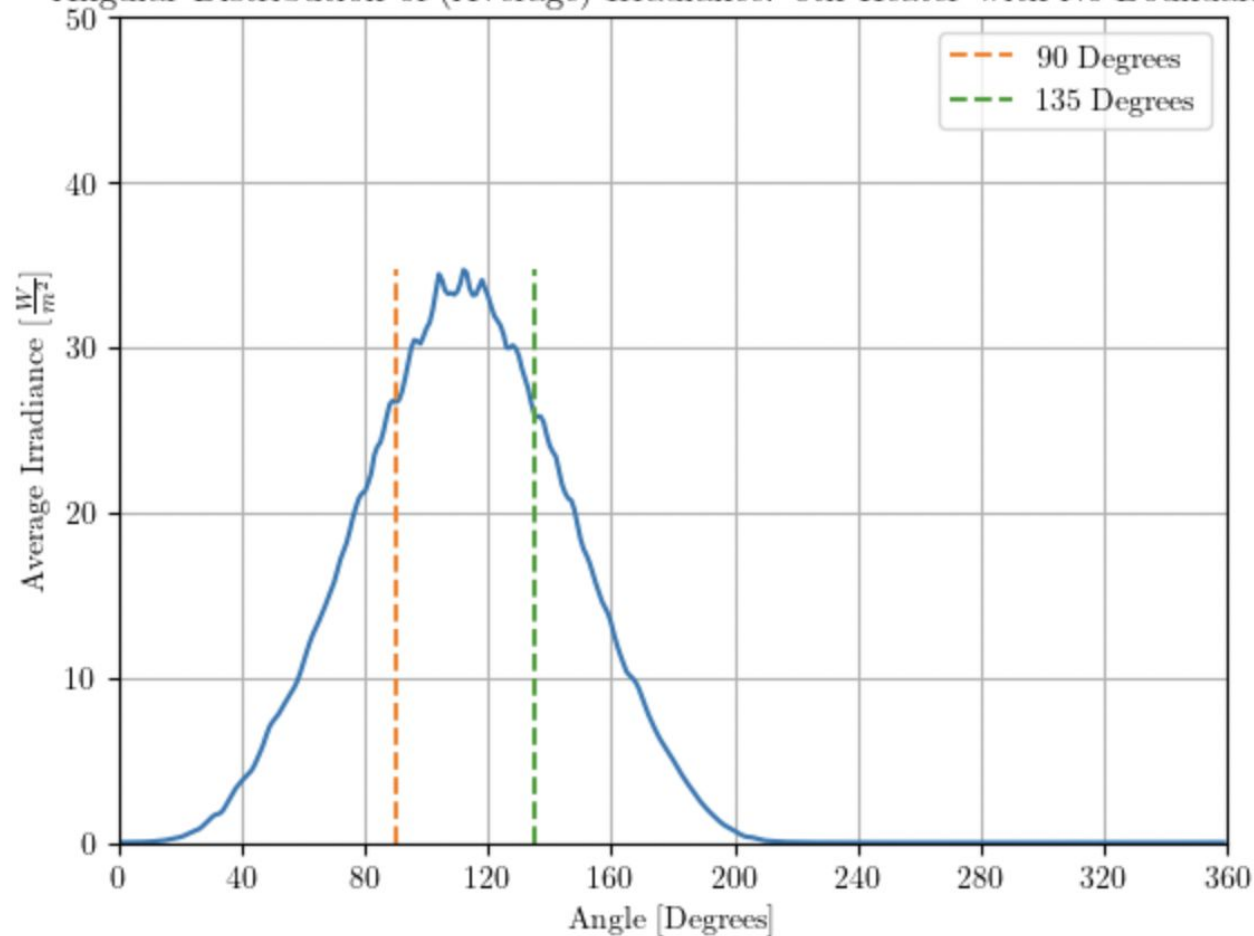


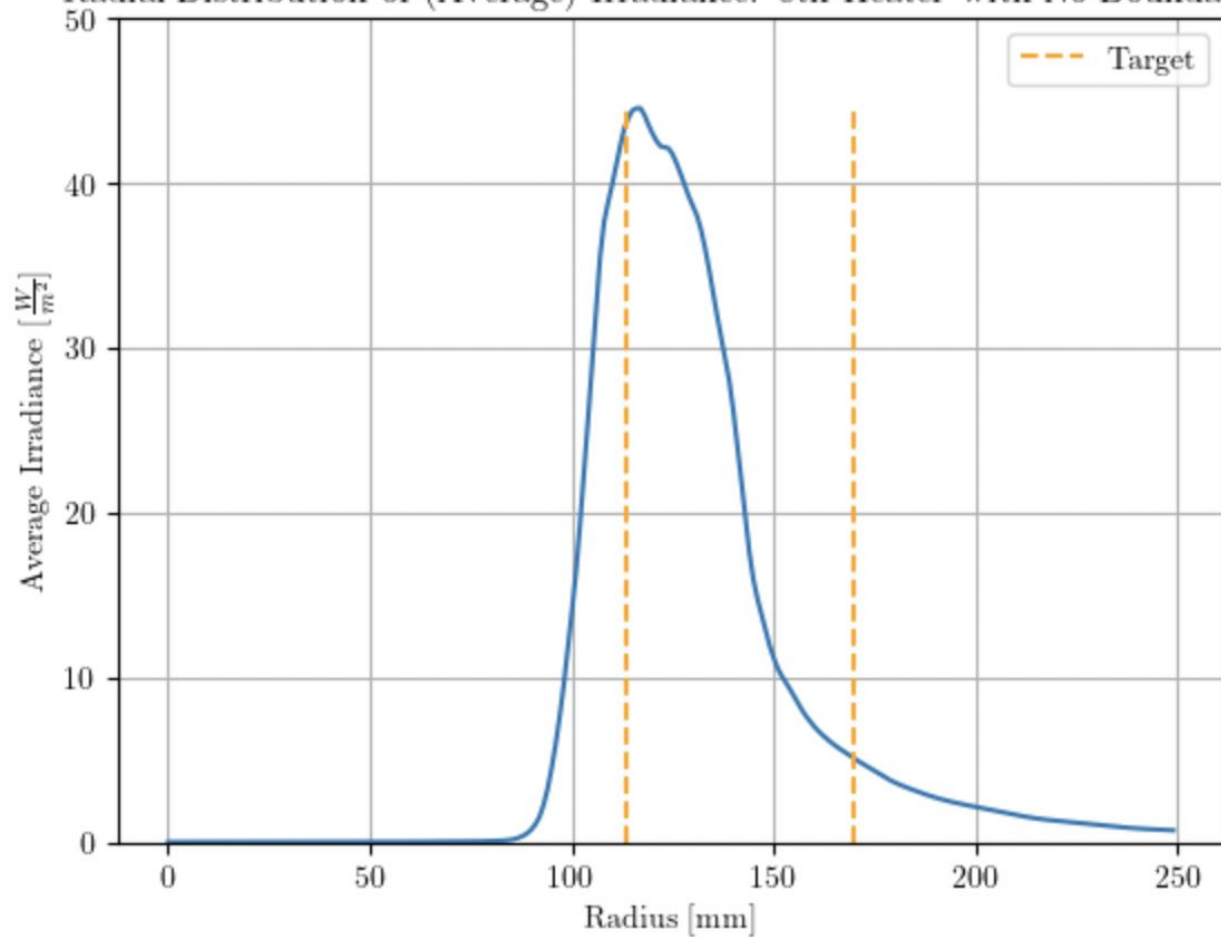
HOM RH Modification

Simulation Progress

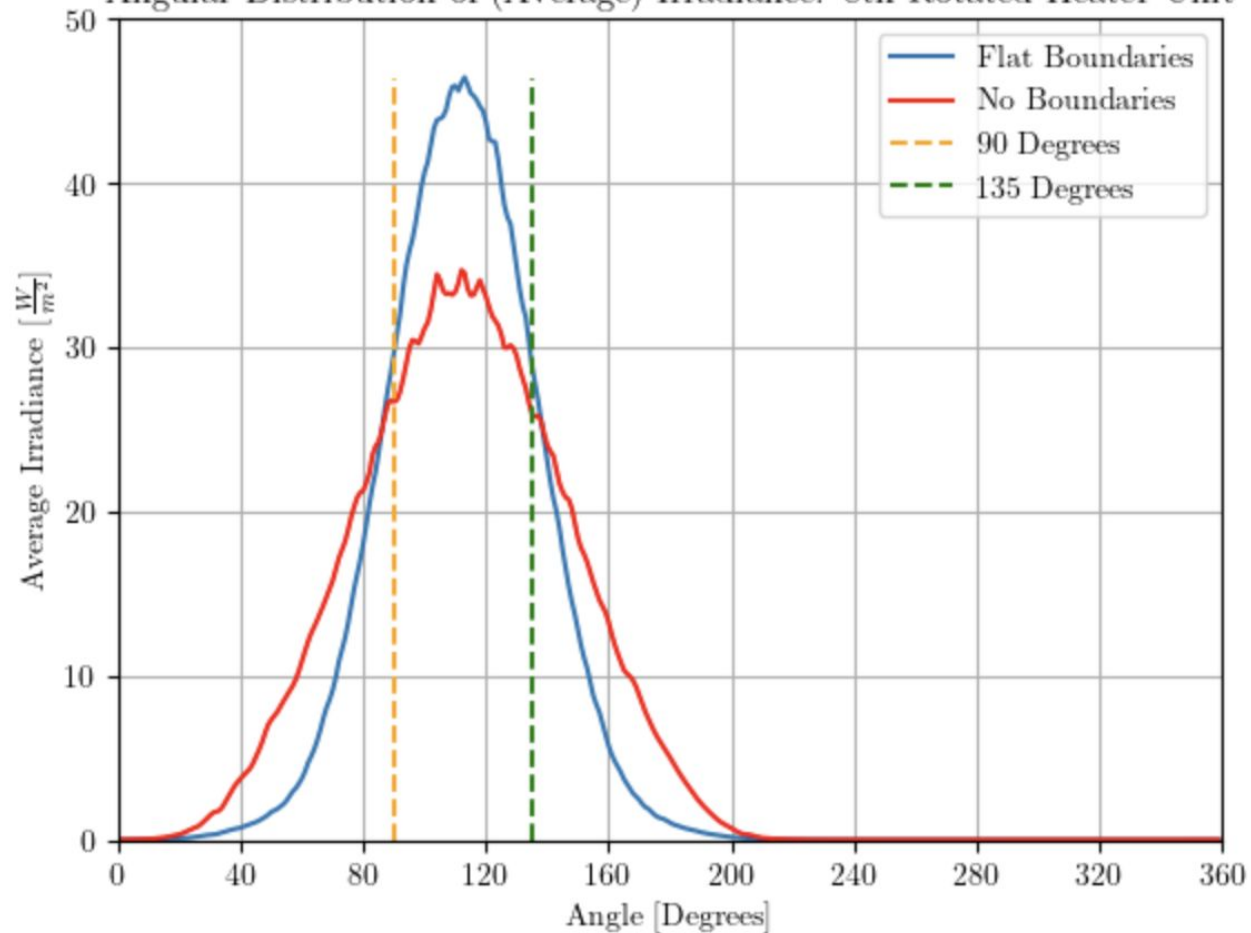
Angular Distribution of (Average) Irradiance: 8th Heater with No Boundaries



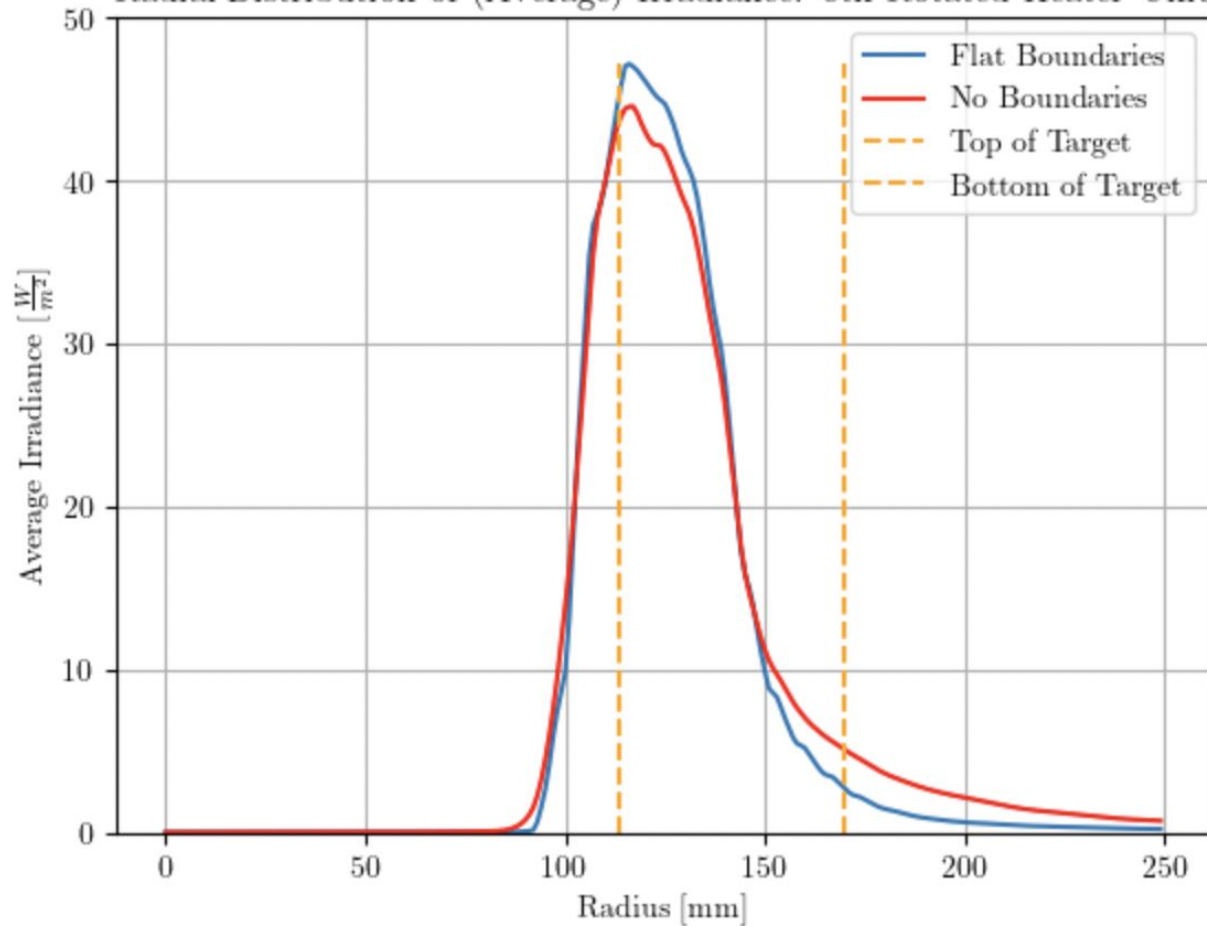
Radial Distribution of (Average) Irradiance: 8th Heater with No Boundaries



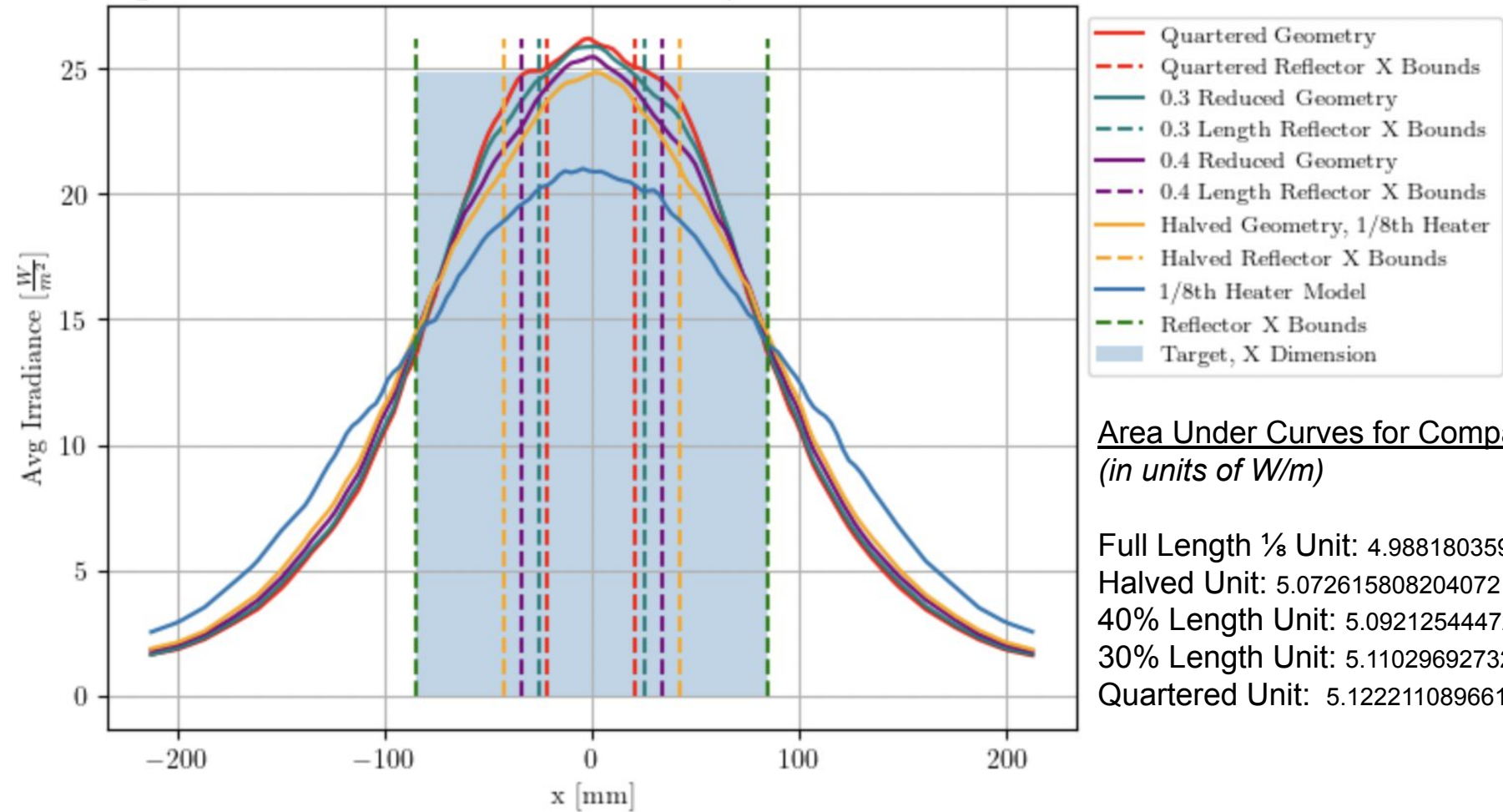
Angular Distribution of (Average) Irradiance: 8th Rotated Heater Unit



Radial Distribution of (Average) Irradiance: 8th Rotated Heater Unit



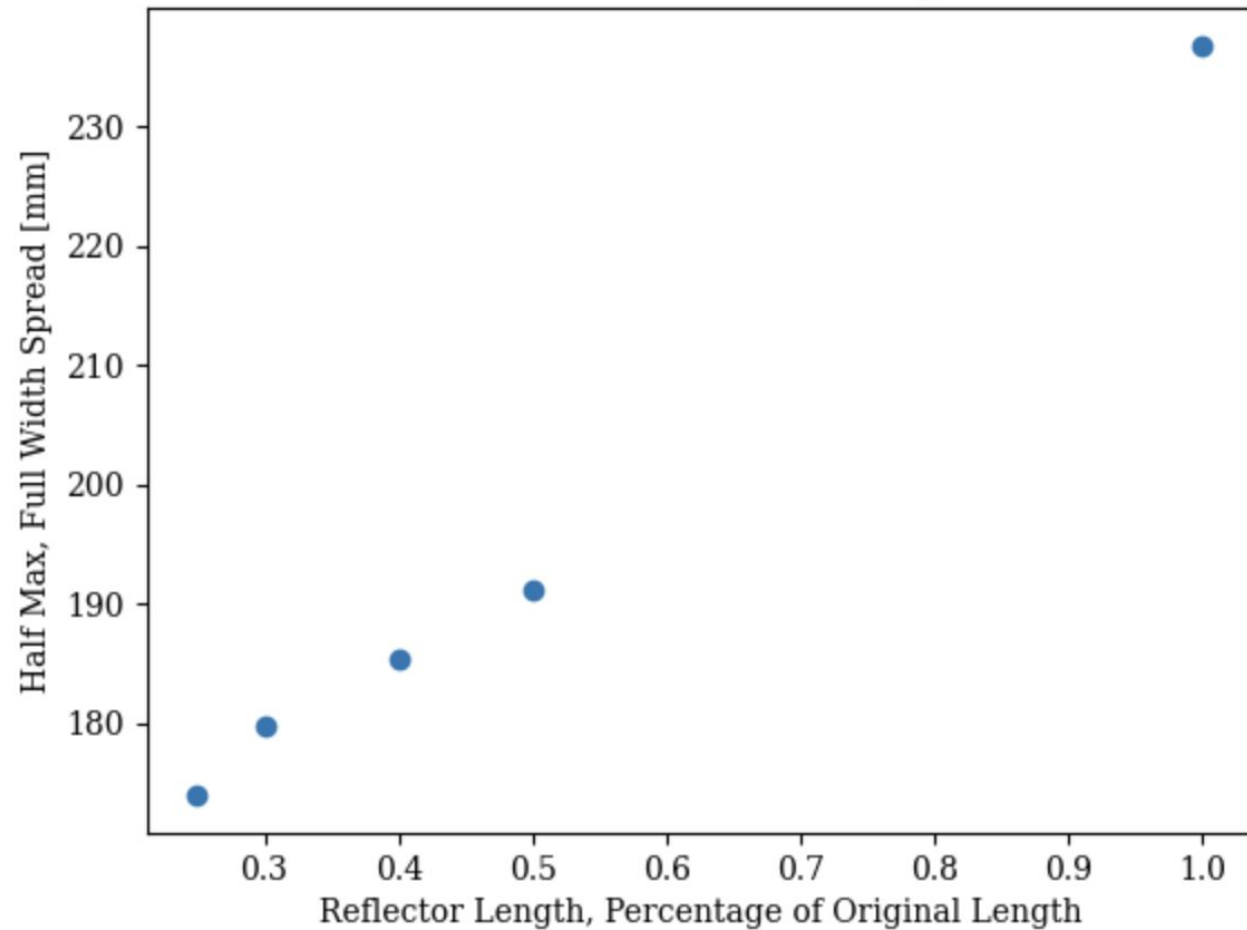
Average Horizontal Distribution of Irradiance: 1/8th Heater Extruded Model



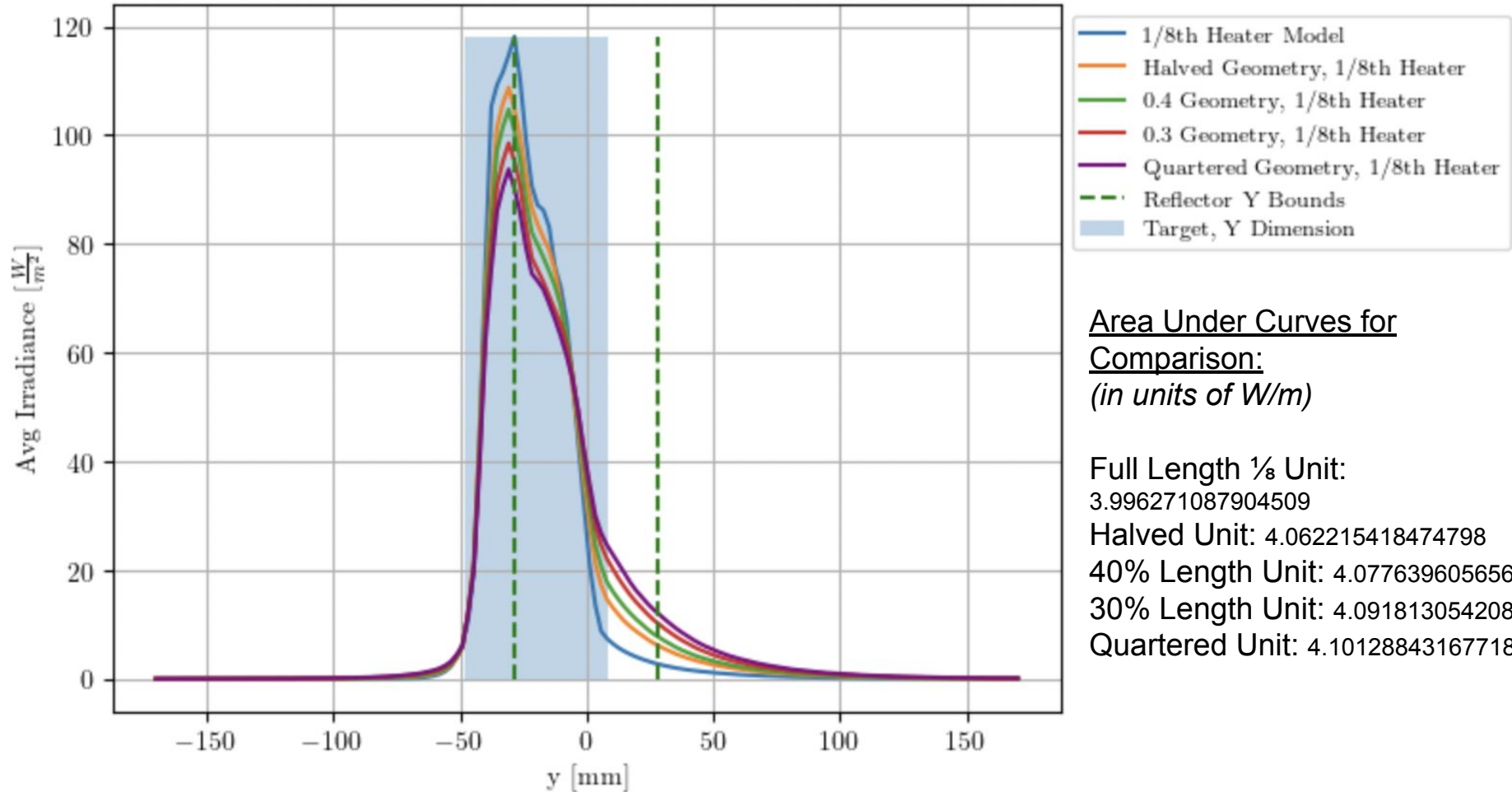
Area Under Curves for Comparison:
(in units of W/m)

Full Length $\frac{1}{8}$ Unit: 4.988180359828554
Halved Unit: 5.072615808204072
40% Length Unit: 5.092125444722964
30% Length Unit: 5.110296927327112
Quartered Unit: 5.122211089661336

Half Max, Full Width vs. Reflector Length: No Bounds



Average Vertical Distribution of Irradiance: 1/8th Heater Extruded Model



Area Under Curves for Comparison:
(in units of W/m)

Full Length $\frac{1}{8}$ Unit:

3.996271087904509

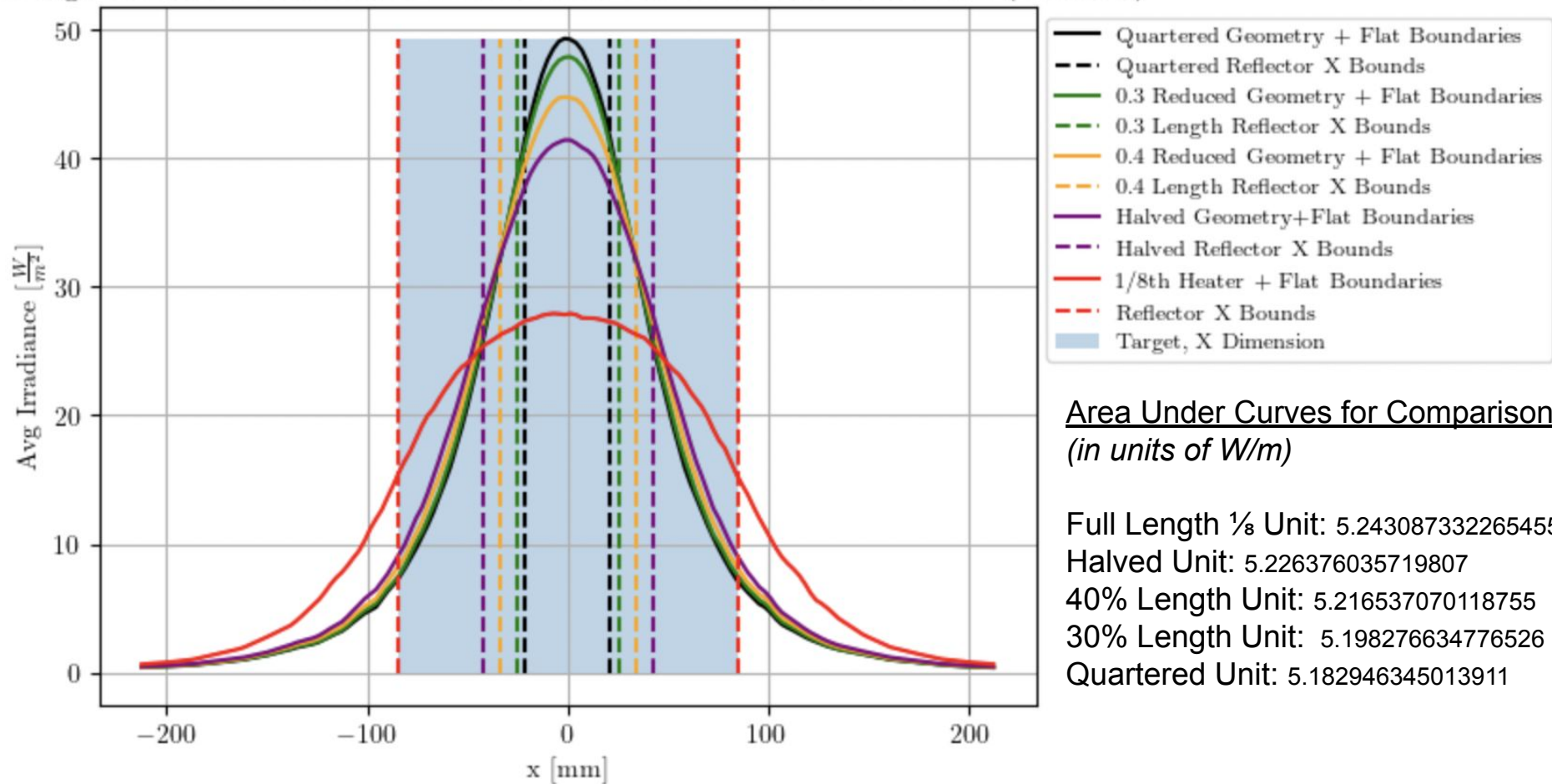
Halved Unit: 4.062215418474798

40% Length Unit: 4.077639605656323

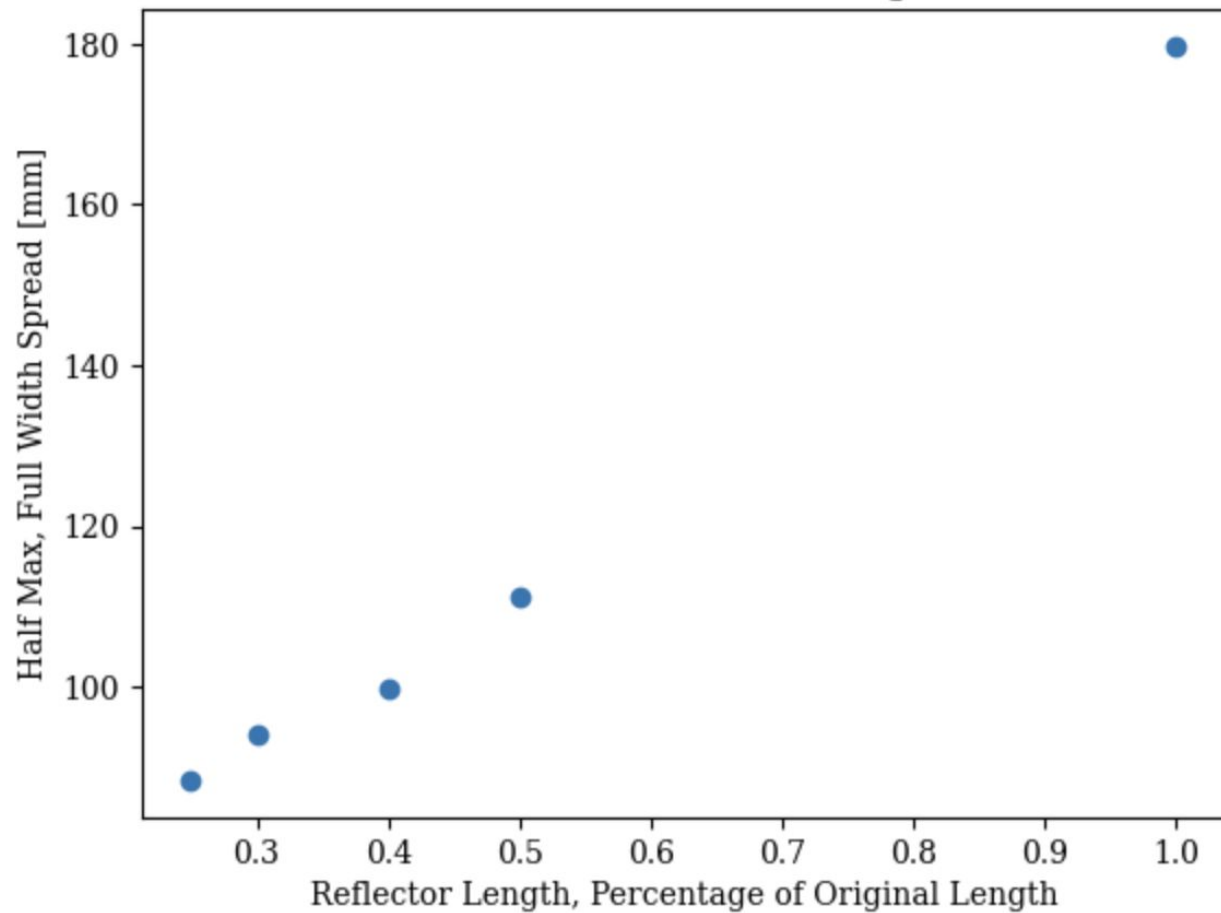
30% Length Unit: 4.091813054208512

Quartered Unit: 4.1012884316771805

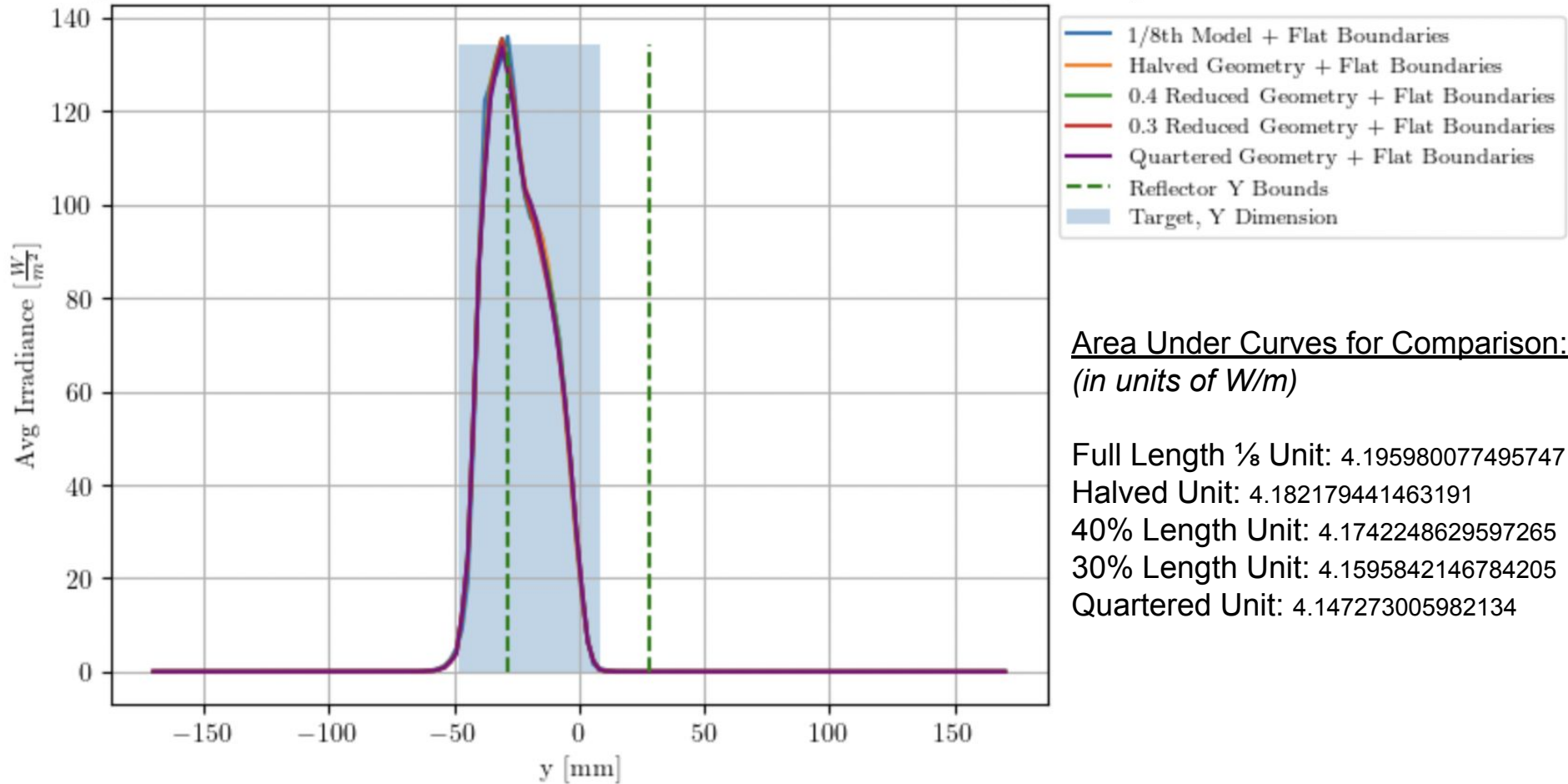
Average Horizontal Distribution of Irradiance: 8th Heater Extruded Model (Bounded)



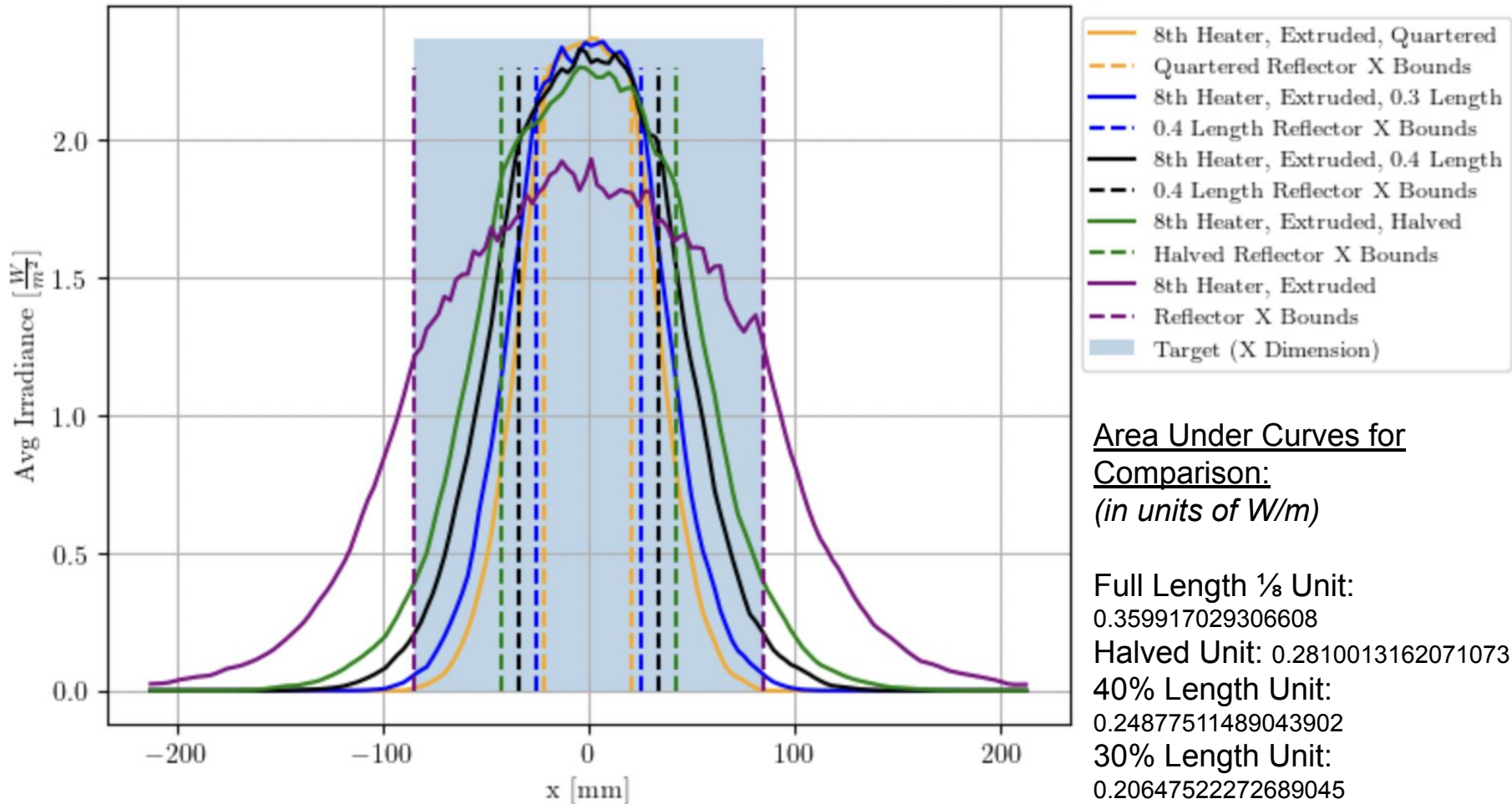
Half Max, Full Width vs. Reflector Length: Flat Bounds



Average Vertical Distribution of Irradiance: 8th Heater Extruded Model (Bounded)



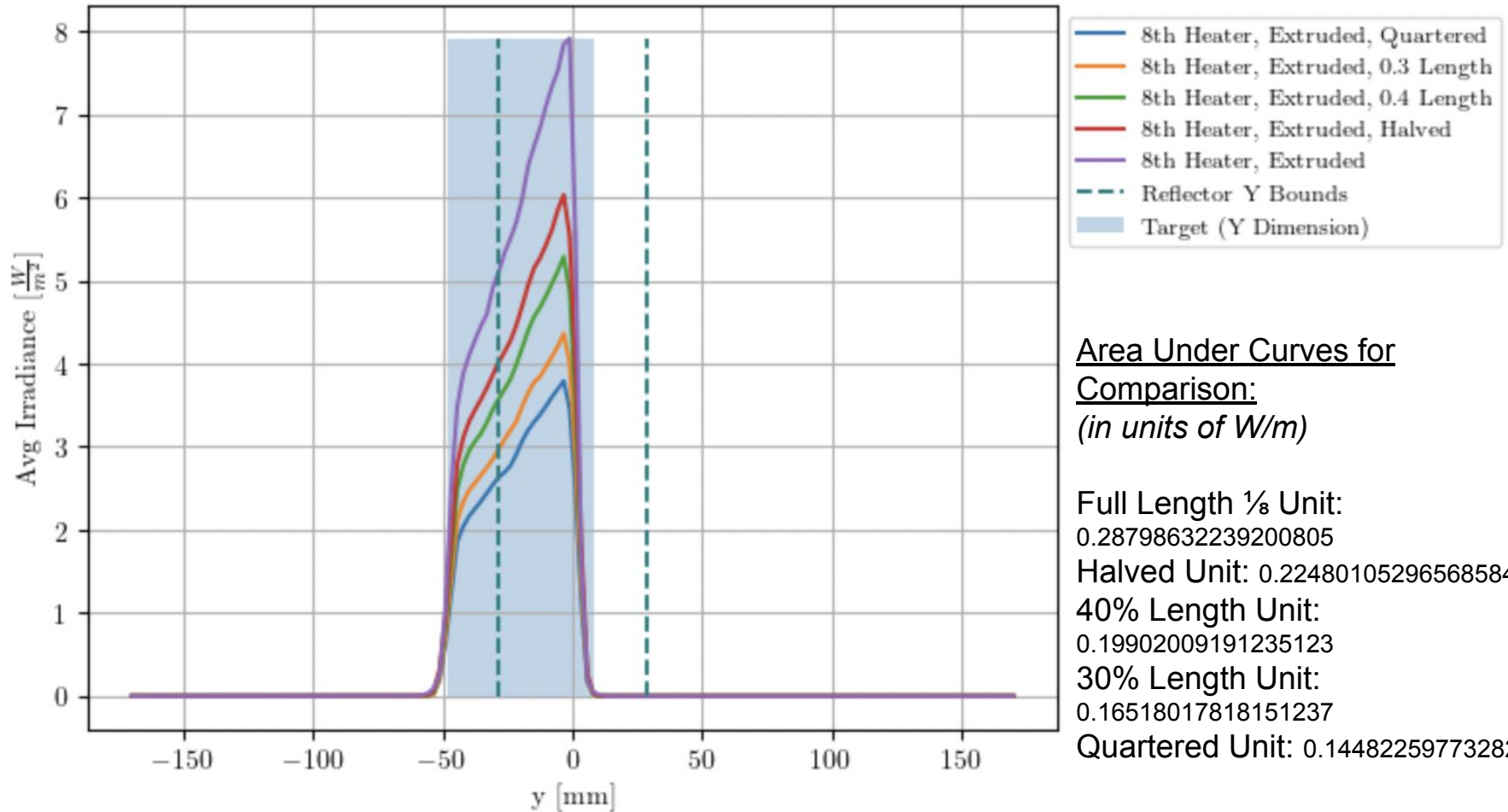
Average Horizontal Distribution of Irradiance: Direct Bottom Aperture Rays



Area Under Curves for Comparison:
(in units of W/m)

- Full Length $\frac{1}{8}$ Unit: 0.359917029306608
- Halved Unit: 0.2810013162071073
- 40% Length Unit: 0.24877511489043902
- 30% Length Unit: 0.20647522272689045
- Quartered Unit: 0.18102824716603522

Average Vertical Distribution of Irradiance: Direct Bottom Aperture Rays



Area Under Curves for Comparison:
(in units of W/m)

Full Length 1/8 Unit:

0.28798632239200805

Halved Unit: 0.22480105296568584

40% Length Unit:

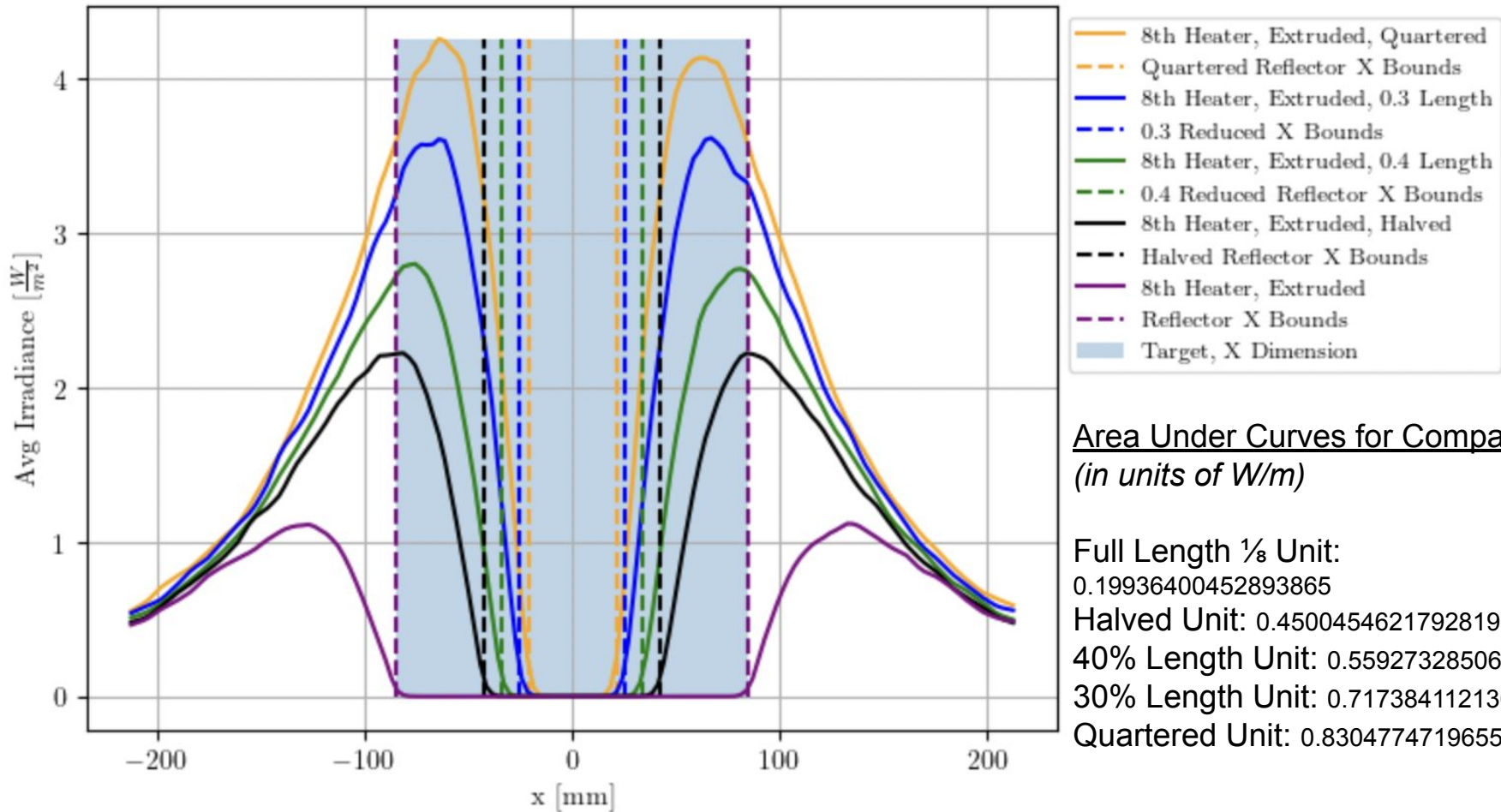
0.19902009191235123

30% Length Unit:

0.16518017818151237

Quartered Unit: 0.14482259773282818

Average Horizontal Distribution of Irradiance: Direct Edge Aperture Rays



Area Under Curves for Comparison:
(in units of W/m)

Full Length $\frac{1}{8}$ Unit:

0.19936400452893865

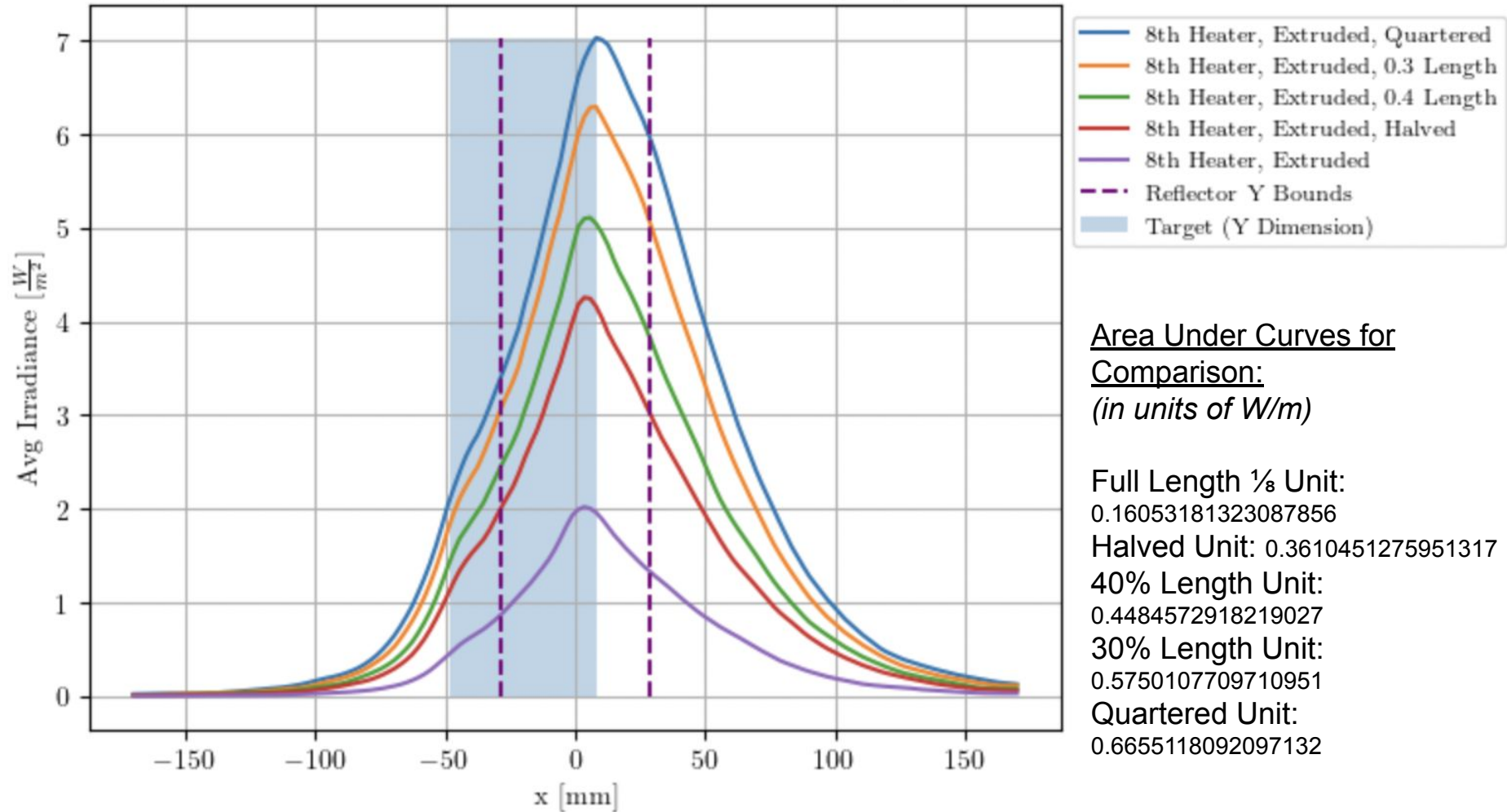
Halved Unit: 0.45004546217928193

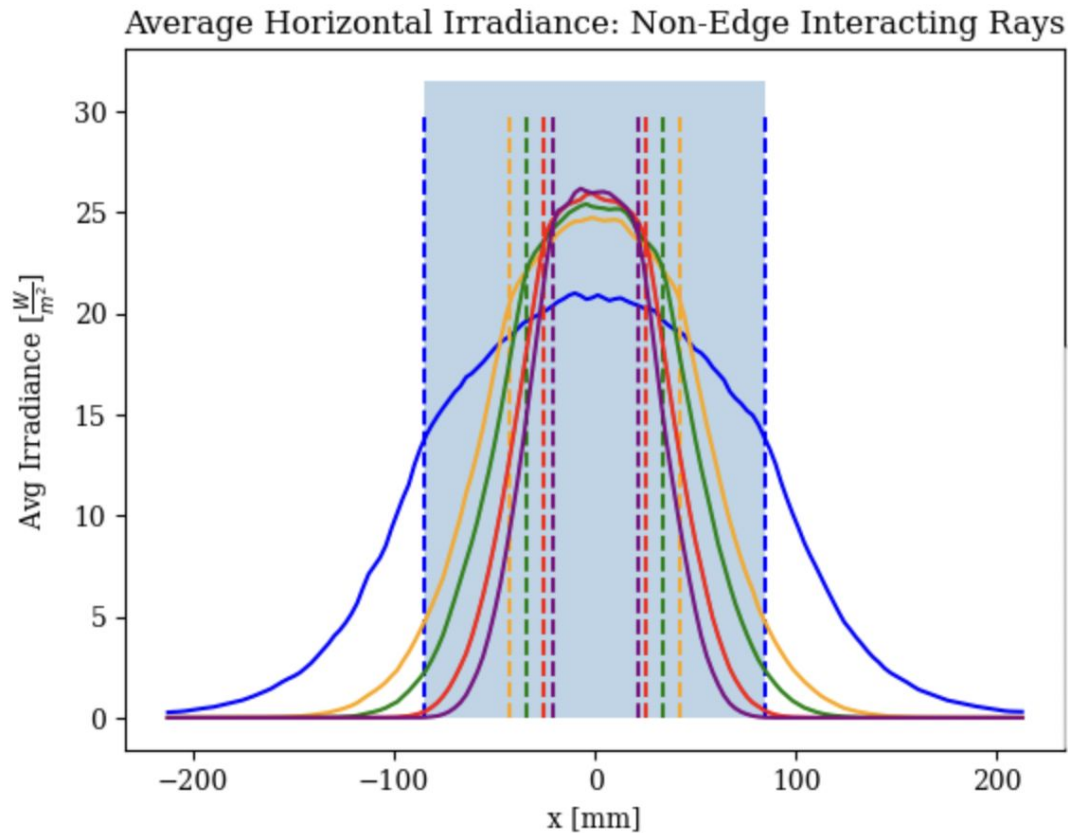
40% Length Unit: 0.559273285065193

30% Length Unit: 0.7173841121300857

Quartered Unit: 0.8304774719655866

Average Vertical Distribution of Irradiance: Direct Edge Aperture Rays

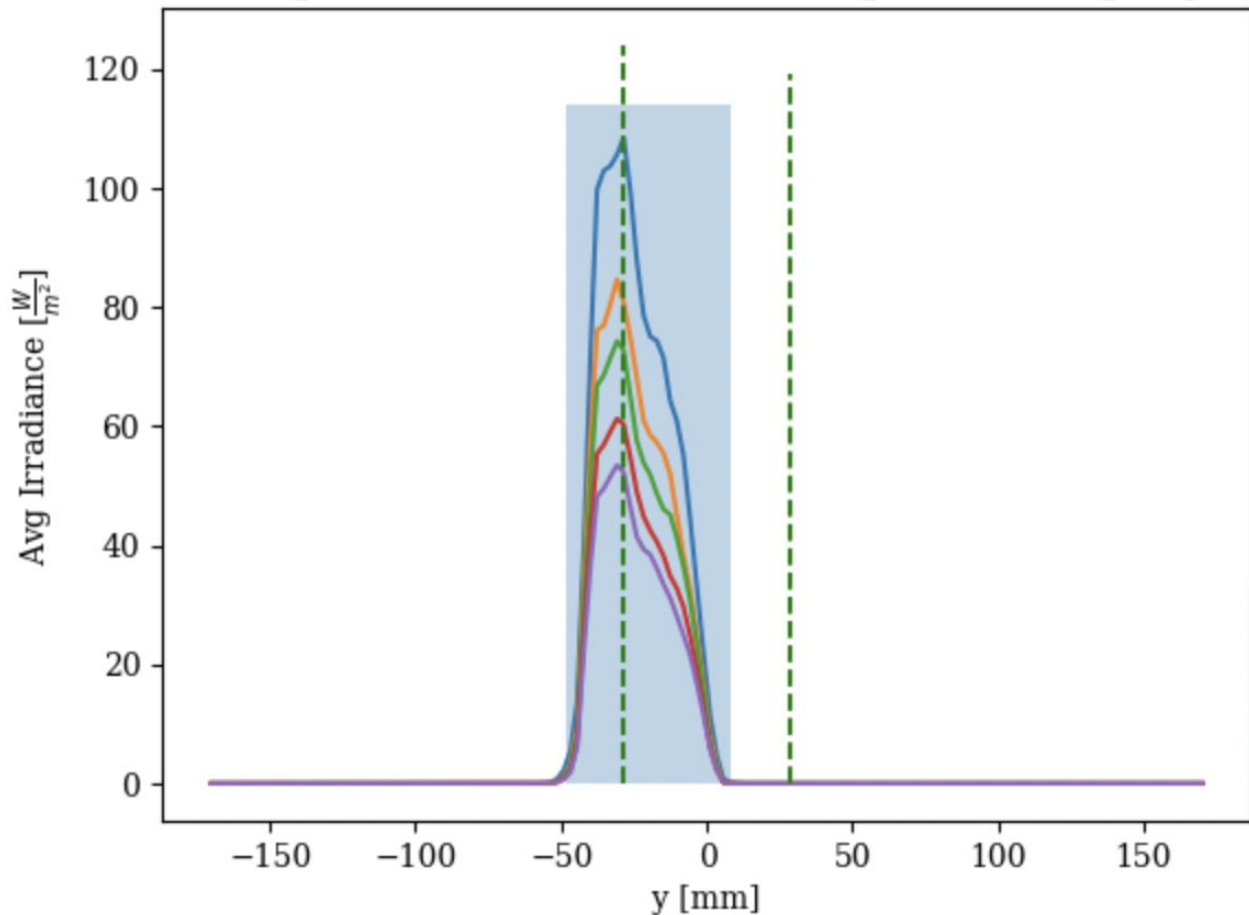




- All radiation that does not interact with edges
- ◆ flat edge boundaries absorb rays
 - ◆ Elliptical surfaces are reflectors
 - ◆ Bottom aperture unblocked

- 8th Heater, 100% Length
- - - 8th Heater, 100% Length Reflector X Bounds
- 8th Heater, 50% Length
- - - 8th Heater, 50% Length Reflector X Bounds
- 8th Heater, 40% Length
- - - 8th Heater, 40% Length Reflector X Bounds
- 8th Heater, 30% Length
- - - 8th Heater, 30% Length Reflector X Bounds
- 8th Heater, 25% Length
- - - 8th Heater, 25% Length Reflector X Bounds

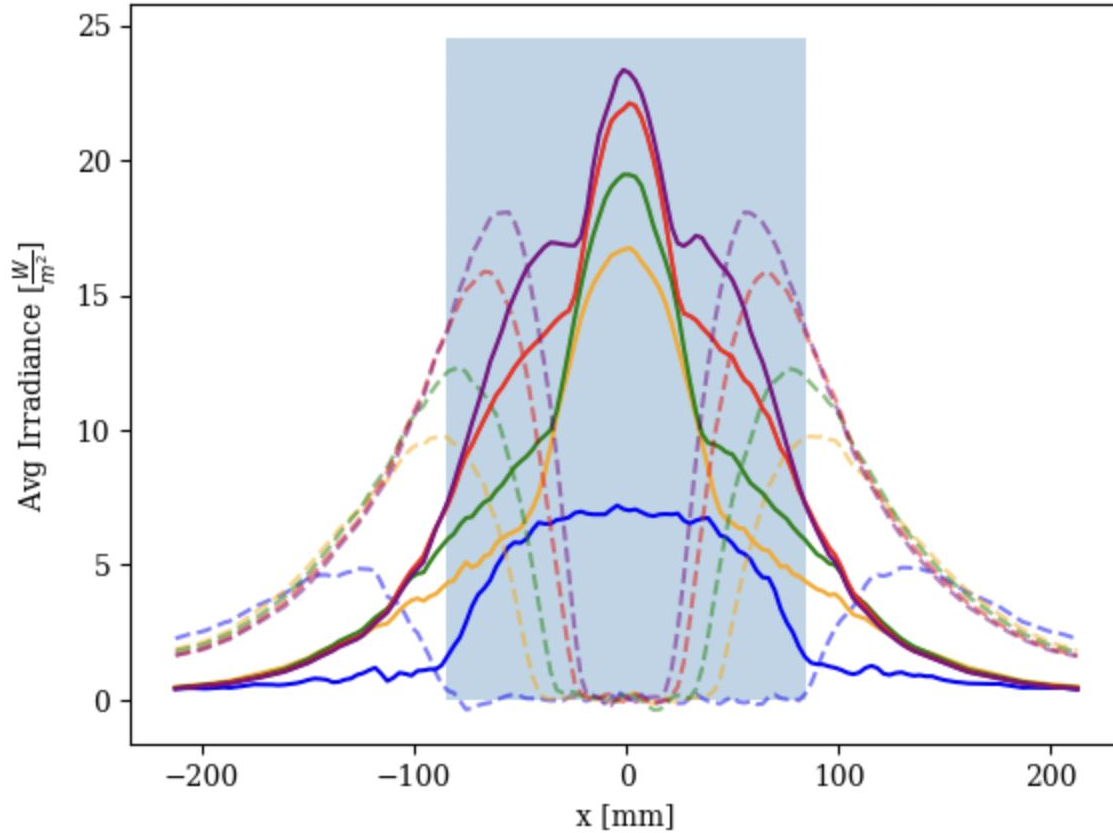
Average Vertical Irradiance: Non-Edge Interacting Rays



- All radiation that does not interact with edges
- ◆ flat edge boundaries absorb rays
 - ◆ Elliptical surfaces are reflectors
 - ◆ Bottom aperture unblocked

- 8th Heater, 100% Length
- 8th Heater, 50% Length
- 8th Heater, 40% Length
- 8th Heater, 30% Length
- 8th Heater, 25% Length

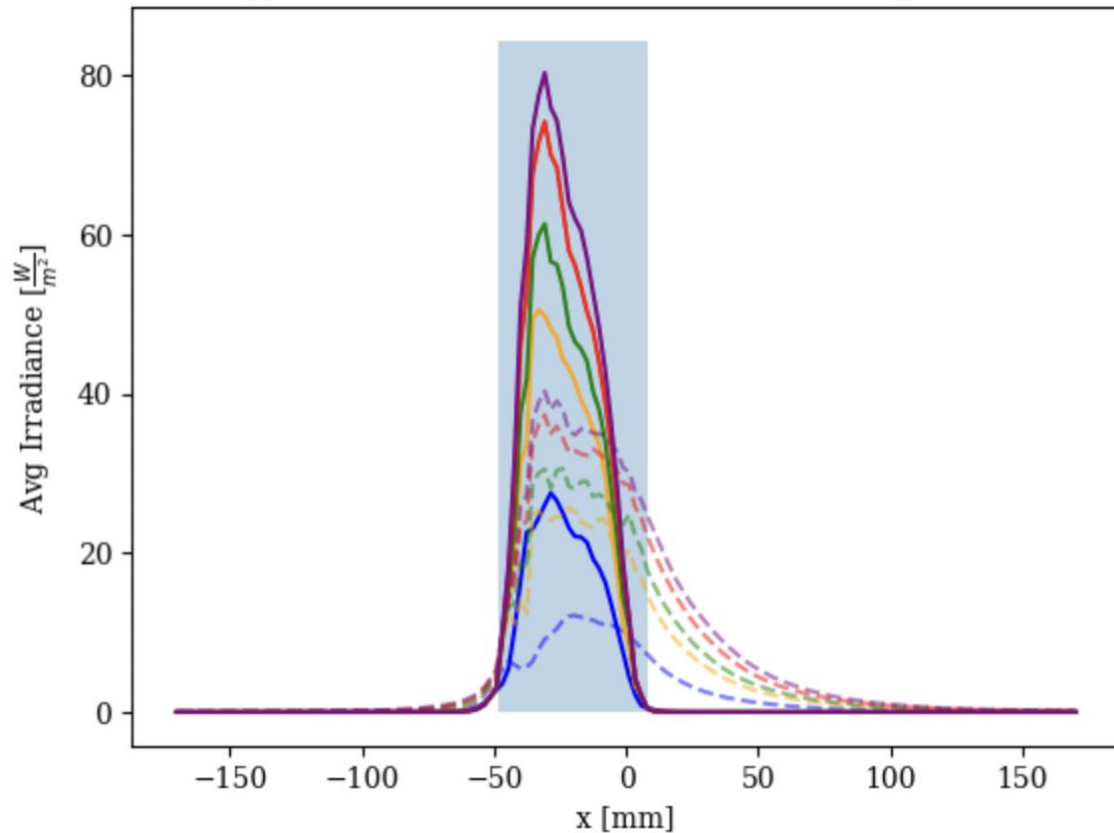
Average Horizontal Irradiance Distribution: Edge Radiation



→ Total Irradiance Distribution
- Distribution of Irradiance
that does not interact with
edges/edge boundaries

- 8th Heater, 100% Length, Flat Bounds
- 8th Heater, 100% Length, No Bounds
- 8th Heater, 50% Length, Flat Bounds
- 8th Heater, 50% Length, No Bounds
- 8th Heater, 40% Length, Flat Bounds
- 8th Heater, 40% Length, No Bounds
- 8th Heater, 30% Length, Flat Bounds
- 8th Heater, 30% Length, No Bounds
- 8th Heater, 25% Length, Flat Bounds
- 8th Heater, 25% Length, No Bounds
- Target, X Dimension

Average Vertical Irradiance Distribution: Edge Radiation



→ Total Irradiance Distribution
- Distribution of Irradiance
that does not interact with
edges/edge boundaries

- 8th Heater, 100% Length, Flat Bounds
- 8th Heater, 100% Length, No Bounds
- 8th Heater, 50% Length, Flat Bounds
- 8th Heater, 50% Length, No Bounds
- 8th Heater, 40% Length, Flat Bounds
- 8th Heater, 40% Length, No Bounds
- 8th Heater, 30% Length, Flat Bounds
- 8th Heater, 30% Length, No Bounds
- 8th Heater, 25% Length, Flat Bounds
- 8th Heater, 25% Length, No Bounds
- Target, Y Dimension