

Section 3: Installation/Assembly

Ceiling Calculation for a Single Ceiling Light

Use the following table to select the correct length ceiling rod for your application.

Ceiling Mounting Height "Y"-Value	Ceiling Rod Length	"X"-Value	Head room to bottom of Extension Arm (Y-Value – X-Value)
8'0" – 8'10" [2438 – 2692]	9" [229] P/N: 1001461-9	19.5" [495]	76.5" – 86.5" [1943 – 2197]
8'11" – 9'8" [2718 – 2946]	20" [508] P/N: 1001461-20	30.5" [775]	76.5" – 85.5" [1943 – 2172]
9'9" – 10'6" [2972 – 3200]	30" [762] P/N: 1001461-30	40.5" [1029]	76.5" – 85.5" [1943 – 2172]
10'7" – 11'4" [3226 – 3454]	40" [1016] P/N: 1001461-40	50.5" [1283]	76.5" – 85.5" [1973 – 2172]
11'5" – 12'2" [3480 – 3708]	50" [1270] P/N: 1001461-50	60.5" [1537]	76.5" – 85.5" [1973 – 2172]

[xx] denotes millimeters

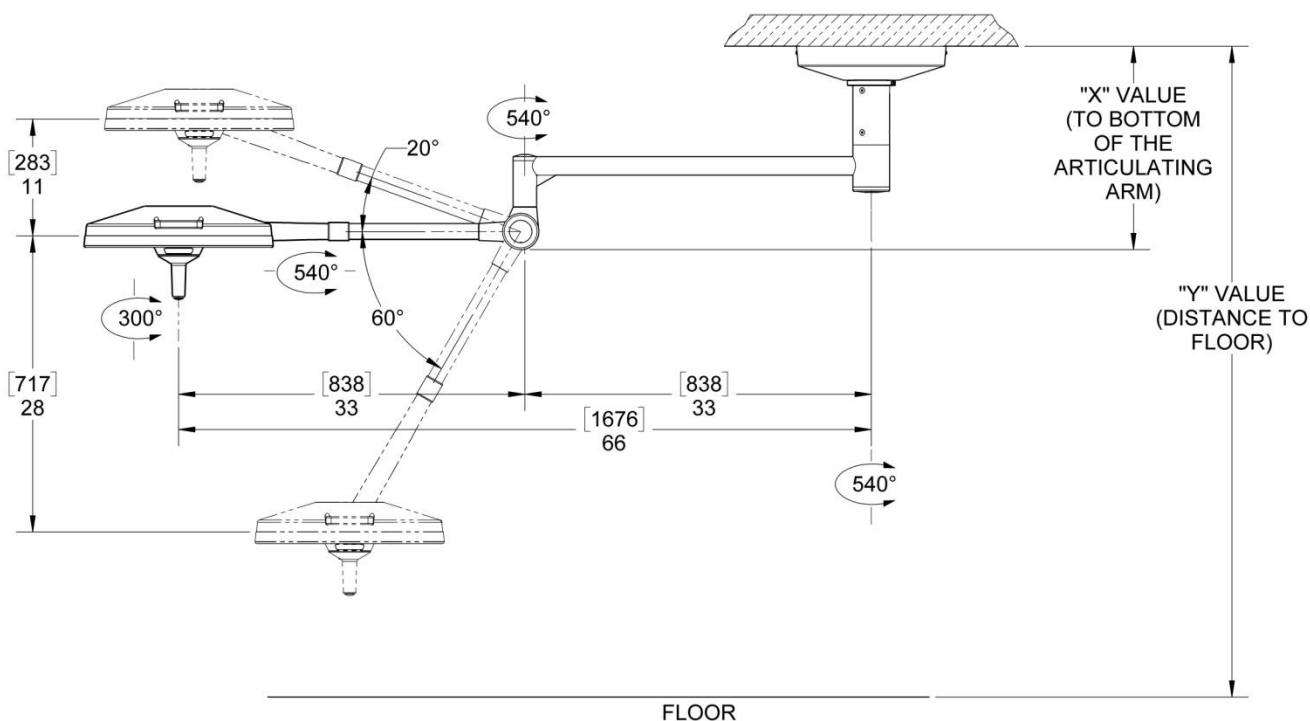


Figure 1: Ceiling Rod Calculation for Single Ceiling Mount

Ceiling Calculation for a Dual Ceiling Light

Use the following table to select the correct length ceiling rod for your application.

Ceiling Mounting Height "Y"-Value	Ceiling Rod Length	"X"-Value	Head room to bottom of Extension Arm (Y-Value – X-Value)
8'0" – 8'10" [2438 – 2692]	9" [229] P/N: 1001461-9	23.5" [597]	72.5" – 82.5" [2026 – 2280]
8'11" – 9'8" [2718 – 2946]	20" [508] P/N: 1001461-20	34.5" [876]	72.5" – 81.5" [1842 – 2070]
9'9" – 10'6" [2972 – 3200]	30" [762] P/N: 1001461-30	44.5" [1130]	72.5" – 81.5" [1842 – 2070]
10'7" – 11'4" [3226 – 3454]	40" [1016] P/N: 1001461-40	54.5" [1384]	72.5" – 81.5" [1842 – 2070]
11'5" – 12'2" [3480 – 3708]	50" [1270] P/N: 1001461-50	64.5" [1638]	72.5" – 81.5" [1842 – 2070]

[xx] denotes millimeters

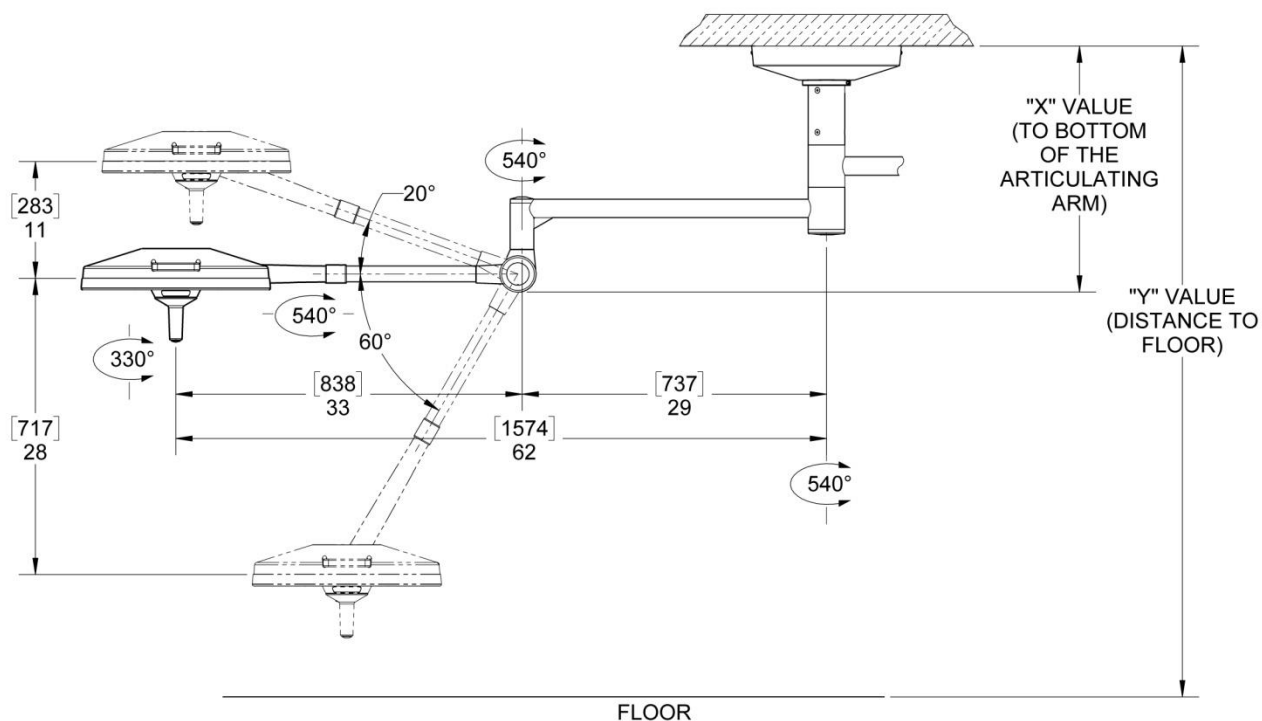


Figure 2: Ceiling Rod Calculation for Dual Ceiling Mount

Ceiling Mount Pre-Installation Guidelines

SPECIAL NOTE: Installation and repair of this equipment should be performed by qualified personnel only. Medical Illumination International, Inc. does not warranty any damage occurring as a result of improper installation. It is recommended that this installation manual be completely reviewed prior to installation.

Before installation, check to ensure the following minimum conditions are provided:

Ceiling Mount	Weight: Lb.	Moment: Ft Lb.
Single Ceiling	145	326
Dual Ceiling	231	626

← recommended

Medical Illumination strongly recommends that the ceiling structure be designed to the weights and moments for the worst case (double ceiling). Designing for the heaviest model with the highest load/torque will ensure adequate support for all models.



A structural mount that does not meet these minimum conditions can cause serious injury and/or property damage.



A sloped or vaulted ceiling will require a level mounting surface be constructed that meets the above listed requirements.

- The ceiling structure must be strong enough to support the weight and rigid enough to constrain rotation to less than 0.1° at the ceiling casting.
- The equipment may be mounted directly over a 4-0 junction box. Input power supply lines should be wired in accordance with all applicable building codes.
- The supply circuit line must be as follows:
100-240VAC, 50/60 Hz, single phase, three wire, capable of supplying 200 Watts.
- The equipment is not deemed compatible with any sort of electrical dimming device. Use line voltage only.
- The power supply circuit line must be routed and wired to the wire harness in compliance with all applicable building codes.



Failure to provide a circuit meeting these minimum standards or complying with local building codes can cause a shock hazard.

Check the length of the ceiling rod supplied to make sure that it is the proper length to install and operate the light without interference or overreach.



Means of Isolation

The Means of Isolation disconnects (isolates) the light from the source of power. This isolation makes it safe to work on the light. In the case of a ceiling mounted light, the means of isolation is the circuit breaker that supplies the power to the circuit. In the case of the Wall, Floor or Floor UPS, the means of isolation is the cord. Unplugging the cord isolates the light from power.

Ceiling Structure Construction and Mounting

The Ceiling Mount system will experience various levels of dynamic off-center moment during regular use. Therefore, it is crucial that the ceiling structure be strong enough to uphold the weight of the system and support the positioning arms and light head without deflection. The owner and/or owner's contractor has the final responsibility for the strength and rigidity of the ceiling structure. An inadequate ceiling structure may result in serious injury, unintended drift, and/or equipment damage.

Because the ceiling structure is the owner's responsibility, the design and construction recommendation shown below covers only one of the many possible alternatives that can be used. Medical Illumination highly recommends that the owner consult a structural engineer prior to designing and installing the ceiling structure.

Recommended Ceiling Structure Construction Details

The illustrations below are suggested mounting schemes per 2001 California Building Code – Section 1632A: Anchorage and Seismic. For any other mounting scheme, please consult a structural engineer and/or professional contractor for the best solution for your situation. Installation and repair of this equipment should be performed by qualified personnel only. Medical Illumination does not warranty any damage occurring as a result of improper installation.

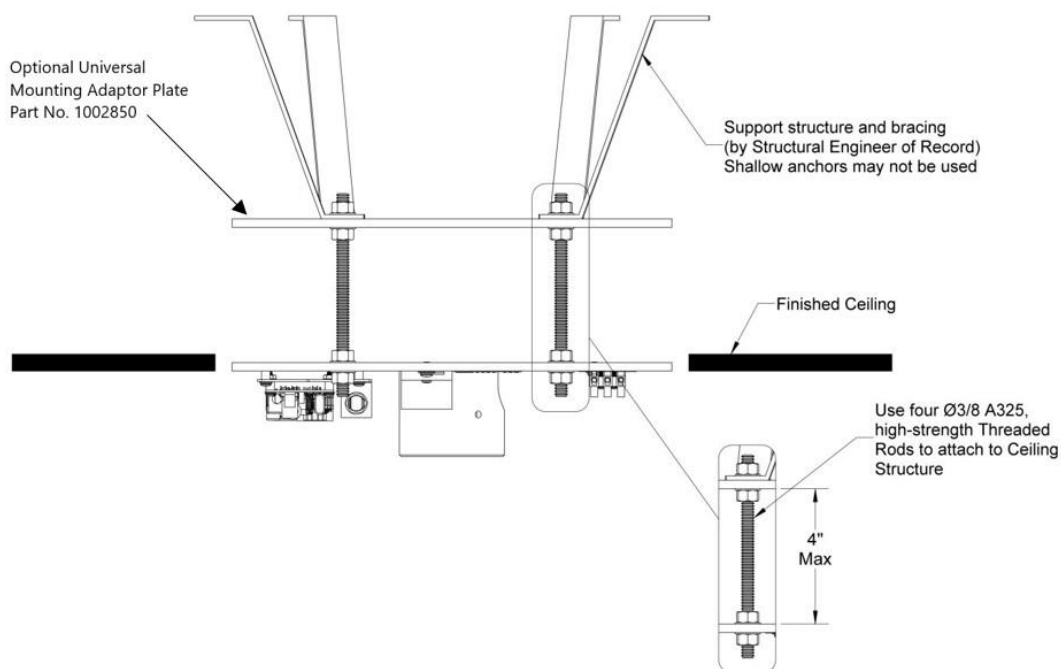


Figure 3: Recommended Ceiling Structure Construction

Ceiling Structure Construction and Mounting

⚠ Improper fastening of the ceiling casting can cause serious injury and/or property damage.

- Mount the Ceiling casting to the ceiling structure using four $\frac{3}{8}$ " Dia. Grade-8 bolts with nuts and washers as shown in Figure 3.

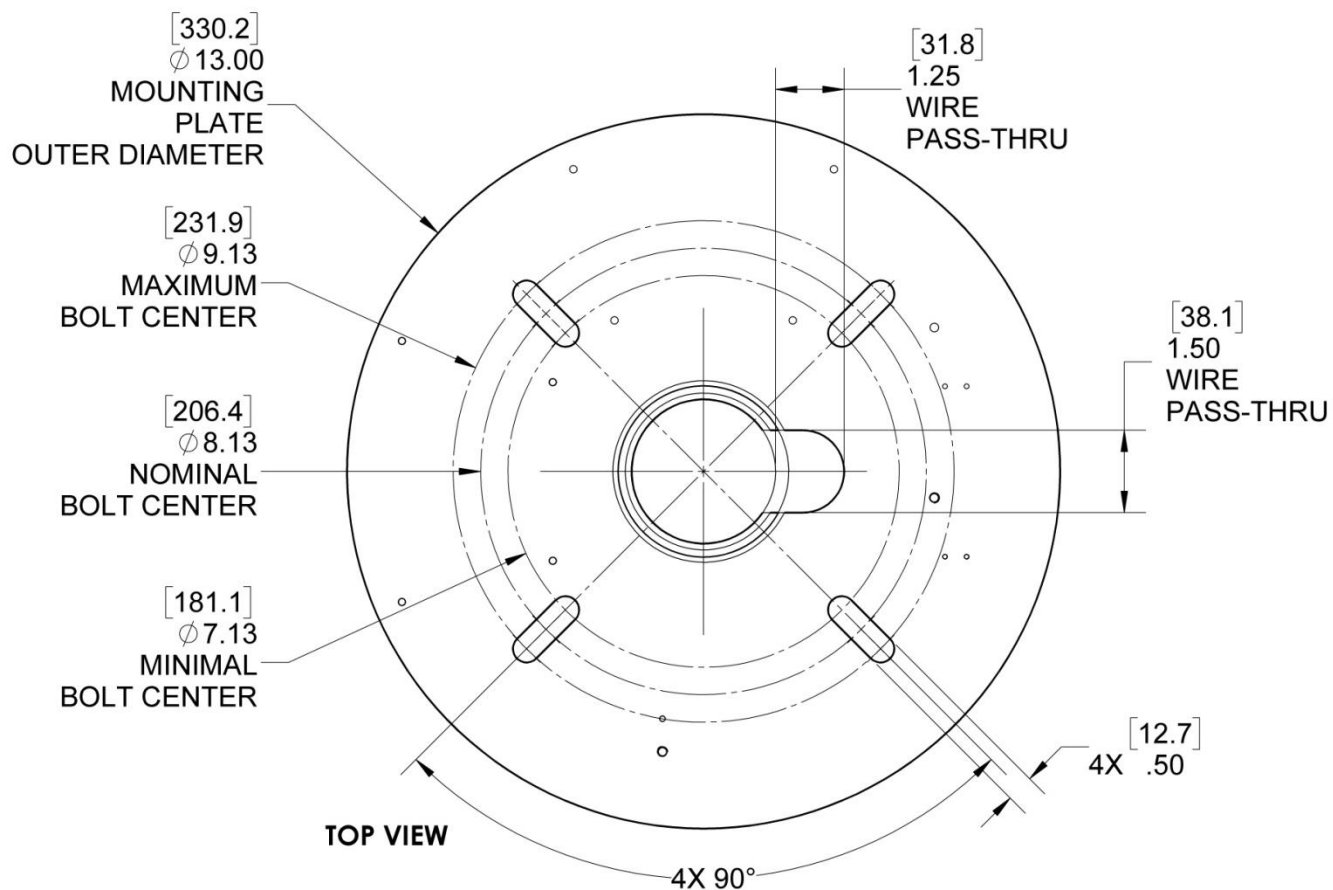


Figure 4: Mounting Dimensions for Ceiling Mount Assembly

Arm Cable Termination

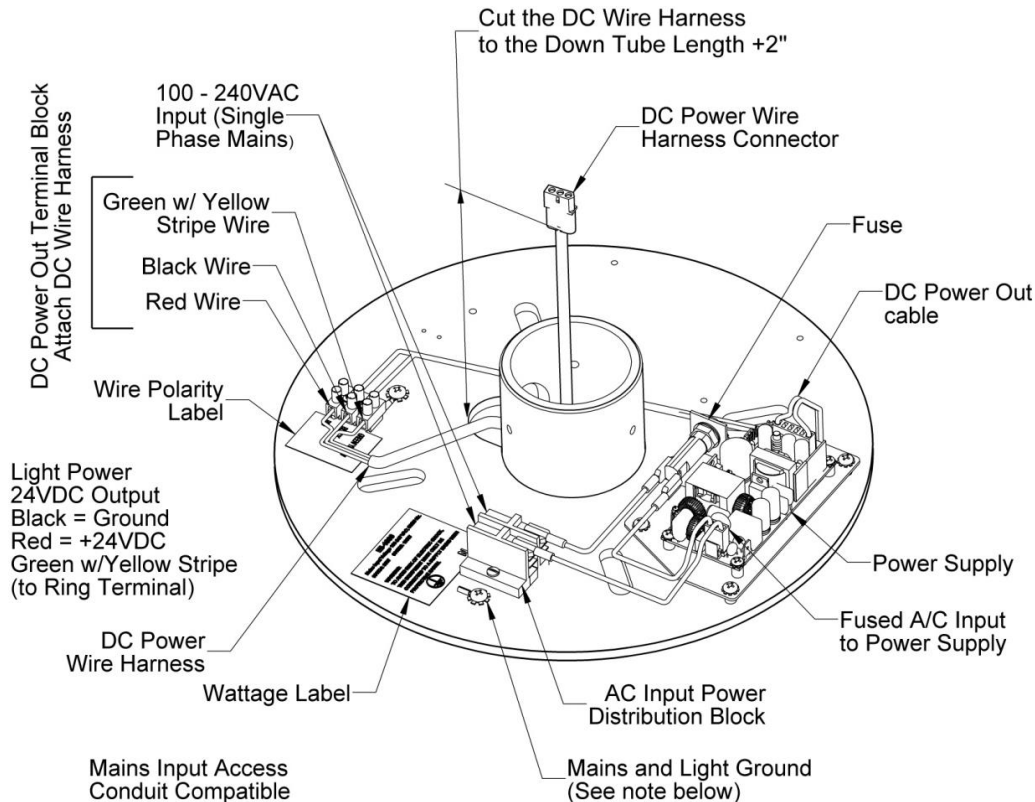


Figure 5: Arm Cable Termination

(Note: Ceiling Mount Assembly with a Single with Power Supply)

The DC Power cable is attached to the DC Power Terminal on Mounting Plate Assembly so that it can be tested as a complete system prior to packaging. To shorten the cable length, route the DC Wire Harness through the Wire Pass-Thru and then out of the center hub. Then run the cable through the Down Tube and position the Down Tube over the center hub aligning the Wire Pass-Thru recesses. Position the connector at 2" past the end of the Down Tube and remove the slack to measure the excess cable length to be removed.

Disconnect the cable from the DC Power Terminal and cut the excess length from the cable. Then strip and reconnect the three wires back to the DC Power Terminal observing the polarity: First connect the Green w/Yellow Stripe wire to the Mains Earth Ground \oplus terminal, then the Black wire to the Terminal labeled "Black" and then the Red wire to the Terminal labeled "Red (+24VDC)". For a dual light configuration, connect the second DC wire harness to the other power supply in the same manner.

For ease of installation, install the Down Tube on the Ceiling Mount using the three (3) of the $\frac{1}{4}$ -20 x $\frac{1}{2}$ " Flat Socket Head and tightening sequentially. Ensure the Wire Harness Connector(s) exceed the open end of the Down Tube and that the wires are hanging unencumbered.

⚠ Protective Earth Ground Warning, to avoid risk of electrical shock, this equipment must be only connected to supply mains with protective earth.