

Directional Downlight 39W PAR-20 Metal Halide Lamp 4 1/2" Square Parabolic Trim

Optics and Applications

For PAR-20 spot or flood metal halide lamps. See back of page for performance characteristics. The trim has a parabolic contour which controls brightness, even at maximum lamp angulation. Suitable for damp locations.

Design Features

The lamp assembly rotates 360°, tilts 40° and locks in any selected position. A sturdy steel housing protects all internal components and is vented for air flow cooling. The trim is stabilized to prevent racking. It is held to the ceiling by constant tension stainless steel springs. Maximum ceiling thickness 7/8". Top or bottom service.

Ballast

Electronic metal halide ballasts provide more constant lumen and wattage output. They feature thermal protection with auto reset, higher CRI, fast restrike, quiet operation and automatic shutdown at end of life. They draw less energy than magnetic ballasts, permitting more fixtures on a circuit.

Finish

Housing and structural parts are painted matte black to suppress stray light leaks. Standard trim is anodized Softglow® clear. Special finishes, textures and colors are available, see below under Accessories.

Trim Textures

Textured trims create a subtle new aperture appearance. Select among different embossed patterns to match the ambience of the space being illuminated. Refer to Squares brochure for descriptive photos.

General

Fixtures are pre-wired, thermally protected, UL and C-UL listed for eight wire 75°C branch circuit wiring. Union made IBEW. Luminaire Efficiency Ratings (LER) do not apply to directional fixtures.

Accessories

- | | |
|------------------------|--------------------------|
| R2 26" support rails. | WT White trim flange. |
| R5 52" support rails. | WHT White complete trim. |
| SB Softglow black. | BP Ball Peen texture. |
| SG Softglow gold. | CG Corrugated texture. |
| SH Softglow mocha. | DS Distressed texture. |
| SP Softglow graphite. | WV Woven texture. |
| ST Softglow titanium. | HL Hexcell louver.* |
| SW Softglow wheat. | HD Hood.* |
| SY Softglow pewter. | LL Linear spread lens.* |
| SZ Softglow bronze. | LP Large prism lens.* |
| BR Bright trim finish. | MP Microprism lens.* |
| FR Frosting on lens. | F Ballast fuse. |

FF20-2 Accessory holder. Holds two accessories.

FLT4 Full lens trim, specify lens type, e.g. H8402-FLT4LL.

V347 347 volt ballast, contact factory.

EC Emergency circuit with mini-can socket and leads.

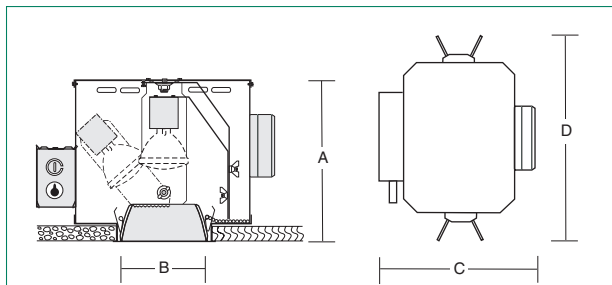
AOE1 Electronic ballast Auto-On restrike system 120V.

AOE2 Electronic ballast Auto-On restrike system 277V.

For color filters, pattern control lenses, light block screens, UV filters and other accessories, contact the factory.

*Requires FF20-2 accessory holder.

Dimensions and Lamps



Number	A Depth	B Aperture	C Width	D Length	Lamp
H8402	9" 229mm	4 1/2" sq. 114mm	14 1/4" 362mm	19" 483mm	39W PAR-20 Metal halide

Matching Square Units **

- | | |
|------------------------|------------------------------|
| Directional downlights | Pages H1, H2 |
| Compact fluorescent | Page H21 |
| Tungsten halogen | Page H4 |
| Metal halide T-6 | Page H25 |
| Low voltage | Page H1 |
| Wall washer | Page H36 |

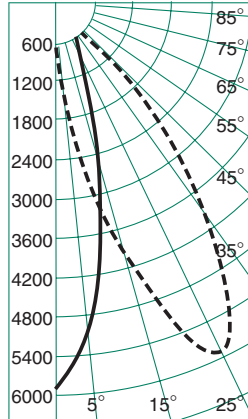
** Click for link to pages in blue.

H24 H8402

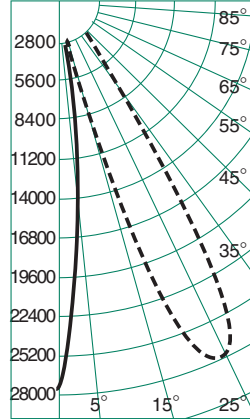
Footcandle Values at Nadir

Distance	5'			10'			15'			20'										
	Nadir	10°	15°	Nadir	10°	15°	Nadir	10°	15°	Nadir	10°	15°								
Lamps	FC	FC	Diam	FC	FC	Diam	FC	FC	Diam	FC	FC	Diam								
H8402 39W PAR-20 FL MH	238	151	2'	107	3'	60	38	4'	27	5'	26	17	5'	12	8'	15	9	7'	7	11'
H8402 39W PAR-20 SP MH	1117	321	2'	40	3'	279	80	4'	10	5'	124	36	5'	4	8'	70	20	7'	3	11'

Candlepower Distribution



H8402 39W PAR-20 FL MH
Eff. 67% S/M .48



H8402 39W PAR-20 SP MH
Eff. 85% S/M .21

Candelas

Vertical Angles	FL 30°	SP 10°
	2300*	2300*
0	5950	27935
5	5044	15985
10	3966	8419
15	2975	1105
20	1215	224
25	701	70
30	203	9
35	55	0
40	9	0
45	0	0
50	0	0
55	0	0
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles
* Initial Lamp Lumens

Notes

- All data with standard trim, Softglow® clear.
- Candlepower distribution curves: solid lines show horizontal distribution at nadir, dotted lines show horizontal distribution at 25° lamp tilt.
- Pattern diameters are determined from each side of nadir with 0° lamp tilt. The diameter includes both sides, so a 10° diameter represents a total 20° pattern width at the floor. Footcandles are measured at the diameter edge. Tilting the lamp changes all data.
- Average Luminance Method brightness data are inaccurate for downlights. They are theoretical calculations for large surfaces such as troffer lenses. Our brightness data derives from direct photometer readings which approximate what the eye perceives when evaluating glare. For a complete discussion refer to Z section brochure Z1.

Brightness

Number	Lamps	85°	75°	65°	55°	45°
H8402	39W MH PAR-20 FL	3	12	21	47	156
	39W MH PAR-20 SP	3	10	18	34	101

Data in footlamberts. Photometer readings, Maximum Brightness Method. See note 4.
Data collected with lamps tilted at 25°.