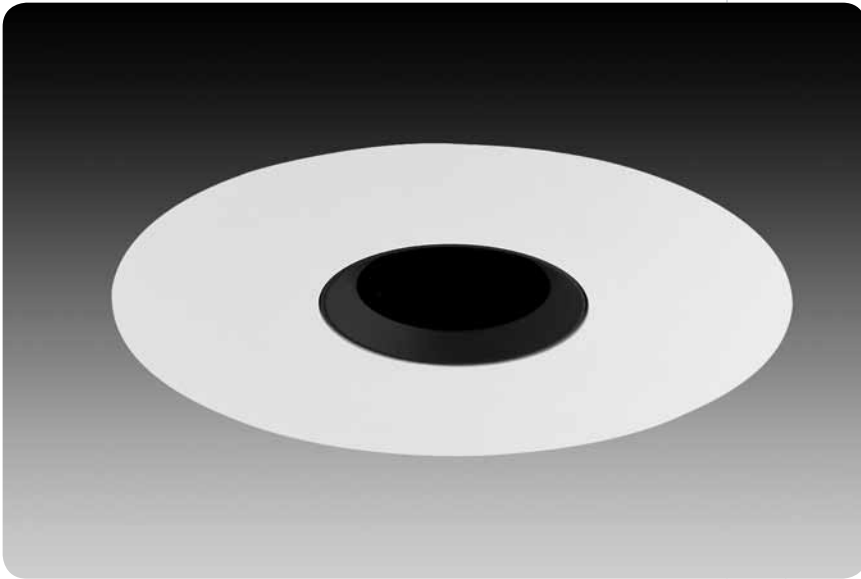


0-45° accent – pinhole  
id®



Patent Pending

features

Trims available in Overlap flange or Flush mud-in for a seamless appearance.

Gloves Off™ hot aiming made simple with gear drive for both 45° vertical and 363° horizontal adjustment; Self locking.

Auto Memory remembers original lamp position after relamping. Lenses are independent of lamp, and remain undisturbed during relamping.

Adjustment mechanism provides for:

- easy relamping
- locking of both vertical and horizontal aiming
- lowers for easy lamp and lens access.

Perfect Fit™ installation process provides seamless integration in plaster, drywall and acoustical tiles, while maintaining optics in any ceiling thickness.

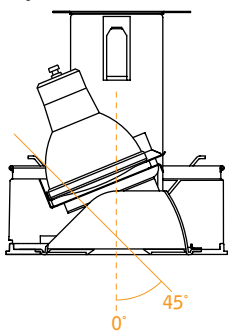
Smart Lock™ ring allows quick removal and re-assembly of trim components for field painting.

Standard white finish is field paintable.

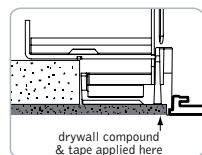
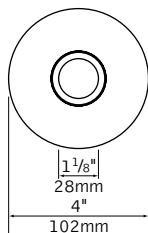
Interchangeable lamp and trim mechanisms allow for maximum flexibility, even after luminaire is installed.

trim assembly

trim with adjustment mechanism

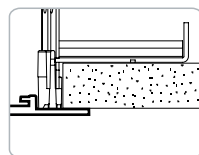
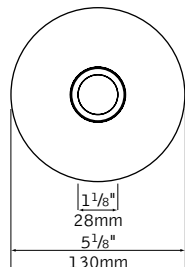


flush trim (drywall only)



ceiling cutout dimensions: 6 3/16"

overlap trim

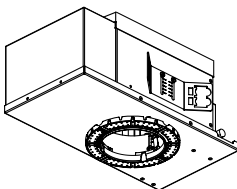


ceiling cutout dimensions: 4 11/16"

housing

T/IC

14" x 7.625" x 6" h



trim option



trim without black bevel

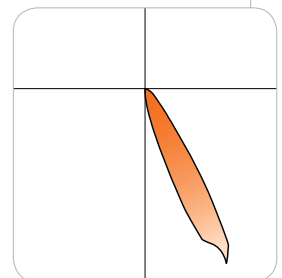
lens accessories



hex louver linear prismatic sand blasted

performance

Accent Pinhole with Black Bevel  
CMH20MR16/830/SP12  
2171 cd @ 30° (30° tilt)



Use 20W Ceramic Metal Halide in place of 50W Halogen.

Visit focalpointlights.com for complete photometric data.

may 2010 C

fixture:

project:

## housing specifications

### lamp

Ceramic Metal Halide 20W MR16 Lamp provides a crisp white light source, 3000K and 80CRI, with UV stop. It is a protected lamp for use in open fixture designs.

### construction

(IC) Thermally protected for Insulated Ceiling housing for new construction applications with direct insulation contact. Unit is enclosed in a 20ga black painted CRS housing, which eliminates stray light into the plenum, on a 20Ga CRS frame. IC housing ships standard with butterfly brackets which mount to ½ emt or channel, vertically adjusts 2 inches. Bar hangers are an option and must be specified when ordering thermally protected housing. Transformer is accessible from below ceiling. Unit may be relamped from above. Fixture will not exceed 7.5 lbs.

### electrical

Ceramic Socket GX10 for Metal Halide lamp, with permanently joined socket wires. Lamp is held by twist and lock 5KVA socket, ensuring simple lamp insertion and removal.

Large junction box 2x4x5.5" with ½" and ¼" pryouts. UL listed for thru branch wiring, 4#12 90°C conductors.

Thermally isolated electronic ballast, replaceable from below, is mounted outside of the housing to ensure cool operation. Wiring compartment mounting provides additional thermal break from the lamp. 120 or 277V, M156 ANSI spec ballast consumes 26 watts and provides >90% PF, 20% THD and end of life shut down circuitry.

### installation

Adjustable throat allows infinite adjustment for ½" to 1½" thick ceilings. Shipped in ½" ceiling position. For thicker ceilings consult factory.

Ceiling thickness adjustment sleeve locks with supplied ⅜" hex driver.

Sleeve allows fine tuning of the housing for a perfect fit. Comes with laser/string alignment guides.

Housing ships with dust cover.

## trim specifications

### aesthetics

Diminutive black knife edge baffle minimizes brightness. Truncated Specular black reflector cone above ensures glare free optics. Reflector is .040" spun aluminum.

Smart Lock™ ring allows disassembly of trim components for field painting of faceplate. Matte white finish may be used as a primer coat.

### adjustment mechanism

Auto Memory for relamping, lamp returns to preset aiming position.

Mechanism is matte black finish and holds lamp and lenses independently.

Hot aiming with Philips screwdriver allows for 45° vertical tilt, and 363° rotation and locks into position. Mechanism pulls down for quick and easy relamping. Vertical angle and horizontal rotation indicators display positioning.

Tempered soft focus lens and spacer plate supplied as standard.

Lens tray can hold up to two accessories, up to ¼" thick. Lenses remain undisturbed during relamping.

### optics

50° cutoff to the lamp and lamp image.

### construction

Trim stays captive to housing during relamping via torsion springs.

Torsion springs pull trim tight to the ceiling.

No visible fasteners within the trim.

Mechanical light traps eliminate light leaks.

Warp free die-cast aluminum faceplate, .040" thick flange on overlap versions.

### labels

UL listed, Damp label standard.

No visible labels when trim is installed.

## housing ordering

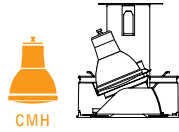
<b>housing series</b>		<u>FM4</u>
Metal Halide Housing	FM4	
<b>lamp</b>		<u>MR</u>
20W CMH MR16	MR	
<b>ballast type</b>		<u>M156U</u>
M156 20W Electronic (120V and 277V)	M156U	
<b>faceplate type</b>		_____
Round Flush	RF	
Round Overlap	RO	
<b>housing type</b>		<u>IC</u>
Combined T and IC Rated	IC	
<b>factory options</b>		_____
Bar Hangers	BH	
Chicago Plenum	CP	
3000K Lamp 12° Spot	LSP	
3000K Lamp 25° Spot	LFL	
3000K Lamp 40° Wide Flood	LWF	

## trim ordering

<b>trim aperture</b>		<u>D1</u>
1½" Aperture	D1	
<b>faceplate type</b>		_____
Round Flush (drywall only)	RF	
Round Overlap	RO	
<b>optic</b>		_____
Pinhole with Black Bevel	PIN	
Pinhole without Black Bevel	PINX	
<b>faceplate finish</b>		_____
White	WH	
Black	BK	
Titanium Silver	TS	
Aluminum Raw	AL	
<b>lens accessories</b>		_____
(soft focus lens supplied as standard)		
Hex Louver	HL	
Linear Spread Lens	LSL	
Prismatic Spread Lens	PSL	
Sand Blasted Lens	SBL	
Clear Lens	CL	
UV Lens	UVL	

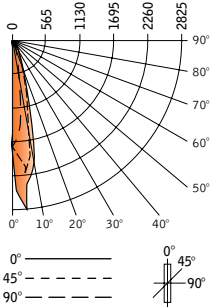
a complete unit consists of two line items, housing and trim  
example: FM4-MR-M156-RF-IC  
D1-RF-PIN-WH

rnd accent – pinhole  
id®



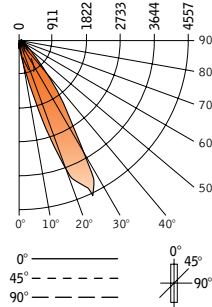
Luminaire: 20W CMH downlight, spot distribution with soft focus lens  
 Filename: D1RXPINMH20SP12\_0.ies and D1RXPINMH20SP12\_30.ies  
 Catalog #: D2-RX-PIN-WH  
 Efficiency: 35% (0° tilt), and 36% (30° tilt)  
 Photometric Report #: 13549.0 and 13550.0

**CANDLEPOWER DISTRIBUTION - 0° TILT**



Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	1753	1753	1753	1753	1753
5°	2825	2672	2255	1796	1449
15°	1070	979	849	555	330
25°	169	166	148	102	58
35°	45	43	42	36	31
45°	2	1	0	0	0
55°	0	0	0	0	0
65°	0	0	0	0	0
75°	0	0	0	0	0
85°	0	0	0	0	0
90°	0	0	0	0	0

**CANDLEPOWER DISTRIBUTION - 30° TILT**

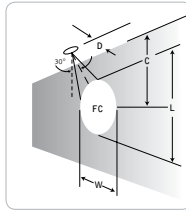
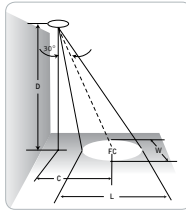


Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	92	92	92	92	92
5°	178	164	133	103	85
15°	931	730	281	98	60
25°	2171	1314	259	52	40
35°	770	586	100	33	14
45°	114	108	37	12	0
55°	30	24	3	0	0
65°	0	0	0	0	0
75°	0	0	0	0	0
85°	0	0	0	0	0
90°	0	0	0	0	0

**FOOTCANDLE VALUES**

0° aiming angle - horizontal surface

D	C	FC	L	W
6'	0	49	1.3'	1.3'
8'	0	27	1.7'	1.7'
10'	0	18	2.1'	2.1'
12'	0	12	2.5'	2.5'
14'	0	9	2.9'	2.9'



**FOOTCANDLE VALUES**

30° aiming angle - horizontal surface

D	C	FC	L	W
6'	3.5'	25	1.7'	1.5'
8'	4.6'	15	2.3'	1.9'
10'	5.8'	9	2.8'	2.4'
12'	6.9'	7	3.2'	2.9'
14'	8.1'	5	3.9'	3.4'

**FOOTCANDLE VALUES**

30° aiming angle - vertical surface

D	C	FC	L	W
2'	3.5'	79	1.7'	0.8'
3'	5.2'	35	1.6'	1.3'
4'	6.9'	20	3.5'	1.7'
5'	8.7'	13	4.3'	2.1'
6'	10.4'	9	5.2'	2.5'

Footcandle results based on AGI32; off the shelf lamp in fixture, with soft focus lens; Reflectances=0/0/0; LLF=1

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.