

downlight – reflector  
id<sup>®</sup>



Patent Pending

features

Downlight offers a parabolic 50 degree cutoff reflector.

Gloves Off™ hot aiming made simple with gear drive for both 10° vertical and 363° horizontal adjustment; Self locking.

Adjustment mechanism provides for:

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

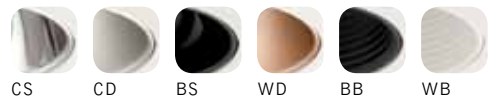
Perfect Fit™ installation process provides seamless integration in plaster, drywall and acoustical tiles, while maintaining optics in any ceiling thickness.

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

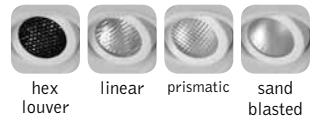
Standard white finish is field paintable.

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

reflector options

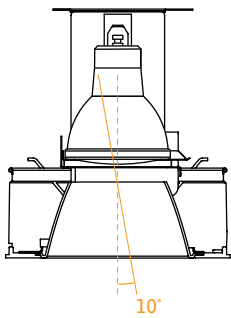


lens accessories

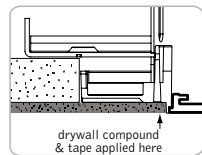
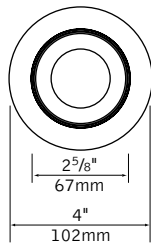


trim assembly

trim with adjustment mechanism

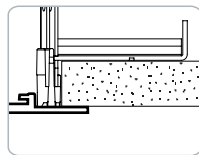
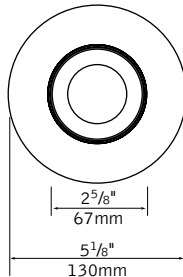


flush trim (drywall only)



ceiling cutout dimensions: 6 3/16"

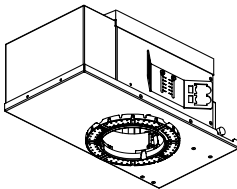
overlap trim



ceiling cutout dimensions: 4 11/16"

housing

T/IC  
14" x 7.625" x 6"h

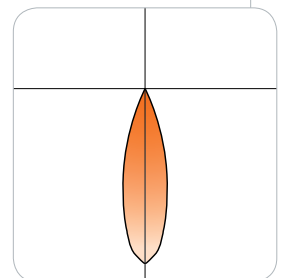


performance

Downlight Clear Specular Reflector  
CMH20MR16/830/FL25  
3319 cd @ 0° (0° 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 ¾" 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 ¾" 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

Parabolic reflector cone ensures glare free optics. Reflector is .040 spun aluminum.

Optional slope-sided baffle, consists of ¼" steps. Black and white baffles are painted finishes. Reflector sit flush with the front surface of the faceplate.

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 Phillips screwdriver allows for 10° 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 ¾" thick. Lenses remain undisturbed during relamping.

### optics

50° cutoff to the lamp and lamp image.

### construction

Torsion springs pull trim tight to the ceiling.

Trim stays captive to housing during relamping via torsion springs.

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

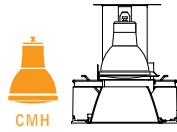
<b>housing series</b>	<b>FM4</b>
Metal Halide Housing	FM4
<b>lamp</b>	<b>MR</b>
20W CMH MR16	MR
<b>ballast type</b>	<b>M156U</b>
M156 20W Electronic (120V and 277V)	M156U
<b>faceplate type</b>	
Round Flush	RF
Round Overlap	RO
<b>housing type</b>	<b>IC</b>
Combined T and IC Rated	IC
<b>factory options</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>	<b>D2</b>
2½" Aperture	D2
<b>faceplate type</b>	
Round Flush (drywall only)	RF
Round Overlap	RO
<b>optic</b>	<b>DN</b>
Downlight	DN
<b>color</b>	
Clear Specular	CS
Clear Diffuse	CD
Black Specular	BS
Warm Diffuse	WD
Black Baffle	BB
White Baffle	WB
<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

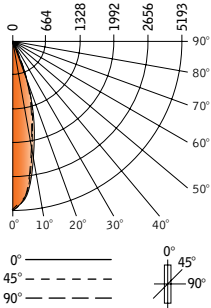
a complete unit consists of two line items, housing and trim  
example: FM4-MR-M156U-RF-IC  
D2-RF-DN-CD-WH

rnd downlight – reflector  
id®



Luminaire: 20W CMH downlight, flood distribution with soft focus lens  
 Filename: D2RXDNCSMH20FL25\_0.ies  
 Catalog #: D2-RX-DN-CS-WH  
 Efficiency: 94%  
 Photometric Report #: 13552.0

CANDLEPOWER DISTRIBUTION



Spacing: .5  
 Criterion: .5

Vertical Angle	Horizontal Angle				Zonal Lumens
	0°	22.5°	45°	67.5°	
0°	3319	3319	3319	3319	3319
5°	3054	3038	3046	3072	3041
15°	1504	1524	1537	1530	1467
25°	332	334	369	351	348
35°	67	71	76	75	75
45°	7	10	9	9	6
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
95°	0	0	0	0	0

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt
0°-30°	883	88.3	94.4
0°-40°	929	92.9	99.3
0°-60°	936	93.6	100
0°-90°	936	93.6	100
Total Luminaire	936	93.6	100

LUMINANCE DATA (CD/M<sup>2</sup>)

Vertical Angle	0°	45°	90°
45°	13748	17676	11784
55°	0	0	0
65°	0	0	0
75°	0	0	0
85°	0	0	0

CO-EFFICIENTS OF UTILIZATION

Floor	80				70				50				30				10				00			
Ceiling	70	50	30	10	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
Wall	101	111	111	111	109	109	109	104	104	104	100	100	95	95	94	94	94	93	91	87	89	86	85	85
RCR 0	111	111	111	111	109	109	109	104	104	104	100	100	95	95	94	94	94	93	91	87	89	86	85	85
1	108	106	105	103	106	104	101	101	98	97	96	96	94	91	89	87	87	84	82	80	82	78	77	77
2	104	101	98	96	102	99	94	96	92	94	91	91	89	87	85	83	82	80	78	77	77	73	72	72
3	101	97	93	91	99	95	90	93	89	91	87	87	86	84	82	80	80	78	77	75	75	70	69	69
4	98	93	89	86	96	92	86	90	85	88	84	84	83	81	79	77	77	73	72	70	70	67	66	66
5	94	89	85	82	93	88	82	87	81	85	80	80	78	76	74	72	72	70	68	66	66	63	62	62
6	92	86	82	79	91	85	79	84	79	83	78	78	77	75	73	71	71	69	67	65	65	62	61	61
7	89	83	79	77	88	83	76	82	76	81	76	76	75	73	71	69	69	67	65	63	63	60	59	59
8	87	80	76	74	86	80	74	79	73	78	73	73	72	70	68	66	66	64	62	60	60	57	56	56
9	84	77	74	71	83	77	71	76	71	76	71	71	70	68	66	64	64	62	60	58	58	55	54	54
10	81	74	71	68	80	74	68	73	68	73	68	68	67	65	63	61	61	59	57	55	55	52	51	51

Numbers indicate percentage values of reflectivity.

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