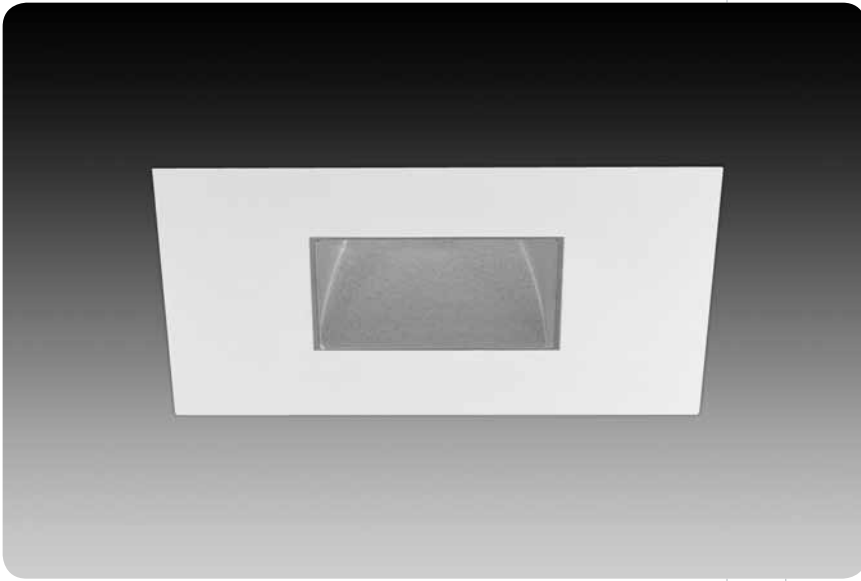


downlight – reflector
id®



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.

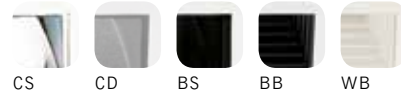
Adjustment mechanism provides for:

- 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 and allowing square trims to easily align with architecture and adjacent fixtures.

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

reflector options

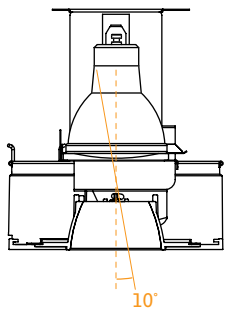


lens accessories

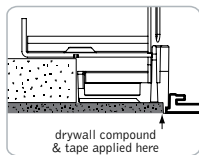
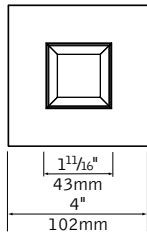


trim assembly

trim with adjustment mechanism

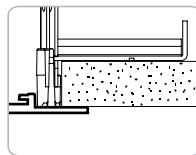
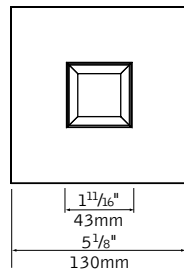


flush trim (drywall only)



ceiling cutout dimensions: 6 3/16"

overlap trim

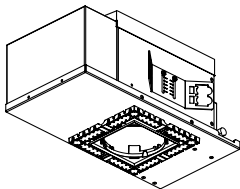


ceiling cutout dimensions: 4 11/16"

housing

T/IC

14" x 7.625" x 6"h

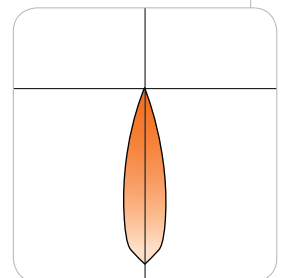


performance

Downlight Clear Specular Reflector
CMH20MR16/830/FL25
2555 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 watt 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 ¼" hex driver. Sleeve allows fine tuning of the housing for a perfect fit. Square housing allows 45° rotation to square up the edges of the trim with the architecture and adjacent trims. Comes with laser/string alignment guides.

Housing ships with dust cover.

trim specifications

aesthetics

Die cast parabolic cone ensures glare free optics. Optional slope-sided baffle, consists of ¼" steps. All reflectors are painted finishes. Optics 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 Philips 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

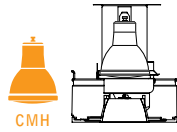
housing series		<u>FM4</u>
Metal Halide Housing	FM4	
lamp		<u>MR</u>
20W CMH MR16	MR	
ballast type		<u>M156U</u>
M156 20W Electronic (120V and 277V)	M156U	
faceplate type		_____
Square Flush	SF	
Square Overlap	SO	
housing type		<u>IC</u>
Combined T and IC Rated	IC	
factory options		_____
Bar Hangers	BH	
Chicago Plenum	CP	
3000K Lamp 12' Spot	LSP	
3000K Lamp 25' Spot	LFL	
3000K Lamp 40' Wide Flood	LWF	

trim ordering

trim aperture		<u>D2</u>
2½" Aperture	D2	
faceplate type		_____
Square Flush (drywall only)	SF	
Square Overlap	SO	
optic		<u>DN</u>
Downlight	DN	
color		_____
Clear Specular	CS	
Clear Diffuse	CD	
Black Specular	BS	
Black Baffle	BB	
White Baffle	WB	
faceplate finish		_____
White	WH	
Black	BK	
Titanium Silver	TS	
Aluminum Raw	AL	
lens accessories (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	

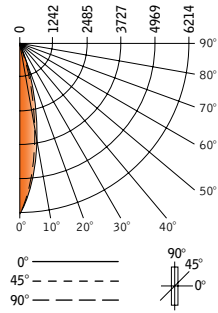
a complete unit consists of two line items, housing and trim
example: FM4-MR-M156U-SF-IC
D2-SF-DN-CD-WH

sqr downlight – reflector
id®



Luminaire: 20W CMH downlight, flood distribution with soft focus lens
 Filename: D2SXDNCSMH20FL25_0.ies
 Catalog #: D2-SX-DN-CS-WH
 Efficiency: 70%
 Photometric Report #: 13643.0

CANDLEPOWER DISTRIBUTION



Spacing: .4
 Criterion: .5

Vertical Angle	Horizontal Angle					Zonal Lumens
	0°	22.5°	45°	67.5°	90°	
0°	3402	3402	3402	3402	3402	
5°	3192	3187	3234	3218	3226	307
15°	1043	1069	1084	1082	1041	303
25°	132	138	164	140	120	66
35°	34	41	51	37	35	26
45°	0	0	5	1	0	1
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt
0°-30°	675	67.5	96.2
0°-40°	701	70.1	99.8
0°-60°	702	70.2	100
0°-90°	702	70.2	100
Total Luminaire	702	70.2	100

LUMINANCE DATA (CD/M²)

Vertical Angle	0°	45°	90°
45°	0	3567	0
55°	0	0	0
65°	0	0	0
75°	0	0	0
85°	0	0	0

CO-EFFICIENTS OF UTILIZATION

	Floor				Ceiling				Wall				
	80	50	30	10	70	50	30	10	50	30	10	00	
RCR 0	84	84	84	84	82	82	82	78	78	75	75	72	72
1	81	80	79	78	80	79	77	76	74	73	72	71	70
2	79	76	74	73	77	75	72	73	70	71	69	69	68
3	77	74	71	69	75	73	69	71	68	69	67	68	66
4	74	71	68	67	73	70	66	69	65	68	65	67	64
5	72	69	66	64	71	68	64	67	63	66	63	65	62
6	71	67	64	62	70	66	62	66	62	65	61	64	61
7	69	65	63	61	68	65	61	64	60	63	60	63	60
8	67	63	61	59	67	63	59	62	59	62	58	61	58
9	66	62	59	57	65	61	57	61	57	60	57	60	57
10	64	60	57	56	63	60	55	59	55	59	55	58	55

Numbers indicate percentage values of reflectivity.

Go to www.focalpointlights.com for additional photometric data.