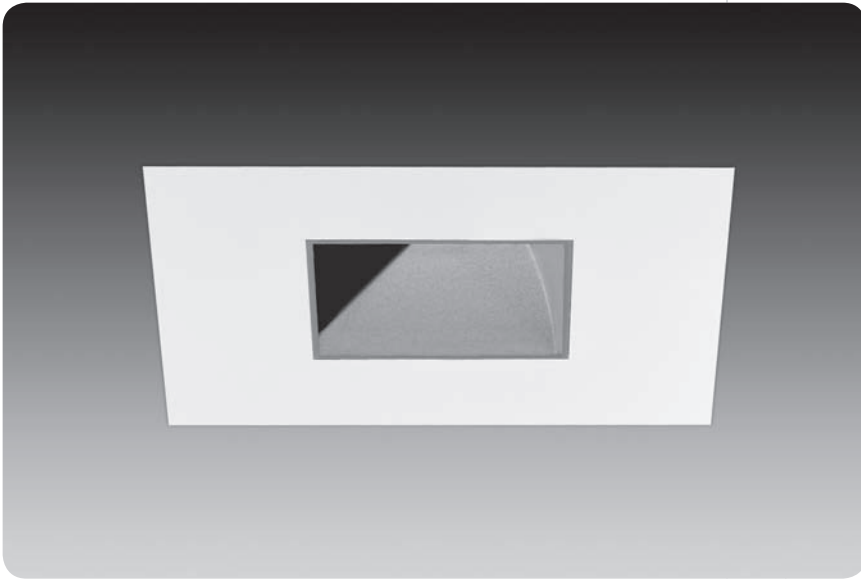


0-45° accent – reflector
id®



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.

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

Adjustment mechanism provides for:

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

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

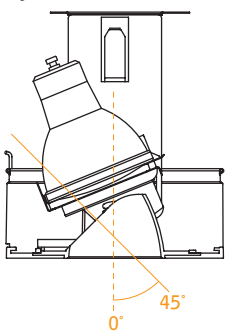


lens accessories

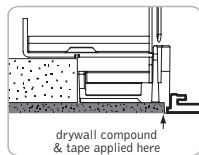
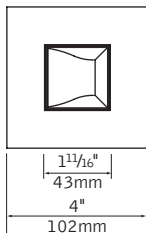


trim assembly

trim with adjustment mechanism

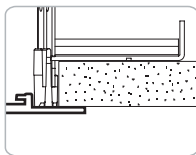
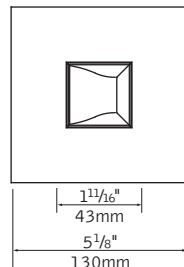


flush trim (drywall only)



ceiling cutout dimensions: 6 3/16"

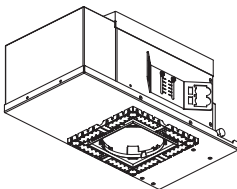
overlap trim



ceiling cutout dimensions: 4 11/16"

housing

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

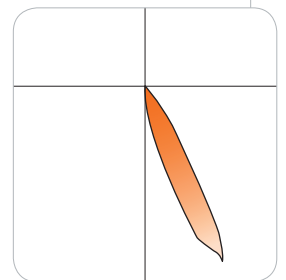


performance

Accent Black Specular Reflector
CMH20MR16/830/SP12
4233 cd @ 30° (30° tilt)
For optimal performance, rotate lamp on axis to 0°, 90°, 180° or 270°.



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



Visit focalpointlights.com for complete photometric data.

July 2009

fixture:

project:

housing specifications

lamp

Ceramic Metal Halide 20W-39W 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

(T) Thermally protected housing for new construction applications without direct contact with insulation. Unit is enclosed in a 20ga black painted CRS housing, which eliminates stray light into the plenum, on a 20Ga CRS frame. T 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.

(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, M130 or M156 ANSI spec ballast consumes 26 or 39 watt and provides >90% PF, 20% THD and end of life shut down circuitry. 39W dimming ballast is available.

installation

Adjustable throat allows infinite adjustment for ½" to 1⅞" thick ceilings. Shipped in ½" ceiling position. For thicker ceilings consult factory.

Ceiling thickness adjustment sleeve locks with supplied ⅞" 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 cones ensures glare free optics. Truncated cone cut allows full tilt of lamp. CD is a painted finish.

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

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. For optimal performance, rotate lamp on axis to 0°, 90°, 180° or 270°.

Tempered soft focus lens 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 and install in 90° increments.

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

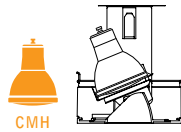
housing series	FM4
Metal Halide Housing	FM4
lamp	MR
20W or 39W CMH MR16	MR
ballast type	
M156 20W Electronic (120V and 277V)	M156U
M130 39W Electronic (120V)	M1301
M130 39W Electronic (277V)	M1302
M130 39W Electronic Dimming (120V)	M1301D
M130 39W Electronic Dimming (277V)	M1302D
faceplate type	
Square Flush	SF
Square Overlap	SO
housing type	
Thermally Protected, Non-IC (39W only)	T
Combined T and IC Rated (20W only)	IC
factory options	
Bar Hangers	BH
Chicago Plenum	CP
3000K Lamp 12° Spot	LSP
3000K Lamp 25° Spot	LFL
3000K Lamp 40K Wide Flood	LWF

trim ordering

trim aperture	D2
1⅞" Aperture	D2
faceplate type	
Square Flush (drywall only)	SF
Square Overlap	SO
optic	AA
Adjustable Accent	AA
color	
Clear Specular	CS
Clear Diffuse	CD
Black Specular	BS
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

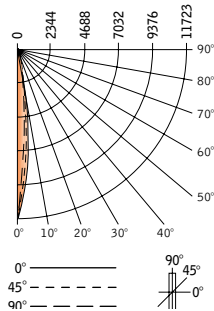
a complete unit consists of two line items, housing and trim
example: FM4-MR-M156U-SF-IC
D2-SF-DN-CD-WH

sqr accent – reflector
id®



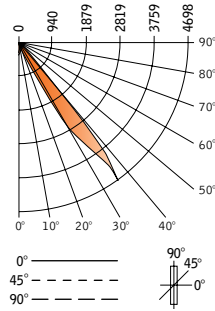
Luminaire: 20W CMH adjustable accent, spot distribution with soft focus lens
 Filename: D2SXWWCSMH20FL25_0.ies and D2SXWWCSMH20FL25_30.ies
 Catalog #: D2-SX-AA-CS-WH
 Efficiency: 92% (0° tilt), and 59% (35° tilt)
 Photometric Report #: 13641.0 and 13642.0

CANDLEPOWER DISTRIBUTION - 0° TILT



Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	11723	11723	11723	11723	11723
5°	5225	5525	6189	6864	7375
15°	499	546	615	628	582
25°	90	129	189	127	109
35°	40	64	96	72	77
45°	31	63	89	55	18
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 - 35° TILT

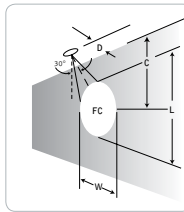
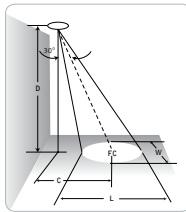


Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	596	596	596	596	596
5°	503	572	554	532	538
15°	406	369	220	153	161
25°	1778	796	245	180	155
35°	9018	1049	142	130	82
45°	986	216	76	70	0
55°	43	37	44	0	0
65°	3	4	0	0	0
75°	0	0	0	0	0
85°	0	0	0	0	0
90°	0	0	0	0	0

FOOTCANDLE VALUES

0° aiming angle - horizontal surface

D	C	FC	L	W
6'	0	327	1.3'	1.3'
8'	0	184	1.7'	1.7'
10'	0	118	2.1'	2.1'
12'	0	82	2.5'	2.5'
14'	0	60	2.9'	2.9'



FOOTCANDLE VALUES

35° aiming angle - horizontal surface

D	C	FC	L	W
6'	3.5'	100	1.9'	1.5'
8'	4.6'	54	2.5'	2.1'
10'	5.8'	35	3.2'	2.6'
12'	6.9'	24	3.8'	3.1'
14'	8.1'	18	4.4'	3.6'

FOOTCANDLE VALUES

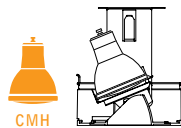
35° aiming angle - vertical surface

D	C	FC	L	W
2'	3.5'	282	1.3'	0.7'
3'	5.2'	130	2'	1.1'
4'	6.9'	75	2.6'	1.5'
5'	8.7'	46	3.3'	1.8'
6'	10.4'	32	3.9'	2.2'

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

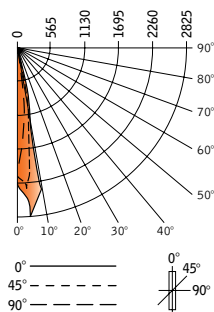
Go to www.focalpointlights.com for additional photometric data.

sqr accent – reflector
id®



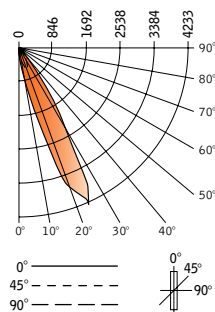
Luminaire: 20W CMH adjustable accent, spot distribution with soft focus lens
 Filename: D2SXAABSMH20SP12_0.ies and D2SXAABSMH20SP12_30.ies
 Catalog #: D2-SX-AA-BS-WH
 Efficiency: 53% (0° tilt), and 59% (30° tilt)
 Photometric Report #: 13571.0 and 13572.0

CANDLEPOWER DISTRIBUTION - 0° TILT



Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	2636	2636	2636	2636	2636
5°	3480	3302	2911	2516	2176
15°	1319	1301	1161	800	548
25°	258	276	270	140	91
35°	65	72	79	58	52
45°	14	22	40	23	8
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

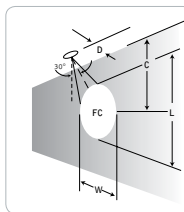
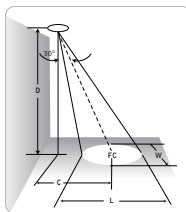


Vertical Angle	Horizontal Angle				
	0°	22.5°	45°	67.5°	90°
0°	209	209	209	209	209
5°	434	356	304	235	185
15°	1793	1330	546	215	116
25°	4233	2092	396	100	66
35°	1175	819	127	51	36
45°	149	127	54	30	2
55°	44	45	28	0	0
65°	0	2	0	0	0
75°	0	0	0	0	0
85°	0	0	0	0	0
90°	0	0	0	0	0

FOOTCANDLE VALUES

0° aiming angle - horizontal surface

D	C	FC	L	W
6'	0	74	1.3'	1.3'
8'	0	41	1.7'	1.7'
10'	0	26	2.1'	2.1'
12'	0	18	2.5'	2.5'
14'	0	13	2.9'	2.9'



FOOTCANDLE VALUES

30° aiming angle - horizontal surface

D	C	FC	L	W
6'	3.5'	46	1.7'	1.5'
8'	4.6'	27	2.3'	1.9'
10'	5.8'	17	2.8'	2.4'
12'	6.9'	2	3.2'	2.9'
14'	8.1'	9	3.9'	3.4'

FOOTCANDLE VALUES

30° aiming angle - vertical surface

D	C	FC	L	W
2'	3.5'	145	1.7'	0.8'
3'	5.2'	63	1.6'	1.3'
4'	6.9'	35	3.5'	1.7'
5'	8.7'	23	4.3'	2.1'
6'	10.4'	16	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 for additional photometric data.