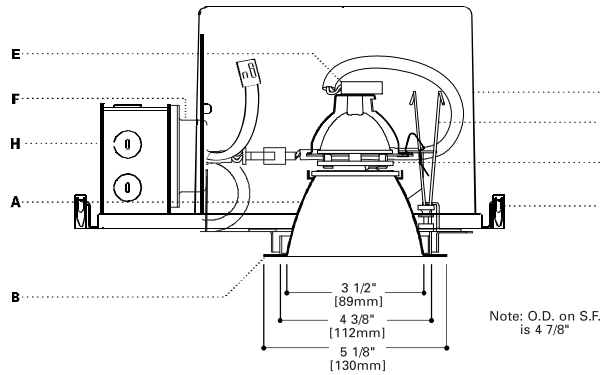


DESCRIPTION

Specification grade, wet listed 71 watt MR16 lamp fixture. The 60° cutoff to lamp and lamp image provides a glare free, smooth distribution of light. For use with all halogen MR16 lamps in either open or cover glass varieties. Units small size is ideal for tight construction areas. Insulation must be kept 3" away from sides and top of fixture. **Optical element can be changed after installation to provide a variety of distributions. e.g. into an Adjustable**



SPECIFICATION FEATURES

A...Reflector

.040 thick aluminum spun parabolic reflector in Clear, Gold, Haze, Warm Haze, Black Alzak® finish, painted gloss white or matte white. Special cone colors listed below. .125 thick tempered glass protects lamp from direct spray of water and is retained during relamping.

B...Flange

Self flange reflector or die-cast flange with either matte white or clear coat finish. Die-cast flanges are easily removed for field painting. Elements are keyed for proper insertion.

C...Lens

Soft focus lens standard for smooth beam patterns. Up to two filter media can be used which are retained during relamping.

D...Attachment

Positive torsion springs pull flange tight to ceiling. Mechanical light trap eliminates spill light at edge of flange or reflector.

E...Socket

GX5.3 base for Bi-pin MR16 lamps. Fixed socket height ensures consistent lamp position and back light shield keeps interior of fixture dark.

F...Transformer

Truvolt™ toroidal transformer with dual-output taps for proper 12.0V operation. Dimmer tap compensates for inherent voltage loss from dimmers, resulting in 30% more lumens than traditional laminated transformers. Toroidal design, with 90% or greater efficiency, features a rolled one-piece continuous core of M3 grade grain oriented silicon steel complete with an integral thermal to protect against overheating and ensure quiet operation.

For dimming, use dimmers rated for electromagnetic transformers. **Transformer is warranted for 5 years and is serviceable from below ceiling.**

Note: If a dimming system is operated for construction lighting in its "shunt" mode, i.e. bypassing the dimmer modules, for an extended period of time, fixtures with the dual-tap toroidal transformer should be operated on the "Switched Fixture" output until the dimmers are in use. Operating fixtures on the "Dimmed Fixture" output with a full 120v input for an extended period will overdrive the lamp and cause shortened lamp life.

G...Frame/Housing

Hot dipped galvanized 20 gauge steel frame with built in 1/2 inch plaster lip. Gunsights allow for consistent alignment. Matte black housing interior.

H...Junction Box

18 cubic inches, listed for 4#12 AWG or 6#14 AWG 90 C additional feed through conductors, has three 1/2 inch pryouts.

I...Bar Hangers

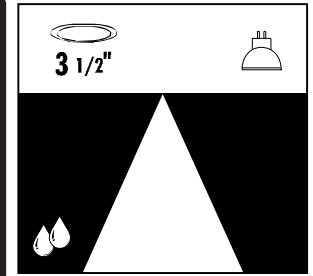
No Flex® bar hangers with positive locking, for use with wood, engineered wood and steel frame joists spaced up to 24" O.C. ship with platform. For use in T-bar ceilings order accessory MBCLP. Nailless barb and locator lip provide consistent installation height.

J...Codes

Thermally protected, IP labeled. Meets Air tight requirements, 1995 CABO Model Energy Code.

K...Labels

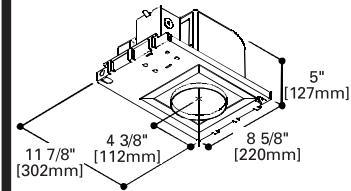
UL and cUL listed, standard wet label, IBEW union made.



PN3MR E3SR

71 W MR 16

3" SHOWER DOWNLIGHT



Ceiling Cutout 4 3/8" [112mm]

ENERGY DATA

120V Input

Lamp Watts	Input Watts	Operating Current
20	23	.19
35	41	.34
37	42	.35
42	47	.39
50	57	.48
65	70	.58
71	77	.64
75	81	.68

ORDERING INFORMATION

Complete unit consists of a platform and element

Platform	Optical Element	Finish	Flange	Accessories
PN3MR	E3SR			
PN3MR = 3" Non-IC Low Voltage Housing PN3MR REMOTE = 3" Non-IC Housing for Remote Transformer	Element E3SR = 3" MR16 Lensed Downlight Reflector	Standard C=Clear H=Haze G=Gold WMH=Warm Haze W=Gloss White MW= Matte White B= Black Custom K=Cognac KH=Cognac Haze	CC=Chocolate CCH=Chocolate Haze BU=Blush BUH=Blush Haze GP=Graphite GPH=Graphite Haze PN=Pine PNH=Pine Haze SK=Sky SKH=Sky Haze	Blank= Matte White die-cast SF= Self Flange RAW= Natural Die-cast SFWF= Self Flange Painted White MBCLP = 40 Push On T Bar Clips (for 10 Units) PLE3 = Plaster Lip Extension for Max 2" Thick Ceiling LSPD = Spread Lens LLNR = Linear Spread Lens LUV = UV Reduction Lens LLPINK = Light Pink Lens LLSTRAW = Light Straw Lens L27K = 2700K dichroic filter LDAY = Daylight LSPINK = Surprise Pink Lens LPLAV = Pale Lavender Lens LHEX= Hex Cell Louver

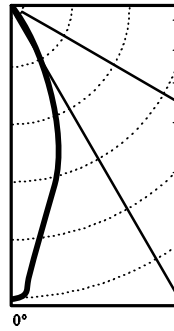
PHOTOMETRICS

PN3MR-E3SRC

Test No. H21086
 Lamp: GE 71MR16/C/FL40
 Lumens: 1200
 Cutoff: 60°
 Spacing: 0.6
 Efficiency: 68.8%
 Unit LPW: 11.6

Candelas		
Vertical Angle	CD	
90	0	
85	0	
75	0	
65	0	
55	11	
45	15	
35	121	
25	559	
15	1124	
5	1677	
0	1912	

Distribution



Luminance

Degree	cd/m ²
85°	0
75°	0
65°	0
55°	3089
45°	3416

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'6"	94	2'6"
5'6"	63	3'0"
6'6"	45	4'0"
8'0"	30	4'6"
10'0"	19	6'0"
12'0"	13	7'0"

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	716	59.7	86.7
0-40	798	66.5	96.6
0-60	826	68.8	100.0
0-90	826	68.8	100.0
90-180	0	0.0	0.0
0-180	826	68.8	100.0

Coefficient of Utilization

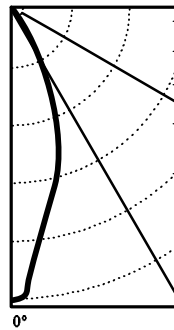
Ceiling Reflectance	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Room Cavity Ratio											
0	82	82	82	82	80	80	76	76	73	73	69
1	79	78	76	75	76	74	74	72	71	70	67
2	77	74	72	71	73	70	71	68	69	67	64
3	74	71	69	67	70	66	69	65	67	64	63
4	72	68	66	64	68	63	66	63	65	62	61
5	70	66	63	61	65	61	64	60	63	60	58
6	68	64	61	59	63	58	62	58	61	58	57
7	66	61	58	56	61	56	60	56	59	55	55
8	64	59	56	54	59	54	58	54	57	54	53
9	62	57	54	52	57	52	56	52	55	52	51
10	60	55	52	50	55	50	54	50	54	50	49

PN3MR-E3SRC

Test No. H21085
 Lamp: GE 50MR16/C/FL40
 Lumens: 880
 Cutoff: 60°
 Spacing: 0.5
 Efficiency: 65.9%
 Unit LPW: 11.5

Candelas		
Vertical Angle	CD	
90	0	
85	0	
75	0	
65	0	
55	8	
45	11	
35	67	
25	343	
15	842	
5	1469	
0	1715	

Distribution



Luminance

Degree	cd/m ²
85°	0
75°	0
65°	0
55°	2246
45°	2505

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'6"	84	2'0"
5'6"	56	2'6"
6'6"	40	3'0"
8'0"	27	4'0"
10'0"	17	5'0"
12'0"	12	6'0"

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	517	58.7	89.1
0-40	562	63.9	96.9
0-60	580	65.9	100.0
0-90	580	65.9	100.0
90-180	0	0.0	0.0
0-180	580	65.9	100.0

Coefficient of Utilization

Ceiling Reflectance	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Room Cavity Ratio											
0	78	78	78	78	77	77	73	73	70	70	66
1	76	75	73	72	73	71	71	69	68	67	64
2	74	71	70	68	70	67	68	66	66	64	62
3	72	69	67	65	68	64	66	63	65	62	61
4	70	66	64	62	66	62	64	61	63	60	59
5	67	64	61	59	63	59	62	59	61	58	57
6	66	62	59	57	61	57	61	57	60	57	56
7	64	60	57	55	59	55	59	55	58	55	54
8	62	58	55	53	57	53	57	53	56	53	52
9	60	56	53	52	56	52	55	51	55	51	50
10	59	54	52	50	54	50	54	50	53	50	49

Notes and Formulas:

Luminance: To convert cd/m² to footlamberts, multiply by 0.2919

Cone of Light:

- Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
- Footcandle values are initial. Apply appropriate light loss factors where necessary.

See pages 64-65 of Iris Catalog

CU Notes/Formulas:

- maintained illuminance = $\frac{\text{lamp lumens} \times \text{CU} \times \text{light loss factors}}{\text{room area}}$
- total number of luminaires = $\frac{\text{total room area} \times \text{maintained illuminance}}{\text{lamp lumens} \times \text{CU} \times \text{light loss factors}}$
- CU data based on 20% effective floor cavity reflectance.

Note: Specifications and Dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

