

DESCRIPTION

Specification grade 75 watt MR16 fixture. The 50° 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.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Reflector

.040 thick aluminum spun parabolic reflector. Reflector is available in iridescent free Black, Clear, Gold, Haze, Warm Haze Alzak®, or painted gloss white finish. Special cone colors listed below.

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 and quiet operation when dimmed. 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. 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

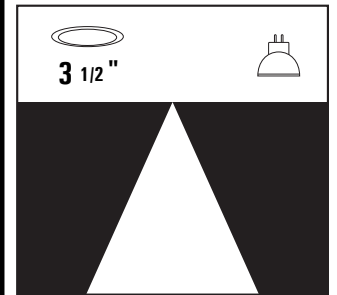
18 cubic inches, listed for 4#12 AWG or 6#14 AWG 90 C additional feed through conductors, has three 1/2 inch pryouts.

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. shipped with platform. For use in T-bar ceilings order accessory MBCLP clips. Nailless barb and locator lip provide consistent installation height.

J ... Codes

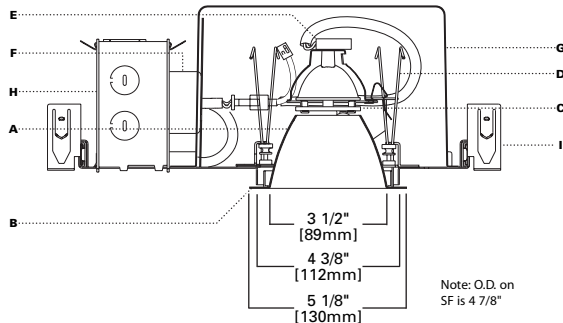
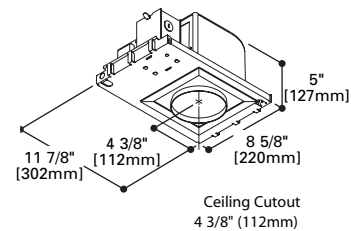
Thermally protected, IP labeled. Unit is airtight and exchanges less than 2.0 CFM with the plenum at a pressure of 75 pascals. Insulation must be kept three inches away from fixture sides and none on top as to entrap heat.



**PN3MR
E3MR**

71W MR16

3" DOWNLIGHT



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

Sample Number: Order platform and element separately for a complete unit.

Platform	Optical Element	Finish	Flange	Accessories
P3				
PN3MR = 3" Airtight Non-IC Rated Low Voltage Housing PN3MRREMOTE = 3" Airtight Non-IC Rated Low Voltage Housing for Remote Transformer	E3MR = 3" MR16 Downlight	C =Clear CC =Chocolate CCH =Chocolate Haze G =Gold GP =Graphite GPH =Graphite Haze H =Haze	K =Cognac KH =Cognac Haze WMH =Warm Haze MW = Matte White W =Gloss White B =Black	Blank = White die-cast RAW =Natural Die-cast SF = Self-Flange SFWF = Self Flange painted White MBCLP = 40 Push On T Bar Clips (for 10 Units) LHEX = Hex Cell Louver FMC3 = 3" Flush Mount Collar LLNR = Linear Spread Lens LUV = Ultraviolet Reduction Lens LSPD = Spread Lens L27K = 2700 Dichroic Filter LLSTRAW = Light Straw Tint LPLAV = Pale lavender Tint LLPINK = Light Pink Tint LDAY = Daylight Tint LSPINK = Surprise Pink Tint PLE3 = Plaster Lip Extension for Max 2" Thick Ceiling

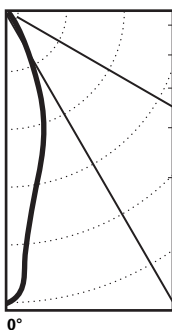
For additional options, please consult factory.

PN3MR-E3MRC

Test No. H21037
 Lamp: Q75MR16/C/FL
 Lumens: 1200
 Cutoff: 50°
 Spacing: 0.4
 Efficiency: 93.9%

Candelas		CD
Vertical Angle		
90		0
85		0
75		0
65		0
55		0
45		11
35		81
25		672
15		1755
5		2894
0		3771

Distribution



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

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'6"	185	2'0"
5'6"	124	2'6"
6'6"	89	3'0"
8'0"	59	3'6"
10'0"	38	4'6"
12'0"	26	5'6"

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1059	88.3	94.0
0-40	1118	93.2	99.2
0-60	1127	93.9	100.0
0-90	1127	93.9	100.0
90-180	0	0.0	0.0
0-180	1127	93.9	100.0

Coefficient of Utilization

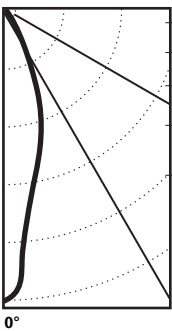
Ceiling Reflectance	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Room Cavity Ratio	0	112	112	112	112	109	109	104	104	100	100	94
	1	108	107	105	103	105	102	101	99	97	96	92
	2	105	102	100	98	101	97	98	95	95	93	89
	3	103	99	96	94	98	93	95	91	93	90	88
	4	100	96	92	90	95	89	93	88	91	88	86
	5	97	93	89	87	92	86	90	86	89	85	83
	6	95	90	87	84	89	84	88	83	87	83	82
	7	93	87	84	81	87	81	86	81	85	80	79
	8	90	85	81	79	84	79	84	79	83	78	77
	9	88	82	79	77	82	77	81	76	81	76	75
	10	86	80	77	75	80	75	79	74	79	74	73

PN3MR-E3MRC

Test No. H21282
 Lamp: 65MR16Q/40/FL
 Lumens: 1100
 Cutoff: 50°
 Spacing: 0.3
 Efficiency: 75.0%

Candelas		CD
Vertical Angle		
90		0
85		0
75		0
65		0
55		1
45		5
35		32
25		438
15		1409
5		2013
0		3462

Distribution



Luminance		cd/m ²
Degree		
85°		0
75°		0
65°		0
55°		281
45°		1139

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'	216	1'2"
6'	96	1'8"
7'	71	2'1"
8'	54	2'4"
10'	35	2'9"
12'5"	22	3'7"

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	791	71.9	95.8
0-40	820	74.6	99.7
0-60	825	75.0	100.0
0-90	825	75.0	100.0
90-180	0	0.0	0.0
0-180	825	75.0	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	89	89	89	89	87	87	83	83	80	80	75
	1	86	84	83	81	84	80	80	78	77	75	72
	2	83	80	78	76	81	75	76	73	74	72	69
	3	80	76	73	71	79	70	73	69	72	68	66
	4	77	73	69	67	76	67	70	66	69	65	63
	5	74	70	66	64	73	63	68	63	67	62	61
	6	72	67	63	61	71	61	65	60	64	60	59
	7	69	64	61	58	69	58	63	58	62	58	56
	8	67	62	58	56	66	56	61	56	60	55	54
	9	65	59	56	54	64	54	58	53	58	53	52
	10	63	57	54	52	62	52	57	52	56	51	51

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 catalog.

CU Notes/Formulas:

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