

DESCRIPTION

Recessed lens downlight luminaire with 4 inch square aperture utilizing a low voltage MR16 tungsten-halogen lamp. Modular platform can be reconfigured from below the ceiling to accept a broad range of lamp modules and optical elements. Platform is suitable for 2x6 residential or shallow plenum commercial construction. Insulation must be kept 3" from top and sides of housing. Platform + module + element combination supports various lamp beam spreads for desired optical distribution with excellent light control and low aperture brightness.

Catalog #		Type
Project		
Comments		Date
Prepared By		

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking.

Collar

Matte black steel collar adjusts vertically for 1/2" - 1" thick ceilings and can be rotated +/- 75° thru the aperture. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with a paint overspray protector installed in the collar.

Lamp Module

Installed or removed thru the aperture or from the top at 0°, 90°, 180° and 270° positions.

Housing

Steel housing painted matte black for a visually dark interior. Removable hinged top allows for top access. All fasteners are captive.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Optical Element

Mousetrap type springs pull flange tight to ceiling. Light trap eliminates spill light at edge of flange and reflector. Available in self flanged or metal trim ring versions.

Bar Hangers

Captive preinstalled bar hangers adjusts from 8-1/2" to 24" wide; pass thru feature allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attaches directly to t-bar.

Butterfly Bracket

Provides 3" of vertical adjustment and accepts 1/2" EMT, C channel or bar hangers.

Lower Reflector

Aluminum parabolic shielding prismatoid with integral clear glass lens provides for 65° cutoff and is available in a wide range of semi specular Alzak® finishes. Corrugated Baffle: An optional embossed pattern that extends through the flange adding a subtle design element and reduces aperture brightness.

Junction Box

(7) 1/2" trade size pry outs, (3) integral clamps for non-metallic cable. Rated for (8) #12 thru branch circuits. Wago® type push wire connectors for field connections.

Thermal Protector

Self-resetting thermal protector protects against improper lamping and direct contact with insulation.

Transformer

Integral dual output toroidal magnetic transformer, 120V 50/60Hz input, 12V nominal 75VA maximum output. Separate output for circuits controlled by dimmers compensates for losses in dimmers, improves color temperature and lumen output.

Lamp Capsule

Ceramic GX5.3 lamp holder mounts to die cast aluminum heat sink to dissipate heat. Connects to the transformer with electrical quick connects. Accepts 2 lenses or filters.

Code Compliance

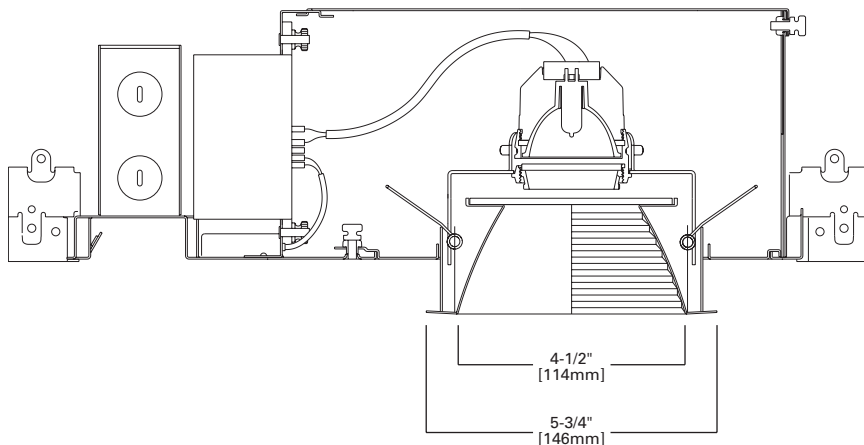
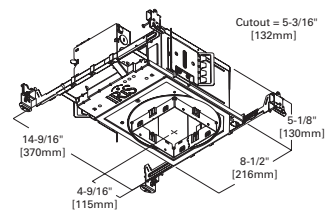
Thermally protected, IP labeled, cULus listed for protected wet locations and ASTM-E283 AIRTITE™.



**P406TAT
MV4MR
E4MRSR
E4MRSRCB**

**75W MR16
Tungsten-Halogen**

4 Inch Square Lens Downlight



ENERGY DATA		
Lamp Wattage (Nominal)	Input Power (Watts)	Input Current (Amps)
20	21	0.17
35	37	.031
37	39	0.32
42	44	0.37
50	53	0.44
65	69	0.57
71	76	0.63
75	81	0.67

ORDERING INFORMATION: Complete unit consists of platform, lamp module and optical element.

Example: P406TAT + MV4MR + E4MRSRHSF

Platform	Lamp Module	Optical Element	Finish	Flange	Accessories
	MV4MR				
<p>P406TAT = 4" Square Aperture Non-IC Housing</p> <p>P406TCP = 4" Square Aperture Non-IC Chicago Plenum Housing</p>	<p>MV4MR = MR16 Vertical Lamp Module, 120V Input</p>	<p>E4MRSR = 4" Square Aperture Lower Shielding Prismatic Lens</p> <p>E4MRSRCB = 4" Square Aperture Corrugated Lower Shielding Prismatic Lens</p>	<p>Alzak® Finishes</p> <p>LI = Specular Clear, Low Iridescence</p> <p>H = Semi-Specular Clear</p> <p>G = Gold</p> <p>WMH = Warm Haze</p> <p>WH = Wheat</p> <p>WHH = Wheat Haze</p> <p>GP = Graphite</p> <p>GPH = Graphite Haze</p> <p>K = Cognac</p> <p>KH = Cognac Haze</p> <p>CC = Chocolate</p> <p>CCH = Chocolate Haze</p> <p>B = Black</p> <p>Painted Finishes</p> <p>MB = Matte Black</p> <p>MW = Matte White</p> <p>W = Gloss White</p>	<p>[Blank] = Metal Trim Ring, Matte White</p> <p>SF = Self Flanged</p> <p>SFWF = Self Flanged, Matte White Flange (SFWF not available with corrugated baffle)</p>	<p>EDC4X41 = Extended depth collar for 1" - 1-1/2" thick ceilings</p> <p>EDC4X42 = Extended depth collar for 1-1/2" - 2" thick ceilings</p> <p>L4X4LNR = Skytek linear spread lens</p> <p>L4X4SF = Solite soft focus lens</p> <p>L4X4SPD = Crystal #73 prismatic spread lens</p> <p>MTR4MW = Metal trim ring, matte white</p> <p>MTR4MB = Metal trim ring, matte black</p> <p>MTR4SN = Metal trim ring, satin nickel</p> <p>MTR4TBZ = Metal trim ring, tuscan bronze</p> <p>L Series - Filter Media For MR16 lamps (See Accessories specification sheet)</p>

PHOTOMETRICS

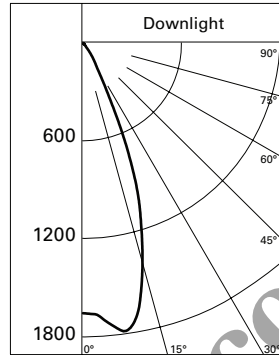
P406TAT MV4MR E4MRSR E4MRSRCB

Photometric Results

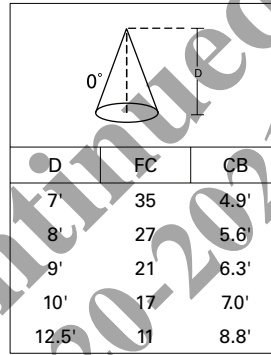
Spacing Criterion = .6
Efficiency = 69.3%

Test No. P11089
Platform = P4
Element = E4MRSRH
Lumens = 1200
Lamp = Q71MR16C/FL40

Candlepower Distribution



Cone of Light



Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	1
55	1
45	12
35	84
25	443
15	1401
5	1710
0	1648

Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0- 30	768	64	92.3
0- 40	818	68.2	98.4
0- 60	831	69.2	99.9
0- 90	832	69.3	100
90-180	0	0	0
0-180	832	69.3	100

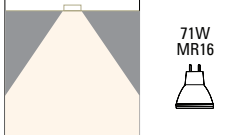
Coefficients of Utilization

Ceiling Wall % RCR	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
	Zonal cavity method -- floor reflectance = 20%					
0	82 82 82 82	81 81 81 81	77 77 77	74 74 74	71 71 71	69
1	79 78 76 75	78 76 75 74	73 72 71	71 70 69	69 68 67	66
2	76 73 71 69	75 72 70 68	70 68 67	68 67 66	66 65 64	63
3	73 70 67 65	72 69 66 64	67 65 63	65 64 62	64 63 61	60
4	71 66 63 61	70 66 63 61	64 62 60	63 61 59	62 60 59	58
5	68 63 60 58	67 63 60 57	62 59 57	61 58 57	60 58 56	55
6	66 61 57 55	65 60 57 55	59 56 54	58 56 54	57 55 54	53
7	63 58 55 52	62 58 54 52	57 54 52	56 54 52	55 53 51	51
8	61 56 52 50	60 55 52 50	55 52 50	54 51 50	53 51 49	49
9	59 54 50 48	58 53 50 48	53 50 48	52 50 48	52 49 48	47
10	57 52 48 46	56 51 48 46	51 48 46	50 48 46	50 47 46	45

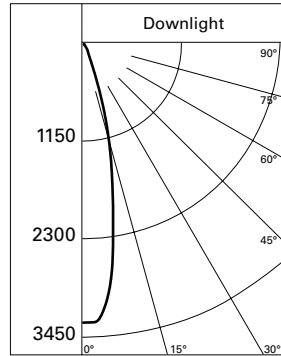
Photometric Results

Spacing Criterion = .4
Efficiency = 68.7%

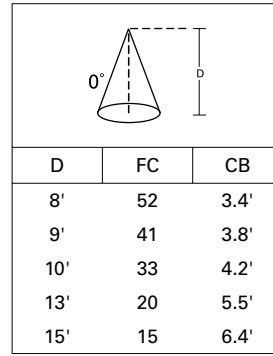
Test No. P11083
Platform = P4
Element = E4MRSRH
Lumens = 1100
Lamp = 71MR16Q/25/
NFL/B



Candlepower Distribution



Cone of Light



Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	1
55	1
45	7
35	55
25	188
15	1250
5	3119
0	3311

Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	711	64.6	94.1
0-40	747	67.9	98.9
0-60	755	68.6	99.9
0-90	755	68.7	100
90-180	0	0	0
0-180	755	68.7	100

Coefficients of Utilization

Ceiling Wall % RCR	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
	Zonal cavity method -- floor reflectance = 20%					
0	82 82 82 82	80 80 80 80	76 76 76	73 73 73	70 70 70	69
1	79 78 76 75	77 76 75 74	73 72 72	71 70 70	69 68 68	66
2	76 74 72 70	75 73 71 69	71 69 68	69 68 67	67 66 65	64
3	74 71 68 66	73 70 68 66	68 66 65	67 65 64	65 64 63	62
4	72 68 65 63	71 67 65 63	66 64 62	65 63 62	64 62 61	60
5	70 66 63 61	69 65 62 61	64 62 60	63 61 60	62 60 59	58
6	68 63 61 59	67 63 60 58	62 60 58	61 59 58	60 59 57	57
7	66 61 59 57	65 61 58 56	60 58 56	60 57 56	59 57 56	55
8	64 60 57 55	63 59 57 55	59 56 55	58 56 54	57 56 54	53
9	62 58 55 53	62 58 55 53	57 55 53	57 54 53	56 54 53	52
10	61 56 54 52	60 56 53 52	56 53 52	55 53 51	55 53 51	51

Discontinued
09-20-2021