

DESCRIPTION

Recessed directional luminaire with 2 inch square regressed pinhole 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 and allows lamp orientation at 0°, 90°, 180° and 270° positions.

Housing

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

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

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.

Splay

Diecast aluminum splay has truncated pyramid with regressed square aperture providing minimal ceiling presence. Can be painted to match ceiling finish. Mousetrap type springs pull flange tight to ceiling. Light trap eliminates spill light at edge of flange. May also be installed rimless using optional plastering lathing ring. Provided with both straight and angle cut parabolic shielding cone, shipped with angle cut version installed.

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 an aluminum heat sink to dissipate heat. Connects to the transformer with electrical quick connects. Accepts 2 lenses, filters or optional lamp snoot.

Code Compliance

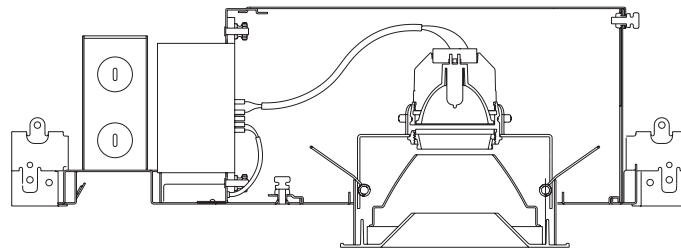
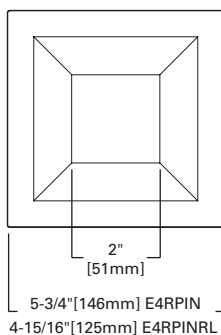
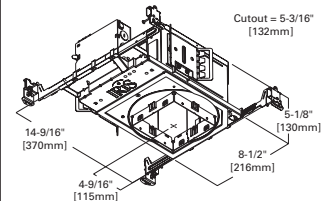
Thermally protected, IP labeled, cULus listed for damp locations and ASTM-E283 AIRTITE™.



**P406TAT
MV4MR
E4RPIN**

**75W MR16
Tungsten-Halogen**

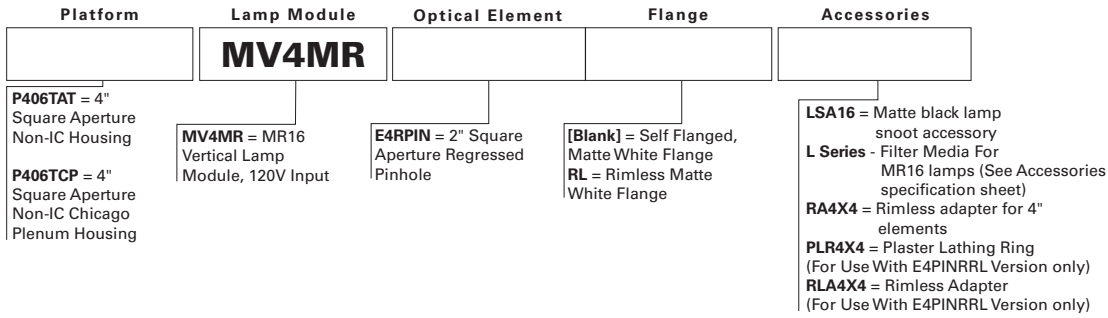
**2 Inch Square Regressed
Downlight**



ENERGY DATA		
Lamp Wattage (Nominal)	Input Power (Watts)	Input Current (Amps)
20	21	.17
35	37	.31
37	39	.32
42	44	.37
50	53	.44
65	69	.57
71	76	.63
75	81	.67

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

Example: P406TAT + MV4MR + E4RPIN



PHOTOMETRICS

P406TAT MV4MR E4RPIN

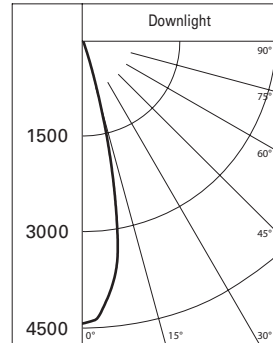
Photometric Results

Spacing Criterion = .4
Efficiency = 67.4%

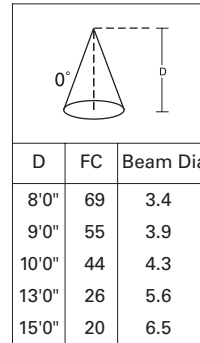
Test No. P10587
Platform = P4
Element = E4RPIN
Lumens = 1100
Lamp = 65MR16 IR FL25

65W MR16

Candlepower Distribution



Cone of Light



Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	0
55	0
45	1
35	6
25	37
15	1218
5	4120
0	4430

Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0- 30	736	66.9	99.3
0- 40	740	67.3	99.9
0- 60	741	67.4	100
0- 90	741	67.4	100
90-180	0	0	0
0-180	741	67.4	100

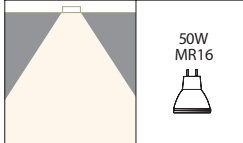
Coefficients of Utilization

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

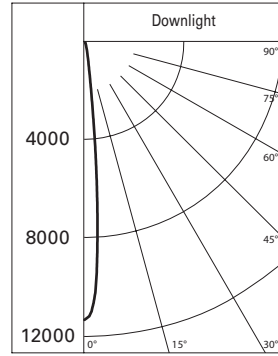
Photometric Results

Spacing Criterion = .2
Efficiency = 39.8%

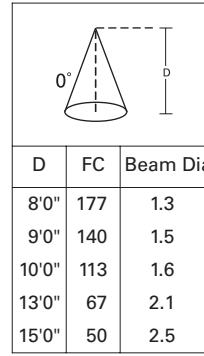
Test No. P10535
Platform = P4
Element = E4RPIN
Lumens = 1320
Lamp = 50MR16 IR SP10



Candlepower Distribution



Cone of Light



Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	0
55	0
45	0
35	12
25	73
15	360
5	5711
0	11325

Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0- 30	517	39.2	98.4
0- 40	525	39.8	99.9
0- 60	526	39.8	100
0- 90	526	39.8	100
90-180	0	0	0
0-180	526	39.8	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	47 47 47 47	46 46 46 46	44 44 44	42 42 42	41 41 41	40
1	46 46 45 44	45 45 44 44	43 43 42	42 41 41	40 40 40	39
2	45 44 43 42	44 43 42 42	42 41 41	41 40 40	40 40 39	39
3	44 43 42 41	43 42 41 40	41 40 40	40 40 39	40 39 39	38
4	43 42 40 40	43 41 40 39	40 40 39	40 39 38	39 39 38	38
5	42 41 39 39	42 40 39 38	40 39 38	39 38 38	39 38 38	37
6	42 40 39 38	41 40 39 38	39 38 37	39 38 37	38 38 37	37
7	41 39 38 37	41 39 38 37	39 38 37	38 37 37	38 37 37	36
8	40 39 37 37	40 38 37 37	38 37 36	38 37 36	38 37 36	36
9	40 38 37 36	40 38 37 36	38 37 36	37 36 36	37 36 36	36
10	39 38 36 36	39 37 36 36	37 36 36	37 36 35	37 36 35	35