

DESCRIPTION

Recessed lens downlight 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 direct contact with insulation and 2x8 residential construction. 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

Double wall aluminum housing painted matte black for a visually dark interior. 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.

Splay

Diecast aluminum splay has truncated pyramid with regressed square aperture and integral glass lens. Lens can be removed to facilitate painting 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 flush to ceiling using optional plaster 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 (4) #12 thru branch circuits. Wago® type push wire connectors for field connections

Thermal Protector

Self-resetting thermal protector protects against improper lamping.

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

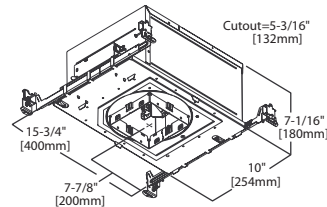
Thermally protected, IP labeled, cULus listed for wet locations and ASTM-E283 AIRTITE™. Suitable for direct contact with insulation.



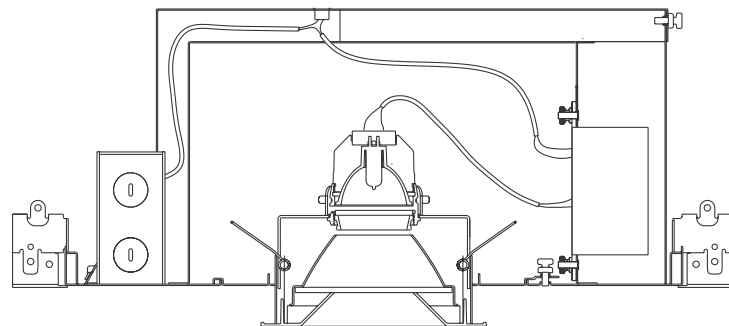
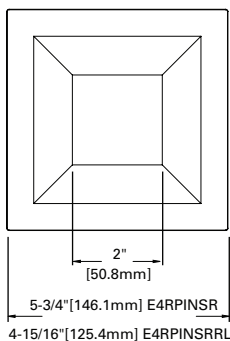
**P408ICAT
MV4MR
E4RPINSR**

**50W MR16
Tungsten-Halogen**

2 Inch Square Lens Downlight

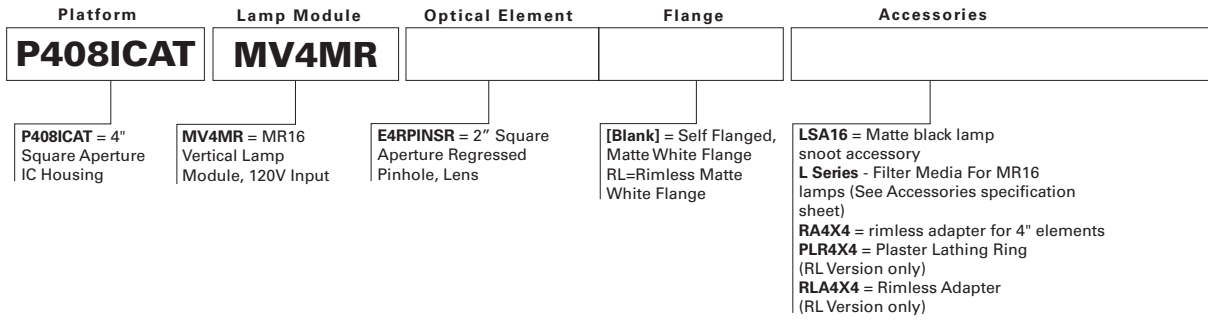


ENERGY DATA		
Lamp Wattage (Nominal)	Input Power (Watts)	Input Current (Amps)
20	21	0.17
35	37	.031
37	39	0.32
42	44	0.37
50	53	0.44



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

Example: P408ICAT + MV4MR + E4RPINSR



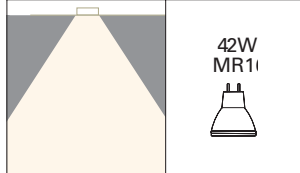
PHOTOMETRICS

P408ICAT MV4MR E4RPINSR

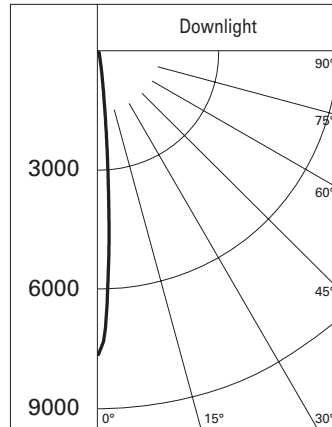
Photometric Results

Spacing Criterion = .1
Efficiency = 38.3%

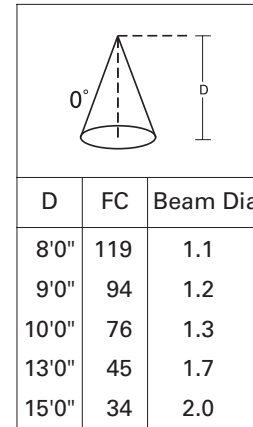
Test No. P10515
Platform = P408I CAT
Element = E4RPINSR
Lumens = 575
Lamp = 42MR16 VNSP9



Candlepower Distribution



Cone of Light



Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	0
55	0
45	1
35	4
25	16
15	103
5	2514
0	7625

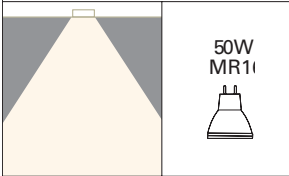
Coefficients of Utilization

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	46 46 46 46	44 44 44 44	43 43 43	41 41 41	39 39 39	38
1	44 44 43 43	44 43 43 42	42 41 41	40 40 40	39 39 38	38
2	44 42 42 41	43 42 41 40	41 40 40	40 39 39	39 38 38	38
3	43 41 40 40	42 41 40 39	40 39 39	39 39 38	38 38 38	37
4	42 41 39 39	41 40 39 38	39 39 38	39 38 38	38 38 37	37
5	41 40 39 38	41 39 38 38	39 38 37	38 38 37	38 37 37	37
6	41 39 38 37	40 39 38 37	38 38 37	38 37 37	38 37 37	36
7	40 39 38 37	40 38 37 37	38 37 37	38 37 36	37 37 36	36
8	40 38 37 36	39 38 37 36	38 37 36	37 37 36	37 36 36	36
9	39 38 37 36	39 38 37 36	37 36 36	37 36 36	37 36 36	35
10	39 37 36 36	39 37 36 36	37 36 36	37 36 36	37 36 35	35

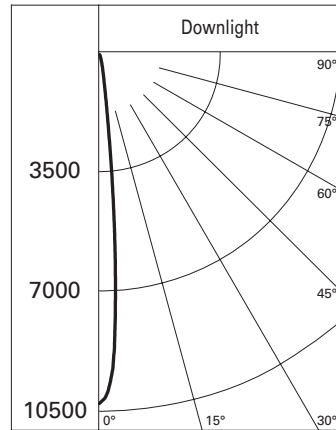
Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0- 30	217	37.7	98.6
0- 40	220	38.2	99.9
0- 60	220	38.3	100
0- 90	220	38.3	100
90-180	0	0	0
0-180	220	38.3	100

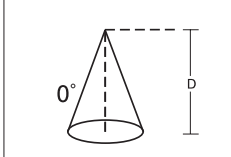
Photometric Results

Spacing Criterion = .2 Efficiency = 36.3%
Test No. P10537 Platform = P408ICAT Element = E4RPINSR Lumens = 1320 Lamp = 50MR16 IR SP10


Candlepower Distribution



Cone of Light



D	FC	Beam Dia
8'0"	160	1.3
9'0"	126	1.5
10'0"	102	1.6
13'0"	61	2.1
15'0"	45	2.5

Candelas

Vertical Angle	CD
90	0
85	0
75	0
65	1
55	0
45	0
35	12
25	67
15	330
5	5202
0	10234

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	43 43 43 43	42 42 42 42	40 40 40	39 39 39	37 37 37	36
1	42 42 41 40	41 41 40 40	39 39 39	38 38 37	37 37 36	36
2	41 40 39 39	40 40 39 38	38 38 37	37 37 37	36 36 36	35
3	40 39 38 37	40 38 38 37	38 37 36	37 36 36	36 36 35	35
4	39 38 37 36	39 38 37 36	37 36 35	36 36 35	36 35 35	34
5	39 37 36 35	38 37 36 35	36 35 35	36 35 34	35 35 34	34
6	38 36 35 34	38 36 35 34	36 35 34	35 35 34	35 34 34	33
7	37 36 35 34	37 36 35 34	35 34 34	35 34 33	35 34 33	33
8	37 35 34 33	37 35 34 33	35 34 33	34 34 33	34 33 33	33
9	36 35 34 33	36 35 34 33	34 33 33	34 33 33	34 33 33	32
10	36 34 33 32	36 34 33 32	34 33 32	34 33 32	33 33 32	32

Zonal Lumens Summary

Zone	Lumens	% Lamp	% Luminaire
0- 30	471	35.7	98.1
0- 40	478	36.2	99.8
0- 60	479	36.3	99.9
0- 90	480	36.3	100
90-180	0	0	0
0-180	480	36.3	100