DESCRIPTION

A low brightness 3-1/2" aperture downlight fixture for MR16 lamps (75W max). Optics provide 50° cutoff to lamp and lamp image allowing maximum light output. Trim appearance matches the 3400 series used with the HA3MR adjustable housing. Lamp secures to top of reflector, eliminating all views into the housing.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Reflector
Spun 0.040" aluminum. Available in a variety of Alzak® finishes. Two torsion springs pull trim tight to ceiling.

B ... Trim Ring
Self flanged white painted die cast trim ring. Mechanical light trap eliminates spill light at edge of flange or reflector.

C ... Housing
One piece die cast 1" deep collar. 18 gauge CRS housing is painted optical matte black to eliminate stray light. Housing is top accessible.

D ... Universal Mounting Bracket
Accepts 1/2" EMT, C Channel, T bar fasteners and hanger bars. Provides 5" total adjustment.

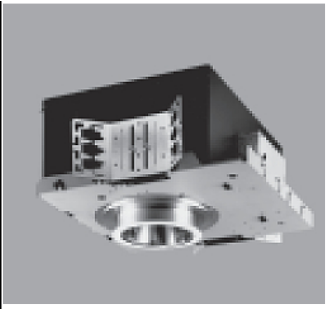
E ... Junction Box
Listed for six #12g (three in, three out) 90°C conductors feed through branch wiring. Pry-outs for six 1/2" conduits. Access to junction box through panel inside of housing.

F ... Socket
GX5.3 base for Bi-pin MR16 lamps. Field replaceable with keyed connector.

G ... Transformer
75VA magnetic core and coil dual tap 120/277V transformer features a bolted and acoustically isolated mounting to ensure quiet operation. Transformer is serviceable from below ceiling.

Insulation Detector
Self-resetting insulation detector opens circuit if insulation is improperly installed.

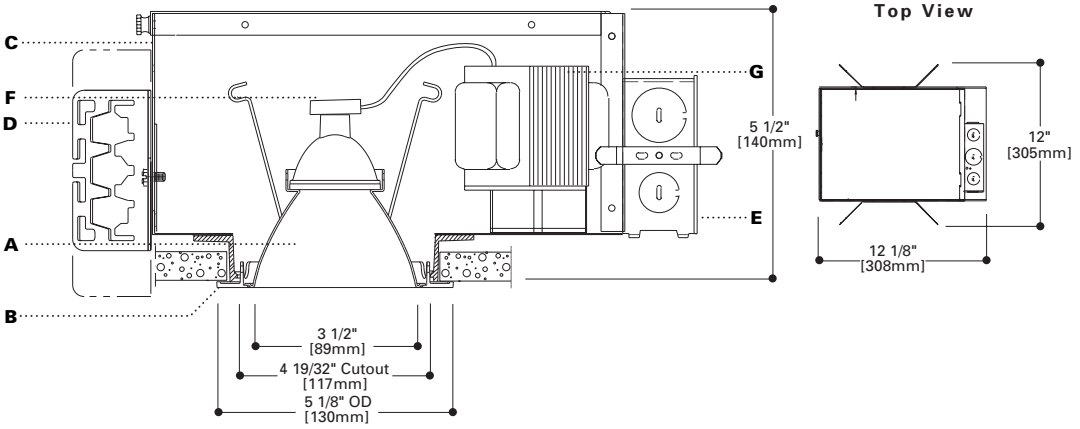
Labels
cULus Listed, damp location.



HD3MR
3401/3403

75W MAX
MR16

3 1/2" DOWNLIGHT
Top Access



ORDERING INFORMATION

Complete unit consists of housing, ballast and trim.

Housing

HD3MR= 3" Low Voltage MR16 Downlight, 120/277V
HD3MRCP= 3" Low Voltage MR16 Downlight, 120/277V, Chicago Plenum

Options

Options
CP =Chicago Plenum
DR20=20W Max
DR37= 37W Max
DR50= 50W Max

Trims

3401= Reflector, Self Flanged
3403= Reflector, Metal Trim Ring, White

Finish

LI= Low Iridescent Clear
H= Haze
S= Straw
WH= Wheat
WMH= Warm Haze
B= Black
W= White

Options

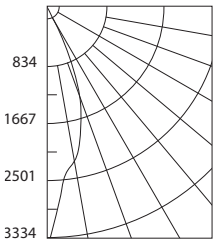
WF= White Painted Flange (Self Flanged only)

Accessories

HB26= C Channel Bar Hanger, 26" Long, Pair
HB50= C Channel Bar Hanger, 50" Long, Pair
RMB22= Wood Joist Bar Hanger, 22" Long, Pair
L100 Series= Color Filters and Lens
FK5= Field Installed Fuse Kit, 5 Amp

PHOTOMETRICS

Candlepower Distribution



Test No. H21327
HD3MR-3403C
Lamp=Q71MR16/C/FL40 71W
Lumens=1200
Spacing Criteria=.50
Efficiency=87.3%

Candlepower

Deg.	CD
0	3334
5	2428
15	1753
25	574
35	67
45	23
55	0
65	0
75	0
85	0
90	0

Average Luminance

Deg.	CD/SQ M
45	5235
55	0
65	0
75	0
85	0

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'	208	2'
6'	93	3'
8'	52	4'
10'	33	5'
12'6"	21	6'
15'	15	7'

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.

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	972.5	81	92.8
0-40	1028.77	85.7	98.2
0-60	1047.41	87.3	100
0-90	1047.41	87.3	100
90-120	0	0	0
90-130	0	0	0
90-150	0	0	0
90-180	0	0	0
0-180	1047.41	87.3	100

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	104	104	104	104	101	101	101	97	97	93	93	89	89	87
1	109	98	96	94	96	94	93	93	90	89	87	86	85	83
2	96	93	90	87	91	89	86	88	85	86	83	84	81	80
3	93	88	85	82	87	84	81	85	80	83	79	81	77	76
4	89	84	80	77	83	79	77	81	76	79	75	78	74	73
5	86	80	76	73	79	75	73	78	72	76	71	75	71	70
6	83	77	72	69	76	72	69	75	69	74	68	73	68	67
7	80	73	69	66	73	69	66	72	66	71	65	70	65	64
8	77	70	66	63	70	66	63	69	63	68	63	68	63	62
9	74	68	64	61	67	63	61	67	61	66	60	65	60	59
10	72	65	61	58	65	61	58	64	58	64	58	63	58	57

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.

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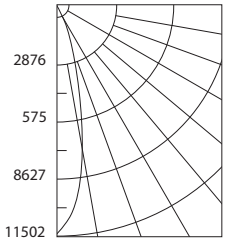
Candlepower Distribution



Test No. H21328
HD3MR-3403C
Lamp=Q71MR16/C/NSP10 71W
Lumens=1125
Spacing Criteria=.24
Efficiency=89.4%

Candlepower

Deg.	CD
0	11502
5	8112
15	853
25	232
35	36
45	14
55	0
65	0
75	0
85	0
90	0

Average Luminance

Deg.	CD/SQ M
45	3187
55	0
65	0
75	0
85	0

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
4'	719	1'
6'	319	1'6"
8'	180	2'
10'	115	2'6"
12'6"	74	3'
15'	51	4'

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.

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	961.82	85.5	95.6
0-40	993.75	88.3	98.8
0-60	1005.65	89.4	100
0-90	1005.65	89.4	100
90-120	0	0	0
90-130	0	0	0
90-150	0	0	0
90-180	0	0	0
0-180	1005.65	89.4	100

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	106	106	106	106	104	104	104	99	99	95	95	91	91	89
1	103	102	100	99	100	98	97	96	94	93	91	90	89	87
2	100	98	95	93	96	94	92	93	90	91	88	88	87	85
3	98	94	91	89	93	90	88	91	87	89	86	87	84	83
4	95	91	88	86	90	87	85	89	84	87	83	85	83	82
5	93	89	85	83	88	85	83	87	82	85	81	84	81	80
6	91	86	83	81	86	83	81	85	80	84	80	83	79	78
7	89	84	81	79	84	81	79	83	78	82	78	81	78	77
8	87	82	79	77	82	79	77	81	77	81	77	80	76	75
9	86	81	78	76	80	78	76	80	75	79	75	79	75	74
10	84	79	76	74	79	76	74	78	74	78	74	77	74	73

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio

CU Data Based on 20% Effective Floor Cavity Reflectance.