

# R7344

**Wide Distribution Downlight**  
**50-70-100W Metal Halide**  
**5<sup>7</sup>/<sub>8</sub>" Conoid Aperture**

### Optics and Applications

The lamp is mounted horizontally for minimum recess depth. The reflector system produces a wide spacing ratio of 1.2 to the mounting height. The pattern is uniform with a soft fringe which blends with adjacent units. Use anywhere for general and transient lighting.

### Design Features

The optical system is protected by a steel housing which holds the reflectors in proper alignment. A glass lamp shield is provided as required by code and is mounted above the cone. The aperture frame features a 2" throat for installation in thicker ceilings. Top or bottom service.

### Finish

A specular clear Alzak cone is standard. Optional colors and Softglow® finishes are available. Housing and structural parts are painted optical matte black to suppress stray light leaks.

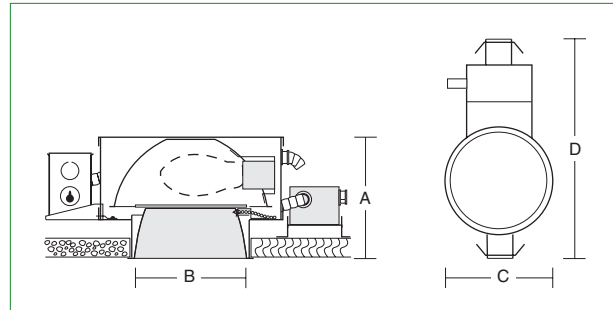
### Ballasts

Standard ballast is encased and potted magnetic. Type HX, HPF, 120V or 277V taps. Shipped for 277V, field conversion to 120V. Thermally protected with auto reset. Temperature -20°F to 105°F. Comes mounted on a plate with 4" of flex. End of life protection not available, replace failed lamps immediately. Service through the aperture requires 15" plenum depth for the ballast to swing up for removal. If plenum is shallow, use optional EBH electronic ballast. Optional electronic metal halide ballasts provide more constant lumen and wattage output. They feature thermal protection with auto reset, quiet operation and automatic shutdown at end of life. Service through the aperture requires 11" plenum depth for the ballast to swing up for removal.

### General

Fixtures are pre-wired and thermally protected, UL and C-UL listed for eight wire 75°C branch circuit wiring. Union made IBEW. Luminaire Efficiency Rating (LER) data is in the photometric directory located in Section Z.

### Dimensions and Lamps



Number	A Depth	B Aperture	C Width	D Length	Lamps
R7344*	6 1/2" 165mm	5 7/8" 149mm	9 3/4" 247mm	18" 457mm	50-70-100W ED-17 or B-17 MH/C

\*To specify add watts and volts for proper ballast, e.g. R7344-50277.

### Matching Units

Vertical lamp downlights Pages R3, R4, R5, C6  
 Sloped ceiling downlights Pages R7, C22, C23, K3, K6  
 Directionals Pages R7, C22, C23, K3, K6  
 Wall washers Pages R32, E4, E5, E6, E8, P31, P61, P62, P63

### Accessories

- F Ballast fuse.
  - R2 26" support rails.
  - R5 52" support rails.
  - B Specular black cone.
  - G Specular gold cone.
  - H Specular mocha cone.
  - P Specular graphite cone.
  - S Softglow® finishes: add S before color letters. e.g. SW for Softglow® wheat cone, SC for Softglow® clear cone.
  - WT White trim flange.
  - WHT White complete trim.
  - TLI Emergency 60W lamp.
  - T Specular titanium cone.
  - W Specular wheat cone.
  - Y Specular pewter cone.
  - Z Specular bronze cone.
  - EBH Electronic ballast, specify watts and volts.
  - V347 347 volt ballast, contact factory.
  - OP Open construction, no lamp shield.
  - EC Emergency circuit with mini-can socket and leads.\*
  - AO Magnetic ballast restrike Auto-On system.\*
  - AOE1 Electronic ballast Auto-On restrike system 120V.\*
  - AOE2 Electronic ballast Auto-On restrike system 277V.\*
- \*Use open rated 60W max. auxiliary incandescent lamp.

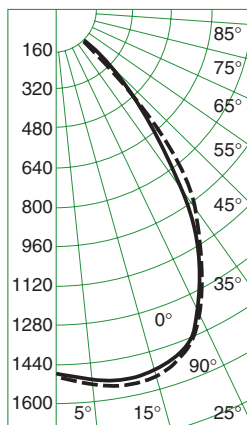
# R6 R7344

## Performance Datachart

Single Unit Initial Footcandles, 30" Work Plane						Ceiling to Floor				Multiple Units Initial Footcandles, 30" Work Plane				
R7344 50W ED-17 MH/C Read Top Data										Ceiling 80% Walls 50% Floor 20%				
R7344 100W ED-17 MH/C Read Bottom Data										Spacing is Maximum Over Work Plane				
Nadir	15°		25°		35°						Spacing	RCR 1	RCR 3	RCR 8
FC	FC	Diam	FC	Diam	FC	Diam								
48 112	45 105	3' 3'	35 81	5' 5'	18 41	8' 8'	8'				7' 7'	58 135	48 114	33 76
26 60	24 56	4' 4'	19 44	7' 7'	9 22	11' 11'	10'				9' 9'	31 73	26 61	18 41
16 37	15 35	5' 5'	12 27	9' 9'	6 14	13' 13'	12'				11' 11'	19 45	16 38	11 25
11 26	10 24	6' 6'	8 19	11' 11'	4 9	16' 16'	14'				14' 14'	13 31	11 26	7 17
8 19	7 17	7' 7'	6 13	13' 13'	3 7	19' 19'	16'				16' 16'	10 22	8 19	5 13

See notes 4 and 5.

### CP Distribution



R7344 50W ED-17 Eff. 68%  
S/M 0°1.18 90° 1.22

### Candelas

°	0°	90°
	3400*	3400*
0	1443	1443
5	1497	1512
10	1524	1546
15	1486	1516
20	1535	1505
25	1385	1437
30	1174	1237
35	948	993
40	665	828
45	454	462
50	187	226
55	75	156
60	40	49
65	9	11
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles  
\* Initial Lamp Lumens

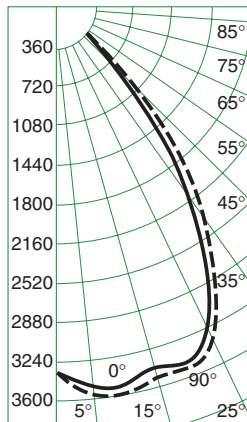
### Coefficients of Utilization

Ceiling	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	0
Wall %	RCR Zonal Cavity Method - Floor Reflectance 20%										
RCR	.76	.74	.72	.70	.72	.69	.70	.67	.67	.65	.62
1	.76	.74	.72	.70	.72	.69	.70	.67	.67	.65	.62
2	.71	.68	.65	.62	.66	.61	.64	.60	.62	.59	.56
3	.67	.62	.58	.55	.61	.55	.59	.54	.58	.53	.51
4	.63	.57	.53	.49	.56	.49	.55	.49	.53	.48	.46
5	.59	.53	.48	.45	.52	.44	.51	.44	.49	.44	.42
6	.55	.48	.44	.40	.48	.40	.47	.40	.46	.40	.38
7	.52	.45	.40	.37	.44	.37	.43	.37	.43	.36	.35
8	.49	.42	.37	.34	.41	.34	.40	.34	.40	.33	.32
9	.46	.39	.34	.31	.38	.31	.38	.31	.37	.31	.30
10	.44	.36	.32	.29	.36	.29	.35	.29	.35	.28	.27

R7344 50W ED-17 MH/C

### Notes

- Data on all charts calculated with a clear specular cone finish.
- Specular colored cone multipliers: Gold x .96, Wheat x .94, Pewter x .89, Mocha x .89, Graphite x .86, Titanium x .86, Bronze x .84, Black x .70.
- Softglow® cone multipliers: Clear x .95, Gold x .91, Wheat x .88, Pewter x .78, Mocha x .77, Graphite x .74, Titanium x .73, Bronze x .68, Black x .62.
- Single unit Datachart pattern diameters are determined by the number of degrees from each side of nadir. Therefore a 15° diameter represents a total 30° pattern width above the floor. Footcandle values are at the edge of that diameter.
- Datachart spacing is rounded off to the nearest foot.
- Candlepower distribution curves: solid lines show distribution at 0°, along the lamp axis. Dotted lines show distribution at 90°, across the lamp axis.
- Brightness data from the Average Luminance Method are inaccurate for small aperture downlights. They are theoretical calculations derived for large surfaces such as troffers. For a complete discussion refer to section Z brochure Z1.



R7344 100W ED-17 Eff. 68%  
S/M 0°1.19 90° 1.23

°	0°	90°
	8000*	8000*
0	3375	3375
5	3509	3538
10	3562	3618
15	3473	3554
20	3568	3522
25	3240	3364
30	2744	2891
35	2211	2329
40	1554	1936
45	1064	1080
50	435	525
55	179	360
60	96	115
65	20	26
70	7	10
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles  
\* Initial Lamp Lumens

Ceiling	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	0
Wall %	RCR Zonal Cavity Method - Floor Reflectance 20%										
RCR	.77	.75	.73	.71	.73	.70	.70	.68	.68	.66	.63
1	.77	.75	.73	.71	.73	.70	.70	.68	.68	.66	.63
2	.72	.68	.65	.63	.67	.62	.65	.61	.63	.59	.57
3	.68	.63	.59	.56	.62	.55	.60	.54	.58	.54	.52
4	.64	.58	.53	.50	.57	.50	.55	.49	.54	.48	.47
5	.60	.53	.49	.45	.52	.45	.51	.44	.50	.44	.43
6	.56	.49	.44	.41	.48	.41	.47	.40	.46	.40	.39
7	.53	.45	.41	.37	.45	.37	.44	.37	.43	.37	.36
8	.50	.42	.37	.34	.42	.34	.41	.34	.40	.34	.33
9	.47	.39	.35	.31	.39	.31	.38	.31	.37	.31	.30
10	.44	.37	.32	.29	.36	.29	.36	.29	.35	.29	.28

R7344 100W ED-17 MH/C

### Brightness

Number	Lamps	85°	75°	65°	55°	45°
R7344	50W ED-17 MH/C	3	23	35	1210	4083
	70W ED-17 MH/C	4	31	51	1776	6008
	100W ED-17 MH/C	8	57	93	3214	10868

Data in footlamberts. Photometer readings, Maximum Brightness Method. See note 7.