

R7301

Downlight
39-70W PAR-30L Metal Halide
5 7/8" Aperture

Optics and Applications

This unit has a shielding conoid reflector designed for PAR-30 long neck lamps. Use in a variety of ceiling heights for area, task or feature lighting.

Design Features

A steel housing protects and positions the lamp and reflector. 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.

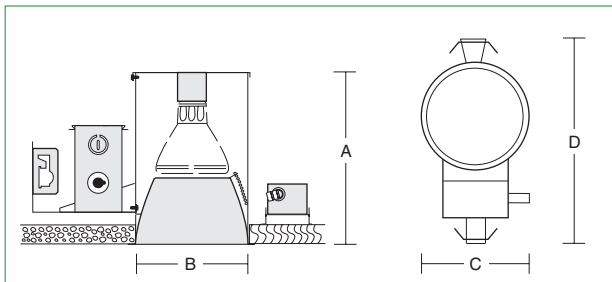
Ballast

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. 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.

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 Ratings (LER) do not apply to fixtures using reflector type lamps.

Dimensions and Lamps



Number	A Depth	B Aperture	C Width	D Length	Lamps
R7301*	10 1/2" 267mm	5 7/8" 149mm	7 1/4" 184mm	14 1/4" 362mm	39-70W PAR-30L MH

*To specify add watts and volts for proper ballast, e.g. R7301-39277.

Matching Units

- Vertical lamp downlights Pages R4, R5, C6, C7, C8
- Horizontal lamp downlight Page R6
- Sloped ceiling downlights Pages R7, C22, C23
- Directional downlights Pages R7, C22, C23
- Wall washers Pages R32, E4, E5, E6, E8

Accessories

- F Ballast fuse.
- B Specular black cone.
- G Specular gold cone.
- H Specular mocha cone.
- P Specular graphite cone.
- T Specular titanium cone.
- W Specular wheat cone.
- Y Specular pewter cone.
- Z Specular bronze cone.
- S Softglow® finishes: add S before color letters. e.g. SW for Softglow® wheat cone, SC for Softglow® clear cone.
- R2 26" support rails.
- R5 52" support rails.
- WT White trim flange.
- WHT White complete trim.
- TLI Emergency 60W lamp.
- HL Hexcell louver.†
- LL Linear lens.†
- LP Large prism lens.†
- MP Microprism lens.†

- EBH Electronic ballast, specify watts and volts.
- V347 347 volt ballast, contact factory.
- FR Frosted lens. Example LLFR for linear lens frosted.†
- 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.*
- FF30-2 Accessory holder for PAR-30. Holds two accessories. Requires cut down cone.
- CDC Cut down cone.
- †Requires accessory holder.
- *Use open rated 60W max. auxiliary incandescent lamp.

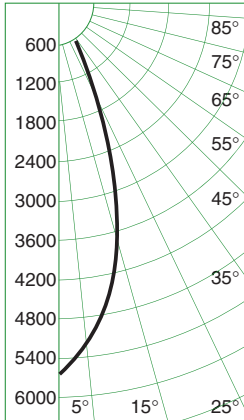
R3 R7301

Performance Datachart

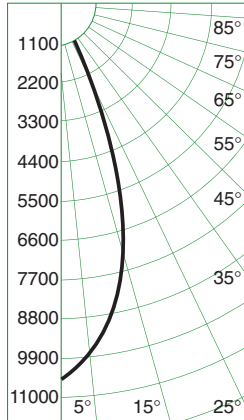
Single Unit - Initial Footcandles, 30" Work Plane						Ceiling to Floor		Multiple Units - Initial Footcandles, 30" Work Plane				
R7301 39W PAR-30L FL MH Read Top Data								Ceiling 80% Walls 50% Floor 20%				
R7301 70W PAR-30L FL MH Read Bottom Data								Spacing is Maximum Over Work Plane				
Nadir	10°		20°		30°							
FC	FC	Diam	FC	Diam	FC	Diam			Spacing	RCR 1	RCR 3	RCR 8
103	77	3'	35	5'	5	9'	10'		5'	117	105	87
187	143	3'	66	5'	9	9'	12'		5'	222	200	163
64	48	3'	22	7'	3	11'	14'		6'	73	66	54
116	89	3'	41	7'	6	11'	18'		6'	139	125	101
44	33	4'	15	8'	2	13'	22'		7'	50	45	37
79	61	4'	28	8'	4	13'			7'	95	85	69
24	18	5'	8	11'	1	18'			9'	27	25	20
44	34	5'	15	11'	2	18'			9'	52	47	38
15	11	7'	5	14'	1	23'			12'	17	16	13
28	21	7'	10	14'	1	23'			12'	33	30	24

See note 4.

Candlepower Distribution



R7301 39W PAR-30L FL MH
Eff. 87% S/M .60



R7301 70W PAR-30L FL MH
Eff. 88% S/M .60

Candelas

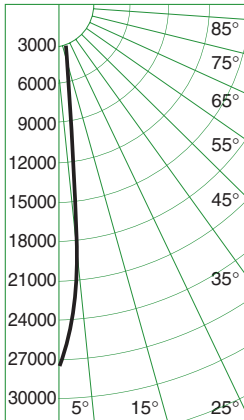
°	39W	70W
	2400*	4500*
0	5808	10513
5	5357	9880
10	4562	8440
15	3743	6959
20	2361	4458
25	1014	2018
30	404	789
35	101	216
40	32	72
45	11	35
50	0	8
55	0	0
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles
* Initial Lamp Lumens

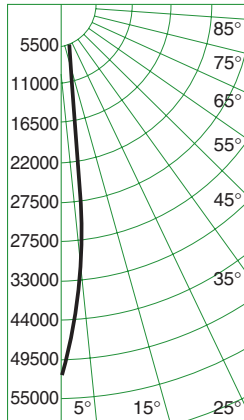
Coefficients of Utilization

Ceiling	80%		70%		50%		30%		0		
	70	50	30	10	50	10	50	10	50	10	
Wall %	Zonal Cavity Method - Floor Reflectance 20%										
RCR											
1	1.01	.99	.97	.95	.98	.97	.97	.91	.90	.88	.84
2	.97	.94	.91	.89	.95	.92	.92	.86	.87	.84	.81
3	.94	.89	.86	.83	.92	.88	.88	.81	.84	.80	.78
4	.90	.85	.82	.79	.89	.85	.85	.78	.81	.77	.75
5	.87	.82	.78	.75	.86	.81	.81	.74	.78	.74	.72
6	.85	.79	.75	.72	.83	.78	.78	.71	.76	.71	.69
7	.82	.76	.72	.69	.81	.75	.75	.69	.73	.68	.67
8	.79	.73	.69	.66	.78	.73	.73	.66	.71	.66	.65
9	.77	.70	.67	.64	.76	.70	.70	.64	.69	.63	.62
10	.74	.68	.64	.62	.74	.68	.68	.62	.67	.61	.60

R7301 39W PAR-30L MH
R7301 70W PAR-30L MH x 1.01



R7301 39W PAR-30L SP MH
Eff. 89% S/M .22



R7301 70W PAR-30L SP MH
Eff. 85% S/M .23

°	39W	70W
	2400*	4500*
0	28198	54060
5	18350	31807
10	5932	10260
15	1944	3460
20	679	1367
25	361	719
30	124	260
35	43	85
40	0	0
45	0	0
50	0	0
55	0	0
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles
* Initial Lamp Lumens

Notes

- Data on all charts calculated using a clear specular cone.
- Specular colored cone multipliers: Gold x .97, Wheat x .96, Pewter x .92, Mocha x .93, Graphite x .92, Titanium x .92, Bronze x .85, Black x .68.
- Softglow® cone multipliers: Clear x .96, Gold x .95, Wheat x .87, Pewter x .86, Mocha x .85, Graphite x .85, Titanium x .85, Bronze x .84, Black x .80.
- Datachart degree headings measure one side from nadir. Diameter data includes both sides. Therefore the 20° column describes a total 40° pattern diameter above the floor. Footcandle values are at the diameter edge.
- Datachart spacing is rounded off to the nearest foot.
- Brightness data from the Average Luminance Method are inaccurate for downlights. They are theoretical calculations for large surfaces such as troffer lenses. We recommend the stricter standard of Maximum Brightness Method point data from direct photometer readings. They approximate what the human eye perceives when evaluating glare. For more information refer to Z section brochure Z1.

Brightness

Number	Lamps	85°	75°	65°	55°	45°
R7301	39W PAR-30L FL	3	12	18	36	12756
	70W PAR-30L FL	7	30	48	108	14781
	39W PAR-30L SP	2	8	14	30	22124
	70W PAR-30L SP	4	16	23	48	40015

Data in footlamberts. Photometer readings, Maximum Brightness Method. See note 6.