

Square Downlight Open Appearance

Features

Lamp

- Designed for vertical T4.5 metal halide lamps. See Option -43 for lower wattage lamps.

Socket

- Vertical. G8.5 bi-pin. Pulse rated.
- Porcelain body. Silicone leads.

Reflectors

- Upper: Parabolic specular Alzak® aluminum.
- Lower: Softex softly etched pre-anodized aluminum. Self-flanged. Gasketed.

Lens

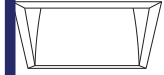
- UV absorbing tempered Microlux glass mounted to upper reflector.

Ballast Assembly: Specify Voltage

- WhisperPack™ fully encapsulated 1000-hour HPF pulse start ballast.
- Class H, high reactance for 120 volt, linear reactor for 277 volt.
- See Option -43 for conventional proboscis start CWA metal halide.
- Capacitor and ignitor supplied.
- Electronic ballast available. See Options.
- (Standard for 20 watt)
- Cool, quiet, long life, silicone leads.
- Visible and easily serviced in all ceilings including drop wall.

THIS PRODUCT IS NO LONGER AVAILABLE

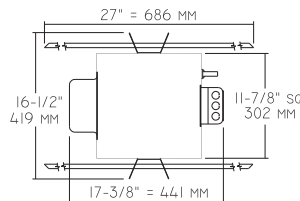
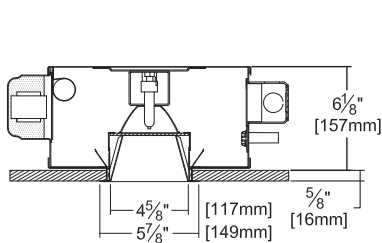
Please consult QUOTATIONS for the best alternative.



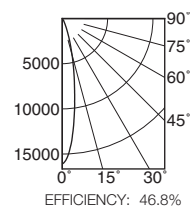
Recessed Square
Open
Appearance
Dual Reflector

Performance at a Glance

HRS-04231



Ceiling Cut-out
5 1/4" Sq.



Cone of Light*		
Dist.	FC	Dia.
6	447.2	2.0
8	251.5	2.7
10	161.0	3.3
12	111.8	4.0
14	82.1	4.7
16	62.9	5.4

SC 0.3

Cone of Light Key

- Ft. Distance from fixture
- FC Footcandles (average)
- Dia. Circle of light at 50% of FC
- * Dia. (in ft.) shown is where FC value is half the FC at nadir.

THE KIRLIN COMPANY

3401 EAST JEFFERSON AVENUE • DETROIT, MICHIGAN 48207-4232
(313) 259-6400 • Fax: (313) 259-9409 OR (313) 259-3121 • www.kirlinlighting.com

PULSE START METAL HALIDE LIGHTING

MAXIMUM WATTAGE

70

CATALOG NUMBER

HRS-04231

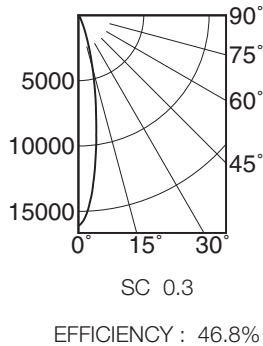
DUE TO OUR CONTINUING EFFORT TO IMPROVE PRODUCTS, TECHNICAL INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

Alzak® is a registered trademark of ALCOA.

Detailed Photometry - Installed Fixture

Photometry from I.T.L., Boulder, CO

HRS-04231 (T4.5 70 Watt)



CANDLEPOWER DISTRIBUTION					
	0.0	22.5	45.0	67.5	90.0
0	16099	16099	16099	16099	16099
5	13054	13054	13054	13054	13054
15	4424	4424	4424	4424	4424
25	1045	1045	1045	1045	1045
35	218	218	218	218	218
45	76	76	76	76	76
55	33	33	33	33	33
65	16	16	16	16	16
75	8	8	8	8	8
85	0	0	0	0	0
90	0	0	0	0	0

COEFFICIENTS OF UTILIZATION							
RF	20						
RC	80			50			
RW	70	50	30	10	50	30	10
1	54	53	52	51	50	49	49
2	52	50	49	47	48	47	46
3	50	48	46	44	46	45	43
4	48	46	44	42	44	43	42
5	47	44	42	40	43	41	40
6	45	42	40	39	41	40	38
7	44	41	39	37	40	38	37
8	43	40	37	36	39	37	36
9	42	38	36	35	38	36	35
10	40	37	35	34	37	35	34

PRORATED FROM I.T.L. TEST #51802
 HRS-04231: *LER=30.3 •AEC=\$7.93
 HRS-04231-96: *LER=36.5 •AEC=\$6.57

* LER = Luminaire Efficiency Rating

LER = $\frac{\text{Luminaire Effic.} \times \text{Total Lamp Lumens} \times \text{Ballast Factor}}{\text{Input Watts}}$

• AEC = Annual Energy Cost per 1000 lumens
 (based on 3000 hours use @ \$0.08 KWH).

Options

Ballasts

- 96 Regulating electronic MH ballast instead. Consult factory for availability in 175W or above.

Wattage and Voltage

- 43 Lower wattage. For 39 watt standard bi-pin. Specify voltage. For 20 watt (electronic only) system, consult factory.
 -120 120 volt, 60 Hz. ballast.
 -277 277 volt, 60 Hz. ballast.
 -347 347 volt, 60 Hz. ballast. Consult factory for electronic.
 -97 Other voltage ballast. Consult factory.

Relays, Standbys, Lamps

- 49 Extra circuit DCB socket. Do not energize simultaneously with main source. Also see -LS.
 -65 Electronic standby system and DCB socket. Following HID outage, provides immediate light until HID restrikes. Also see -66 and -LS.

- 66 Electronic time delay standby system and DCB socket. Following outage, provides light until HID reaches 70% output. Also see Option -LS.

- LP With lamp. Specify source, wattage, color temperature, and clear or coated. (3700°K standard for metal halide)

- LS With T4 DCB tungsten halogen standby lamp. Use only with Options -49, -65 or -66.

Reflectors and Trims (Self-Flanged)

- 16 Champagne Gold specular Alzak lower trim. (CP x 1.10)

- 30 All White lower trim. (CP x 1.10)

- 31 White flange (only) on lower trim.

- 32 White oversize trim extender. Specify size.

- 62 Clear specular Alzak lower trim. (CP x 1.16)

- 63 Dune specular Alzak lower trim. (CP x 1.08)

- 69 Wheat specular Alzak lower trim. (CP x 1.07)

- 71 Softex Dune etched lower trim. (CP x .97)

- 72 Black specular Alzak lower trim. (CP x .89)

- 77 Softex Pewter etched lower trim. (CP x .92)

- 90 Softex Champagne Gold lower trim. (CP x .97)
 -91 Softex Wheat etched lower trim. (CP x .95)
 -92 Umber specular Alzak lower trim. (CP x .96)
 -93 Pewter specular Alzak lower trim. (CP x 1.02)
 -94 Custom color lower trim instead. Consult factory.

Lenses

- 15 Prismatic C#73 flat glass lens instead.
 -28 UV absorbing clear tempered glass instead.

Mounting Options

- 79 Extension collar for up to 2" thick ceilings.
 -85 Ceiling Panel; with recessed fixture hole. Lays-in 2' x 2' grid. White.

Other Options

- 99 Special modification. Consult factory.
 -TA Top access modification for servicing from above ceiling.

SUBMITTAL DATA

APPROVAL STAMP

JOB NAME

TYPE

WATTAGE

VOLTAGE

CATALOG NUMBER

LIMITED WARRANTY: CATALOGED KIRLIN FIXTURES ARE WARRANTED FREE OF DEFECTS IN WORKMANSHIP OR MATERIAL FOR THREE YEARS FROM DATE OF PURCHASE. INSTALLATION MUST BE IN ACCORDANCE WITH THE KIRLIN INSTALLATION INSTRUCTIONS. KIRLIN SHALL NOT BE LIABLE FOR ANY DAMAGES, DIRECT OR INDIRECT, SUSTAINED OR SUFFERED BY PURCHASER OR ANY PERSON. THIS WARRANTY IS SUPPLIED TO THE BUYER IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SELLER DOES NOT WARRANT AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, NOR WILL ANY STATEMENT CONSTITUTE A WARRANTY OR AMEND THIS SPECIFIC WARRANTY. ABUSE OF THE FIXTURE, IMPROPER INSTALLATION, OR REPAIR, OR MODIFICATION OF THE FIXTURE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE MANUFACTURER WILL RENDER THE WARRANTY VOID.