

CATALOG #	TYPE
JOB NAME	WATTAGE VOLTAGE

9" T4.5 METAL HALIDE 70 WATT MAXIMUM HSR-09229

Ellipsoidal Downlight Cylinder

Features

Lamp

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

Socket

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

Reflectors

- Upper: Ellipsoidal specular Alzak® aluminum.
- Lower: Low brightness parabolic specular Alzak aluminum, self-flanged.

Lens

- UV absorbing tempered MicroLux glass mounted to upper reflector. Also see Options.

Ballast Assembly: Specify Voltage

- Core and coil ballast.
- Class H, high reactance for 120 volt and Options -65, -66; linear reactor for 277 volt.
- Capacitor and ignitor supplied.
- Electronic ballast available. See Options. (Standard for 20 watt)
- Cool, quiet, long-life. Silicone leads.

Fuse

- Fused primary. Renewable. Aids servicing.

Housing

- White acrylic enameled. Rustproof: Exceeds 1000 hour ASTM 5% salt spray test.
- Interlocking flare trim.
- No visible cylinder hardware.
- Lightweight: Minimizes ceiling load.
- Cool operation: Extends component life.

Installation

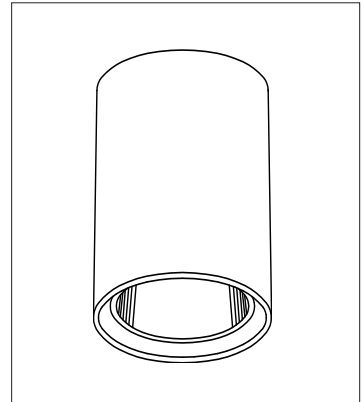
- Center point mounting for snug fit to ceiling. Mounting hardware included.
- QuickConnect mounting system available (see Option -QM).
- Surface J-box mount available. (Option -80)
- Pendant or wall bracket mount available. (See Options -PM, -WB)
- Indoor or outdoor for covered ceiling use. (See Options -QM, -89)

UL, C-UL (Canada) Listings

- Wet, damp or dry locations, covered ceilings. (See Options -QM, -89)

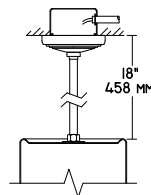
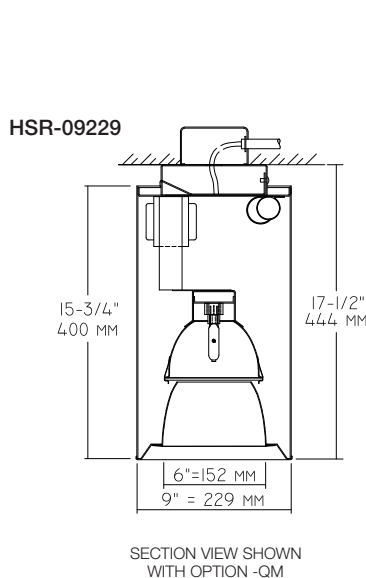
Three Year Limited Warranty

- Complete standard fixture, including ballast.



Surface Round
Open
Appearance
Dual Reflector

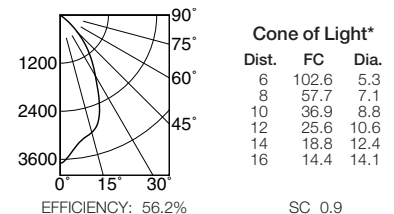
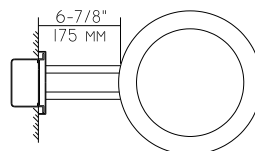
Performance at a Glance



Representative Views:

(Above) With optional pendant mount (Option -PM)

(Below) With optional wall bracket (Option -WB)



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

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PULSE START
METAL HALIDE LIGHTING

MAXIMUM WATTAGE

70

CATALOG NUMBER

HSR-09229

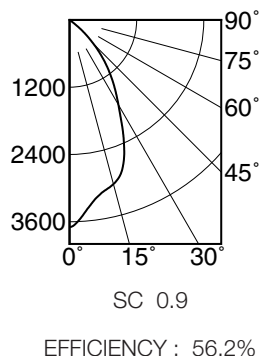
DUE TO OUR CONTINUING EFFORT TO IMPROVE PRODUCTS, TECHNICAL INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

Alzak® is a registered trademark of ALCOA.

Detailed Photometry - Installed Fixture

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

HSR-09229 (T4.5 70 Watt)



CANDLEPOWER DISTRIBUTION					
	0.0	22.5	45.0	67.5	90.0
0	3694	3694	3694	3694	3694
5	3414	3414	3414	3414	3414
15	3032	3032	3032	3032	3032
25	2278	2278	2278	2278	2278
35	1354	1354	1354	1354	1354
45	614	614	614	614	614
55	19	19	19	19	19
65	5	5	5	5	5
75	0	0	0	0	0
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
1	64	62	60	59	58	57
2	60	57	55	53	54	53
3	57	53	50	48	51	48
4	54	49	46	43	47	45
5	51	46	42	40	44	41
6	48	43	39	36	41	38
7	45	40	36	34	39	36
8	43	37	34	31	36	33
9	41	35	31	29	34	31
10	39	33	29	27	32	29

PRORATED FROM I.T.L. TEST #51361
 HSR-09229: *LER=36.4 •AEC=\$6.60
 HSR-09229-96: *LER=43.9 •AEC=\$5.47

* 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 Remote (15' max.) electronic MH ballast instead. Consult factory for internal mounting.

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 wattage and color temperature. (3000°K standard for MH)

- 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 cone. (CP x .95)
- 30 All White lower cone. (CP x .95)
- 31 White flange (only) on lower cone.
- 63 Dune specular Alzak lower cone. (CP x .93)
- 69 Wheat specular Alzak lower cone. (CP x .92)
- 70 SofTex Clear etched lower cone. (CP x .92)
- 71 SofTex Dune etched lower cone. (CP x .89)
- 72 Black specular Alzak lower cone. (CP x .77)
- 77 SofTex Pewter etched lower cone. (CP x .92)
- 90 SofTex Champagne Gold etched lower cone. (CP x .90)
- 91 SofTex Wheat etched lower cone. (CP x .88)
- 92 Umber specular Alzak lower cone. (CP x .83)
- 93 Pewter specular Alzak lower cone. (CP x .88)
- 94 Custom color lower cone. Consult factory.
- OG OptiGroove black tapered aluminum lower cone. White trim. (CP x .75)

Lenses

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

Luminaire (Housing) Finishes

- 35 Natural Aluminum acrylic enamel.

- 36 Gold acrylic enamel.
- 37 Dark Bronze acrylic enamel.
- 38 Black acrylic enamel.
- 94 Custom color / finish. Specify. Consult factory.

Mounting Options

- 54 Safety cable from fixture through pendant stem and 12" beyond. Use with Option -PM.
- 80 2" collar for mounting beneath surface outlet box. 1/2" T.S. KO's. Also see Option -89.
- 87 Custom -PM length. Specify up to 4 feet or consult factory for longer lengths with couplers.
- 88 Swivel canopy for sloped ceilings up to 45°. Earthquake rated. Use with Option -PM.
- 89 Sealed top feature prevents moisture and insect intrusion from above in outdoor or high humidity areas. Must use with Options -80, -PM or -WB for Wet Label listing.
- PM Pendant mount instead. 3/8" T.S. x 18" standard. Also see Options -54, -87, -88, -89.
- QM QuickConnect mount, for indoor (damp or dry) use only. Housing swings aside for easy wiring, pivots and locks to matte black collar.
- WB Wall bracket mount instead. Also see -89.

Other Options

- 99 Special modification. Consult factory.

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 TO N.E.C. IN NORMAL USE. Manufacturer at his option will replace or repair such fixture or refund the purchase price on presentation of proof of purchase and defective fixture at the office of manufacturer within three years of original shipment. Liability of manufacturer is limited to the foregoing and manufacturer shall not be liable for any other 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 oral statement constitute a warranty or amend this specific warranty. Abnormal use, abuse of the fixture, improper installation, repair, or modification of the fixture without prior written authorization from the manufacturer will render the warranty void.