



120V 277V

HID PAR Series

SPECIFICATIONS

PHYSICAL

- Yoke mounted electronic ballast
- Rugged die-cast aluminum construction
- Tool free access to the reflector and lens
- Sealed reflector housing
- Reflector temperature control through integral heat sink fins
- Gel frame holders with two accessory slots
- Top-mounted, gel-frame retainer
- Steel yoke with two mounting positions
- Positive locking yoke clutch
- UL and cUL Listed

ELECTRICAL

- 70W electronic ballast (yoke mounted)
- Less than 14 Amps inrush current, lasts less than one AC cycle (16.7mS)
 - Select breakers that meet or exceed the in-rush and ampacity requirement
- Less than 10% Harmonic distortion
- Greater than 95% Power Factor
- 90% Ballast Efficiency
- 120V Ballast:
 - 120V±10%, 60Hz
 - 1.5 Amps operating current
- 277V Ballast:
 - 277V±10%, 60Hz
 - 0.61 Amps operating current

OPTICAL

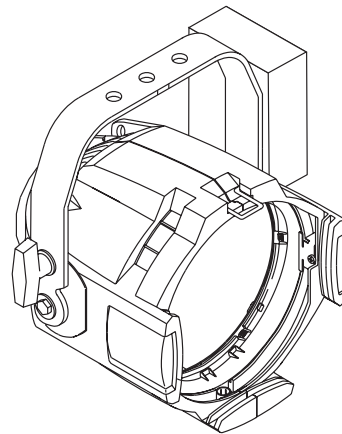
- Modified parabolic and multifaceted reflector
- Computer designed reflector facets molded directly into heat sink casting, finished with an enhanced aluminum deposition process, and polished for maximum reflectance

LENSES

- Four heat resistant, molded borosilicate glass lenses supplied with each unit: Very Narrow Spot (VNSP), Narrow Spot (NSP), Medium Flood (MFL) and Wide Flood (WFL).
- Round beam for VNSP and NSP, oblong beam shape for MFL and WFL
- Optional Extra Wide Flood lens (XWFL) also available
- Tool free lens changing
- Thermally insulated lens ring

LAMP

- 70W Ceramic metal halide
- ETC Source Four HID is shipped with a 70W Philips MasterColor® CDM lamp
- 3000°K color temperature
 - 12,000 hrs. lamp life
 - Color Rendering Index (CRI) - 81
- Optional 70W Philips MasterColor CDM 4,200°K color temperature (92 CRI) lamp available



ORDERING INFORMATION

Source Four 70W HID PAR

MODEL	DESCRIPTION
HID-PAR-70	Source Four 70W HID PAR (black)
HID-PAR-70-1	Source Four 70W HID PAR (white)
HID-PAR-70-277	Source Four 70W HID PAR (black) 277V
HID-PAR-70-277-1	Source Four 70W HID PAR (white) 277V

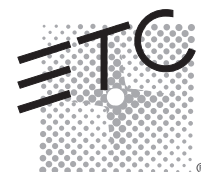
ETC Source Four 70W HID PARs are supplied with a Philips CDM MasterColor 70W ceramic metal halide lamp, 4-lens set: VNSP, NSP, MFL, WFL; color frame and 6' (1.8 meter) lead as standard

Connector Designation

Use Suffixes below to specify Factory-Fitted Connector type

MODEL	DESCRIPTION
-A	Parallel-blade U-ground connector - 120V
-B	Two-pin and ground, 20A connector - 120V
-C	Grounded 20A Twist lock connector - 120V
-D	Grounded 20A Twist lock (NEMA L7-20P) - 277V

See back page for Source Four HID PAR Accessories and optional mounting accessories



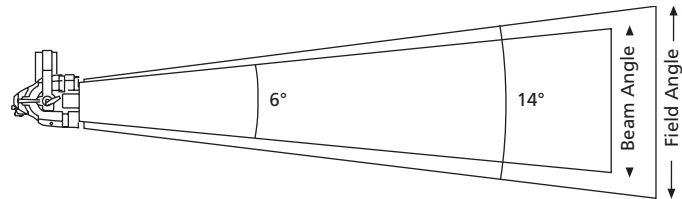
PHOTOMETRICS

Photometric data below is measured with a Philips CDM master color 70W (3000K) ceramic metal halide lamp. To convert data when using any other HID lamps, use the lumen or candela multiplying factors (Lm MF or Cd MF) for that specific lamp. These multiplying factors are listed in the Lamps table in this datasheet. For lumen data, multiply by the Lm MF. For candela or footcandle data, multiply by the Cd MF.

Source Four 70W HID PAR with VNSP lens

Degree	Candela	Field Lumens	Beam Lumens	Efficiency	Lumens per watt
VNSP	175,586	2,525	1,029	38%	36.1

For Field diameter at any distance, multiply distance by 0.24
 For Beam diameter at any distance, multiply distance by 0.10

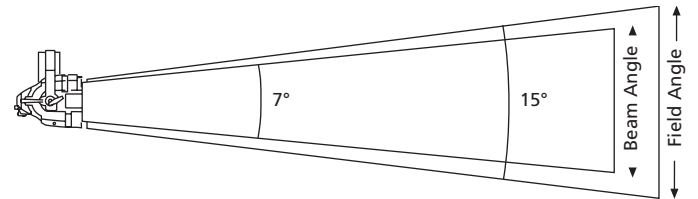


Throw Distance (d)	30'	40'	50'	60'
	9.1m	12.2m	15.2m	18.3m
Field Diameter	7.3'	9.8'	12.2'	14.6'
	2.2m	3.0m	3.7m	4.5m
Illuminance (fc)	195	110	70	49
Illuminance (lux)	2,100	1,181	756	525

Source Four 70W HID PAR with NSP lens

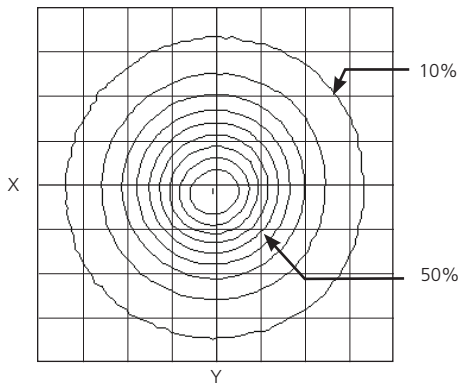
Degree	Candela	Field Lumens	Beam Lumens	Efficiency	Lumens per watt
NSP	146,133	2,644	1,158	40%	37.8

For Field diameter at any distance, multiply distance by 0.27
 For Beam diameter at any distance, multiply distance by 0.12

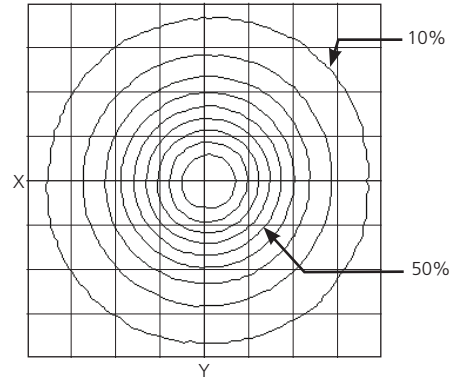


Throw Distance (d)	30'	38'	46'	54'
	9.1m	11.6m	14.0m	16.5m
Field Diameter	8.0'	10.1'	12.3'	14.4'
	2.4m	3.1m	3.7m	4.4m
Illuminance (fc)	163	101	69	50
Illuminance (lux)	1,750	1,089	742	538

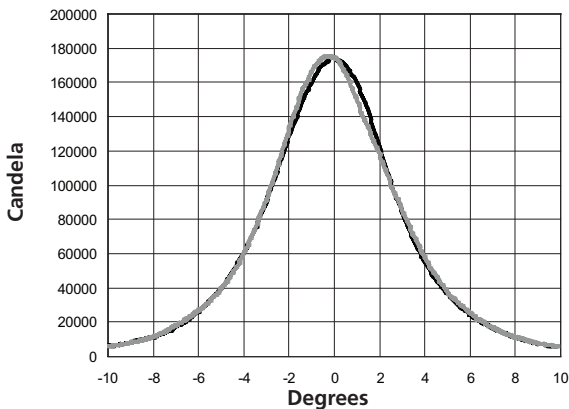
Iso-Illuminance Diagram (Flat Surface Distribution)



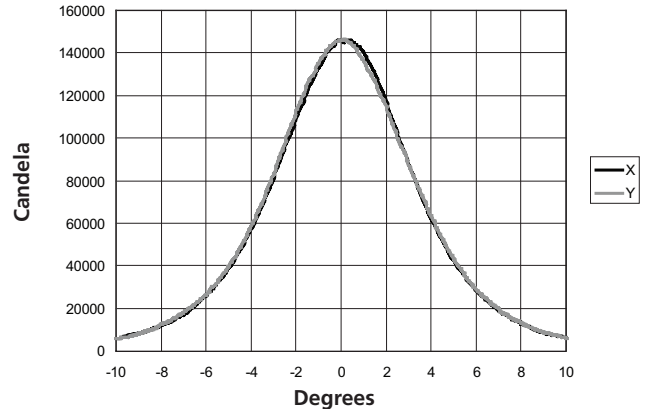
Iso-Illuminance Diagram (Flat Surface Distribution)



Candela Plot



Candela Plot



Metric Conversions: For Meters multiply feet by .3048
For Lux multiply footcandles by 10.76

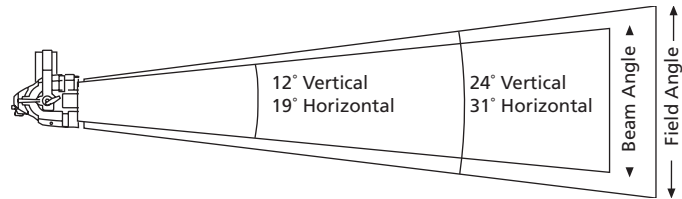
PHOTOMETRICS

Source Four 70W HID PAR with MFL lens

Degree	Candela	Field Lumens	Beam Lumens	Efficiency	Lumens per watt
MFL	41,747	2,999	1,691	45%	42.8

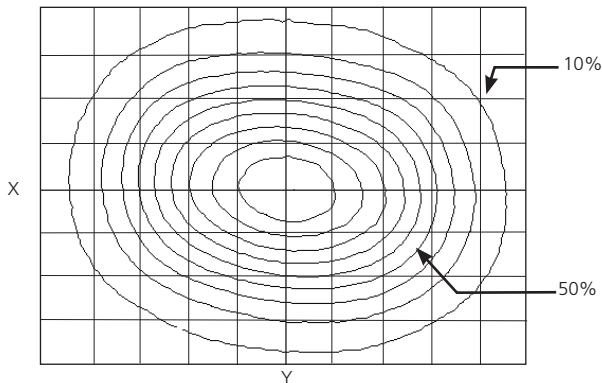
For Field diameter at any distance, multiply distance by 0.42V / .55H

For Beam diameter at any distance, multiply distance by 0.22V / .34H

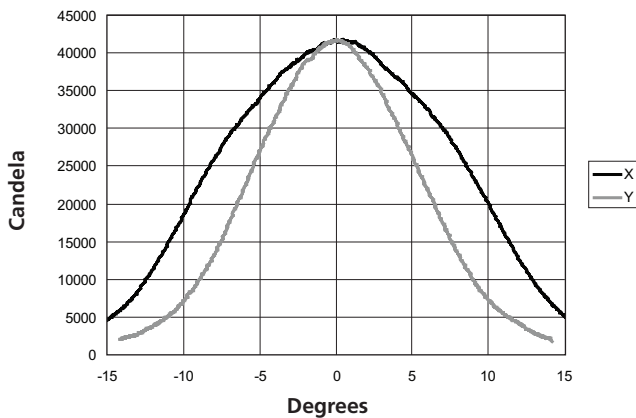


Throw Distance (d)	15'	20'	25'	30'
	4.6m	6.1m	7.6m	9.1m
Field Diameter (vertical)	6.3'	8.4'	10.5'	12.6'
	1.9m	2.6m	3.2m	3.8m
Illuminance (fc)	186	104	67	46
Illuminance (lux)	1,997	1,123	719	499

Iso-Illuminance Diagram (Flat Surface Distribution)



Candela Plot

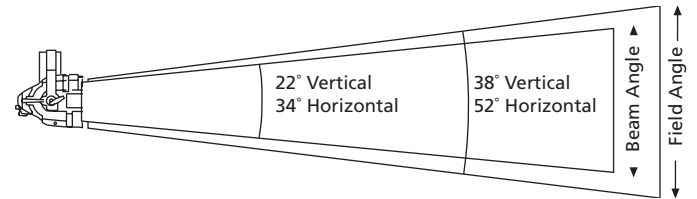


Source Four 70W HID PAR with WFL lens

Degree	Candela	Field Lumens	Beam Lumens	Efficiency	Lumens per watt
WFL	12,793	2,880	1,825	44%	41.1

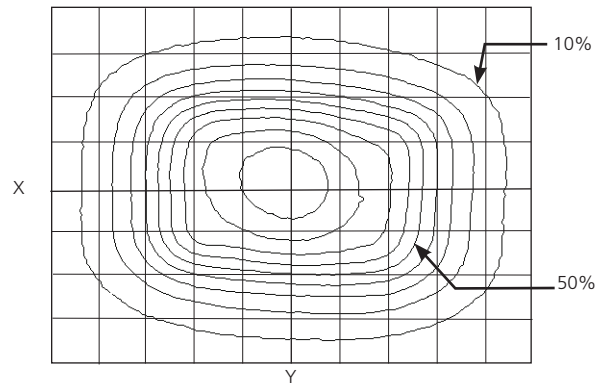
For Field diameter at any distance, multiply distance by 0.68V / .98H

For Beam diameter at any distance, multiply distance by 0.39V / 0.61H

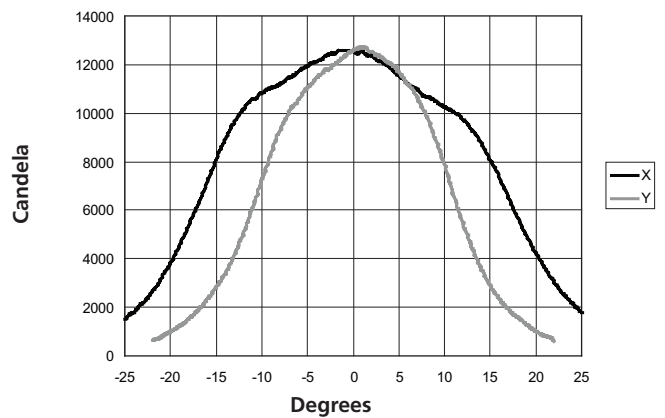


Throw Distance (d)	8'	11'	14'	17'
	2.4m	3.4m	4.3m	5.2m
Field Diameter (vertical)	5.5'	7.5'	9.5'	11.6'
	1.7m	2.3m	2.9m	3.5m
Illuminance (fc)	200	106	65	44
Illuminance (lux)	2,152	1,138	703	476

Iso-Illuminance Diagram (Flat Surface Distribution)



Candela Plot



Complete IES photometry data files (LM-63-02 format) may be downloaded from the ETC website.

Go to <http://www.etconnect.com/downloads.asp>

HID PAR Series

L A M P S

To determine Candela (Cd) or Lumens (Lm) for other HID lamps, multiply the Candela or Lumen value by the appropriate multiplying factor (CdMF or LmMF) shown for that lamp in the table below.

ETC Part #	Lamp Code	Watts	Volts	CRI	Initial Lumens	Color Temp. K	Average Rated Life	All Lenses Cd MF	All Lenses Lm MF
RT212	CDM 70/T6/830**	70	88	81	6,600	3000	12,000	1.0	1.0
RT214	CDM 70/T6/942	70	88	92	6,600	4200	12,000	1.0	1.0

Source Four 70W HID PAR is rated for 70W maximum.

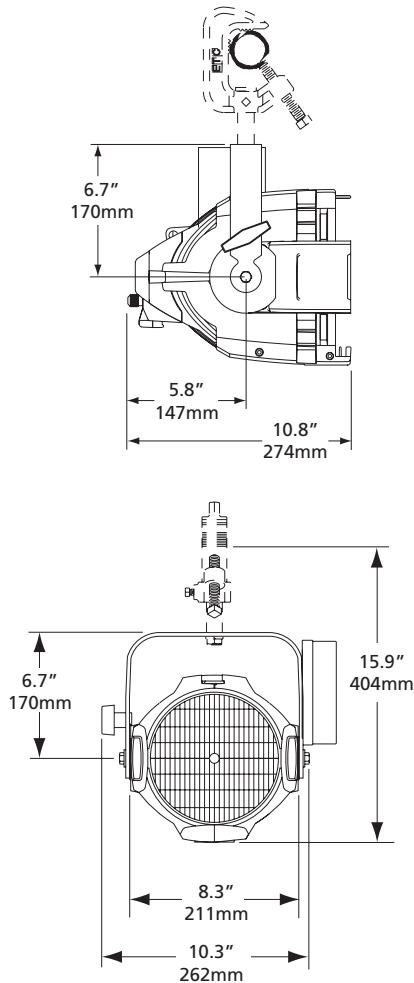
**Photometric data was prepared using a production fixture and the Prometric CCD measurement system. Fixture tested with calibrated lamp at rated voltage. All data normalized to nominal lamp lumens in accordance with IES LM-73-04. Testing performed at ETC West, Hollywood, CA. All other multiplying factors extrapolated from primary test data.

For links to photometry file downloads (IES LM-63-02 format) go to www.etcconnect.com

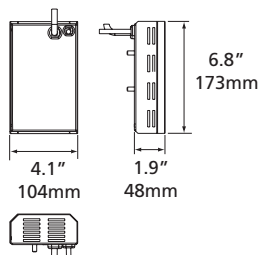
OPERATING CURRENT INFORMATION AND BREAKER GUIDELINES

BALLAST WATTAGE	RUN CURRENT	RECOMMENDED 20A BREAKER LOAD	RECOMMENDED 15A BREAKER LOAD
150W	1.4A @ 120V	Up to 10 units	Up to 7 units
	.65A @ 277V	Up to 15 units	Up to 10 units
70W	.7A @ 120V	Up to 15 units	Up to 10 units
	.3A @ 277V	Up to 20 units	Up to 15 units

PHYSICAL



Ballast Dimensions (Ballast may vary)



Source Four 70W HID PAR Weights*

MODEL	WEIGHT		SHIPPING WEIGHT	
	lbs	kgs	lbs	kgs
HID-PAR-70	10.4	4.7	15.6	7.1

*Add 2.3 lbs for C-clamp

ORDERING INFORMATION

Continued from front page...

Source Four HID PAR Accessories

MODEL	DESCRIPTION
407CF	Color frame (7.5") (included)
400SC	Safety Cable
400-VNSP	Very Narrow Spot lens
400-NSP	Narrow Spot lens
400-MFL	Medium Flood lens
400-WFL	Wide Flood lens
400-LS4	Set of four Source Four PAR lenses (VNSP, NSP, MFL, WFL)
400-XWFL	Extra Wide Flood lens (optional - not included with fixtures)
400PTH3	Top hat, 3"
400PTH6	Top hat, 6"
400PHH	Half hat
400XBTH	Cross baffle top hat
400PGE3	Gel extender, 3"
400PGE6	Gel extender, 6"
400BD	Barn door
400L	Egg crate louver

Note: For colors other than black and white, please call ETC.

Optional Mounting Accessories

MODEL	DESCRIPTION
400CC	C-clamp
400CK	Canopy mounting kit
400WB	Weighted base

Source Four products are protected by one or more of the following patents:

U.S.	USRE36,3316, US5,345,371, US6,092,914 and US5,775,799
U.K.	GB0592589, GB0673488, 99930527.9*
Germany	DE0592589, GB0673488, 99930527.9*
Japan	JP2,501,772

* European patent application number



Corporate Headquarters • 3031 Pleasant View Rd, PO Box 620979, Middleton WI 53562 0979 USA • Tel +1 608 831 4116 • Fax +1 608 836 1736

London, UK • Unit 26-28, Victoria Industrial Estate, Victoria Road, London W3 6UU, UK • Tel +44 (0)20 8896 1000 • Fax +44 (0)20 8896 2000

Rome, IT • Via Pieve Torina, 48, 00156 Rome, Italy • Tel +39 (06) 32 111 683 • Fax +44 (0)20 8752 8486

Holzkirchen, DE • Ohmstrasse 3, 83607 Holzkirchen, Germany • Tel +49 (80 24) 47 00-0 • Fax +49 (80 24) 47 00-3 00

Hong Kong • Room 1801, 18/F, Tower 1 Phase 1, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong • Tel +852 2799 1220 • Fax +852 2799 9325

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