

REFRACTOPACK®



The Refractopack luminaire is a versatile unit, combining the options of vertical/horizontal entry, top/side mounting capabilities, and three distinct prismatically controlled light patterns to efficiently distribute light over a given area. The luminaire can be tailored to most area, roadway, and security application requirements.

Corrosion resistant construction allows this luminaire to be installed in corrosive and marine outdoor applications.

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The Refractopack luminaire with its wide variety of lamps and distributions provides for high efficiency lighting performance that can be tailored to your job requirements.

Optical performance

Refractopack luminaires utilize a vertical-burning lamp that distributes over 90% of the lumens to the side of the precisely engineered refractor, which provides for exceptional, efficient light control. Source-enlarging prisms prevent harsh, concentrated glare spots and give Refractopack luminaires a uniform luminous appearance. This performance allows for up to a 12:1 spacing to mounting height ratio.

The refractor improves visibility by providing sufficient high-angle candlepower to meet the required uniform surface and pavement brightness, while still limiting glare to an acceptable, comfortable level.

With Refractopack luminaires, you have a choice of three distinct prismatically controlled light patterns- asymmetric, square, or long and narrow distribution to meet a complete range of outdoor lighting requirements. The asymmetric distribution provides excellent lighting coverage for security and surveillance applications.

Refractopack luminaires are available with 200W, 250W and 400W HPS or 400W metal halide lamps.

- Efficient light distribution
- Maximum spacing
- Choice of lamps
- Uniform appearance
- Choice of distribution
- Wall mounting
- Choice of poles

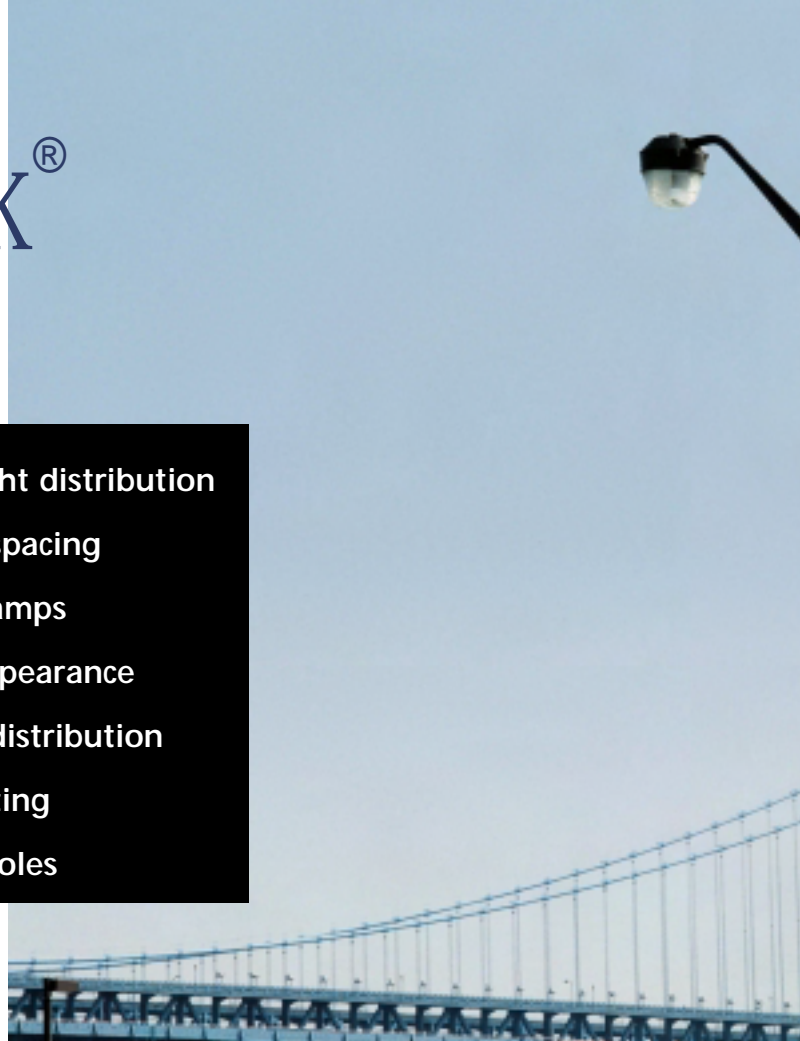


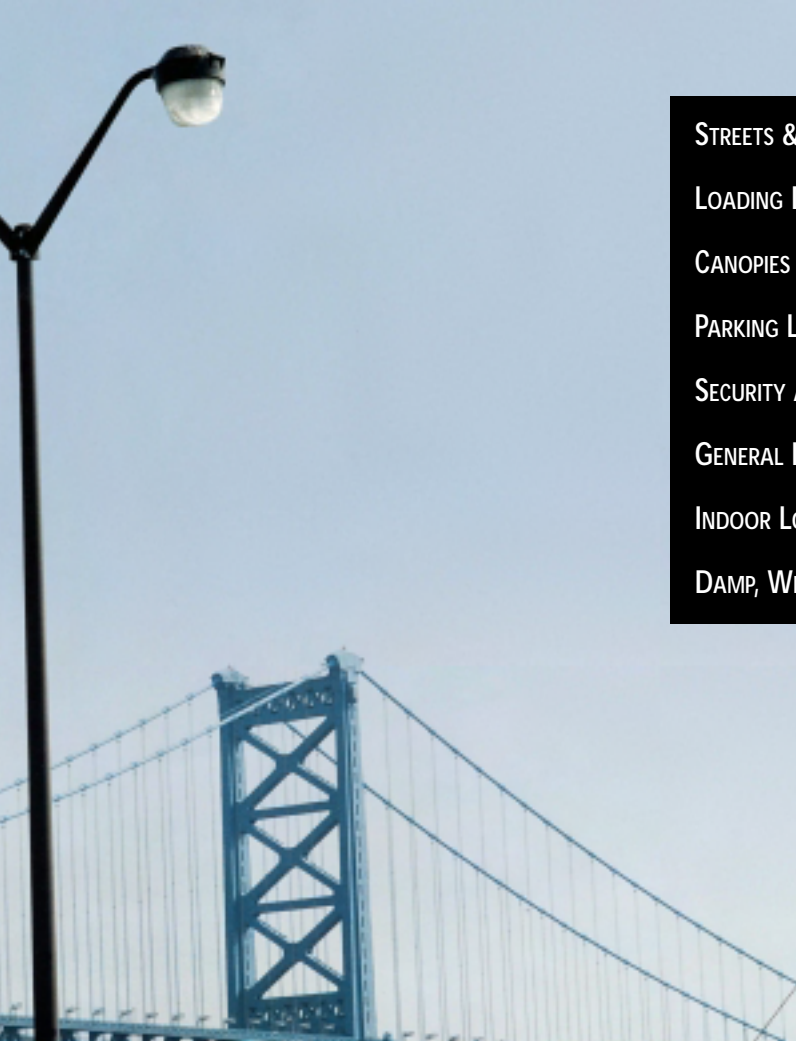
Mechanical performance

The die cast aluminum housing is finished with a seven stage pretreatment and an electrostatically applied polyester powder paint for excellent corrosion resistance. The finish meets the requirements of ASTM B117 1000 salt spray test and ASTM D522 adhesion test. All external hardware is stainless steel.

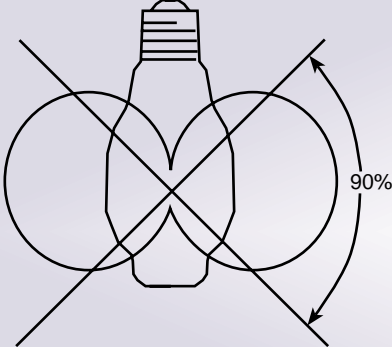
Choice of mounting

Poles heights range from 6m (20') to 12m (40') and are available with satin finished, round tapered aluminum or round tapered steel either prime painted or galvanized.

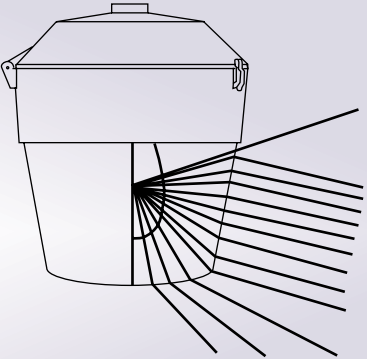




- STREETS & ALLEYS
- LOADING DOCKS
- CANOPIES
- PARKING LOTS
- SECURITY AREAS
- GENERAL INDUSTRIAL
- INDOOR LOCATIONS
- DAMP, WET AREAS



The natural light flux distribution of HID lamps greatly favors their use in the vertical position. 90% of all the lamp output is emitted to the sides.



Refractopack luminaires distribute the sideward lamp lumens directly to horizontal and vertical surfaces away from the base of the pole. No concentrated, wasteful "puddle of light" under the luminaire.

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- 1** Weathertight diecast aluminum ballast housing.
- 2** Location for top entry, or NEMA photocell receptacle standard accessory (when specified).
- 3** Leveling block (side entry only).
- 4** Slip fit for 1 1/4" or 2" pipe (when specified).
- 5** Hinge.
- 6** Gasket.
- 7** Self-locking latches (2).
- 8** Single piece Endural[®] prismatic glass refractor.

- 1** 1 1/4" Pipe slip fit.
- 2** Stainless steel studs.
- 3** Cork-Buna gasket.
- 4** Outlet box has 1" threaded entry on one side and in back.



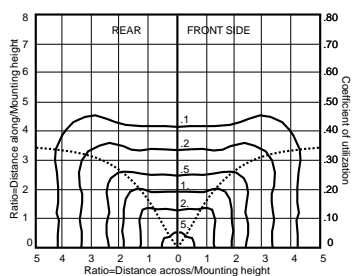
#0877 Cast aluminum bra

To convert Isofootcandle Chart values for mounting heights other than 7.6m (25'), use the following multiplying factors:

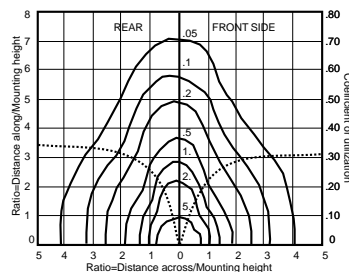
MH (feet)	Factor
6m (20')	1.56
7.6m (25')	1.00
9m (30')	0.69
10.6m (35')	0.51
12m (40')	0.39

Complete photometric data is available from your local Holophane sales engineer for various lamps and distributions.

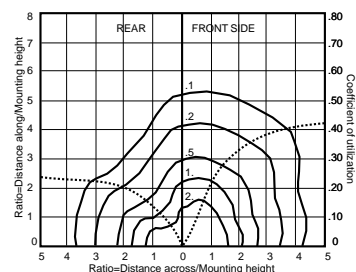
Square, test no. 26953



Long and Narrow, test no. 26945



Asymmetric, test no. 26937



400W HPS at 7.6m (25') mounting height

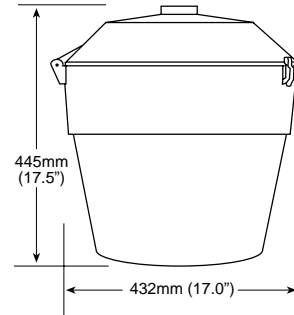
Ordering Data

How to construct a catalog number for Refractopack _____

Fixture type _____

EXAMPLE: 1 — 2 — 12 — S — AS — R
1 2 3 4 5 6

Catalog no.	Description
1 Luminaire Type	
— RPAK	Refractopack
2 Source and wattage	
— 200HP	200W High Pressure Sodium
— 250HP	250W High Pressure Sodium
— 400HP	400W High Pressure Sodium
— 400MH	400W Metal Halide
3 Voltage	
— 12	120 Volt
— 20	208 Volt
— 24	240 Volt
— 27	277 Volt
— 34	347 Volt
— 48	480 Volt
— MT	Multi-voltage (120, 208, 240, 277V in U.S.)
— VT	Vari-tap (120, 277, 347V in Canada)
4 Luminaire entry	
— S	Side entry for 1½" or 2" I.P. bracket
— T	Top entry with 1½" tapered pipe thread
5 Refractor	
— LN	Long and narrow distribution
— AS	Asymmetric distribution
— SQ	Square distribution
6 Options and Accessories	
— F1	Single fuse assembly kit (120, 240, 277, 347V) for field installation
— F2	Double fuse assembly kit (208, 240, 480V) for field installation
— PS	Protective starter for HPS units only.
— 0877	Wall bracket (side entry units only)
— 0871-CA	Corner adaptor for 0877
— R	Photocontrol receptacle kit (side entry units only) for field installation



Maximum weight: 18kg (40 lbs.)
EPA: 1 sq. ft.

Order number _____ Job name _____

The complete fixture shall be Holophane Refractopack catalog number _____.

Mechanical Construction

The housing shall be die cast aluminum with a minimum thickness of 3mm. It shall be pretreated with phosphate and overcoated with an electrostatically applied 2 to 4 mil coat of TGIC (triglycid isocyanurate) polyester powder cured at 425°F. The finish shall have passed ASTM B-117 1000 hour salt spray test and ASTM D-522 adhesion test over a 1/8" diameter mandrel. The fixture shall be suitable for side or top entry as specified. All external fas-

teners shall be stainless steel or aluminum.

Optical Performance

The optical assembly shall consist of a vandal resistant, non-yellowing, annealed, prismatic borosilicate refractor up to .33" thick. The refractor shall be unaffected by normal industrial contaminants or ultra violet radiation and be designed to suffer no permanent depreciation. It shall provide a square, asymmetric or long and narrow lighting distribution as specified. The lamp shall be vertical inside the fixture to provide a balance of horizontal and vertical illumination that mimics the ratio provided

naturally on a sun lit day. The fixture shall have a coefficient of utilization of _____% on the street side and _____% on the house side. Spacing ratio between fixtures to meet IES standards shall be _____ mounting heights.

Electrical Performance

The ballast shall be copper wound, high power factor lead or peak lead design suitable for operation in -40°F to 104°F ambients. The ballast shall provide 100% output to the lamp and have a published ballast factor of 1 per ANSI C82.2. The luminaire shall be UL 1572 Wet Label listed and CSA Certified for elevated ambients up to 40°C. When

operated in 25°C average temperature, the ballast and capacitor life shall be doubled. An optional Protected Starter for HPS lamps, if specified, shall sense an inoperative lamp and automatically shut down to prevent continuous pulsing of the high voltage starting spike to prevent thermal runaway or damage to the ballast secondary.

Warranty

The electrical assembly shall be warranted for a period of 5 years and the luminaire for a period of 2 years from the date of shipment.

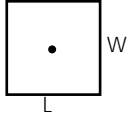
Performance Specifications

REFRACTOPACK®

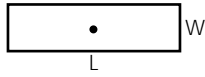
Quick calculation guide to find luminaire spacing

Light modules — all areas expressed in terms of LxW

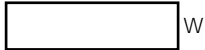
Square (SQ)



Long and narrow (LN)



Asymmetric (AS)



Initial avg.

illumination (fc)

Mounting ht.	.5 FC		1.0 FC		2.0 FC	
	7.6m (25')	10.6m (35')	7.6m (25')	10.6m (35')	7.6m (25')	10.6m (35')
250W HPS						
SQ	195'x195'	185'x185'	125'x125'	115'x115'	80'x80'	70'x70'
LN	350'x100'	250'x140'	220'x75'	155'x105'	140'x50'	100'x70'
AS	230'x100'	135'x140'	140'x75'	105'x100'	95'x50'	65'x70'
400W HPS						
SQ	NR*	250'x250'	180'x180'	165'x165'	120'x120'	100'x100'
LN	NR*	420'x140'	295'x100'	265'x105'	240'x50'	170'x70'
AS	NR*	285'x140'	250'x75'	180'x105'	165'x50'	115'x70'
400W MH						
SQ	NR*	205'x205'	145'x145'	130'x130'	95'x95'	80'x80'
LN	NR*	295'x140'	255'x75'	185'x105'	165'x50'	120'x70'
AS	NR*	200'x140'	175'x75'	125'x105'	110'x50'	80'x70'

* Not recommended.



HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

An AcuityBrands Company

Acuity Lighting Group, Inc.

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Holophane Europe Limited, Bond Ave., Milton
Keynes MK1 1JG, England / Holophane, S.A. de
C.V., Apartado Postal No. 986, Naucalpan de
Juarez, 53000 Edo. de Mexico

Contact your local Holophane sales representative for application assistance, and computer-aided design and cost studies. For information on other Holophane products and systems, call the Inside Sales Service Department at 740-345-9631. In Canada call 905-707-5830 or fax 905-707-5695.

Limited Warranty and Limitation of Liability
Refer to the Holophane limited material warranty and limitation of liability on this product, which are published in the "Terms and Conditions" section of the current product digest, and is available from our local Holophane sales representative.

Visit our web site at www.holophane.com