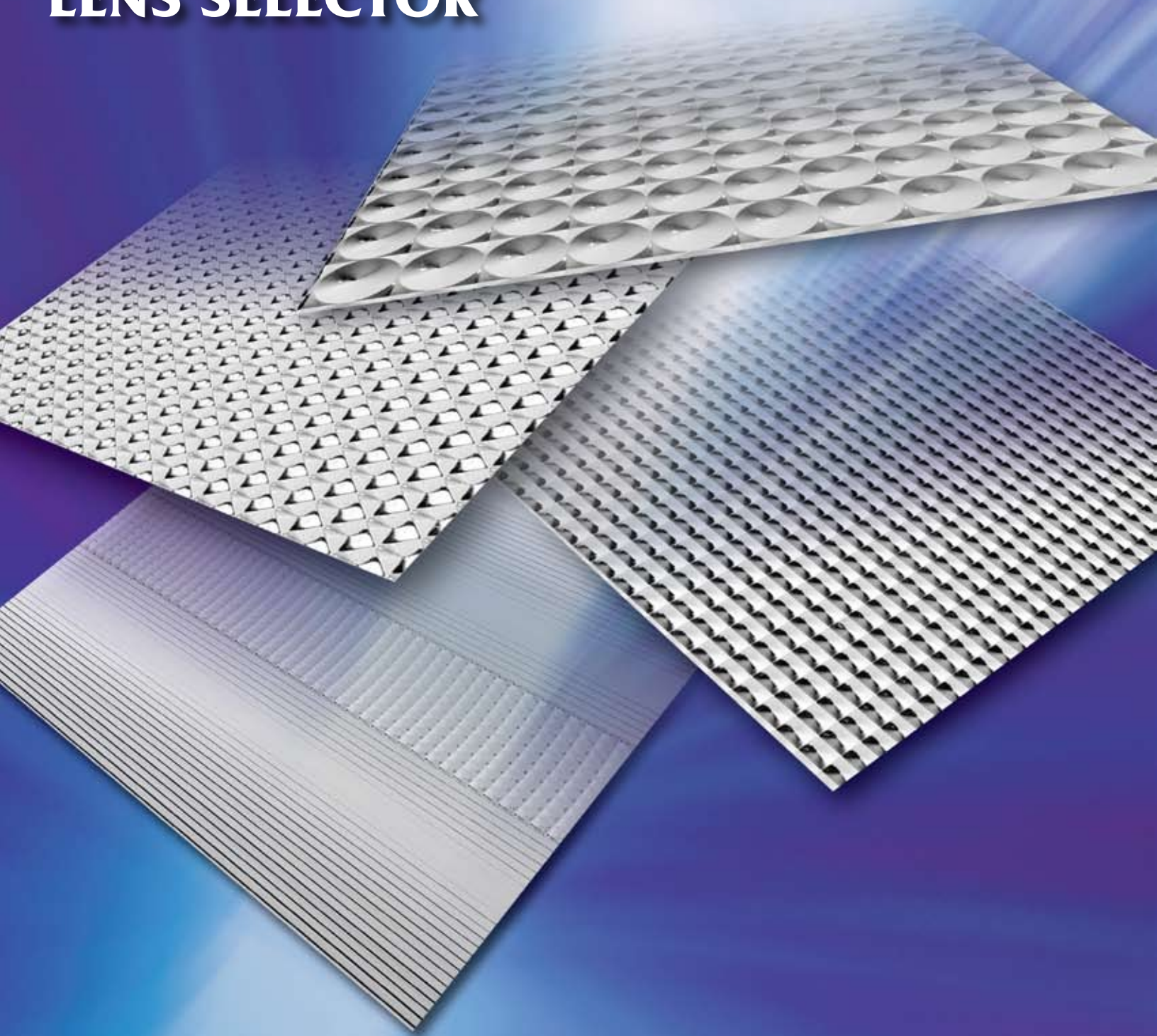


PLASKOLITE, INC.

# **KSH® SERIES LENS SELECTOR**



# **PLASKOLITE LIGHTING**

Plaskolite, a privately held company, was founded in 1950, and for over 50 years has built an excellent reputation based on service, quality, stability and integrity.

The KSH® series of light controlling products from Plaskolite were designed to meet the requirements of today's sophisticated work environments. Each of the KSH lenses was designed to control and direct fluorescent and HID lighting, based on specific industry requirements, while maintaining a high level of visual comfort.

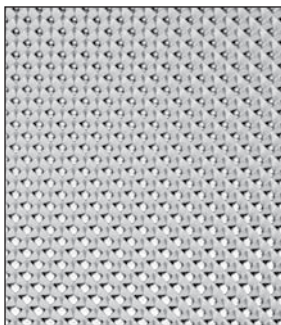
**KSH lighting panel series color and pattern descriptions:**

- UVALITE® - a matte finish that provides additional ultraviolet protection.
- UVALITE® Plus - a smooth finish that provides optimum ultraviolet protection
- RF - Radio Frequency suppression to prevent interference in computing and testing equipment.
- ACRI-TUF® - 10-20 times stronger than standard acrylic panels.
- Silvertint - offers low brightness, increased visual comfort.

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The suggestions and data contained in this brochure are based on information we believe to be reliable. They are offered in good faith, without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

## KSH-12



A prismatic panel with a 3/16" square base female conical prism placed on a 45° axis.

This panel offers maximum efficiency with excellent direct glare control. It has been considered the standard of the industry for many years.

Availability:

- Clear and Silvertint acrylic
- RF, UVALITE and ACRI-TUF

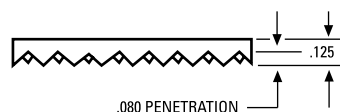
AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1254	1421	0-40°	40.4%
55°	946	990	0-60°	61.2%
65°	706	676	0-90°	67.7%
75°	418	376		
85°	387	319		

V.C.P. for a 30'x40'x8.5' Room is 63.

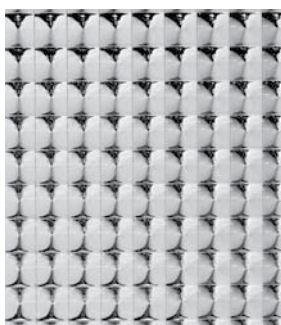
Building Acoustics and Lighting Laboratories.

Report No. 5073.0, 7-17-87.

KSH-12 Clear Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3779.



## KSH-15



A prismatic panel with a bold 3/8" square base female conical prism placed parallel and perpendicular to the length and width of the panel.

This panel has excellent efficiency and direct glare control. A specification panel recommended for use in large areas without objectionable sag or as a frameless lens.

Availability:

- Clear acrylic
- Recommended sizes up to 4' x 4'

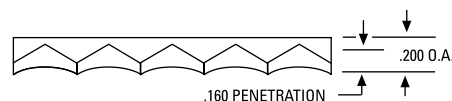
AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1241	1591	0-40°	38.2%
55°	840	867	0-60°	59.9%
65°	567	634	0-90°	66.8%
75°	501	542		
85°	465	465		

V.C.P. for a 30'x40'x8.5' Room is 58.

Building Acoustics and Lighting Laboratories.

Report No. 5096.0 8-7-87.

KSH-15 Clear Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3647.



## KSH-19



A prismatic panel with a 3/16" square base male conical prism placed parallel and perpendicular to the length and width of the panel.

This specification panel is better than its injection molded counterparts. It is fast becoming the quality standard for the industry to control high angle brightness.

Availability:

- Clear or Silvertint acrylic
- RF
- Recommended thickness for 2' x 4' is .156"
- Recommended thickness for 3' x 3' is .187"

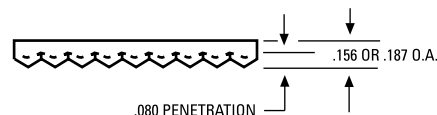
AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1290	1451	0-40°	41.3%
55°	609	559	0-60°	61.5%
65°	290	272	0-90°	66.9%
75°	326	318		
85°	414	344		

V.C.P. for a 30'x40'x8.5' Room is 68.

Building Acoustics and Lighting Laboratories.

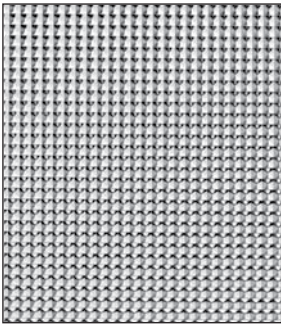
Report No. 5058.0, 7-6-87.

KSH-19 Clear Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3956.





## KSH-20



A prismatic panel with a 1/8" square base male conical prism placed parallel and perpendicular to the length and width of the panel.

It offers excellent brightness control and a soft surface appearance.

Availability:

- Clear acrylic
- Recommended thickness for 2' x 4' is .140"

AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1264	1525	0-40°	39.4%
55°	675	683	0-60°	59.7%
65°	447	424	0-90°	65.4%
75°	366	350		
85°	388	331		

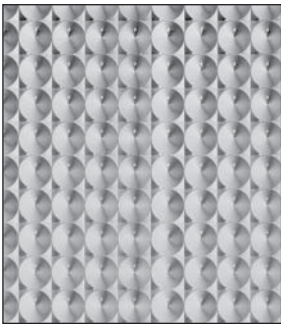
V.C.P. for a 30'x40'x8.5' Room is 66.

Building Acoustics and Lighting Laboratories.  
Report No. 5097.0, 8-7-87.

KSH-20 Clear Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3761.



## KSH-23



The KSH-23 Clear Acrylic Lens is a unique combination of bold, shallow optics, providing excellent retention of the lens' surface texture and uniform surface appearance in fluorescent troffers. The truss-shaped prism design provides an economical solution to sagging lens problems.

Availability:

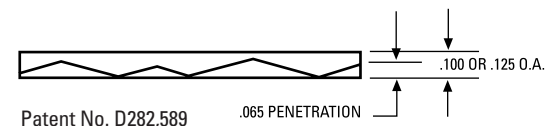
- UVBWF (ultraviolet blue wave filtering) for environments with photosensitive materials
- Recommended thickness for 2' x 4' is .100"
- Recommended thickness for 3' x 3' is .125"

AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1313	1682	0-40°	35.1%
55°	1013	1173	0-60°	59.6%
65°	655	706	0-90°	68.2%
75°	500	545		
85°	600	512		

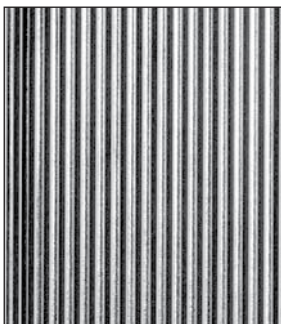
V.C.P. for a 30'x40'x8.5' Room is 55.

Building Acoustics and Lighting Laboratories.  
Report No. 4372.0, 5-28-85.

KSH-23 Clear Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3266.



## KSH-25 SPECIFICATION DATA



KSH-25 panels are linear ribbed lenses with a 90° included angle on 1/8" centers. A hammertone texture is applied to the lens surface to diffuse the light rays and eliminate harsh spikes of light.

Panels are furnished with the ribs running parallel to the lamp axis

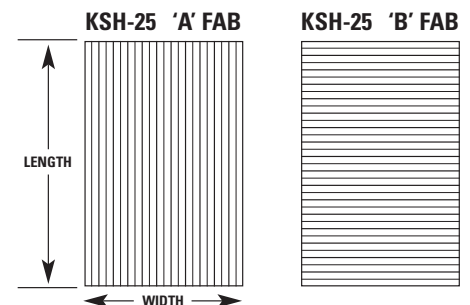
("A" Fab.) or perpendicular to the lamp axis ("B" Fab.) to vary the light distribution.

"A" Fab. panels are used where a broad distribution is required and direct glare is not a problem.

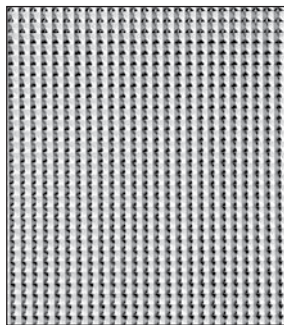
"B" Fab. panels are normally used in task lighting and under the counter lighting-fixtures.

Install panels with ribs toward lamps.

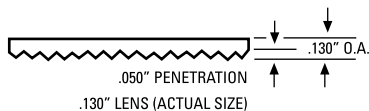
Available in 115" thickness.



## KSH-32 CFL (Computer Friendly Lens)



KSH-32 CFL acrylic lenses have a raised prismatic pattern of male cones running parallel and perpendicular to the length and width of the lens. With good efficiency, excellent luminance control, and lamp obscuration, the KSH-32 is the logical alternative to the small cell louver.



AVERAGE LUMINANCE			EFFICIENCY	
DEGREE	PARALLEL	CROSSWISE	DEGREE	PERCENT
45°	1098	1313	0-40°	33.6%
55°	458	492	0-60°	49.5%
65°	229	236	0-90°	52.1%
75°	180	195		
85°	162	178		

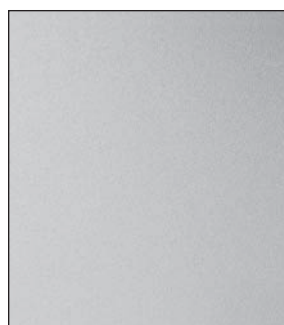
V.C.P. for a 30'x40'x8.5' Room is 80.

Building Acoustics and Lighting Laboratories.

Report No. 6226.0, 7-11-90.

KSH-32 Acrylic Lens. 2x4 troffer with 4, 3200 lumen lamps.  
Nadir candlepower: 3200.

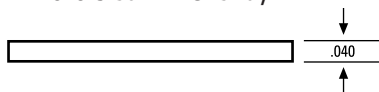
## .040 OVERLAY PRODUCTS



A high transmission acrylic used as an overlay sheet to diffuse lamp images and provide more uniform surface brightness.

### LIGHT TRANSMISSION

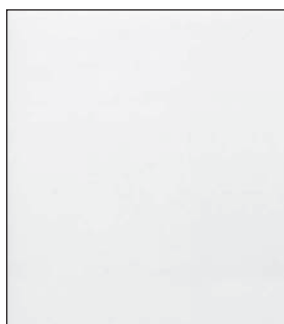
A. .040 Overlay White	79%
B. .040 Clear HT Overlay	83%



Availability:

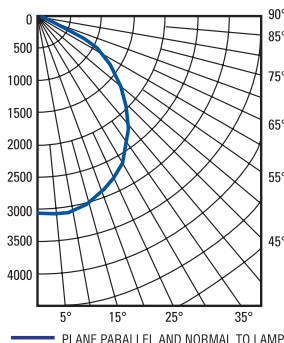
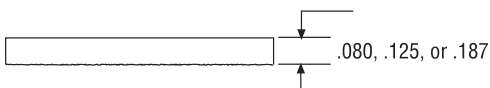
\* Clear and UVALITE White

## KSH-FROST GLAZE WHITE ACRYLIC



KSH-Frost Glaze panels have a heavily pebbled textured finish on one side, and a smooth finish on the other. This extraordinary pebbled surface adds a new dimension in lighting.

The acrylic used in Frost Glaze White Acrylic lighting panels is 100% high molecular weight virgin material meeting Grade 8 requirements as set forth in Table 2 of ASTM D-788-69a. It exceeds IES-NEMA-SPI standards for acrylic material by 100%. Under normal interior conditions, these panels will perform satisfactorily for 20 years.



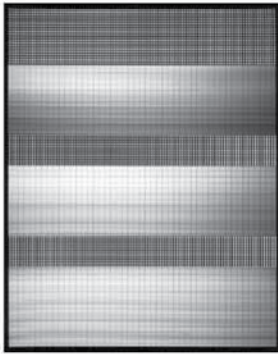
### CANDLEPOWER DISTRIBUTION

Building Acoustics and Lighting Laboratories.  
Report No. 2152.0, 10/7/81.  
Data for lenses in 2' x 4' troffer with four 320 lumen lamps.  
Fixture reflectance 90%.

### EFFICIENCY

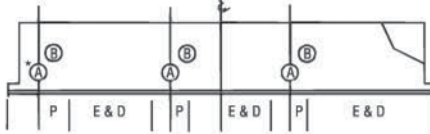
DEGREE	PERCENT
0-40°	24.7%
0-60°	43.0%
0-90°	54.6%

## KSH-34 HSS (Hospital Surgical Suite)



### THE FIXTURE

The unique banded optic design of the KSH-34 HSS requires a specific placement of the lamps in the luminaire. The lamps are arranged in 3 pairs of two lamps each, and are located over the male cone prism bands. To maximize the light output, the lamps are asymmetric about the luminaire centerline. Lens measures 22.75" x 47.75", in a thickness of .150"

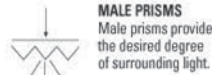


### CANDLEPOWER DISTRIBUTION

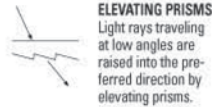
The KSH-34 HSS was designed specifically for supplemental hospital surgical suite lighting. The scientifically placed male prismatic and linear lens elements provide an asymmetric distribution. This distribution directs maximum candle power to the surgical site area with typical luminaire layouts. The areas surrounding the surgical site are also generously illuminated.

### THE LENS

The computer designed clear acrylic lens consists of male cone prisms and linear elevating and depressing prisms.



**MALE PRISMS**  
Male prisms provide the desired degree of surrounding light.



**ELEVATING PRISMS**  
Light rays traveling at low angles are raised into the preferred direction by elevating prisms.



**DEPRESSING PRISMS**  
High angle light rays are directed to useful angles by depressing prisms.

### NOTICE: RFI-SUPPRESSION AND ELECTRONIC BALLASTS

Testing data for fixtures with electronic ballasts and clear acrylic lenses with RFI-suppressing grids have yielded a result that deviates from the Mil-Std specifications (461A, 461D). The result is associated with the approximate 20 kHz operating frequency of the ballasts and their harmonics (which differ markedly from those associated with magnetic ballasts).

Plaskolite, Inc. recommends that you require test data confirming compliance when Mil-Std specifications are involved.

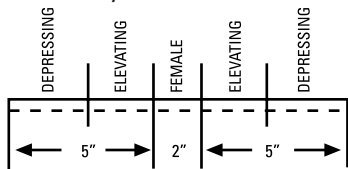
### RADIO FREQUENCY INTERFERENCE SUPPRESSION

The KSH-34 HSS lens comes with a RFI suppressing grid of silver ink on the smooth side of the lens. This grid intercepts the radiated emissions from the lamps which are then carried out of the fixture and dissipated through an electrical ground. This reduces the RFI transmitted to the space to a level below which RFI sensitive equipment is affected. The RFI grid has been tested to and complies with Mil Standard 461A.

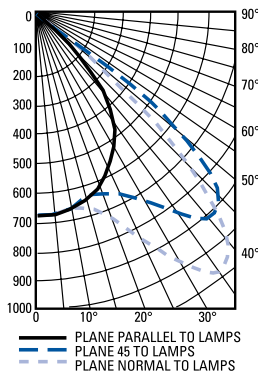
KSH-3E 1X4



A computer designed lens for a one lamp 1x4 foot fluorescent luminaire for energy saving lighting, and with its wide spread bi-symmetrical candlepower distribution is a choice lens in coffer systems. Available in .137" thickness.



Patent No. 3,988,609



CANDLEPOWER DISTRIBUTION

Building Acoustics and Lighting Laboratories. Report No. 3451.0, 3-6-84. KSH-3E 1x4 Clear Acrylic Lens 1x4 troffer with 1, 3200 lumen lamp. Nadir candlepower: 723.

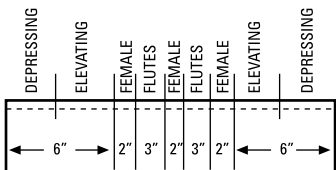
EFFICIENCY

DEGREE	PERCENT
0-40°	39.6%
0-60°	64.5%
0-90°	73.6%

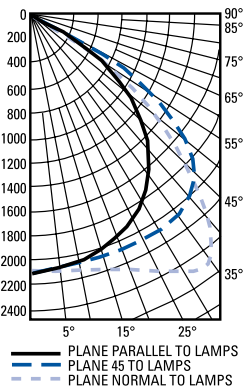
KSH-3E 2X4



A computer perfected blend of four optical bands distributing candlepower to minimize ceiling reflections and increase task visibility while providing energy saving lighting through wide spacing to mounting height ratios and the ability to produce the same ESI at lower watts per square foot. Available in .150" thickness.



Patent No. 3,988,609



CANDLEPOWER DISTRIBUTION

Building Acoustics and Lighting Laboratories. Report No. 3518.0, 11-21-83. KSH-3E Clear Acrylic Lens. 2x4 troffer with 3, 3200 lumen lamps. Nadir candlepower: 2245.

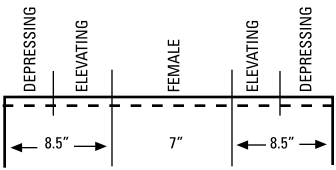
EFFICIENCY

DEGREE	PERCENT
0-40°	36.1%
0-60°	64.7%
0-90°	75.9%

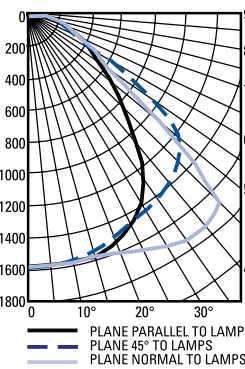
KSH-3ER



The KSH-3ER is a scientific computer blend of 3 optical bands of female, elevating, and depressing prisms, designed for retrofitting a 4-lamp luminaire system to a 2-lamp luminaire system. This conversion will save 50% per annual operating costs, while maintaining 55-70% of your existing system's footcandle levels. Additional cost savings can be achieved by increasing the fixture spacing. Calculations do not include savings from lamps, ballasts, and air conditioning costs.



Patent No. 3,988,609



CANDLEPOWER DISTRIBUTION

Independent Testing Laboratories, Inc. Report No. 19824, 10-2-75. KSH-3ER Acrylic Lens. 2x4 troffer with 2, 3110 lumen lamps. Nadir candlepower: 1605.

EFFICIENCY

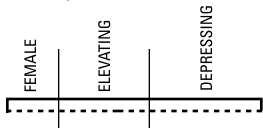
DEGREE	PERCENT
0-40°	35.3%
0-60°	62.3%
0-90°	72.5%

Available in .150" thickness.

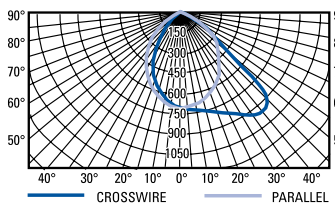
KSH-3E ASYMMETRIC



A computer designed lens for a one lamp fluorescent luminaire for energy savings lighting in corridors, small offices, classrooms, etc. Excellent for wall washers.



Patent No. 3,988,609



CANDLEPOWER DISTRIBUTION

Environmental Research Laboratories, Inc. Report No. E.R.L. 2222 KSH-3E-A Clear Acrylic Lens. 1x4 troffer with 1, 3150 lumen lamp. Nadir candlepower: 709.

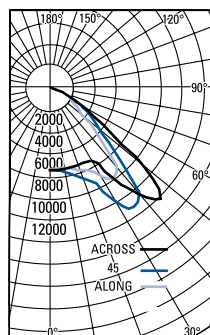
Available in .150" thickness.



## TRIUMPH® I

The Triumph I is an acrylic lens designed specifically for H.I.D. lighting. This computer perfected lens squares the conventional circular light spread resulting in a need for fewer fixtures and a substantial reduction in energy costs. Available in acrylic or polycarbonate.

**CLEAR SUPER METAL HALIDE (400W)** Certified Test Report No. LSI 1006. Computed by LSI Program (Test-Lite) KSH-Triumph® I acrylic lens in commercially available 2x2 ft. luminaire light center 2" above bottom of lens flange. Fixture painted white. One horizontal MS400 clear super metal halide lamp. Lumen rating 40000 LMS.



### EFFICIENCY - 74.82%

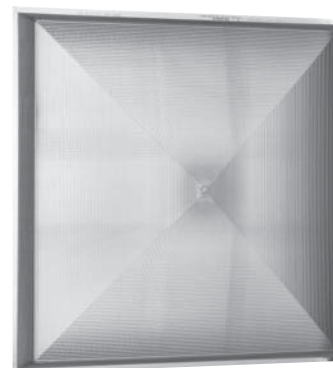
Paint Reflectance . . . . .85  
S/MH . . . . .1.9  
SC (along) . . . . .1.7  
SC (across) . . . . .1.9

### ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	PCT LAMP	PCT FIXTURES
0-30	6724	16.81	22.47
0-40	12996	32.49	43.43
0-60	23773	59.43	79.44
0-90	28840	72.10	96.37
90-180	1085	2.71	3.63
0-180	29926	74.82	100.00

IES SPACING CRITERIA (along)-1.7 (across) -1.9

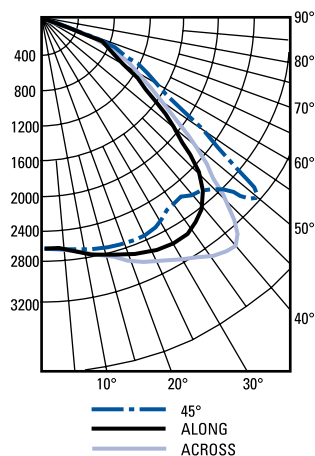
Patent No. 4,262,326



## TRIUMPH® II, JR.

The KSH-Triumph II (JR) fulfills the need for an optical control device for low-wattage H.I.D. sources. The patented optics accept horizontal or vertical lamp placement and provide wide spread spacing capabilities without special reflector contours. By reducing light output at Nadir and redirecting it into the 45° plane, more uniform lighting is achieved. Available in acrylic or polycarbonate.

**CLEAR HIGH PRESSURE SODIUM (150W)** Certified Test Report No. B.A.L.L. 33240.0 KSH Triumph II clear acrylic lens in commercially available 1x1 ft. luminaire. Light center 2-1/8" above bottom of lens flange. One horizontal clear high pressure sodium lamp. Lumen rating 16000.



### ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	PCT LAMP	PCT FIXTURES
0-30	2304	14.4	23.0
0-40	4052	25.3	40.4
0-60	7823	48.9	78.0
0-90	9850	61.6	98.2
90-180	176	1.1	1.8
0-180	10025	62.7	100.00

IES SPACING CRITERIA (along)-1.6 (across) -1.8

Patent No. 4,262,326



# PLASKOLITE, INC.

P.O. Box 1497 / Columbus, OH 43216 / (800) 848-9124

[www.plaskolite.com](http://www.plaskolite.com)