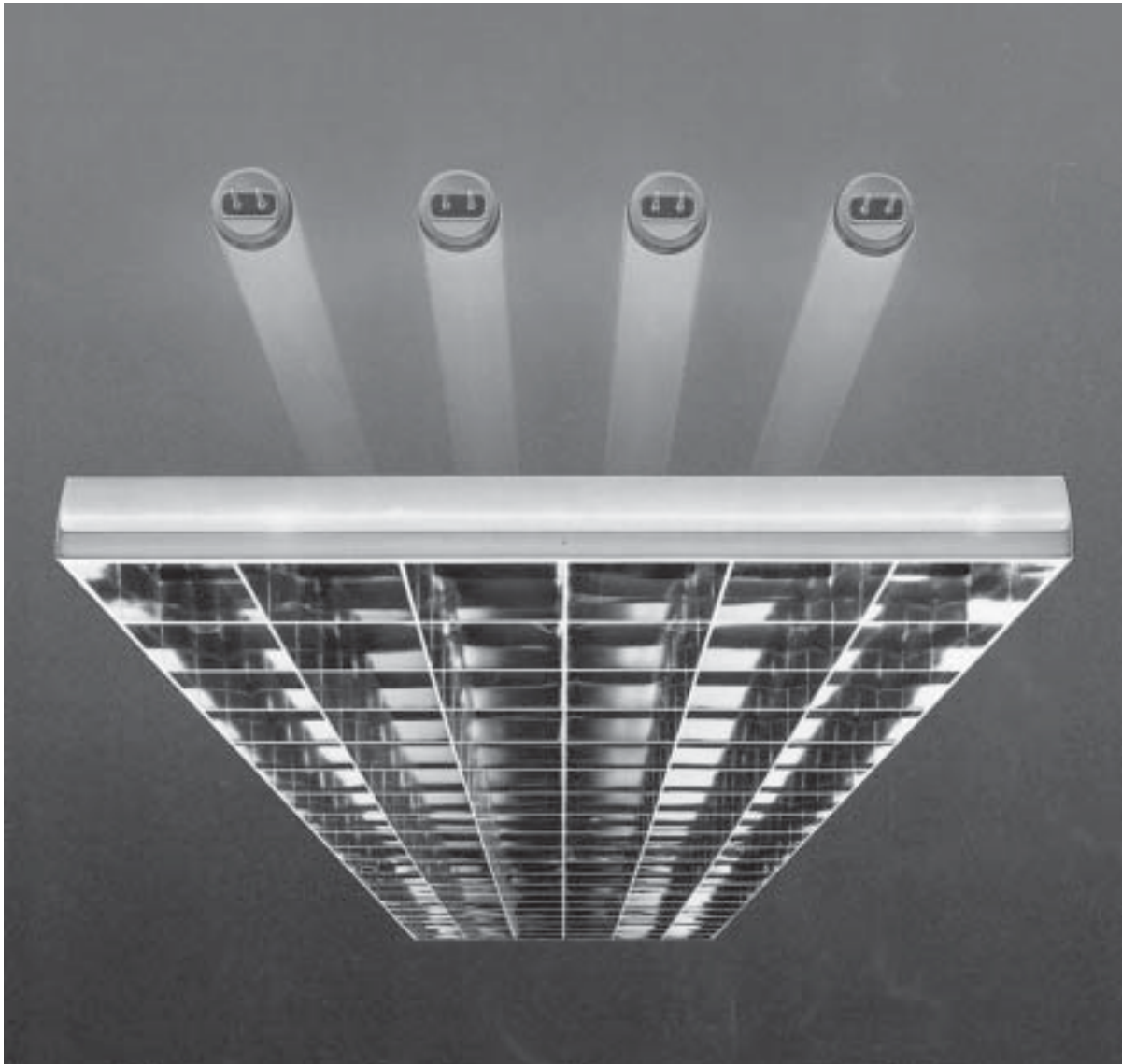


NORTON INDUSTRIES

1366 West 117th Street • Lakewood, Ohio 44107 • (216) 228-6650 • 228-9065 Fax • (800) 462-6650 Fax



**LOUVERS, LENSES, DIFFUSERS
AND FIXTURE COMPONENTS
SPECIFICATION GUIDE**

NORTON INDUSTRIES

INCORPORATED

OUR MISSION STATEMENT

We exist to serve you and we must earn your business.

We must be your very best choice; the best product, the best cost, the best service and the easiest and friendliest to work with.

It's really very simple if we do our job right, we will be the best and continue to earn your business.

Our 45,000 square foot facility gives us the efficiency and space to assure you the best cost and availability. Our No Hassle Policy; no minimum billing and no broken carton charge, lets you purchase only what you need, when you need it. My job and the jobs of all of the N.I. Team depends on your support. As we begin our 36th year, we promise to continue to earn your business every day.

Mary Pat "Tricia" Norton
VICE PRESIDENT

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FIRST, A SIMPLIFIED EXPLANATION OF SOME COMMONLY USED LIGHTING TERMS

Glare

Uncomfortable bright light. Also reflected light which obscures vision.

Luminaire

A complete lighting unit, e.g., fixture, lamps, ballast, diffuser.

Diffuser

A device to redirect the light from its source. Commonly, flat translucent plastic or glass.

Lens

A clear or translucent glass or plastic diffuser that utilizes prisms or other shapes to refract light. Figure 1.

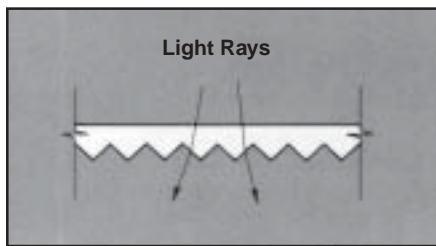


Fig. 1

Louver

A plastic or metal diffuser consisting of a series of blades arranged in a geometric pattern, most often square or rectangular.

Eggcrate Louver

A louver with straight blades. Figure 1 A.

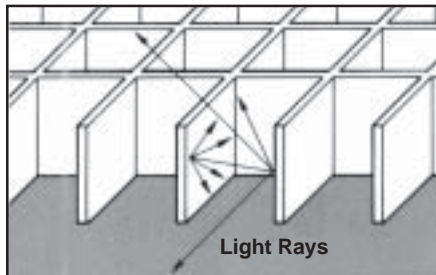


Fig. 1A

Parabolic Louver

A louver with parabolically shaped blades. Figure 2.

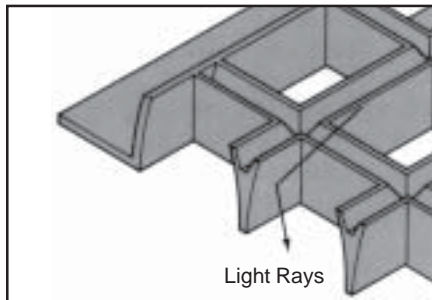


Fig. 2

Baffle

A plastic or metal diffuser consisting of parallel, one directional blades. Figure 2A.

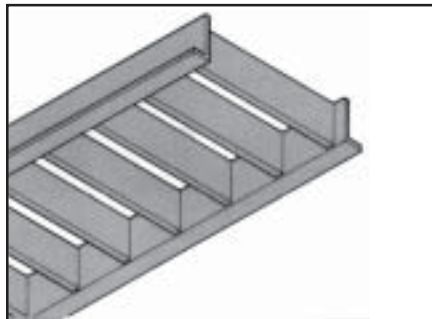


Fig. 2A

Photometry

The science that deals with the measurement of the quantity of light.

Lumen

A unit of light measurement.

VCP (Visual Comfort Probability)

The percentage of people who rate a particular luminaire as comfortable, in terms of brightness, in a particular sized room.

CU (coefficient of Utilization)

That portion of the lumens produced by lamps in a luminaire that will actually reach the work place. CU's are affected by luminaire design, room dimensions and room surface reflectances.

Louver Shielding Angle

The angle between the luminaire plane and the line of sight at which the lamps first become visible. Figure 3.

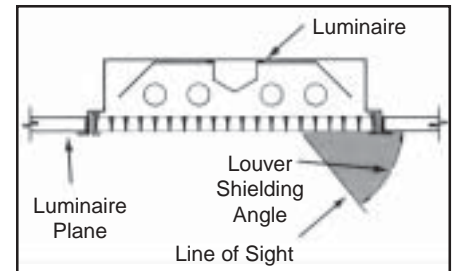


Fig. 3

Luminaire Efficiency

Lumens emitted by luminaire divided by lumens produced by lamps, expressed as a percentage.

Overlay

Generally, a translucent white plastic panel placed over a louver. Tends to increase luminaire brightness and reduce luminaire efficiency. Figure 4.

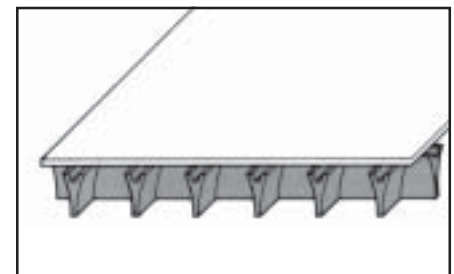


Fig. 4

THEN... QUALITY ILLUMINATION

Not too long ago most office tasks were concerned with reading and writing on a horizontal plane. This was the time of the "more is better" concept of lighting. With head bent downward, the only problem was, perhaps, light reflections on glossy paper. A plastic lens to diffuse

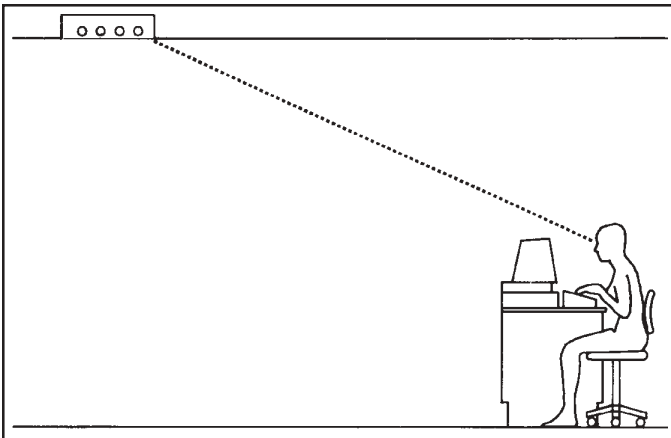


Fig. 5

QUALITY ILLUMINATION IS NOW

Parabolic louvers control the light and direct it downward. Figure 2. A specular (mirror-like) silver finish offers the most precise light control. Of key importance are the angles of light rays as they leave the luminaire. Angles of 60° or more from vertical are those most likely to result in glare, both direct and reflected off the screen. Figure 7. Put another way, the louver shielding angle should be at least 30° . Louver cell dimensions determine the shielding angle. Figure 8.

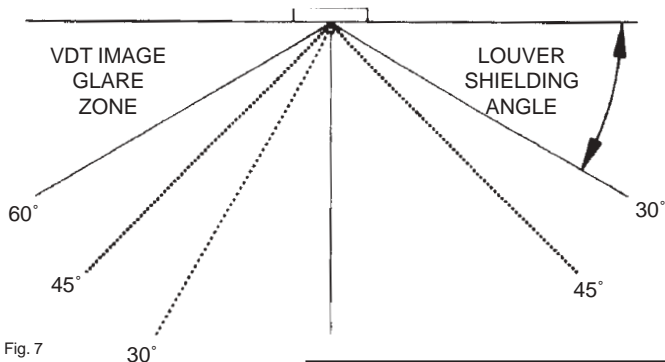


Fig. 7



Fig. 8

fluorescent lighting was the norm. In recent years many of those reading and viewing tasks have become vertical as VDT's (visual display terminals) multiplied in the workplace. The "more is better" concept of lighting just doesn't work in this new environment. Why? Direct glare and reflected glare.

Figure 5 illustrates direct glare. The operator is in a chin-up position so as to view the nearly vertical screen. The light source is also within his field of vision. His eyes are trying to simultaneously adapt to the low brightness of the screen and the extreme brightness of the light source. Figure 6 is an example of reflected glare. Here the fluorescent light sources are reflected in the screen. (Other examples of reflected glare are daylight from windows, and even light colored clothing worn by the operator.) Glare, whether direct or reflected, causes visual discomfort in the form of eyestrain, headache, and fatigue. The result is reduced productivity.



Fig. 6

PARABOLIC LOUVERS IMPROVE THE QUALITY OF LIGHTING BY:

- Eliminating glare.
- Rendering more precise light distribution.
- Providing better contrast and image definition.
- Shielding lamps from direct view.
- Reducing luminaire surface brightness for maximum visual comfort.

AND THERE'S MORE BENEFITS

- Economy – you can retrofit existing fixtures without additional electrical work.
- Efficiency – open grid means lower operating temperatures within the luminaire – so lamps and ballasts last longer.
- Noise bounce back is reduced when using an open grid compared to a flat lens surface.
- Improved ceiling and luminaire appearance.
- All light is directed downward where it's needed. Light diffused in all directions by a prismatic lens could be a waste of energy.
- Improved productivity – fewer complaints of headache, eyestrain, and fatigue.
- Perfectly square louver cells means you don't have to worry about workstation location in relation to fixture viewing angle.

CHOOSING THE RIGHT LOUVER

Many factors must be considered when choosing an appropriate louver cell configuration for a given application. They include room length, width, and ceiling height, luminaire spacing, luminaire specifications, wall, ceiling and sometimes even furniture/equipment reflectances, and the type and intensity of activity or work within the environment.

Some general applications follow. If you need assistance we recommend you consult Norton Industries.

	E - F H - K	B - C	D - L	I
VDT areas	■ ■ ■	■		■
Offices	■ ■ ■	■	■	■
Schools		■		■
Public areas		■	■	■
Department stores		■	■	■
Retail/specialty stores		■	■	
High ceiling area		■	■	

FINISHES ON PLASTIC PARABOLIC LOUVERS

STANDARD

Our most common standard finish for plastic parabolic louvers is a full specular silver (mirror) finish which offers the most precise light control. Other standard finishes include specular gold, bronze and copper and are generally chosen for their aesthetic qualities.

SD

Semi-diffuse, aluminum like finish, is achieved by placing a clear matte coating over a silver specular finish. The result is a visually comfortable environment brought about by good light control and a small degree of ceiling luminosity. This new finish is available on our square parabolic louvers, types, F, K, I, B, C and L. Due to its matte coating, this finish hides the fingerprints and dirt smudges beautifully.

Exclusive ULTRA-LUX FINISH

Our Exclusive *ULTRA-LUX* Finish is available on plastic parabolic louver types "F", "K", "I", "C", "B" and "L". This is the highest quality mirror finish available with unsurpassed durability and has no huge price premium. Fingerprints wipe right off, it is easy to clean, lasts longer, and has a bright specular metalized finish. When ordering louver with this finish, add "UL" to the end of the louver part number ie: NLBF-24-1P-UL. This finish is guaranteed for 5 years! Call us for Detailed Specifications.

WH

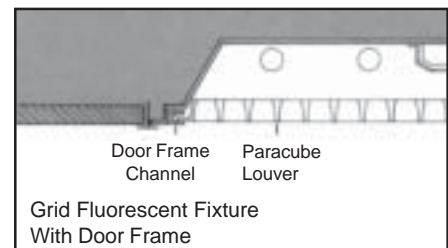
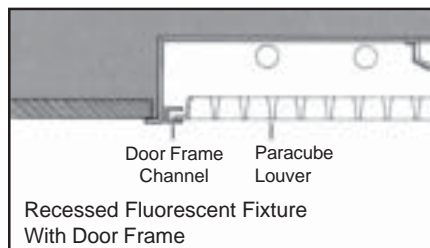
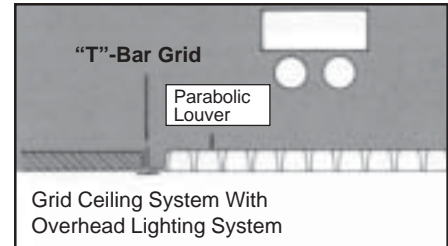
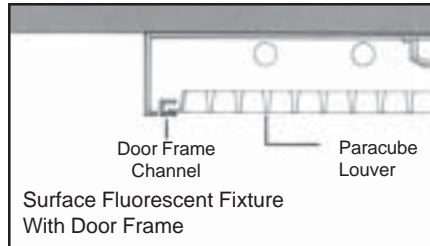
Unplated white louvers are also available.

BL

Unplated black louvers are also available.

CEILING/FIXTURE SYSTEMS

The drawings at the right (Figure 9) illustrate the four most common ceiling/fixture configurations. Most louvers can be modified to fit virtually any style door frame or ceiling grid.



FIXTURE/DOOR FRAME MEASUREMENTS

Accurate measurements are necessary for proper louver fit. In some cases the dimensions of the existing lens or louver are all that is needed. The following measuring instructions are essential for any louver with a depth of 3/4" or more. Remember, measurements must be taken for each style fluorescent fixture being retrofitted.

Dimension 'X'

NLB B

1-1/4" clearance required for 1" louver depth.

NLBL

1-3/4" clearance required for 1-1/2" louver depth.

Dimension A _____ Dimension C-3 _____

Dimension B _____ Dimension D _____

Dimension C-1 _____ Dimension E _____

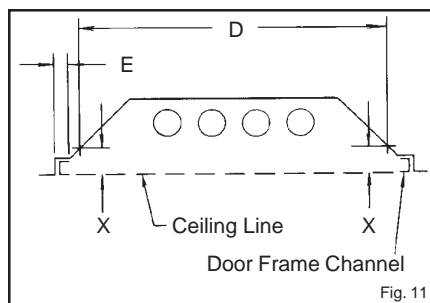
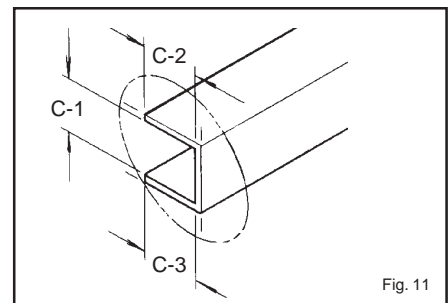
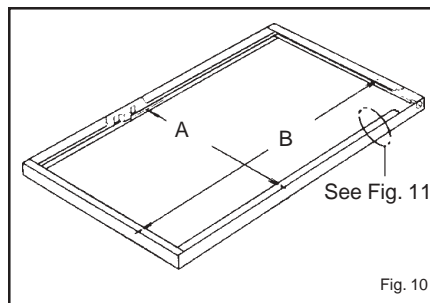
Dimension C-2 _____ Dimension X _____

1 Remove fixture door frame. Determine inside width (A) and inside length (B) measurements as shown in Figure 10. Check for any internal brackets or hardware in the door frame channel. Measurements (A) and (B) must allow for any internal parts.

2 Measure door frame channel: Inside height (C-1); top width, closest to lamps (C-2); and bottom width (C-3). Figure 11.

3 When ordering **NLB-B** or **C** or **L** louvers, additional measurements must be taken for clearance of louver depth. First follow instructions in steps 1 and 2. Measure distance (E). Figure 12. For measurement (D), lay straightedge or yardstick along bottom of fixture at ceiling. Measure up dimension (X). (See chart). Place a mark where dimension X intersects the sloped walls of fixture housing. Mark intersections on both sides of the housing. Next, measure the distance (D) between both marks.

NOTE: In some cases, dimension 'X' (1-1/4" or 1-3/4" will not clear lamps. In these cases 50/50 or inverted Paratrim may be used. Figures 16, 17.



DOOR FRAME INSTALLATION

1. Open fixture and remove entire door frame assembly from fixture.
2. Partially disassemble door frame. Removal of end channel is usually all that is required. Remove old lens.
3. Carefully insert the new Paracube louver into door frame. (White gloves furnished with new louver should be worn to protect the louver's plated surface.) Reassemble the door frame.
4. Wearing gloves, reinstall door frame into fixture and lock securely.



FABRICATION SERVICES

Many Paracube parabolic louvers are molded with an integral flange to accommodate virtually any standard door frame. Figure 14. All flanged louvers may be trimmed by Norton Industries or at the job site to accurately fit any door frame or fixture.

Since deeper celled louvers sometimes do not clear the fixture housing or component configuration, a wider flange size or a Paratrim adaptor frame may be required. Figures 15, 16, 17.

Norton Industries offers a complete fabrication service. We will trim the louver to proper size, miter the Paratrim and sonically weld the entire assembly as a unit. Figure 18.

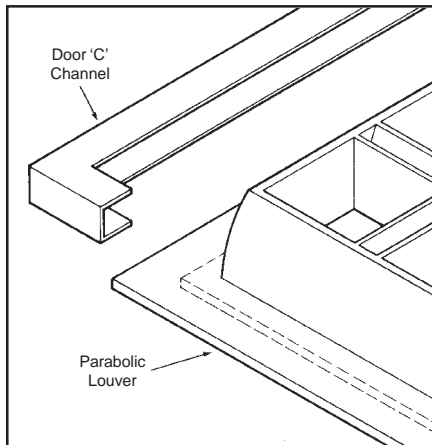


Fig. 14

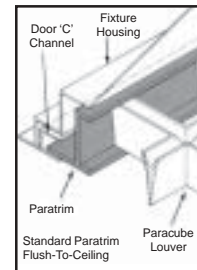


Fig. 15

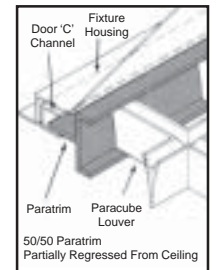


Fig. 16

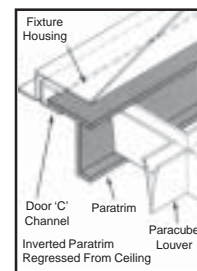


Fig. 17

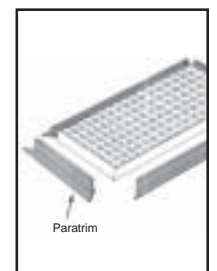


Fig. 18

LOUVER CARE DURING INSTALLATION

Since the paracube specular finish is comparable to a mirror, we recommend that handling be minimized. Keep louvers in original plastic bags for as long as possible. Use white cotton gloves when handling for insertion in doors or installation

in grid systems.

Installation of doors and louvers should be deferred during construction until the end of the job, preferably after floors are broom cleaned and, if possible,

after air conditioning systems are balanced and filters functioning normally. If this is not possible and there is dust accumulation due to construction, the dust can be removed with a high velocity air gun.

CEILING GRID PLASTIC PARABOLIC LOUVERS

SPECULAR PARABOLIC LOUVERS



N.I. Part #	Cell Size (actual) & Section	Module Size And Finish	Nominal Cell Size And Efficiency	
NLB F-24-1P NLB F-22-1P NLB F-24-2P NLB F-22-2P	9/16" x 9/16" x 7/16" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	1/2" x 1/2" x 1/2" CU .48 VCP 100 Shielding 45°	SQUARE
NLB K-24-1P NLB K-22-1P NLB K-24-2P NLB K-22-2P	9/16" x 9/16" x 13/32" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	1/2" x 1/2" x 3/8" CU .60 VCP 95 Shielding 39°	SQUARE
NLB D-24-1P NLB D-22-1P NLB D-24-2P NLB D-22-2P	3/4" x 3/4" x 3/8" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	3/4" x 3/4" x 3/8" CU .85 VCP 87 Shielding 29°	SQUARE
NLB H-24-1P NLB H-22-1P NLB H-24-2P NLB H-22-2P	3/4" x 3/4" x 1/2" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	3/4" x 3/4" x 1/2" CU .76 VCP 89 Shielding 35°	SQUARE
NLB I-24-1P NLB I-22-1P NLB I-24-2P NLB I-22-2P	13/16" x 13/16" x 9/16" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	3/4" x 3/4" x 1/2" CU .55 VCP 99 Shielding 40°	SQUARE
NLB C-24-1P NLB C-22-1P NLB C-24-2P NLB C-22-2P	1-1/2" x 1-1/2" x 7/8" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold	1-1/2" x 1-1/2" x 7/8" CU .71 VCP 86 Shielding 35°	SQUARE
NLB B-24-1P NLB B-24-2P NLB B-24-WA	1-1/2" x 1-1/2" x 1" 	2' x 4' Specular Silver 2' x 4' Specular Gold 2' x 4' White (Acrylic)	1-1/2" x 1-1/2" x 1" CU .63 VCP 93 Shielding 40°	SQUARE
NLB L-24-1P NLB L-24-2P NLB L-24-WA	3" x 3" x 1-1/2" 	2' x 4' Specular Silver 2' x 4' Specular Gold 2' x 4' White (Acrylic)	3" x 3" x 1-1/2" CU .74 VCP 85 Shielding 30°	SQUARE
NLB E-24-1P NLB E-22-1P NLB E-24-2P NLB E-22-2P NLB E-24-CA NLB E-22-CA	9/16" Hex x 7/16" 	2' x 4' Specular Silver 2' x 2' Specular Silver 2' x 4' Specular Gold 2' x 2' Specular Gold 2' x 4' Clear (Acrylic) 2' x 2' Clear (Acrylic)	5/8" x 5/8" x 1/2" CU .49 VCP 100 Shielding 45°	HEXAGON

MATERIAL

Parabolic louvers are standard Polystyrene base material.
For Acrylic "Class A" louvers Substitute "A" for "P"
i.e.: NLBF-24-1A

AIR

Narrow Body Flanged louvers for "air handling" troffers are available for styles "NLBF", "NLBB", "NLBD" and "NLBH" add "NB" to end of parabolic louver part number.
i.e.: NLBF-24-1PFNB

EFFICIENCY

Comparative efficiency shown is based on specular silver finish, RCU of 1, wall reflectance 50%, ceiling reflectance 80%, room size 20' x 20' x 8'6"

COLORS

Type "F", "K", "I", "C", "B", "L" and "E" are available in black and white. Change finish to "BL" or "WA"
i.e.: NLBF-24-BLP

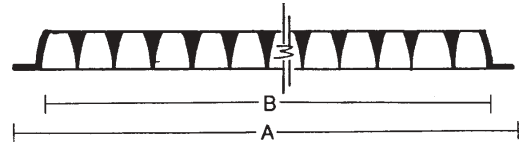
SIZE









Full size louvers measure:
2' x 4' = 23-3/4" x 47-3/4"
2' x 2' = 23-3/4" x 23-3/4"
1' x 4' = 11-3/4" x 47-3/4"
To order a 1' x 4' louver, Substitute a "14" in the part number
i.e.: NLBF-14-1P

CHOICES

When ordering louvers cut to fit a fixture, keep the depth in mind and consider a flanged louver.
Ultra Lux Finish (Pg. 8).
Give us a call if you need assistance.

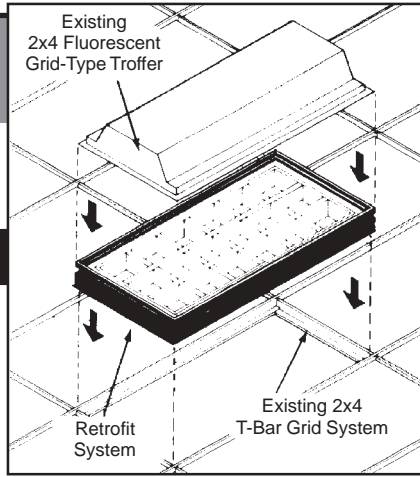
SPECULAR PARABOLIC LOUVERS



N.I. Part #	Cell Size (actual) & Section	Module Size And Finish	Nominal Cell Size And Efficiency	
NLB F-24-1PF NLB F-24-2PF	9/16" x 9/16" x 7/16" 	A 22-3/4" x 46-3/4" Specular Silver B 20-11/16" x 44-3/4" Specular Gold	1/2" x 1/2" x 1/2" CU .51 VCP 98 Shielding 40°	SQUARE
NLB K-24-1PF NLB K-24-2PF NLB K-22-1PF NLB K-22-2PF	9/16" x 9/16" x 13/32" 	A 22-1/2" x 46-1/2" Specular Silver B 20-5/16" x 44-3/16" Specular Gold A 22-1/2" x 22-1/2" Specular Silver B 20-5/16" x 20-7/16" Specular Gold	1/2" x 1/2" x 3/8" CU .60 VCP 95 Shielding 39°	SQUARE
NLB D-24-1PF NLB D-24-2PF	3/4" x 3/4" x 3/8" 	A 22-9/16" x 46-9/16" Specular Silver B 20-7/16" x 44-7/16" Specular Gold	3/4" x 3/4" x 3/8" CU .85 VCP 87 Shielding 29°	SQUARE
NLB H-24-1PF NLB H-24-2PF NLB H-22-1PF NLB H-22-2PF	3/4" x 3/4" x 1/2" 	A 22-9/16" x 46-9/16" Specular Silver B 20-7/16" x 44-7/16" Specular Gold A 22-9/16" x 22-9/16" Specular Silver B 20-7/16" x 20-7/16" Specular Gold	3/4" x 3/4" x 1/2" CU .76 VCP 89 Shielding 35°	SQUARE
NLB I-24-1PF NLB I-24-2PF NLB I-22-1PF NLB I-22-2PF	13/16" x 13/16" x 9/16" 	A 22-1/2" x 46-9/16" Specular Silver B 20" x 44" Specular Gold A 22-1/2" x 22-1/2" Specular Silver B 20" x 20-1/8" Specular Gold	3/4" x 3/4" x 1/2" CU .76 VCP 89 Shielding 35°	SQUARE
NLB C-24-1PF NLB C-24-2PF NLB C-22-1PF NLB C-22-2PF NLB C-14-1PF NLB C-14-2PF	1-1/2" x 1-1/2" x 7/8" 	A 22-3/8" x 46-3/8" Specular Silver B 20-1/4" x 44-1/4" Specular Gold A 22-3/8" x 22-3/8" Specular Silver B 21-1/8" x 21-1/8" Specular Gold A 10-3/4" x 46-3/4" Specular Silver B 9-1/8" x 45-1/16" Specular Gold	1-1/2" x 1-1/2" x 7/8" CU .71 VCP 86 Shielding 35°	SQUARE
NLB B-24-1PF NLB B-24-2PF NLB B-22-1PF NLB B-22-2PF	1-1/2" x 1-1/2" x 1" 	A 22-1/2" x 46-1/2" Specular Silver B 20-1/2" x 44-1/2" Specular Gold B 22-3/4" x 22-3/4" Specular Silver B 20-1/2" x 20-1/2" Specular Gold	1-1/2" x 1-1/2" x 1" CU .63 VCP 93 Shielding 40°	SQUARE
NLB L-24-1PF NLB L-24-2PF NLB L-22-1PF NLB L-22-2PF NLB L-14-1PF NLB L-14-2PF	3" x 3" x 1-1/2" 	A 22-1/2" x 46-1/2" Specular Silver B 20-5/8" x 44-5/8" Specular Gold A 22-1/2" x 22-1/2" Specular Silver B 20-5/8" x 20-5/8" Specular Gold A 10-13/16" x 46-1/2" Specular Silver B 8-9/16" x 44-5/8" Specular Gold	3" x 3" x 1-1/2" CU .74 VCP 85 Shielding 30°	SQUARE

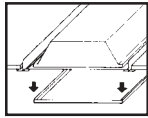
Exclusive ULTRA-LUX FINISH Our exclusive ULTRA-LUX Finish is available on plastic parabolic louver types "F", "K", "I", "C", "B" and "L". This is the highest quality mirror finish available with unsurpassed durability and has no huge price premium. Fingerprints wipe right off, it is easy to clean, lasts longer, and has a brilliant specular metalized finish. When ordering louver with this finish, add "UL" to the end of the louver part number. i.e.: NLBF-24-1P-UL. This finish is guaranteed for 5 years! Call us for Detailed Specifications.

SEMI-DIFFUSED ALUMINUM LOOK FINISH Plastic louver that looks like aluminum! Available with plastic parabolic louver types "F", "K", "I", "C", "B" and "L". By applying a clear matte coating over a silver specular finish, the result is a visually comfortable environment with a small degree of ceiling luminosity. This matte finish hides fingerprints and dirt smudges beautifully. When ordering louvers with this top coating, add "SD" to the end of the louver part number. i.e.: NLBF-24-1P-SD.

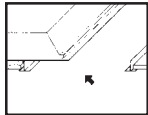


DEEP CELL ALUMINUM RETROFIT SYSTEM

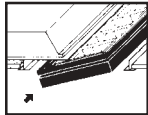
Deep Cell Retro gives you a brand new frame and a 3" deep semi-specular anodized aluminum louver economically. Your existing troffer body can be reused without even disconnecting it. Fixture must be installed in T-Bar with flexible wiring and have a minimum of 6" clearance above troffer body.



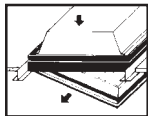
1. Remove old door frame with diffuser from existing fluorescent troffer and discard



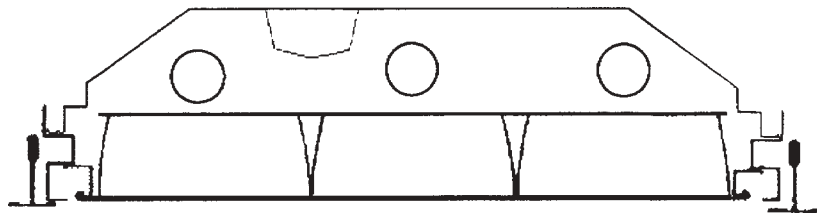
2. Move troffer over to the side.



3. Install Par-Alum frame assembly in existing T-Bar grid ceiling.



4. Open hinged door and reinstall existing troffer in top of frame assembly.



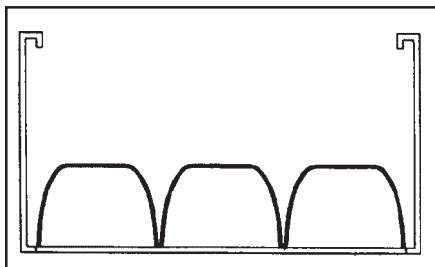
N.I. Part Number	Nominal Size	Dimensions	Outer/Inner Frame	No. of Cells	Nominal Cell Size	Louver Depth
NRPA-22-9	2 x 2	23-3/4 x 23-3/4	Black	9	7" x 7"	3"
NRPA-24-18	2 x 4	23-3/4 x 47-3/4	Black	18	7" x 7"	3"
NRPA-24-32	2 x 4	23-3/4 x 47-3/4	Black	32	5" x 5"	3"
NRPA-14-6	1 x 4	11-3/4 x 47-3/4	Black	6	7" x 9"	3"
NRPA-14-8	1 x 4	11-3/4 x 47-3/4	Black	8	6" x 9"	3"
NRPA-14-10	1 x 4	11-3/4 x 47-3/4	Black	10	5" x 9"	3"
NRPA-14-16	1 x 4	11-3/4 x 47-3/4	Black	16	3" x 9"	3"
NRPA-22-16	2 x 2	23-3/4 x 23-3/4	Black	16	5" x 5"	3"
NRPA-24-12	2 x 4	23-3/4 x 47-3/4	Black	12	7" x 10"	3"
NRPA-44-36	4 x 4	47-3/4 x 47-3/4	Black	36	8" x 6"	3"

Additional sizes and cell configurations (special order) - Call for quotations

NLBMWA ALUMINUM PARABOLIC WRAP AROUND LOUVER

Get the appearance of a new fixture by changing the lens to a parabolic louver.

Wrap around lens fixtures can be updated with a low glare, efficient, aluminum parabolic louver. This creative alternative is simple to install and a fraction of the cost of a new fixture.



DEPTHS: 3/4" or 1-1/2"

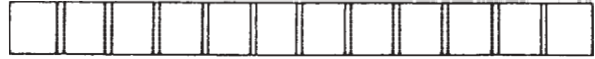
CELL SIZE: To your specification or shielding requirements.

FINISHES: Semi specular silver, full specular silver or semi specular gold.

END CAPS: Optional.

A sample lens is required from the existing fixture for fabrication.

ALUMINUM EGGCRATE LOUVERS



N.I. Part #	Finish	Cell Size	Module Size (nominal)
NA1-44-WH	White	1/2" x 1/2" x 1/2"	4' x 4'
NA1-24-WH	White	1/2" x 1/2" x 1/2"	2' x 4'
NA1-22 (14)-WH	White	1/2" x 1/2" x 1/2"	2' x 2' (1' x 4')
NA1-44-ML	Mill	1/2" x 1/2" x 1/2"	4' x 4'
NA1-24-ML	Mill	1/2" x 1/2" x 1/2"	2' x 4'
NA1-22 (14)-ML	Mill	1/2" x 1/2" x 1/2"	2' x 2' (1' x 4')
NA3-44-WH	White	1" x 1" x 1"	4' x 4'
NA3-24-WH	White	1" x 1" x 1"	2' x 4'
NA3-22 (14)-WH	White	1" x 1" x 1"	2' x 2' (1' x 4')
NA3-44-ML	Mill	1" x 1" x 1"	4' x 4'
NA3-24-ML	Mill	1" x 1" x 1"	2' x 4'
NA3-22 (14)-ML	Mill	1" x 1" x 1"	2' x 2' (1' x 4')

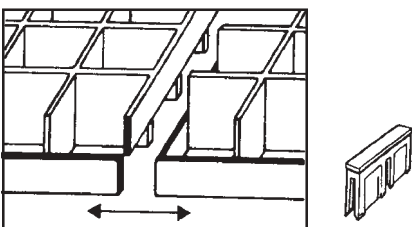
*Other cell sizes available *Other finishes available (anodized and Painted)

INJECTION MOLDED PLASTIC EGGCRATE LOUVERS



N.I. Part #	Material	Cell Size	Module Size (nominal)
PLA1-24-WH	White Acrylic	1/2" x 1/2" x 1/2"	2' x 4'
PLA1-22 (14)-WH	White Acrylic	1/2" x 1/2" x 1/2"	2' x 2' (1' x 1')
PLP1-24-WH	White Polystyrene	1/2" x 1/2" x 1/2"	2' x 4'
PLP1-22 (14)-WH	White Polystyrene	1/2" x 1/2" x 1/2"	2' x 2' (1' x 1')
PLA4-24-WH	White Acrylic	1/2" x 1/2" x 3/8"	2' x 4'
PLA4-22 (14)-WH	White Acrylic	1/2" x 1/2" x 3/8"	2' x 2' (1' x 1')
PLP4-24-WH	White Polystyrene	1/2" x 1/2" x 3/8"	2' x 4'
PLP4-22 (14)-WH	White Polystyrene	1/2" x 1/2" x 3/8"	2' x 2' (1' x 1')
PLP4-24-BL	Black Polystyrene	1/2" x 1/2" x 3/8"	2' x 4'
PLP4-22 (14)-BL	Black Polystyrene	1/2" x 1/2" x 3/8"	2' x 2' (1' x 1')
PLP4-24-IP	Specular Silver	1/2" x 1/2" x 3/8"	2' x 4'
PLP4-22 (14)-IP	Specular Silver	1/2" x 1/2" x 3/8"	2' x 2' (1' x 1')
PLP1-3648-WH	White Polystyrene	1/2" x 1/2" x 1/2"	36" x 48"
PLP3-3060-WH	White Polystyrene	9/16" x 9/16" x 9/16"	30" x 60"

JOINING

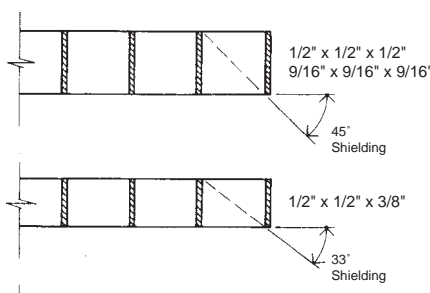


Injection molded Eggcrate Louvers have a half edge around the perimeter of the louver. These can be turned to form a ship-lap fit (single wall thickness) when louvers are joined together giving the appearance of one continuous louver.

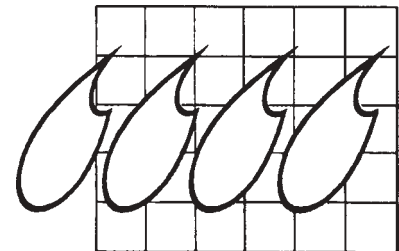
Plastic aligner clips for joining 1/2" deep louvers. Holds the two panels securely so that shiplap fit does not separate.

Catalog No. PLIC

SHIELDING



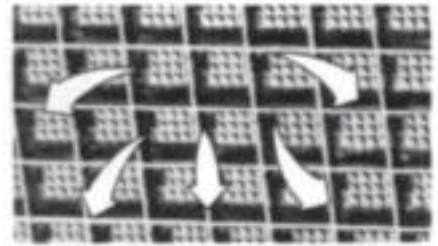
FIRE



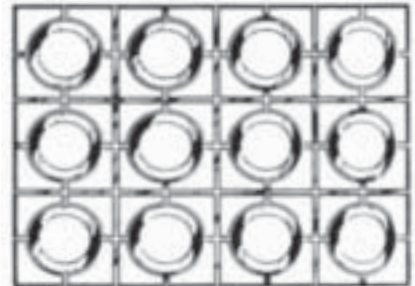
Aluminum Eggcrate Louvers will not support combustion. Acrylic and polystyrene louvers are slow burning with acrylic rated class 1.

LOUVLENS

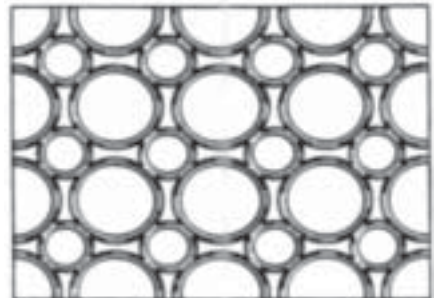
#LL24CA Louvelens offers complete lamp concealment and a low turbulence air handling function. This durable product is well suited for repeated cleanings. This panel is injection molded in clear acrylic and has an available optional black accent.

**NOROUND**

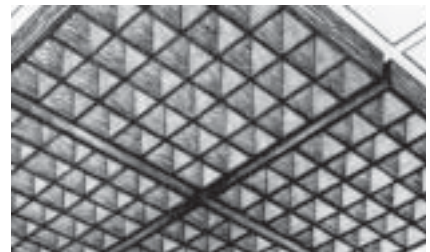
#NRD. This Classic European designed product marries geometric shapes while providing low brightness. This product is available in either a 1" or 2" cone size and in either specular silver or gold.

**GALAXY**

#GAL The alternating depths of cylindrical cells make this a decorative ceiling element. This panel has a tegular reveal perimeter which allows the body of the louver to float below the face of standard tee bar.

**WOOD**

#NWL Wood Louvers add a warmth and richness to the ceiling plane. For a complete brochure on our wood louver ceilings, please call 888-357-2345 or 216-228-6650 and ask to have a free catalog sent to you.

**VINYL**

#VLSG Square Grid Vinyl Louvers are suitable for use under sprinkler systems and in elevator cab ceilings. Vinyl louver are self-extinguishing Class 1. The cell size is 5/8" and panels are available in 24" x 48" modules as well as 30" x 60" modules.

**ANGLE FLEX**

Low Brightness Specular Silver Louver Directs Light in One or Two Directions, 3/4" Cells, 1' x 2' Modules.



EXTRUDED PRISMATIC LENSES

N.I. Part #	Material	Module (nominal)	Thickness
PCA-24-100	Clear Acrylic	2' x 4'	.100"
PCA-22-100	Clear Acrylic	2' x 2'	.100"
PCA-14-100	Clear Acrylic	1' x 4'	.100"
PCA-50100-110	Clear Acrylic	50" x 100"	.110"
PCA-5050-110	Clear Acrylic	50" x 50"	.110"
PCA-24-110	Clear Acrylic	2' x 4'	.110"
PCA-22-110	Clear Acrylic	2' x 4'	.110"
PCA-14-110	Clear Acrylic	1' x 4'	.110"
PCA-24-125	Clear Acrylic	2' x 4'	.125"
PCA-22-125	Clear Acrylic	2' x 2'	.125"
PCA-14-125	Clear Acrylic	1' x 4'	.125"
PWA-24-110	White Acrylic	2' x 4'	.110"
PWA-22-110	White Acrylic	2' x 2'	.110"
PWA-14-110	White Acrylic	1' x 4'	.110"
PWA-24-125	White Acrylic	2' x 4'	.125"
PWA-22-125	White Acrylic	2' x 2'	.125"
PWA-14-125	White Acrylic	1' x 4'	.125"
PCP-24-100	Clear Polystyrene	2' x 4'	.100"
PCP-22-100	Clear Polystyrene	2' x 2'	.100"
PCP-14-100	Clear Polystyrene	1' x 4'	.100"
PWP-24-100	White Polystyrene	2' x 4'	.100"
PWP-22-100	White Polystyrene	2' x 2'	.100"
PWP-14-100	White Polystyrene	1' x 4'	.100"

ABOVE PRISMATIC LENSES ARE INDUSTRY STANDARD "PATTERN 12". SEVERAL SPECIFICATION PATTERNS ARE AVAILABLE. SEE PAGE 14, OR CALL NORTON INDUSTRIES.

DIFFUSERS

N.I. Part #	Material	Module (nominal)	Thickness
S40A-24	White Acrylic	2' x 4'	.040" Overlay
S40A-22	White Acrylic	2' x 2'	.040" Overlay
S40A-14	White Acrylic	1' x 4'	.040" Overlay
S60A-24	White Acrylic	2' x 4'	.060"
S60A-22	White Acrylic	2' x 2'	.060"
S60A-14	White Acrylic	1' x 4'	.060"
S80A-5050	White Acrylic	50" x 50"	.080"
S80A-50100	White Acrylic	50" x 100"	.080"
S80A-24	White Acrylic	2' x 4'	.080"
S80A-22	White Acrylic	2' x 2'	.080"
S80A-14	White Acrylic	1' x 4'	.080"

OTHER THICKNESSES, MODULES AND FORMED PANELS AVAILABLE. FOR INFORMATION PLEASE CONSULT NORTON INDUSTRIES. CLEAR OVERLAYS ALSO AVAILABLE.

SPARKLITE

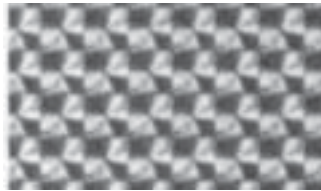
N.I. Part #	Material	Module (nominal)	Thickness
SPCP-24	Clear Polystyrene	2' x 4'	.070"
SPCP-22	Clear Polystyrene	2' x 2'	.070"
SPCP-14	Clear Polystyrene	1' x 4'	.070"
SPWP-24	White Polystyrene	2' x 4'	.070"
SPWP-22	White Polystyrene	2' x 2'	.070"
SPWP-14	White Polystyrene	1' x 4'	.070"

FULL SIZE LENSES MEASURE: 2' x 4', 23-3/4" x 47-3/4", 2' x 2', 23-3/4" x 23-3/4", 1' x 4', 11-3/4" x 47-3/4"



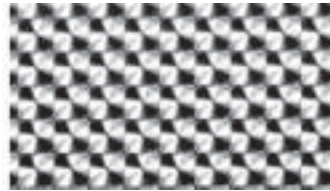
PATTERN 8224

Pattern: 8224
 Mfg. With: Hemispherical "fish eye"
 Thickness: .250"
 Color: Clear-available with frosted overlay.



PATTERN 12

Pattern: 3/16" square based female cones running 45°
 Mfg. With: Acrylic, polystyrene, polycarbonate
 Thickness: .100", .110", .125", .187"
 Color: Clear and White acrylic



PATTERN 19

Pattern: 3/16" square based raised male cones running 90°
 Mfg. With: Acrylic
 Thickness: .156", .187"
 Color: Clear



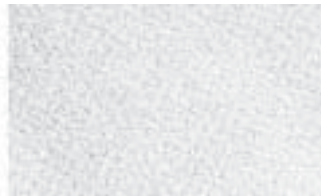
PATTERN 32

Pattern: 1/8" square based male cones running 90°
 Mfg. With: Acrylic
 Thickness: .130"
 Color: Clear



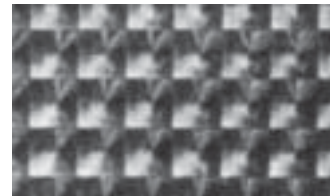
PATTERN 25

Pattern: 1/8" pitch 90° angle linear ribbed
 Mfg. With: Acrylic
 Thickness: .115"
 Color: Clear



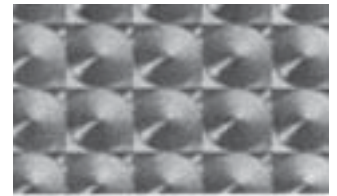
PATTERN SA

Pattern: Smooth with a fine matte texture on visible side.
 Mfg. With: Acrylic, Polycarbonate
 Thickness: .040", .060", .080", .125"
 Color: White, frosted clear



PATTERN 15

Pattern: 3/8" square based female cones running at 90° or 45°
 Mfg. With: Acrylic
 Thickness: .200"
 Color: Clear



PATTERN 23

Pattern: 3/8" female conical prism running at 90°
 Mfg. With: Acrylic, UVBWF (gold)
 Thickness: .100", .125"
 Color: Clear, UVBWF (gold)

APPLICATION

Glare Control on CET or High Angle Brightness	8224 32 & 19
Ultraviolet Blue Wave Filtering	23
Span larger areas, i.e.: 3' x 3' or 4' x 4 fixtures'	15
Impact Resistance, i.e.: vandalism, indoor sports facilities	12 or SA.
(See also WIREGUARDS on page 12)	Specify Polycarbonate
Radio Frequency Interference, i.e.: protective sensitive equipment	12 or 19.
from R.F. interference	Specify RFI feature
Minimize Lamp Image	19, SA, 23 & 32
Efficiency	23
Heat Resistance	Pattern 12 & SA
	Specify Polycarbonate

RECOMMENDED PATTERNS

MATERIAL DEFINITIONS

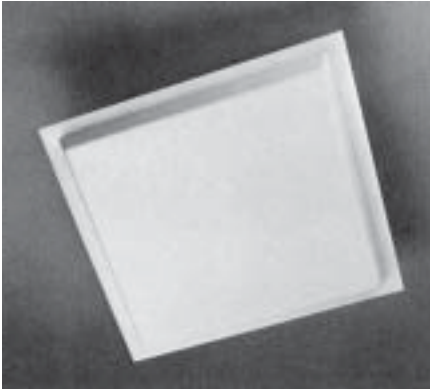
POLYCARBONATE:

Suitable for lenses where impact strength is of major concern such as security lighting, vandal fixtures, outdoor lighting, etc. The main advantages are maximum strength and high heat distortion temperature. The disadvantages are limited light stability. Polycarbonate is classified as self-extinguishing.

ACRYLIC:

Most widely used thermo-plastic for lighting applications. The major use is for indoor luminaires and is widely approved by most state and local codes for use in lighting applications. A major feature of acrylic is stability against yellowing.

FLANGED DROP DISH DIFFUSERS



Flanged Drop Dish Diffusers provide excellent lighting diffusion. Pricing includes trimming the flange to the size you require. Flanged Diffusers can be used for replacement in fluorescent fixtures or as a luminous ceiling in a grid system.



MEASURE YOUR EXISTING DIFFUSER AS SHOWN ABOVE OR SEND US A SAMPLE TO MATCH

N.I. Part #	Nominal Size	Material
NFDD 1248	12" x 48"	.080" Acrylic
NFDD 2424	24" x 24"	.080" Acrylic
NFDD 2448	24" x 48"	.080" Acrylic
NFDD 4848	48" x 48"	.080" Acrylic

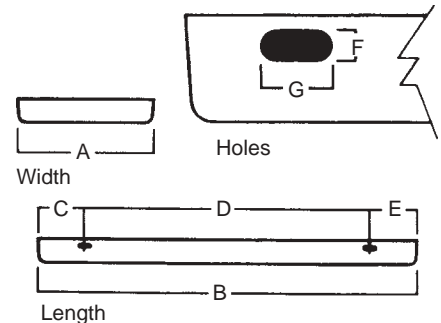
ABOVE DROP DISH DIFFUSERS ARE SMOOTH WHITE ACRYLIC. ALSO AVAILABLE IN CLEAR PRISMATIC ACRYLIC. OTHER SIZES INCLUDING 12" X 24", 15" X 48" AND 36" X 36" AVAILABLE.

SNAP-IN DROP DISH DIFFUSERS

Snap-In Diffusers are designed as a replacement for existing fluorescent that are damaged or discolored and provide excellent light diffusion and light transmission.

N.I. Part #	Nominal Size	Material	Depth Of Bowl
NSDD 1248	12" x 48"	.080" Acrylic	1-7/8"
NSDD 2424	24" x 24"	.080" Acrylic	1-7/8"
NSDD 2448	24" x 48"	.080" Acrylic	1-7/8"
NSDD 4848	48" x 48"	.080" Acrylic	2"

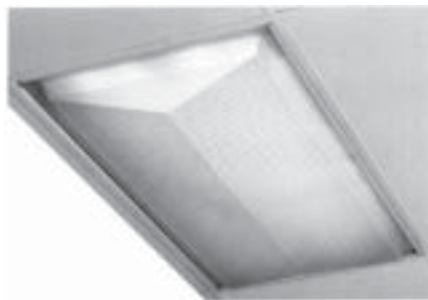
ABOVE SNAP-IN DIFFUSERS ARE SMOOTH WHITE ACRYLIC. OTHER SIZES AND DEPTHS AVAILABLE.



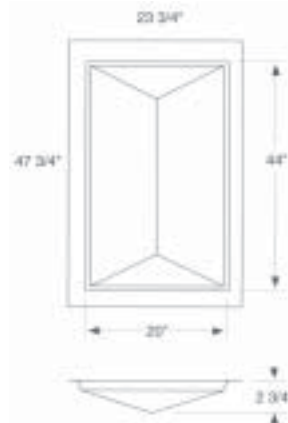
MEASURE YOUR EXISTING DIFFUSER INCLUDING THE MOUNTING HOLE SIZE AND LOCATIONS AS SHOWN ABOVE OR SEND US A SAMPLE TO MATCH.

POWER LENS

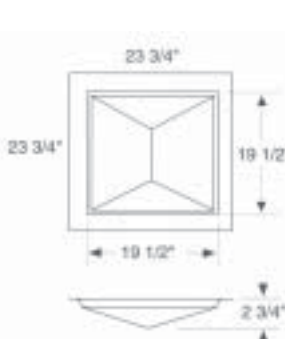
Maximum light - minimum shadows.



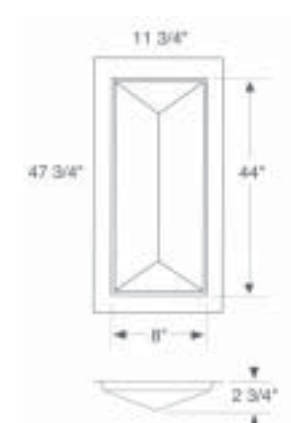
POWR2448 NOMINAL 2X4



POWR2424 NOMINAL 2X2



POWR1248 NOMINAL 1X4



GASKETED ENCLOSURES



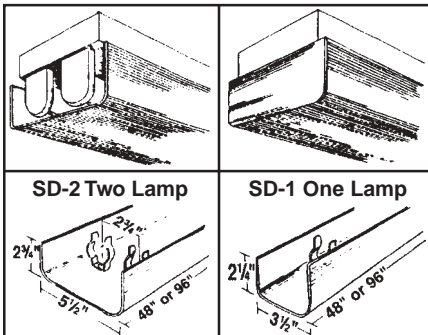
Our Gasketed Vaportight Enclosures, when combined with your standard strip fixture, provides a complete and very economical vapor proof assembly to protect the light source against weather, moisture, chemicals and other elements. Vaportight enclosures are composed of a fiberglass upper housing and acrylic diffuser held with retaining latches against a weatherproof neoprene seal. Suitable for use in wet and damp locations it is ideal for exterior applications as well as food service areas.



N.I. Part #	Lens	Size
GE2A	A	2'
GE2P	P	2'
ENG4A	A	4'
ENG4P	P	4'
ENG8A	A	8'
ENG8P	P	8'

INCLUDES HOUSING, LENS AND LATCHES
ADD YOUR OWN STRIP FIXTURES

SNAP-ON DIFFUSERS FOR STRIP LIGHTING



White acrylic diffuser clips on lamp for an economical way to eliminate the glare of bare lamp strip fixtures. Diffuser is 3-1/2" or 5-1/2" wide and 2-3/4" deep with clips for either one lamp (SD-1) or two lamp (SD-2) strip fixtures. Specify length. End caps available in white acrylic for finished look on fixture ends.

N.I. Part #
SD-1 (Single Lamp)
SD-2 (Double Lamp)

ALSO AVAILABLE IN CLEAR PRISMATIC ACRYLIC

TUBE GUARDS



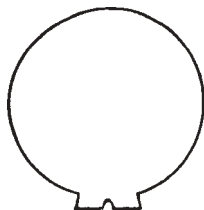
Unbreakable Polycarbonate Tube Guard protects against lamp breakage and are complete with two end caps. Available colors include Amber "A", Blue "B", Green "G", Red "R", Yellow "Y", Violet "V", and Pink "P". UV Filtering Guards and other diameters are available.

N.I. Part #	Length	Diameter	Color
TG-12-4-CL	4'	T-12	Clear
TG-12-4-CO	4'	T-12	Color
TG-12-8-CL	8'	T-12	Clear
TG-12-8-CO	8'	T-12	Color
TG-8-4-CL	4'	T-8	Clear
TG-8-4-CO	4'	T-8	Color
TG-8-8-CL	8'	T-8	Clear
TG-8-8-CO	8'	T-8	Color
TG-5-4-CL	4'	T-5	Clear
TG-5-4-CO	4'	T-5	Color
TG-12UV-4-CL	4'	T-12	Clear**
TG-12UV-8-CL	8'	T-12	Clear**
TG-8UV-4-CL	4'	T-8	Clear**
TG-8UV-8-CL	8'	T-8	Clear**
TG-5UV-4-CL	4'	T-5	Clear**
EC 8	Extra	T-8	Black
EC 12	End Caps	T-12	Black
EC-5	End Caps	T-5	Black

*TUBE GUARDS CAN BE USED WITH 800 M.A. HO AND 1500 M.A. VHO LAMPS BY USING 2 HEAT SINK SCREENS PER LAMP.

**STANDARD TUBE GUARDS ARE POLYCARBONATE AND ELIMINATE UV BELOW 370 NANOMETERS. "UV" TUBE GUARDS ARE CLEAR ACRYLIC AND ELIMINATE UV BELOW 395 NANOMETERS.

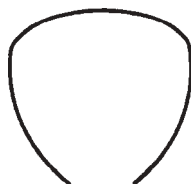
MOLDED GLOBES AND SHAPES



SIZES AVAILABLE

6", 7.5", 8", 10",
11", 12", 14", 16",
18", 20", 22", 24",
26", 30"

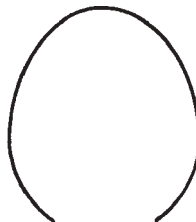
**STYLE NN1
CYLINDER**



SIZES AVAILABLE

10.5"W x 10"H
12"W x 11"H
15"W x 14.5"H

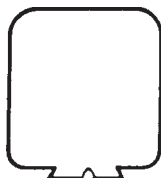
**STYLE NN4
PEAR**



SIZES AVAILABLE

11"W x 12.5"H
12"W x 14"H
14.5"W x 17"H

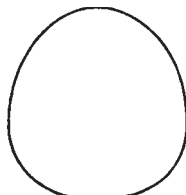
**STYLE NN7
EGG**



SIZES AVAILABLE

8" x 8"
8.5" x 9"
10" x 10"
10.5" x 10.5"
11.5" x 12.5"
12" x 12"
15" x 15"
15.5" x 15.5"
19" x 18.5"

**STYLE NN2
CUBE**



SIZES AVAILABLE

15.5"W x 16.5"H

**STYLE NN5
OLIVE**



SIZES AVAILABLE

16"W x 8"H
16"W x 10"H
22"W x 11"H
26"W x 13"H
34"W x 17"H

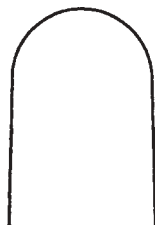
**STYLE NN8
ELLIPSOID**



SIZES AVAILABLE

7"W x 10"H
14"W x 21.37"H
16.5"W x 24.75"H

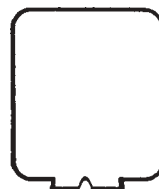
**STYLE NN3
ACORN**



SIZES AVAILABLE

11.8125"W x 18"H
12"W x 17"H

**STYLE NN6
DOME**



SIZES AVAILABLE

8"W x 9"H
11"W x 12"H
14.5"W x 15"H
18.5"W x 21"H

**STYLE NN9
CYLINDER**

MATERIALS AVAILABLE

"A" ACRYLIC – long term resistance to ultraviolet radiation. Impact strength is great than glass.
"P" POLYCARBONATE – Superior impact strength and high heat distortion temperature.

COLORS AVAILABLE

CLEAR "C", WHITE "W", BRONZE "B"

NECK STYLES AVAILABLE



CATALOG NUMBER	—	—	—	—	—
	SHAPE	STYLE	SIZE	MATERIAL	COLOR
					NECK STYLE

SAND BLASTING AND STRIPPING ARE AVAILABLE BY SPECIAL ORDER

POST TOP FITTERS AVAILABLE

Description			Neck Style			
Shape/Style	Material	Size	1 Min. Opening	2 Outside Diameter of Thread	3 Outside Diameter of Fitter	4 Outside Diameter of Twist Lock
NN1	A P	6"	3"	3.25"	3.25"	-
NN1	A P	7.5"	3"	3.25"	3.25"	-
NN1	A P	8"	3"	-	4"	4"
NN1	A P	10"	3"	-	4"	4"
NN1	A P	11"	3.75"	-	4"	4"
NN1	A P	12"	4"	-	-	5.75"
NN1	A P	12"	4"	-	-	5.75"
NN1	A P	14"	5.25"	-	-	5.75"
NN1	A P	16"	5.25"	-	-	5.75"
NN1	A P	18"	5.25"	-	7.5"	5.75"
NN1	A P	20"	5.25"	-	7.5"	-
NN1	A P	22"	8.625" 1.6"	-	9.187"	-
NN1	A P	24"	8.625" 1.6"	-	9.187"	-
NN1	- P	26"	- 1.6"	-	-	-
NN1	- P	30"	- 1.6"	-	-	-
NN2	- A	8"W x 8"H	- 3"	-	-	-
NN2	- A P	8.5"W x 9"H	3.75"	-	4"	4"
NN2	- A P	10"W x 1"-H	4"	-	-	-
NN2	- A P	10.5"W x 10.5"H	4"	-	-	5.75"
NN2	- A P	11.5"W x 12.5"H	5.25"	-	-	5.75"
NN2	- A P	12"W x 12"H	6"	-	-	-
NN2	- A P	15"W x 15"H	6"	-	-	-
NN2	- A P	15.5"W x 15.5"H	5.25"	-	7.5"	5.75"
NN2	- A P	19"W x 18.5"H	8.25"	-	9.125"	-
NN3	- P	7"W x 10"H	3.5"	-	4"	-
NN3	- P	14"w x 21.37"H	-	-	8"	Available in Clear and White only
NN3	- P	16.5"W x 24.75"H	-	-	8"	Available in Clear and White only
NN4	- A P	10.5"W x 10"H	3.75"	-	4"	4"
NN4	- A P	12"W x 11"H	5.25"	-	-	5.75"
NN4	- A P	15"W x 14.5"H	5.25"	-	-	5.75"
NN5	- A P	15.5"W x 16.5"H	6.437"	-	-	-
NN6	- A P	11.812"W x 18"H	11.687"	-	-	*Available with 13" overall rim
NN6	- A P	12"W x 17"H	11.875"	-	-	-
NN7	- A P	11"W x 12.5"H	5.25"	-	-	5.75"
NN7	- A P	12"W x 14"H	5.25"	-	-	5.75"
NN7	- A P	14.5"W x 17"H	5.25"	-	-	5.75"
NN8	- A -	16"W x 8"H	no minimum	-	-	-
NN8	- A P	16"W x 10"H	5.25"	-	-	5.75"
NN8	- A -	22"W x 11"H	no minimum	-	-	-
NN8	- A -	26"W x 13"H	no minimum	-	-	-
NN8	- A -	34"W x 17"H	no minimum	-	-	-
NN9	- A P	8"W x 9"H	3.75"	-	4"	4"
NN9	- A P	11"W x 12"H	5.25"	-	-	5.75"
NN9	- A P	14.5"W x 15"H	5.25"	-	-	5.75"
NN9	- A P	18.5"W x 21"H	8.813"	-	9.25"	-

FLUORESCENT STRIP & REFLECTOR GUARDS

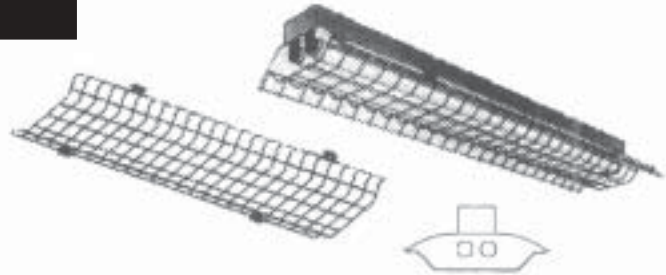
Fluorescent Wire Guards are constructed of tempered steel wire, resistance welded in a rectangular grid pattern 2" x 2-1/2". The standard length of 47-3/4" allows clearance of end panels and continuous alignment when row fixture mounting for all four foot fluorescent fixtures. Available in 14 gauge - light duty or 11 gauge - heavy duty. Standard finishes are powder coated epoxy chrome or white. Custom colors and lengths are available.

WGLGWR - REFLECTOR GUARD

Reflector width 10" - 18-1/2"

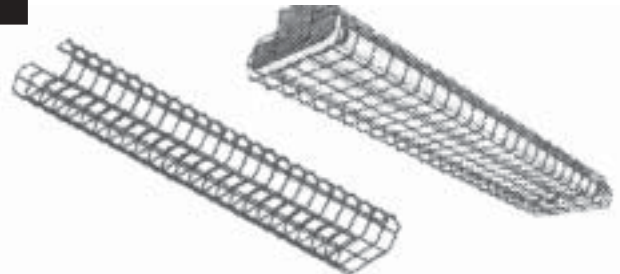
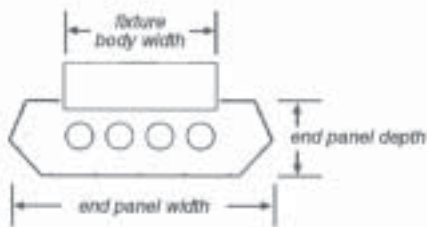


Reflector style and measuring point



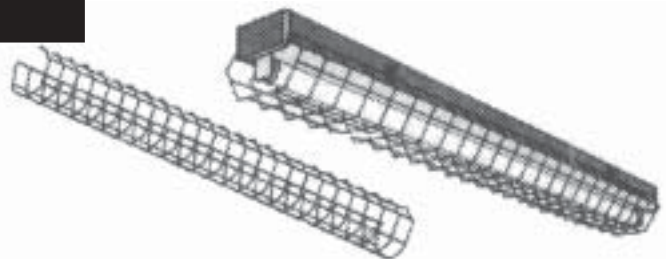
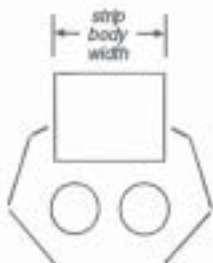
Part No.: WGLGWR - reflector style (A-F) exact inside reflector width (10" - 18-1/2") gauge (11 or 14) finish (white, chrome or custom)

WGSOLG - SOLG GUARD



Part No.: WGSOLG - fixture body width end panel width end panel depth gauge (11 or 14) finish (white, chrome or custom)

WGSLG - STRIP GUARD



Part No.: WGSLG - strip body width gauge (11 or 14) finish (white, chrome or custom)

ALSO AVAILABLE

Please call us for more information!

WGSL Safety Light Guard



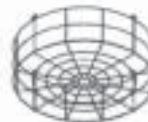
Protect emergency lights, exit lights, clocks, and controls; tempered steel wire construction; 14 sizes available; chrome finish

WGLB Round High Bay Guards



Sizes range from 12" -24" diameter in 1" increments; steel hinge clamps are attached for easy mounting to reflector rim; chrome or white finish.

WGLB Round Low Bay Guards



Sizes range from 12" -24" diameter in 1" increments; steel hinge clamps are attached for easy mounting to reflector rim; chrome or white finish.

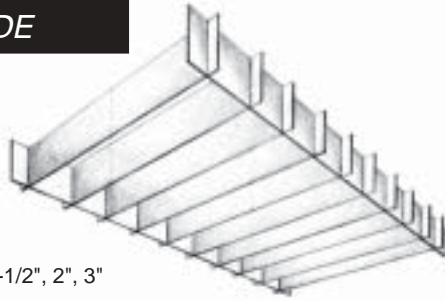
WGCG Clock Guards



Sizes range from 12" -24" diameter in 1" increments; surface mounted hinge clips supplied; chrome or white finish.

SINGLE BLADE

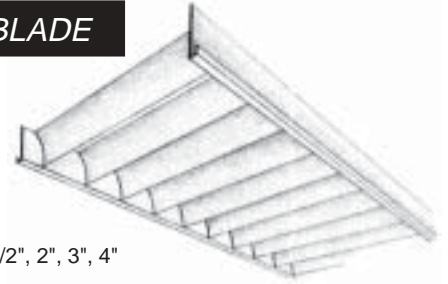
NASB



Heights: 1/2", 3/4", 1", 1-1/2", 2", 3"
 Blade Spacing: up to 6"
 Overall Length: 48" – end tab interlock for continuous appearance.
 Width: Up to 15"
 Finishes: White, Anodized, or any painted color.
 Available with flanged perimeter for fixture application.

PARABOLIC BLADE

NAPB



Heights: 3/4", 1-1/4", 1-1/2", 2", 3", 4"
 Blade Spacing: up to 8"
 Overall Length: 48" – end tab interlock for continuous appearance.
 Width: Up to 24" (2" - 4" depths) Up to 14" (3/4" - 1-1/2" depths)
 Finishes: White, Anodized (silver or gold, full or semi-specular), or any painted colors.
 Available with flanged perimeter for fixture application.

BOLD BLADE

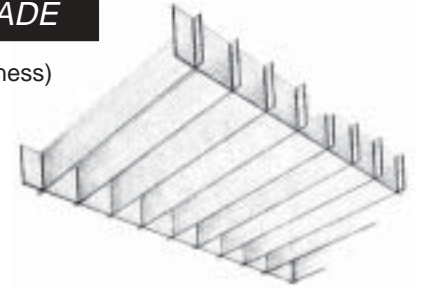
NABB (3/16" Blade thickness)



Heights: 1", 1-1/2", 2"
 Blade Spacing: up to 6"
 Overall Length: 48" – end tab interlock for continuous appearance.
 Width: Up to 24"
 Finishes: White, Anodized (silver or gold - full or semi-specular), or any painted finish.
 Available with flanged perimeter for fixture application.

TEXTURED BLADE

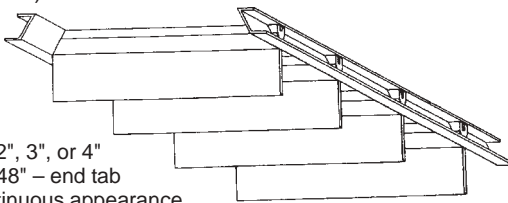
NAEX (.085 Blade thickness)



Heights: 2"
 Blade Spacing: up to 6"
 Overall Length: 48" – end tab interlock for continuous appearance.
 Width: Up to 24"
 Finishes: Anodized (silver or gold, semi-specular or full specular), White, or any painted finish.

EXTRUDED BLADE

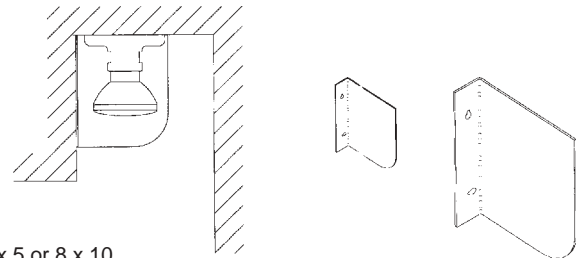
NAEB (1-1/4" Projection below support rail)



Heights: 2"
 Blade Spacing: 2", 3", or 4"
 Overall Length: 48" – end tab interlock for continuous appearance.
 Width: Up to 24"
 Finishes: White, gray, bronze, or any painted finish.
 Available with flanged perimeter for fixture application.

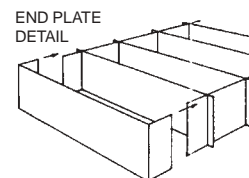
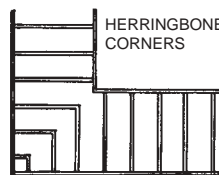
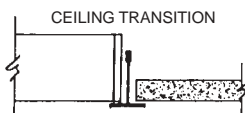
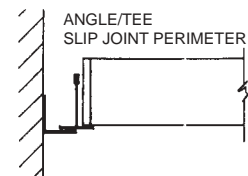
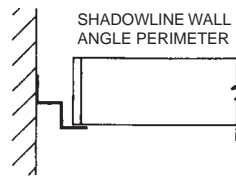
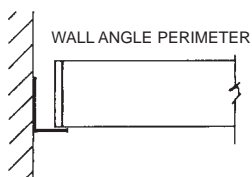
PADDLE SHIELD

NAPS



Sizes: 4 x 5 or 8 x 10
 Finishes: White, black, gray, bronze, or any painted color.
 Formed shields placed in between lamps eliminate glare without interrupting the light pattern.

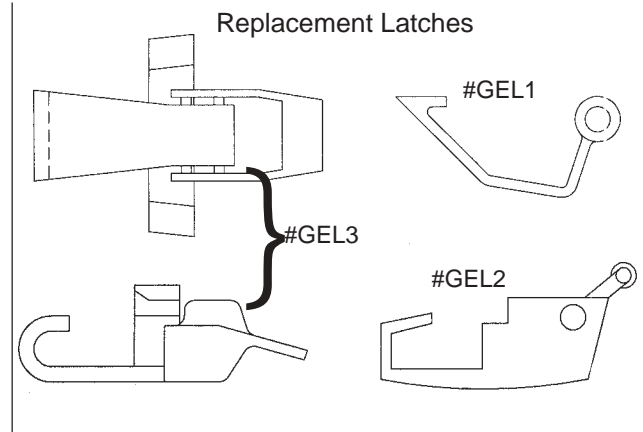
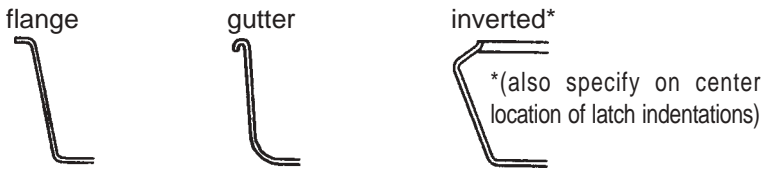
PERIMETER TRANSITIONS & ACCESSORIES



VAPOR PROOF LENSES

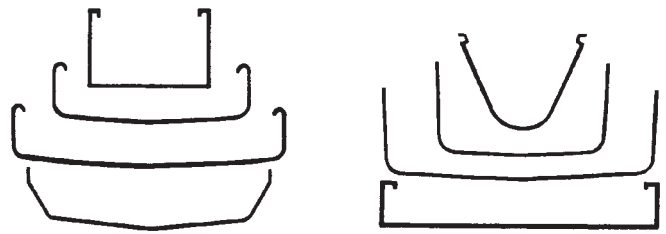
Replacement formed vapor proof lenses are available for any fixture. Please call for quotation with the information noted below, or send us a sample to match.

Material: acrylic or polycarbonate
 Material Finish: Crepe or prismatic
 Overall Size: Measure at ends, and include the gutter/flange
 Perimeter Style:

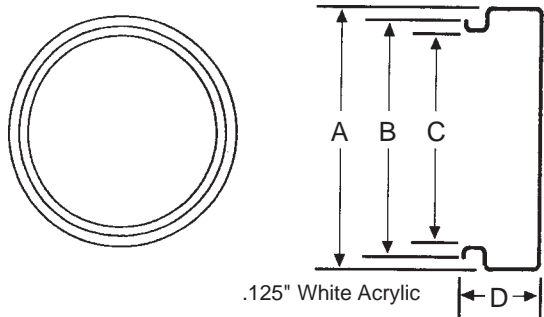


WRAP AROUND LENS

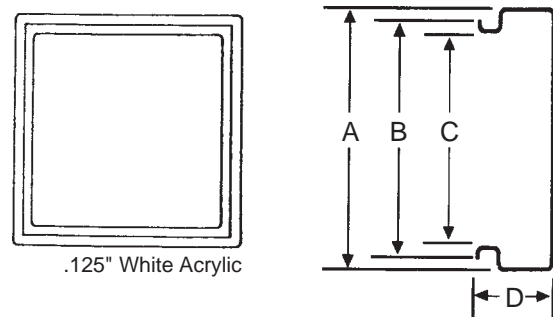
Every replacement Acrylic Wrap Around lens made, Prismatic, and White, Custom and Standard. Ask for full catalog.



CIRCLELINE



SQUARELINE

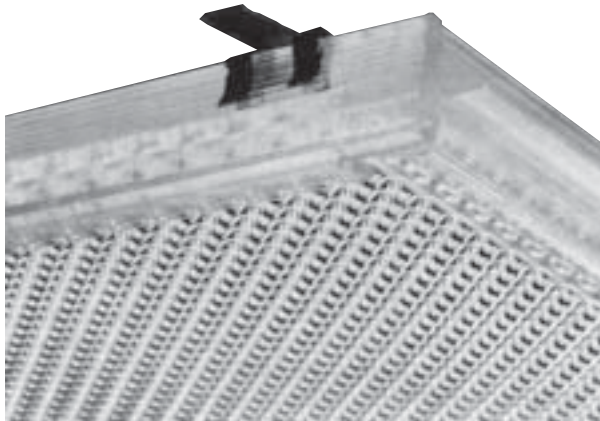


Part No.	"A"	"B"	"C"	"D"
CL6-090-WA	9"	7-7/8"	7-1/4"	2-3/4"
CL6-110-WA	11"	9-7/8"	9-1/4"	2-3/4"
CL6-137-WA	13-3/4"	12-5/8"	12"	3"
CL6-190-WA	19"	16-7/8"	16"	3-3/4"

Part No.	"A"	"B"	"C"	"D"
SL6-090-WA	11-1/2"	10-5/8"	9-7/8"	3"
SL6-110-WA	14-3/8"	13-1/2"	12-3/4"	3-1/4"
SL6-137-WA	19-1/4"	18-3/8"	17-5/8"	3-3/4"

Circleline and Squareline lenses are available in .187" white polycarbonate and .187" clear acrylic prismatic. Please call.

FRAMELESS LENSES



Frameless lenses are custom fabricated to fit frameless style fluorescent fixtures. We use our PCA-110 Clear Acrylic Prismatic Lens with side and end extrusions to provide a lens assembly that won't sag. These lenses are best reproduced from an actual sample of your existing unit.

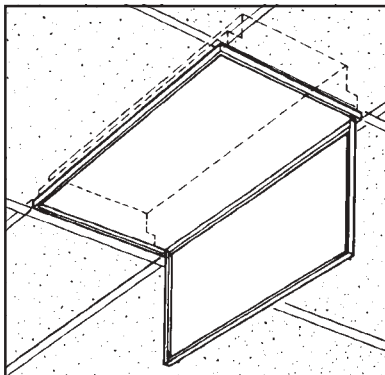
N.I. Part #	Nominal Size
FL 14 CA	12" x 48"
FL 22 CA	24" x 24"
FL 24 CA	24" x 48"

ABOVE FRAMELESS LENSES ARE .110" CLEAR PRISMATIC ACRYLIC.
ADDER FOR STEEL HINGE CLIPS

RETRO FRAME REPLACEMENT DOOR FRAME

Retro Frame gives you a brand new hinged frame that takes the place of your existing troffer door frame. Many old style door frames will not work with the new generation low brightness louvers or have become discolored or damaged. The troffer body with the ballasts, sockets and wiring is the expensive part that you can reuse without even disconnecting it.

Fixture must be installed in T-Bar with flexible wiring and have a minimum of 3" clearance above troffer body.



Follow steps 1 and 2 on page 10.

Step 3 - Install Retro Frame assembly which can include your choice of dozens of louvers and lenses, simply by laying the assembly in the existing T-Bar grid ceiling.

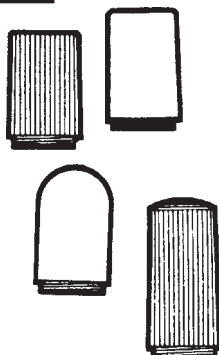
Step 4 - Open your new hinged door and slide your existing troffer body back on top of the Retro Frame assembly.

Step 5 - Close and latch the door and you have a new white door frame with a new louver or lens.

N.I. Part#	Nominal Size
RPF-1248	1 x 4
RPF-2424	2 x 2
RPF-2448	2 x 4

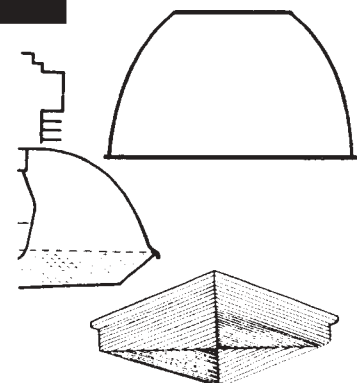
CYLINDERS

- Sample required for quotation
- Clear & Colors
- Acrylic & Polycarbonate



HIGH/LOW BAY HID

- Replacement Lenses
- Sample required for quotation
- Polycarbonate
- Square, Dome & Dish Styles.



NORTON INDUSTRIES

1366 West 117th Street • Lakewood, Ohio 44107 • (216) 228-6650 • 228-9065 Fax • (800) 462-6650 Fax