

A Study In...

Industrial Lighting



industria®



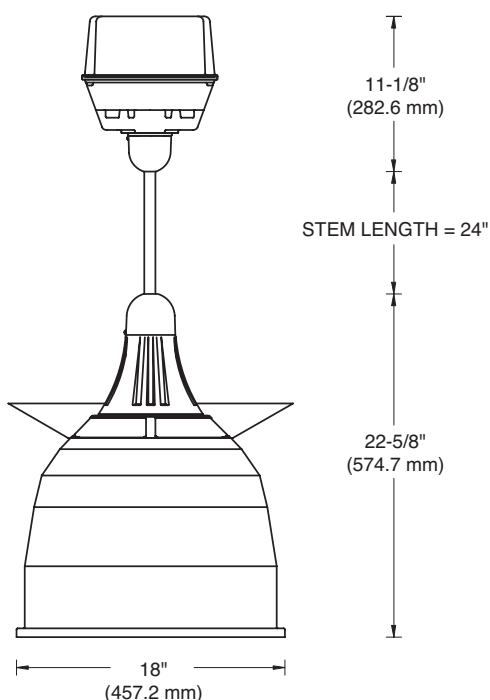
LG

New Revolutionary Industria4 LG Luminaire Developed for State-of-the-Art Manufacturing Facility

The Lighting Designer's approach to lighting the new Manufacturing and Assembly facility in York, PA was to supply a "low-glare" environment. This new installation was carefully designed keeping the comfort and productivity levels of the workers in mind by focusing on implementing a lighting system that would not distract them with any disabling glare as they looked across the ceiling.



Day-Brite® Lighting undertook the task of developing a luminaire to meet these requirements. The result was the Industria4 LG luminaire. Working in conjunction with the Orfield Laboratories, a new ambient lighting system was identified that would have indirect and direct components, with very tight cutoff on the direct component and a very broad distribution of the indirect component. Orfield Laboratories, experts in the field of visibility and glare as it pertains to the manufacturing and inspection process in industrial applications, provided much guidance in the luminaire design.



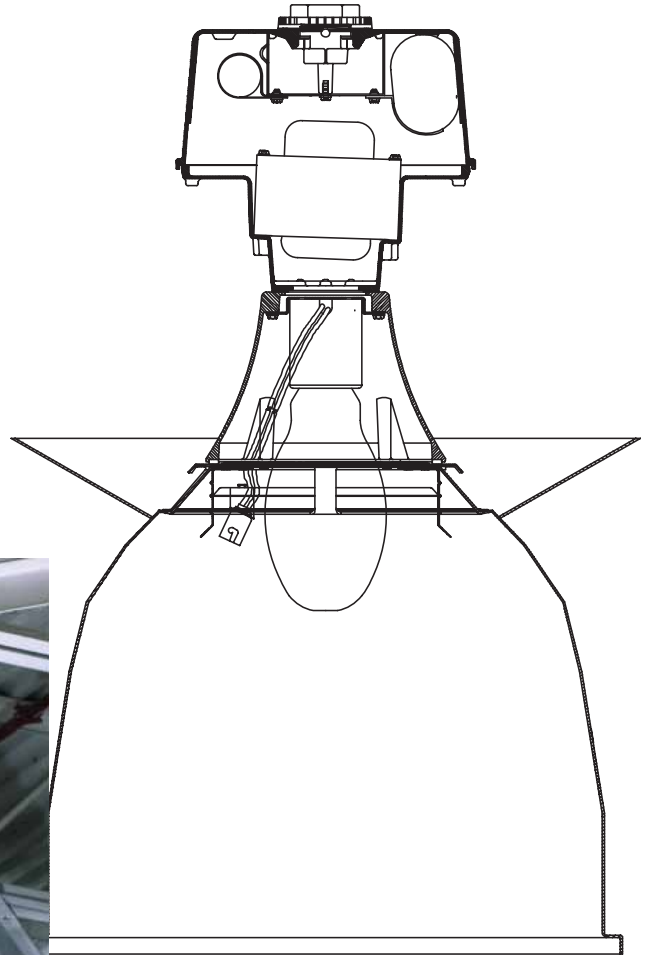
“The idea is somewhat revolutionary and took some educating on our part to explain to the employees that this approach, albeit seemingly low light levels to them, who are accustomed to 75-100 footcandles in their existing plants, was successful in providing enough illumination for general visual tasks and more importantly reduce the disabling glare issues that they previously tolerated.”

Kristin Bernick, Mid-State Lighting,
Sales Agent

“The uplight feature of this unique luminaire reduces the cave-like effect within the manufacturing space and enhances the image for the facility, along with improving the visual comfort of the workers. This new lighting installation and layout, which used our new Low Glare high bay luminaire, provided an office downlighting setting in a manufacturing environment.”

Bill Busch, Senior Product Manager at Day-Brite Lighting

Engineers at Day-Brite Lighting modified the existing Industria4 luminaire, which already provided the required adjustable uplight in an enclosed aluminum reflector, to address the additional light control requirements needed for this new application. A unique reflector assembly was designed, and the body of the reflector was “drawn down” an additional 4 inches to provide better lamp cut-off and shielding.



The inner surface of the reflector was buffed to improve optical performance. In addition, the Industria4 LG features matte white paint on all of the upper parts and utilizes a coated reduced jacket lamp. An option is offered for pendant mounting the reflector 24 inches down from the ballast housing to eliminate “ballast shadows” on white metal truss ceilings. All of these modifications created a luminaire ideally suited for use in low-glare applications. The Industria4 LG provides application flexibility and higher visual comfort when compared to standard open aluminum high bays.

A total of three hundred and thirty 400W Metal Halide luminaires light the assembly and manufacturing areas covering approximately 200,000 square feet of the floor space. The rows are 18 feet apart and are staggered every 18 feet creating an actual row spacing of 36 feet. This spacing results in uniform lighting distribution in a "diamond" spacing configuration approximating 25 foot centers. The light levels are sufficient for general illumination purposes, providing an average of 35 footcandles at 2-1/2 feet off the floor. The new luminaires are mounted 27-28' above the floor where ceiling heights reach from 30-35'. Task lighting was thoughtfully studied and provided for machine and press areas as required with supplemental 4' and 8' fluorescent industrial luminaires with louver at approximately 10' from the floor.



INVOLVED PARTIES...

Local Distributor: Schaedler Yesco Distribution

Day-Brite Sales Rep: Kristin Bernick, Mid-State Lighting

Lighting Designer: Steve Orfield, Orfield Laboratories

Electrical: Three I Engineers Inc., Evansville, IN

Installing Contractor: Hunt Electric (Joint Venture with J.Z. Barton Electric, York, PA)